

**State of Board of Health
Agenda
March 23, 2023 – 9:00 a.m.
Perimeter Center, Boardroom 2**

Call to Order and Welcome	Gary Critzer, Chair
Introductions	Mr. Critzer
Remarks from Secretary Littel	John Littel Secretary of Health and Human Resources Youngkin Administration
Review of Agenda	Alexandra Jansson, MPP Sr. Policy Analyst
Approval of December 15, 2022 Minutes	Mr. Critzer
Agency Report	R. Christopher Lindsay Chief Operating Officer
Break	
Public Comment Period	
<u>Lunch Presentation</u> Regulatory Action Update	Michael Capps, MPH Sr. Policy Analyst
Break	
<u>Regulatory Action Items</u> Regulations Governing Vital Records 12VAC5-550 (Fast Track Amendments)	Seth Austin Director Office of Vital Records
Regulations Governing Application Fees for Construction Permits for Onsite Sewage Disposal Systems and Private Wells 12VAC5-620 (Fast Track Amendments)	Julie Henderson Director Office of Environmental Health Services
Regulations for Bedding and Upholstered Furniture Inspection Program 12VAC5-125 (Final Amendments)	Ms. Henderson

Regulations Governing Tourist Establishment
Swimming Pools and Other Public Pools
12VAC5-460
(Notice of Intended Regulatory Action)

Ms. Henderson

Break

Regulations for the Licensure of Home
Care Organizations in Virginia
12VAC5-381
(Proposed Amendments)

Rebekah Allen, JD
Senior Policy Analyst
Office of Licensure and Certification

Regulations Governing Eligibility Standards
and Charges for Medical Care Services to
Individuals
12VAC5-200
(Fast Track Amendments)

Lisa Park
Healthcare Reimbursement Manager, Sr.
Community Health Services

Results of Periodic Review (bloc)
Regulations for the Sanitary Control of the
Storing, Processing, Packing or Repacking of
Oysters, Clams and Other Shellfish
12VAC5-150

Joseph Hilbert
Deputy Commissioner for Governmental
and Regulatory Affairs

Regulations for the Sanitary Control of the
Picking, Packing and Marketing of Crab Meat
for Human Consumption
12VAC5-160

Sewage Handling and Disposal Regulations
12VAC5-610

Legislative Update – 2023 General Assembly

Ms. Jansson

Budget Update

Stephanie Gilliam
Deputy Director for Budget
Office of Financial Management

Appointment of Nominating Committee

Mr. Critzer

Other Business

Adjourn

**State Board of Health
December 15, 2022 - 9:00am
Perimeter Center, Boardroom 2**

Members Present: Gary Critzer, Chair; Michael Desjaton; Elizabeth Ruffin Harrison; Anna Jeng, ScD; Lee Jones, DMD; Patricia Kinser, PhD; Wendy Klein, MD, Vice Chair; Patricia O'Bannon; Holly Puritz, MD; Maribel Ramos; Stacey Swartz, PharmD; Ann B.R. Vaughters, MD; Mary Margaret Whipple.

Ms. Whipple attended remotely due to care for a family member. Ms. Whipple participated from her home in Arlington.

Members Absent: Melissa Green and Jim Shuler, DVM.

Mr. Critzer left the meeting at approximately 10:30am. Dr. Jeng and Dr. Vaughters left the meeting at 2pm.

VDH Staff Present: Michael Capps, Senior Policy Analyst; Kathryn Crosby, Chief Diversity, Equity, and Inclusion Officer; Tiffany Ford, Deputy Commissioner for Administration; Dr. Colin Greene, State Health Commissioner; Joe Hilbert, Deputy Commissioner for Governmental and Regulatory Affairs; Alexandra Jansson, Senior Policy Analyst; Christopher Lindsay, Chief Operating Officer; Dr. Lilian Peake, State Epidemiologist; and Maria Reppas, Director, Office of Communications,.

Other Staff Present: Robin Kurz, JD, Senior Assistant Attorney General

Call to Order

Mr. Critzer called the meeting to order at 9:06am.

Introductions

Mr. Critzer welcomed those in attendance to the meeting. Mr. Critzer then started the introductions of the Board members and VDH staff present.

Review of Agenda

Ms. Jansson reviewed the agenda and the items contained in the Board's binder.

Approval of September 22nd, 2022 Minutes

Mr. Critzer made the motion to approve the minutes from the September 22, 2022 meeting. The minutes were approved unanimously by voice vote.

Commissioner's Report

Dr. Greene provided the Commissioner's Report to the Board. He updated the Board on key issues and projects VDH is engaged in including:

- Agency Stars

- COVID-19
- Monkeypox
- Influenza
- Ebola
- GenX Water Issue
- Partnership for Petersburg
- Maternal and Child Health
- ARPA Projects
- Electronic Health Record Initiative
- Temporary Detention Order Prompt Placement Task Force
- Opioid Abatement Authority

There was discussion regarding work done at both the federal and local government levels related to substance misuse; the importance of mental health supports through perinatal mental health facilities; respiratory illnesses and potential impact of COVID-19 on the severity of other respiratory illness; the Pathways program; and partnership models for suicide prevention.

Regulatory Action Update

Mr. Capps reviewed the summary of all pending VDH regulatory actions.

Since the September 2022 meeting, the Commissioner approved three regulatory actions on behalf of the Board while the Board was not in session. First, two NOIRAs for the Virginia Radiation Protection Regulations (12VAC5-481), and the Virginia Radiation Protections Regulations: Fee Schedule (12VAC5-490). These followed periodic reviews and will update the Regulations by removing outdated information and incorporating recommendations and national best practices. The Commissioner also approved the final exempt action for the Sanitary Regulations for Hotels (12VAC5-431) to conform the Regulations to Chapter 751 of the 2022 Acts of Assembly, requiring human trafficking training for hotel employees within six months of employment and every two years thereafter.

Since the September 2022 meeting the Commissioner has taken no non-regulatory action on behalf of the Board while the Board was not in session.

Mr. Capps advised the Board that there are 15 periodic reviews in progress:

- 12 VAC 5-67 Advance Health Care Directive Registry
- 12 VAC 5-110 Regulations for the Immunization of School Children
- 12 VAC 5-125 Regulations for Bedding and Upholstered Furniture Inspection Program
- 12 VAC 5-150 Regulations for the Sanitary Control of Storing, Processing, Packing or Repacking of Oysters, Clams and Other Shellfish
- 12 VAC 5-160 Regulations for the Sanitary Control of the Picking, Packing and Marketing of Crab Meat for Human Consumption
- 12 VAC 5-216 Methodology to Measure Efficiency and Productivity of Health Care Institutions
- 12 VAC 5-217 Regulations of the Patient Level Data System
- 12 VAC 5-218 Rules and Regulations Governing Outpatient Data Reporting

DRAFT - NOT APPROVED

- 12 VAC 5-220 Virginia Medical Care Facilities Certificate of Public Need Rules and Regulations
- 12 VAC 5-405 Rules Governing Private Review Agents
- 12 VAC 5-407 Regulations for the Submission of Health Maintenance Organization Quality of Care Performance Information
- 12 VAC 5-530 Regulations Governing the Virginia Medical Scholarship Program
- 12 VAC 5-542 Rules and Regulations Governing the Virginia Nurse Practitioner / Nurse Midwife Scholarship Program
- 12 VAC 5-545 Guidelines for the Nurse Educator Scholarship
- 12 VAC 5-610 Sewage Handling and Disposal Regulations

Since the September 2022 meeting, the Executive Branch completed the review of five regulatory actions while the Board was not in session – Final amendments to the Regulations for Disease Reporting and Control (12VAC-90; COVID Emergency Update), a NOIRA for the Regulations Governing Virginia Newborn Screening Services (12VAC5-71), Final Exempt amendments to the Food Regulations (12VAC5-421), Final Exempt amendments to the Sanitary Regulations for Hotels (12VAC5-431), and a NOIRA for the Regulations for Summer Camps (12VAC5-440).

Public Comment Period

Twenty persons signed up for public comment at the meeting. The Board's public comment period allows for a 20 minute period with 2 minutes per person. A motion to extend the public comment period by twenty minutes was motioned by Dr. Puritz and seconded by Mrs. O'Bannon. The motion was passed by unanimous voice vote.

Nineteen individuals spoke about the immunization schedule for children and against adding the COVID-19 immunization. Their names were Sally Johnson, Barbara Zedler, Lori Leonard, Barbara Henry, Donna Maichen, Jennifer Herget, Robyn Middleton, Bob Childers, Carol Sargeant, Sara Gerloft, Susan Franz, Ann Parker, Linda Cox, Jessica McLane, Ann Kelly, Cathy Tankersley, Ruth Machen, Peter Machen, and Pamela Burnham.

One person, Doris Knick, spoke about potential radiation from smart meters.

Written comment was received from the Virginia Healthcare and Hospital Association in support of the Fast Track Amendments to Regulations for the Licensure of Hospitals in Virginia on the agenda.

Individuals who spoke also provided written comment, all written comments received are included at the end of the minutes document.

Lunch Presentation

A presentation on the Virginia Department of Health's Substance Use and Drug Overdose Response was given by Liz Zaunick, Overdose Data and Action Grant Coordinator, and Lauren Yerkes, Injury and Violence Prevention Epidemiologist.

There was discussion regarding fentanyl administration during EMS transports, prescription

versus synthetic opioid classification, drug aversion strategies, drug tracking trends related to opioid prescriptions and associated overdoses, the inclusion of the current target population's input regarding substance misuse programs, academic-government partnerships to collect relevant data related to drug misuse, and comprehensive harm-reduction strategies and potential expansion.

Fast Track Amendments to Regulations Governing Campgrounds

Ms. Henderson presented the Fast Track Amendments to the Regulations Governing Campgrounds. The purpose of this regulatory change is to clarify standards for material used in the conveyance and storage of hand washing water at temporary campgrounds. Currently, the Regulations require any tanks, hoses, or appurtenances used to store or distribute water to be of "food-grade" construction. However, most portable hand washing sinks used by industry do not meet this standard. In traditional plumbed settings, hand washing water is considered potable water, and thus is required to meet the standard of water provided for drinking. In the settings of temporary campgrounds, temporary hand washing sinks, when used, provide extra sanitation for campers using portable toilets, but are not used as drinking water fountains.

This action exempts portable hand washing sinks from meeting the full requirements applied to other water provided for drinking or showering in temporary campgrounds. To ensure this change has no adverse impact on public health, any portable hand washing sink that does not meet food-grade standards will be required to post a sign notifying campers not to drink the water.

Without this fast-track amendment, the current language potentially creates a hardship on temporary campground operators and portable hand washing sink distributors and service providers, could discourage hand washing and the use of hand washing sinks, or unintentionally promote certain brands or providers.

Dr. Vaughters made a motion to approve the final exempt regulations with Dr. Swartz seconding. There was discussion regarding the chlorination requirement of the water sources used.

The fast track amendments were approved unanimously by voice vote.

Fast Track Amendments to Regulations Governing Vital Records

Rilee Bennett presented the Fast Track Amendments to the Regulations Governing Vital Records. The purpose of the fast track amendments is to amend the Regulations to reflect several recent changes in the Code of Virginia, including changes to §32.258.1, §32.1-269.1, §32.1-261, and §32.1-267. Several sections would be repealed, as these sections are not regulatory in nature. The amendment to 12VAC5-550-520 changes the certification fee from \$10 to \$12 because this fee was changed in the Code and implemented several years ago.

Chapter 171 of the 2022 Acts of Assembly removed the authority to charge a fee to obtain a stillbirth certificates. The business operations of the Office of Vital Records have already been changed to conform to the new law, but the regulations have not yet been changed. Chapters 209, 210, and 211 of the 2020 Acts of Assembly removed race from the data to be collected regarding marriages, divorces, and annulments. Chapters 465 and 466 of the 2020 Acts of Assembly

amended the process to change one's sex on a birth certificate. Chapters 116 and 117 of the 2022 Acts of Assembly changed the process and timelines associated with amending a death certificate.

The amendments improve the regulatory language used in the Virginia Administrative Code so that both the public and government organizations have better direction concerning the responsibilities and requirements needed to perform their duties. This should reduce time spent dealing with challenges to processes that are presented by members of the public and will make the operations of the Office of Vital Records more efficient.

Dr. Swartz made a motion to approve the final exempt regulations with Dr. Puritz seconding. There was discussion regarding section 320 of the Fast Track Amendments pertaining to change of sex, specifically concerning the VS-42 form and its regulatory requirements. The motion for approval was withdrawn by Dr. Swartz.

Mrs. O'Bannon motioned to defer action on the Fast Track Amendments until the March 2023 Board meeting so that the proposed amendment to section 320 can be clarified with respect to requirements for change of sex and use of the VS-42 form, with Mr. Desjadon seconding that motion. The motion passed unanimously by voice vote.

Fast Track Amendments to Regulations for the Licensure of Hospitals in Virginia

Rebekah Allen presented Fast Track Amendments to the Regulations for the Licensure of Hospitals in Virginia. This fast-track action is being utilized to conform 12VAC5-410-10 et seq. to the Code of Virginia and to update out-of-date regulatory provisions. Changes include amendments to address mandates found in multiple Acts of Assembly from 2022, 2021, 2020 and 2005. The rationale or justification for the regulatory change is that the regulation should incorporate all legislative mandates, current clinical and industry practices, and current licensing processes and procedures. The regulatory change is essential to protect the health, safety, or welfare of citizens because the regulation does not currently reference the most current clinical and industry practices, including for infection prevention and control, and does not address all mandated subjects affecting patient rights. The goals of the regulatory change are consistency with the Code of Virginia and reduced confusion for patients and for hospitals; the problems it is intended to solve are removing out-of-date material that impedes hospitals from utilizing current clinical standards and ensuring that hospitals and patients are equally aware of what their rights and obligations are.

Dr. Jones made a motion to approve the final exempt regulations with Dr. Vaughters seconding. There was discussion regarding the potential HIPAA violations resulting from this regulation and the use of electronic medical records, the Fast-Track rulemaking process and language issues identified by Board members; and the construction guidelines and whether or not construction starting in 2018 was grandfathered into this new clause.

The fast track amendments were approved by 10 members by voice vote with 1 nay by Mr. Desjadon.

Fast Track Amendments to Regulations for the Licensure of Nursing Facilities

Ms. Allen presented the Fast Track Amendments to the Regulations for the Licensure of Nursing Facilities. This fast-track action is being utilized to conform 12VAC5-371-10 et seq. to the Code of Virginia and to update out-of-date regulatory provisions. The changes include including removing unused terminology, improving terminology consistency, providing definitions for terms to match current clinical and industry practices, moving regulatory provisions to the appropriate part of 12VAC5-371-10 et seq., and revising provisions related to the licensing process and oversight procedures.

Dr. Puritz made a motion to approve the final exempt regulations with Dr. Jeng seconding. There was discussion regarding the expansion of the “public health emergency” in a future regulatory action.

The fast track amendments were approved unanimously by voice vote.

Board of Health Annual Report: Plan for Well-Being

Khalida Willoughby presented the Board of Health’s Annual report. She shared an overview of the State Health Assessment process and highlighted key successes of the Assessment’s findings. She also provided an overview of next steps in developing the State Health Improvement Plan.

Dr. Swartz made a motion to approve the Board of Health Annual Report with Dr. Puritz seconding. There was discussion regarding the community health worker alliance.

The report was approved unanimously by voice vote.

Public Policy Agenda Process

Mr. Hilbert presented an outline of the Public Policy Agenda Development Process used by the agency. This included the purpose, goals, outcomes, opportunities for participation and interdependencies, a process overview, and potential problem statement categories. Mr. Hilbert shared where in the process the Board may be briefed and that members were able to suggest potential topics to be put through the agenda process.

There was discussion regarding staff feedback on the Policy Agenda Process.

Electronic Meeting Policy

Ms. Jansson presented an updated electronic participation policy for the Board’s consideration. The updated policy conformed to the language adopted from the 2022 Session and Special Session I of the General Assembly, effective September 1, 2022. The policy outlines reasons for remote participation, the process for requesting remote participation, documenting requirements for the remote participation, and also a process to allow the Board to hold all virtual public meetings outside of an emergency.

Mr. Desjaden made a motion to approve the Electronic Meeting Policy with Ms. Harrison seconding the motion. There was discussion regarding the Board bylaws and the quorum requirements.

The electronic meeting policy was approved unanimously by voice vote.

Other Business

There was no other business to discuss.

Adjourn

The meeting adjourned at 2:44pm



SENT VIA EMAIL TO (rebekah.allen@vdh.virginia.gov)

December 13, 2022

Mr. Gary Critzer
Chairman of the State Board of Health
Virginia Department of Health
9960 Mayland Drive, Suite 401
Ridge, Virginia 23233

RE: Public Comment on Fast Track Action – Regulations for the Licensure of Hospitals in Virginia – Amend Regulation After Periodic Review

Dear Chairman Critzer,

Please accept this letter as written public comment meeting submitted on behalf of the Virginia Hospital and Healthcare Association (VHHA) for the December 15th, 2022, meeting of the State Board of Health (“the Board”).

As part of its meeting agenda, the Board will vote to adopt the proposed amendments to the Regulations for the Licensure of Hospitals in Virginia (12VAC5-410-10 et seq.) (the “Regulations”) to conform to the Code of Virginia and to update out-of-date regulatory provisions through fast-track action. VHHA agrees that these proposed changes to the Regulations are appropriate for fast-track action. The proposed changes to Regulations in this fast-track action include changes needed to implement various changes to law:

- Chapters 80 and 81 of the 2022 Acts of Assembly (minimum standards for any hospital that voluntarily installs a newborn safety device for the reception of children);
- Chapter 218 of the 2022 Acts of Assembly (requiring hospitals that makes minors’ health records available to minors through a secure website to also make the health records available to the minor’s parent or guardian through the same website);
- Chapters 678 and 679 of the 2022 Acts of Assembly (minimum standards for payment plans and providing information about charity care and financial assistance policies);
- Chapter 72 of the 2021 Acts of Assembly, Special Session I (prohibition on discriminating against health insurance enrollee on the basis of the enrollee being a litigant or potential litigant due to a motor vehicle accident);
- Chapter 220 of the 2021 Acts of Assembly, Special Session I (minimum requirements for designated support persons);
- Chapters 1080 and 1081 of the 2020 Acts of Assembly (prohibition on balance billing);
- Chapter 1088 of the 2020 Acts of Assembly (quarterly reporting of hospital employment of certified sexual assault nurse examiners); and

- Chapters 177 and 222 of the 2005 Acts of Assembly (design and construction guidelines for hospitals).

The proposed changes to the Regulations also include minimum requirements for long-term care nursing units that are certified nursing facilities required by Article 1 (§ 32.1-123 et seq.) of Chapter 5 of Title 32.1 of the Code of Virginia and updating breast milk storage requirements, removing unused terminology, improving terminology consistency, providing definitions for terms to match current clinical and industry practices, moving regulatory provisions to the appropriate part of 12VAC5-410-10 et seq., and revising provisions related to the licensing process and oversight procedures.

VHHA was closely involved in underlying legislation that the proposed changes to Regulations are seeking to implement. As it relates to this regulatory action, we are pleased to see that the proposed amendments to the Regulations are thoughtfully constructed and carefully align with the Code of Virginia. Pending adoption by the Board, we look forward to continuing to participate in the rulemaking process for this regulatory action.

We appreciate this opportunity to submit written public comment.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Brent Rawlings". The signature is fluid and cursive, with a large initial "R" and a long, sweeping underline.

R. Brent Rawlings
Senior Vice President & General Counsel



Why are utilities replacing reliable analog electric, gas and water meters with "smart" meters?

- To cut costs by firing meter readers.
- To obtain federal grants (your tax dollars).
- To charge you more during "peak" hours.
- To enable remote shut-off.
- To extract data on your family's behavior.

Smart Meters are NOT Green.

The manufacture and operation of millions of power-consuming "smart" meters and data centers increases carbon and electrosmog pollution. No power savings have been attributed to "smart" meters, which squander resources needed for efficiency and local renewable energy. RF radiation damages life.

Types of "Smart" Meters:

AMI (Advanced Metering Infrastructure) uses a "mesh network" of wireless pulses between meters and utility antennas; can remotely shut off power.
AMR (Automated Meter Reading- aka OMR/ERT) broadcast your info for utility drive-by reading. "Bubble up" type transmit all the time, "wake up" when signaled.
PLC (Power Line Communication) aka TWACS transmits your data over power lines. Though this is a wired system, "dirty electricity" radiates inside homes.
"Radio Off" Digital Meters can still be surveillance devices, cause "dirty electricity" and health problems, overcharge and burn. Utilities may turn radio "on."

Know the Difference

Bottom Line: If it's plastic and electronic, refuse it. Demand a "non-electronic electromechanical analog." Beware "Trojan Horse" meters that resemble analogs. An FCC number = wireless. Use an EMF Tester from StopSmartMeters.org/store to be sure.

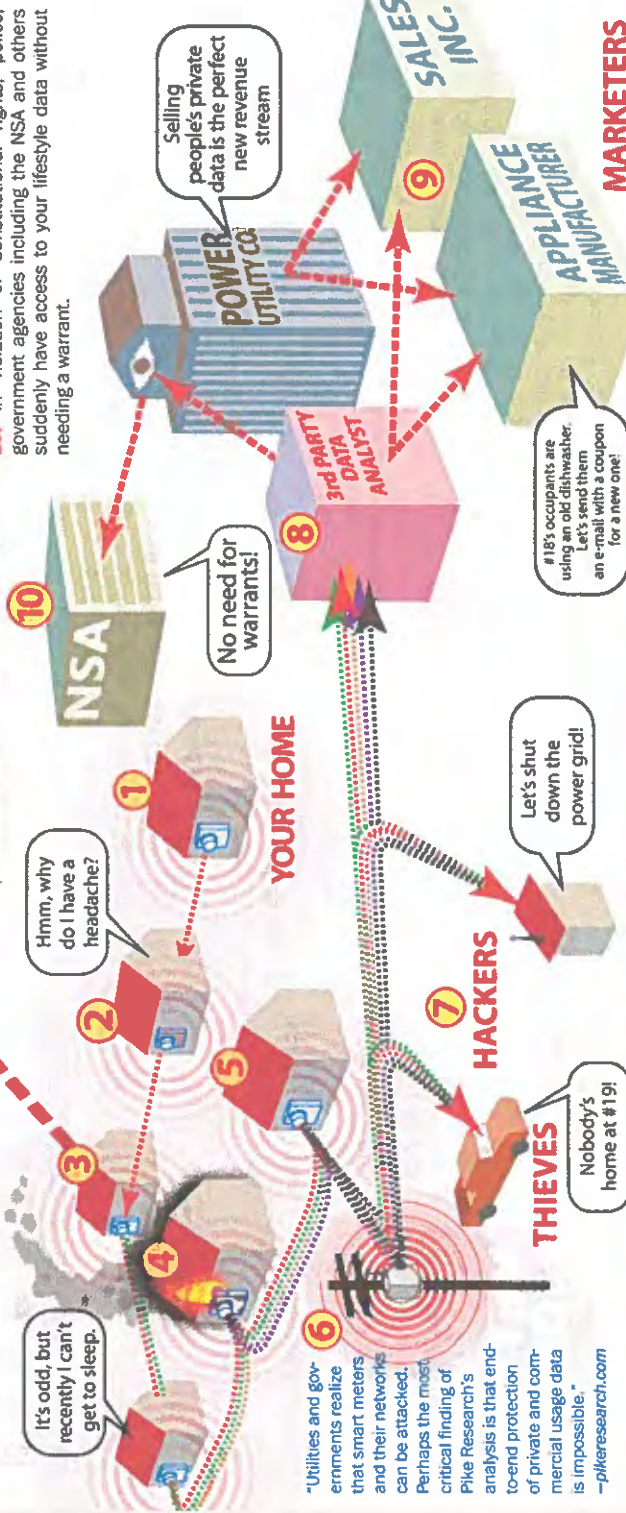


The Path of Your Privacy: How an AMI "SMART" METER MESH NETWORK really works

1. In an AMI "mesh network," data is transmitted from one "smart" meter and sent by wireless microwave pulses on to the next house's meter, and the next...
2. Although a neighbor may choose to keep or replace their analog meter, they may still be exposed to microwave radiation from surrounding meters.
3. Anyone whose outside wall has a "smart" meter, or who lives adjacent to banks of meters suffers strong bursts of pulsed radiation, all day and night long, up to 190,000 times/day.
4. "Smart" Meters- made cheaply of plastic, carrying high voltage, and installed by temp workers, are prone to fire and explosion and have caused multiple injuries and fatalities.
5. Random homes get "collector meters," through which data from hundreds of homes is funneled. Radiation exposure is dramatically multiplied for these families who are never informed that their meter is the "collector."



A child sleeping on the other side of the wall from a meter or meters is subject to involuntary pulsed radiation at levels far above what peer-reviewed science has found harmful.



"Utilities and governments realize that smart meters and their networks can be attacked. Perhaps the most critical finding of Pike Research's analysis is that end-to-end protection of private and commercial usage data is impossible."
 -pikeresearch.com

"A so-called 'Smart Grid' that is as vulnerable as what we've got is not smart at all, it's a really really stupid grid."
 -James Woolsey, former CIA Director, 2011

Printed on paper using 30% PCW

4th edition January 2015

MARKETERS

Fires and Explosions: Fatalities and serious injuries have been caused by smart meter fires and explosions. Following fire incidents, hundreds of thousands of smart meters have been recalled in Saskatchewan, Pennsylvania, Arizona, Florida, Oregon, and elsewhere. In early 2015, electrical surges caused hundreds of smart meters to explode off of the walls in Stockton and Capitola, California.



"Smart" Meter Radiation Is a Serious Risk to Our Health.

Cancer & RF Radiation. The World Health Organization (WHO) states that radio frequency (RF) electromagnetic fields (EMF) from non-ionizing radiation-emitting devices (such as "smart" meters, cell phones, and Wi-Fi) are a **Class 2B possible cancer causing agent** in the same category as lead, DDT, and chloroform. Studies show DNA breaks and damage.

"Smart" meters pulse RF radiation up to 190,000 times/ day at levels hundreds of times stronger than that which have been found to cause serious health problems. **Children, pregnant women, seniors, those with immune deficiencies, medical conditions, pacemakers and implants are especially at risk.**

Upon installation of smart meters and infrastructure, some people report headaches, ringing ears, dizziness, breathing problems, insomnia, nausea, cognitive problems, memory loss, muscle spasms, rashes, heart problems, and even seizures. Some have had to abandon their homes. Electro-hypersensitivity (EHS) increases with exposure.

Time bomb. Peer-reviewed science confirms many harmful effects of EMF emitting technologies like smart meters. At first, the dangers of smoking and asbestos were ignored. Many illnesses, like cancer, take years to develop. **Will you allow the utilities to put your family's health at risk?**

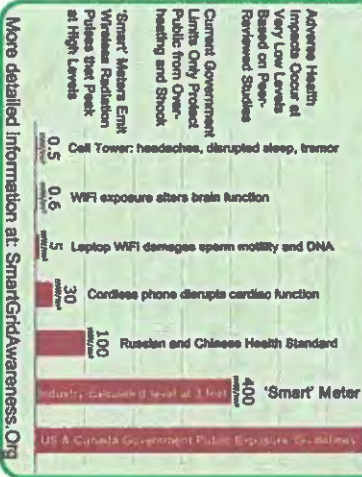
"Adverse neurological effects have been reported in people who sustain close proximity to wireless meters, especially under 10 feet," say 54 experts in 20 countries, including Joel Moskowitz of UC Berkeley School of Public Health and David Carpenter, Director, University of Albany NY Institute for Health and the Environment.



WHAT CAN WE DO?

- Inform elected officials that you oppose smart meters—hold them accountable.
- Organize a public meeting or panel discussion on the subject.
- Refuse together with your community. There is power in numbers.
- Take direct action to block deployments and have smart meters removed.
- **If you have an analog meter:**
 - Send a certified letter to utility refusing consent.
 - Secure analog meters behind locked gates or lock box.
 - Do not allow installers on your property. Call police if they trespass. Form a neighborhood watch.
 - Tell them "You are trespassing. Get off my property. I forbid installation of the digital meter."
 - Don't agree to illegal "opt out" fees. We never opted in!
- **If you have a "smart" meter:**
 - Revoke consent by certified letter (samples on our website). Set a deadline for removal.
 - Insist on written confirmation that replacement meters are "electromechanical analogs with no electronics."
 - When utilities refuse to remove unauthorized "smart" meters, people are buying analog meters online and having them installed. **It can be dangerous to swap an electric meter if you don't know what you are doing.**
 - In the event of a disconnect, be prepared to speak out to the local council, the community, and the media. Report service cuts and other abuses to us.
 - **Get it in writing!** Keep copies of all correspondence. Avoid circular conversations. Ask for a supervisor. **Insist on analog for no charge. Don't back down.**
 - **Don't give up your power or your rights** assume the utility company is being deceptive.

"Smart" Meter Wireless Radiation Comparison



For more info, copies of this brochure, FAQ, DVD's, EMF testers, local contacts, organizing support and advice, and to donate, **please visit our website.**



Info@stopsmartmeters.org • P.O. Box 682 Portola, CA 96122
For area information, please contact your local organization, above.

VERIFY! Thousands of published and peer-reviewed scientific papers show environmental and human health damage from microwave radiation. To learn more and reduce your risk, go to: StopSmartMeters.org/warning. You and your community have the right to safety, health and privacy. **Did you know? Neither smart meters nor "opt out" fees are required by law.**

"SMART" METERS



Costing You Money. Risking Your Health, Privacy and Safety.

What are "Smart" Meters?

- Any electronic utility meter—usually wireless
- Allows utilities, third parties, and governments access to detailed info about your home life
- Emits RF radiation and "dirty electricity" linked to environmental and health problems
- Can catch fire, explode, and damage appliances
- Increases utility bills
- Communities worldwide are rejecting "smart" meters, ordering safety recalls, and replacing analogs. However, utilities continue to mislead the public and install without a mandate, using coercion, extortion, and propaganda to achieve their aims.

Good Morning,

I am asking that these documents be put on the record. I have also sent them via email with links.

I am Jennifer. I am a mother and a grandmother. Is anyone here aware of the Pfizer documents for the Covid-19 Vaccine? I have personally spoken with 5 doctors, and they were unaware. The FDA tried to have the documents sealed for 75 years – until 2096. A Texas judge ordered the release, and the 1st set came out on March 1st.

There are nine pages of adverse reactions that were known by February 28, 2021. (Over a year ago). Not only are there approximately 40 autoimmune diseases, but there are also 22 immune-mediated diseases, over 50 herpes diseases, 6 different types of hepatitis, neonatal death, COVID-19, and COVID-19 pneumonia. Should your immune system be compromised, your body can't protect itself properly from anything.

Not only do I know of 5 people that got shingles (Herpes Zoster), but I know of 6 people that had heart attacks – 3 died, one being my husband's uncle 2 days after the booster. Another that his cancer came back after being in remission for years – he also passed away, a child that now has an auto-immune disease, both daughters of a friend now have lymph node issues, my daughter has ovarian dysfunction or is infertile, and now a 13-year-old girl with heart problems, I could go on. There is only so much "coincidence". People aren't putting 2+2 together because information is being censored and/or suppressed. None of these incidents have been reported to VAERS. I am concerned for children and our country.

Parents deserve informed consent when it comes to the health of their children. Please take this information seriously. Think about your children and grandchildren. Keep the Covid-19 vaccines off the childhood schedule and educate people with the facts.

<https://rumble.com/vw1dkp-rfk-jr.-the-vaers-under-system-undercounts-vaccine-injuries-by-as-much-as-9.html> - VAERS under reporting by as much as 99%

Go to www.openvaers.com – click on the 3 lines at the top left – click on the “Red Box” Summaries.

Lazarus Report <https://decodingthedeception.com/document-knowledge-base-2/the-lazarus-report/> - scroll down to the results.

My hope is that all people have informed consent prior to vaccinating their children or any family member.

Best Regards,

Jennifer

Good morning,

I am asking that these documents be put on the record. I have also sent them via email with links.

I am Jennifer. I am a mother and a grandmother. Is anyone here aware of the Pfizer documents for the Covid-19 Vaccine? I have personally spoken with 5 doctors, and they were unaware. The FDA tried to have the documents sealed for 75 years – until 2096. A Texas judge ordered the release, and the 1st set came out on March 1st.

I have read some of the first 55,000 pages and I am following the doctors that are going through the documents. I am a strong supporter of “informed consent”.

There are nine pages of adverse reactions that were known by February 28, 2021. (Over a year ago). Within these nine pages, there are approximately 40 autoimmune diseases. Should your immune system be compromised, your body can't protect itself properly.

Has anyone here heard about the hepatitis outbreak in children? 6 different types of hepatitis are listed in these 9 pages.

Not being talked about is Shingles (also called Herpes Zoster). I know of 5 people that have gotten shingles. 2 of them are in their 20's and doctors said that it was because of stress, but the doctors have not been given this information. This normally occurs in people over 50. Maybe a weakened immune system? Over 50 types of herpes are in these 9 pages.

Parents deserve informed consent when it comes to the health of their children. I personally have 2 family members that are vaccine injured and one that died 2 days after the booster. Please take this information seriously. Think about your children and grandchildren. Keep the Covid-19 vaccines off the childhood schedule and educate people with the facts.

DMED DATA % increase in partial year of 2021 (Oct 19) compared to years 2016-2020 you can find the full graph on www.renz-law.com
<https://renz-law.com/attorney-tom-renz-whistleblowers-dmed-defense-medical-epidemiology-database-reveals-incredibly-disturbing-spikes-in-diseases-infertility-injuries-across-the-board-after-the-military-was-forced-to/> Scroll to the bottom and click on "NEXT DMED DATA" – but you really need to read this page before you click for the data.

	2016	2017	2018	2019	2020	2021 (partial year)	% increase
Diseases and Injuries (Ambulatory)	2,059,630	2,058,379	2,022,663	2,110,383	1,976,724	21,512,583	988.30%
Diseases and injuries (Hospitalization)	43,786	43,338	42,024	43,493	40,052	54,776	36.80%
Diseases of the Nervous System	82,435	81,998	81,382	85,012	80,786	863,013	968.30%
Malignant Neuroendocrine Tumor	167	135	98	113	117	440	276.10%
Acute Myocardial Infarct	324	370	376	366	372	1,650	343.50%
Acute Myocarditis	84	92	116	159	108	307	184.30%
Acute Pericarditis	535	538	522	531	499	850	70.30%
Pulmonary Embolism	678	701	668	716	968	3,489	260.40%
Congenital Malformations	11,710	11,131	10,456	11,081	10,153	18,951	86.70%
Nontraumatic Subarachnoid Hemorrhage	219	139	134	170	196	640	226.50%
Anxiety	37,011	36,667	36,145	37,762	37,870	931,791	2360.50%
Suicide	359	496	530	570	550	1798	226.90%
Neoplasms for All Cancers	41,557	39,139	37,756	38,889	36,050	114,645	218%
Cancer (Digestion)	660	654	633	602	704	4,060	476.70%
Cancer (Breast)	934	810	766	792	766	4,357	468.80%
Cancer (Testicular)	1,156	1,008	866	880	889	3,537	297.90%
Infertility (female)	2,261	2,262	2,243	2,340	2,262	11,748	419.40%
Dismenorrhea	3,104	3,403	3,481	3,943	3,900	12,539	221.50%
Ovarian Dysfunction	862	936	908	945	1,022	4,086	299.80%
Infertility (male)	2,187	2,287	2,037	2,152	1,990	8,365	320.40%
Guillian-Bare Syndrome	66	79	71	85	65	403	520%

Acute Transverse Myelitis	46	57	48	35	34	202	494.10%
Seizures	196	148	130	150	123	489	297.60%
Narcolepsy Cataplexy	995	898	864	830	766	2,097	351.70%
Rhabdomyolysis	706	696	740	755	669	5,162	671.60%
Multiple Sclerosis	479	391	367	400	385	2750	614.30%
Migraine	15,734	15,714	16,462	17,116	16,311	73,490	351.70%
Blood Disorders	11,533	11,122	10,851	11,773	11,429	34,486	204.10%
Hypertension	2,308	2,323	2,363	2,392	2,415	53,846	2129.60%
Cerebral Infarct	887	848	858	888	887	3,438	293.70%

www.pfizer.com
click on "documents"
Search 5.3.6
pgs 30-38 for Adverse Event Reports

BNT162b2

5.3.6 Cumulative Analysis of Post-authorization Adverse Event Reports

5.3.6 CUMULATIVE ANALYSIS OF POST-AUTHORIZATION ADVERSE EVENT REPORTS OF PF-07302048 (BNT162B2) RECEIVED THROUGH 28-FEB-2021

Report Prepared by: [REDACTED]

Worldwide Safety [REDACTED]

Pfizer [REDACTED]

The information contained in this document is proprietary and confidential. Any disclosure, reproduction, distribution, or other dissemination of this information outside of Pfizer, its Affiliates, its Licensees, or Regulatory Agencies is strictly prohibited. Except as may be otherwise agreed to in writing, by accepting or reviewing these materials, you agree to hold such information in confidence and not to disclose it to others (except where required by applicable law), nor to use it for unauthorized purposes.

090177e196ea1800\Approved\Approved On: 30-Apr-2021 09:26 (GMT)

CONFIDENTIAL

Page 1

FDA-CBER-2021-5683-0000054

APPENDIX 1. LIST OF ADVERSE EVENTS OF SPECIAL INTEREST

1p36 deletion syndrome;2-Hydroxyglutaric aciduria;5'nucleotidase increased;Acoustic neuritis;Acquired C1 inhibitor deficiency;Acquired epidermolysis bullosa;Acquired epileptic aphasia;Acute cutaneous lupus erythematosus;Acute disseminated encephalomyelitis;Acute encephalitis with refractory, repetitive partial seizures;Acute febrile neutrophilic dermatosis;Acute flaccid myelitis;Acute haemorrhagic leukoencephalitis;Acute haemorrhagic oedema of infancy;Acute kidney injury;Acute macular outer retinopathy;Acute motor axonal neuropathy;Acute motor-sensory axonal neuropathy;Acute myocardial infarction;Acute respiratory distress syndrome;Acute respiratory failure;Addison's disease;Administration site thrombosis;Administration site vasculitis;Adrenal thrombosis;Adverse event following immunisation;Ageusia;Agranulocytosis;Air embolism;Alanine aminotransferase abnormal;Alanine aminotransferase increased;Alcoholic seizure;Allergic bronchopulmonary mycosis;Allergic oedema;Alloimmune hepatitis;Alopecia areata;Alpers disease;Alveolar proteinosis;Ammonia abnormal;Ammonia increased;Amniotic cavity infection;Amygdalohippocampectomy;Amyloid arthropathy;Amyloidosis;Amyloidosis senile;Anaphylactic reaction;Anaphylactic shock;Anaphylactic transfusion reaction;Anaphylactoid reaction;Anaphylactoid shock;Anaphylactoid syndrome of pregnancy;Angioedema;Angiopathic neuropathy;Ankylosing spondylitis;Anosmia;Antiacetylcholine receptor antibody positive;Anti-actin antibody positive;Anti-aquaporin-4 antibody positive;Anti-basal ganglia antibody positive;Anti-cyclic citrullinated peptide antibody positive;Anti-epithelial antibody positive;Anti-erythrocyte antibody positive;Anti-exosome complex antibody positive;Anti-GAD antibody negative;Anti-GAD antibody positive;Anti-ganglioside antibody positive;Antigliadin antibody positive;Anti-glomerular basement membrane antibody positive;Anti-glomerular basement membrane disease;Anti-glycyl-tRNA synthetase antibody positive;Anti-HLA antibody test positive;Anti-IA2 antibody positive;Anti-insulin antibody increased;Anti-insulin antibody positive;Anti-insulin receptor antibody increased;Anti-insulin receptor antibody positive;Anti-interferon antibody negative;Anti-interferon antibody positive;Anti-islet cell antibody positive;Antimitochondrial antibody positive;Anti-muscle specific kinase antibody positive;Anti-myelin-associated glycoprotein antibodies positive;Anti-myelin-associated glycoprotein associated polyneuropathy;Antimyocardial antibody positive;Anti-neuronal antibody positive;Antineutrophil cytoplasmic antibody increased;Antineutrophil cytoplasmic antibody positive;Anti-neutrophil cytoplasmic antibody positive vasculitis;Anti-NMDA antibody positive;Antinuclear antibody increased;Antinuclear antibody positive;Antiphospholipid antibodies positive;Antiphospholipid syndrome;Anti-platelet antibody positive;Anti-prothrombin antibody positive;Antiribosomal P antibody positive;Anti-RNA polymerase III antibody positive;Anti-saccharomyces cerevisiae antibody test positive;Anti-sperm antibody positive;Anti-SRP antibody positive;Antisynthetase syndrome;Anti-thyroid antibody positive;Anti-transglutaminase antibody increased;Anti-VGCC antibody positive;Anti-VGKC antibody positive;Anti-vimentin antibody positive;Antiviral prophylaxis;Antiviral treatment;Anti-zinc transporter 8 antibody positive;Aortic embolus;Aortic thrombosis;Aortitis;Aplasia pure red cell;Aplastic anaemia;Application site thrombosis;Application site vasculitis;Arrhythmia;Arterial bypass occlusion;Arterial bypass thrombosis;Arterial thrombosis;Arteriovenous fistula thrombosis;Arteriovenous graft site stenosis;Arteriovenous graft thrombosis;Arteritis;Arteritis

coronary; Arthralgia; Arthritis; Arthritis enteropathic; Ascites; Aseptic cavernous sinus thrombosis; Aspartate aminotransferase abnormal; Aspartate aminotransferase increased; Aspartate-glutamate-transporter deficiency; AST to platelet ratio index increased; AST/ALT ratio abnormal; Asthma; Asymptomatic COVID-19; Ataxia; Atheroembolism; Atonic seizures; Atrial thrombosis; Atrophic thyroiditis; Atypical benign partial epilepsy; Atypical pneumonia; Aura; Autoantibody positive; Autoimmune anaemia; Autoimmune aplastic anaemia; Autoimmune arthritis; Autoimmune blistering disease; Autoimmune cholangitis; Autoimmune colitis; Autoimmune demyelinating disease; Autoimmune dermatitis; Autoimmune disorder; Autoimmune encephalopathy; Autoimmune endocrine disorder; Autoimmune enteropathy; Autoimmune eye disorder; Autoimmune haemolytic anaemia; Autoimmune heparin-induced thrombocytopenia; Autoimmune hepatitis; Autoimmune hyperlipidaemia; Autoimmune hypothyroidism; Autoimmune inner ear disease; Autoimmune lung disease; Autoimmune lymphoproliferative syndrome; Autoimmune myocarditis; Autoimmune myositis; Autoimmune nephritis; Autoimmune neuropathy; Autoimmune neutropenia; Autoimmune pancreatitis; Autoimmune pancytopenia; Autoimmune pericarditis; Autoimmune retinopathy; Autoimmune thyroid disorder; Autoimmune thyroiditis; Autoimmune uveitis; Autoinflammation with infantile enterocolitis; Autoinflammatory disease; Automatism epileptic; Autonomic nervous system imbalance; Autonomic seizure; Axial spondyloarthritis; Axillary vein thrombosis; Axonal and demyelinating polyneuropathy; Axonal neuropathy; Bacterascites; Baltic myoclonic epilepsy; Band sensation; Basedow's disease; Basilar artery thrombosis; Basophilopenia; B-cell aplasia; Behcet's syndrome; Benign ethnic neutropenia; Benign familial neonatal convulsions; Benign familial pemphigus; Benign rolandic epilepsy; Beta-2 glycoprotein antibody positive; Bickerstaff's encephalitis; Bile output abnormal; Bile output decreased; Biliary ascites; Bilirubin conjugated abnormal; Bilirubin conjugated increased; Bilirubin urine present; Biopsy liver abnormal; Biotinidase deficiency; Birdshot chorioretinopathy; Blood alkaline phosphatase abnormal; Blood alkaline phosphatase increased; Blood bilirubin abnormal; Blood bilirubin increased; Blood bilirubin unconjugated increased; Blood cholinesterase abnormal; Blood cholinesterase decreased; Blood pressure decreased; Blood pressure diastolic decreased; Blood pressure systolic decreased; Blue toe syndrome; Brachiocephalic vein thrombosis; Brain stem embolism; Brain stem thrombosis; Bromosulphthalein test abnormal; Bronchial oedema; Bronchitis; Bronchitis mycoplasmal; Bronchitis viral; Bronchopulmonary aspergillosis allergic; Bronchospasm; Budd-Chiari syndrome; Bulbar palsy; Butterfly rash; C1q nephropathy; Caesarean section; Calcium embolism; Capillaritis; Caplan's syndrome; Cardiac amyloidosis; Cardiac arrest; Cardiac failure; Cardiac failure acute; Cardiac sarcoidosis; Cardiac ventricular thrombosis; Cardiogenic shock; Cardiolipin antibody positive; Cardiopulmonary failure; Cardio-respiratory arrest; Cardio-respiratory distress; Cardiovascular insufficiency; Carotid arterial embolus; Carotid artery thrombosis; Cataplexy; Catheter site thrombosis; Catheter site vasculitis; Cavernous sinus thrombosis; CDKL5 deficiency disorder; CEC syndrome; Cement embolism; Central nervous system lupus; Central nervous system vasculitis; Cerebellar artery thrombosis; Cerebellar embolism; Cerebral amyloid angiopathy; Cerebral arteritis; Cerebral artery embolism; Cerebral artery thrombosis; Cerebral gas embolism; Cerebral microembolism; Cerebral septic infarct; Cerebral thrombosis; Cerebral venous sinus thrombosis; Cerebral venous thrombosis; Cerebrospinal thrombotic

tamponade;Cerebrovascular accident;Change in seizure presentation;Chest discomfort;Child-Pugh-Turcotte score abnormal;Child-Pugh-Turcotte score increased;Chillblains;Choking;Choking sensation;Cholangitis sclerosing;Chronic autoimmune glomerulonephritis;Chronic cutaneous lupus erythematosus;Chronic fatigue syndrome;Chronic gastritis;Chronic inflammatory demyelinating polyradiculoneuropathy;Chronic lymphocytic inflammation with pontine perivascular enhancement responsive to steroids;Chronic recurrent multifocal osteomyelitis;Chronic respiratory failure;Chronic spontaneous urticaria;Circulatory collapse;Circumoral oedema;Circumoral swelling;Clinically isolated syndrome;Clonic convulsion;Coeliac disease;Cogan's syndrome;Cold agglutinins positive;Cold type haemolytic anaemia;Colitis;Colitis erosive;Colitis herpes;Colitis microscopic;Colitis ulcerative;Collagen disorder;Collagen-vascular disease;Complement factor abnormal;Complement factor C1 decreased;Complement factor C2 decreased;Complement factor C3 decreased;Complement factor C4 decreased;Complement factor decreased;Computerised tomogram liver abnormal;Concentric sclerosis;Congenital anomaly;Congenital bilateral perisylvian syndrome;Congenital herpes simplex infection;Congenital myasthenic syndrome;Congenital varicella infection;Congestive hepatopathy;Convulsion in childhood;Convulsions local;Convulsive threshold lowered;Coombs positive haemolytic anaemia;Coronary artery disease;Coronary artery embolism;Coronary artery thrombosis;Coronary bypass thrombosis;Coronavirus infection;Coronavirus test;Coronavirus test negative;Coronavirus test positive;Corpus callosotomy;Cough;Cough variant asthma;COVID-19:COVID-19 immunisation;COVID-19 pneumonia;COVID-19 prophylaxis;COVID-19 treatment;Cranial nerve disorder;Cranial nerve palsies multiple;Cranial nerve paralysis;CREST syndrome;Crohn's disease;Cryofibrinogenaemia;Cryoglobulinaemia;CSF oligoclonal band present;CSWS syndrome;Cutaneous amyloidosis;Cutaneous lupus erythematosus;Cutaneous sarcoidosis;Cutaneous vasculitis;Cyanosis;Cyclic neutropenia;Cystitis interstitial;Cytokine release syndrome;Cytokine storm;De novo purine synthesis inhibitors associated acute inflammatory syndrome;Death neonatal;Deep vein thrombosis;Deep vein thrombosis postoperative;Deficiency of bile secretion;Deja vu;Demyelinating polyneuropathy;Demyelination;Dermatitis;Dermatitis bullous;Dermatitis herpetiformis;Dermatomyositis;Device embolisation;Device related thrombosis;Diabetes mellitus;Diabetic ketoacidosis;Diabetic mastopathy;Dialysis amyloidosis;Dialysis membrane reaction;Diastolic hypotension;Diffuse vasculitis;Digital pitting scar;Disseminated intravascular coagulation;Disseminated intravascular coagulation in newborn;Disseminated neonatal herpes simplex;Disseminated varicella;Disseminated varicella zoster vaccine virus infection;Disseminated varicella zoster virus infection;DNA antibody positive;Double cortex syndrome;Double stranded DNA antibody positive;Dreamy state;Dressler's syndrome;Drop attacks;Drug withdrawal convulsions;Dyspnoea;Early infantile epileptic encephalopathy with burst-suppression;Eclampsia;Eczema herpeticum;Embolia cutis medicamentosa;Embolic cerebellar infarction;Embolic cerebral infarction;Embolic pneumonia;Embolic stroke;Embolism;Embolism arterial;Embolism venous;Encephalitis;Encephalitis allergic;Encephalitis autoimmune;Encephalitis brain stem;Encephalitis haemorrhagic;Encephalitis periaxialis diffusa;Encephalitis post immunisation;Encephalomyelitis;Encephalopathy;Endocrine disorder;Endocrine ophthalmopathy;Endotracheal intubation;Enteritis;Enteritis leukopenic;Enterobacter pneumonia;Enterocolitis;Enteropathic spondylitis;Eosinopenia;Eosinophilic

fasciitis;Eosinophilic granulomatosis with polyangiitis;Eosinophilic oesophagitis;Epidermolysis;Epilepsy;Epilepsy surgery;Epilepsy with myoclonic-atonic seizures;Epileptic aura;Epileptic psychosis;Erythema;Erythema induratum;Erythema multiforme;Erythema nodosum;Evans syndrome;Exanthema subitum;Expanded disability status scale score decreased;Expanded disability status scale score increased;Exposure to communicable disease;Exposure to SARS-CoV-2;Eye oedema;Eye pruritus;Eye swelling;Eyelid oedema;Face oedema;Facial paralysis;Facial paresis;Faciobrachial dystonic seizure;Fat embolism;Febrile convulsion;Febrile infection-related epilepsy syndrome;Febrile neutropenia;Felty's syndrome;Femoral artery embolism;Fibrillary glomerulonephritis;Fibromyalgia;Flushing;Foaming at mouth;Focal cortical resection;Focal dyscognitive seizures;Foetal distress syndrome;Foetal placental thrombosis;Factor hepatic;Foreign body embolism;Frontal lobe epilepsy;Fulminant type 1 diabetes mellitus;Galactose elimination capacity test abnormal;Galactose elimination capacity test decreased;Gamma-glutamyltransferase abnormal;Gamma-glutamyltransferase increased;Gastritis herpes;Gastrointestinal amyloidosis;Gelastic seizure;Generalised onset non-motor seizure;Generalised tonic-clonic seizure;Genital herpes;Genital herpes simplex;Genital herpes zoster;Giant cell arteritis;Glomerulonephritis;Glomerulonephritis membranoproliferative;Glomerulonephritis membranous;Glomerulonephritis rapidly progressive;Glossopharyngeal nerve paralysis;Glucose transporter type 1 deficiency syndrome;Glutamate dehydrogenase increased;Glycocholic acid increased;GM2 gangliosidosis;Goodpasture's syndrome;Graft thrombosis;Granulocytopenia;Granulocytopenia neonatal;Granulomatosis with polyangiitis;Granulomatous dermatitis;Grey matter heterotopia;Guanase increased;Guillain-Barre syndrome;Haemolytic anaemia;Haemophagocytic lymphohistiocytosis;Haemorrhage;Haemorrhagic ascites;Haemorrhagic disorder;Haemorrhagic pneumonia;Haemorrhagic varicella syndrome;Haemorrhagic vasculitis;Hantavirus pulmonary infection;Hashimoto's encephalopathy;Hashitoxicosis;Hemimegalencephaly;Henoch-Schonlein purpura;Henoch-Schonlein purpura nephritis;Hepaplastin abnormal;Hepaplastin decreased;Heparin-induced thrombocytopenia;Hepatic amyloidosis;Hepatic artery embolism;Hepatic artery flow decreased;Hepatic artery thrombosis;Hepatic enzyme abnormal;Hepatic enzyme decreased;Hepatic enzyme increased;Hepatic fibrosis marker abnormal;Hepatic fibrosis marker increased;Hepatic function abnormal;Hepatic hydrothorax;Hepatic hypertrophy;Hepatic hypoperfusion;Hepatic lymphocytic infiltration;Hepatic mass;Hepatic pain;Hepatic sequestration;Hepatic vascular resistance increased;Hepatic vascular thrombosis;Hepatic vein embolism;Hepatic vein thrombosis;Hepatic venous pressure gradient abnormal;Hepatic venous pressure gradient increased;Hepatitis;Hepatobiliary scan abnormal;Hepatomegaly;Hepatosplenomegaly;Hereditary angioedema with C1 esterase inhibitor deficiency;Herpes dermatitis;Herpes gestationis;Herpes oesophagitis;Herpes ophthalmic;Herpes pharyngitis;Herpes sepsis;Herpes simplex;Herpes simplex cervicitis;Herpes simplex colitis;Herpes simplex encephalitis;Herpes simplex gastritis;Herpes simplex hepatitis;Herpes simplex meningitis;Herpes simplex meningoencephalitis;Herpes simplex meningomyelitis;Herpes simplex necrotising retinopathy;Herpes simplex oesophagitis;Herpes simplex otitis externa;Herpes simplex pharyngitis;Herpes simplex pneumonia;Herpes simplex reactivation;Herpes simplex sepsis;Herpes simplex viraemia;Herpes simplex virus conjunctivitis neonatal;Herpes simplex visceral;Herpes virus

infection; Herpes zoster; Herpes zoster cutaneous disseminated; Herpes zoster infection neurological; Herpes zoster meningitis; Herpes zoster meningoencephalitis; Herpes zoster meningomyelitis; Herpes zoster meningoradiculitis; Herpes zoster necrotising retinopathy; Herpes zoster oticus; Herpes zoster pharyngitis; Herpes zoster reactivation; Herpetic radiculopathy; Histone antibody positive; Hoigne's syndrome; Human herpesvirus 6 encephalitis; Human herpesvirus 6 infection; Human herpesvirus 6 infection reactivation; Human herpesvirus 7 infection; Human herpesvirus 8 infection; Hyperammonaemia; Hyperbilirubinaemia; Hypercholia; Hypergammaglobulinaemia benign monoclonal; Hyperglycaemic seizure; Hypersensitivity; Hypersensitivity vasculitis; Hyperthyroidism; Hypertransaminaemia; Hyperventilation; Hypoalbuminaemia; Hypocalcaemic seizure; Hypogammaglobulinaemia; Hypoglossal nerve paralysis; Hypoglossal nerve paresis; Hypoglycaemic seizure; Hyponatraemic seizure; Hypotension; Hypotensive crisis; Hypothenar hammer syndrome; Hypothyroidism; Hypoxia; Idiopathic CD4 lymphocytopenia; Idiopathic generalised epilepsy; Idiopathic interstitial pneumonia; Idiopathic neutropenia; Idiopathic pulmonary fibrosis; IgA nephropathy; IgM nephropathy; IIIrd nerve paralysis; IIIrd nerve paresis; Iliac artery embolism; Immune thrombocytopenia; Immune-mediated adverse reaction; Immune-mediated cholangitis; Immune-mediated cholestasis; Immune-mediated cytopenia; Immune-mediated encephalitis; Immune-mediated encephalopathy; Immune-mediated endocrinopathy; Immune-mediated enterocolitis; Immune-mediated gastritis; Immune-mediated hepatic disorder; Immune-mediated hepatitis; Immune-mediated hyperthyroidism; Immune-mediated hypothyroidism; Immune-mediated myocarditis; Immune-mediated myositis; Immune-mediated nephritis; Immune-mediated neuropathy; Immune-mediated pancreatitis; Immune-mediated pneumonitis; Immune-mediated renal disorder; Immune-mediated thyroiditis; Immune-mediated uveitis; Immunoglobulin G4 related disease; Immunoglobulins abnormal; Implant site thrombosis; Inclusion body myositis; Infantile genetic agranulocytosis; Infantile spasms; Infected vasculitis; Infective thrombosis; Inflammation; Inflammatory bowel disease; Infusion site thrombosis; Infusion site vasculitis; Injection site thrombosis; Injection site urticaria; Injection site vasculitis; Instillation site thrombosis; Insulin autoimmune syndrome; Interstitial granulomatous dermatitis; Interstitial lung disease; Intracardiac mass; Intracardiac thrombus; Intracranial pressure increased; Intrapericardial thrombosis; Intrinsic factor antibody abnormal; Intrinsic factor antibody positive; IPEX syndrome; Irregular breathing; IRVAN syndrome; IVth nerve paralysis; IVth nerve paresis; JC polyomavirus test positive; JC virus CSF test positive; Jeavons syndrome; Jugular vein embolism; Jugular vein thrombosis; Juvenile idiopathic arthritis; Juvenile myoclonic epilepsy; Juvenile polymyositis; Juvenile psoriatic arthritis; Juvenile spondyloarthritis; Kaposi sarcoma inflammatory cytokine syndrome; Kawasaki's disease; Kayser-Fleischer ring; Keratoderma blenorrhagica; Ketosis-prone diabetes mellitus; Kounis syndrome; Lafora's myoclonic epilepsy; Lambli's excrescences; Laryngeal dyspnoea; Laryngeal oedema; Laryngeal rheumatoid arthritis; Laryngospasm; Laryngotracheal oedema; Latent autoimmune diabetes in adults; LE cells present; Lemierre syndrome; Lennox-Gastaut syndrome; Leucine aminopeptidase increased; Leukoencephalomyelitis; Leukoencephalopathy; Leukopenia; Leukopenia neonatal; Lewis-Sumner syndrome; Lhermitte's sign; Lichen planopilaris; Lichen planus; Lichen sclerosus; Limbic encephalitis; Linear IgA disease; Lip oedema; Lip swelling; Liver function test abnormal; Liver function test decreased; Liver function test increased; Liver induration; Liver injury; Liver iron concentration abnormal; Liver iron concentration

increased;Liver opacity;Liver palpable;Liver sarcoidosis;Liver scan abnormal;Liver tenderness;Low birth weight baby;Lower respiratory tract herpes infection;Lower respiratory tract infection;Lower respiratory tract infection viral;Lung abscess;Lupoid hepatic cirrhosis;Lupus cystitis;Lupus encephalitis;Lupus endocarditis;Lupus enteritis;Lupus hepatitis;Lupus myocarditis;Lupus myositis;Lupus nephritis;Lupus pancreatitis;Lupus pleurisy;Lupus pneumonitis;Lupus vasculitis;Lupus-like syndrome;Lymphocytic hypophysitis;Lymphocytopenia neonatal;Lymphopenia;MAGIC syndrome;Magnetic resonance imaging liver abnormal;Magnetic resonance proton density fat fraction measurement;Mahler sign;Manufacturing laboratory analytical testing issue;Manufacturing materials issue;Manufacturing production issue;Marburg's variant multiple sclerosis;Marchiafava-Bignami disease;Marine Lenhart syndrome;Mastocytic enterocolitis;Maternal exposure during pregnancy;Medical device site thrombosis;Medical device site vasculitis;MELAS syndrome;Meningitis;Meningitis aseptic;Meningitis herpes;Meningoencephalitis herpes simplex neonatal;Meningoencephalitis herpetic;Meningomyelitis herpes;MERS-CoV test;MERS-CoV test negative;MERS-CoV test positive;Mesangioproliferative glomerulonephritis;Mesenteric artery embolism;Mesenteric artery thrombosis;Mesenteric vein thrombosis;Metapneumovirus infection;Metastatic cutaneous Crohn's disease;Metastatic pulmonary embolism;Microangiopathy;Microembolism;Microscopic polyangiitis;Middle East respiratory syndrome;Migraine-triggered seizure;Miliary pneumonia;Miller Fisher syndrome;Mitochondrial aspartate aminotransferase increased;Mixed connective tissue disease;Model for end stage liver disease score abnormal;Model for end stage liver disease score increased;Molar ratio of total branched-chain amino acid to tyrosine;Molybdenum cofactor deficiency;Monocytopenia;Mononeuritis;Mononeuropathy multiplex;Morphaea;Morvan syndrome;Mouth swelling;Moyamoya disease;Multifocal motor neuropathy;Multiple organ dysfunction syndrome;Multiple sclerosis;Multiple sclerosis relapse;Multiple sclerosis relapse prophylaxis;Multiple subpial transection;Multisystem inflammatory syndrome in children;Muscular sarcoidosis;Myasthenia gravis;Myasthenia gravis crisis;Myasthenia gravis neonatal;Myasthenic syndrome;Myelitis;Myelitis transverse;Myocardial infarction;Myocarditis;Myocarditis post infection;Myoclonic epilepsy;Myoclonic epilepsy and ragged-red fibres;Myokymia;Myositis;Narcolepsy;Nasal herpes;Nasal obstruction;Necrotising herpetic retinopathy;Neonatal Crohn's disease;Neonatal epileptic seizure;Neonatal lupus erythematosus;Neonatal mucocutaneous herpes simplex;Neonatal pneumonia;Neonatal seizure;Nephritis;Nephrogenic systemic fibrosis;Neuralgic amyotrophy;Neuritis;Neuritis cranial;Neuromyelitis optica pseudo relapse;Neuromyelitis optica spectrum disorder;Neuromyotonia;Neuronal neuropathy;Neuropathy peripheral;Neuropathy, ataxia, retinitis pigmentosa syndrome;Neuropsychiatric lupus;Neurosarcoidosis;Neutropenia;Neutropenia neonatal;Neutropenic colitis;Neutropenic infection;Neutropenic sepsis;Nodular rash;Nodular vasculitis;Noninfectious myelitis;Noninfective encephalitis;Noninfective encephalomyelitis;Noninfective oophoritis;Obstetrical pulmonary embolism;Occupational exposure to communicable disease;Occupational exposure to SARS-CoV-2;Ocular hyperaemia;Ocular myasthenia;Ocular pemphigoid;Ocular sarcoidosis;Ocular vasculitis;Oculofacial paralysis;Oedema;Oedema blister;Oedema due to hepatic disease;Oedema mouth;Oesophageal achalasia;Ophthalmic artery thrombosis;Ophthalmic herpes simplex;Ophthalmic herpes zoster;Ophthalmic vein thrombosis;Optic neuritis;Optic

neuropathy; Optic perineuritis; Oral herpes; Oral lichen planus; Oropharyngeal oedema; Oropharyngeal spasm; Oropharyngeal swelling; Osmotic demyelination syndrome; Ovarian vein thrombosis; Overlap syndrome; Paediatric autoimmune neuropsychiatric disorders associated with streptococcal infection; Paget-Schroetter syndrome; Palindromic rheumatism; Palisaded neutrophilic granulomatous dermatitis; Palmoplantar keratoderma; Palpable purpura; Pancreatitis; Panencephalitis; Papillophlebitis; Paracancerous pneumonia; Paradoxical embolism; Parainfluenzae viral laryngotracheobronchitis; Paraneoplastic dermatomyositis; Paraneoplastic pemphigus; Paraneoplastic thrombosis; Paresis cranial nerve; Parietal cell antibody positive; Paroxysmal nocturnal haemoglobinuria; Partial seizures; Partial seizures with secondary generalisation; Patient isolation; Pelvic venous thrombosis; Pemphigoid; Pemphigus; Penile vein thrombosis; Pericarditis; Pericarditis lupus; Perihepatic discomfort; Periorbital oedema; Periorbital swelling; Peripheral artery thrombosis; Peripheral embolism; Peripheral ischaemia; Peripheral vein thrombus extension; Periportal oedema; Peritoneal fluid protein abnormal; Peritoneal fluid protein decreased; Peritoneal fluid protein increased; Peritonitis lupus; Pernicious anaemia; Petit mal epilepsy; Pharyngeal oedema; Pharyngeal swelling; Pityriasis lichenoides et varioliformis acuta; Placenta praevia; Pleuroparenchymal fibroelastosis; Pneumobilia; Pneumonia; Pneumonia adenoviral; Pneumonia cytomegaloviral; Pneumonia herpes viral; Pneumonia influenzal; Pneumonia measles; Pneumonia mycoplasmal; Pneumonia necrotising; Pneumonia parainfluenzae viral; Pneumonia respiratory syncytial viral; Pneumonia viral; POEMS syndrome; Polyarteritis nodosa; Polyarthritides; Polychondritis; Polyglandular autoimmune syndrome type I; Polyglandular autoimmune syndrome type II; Polyglandular autoimmune syndrome type III; Polyglandular disorder; Polymicrogyria; Polymyalgia rheumatica; Polymyositis; Polyneuropathy; Polyneuropathy idiopathic progressive; Portal pyaemia; Portal vein embolism; Portal vein flow decreased; Portal vein pressure increased; Portal vein thrombosis; Portosplenomesenteric venous thrombosis; Post procedural hypotension; Post procedural pneumonia; Post procedural pulmonary embolism; Post stroke epilepsy; Post stroke seizure; Post thrombotic retinopathy; Post thrombotic syndrome; Post viral fatigue syndrome; Postictal headache; Postictal paralysis; Postictal psychosis; Postictal state; Postoperative respiratory distress; Postoperative respiratory failure; Postoperative thrombosis; Postpartum thrombosis; Postpartum venous thrombosis; Postpericardiotomy syndrome; Post-traumatic epilepsy; Postural orthostatic tachycardia syndrome; Precerebral artery thrombosis; Pre-eclampsia; Preictal state; Premature labour; Premature menopause; Primary amyloidosis; Primary biliary cholangitis; Primary progressive multiple sclerosis; Procedural shock; Proctitis herpes; Proctitis ulcerative; Product availability issue; Product distribution issue; Product supply issue; Progressive facial hemiatrophy; Progressive multifocal leukoencephalopathy; Progressive multiple sclerosis; Progressive relapsing multiple sclerosis; Prosthetic cardiac valve thrombosis; Pruritus; Pruritus allergic; Pseudovasculitis; Psoriasis; Psoriatic arthropathy; Pulmonary amyloidosis; Pulmonary artery thrombosis; Pulmonary embolism; Pulmonary fibrosis; Pulmonary haemorrhage; Pulmonary microemboli; Pulmonary oil microembolism; Pulmonary renal syndrome; Pulmonary sarcoidosis; Pulmonary sepsis; Pulmonary thrombosis; Pulmonary tumour thrombotic microangiopathy; Pulmonary vasculitis; Pulmonary veno-occlusive disease; Pulmonary venous thrombosis; Pyoderma gangrenosum; Pyostomatitis vegetans; Pyrexia; Quarantine; Radiation leukopenia; Radiculitis

brachial;Radiologically isolated syndrome;Rash;Rash erythematous;Rash pruritic;Rasmussen encephalitis;Raynaud's phenomenon;Reactive capillary endothelial proliferation;Relapsing multiple sclerosis;Relapsing-remitting multiple sclerosis;Renal amyloidosis;Renal arteritis;Renal artery thrombosis;Renal embolism;Renal failure;Renal vascular thrombosis;Renal vasculitis;Renal vein embolism;Renal vein thrombosis;Respiratory arrest;Respiratory disorder;Respiratory distress;Respiratory failure;Respiratory paralysis;Respiratory syncytial virus bronchiolitis;Respiratory syncytial virus bronchitis;Retinal artery embolism;Retinal artery occlusion;Retinal artery thrombosis;Retinal vascular thrombosis;Retinal vasculitis;Retinal vein occlusion;Retinal vein thrombosis;Retinol binding protein decreased;Retinopathy;Retrograde portal vein flow;Retroperitoneal fibrosis;Reversible airways obstruction;Reynold's syndrome;Rheumatic brain disease;Rheumatic disorder;Rheumatoid arthritis;Rheumatoid factor increased;Rheumatoid factor positive;Rheumatoid factor quantitative increased;Rheumatoid lung;Rheumatoid neutrophilic dermatosis;Rheumatoid nodule;Rheumatoid nodule removal;Rheumatoid scleritis;Rheumatoid vasculitis;Saccadic eye movement;SAPHO syndrome;Sarcoidosis;SARS-CoV-1 test;SARS-CoV-1 test negative;SARS-CoV-1 test positive;SARS-CoV-2 antibody test;SARS-CoV-2 antibody test negative;SARS-CoV-2 antibody test positive;SARS-CoV-2 carrier;SARS-CoV-2 sepsis;SARS-CoV-2 test;SARS-CoV-2 test false negative;SARS-CoV-2 test false positive;SARS-CoV-2 test negative;SARS-CoV-2 test positive;SARS-CoV-2 viraemia;Satoyoshi syndrome;Schizencephaly;Scleritis;Sclerodactylia;Scleroderma;Scleroderma associated digital ulcer;Scleroderma renal crisis;Scleroderma-like reaction;Secondary amyloidosis;Secondary cerebellar degeneration;Secondary progressive multiple sclerosis;Segmented hyalinising vasculitis;Seizure;Seizure anoxic;Seizure cluster;Seizure like phenomena;Seizure prophylaxis;Sensation of foreign body;Septic embolus;Septic pulmonary embolism;Severe acute respiratory syndrome;Severe myoclonic epilepsy of infancy;Shock;Shock symptom;Shrinking lung syndrome;Shunt thrombosis;Silent thyroiditis;Simple partial seizures;Sjogren's syndrome;Skin swelling;SLE arthritis;Smooth muscle antibody positive;Sneezing;Spinal artery embolism;Spinal artery thrombosis;Splenic artery thrombosis;Splenic embolism;Splenic thrombosis;Splenic vein thrombosis;Spondylitis;Spondyloarthropathy;Spontaneous heparin-induced thrombocytopenia syndrome;Status epilepticus;Stevens-Johnson syndrome;Stiff leg syndrome;Stiff person syndrome;Stillbirth;Still's disease;Stoma site thrombosis;Stoma site vasculitis;Stress cardiomyopathy;Stridor;Subacute cutaneous lupus erythematosus;Subacute endocarditis;Subacute inflammatory demyelinating polyneuropathy;Subclavian artery embolism;Subclavian artery thrombosis;Subclavian vein thrombosis;Sudden unexplained death in epilepsy;Superior sagittal sinus thrombosis;Susac's syndrome;Suspected COVID-19;Swelling;Swelling face;Swelling of eyelid;Swollen tongue;Sympathetic ophthalmia;Systemic lupus erythematosus;Systemic lupus erythematosus disease activity index abnormal;Systemic lupus erythematosus disease activity index decreased;Systemic lupus erythematosus disease activity index increased;Systemic lupus erythematosus rash;Systemic scleroderma;Systemic sclerosis pulmonary;Tachycardia;Tachypnoea;Takayasu's arteritis;Temporal lobe epilepsy;Terminal ileitis;Testicular autoimmunity;Throat tightness;Thromboangiitis obliterans;Thrombocytopenia;Thrombocytopenic purpura;Thrombophlebitis;Thrombophlebitis migrans;Thrombophlebitis

neonatal;Thrombophlebitis septic;Thrombophlebitis superficial;Thromboplastin antibody positive;Thrombosis;Thrombosis corpora cavernosa;Thrombosis in device;Thrombosis mesenteric vessel;Thrombotic cerebral infarction;Thrombotic microangiopathy;Thrombotic stroke;Thrombotic thrombocytopenic purpura;Thyroid disorder;Thyroid stimulating immunoglobulin increased;Thyroiditis;Tongue amyloidosis;Tongue biting;Tongue oedema;Tonic clonic movements;Tonic convulsion;Tonic posturing;Topectomy;Total bile acids increased;Toxic epidermal necrolysis;Toxic leukoencephalopathy;Toxic oil syndrome;Tracheal obstruction;Tracheal oedema;Tracheobronchitis;Tracheobronchitis mycoplasmal;Tracheobronchitis viral;Transaminases abnormal;Transaminases increased;Transfusion-related alloimmune neutropenia;Transient epileptic amnesia;Transverse sinus thrombosis;Trigeminal nerve paresis;Trigeminal neuralgia;Trigeminal palsy;Truncus coeliacus thrombosis;Tuberous sclerosis complex;Tubulointerstitial nephritis and uveitis syndrome;Tumefactive multiple sclerosis;Tumour embolism;Tumour thrombosis;Type 1 diabetes mellitus;Type I hypersensitivity;Type III immune complex mediated reaction;Uhthoff's phenomenon;Ulcerative keratitis;Ultrasound liver abnormal;Umbilical cord thrombosis;Uncinate fits;Undifferentiated connective tissue disease;Upper airway obstruction;Urine bilirubin increased;Urobilinogen urine decreased;Urobilinogen urine increased;Urticaria;Urticaria papular;Urticarial vasculitis;Uterine rupture;Uveitis;Vaccination site thrombosis;Vaccination site vasculitis;Vagus nerve paralysis;Varicella;Varicella keratitis;Varicella post vaccine;Varicella zoster gastritis;Varicella zoster oesophagitis;Varicella zoster pneumonia;Varicella zoster sepsis;Varicella zoster virus infection;Vasa praevia;Vascular graft thrombosis;Vascular pseudoaneurysm thrombosis;Vascular purpura;Vascular stent thrombosis;Vasculitic rash;Vasculitic ulcer;Vasculitis;Vasculitis gastrointestinal;Vasculitis necrotising;Vena cava embolism;Vena cava thrombosis;Venous intravasation;Venous recanalisation;Venous thrombosis;Venous thrombosis in pregnancy;Venous thrombosis limb;Venous thrombosis neonatal;Vertebral artery thrombosis;Vessel puncture site thrombosis;Visceral venous thrombosis;VIth nerve paralysis;VIth nerve paresis;Vitiligo;Vocal cord paralysis;Vocal cord paresis;Vogt-Koyanagi-Harada disease;Warm type haemolytic anaemia;Wheezing;White nipple sign;XIth nerve paralysis;X-ray hepatobiliary abnormal;Young's syndrome;Zika virus associated Guillain Barre syndrome.



Urgent Warning

Children at Risk!

- *Zero healthy children have died from COVID.**
- *Children have a 99.97% COVID survival rate.**
- *The current COVID-19 vaccines are for variants that no longer exist.**
- *COVID-19 vaccines do not stop infection and potentially increase the likelihood of getting other variants.**

COVID-19 Vaccines: Risks vs. Benefits

X Covid Vaccine Adverse events reported to VAERS for Children Age 5-17 as of 6/17/22: Deaths: 116 / Permanently Disabled: 461 / Myocarditis: 1,335

X The Covid-19 vaccines have more adverse events reported than all other existing vaccines combined since the vaccine program began.

X In the Pfizer trials for children age 6 months to 4 years, over 2/3 of the vaccine group dropped out and did not complete the trial.

X In the Moderna trials, severe adverse events were 500% (6-23 months) and 342% (2-5-year-olds) higher than the placebo. (Some European countries are limiting the use of this vaccine in younger ages amid concerns over cardiovascular side effects.)

X The original Pfizer vaccine trial data released, under court order showed over 1,200 deaths and over 1,000 different adverse events in the first 90 days.

X NO trial data on the co-administration of the COVID-19 shots with other childhood injections and likelihood of interactions and complications are unknown.

All Risk, No Benefit

Ask questions, Demand answers, Be fully informed.

Source: <https://www.fda.gov/media/159195/download>

KS•HF
Kansans for Health Freedom

In life virtually every decision, recognized or not, is based on a cost/benefit analysis. The issue being discussed today is an example.

What is the cost to a child who receives the COVID 19 mRNA injection? What are the potential short term risks? What are the potential long term consequences, possible side effects or consequences 5-10 years after injection? **WE DON'T KNOW what the cost is!!!**

What is the potential benefit for the recipient of a therapy purported to prevent a disease with an almost **ZERO MORTALITY?** Does the mRNA injection prevent spread? Does it prevent infection/disease? In adults the answer is, "NO." In children the answer is **WE DON'T KNOW what the benefit is!!!**

Cost-we don't know/Benefit-we don't know. How can any rational person conclude injection of children with COVID 19 so called vaccination for a disease with a near zero mortality is a good idea based on this?

Jean Crowder
P.O. Box 121
Ware Neck, VA 23178

I'm **Barbara Zedler, M.D.**, a physician from Powhatan, to address the **current regulatory review of the administrative law chapter "State Board of Health Regulations for the Immunization of School Children" (12VAC5-110) to determine whether it should be repealed, amended, or retained.**

In Virginia, by law, parents have "the fundamental right to make decisions concerning the upbringing, education, and care of the parent's child." (§ 1-240.1). *Parents* choose how to provide for their bodily needs such as healthcare. The *state's* role is to make healthcare available and accessible to its citizens, *not* to mandate or require *any* specific pharmacologic product, whether drugs or vaccines

Furthermore, each individual has a fundamental God-given human right of bodily autonomy and the right to private, voluntary and informed medical decision making.

Vaccine mandates and discrimination based on vaccination status violate all of these.

I urge the Board to repeal the entire chapter specifically for that reason and the following:

- 1. This shot is not a vaccine, and 2. CDC's and FDA's approval of the shots as safe and effective was not "evidence-based."**

This experimental genetic injection simply produces an immune response and does not meet the traditional vaccine regulatory standards for safety or effectiveness.

Most appalling is the catastrophic "safety" profile of the shot even in its initial clinical trials. However, that information has been ruthlessly suppressed from the public, thus denying them true informed consent. We have repeatedly shared that information with VDH, Commissioner Green and this Board, but you have ignored, denied or mischaracterized all of it

- 3. The shot is *not* "routinely recommended" for healthy children. And in fact, it's banned or recommended against in a growing number of countries and even U.S. states.**

I urge you to enable individuals to make voluntary, informed medical decisions in the privacy of the patient-doctor relationship instead of mandating any more shots.

This is NOT about a virus, vaccine, science, or healthcare.

This is about CONTROL.

We will not comply with violations of our natural God-given right to bodily autonomy or that of our minor children.

Board of Health: Dec 15, 2022

Good Morning BOH!

Chairman Critzer, members of the board and guests, my name is Elizabeth Higgins and I am a concerned citizen of the state of Virginia. I am here to ask that you not add the experimental COVID gene altering shot to the mandatory childhood immunization schedule.

As the board of health, your decisions affect the life and death of a multitude of people. Your mission statement specifically states that your function is to “promote and protect the health of all Virginians” and you are to “serve(s) as the primary advocate and representative of the citizens of the Commonwealth in achieving optimal health.”

Health is defined as wellbeing and I ask you to protect the health - the wellbeing of our children. They have natural immunity to COVID and recover from it 99.799% of the time, better recovery than seasonal flu. (PJMedia.com March 18, 2022) My question is, why do children need a shot when they have an effective immune system against the COVID virus?

I ask you to advocate for what promotes optimal health. We see that the COVID shots do not promote optimal health. The shots in adults are now being shown to lower resistance to COVID and increase reinfection. My question to you - why would this be helpful to children?

The two new FDA emergency approved COVID shots for children as young as 6 months of age have been found by the CDC to have subpar protection against symptomatic disease, particularly for younger people. This is the study that had no human data and used safety data from old vaccines. (Epic Times, Dec. 8, 2022). Is this acceptable to you?

I ask you to take a stand and not let our children be human experiments.

I ask you to uphold the standards for proper research and safety protocols and reject what is improper and unproven.

I ask you to promote and protect the wellbeing of Virginia’s children by allowing their immune systems to function without the intervention of unproven COVID protocols that do not provide optimal health. I ask that you do not make COVID shots mandatory!

Virginia Dept of Health Meeting 15 Dec 2022
2 minutes on behalf of VAMFA
Lori D. Leonard, BS, DVM, VetMFHom

The mission of the Virginia Department of Health is “protecting the health and promoting the well-being of all people in Virginia”. The vision statement is “healthy people in healthy communities”.

Virginia has a population of over 8.6 million so it is quite generous of you to afford twenty minutes of comments from the public.

Your lack of planning, your lies and incompetence have put this Commonwealth and her citizens where we are today. Over 22,000 Virginians have died. You have done nothing to protect our health or well-being. Instead, you have destroyed them. And you don't care.

You CANNOT tell us what to do with our children. Our children do not belong to you. We are not your property. Children have an almost 0% chance of succumbing to C-19. Therefore they don't need any protection beyond that of a functioning immune system.

You don't vaccinate your way out of a pandemic. This is public health 101. You are promoting an experimental, untested bio weapon that has not been proven to be safe or effective. It contains an imaginary virus that has never been isolated, and so-called variants that are extinct. This makes no sense. And you should know better.

Because of you and your governmental cohorts, we were closed down, locked down, shut down, shut out, masked, and censored. Life saving treatments were and are illegal. Many thousands of Virginia citizens were denied care. Others were subjected to hospital death protocols, where they died. No surprise there. Money is a powerful motivator. These are crimes against humanity.

VAMFA speech 13Dec22 VDH

Ann Kelly James City County, VA

12/15/22

I am here today to make a few brief points on the CDC recommendation to add the Covid 19 vaccine to the school immunization schedule.

The potential risks of the Covid 19 vaccine are not reversible.

The gene injected into the body forces the production of spike proteins which can cause permanent damage to:

Brain and nervous system

Heart and blood vessels, including formation of clots

Reproductive system, affecting future generations of a family

Immune system.

We need years of testing before we can really understand the risks involved.

Children do not represent danger to family members. It is the opposite. Natural immunity is the best protection to your family and to your community.

I ask that this Board take a step back from walking in lockstep with the CDC recommendations. I implore you to be critical thinkers and researchers before drawing a conclusion. Let us employ the same educational techniques we ask of our children in this decision making process. To do your homework. Thank you.

Dear Members of the VDH Board,

I am Donna Machen of Mathews County, Virginia.

“Let every soul be subject to the governing authorities. For there is no authority except from God, and the authorities that exist are appointed by God. Therefore whoever resists the authority resists the ordinance of God, and those who resist will bring judgement on themselves. For rulers are not a terror to good works, but to evil. DO YOU WANT TO BE UNAFRAID OF AUTHORITY? DO WHAT IS GOOD, AND YOU WILL HAVE PRAISE FROM THE SAME. FOR HE IS GOD’S MINISTER TO YOU FOR GOOD. BUT IF YOU DO EVIL, BE AFRAID; for he does not bear the sword in vain; for he is God’s minister, an avenger to execute wrath on him who practices evil. Therefore you must be subject, not only because of wrath but also for conscience sake.” Romans 13:1-5

I am here today to do good to you, the members of the board and to the children of Virginia as a schoolteacher and citizen of this state.

I am here today to voice my opposition to adding the COVID-19 shots to the Virginia school immunization schedule. They should not be mandated for families whose parents, under the U. S. Constitution and Virginia Code 1-240.1, decide what enters their child’s body. Parents should choose if they want their child to keep their superior immune system made by a perfect God or substitute it for a system tampered with by man that will continue to fail against a mutating virus. Will you pass or fail the test? You have a great responsibility today to protect the health of Virginia’s school-aged children. You have been appointed by the Governor of Virginia and that government is ruled by we the people, under God, in a constitutional republic. Stop the shot and may God bless you.

“DO YOU WANT TO BE UNAFRAID OF AUTHORITY? DO WHAT IS GOOD, AND YOU WILL HAVE PRAISE FROM THE SAME. FOR HE IS GOD’S MINISTER TO YOU FOR GOOD. BUT IF YOU DO EVIL, BE AFRAID...” Romans 13:3-4a.

Dear Members of the Board,

Peter Machen, Mathews, VA

I am here today to speak in opposition to adding the Covid-19 jab. If we add the jab to the schedule, then we will have thousands of Virginia's children sick and the blood will be on YOUR hands. Here is the VAERS Data:

COVID Vaccine Reports in Children
(Ages 6 mos.-17 years)

Through December 02, 2022

Deaths: **172**

Permanently Disabled: **549**

Myocarditis: **1,709**

Total Reports: 60142

Life Threatening: 691

Hospitalized: 5370

ER Visit: 5370

Not Recovered: 10329

Encephalitis/ Encephalopathy: 281

Bell's palsy: 233

Severe Allergy: 1629

Migraine/Headache: 4389

Aneurysm/Cerebral Hemorrhage: 44

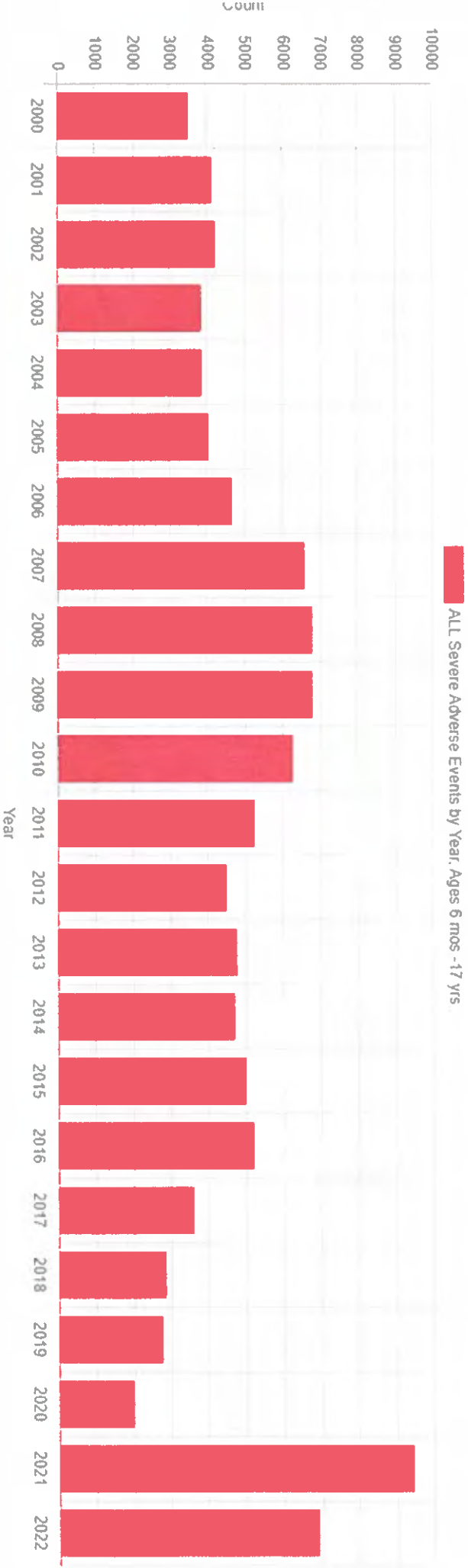
Thrombocytopenia/ Low Platelet: 259

Guillain Barre/Paralysis: 109

Diabetes: 94

Appendicitis: 119

Stop the Shot!



Hi, Ruth Machen, Mathews VA. I could stand here all day and tell you all the stories of real people who I personally know of and have read about who have been injured or died from the COVID shot. Hundreds, thousands, millions of people's lives have been effected forever. I don't know how people can cover their eyes to these people. We need your help fighting for freedom. It's too precious to lose. We will win with or without your help. With your help we can save freedom and humanity. If you don't help, we will pay a higher cost. You have a choice from this second on. Fight for us and God will win for you, or continue on the path you are on. You will never be able to say no one told you. Years from now, you will look back. When we pay the price, when millions of children are dead and injured, all of this will haunt you for the rest of your life. If you choose to do right, your life will change forever. You will tell your grandchildren and great-grandchildren about how you fought with every breath for them. So they could enjoy all the freedoms you once had. Stop the shot. God will win!

*As a mother of a V injured Child I Object to Adding
C19 V*

* *collin Greene just said "Pandemic ending"*

*1. CDC maintains Children in Lowest Demographic Endemic
for Risk of Illness*

2. President said Pandemic is Over!

3. V is under EUA not Fully FDA Approved

RE: V

(EUA from FDA website Dec 14, 2022)

COVID-19 vaccines... For an EUA to be issued for a vaccine... FDA must determine that the known and **potential benefits outweigh the known and potential risks of the vaccine.**

FUN FACT:

On May 19, 2022, the COVID-19 Federal Vaccine Doses, Vaccines Received, Cases and Deaths by Date Reported, and Cases by Vaccination Status dashboards will be retired.

So Where did ACIP get their data?

* *also stated "natural immunity is whole and complete immunity"*

(CDC or VDH website Dec 14, 2022)

ACIP aka CDC gives vaccine **recommendations**.

Based on

- How safe and **effective** the vaccine is when given at a specific age
- The **severity** of the disease the vaccine prevents
- How well the vaccine helps the body produce **immunity** to the disease

People who are **vaccinated may still get COVID-19**
–**So they are Not Effective and Don't provide Immunity - Low child hospitalized – So Not Severe in children**

Current Childhood V Schedule Clearly States
“**Vaccine-Preventable Diseases and the Vaccines that Prevent Them**”

C19 V does NOT PREVENT as per CDC and Should Not Be Added to Childhood V Schedule

Where is the Informed Consent PRIOR to Injection? This is Criminal

Ann Parker
Campbell County School Board

Ann Per
Pg 206

2022 Recommended Immunizations for Children from Birth Through 6 Years Old



Is your family growing? To protect your new baby against whooping cough, get a Tdap vaccine. The recommended time is the 27th through 36th week of pregnancy. Talk to your doctor for more details.

Shaded boxes indicate the vaccine can be given during shown age range.

COVID-19 VACCINATION IS RECOMMENDED FOR AGES 6 MONTHS AND OLDER.

NOTE: If your child misses a shot, you don't need to start over. Just go back to your child's doctor for the next shot. Talk with your child's doctor if you have questions about vaccines.

FOOTNOTES:

- * Two doses given at least four weeks apart are recommended for children age 6 months through 8 years of age who are getting an influenza (flu) vaccine for the first time and for some other children in this age group.
- † Two doses of HepA vaccine are needed for lasting protection. The first dose of HepA vaccine should be given between 12 months and 23 months of age. The second dose should be given 6 months after the first dose. All children and adolescents over 24 months of age who have not been vaccinated should also receive 2 doses of HepA vaccine.

If your child has any medical conditions that put him at risk for infection or is traveling outside the United States, talk to your child's doctor about additional vaccines that he or she may need.

See back page for more information on vaccine-preventable diseases and the vaccines that prevent them.

For more information, call toll-free
1-800-CDC-INFO (1-800-232-4636)
 or visit
www.cdc.gov/vaccines/parents



U.S. Department of Health and Human Services
 Centers for Disease Control and Prevention



American Academy of Pediatrics
 DEDICATED TO THE HEALTH OF ALL CHILDREN™

Ann Per pg 3 of

Vaccine-Preventable Diseases and the Vaccines that Prevent Them

Disease	Vaccine	Disease spread by	Disease symptoms	Disease complications
Chickenpox	Vaccinia vaccine protects against chickenpox.	Air, direct contact	Rash, tiredness, headache, fever	Infected blisters, bleeding disorders, encephalitis (brain swelling), pneumonia (infection in the lungs), death
Diphtheria	DTap* vaccine protects against diphtheria.	Air, direct contact	Sore throat, mild fever, weakness, swollen glands in neck	Swelling of the heart muscle, heart failure, coma, paralysis, death
Hib	Hib vaccine protects against <i>Haemophilus influenzae</i> type b.	Air, direct contact	May be no symptoms unless bacteria enter the blood	Meningitis (infection of the covering around the brain and spinal cord), intellectual disability, epiglottitis (life-threatening infection that can block the windpipe and lead to serious breathing problems), pneumonia (infection in the lungs), death
Hepatitis A	HepA vaccine protects against hepatitis A.	Direct contact, contaminated food or water	May be no symptoms, fever, stomach pain, loss of appetite, fatigue, vomiting, jaundice (yellowing of skin and eyes), dark urine	Liver failure, arthralgia (joint pain), kidney, pancreatic and blood disorders, death
Hepatitis B	HepB vaccine protects against hepatitis B.	Contact with blood or body fluids	May be no symptoms, fever, headache, weakness, vomiting, jaundice (yellowing of skin and eyes), joint pain	Chronic liver infection, liver failure, liver cancer, death
Influenza (Flu)	Flu vaccine protects against influenza.	Air, direct contact	Fever, muscle pain, sore throat, cough, extreme fatigue	Pneumonia (infection in the lungs), bronchitis, sinus infections, ear infections, death
Measles	MMR** vaccine protects against measles.	Air, direct contact	Rash, fever, cough, runny nose, pink eye	Encephalitis (brain swelling), pneumonia (infection in the lungs), death
Mumps	MMR** vaccine protects against mumps.	Air, direct contact	Swollen salivary glands (under the jaw), fever, headache, tiredness, muscle pain	Meningitis (infection of the covering around the brain and spinal cord), encephalitis (brain swelling), inflammation of testicles or ovaries, deafness, death
Pertussis	DTap* vaccine protects against pertussis (whooping cough).	Air, direct contact	Severe cough, runny nose, apnea (a pause in breathing in infants)	Pneumonia (infection in the lungs), death
Polio	IPV vaccine protects against polio.	Air, direct contact, through the mouth	May be no symptoms, sore throat, fever, nausea, headache	Paralysis, death
Pneumococcal	PCV13 vaccine protects against pneumococcus.	Air, direct contact	May be no symptoms, pneumonia (infection in the lungs)	Bacteremia (blood infection), meningitis (infection of the covering around the brain and spinal cord), death
Rotavirus	RV vaccine protects against rotavirus.	Through the mouth	Diarrhea, fever, vomiting	Severe diarrhea, dehydration, death
Rubella	MMR** vaccine protects against rubella.	Air, direct contact	Sometimes rash, fever, swollen lymph nodes	Very serious in pregnant women — can lead to miscarriage, stillbirth, premature delivery, birth defects
Tetanus	DTaP* vaccine protects against tetanus.	Exposure through cuts in skin	Stiffness in neck and abdominal muscles, difficulty swallowing, muscle spasms, fever	Broken bones, breathing difficulty, death

* DTap combines protection against diphtheria, tetanus, and pertussis.

** MMR combines protection against measles, mumps, and rubella.

Ann Per
8/4/08

My name is susan franz. I'm an RN, and I am here to advocate for the children of Virginia. I am asking that you do not add the Covid injection to the childhood immunization schedule despite the fact that it is now recommended by the CDC. I know that in the past you follow CDC recommendations and I know that the state code of Virginia gives you authority to do this. However, you can operate as an independent body. The injection has already been given to many children and has caused disability and death in many instances. Several European countries have stopped injecting their children with this poison. The data and statistics are readily available. I challenge you to do an independent investigation of the effects of this injection on children. Your department continues to promote this injection as safe and effective, when in fact, it is dangerous and ineffective. I call on you to stop the lies now. Protect the children of Virginia and stop the shots for all ages. Past moments in history show that when called to account for their harmful actions, people say " I was just doing my job". That excuse will not be acceptable when the public realizes that they were lied to regarding these poisonous injections. Your job is to take care of the health of Virginians.

Good morning....My name is LTC (retired) Robyn Middleton. I served 23 years in the Air Force Medical Service Corps....and the last 5 years of my duty as the Deputy Reserve Medical Forces Advisor to the AF Surgeon General. My comments are my own and do not reflect that of DOD. I briefly mention my background to convey that I understand the heavy burden you all carry as administrators in shaping safe health policy.

We in Virginia expect and demand that medical coercion, lack of informed consent, and scientific censorship will not be tolerated.

We expect and demand that all physicians' right to treat freely and provide early COVID care will not be obstructed. We know that the EUA was illegally obtained because early, safe and effective treatment existed from the onset.

We expect and demand that all patients' right to bodily autonomy and their right to choose (or decline) care will be protected w/out discrimination or denial of care.

We expect that Virginia will follow the lead of other states such as Florida and not follow the CDC ACIP's reckless guidelines to add COVID 19 injections to the schedule. I trust you all remember the public statements made by Gov Youngkin and AG Miyares on 21 Oct that these "recommendations" will NOT become requirements here in Virginia.

The public knows the ACIP vote was about prioritizing profit over patient safety. With the 1986 National Childhood Vaccine Injury Act....additions to the childhood schedule, bestow manufacturers near indefinite freedom from liability.

We know the injections do not prevent contracting or transmitting the virus.

We know that children are statistically at zero risk.

We know these injections provide no benefit for children.....only risk of harm. The Hippocratic Oath to do no harm is not negotiable.

We must reaffirm basic, core medical ethics to protect the most precious segment of society.....our children.

The Virginia Medical Freedom Alliance is here to educate the public and to hold all regulatory healthcare and governmental entities accountable. Stand with us to do the right thing. Stand with us to protect the children of Virginia. Any other course of action will serve only to further erode Virginians' trust in public health. We thank you and look forward to working closely with you.

I come to you as a parent and grandparent, but also as a citizen concerned about the welfare of all children in Virginia. I am very concerned that the VDoH might consider including COVID-19 shots in the childhood immunization schedule. The Hippocratic Oath says first do no harm. The benefit of a medical treatment must outweigh the risks.

The shots have proven to be of very little benefit in stopping the spread or severity of COVID-19. Data from the Pfizer clinical trial has shown that the minimal immunity that children have immediately after each shot wanes quickly, and that after only four months children are actually more likely to catch COVID than if they had never received the shot in the first place. More recent data has shown that children who have received the shot actually have more severe symptoms than those who chose not to take the shots. So, as a "vaccine" the shots are a failure—no overall benefit to the shot recipient or to the community at large.

And what about the risks? The clinical trials for all of the COVID-19 shots showed alarmingly high rates of severe adverse effects including heart attacks, strokes, blood clots, myocarditis, pericarditis, neurological effects, and autoimmune effects in children as well as in adults. Children are at extremely low risk for death or severe illness from COVID-19, so the risks of the shots far outweigh the benefits for healthy children. Children with pre-existing conditions should be consulting their own doctors to determine their personal risk/benefit profiles.

The COVID-19 shots have been rushed through on emergency approvals with compromised short-term testing and no long-term testing. The short-term results the pharmaceutical companies were forced to release by lawsuits proved that they are dangerous and should never have been approved for children. Don't let anyone tell you that it is normal for so many healthy active young people to suddenly collapse with heart problems!

The pharmaceutical companies will be shielded from liability for injuries if these shots are added to the childhood immunization schedule, and they stand to gain billions in taxpayer dollars from endless booster shots. Therefore, any board members who have employment or financial relationships with pharmaceutical companies or major health networks should recuse themselves from regulatory decisions regarding these shots.

I strongly urge you not to add any Covid-19 shots to the childhood immunization schedule. The safety of Virginia's precious children is at stake.

December 15, 2022

Virginia Department of Health
Office of the State Health Commissioner

Attn: Colin M. Greene MD MPH

I am making a written statement to you at this quarterly meeting of the Virginia Department of Health regarding mandated shots, not only for adults, but particularly for children. The CDC has said that these shots do not prevent transmission of Covid 19, therefore it seems ludicrous to take an experimental injection that has no benefit but many risks.

I worked as an RN for over 50 years and in clinical research for more than 20 years at VCU where I obtained my MPH. I was certified in research and learned about the "Nuremberg Code", the "Declaration of Helsinki", and the "Belmont Report" from the ethics classes which were taught as part of that process

The Covid 19 injections have never been FDA approved. They are experimental biologics using new technology. The citizens receiving these injections have not been informed of the experimental nature of the drug, the adverse side effects, the long term data which does not exist, and they believe that "authorized" is the same as approval and it is not. And the lack of long term data is particularly harmful to children.

My hope for the future is that another Nuremberg Trial will happen, not only here in the U.S., but worldwide. Those who have perpetrated this crime will be held accountable starting from the top all the way down to the individual who administered the injection without obtaining informed consent. If not in this life, they will be accountable in the next. It is doubtful that the perpetrators believe in a next life because there is no way they could be doing this to fellow human beings if they did. The shots need to be stopped NOW.

Sincerely,



Carol Sargeant RN BSN MPH
1908 Sorento Place
Henrico, VA 23238

BOB CNILPERS
REC CNILPERS@GMAIL.COM

Greetings to all gathered today for this hearing. I thank my fellow Virginians for their service as we all seek health, freedom from fear, and untrue statements

I speak to you today to urge withdrawal of Covid-19 shots from all those under 40 and treatment by doctors using FDA approved drugs in therapies of their choosing. Worldwide data do not support Covid-19 shot as safe, effective, and non-transmissible. Covid-19 is easily and safely treatable, say doctors who have proven knowledge and treatment records.

Most importantly, many of us no longer trust our federal government, state government, their health agencies, and our doctors. Loss of trust was swift. Trust will not be regained with current systems unchanged.

Boosters are recommended every two months by the CDC and if injured no recovery is allowed. The low uptake shows most have lost faith.

Action is beginning at the State level with Florida leading the way assert 10th amendment rights to protect citizens against the Federal Government. I have attached an article describing the actions of the Florida Government. They convened a panel of experts who recommended against administering shots to anyone under age 40. DeSantis has petitioned the State Supreme Court to impanel a Grand Jury to hear claims of violation of Florida as described in the Complaint attached.

Has Virginia conducted independent investigation of Covid-19, effectiveness of Hospital treatment protocols, or the effectiveness of medical treatments using repurposed drugs.

My investigations merely as a patient led me to the conclusion that my doctor's recommendation of the two shots I took were not given with informed consent, the shot did not perform as advertised, and as inpatient for surgery during the lockdown was the hospital was empty, and not as shown on the news. When my primary Doctor advised me to go the hospital when I was very sick and not seek therapeutics at first symptoms, I became convinced this was outside all

Legal, Constitutional and Human Rights Violations of Smart Grid and Smart Meters

Congressional White Paper

<http://www.StopSmartGrid.org>



With In Depth Writings and Contributions by: Nina Beety, Marilynne Martin,

Other Special Contributions by: Mike Hazard, Karen Miller, Lisa Verlato Nancollas, Arnie Rosner,

Written and Edited by: Liz Barris

Contact info:
Liz Barris, 310-455-7530
contact@thepeoplesinitiative.org
101 S. Topanga Cyn. Blvd. #586
Topanga, CA 90290

FOREWARD

Although there have been some pretty outrageous tax payer funded financial give aways to large corporations, none quite compare to the advent and deployment of the smart meter and smart grid program.

Sold to trusting citizens as “green, energy saving, financially thrift and ultra safe”, as you will see evidenced in this paper, nothing could be further from the truth.

The smart grid and smart meter “deployment” (military term) in the US has been precedent setting in numerous ways. The sheer number of legal violations are simply staggering, not to mention the conditions under which the roll out was conducted; giving citizens no freedom of choice, under threat and implementation of arrest and denying citizens rights to basic necessities such as water, gas and electricity, upon refusal of a smart meter. All this in direct violation of the very bill that funded the program and the very laws that make our country a democracy – The United States Constitution.

Let it also be known that this is a global roll out, not merely for America, implemented by forces that may not necessarily have American’s best interests at heart, but do have their own desire for surveillance, control and greed.

This document reveals not only reasons why not one more penny of citizen tax dollars should be pumped into this abysmal, corrupt, illegal and punishing program, but also clearly shows that by incentivizing through freely given citizen tax money, the government has created an unfair fight between the utilities, their partners in crime – government agencies like the NSA (or any 3rd party wishing access to this information) and the citizens of the United States who wish to retain their Constitutional rights to health, life, property and privacy.

Citizens who wish to give up their legal and Constitutional rights to health, life and privacy (provided they do not harm others in the process) should be free to do so by being fully informed of the ramifications of a smart meter on their property or the smart grid in their neighborhood, while those who wish to retain them should not be punished for doing so.

Citing Constitutional, legal and human rights violations, we sincerely, hope that Congress heeds our need to reverse the horrific damage to both our biology and rule of law caused by smart grid/smart meter roll out, and hold true to the US Constitution and other legal frameworks under which a true democracy can exist and thrive.

The following Congressional white paper lists Constitutional and other legalities that “deployment” of the smart grid and smart meters are in repetitious violation of, regarding both state and federal law. Each statement of violation is backed up with Constitutional and

other legal citations, court cases, news reports and articles in major publications in addition to some very personal, first hand accounts.

The citizens of the United States are being lied to regarding nearly every aspect of the smart grid and smart meter roll out, from “opting out” to the health effects, to over billing, to fire hazard, to privacy invasion and surveillance.

Congress and the White House must uphold rule of law and REMEDY the problems created by funding a biologically harmful, constitutionally violating and otherwise illegal program.

Throughout this report, our own commentary is written in italics for easier deciphering from articles and other verbiage.

We believe the utilities who accepted government funds for this program, owe the US Treasury and the citizens of the United States, this money returned, as it was gotten through illegal means as evidenced below and in violation of the bill that allowed for funding of the initiative in the first place, not to mention our Constitution. We call on Congress and the President of the United States to enact the following:

- 1) Due to multiple fatal flaws in the program, including national security, all federal funding of smart grid/smart meters must cease and desist.
- 2) The program must be “opt in” as opposed to “opt out” as was stipulated in 2005 Energy Policy Act, but not implemented in the “deployment” (military term). All customers must be offered a hard wired, analog option until a total smart meter ban is instated. Freedom to choose to have a smart meter may be given to customers, provided the meter does not cause physical harm to their neighbors.
- 3) Those not wishing to have a smart, advanced or digital meter must not be charged a fee of any kind or experience rate increases of any kind simply for their wish to retain hard wire, analog metering.
- 4) Utilities or Congress or both, must pay for remediation for people who become ill from or lose or have lost housing to smart meters/smart grid in addition to possible lifelong compensation for any permanent damage caused to the individual.
- 5) Other forced microwave radiation exposure must also be addressed, such as the Telecom Act, WIFI in certain public places so that whole populations are not involuntarily and unwittingly exposed to this Class 2b carcinogen.
- 6) A full disclosure information campaign on potential health effects, surveillance, fire hazard and rate increases must be initiated and funded by utilities or even Congress. Citizens MUST be informed of these risks, hardships and violations.
- 7) Electrosensitivity must be officially recognized by our federal government as a functional impairment as it is in Sweden and recognized as a disability that falls under the ADA. Electrosensitive people need to be cared for and covered by their health insurance like with any other illness and doctors need to be able to address the health

needs of the afflicted, not to mention medical schools need to begin to study this 21st century phenomenon, along with any potential cures and of course prevention.

- 8) A separate agency needs be created for citizens, to look out for their health and well being on the issue of microwave radiation and other areas of the electromagnetic radiation spectrum. The wireless microwave industry has the FCC to look after their interests; we need our own agency with as much power to look out for ours. It is currently an unfair playing field on this issue in Washington.

Table of Contents

- 1) The Secretive, Financial, Water Spigot that is the FFB (Federal Finance Bank)
Citizen Tax Payer Money Freely Distributed To Private Corporations for Smart
Grid/Smart Meters pages 9-12
- 2) 4th Amendment Violations: Spying And Invasion of Privacy Through Smart Meters
and Smart Grid pages 11-23
- 3) Smart Grid Transmuted Into Ubiquitous WIFI in Cities Enables More Spying
On US Citizens pages 23-24
- 4) Smart Meters enable possible access to private information on personal
computers – pages 24-25
- 5) 5th Amendment Violations and References – pages 26-28
- 6) 10th Amendment Violations and References – page 29
- 7) 14th Amendment Violations – page 29
- 8) False and misleading claims of Job Creation For Private Corporations to Gain
Access to US Tax Payer Funds, Those Newly Created Jobs Are Then Shipped
Overseas pages 29-31
- 9) Hacking of Personal and Granular Data Recorded On Smart Chipped Devices –
pages 31-41
- 10) Hacking of Life Saving Medical Implants pages 42-46
- 11) Smart Zigbee Chips Interacting with Medical Implants pages 46-48
- 12) Smart Grid Enables Catastrophic, Multiple Nuclear Facility Meltdowns Based On
Easier Access To Hacking and Terrorism Attack pages 48-51
- 13) Life threatening and debilitating health effects including cancer and
neurological illnesses, permanent genetic alteration to lineage from smart
meters and smart grid and ASDS (Adult Sudden Death Syndrome) via

microwave pulse induced heart attack from smart meters and smart grid
pages 52-131

- 14) Thousands of reports of health effects from smart meters and smart grid from Texas PUC, California PUC, EMF Safety Network pages 132-138
- 15) Smart Grid and Smart Meters Violate ADA pages 138-140
- 16) Ubiquitous Dirty Electricity Created Through Smart Meter/Smart Grid Switching Mode Power supply and Pulsed Microwave Radiation More Harmful Than Continuous pages 140-143
- 17) Smart Meters and Smart Grid Violate FCC Rules and Regulations On Interference pages 143-144
- 18) Smart Grid and Smart Meters Violate the Already Un-protective FCC Standards pages 144-150
- 19) Smart Grid and Smart Meters Violate Environmental Laws, Threatens Eco-Systems, Endangered Species, Animals and Natural Habitat pages 150-155
- 20) Rapid, Deleterious and Costly Impact on Building Structural Integrity Through Pulsed Microwave Emissions pages 155-156
- 21) Fire Hazard Caused by Smart Meters pages 157-161
- 22) False and Misleading Claims of Safety of Microwave Radiation as Emitted by Smart Grid and Smart Meters pages 161-167
- 23) Smart Grid and Smart Meters Violate FTC Act of the Federal Trade Commission page 168
- 24) False and Misleading Claims of Energy Savings and Smart Meters/Energy Star HOAX to Access Tax Payer Dollars pages 168-175
- 25) False and misleading Claims of Consumer Control and Erosion of Consumer Rights With Smart Meters and Smart Grid pages 175-181
- 26) "Time Averaged" MISLEADING Regarding Smart Meter And Smart Grid Microwave Emissions pages 181-183
- 27) False and Misleading Claims of Financial Savings and Rampant, Ubiquitous and Outrageous Over Billing pages 184-189

- 28) Unjust Enrichment and Trespass Via Smart Grid Microwave Radiation Emissions
pages 189-191
- 29) Reckless Endangerment pages 191-195
- 30) Opt Outs, A Farce at the Expense of Public Health and Safety pages 195-198

- 31) Discrimination pages 198-200
- 32) Violation of City and County Franchise Agreements page 200
- 33) Utilities Claim Implied Consent But Implied Consent Is Non Existent pages 201
- 34) Extortion and Violation of Human Rights and Property rights pages 201-202
- 35) Military Use of EMR (Electromagnetic Radiation) As Weaponry – US Federal
Government Has Full Knowledge of Health Effects From RF Microwave Radiation
pages 203-232
- 36) Fraud And Deceit page 232-234
- 37) Fraud and Misrepresentation page 234
- 38) Misrepresentation page 235
- 39) Negligence page 235-236
- 40) Gross Negligence page 236
- 41) Malice and Aforethought pages 237-240
- 42) Public Endangerment page 240
- 43) Wanton and Reckless Disregard for Human Life and The Rights of Citizens
Under the Constitution page 240-241
- 44) Exemplary Damages page 241
- 45) Smart Grid Violates State Law pages 242-246
- 46) Energy Companies Using Smart Grid For Financial Gain, To Try To Remain
Relevant and Slow the Inevitable, As Unsustainable Resources Dry Up and
Sustainable Resources (Solar and Wind) Take Over, Potentially Enabling

“physical entry of the home is the chief evil against which the working of the Fourth Amendment is directed.” Payton v. New York, 445 U.S. 573, 585 (1980) (quoting United States v. United States District Court, 407 U.S. 297, 313 (1972)). It is a basic principle of Fourth Amendment jurisprudence that warrantless searches and seizures of a home are presumptively unreasonable. Payton, 445 U.S. at 586. The Fourth Amendment has drawn a firm line at the entrance to the house with respect to both searches and seizures of property and persons. The Ohio Constitution provides the same protection against warrantless searches.

II. DEFENDANT DID NOT VALIDLY CONSENT TO THE WARRANTLESS SEARCH OF HIS RESIDENCE.

“When the State relies on consent for the warrantless entry of a residence it has the burden of not only proving consent, but also that the consent was freely and voluntary given.”

“Acquiescence to authority (because of the demonstration of force) does not constitute a valid consent.”

Payton v. New York - 445 U.S. 573 (1980)
U.S. Supreme Court
<http://supreme.justia.com/cases/federal/us/445/573/>

Payton v. New York
No. 78-5420
Argued March 26, 1979
Reargued October 9, 1979
Decided April 15, 1980*
445 U.S. 573

“In terms that apply equally to seizures of property and to seizures of persons, the Fourth Amendment has drawn a firm line at the entrance to the house.”

Congressional Research Smart Meter Data, Privacy and Cyber Security Document

<http://www.fas.org/sgp/crs/misc/R42338.pdf>

Privacy and Cybersecurity - Loss of Privacy & Identify theft

“Unforeseen consequences under federal law may result from the installation of smart meters and the communications technologies that accompany them.”

4th amendment

“The Fourth Amendment, which establishes the constitutional parameters for government investigations, may restrict access to smart meter data or establish rules by which it can be obtained.⁶¹ **The Fourth Amendment ensures that the “right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated....”**”⁶²

“...there are several core differences between smart meters and the general third-party cases that may cause concerns about its application. These include concerns expressed by the courts and Congress about the ability of technology to potentially erode individuals’ privacy.”

Smart Meters and the Fourth Amendment

“**The Fourth Amendment ensures that the right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated....**”⁶² This section discusses whether the collection and use of smart meter data may contravene this protection. Although there is no Fourth Amendment case on point, analogous cases may provide guidance.⁶³”

Page 13: (Starts near the top)

Reasonable Expectation of Privacy in Smart Meter Data

“**Under the modern conception of the Fourth Amendment, the government may not intrude into an area in which a person has an actual expectation of privacy that society would consider reasonable.**”¹⁰⁷ In the case of smart meter data, the government presumably seeks records in the custody of third-party utilities on the energy use at a specific home.”

“**There are two relevant differences, however, between smart meters and the traditional third-party cases that may warrant a shift in approach. First is the possible judicial unease with the notion that advancement of technology threatens to erode further the constitutional protection of privacy.**”¹¹¹ From that perspective, as technology progresses, society faces an ever-increasing risk that an individuals activities will be monitored by the government. This is coupled with the concern that the breadth and granularity of personal information that new technology affords provide a far more intimate picture of an individual than the more limited snapshots available through prior technologies. Do the richness and scope of new information technologies warrant increased constitutional scrutiny?”

“Second, smart meters can convey information about the activities that occur inside the home, an area singled out for specific textual protection in the Fourth Amendment and one deeply ingrained in Anglo-Saxon law.¹¹² Even when the Court declared that the Fourth Amendment protects people, not places, ¹¹³ ostensibly shifting away from a property-based conception of the Fourth Amendment, it has still carved out special protections for the home.¹¹⁴”

Privacy in the Home

“The location of the search mattered little in the traditional third-party cases, but it may take on constitutional significance with smart meters.¹⁴² In the case of smart meters, the information is generated in the home, an area accorded specific textual protection in the Fourth Amendment, and one the Supreme Court has persistently safeguarded.¹⁴³ In no uncertain terms the Court has asserted that at the very core [of the Fourth Amendment] stands the right of a man to retreat into his own home and there be free from unreasonable government intrusion.¹⁴⁴ Even as technology advances whether a tracking or thermal-imaging device or something new the Court has maintained this bulwark.”

“In the case of the search of the interior of homes the prototypical and hence most commonly litigated area of protected privacy there is a ready criterion, with deep roots in the common law, of the minimal expectation of privacy that exists, and that is acknowledged to be reasonable. To withdraw protection of this minimum expectation would be to permit police technology to erode the privacy guaranteed by the Fourth Amendment.¹⁵⁸”

“The Court ultimately held that obtaining by sense-enhancing technology any information regarding the interior of the home that could not otherwise have been obtained without physical intrusion into a constitutionally protected area constitutes a search at least where (as here) the technology in question is not in general public use.¹⁵⁹ *Kyllo* affirmed the notion that an expectation of privacy in activities taking place inside the home is presumptively reasonable.¹⁶⁰”

“The Court also protected home privacy by prohibiting the monitoring of the location of a beeper while inside a residence.¹⁶¹ In *United States v. Karo*, with the consent of a government informant the police attached a beeper to the false bottom of a can of ether, which was sold to *Karo*.¹⁶² The can of ether was transported between several residences and storage facilities.¹⁶³ The police used the beeper to monitor the location of the can several times while it was located inside of the residences.¹⁶⁴ The Court was asked to determine whether the monitoring of a beeper in a private residence, a location not open to visual surveillance, violates Fourth Amendment rights of those who have a justifiable interest in the privacy of the residence.¹⁶⁵ The Court answered in the affirmative.”

Citizens to LEAVE Their Various Energy Suppliers pages 246-253

47) DoE Violates Record Keeping Laws and Stonewalls Investigations Into “smart” Money Give Aways and Other Record Keeping page 254

48) Government Officials May Be Held Personally Liable for Civil Rights and Other Legal and Constitutional Violations pages 255-257

1) THE SECRETIVE, FINANCIAL, WATER SPIGOT THAT IS THE FFB (FEDERAL FINANCE BANK) AND CITIZEN TAX PAYER MONEY FREELY DISTRIBUTED TO PRIVATE CORPORATIONS FOR SMART GRID/ SMART METERS

To date, a minimum of 3.4 billion of US tax dollars has been spent on deployment (a military term for a civilian roll out?) of smart grid and smart meters, according to press releases and transparent record keeping. However, what is not accounted for in Congressional spending on smart grid, may accounted for in disbursement of citizen funds through the secretive FFB (Federal Finance Bank).

On Feb. 24th 2014, a FOIA was sent to the FFB inquiring about how much money has been distributed from the FFB for the use of smart grid or smart meters. This FOIA has been ignored by the FFB, which means we may have to file suit to get the real numbers allocated for smart grid/smart meters. We can only guess out of the \$28,000,000,000 (that's 28 billion) in tax payer funds that we have on record flowing from the FFB to the utilities between the years 2006-2013 (after the 2005 Energy Policy Act was passed), how much has gone towards smart grid/meter roll out...we estimate a substantial amount.

The practice of giving citizen taxpayer money to private corporations is in this case, criminal, due to all the legal and other Constitutional violations the smart program brings. The federal government has also created an extremely un-level playing field between the citizens who need to protect themselves from smart meters/smart grid and the governments and private companies who wish to benefit from them.

FFB - FEDERAL FINANCING BANK

<http://www.treasury.gov/ffb/>

The FFB, a bank set up with very specific parameters, is essentially being treated as a monetary water spigot for the utility industry and of course other possible misappropriated spending by the President, certain members of Congress and most likely other federal government agencies or personnel.

The Federal Financing Bank is being abused to fund such harmful programs “for” the general public as smart grid/smart meters. Freely given cash to private or municipal utility companies and military industrial companies for the purposes of controlling and/or monitoring American citizens in their own homes or for any other illegal act or program is a blatant abuse of the privilege the FFB provides the President and Congress.

The funding of the smart grid/smart meter program has set up an unprecedented, un-level playing field whereby only those American citizens who can afford to pay attorneys are able to combat in a court of law, this invasion and disruption of our health, lives and basic Constitutional rights.

Inherent to smart grid and smart meters is the complete and total violation of multiple Constitutional and other legal rights violations that have been both condoned by our federal government and paid for with hard earned US tax dollars.

Because of these violations, all funds that went to the utilities and towards this illegal program must be returned to the US Treasury.

To date, according to the American Recovery and Reinvestment Act, a minimum of 3.4 billion of US tax dollars has been spent on deployment (a military term for a civilian roll out?) of smart grid and smart meters. However, what is not accounted for in Congressional spending on smart grid, IS accounted for in what may be illegal disbursement of citizen funds through the FFB (Federal Finance Bank).

The below link contains a state by state breakdown of Recovery Act funding of smart grid, totaling \$3,425,718,323 US citizen funded “deployment” of smart grid.

<http://stopsmartgrid.org/funding/>

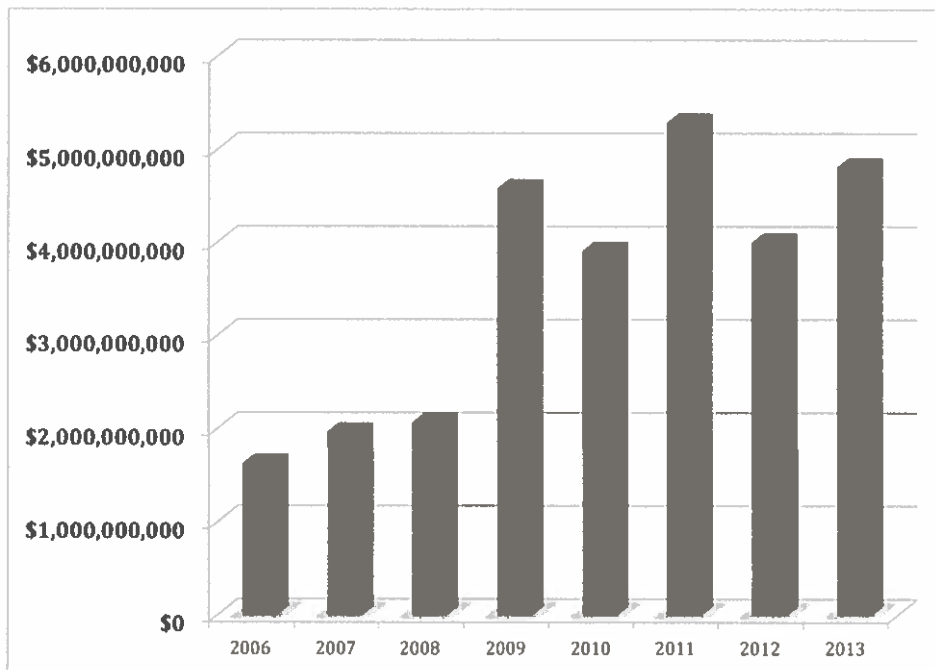
Additionally, there is an FFB (Federal Finance Bank) graph that shows the money doled out to utilities since passage of the 2005 Energy Policy Act, totaling, 28 Billion. This does NOT include funds for smart grid to Dept. of Defense or Dept of Energy.

<http://www.treasury.gov/ffb/press-releases.shtml>

Here is a link to the Federal Financing Bank's financial statements showing \$28.2 Billion¹ loaned to utility companies through the U.S. Dept. of Agriculture's Rural Utilities Program since the Energy Policy Act of 2005. These are funds allocated solely by the U.S. Dept. of Agriculture, and exclude any smart grid money spent by the U.S Dept. of Energy or the Dept. of Defense.

¹ This number is the total amount given to the Rural Utilities Program from 2006-2013 excluding any loan modifications, maturity extensions, interest rate resets, or principal rollovers. See the below breakdown taken from the Federal Financing Bank Press Releases of Financial Activity.

U.S. FEDERAL FINANCING BANK LOANS TO UTILITY COMPANIES



TOTAL: \$28.2 BILLION

US DOE Inspector Says Its Management of Smart-Grid Program Lacking

<http://www.platts.com/latest-news/electric-power/Washington/US-DOE-inspector-says-its-management-of-smart-6065357>

“The US Department of Energy has failed to properly manage a \$700 million program aimed at demonstrating the use of smart grid technology, with millions of dollars in questionable spending, the agency's inspector general said Wednesday.”

"In the absence of significant improvements, the program is at risk of not meeting its objectives and has an increased **risk of fraud, waste and abuse.**"

2) 4th AMENDMENT VIOLATIONS: SPYING AND INVASION OF PRIVACY THROUGH SMART METERS AND SMART GRID

The 4TH AMENDMENT

http://www.law.cornell.edu/constitution/fourth_amendment

“The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue, but upon probable cause, supported by oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.”

*Smart meters and smart grid violate the 4th Amendment of the US Constitution by warrantless-ly searching every electrical, water or gas appliance in the home including potentially the ability to search personal computers. A primary advantageous use of smart meters and smart grid to NSA, DHS, CIA, DOE or any other government entity who wishes to do so, would be spying on US citizens in the sanctity of their own homes. This sets an unprecedented level of invasion of privacy and is in fact, according to the Constitution of the United States of America, **illegal.***

Before we get into the legalities of invading privacy within the home, let us first examine the history of the utilities on the issue of respecting peoples right to privacy, violation of trust and dishonesty at any cost to achieve their goal of smart grid and smart meter roll out.

http://www.mercurynews.com/ci_20481577/pge-employee-who-spied-activists-support-management-cpuc

“A probe by the California Public Utilities Commission has concluded that William Devereaux, a former PG&E employee who used a false identity to spy on activists opposed to SmartMeters, did not act alone but had support from senior managers.”

“Devereaux resigned in November 2010 after admitting that he used the name "Ralph" to try to infiltrate an online group of consumers opposed to the utility's new digital meters.”

“At the time, PG&E characterized him as a rogue employee who acted alone. But a lengthy investigation by the PUC's Consumer Protection and Safety Division revealed that Devereaux forwarded emails that he collected using the false identity to his boss and other senior managers at PG&E, including a member of the legal department.”

"PG&E senior management knew of Mr. Devereaux's deceit before it was reported in the press and failed to prevent and stop his inappropriate behavior," said the eight-page finding from the PUC, released late Wednesday. "By lying to and infiltrating anti-smart meter consumer groups, Mr. Devereaux, acting on behalf of PG&E, violated PG&E's obligation to provide just and reasonable service to its customers."

*If a company lies and spies on those who differ with them on policy, imagine what they would do with granular data on such customers, or for that matter on ANY customer. Who else will be spied on through smart meters and by what corporation or government entity (it is hard to distinguish between the two these days) simply because they differ on policy? This is not a question citizens should ever have to ask. Our innate and Constitutional right to privacy within our own homes and work places **must** be respected.*

Now let's look at who else vying for unfettered access to granular data and intimate details about the customer's life within the boundaries of their own home or business. Notice granular, private information on citizens within the home is considered "a market of data" as opposed to what it actually is, private information about the activities of people within their own home, information that they have the legal right to retain.

3rd Party Access to Private, Personal Data Within the Home

http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/164999.pdf

Joint Reply Comments of AT&T and Verizon to March 1, 2012 Smart Grid Workshop Summary, A. 11-06-006 et al., May 17, 2012

AT&T and Verizon filed comments on the CPUC's Smart Grid Workshop summary about market access to consumer data from Smart Meters:

“A means to achieve a greater degree of certainty is to **establish forward-looking,**

Back again request you add care & health back to the system. It appears your funding and grant monies from Industry & Big Pharma prevent that from happening.

I have submitted information on wireless devices before and the harm on multiple occasions now, 11,000 pages of evidence, not enough time to read it, given a one page summary, called VDH to inquire about anyone's knowledge of this topic, and also FOIA'd which came up empty. No department was created to look into these harms to my knowledge. .

Submitting into Public Record a Congressional White Paper (257 pages) with Key Messages in regard to health and Smart Grid & Smart Meters with a plethora of research links. **I do hope you'll find time for 93 Pages.** As you're responsible for looking out for the **PUBLIC'S HEALTH RIGHT?** Not sure when you'll be moved to do something about this problem as there is no \$ making vaccine or incentives or drugs Fauci can promote. Please let Gov. Youngkin know that families have been without power for a month here in VA over Thanksgiving & still likely over Christmas with **CHILDREN** in the **HOME!**

Meanwhile several families are in the **COLD** as their power has been shut off by Dominion Energy company for refusing their harmful product. Maybe if we had **HEALTH** agencies with integrity & Christ filled hearts **listening & TAKING ACTION** this could've been prevented. If Governors can close small businesses can't they help make A **UTILITY** Company **NOT VIOLATE HUMAN RIGHTS** & allow paying customers electricity & want to protect their health keep their analog meters?

10) Hacking of Life Saving **Medical Implants** pages 42-46 (4 pages)

11) Smart Zigbee Chips Interacting with **Medical Implants** pages 46-48 (2 pages)

13) Life threatening and debilitating health effects including cancer and neurological illnesses, permanent genetic alteration to lineage from smart meters and smart grid and **ASDS (Adult Sudden Death Syndrome)** via microwave pulse induced heart attack from smart meters and smart grid pages 52-131 (79 pages) **These pulses affect your immune system, cardiovascular, nervous system and cross blood brain barrier.**

14) **Thousands of reports of health effects from smart meters and smart grid** from Texas PUC, California PUC, EMF Safety Network pages 132-138 (6 pages)

15) **Smart Grid and Smart Meters Violate ADA** pages 138-140 (2 pgs)

Isn't ADA under your jurisdiction to look out for?

Since you speak with Governor Youngkin, Mr Greene can you ask him if he understands what conflict of interest is? Whose asking to live in a "smart city"? Does he know these "smart meters" & "smart grids" are harmful to human health or is just about money for him?

Back again request you add care & health back to the system. It appears your funding and grant monies from Industry & Big Pharma prevent that from happening.

I have submitted information on wireless devices before and the harm on multiple occasions now, 11,000 pages of evidence, not enough time to read it, given a one page summary, called VDH to inquire about anyone's knowledge of this topic, and also FOIA'd which came up empty. No department was created to look into these harms to my knowledge. .

Submitting into Public Record a Congressional White Paper (257 pages) with Key Messages in regard to health and Smart Grid & Smart Meters with a plethora of research links. **I do hope you'll find time for 93 Pages.** As you're responsible for looking out for the **PUBLIC's HEALTH RIGHT?** Not sure when you'll be moved to do something about this problem as there is no \$ making vaccine or incentives or drugs Fauci can promote. Please let Gov. Youngkin know that families have been without power for a month here in VA over Thanksgiving & still likely over Christmas with CHILDREN in the HOME!

Meanwhile several families are in the COLD as their power has been shut off by Dominion Energy company for refusing their harmful product. Maybe if we had HEALTH agencies with integrity & Christ filled hearts **listening & TAKING ACTION** this could've been prevented. If Governors can close small businesses can't they help make A UTILITY Company NOT VIOLATE HUMAN RIGHTS & allow paying customers electricity & want to protect their health keep their analog meters?

10) Hacking of Life Saving **Medical Implants** pages 42-46 (4 pages)

11) Smart Zigbee Chips Interacting with **Medical Implants** pages 46-48 (2 pages)

13) Life threatening and debilitating health effects including cancer and neurological illnesses, permanent genetic alteration to lineage from smart meters and smart grid and ASDS (**Adult Sudden Death Syndrome**) via microwave pulse induced heart attack from smart meters and smart grid pages 52-131 (79 pages) **These pulses affect your immune system, cardiovascular, nervous system and cross blood brain barrier.**

14) **Thousands of reports of health effects from smart meters and smart grid** from Texas PUC, California PUC, EMF Safety Network pages 132-138 (6 pages)

15) **Smart Grid and Smart Meters Violate ADA** pages 138-140 (2 pgs)

Isn't ADA under your jurisdiction to look out for?

Since you speak with Governor Youngkin, Mr Greene can you ask him if he understands what conflict of interest is? Whose asking to live in a "smart city"? Does he know these "smart meters" & "smart grids" are harmful to human health or is just about money for him?

Back again request you add care & health back to the system. It appears your funding and grant monies from Industry & Big Pharma prevent that from happening.

I have submitted information on wireless devices before and the harm on multiple occasions now, 11,000 pages of evidence, not enough time to read it, given a one page summary, called VDH to inquire about anyone's knowledge of this topic, and also FOIA'd which came up empty. No department was created to look into these harms to my knowledge. .

Submitting into Public Record a Congressional White Paper (257 pages) with Key Messages in regard to health and Smart Grid & Smart Meters with a plethora of research links. **I do hope you'll find time for 93 Pages.** As you're responsible for looking out for the **PUBLIC's HEALTH RIGHT?** Not sure when you'll be moved to do something about this problem as there is no \$ making vaccine or incentives or drugs Fauci can promote. Please let Gov. Youngkin know that families have been without power for a month here in VA over Thanksgiving & still likely over Christmas with CHILDREN in the HOME!

Meanwhile several families are in the COLD as their power has been shut off by Dominion Energy company for refusing their harmful product. Maybe if we had HEALTH agencies with integrity & Christ filled hearts **listening & TAKING ACTION** this could've been prevented. If Governors can close small businesses can't they help make A UTILITY Company NOT VIOLATE HUMAN RIGHTS & allow paying customers electricity & want to protect their health keep their analog meters?

10) Hacking of Life Saving **Medical Implants** pages 42-46 (4 pages)

11) Smart Zigbee Chips Interacting with **Medical Implants** pages 46-48 (2 pages)

13) Life threatening and debilitating health effects including cancer and neurological illnesses, permanent genetic alteration to lineage from smarts meters and smart grid and ASDS (**Adult Sudden Death Syndrome**) via microwave pulse induced heart attack from smart meters and smart grid pages 52-131 (79 pages) **These pulses affect your immune system, cardiovascular, nervous system and cross blood brain barrier.**

14) **Thousands of reports of health effects from smart meters and smart grid** from Texas PUC, California PUC, EMF Safety Network pages 132-138 (6 pages)

15) **Smart Grid and Smart Meters Violate ADA** pages 138-140 (2 pgs)

Isn't ADA under your jurisdiction to look out for?

Since you speak with Governor Youngkin, Mr Greene can you ask him if he understands what conflict of interest is? Whose asking to live in a "smart city"? Does he know these "smart meters" & "smart grids" are harmful to human health or is just about money for him?

Back again request you add care & health back to the system. It appears your funding and grant monies from Industry & Big Pharma prevent that from happening.

I have submitted information on wireless devices before and the harm on multiple occasions now, 11,000 pages of evidence, not enough time to read it, given a one page summary, called VDH to inquire about anyone's knowledge of this topic, and also FOIA'd which came up empty. No department was created to look into these harms to my knowledge. .

Submitting into Public Record a Congressional White Paper (257 pages) with Key Messages in regard to health and Smart Grid & Smart Meters with a plethora of research links. **I do hope you'll find time for 93 Pages.** As you're responsible for looking out for the **PUBLIC's HEALTH RIGHT?** Not sure when you'll be moved to do something about this problem as there is no \$ making vaccine or incentives or drugs Fauci can promote. Please let Gov. Youngkin know that families have been without power for a month here in VA over Thanksgiving & still likely over Christmas with CHILDREN in the HOME!

Meanwhile several families are in the COLD as their power has been shut off by Dominion Energy company for refusing their harmful product. Maybe if we had HEALTH agencies with integrity & Christ filled hearts **listening & TAKING ACTION** this could've been prevented. If Governors can close small businesses can't they help make A UTILITY Company NOT VIOLATE HUMAN RIGHTS & allow paying customers electricity & want to protect their health keep their analog meters?

10) Hacking of Life Saving **Medical Implants** pages 42-46 (4 pages)

11) Smart Zigbee Chips Interacting with **Medical Implants** pages 46-48 (2 pages)

13) Life threatening and debilitating health effects including cancer and neurological illnesses, permanent genetic alteration to lineage from smarts meters and smart grid and ASDS (**Adult Sudden Death Syndrome**) via microwave pulse induced heart attack from smart meters and smart grid pages 52-131 (79 pages) **These pulses affect your immune system, cardiovascular, nervous system and cross blood brain barrier.**

14) **Thousands of reports of health effects from smart meters and smart grid** from Texas PUC, California PUC, EMF Safety Network pages 132-138 (6 pages)

15) **Smart Grid and Smart Meters Violate ADA** pages 138-140 (2 pgs)

Isn't ADA under your jurisdiction to look out for?

Since you speak with Governor Youngkin, Mr Greene can you ask him if he understands what conflict of interest is? Whose asking to live in a "smart city"? Does he know these "smart meters" & "smart grids" are harmful to human health or is just about money for him?

Back again request you add care & health back to the system. It appears your funding and grant monies from Industry & Big Pharma prevent that from happening.

I have submitted information on wireless devices before and the harm on multiple occasions now, 11,000 pages of evidence, not enough time to read it, given a one page summary, called VDH to inquire about anyone's knowledge of this topic, and also FOIA'd which came up empty. No department was created to look into these harms to my knowledge.

Submitting into Public Record a Congressional White Paper (257 pages) with Key Messages in regard to health and Smart Grid & Smart Meters with a plethora of research links. **I do hope you'll find time for 93 Pages.** As you're responsible for looking out for the **PUBLIC's HEALTH RIGHT?** Not sure when you'll be moved to do something about this problem as there is no \$ making vaccine or incentives or drugs Fauci can promote. Please let Gov. Youngkin know that families have been without power for a month here in VA over Thanksgiving & still likely over Christmas with **CHILDREN** in the **HOME!**

Meanwhile several families are in the **COLD** as their power has been shut off by Dominion Energy company for refusing their harmful product. Maybe if we had **HEALTH** agencies with integrity & Christ filled hearts **listening & TAKING ACTION** this could've been prevented. If Governors can close small businesses can't they help make A **UTILITY** Company **NOT VIOLATE HUMAN RIGHTS** & allow paying customers electricity & want to protect their health keep their analog meters?

10) Hacking of Life Saving **Medical Implants** pages 42-46 (4 pages)

11) Smart Zigbee Chips Interacting with **Medical Implants** pages 46-48 (2 pages)

13) Life threatening and debilitating health effects including cancer and neurological illnesses, permanent genetic alteration to lineage from smart meters and smart grid and **ASDS (Adult Sudden Death Syndrome)** via microwave pulse induced heart attack from smart meters and smart grid pages 52-131 (79 pages) **These pulses affect your immune system, cardiovascular, nervous system and cross blood brain barrier.**

14) **Thousands of reports of health effects from smart meters and smart grid** from Texas PUC, California PUC, EMF Safety Network pages 132-138 (6 pages)

15) **Smart Grid and Smart Meters Violate ADA** pages 138-140 (2 pgs)

Isn't ADA under your jurisdiction to look out for?

Since you speak with Governor Youngkin, Mr Greene can you ask him if he understands what conflict of interest is? Whose asking to live in a "smart city"? Does he know these "smart meters" & "smart grids" are harmful to human health or is just about money for him?

Back again request you add care & health back to the system. It appears your funding and grant monies from Industry & Big Pharma prevent that from happening.

I have submitted information on wireless devices before and the harm on multiple occasions now, 11,000 pages of evidence, not enough time to read it, given a one page summary, called VDH to inquire about anyone's knowledge of this topic, and also FOIA'd which came up empty. No department was created to look into these harms to my knowledge.

Submitting into Public Record a Congressional White Paper (257 pages) with Key Messages in regard to health and Smart Grid & Smart Meters with a plethora of research links. **I do hope you'll find time for 93 Pages.** As you're responsible for looking out for the **PUBLIC'S HEALTH RIGHT?** Not sure when you'll be moved to do something about this problem as there is no \$ making vaccine or incentives or drugs Fauci can promote. Please let Gov. Youngkin know that families have been without power for a month here in VA over Thanksgiving & still likely over Christmas with CHILDREN in the HOME!

Meanwhile several families are in the COLD as their power has been shut off by Dominion Energy company for refusing their harmful product. Maybe if we had HEALTH agencies with integrity & Christ filled hearts **listening & TAKING ACTION** this could've been prevented. If Governors can close small businesses can't they help make A UTILITY Company NOT VIOLATE HUMAN RIGHTS & allow paying customers electricity & want to protect their health keep their analog meters?

10) Hacking of Life Saving **Medical Implants** pages 42-46 (4 pages)

11) Smart Zigbee Chips Interacting with **Medical Implants** pages 46-48 (2 pages)

13) Life threatening and debilitating health effects including cancer and neurological illnesses, permanent genetic alteration to lineage from smart meters and smart grid and ASDS (**Adult Sudden Death Syndrome**) via microwave pulse induced heart attack from smart meters and smart grid pages 52-131 (79 pages) **These pulses affect your immune system, cardiovascular, nervous system and cross blood brain barrier.**

14) **Thousands of reports of health effects from smart meters and smart grid** from Texas PUC, California PUC, EMF Safety Network pages 132-138 (6 pages)

15) **Smart Grid and Smart Meters Violate ADA** pages 138-140 (2 pgs)

Isn't ADA under your jurisdiction to look out for?

Since you speak with Governor Youngkin, Mr Greene can you ask him if he understands what conflict of interest is? Whose asking to live in a "smart city"? Does he know these "smart meters" & "smart grids" are harmful to human health or is just about money for him?

Back again request you add care & health back to the system. It appears your funding and grant monies from Industry & Big Pharma prevent that from happening.

I have submitted information on wireless devices before and the harm on multiple occasions now, 11,000 pages of evidence, not enough time to read it, given a one page summary, called VDH to inquire about anyone's knowledge of this topic, and also FOIA'd which came up empty. No department was created to look into these harms to my knowledge. .

Submitting into Public Record a Congressional White Paper (257 pages) with Key Messages in regard to health and Smart Grid & Smart Meters with a plethora of research links. **I do hope you'll find time for 93 Pages.** As you're responsible for looking out for the **PUBLIC's HEALTH RIGHT?** Not sure when you'll be moved to do something about this problem as there is no \$ making vaccine or incentives or drugs Fauci can promote. Please let Gov. Youngkin know that families have been without power for a month here in VA over Thanksgiving & still likely over Christmas with CHILDREN in the HOME!

Meanwhile several families are in the COLD as their power has been shut off by Dominion Energy company for refusing their harmful product. Maybe if we had HEALTH agencies with integrity & Christ filled hearts **listening & TAKING ACTION** this could've been prevented. If Governors can close small businesses can't they help make A UTILITY Company NOT VIOLATE HUMAN RIGHTS & allow paying customers electricity & want to protect their health keep their analog meters?

10) Hacking of Life Saving **Medical Implants** pages 42-46 (4 pages)

11) Smart Zigbee Chips Interacting with **Medical Implants** pages 46-48 (2 pages)

13) Life threatening and debilitating health effects including cancer and neurological illnesses, permanent genetic alteration to lineage from smart meters and smart grid and ASDS (**Adult Sudden Death Syndrome**) via microwave pulse induced heart attack from smart meters and smart grid pages 52-131 (79 pages) **These pulses affect your immune system, cardiovascular, nervous system and cross blood brain barrier.**

14) **Thousands of reports of health effects from smart meters and smart grid** from Texas PUC, California PUC, EMF Safety Network pages 132-138 (6 pages)

15) **Smart Grid and Smart Meters Violate ADA** pages 138-140 (2 pgs)
Isn't ADA under your jurisdiction to look out for?

Since you speak with Governor Youngkin, Mr Greene can you ask him if he understands what conflict of interest is? Whose asking to live in a "smart city"? Does he know these "smart meters" & "smart grids" are harmful to human health or is just about money for him?

Back again request you add care & health back to the system. It appears your funding and grant monies from Industry & Big Pharma prevent that from happening.

I have submitted information on wireless devices before and the harm on multiple occasions now, 11,000 pages of evidence, not enough time to read it, given a one page summary, called VDH to inquire about anyone's knowledge of this topic, and also FOIA'd which came up empty. No department was created to look into these harms to my knowledge. .

Submitting into Public Record a Congressional White Paper (257 pages) with Key Messages in regard to health and Smart Grid & Smart Meters with a plethora of research links. **I do hope you'll find time for 93 Pages.** As you're responsible for looking out for the **PUBLIC'S HEALTH RIGHT?** Not sure when you'll be moved to do something about this problem as there is no \$ making vaccine or incentives or drugs Fauci can promote. Please let Gov. Youngkin know that families have been without power for a month here in VA over Thanksgiving & still likely over Christmas with **CHILDREN** in the **HOME!**

Meanwhile several families are in the **COLD** as their power has been shut off by Dominion Energy company for refusing their harmful product. Maybe if we had **HEALTH** agencies with integrity & Christ filled hearts **listening & TAKING ACTION** this could've been prevented. If Governors can close small businesses can't they help make A **UTILITY** Company **NOT VIOLATE HUMAN RIGHTS & allow paying customers electricity & want to protect their health keep their analog meters?**

10) Hacking of Life Saving **Medical Implants** pages 42-46 (4 pages)

11) Smart Zigbee Chips Interacting with **Medical Implants** pages 46-48 (2 pages)

13) Life threatening and debilitating health effects including cancer and neurological illnesses, permanent genetic alteration to lineage from smart meters and smart grid and **ASDS (Adult Sudden Death Syndrome)** via microwave pulse induced heart attack from smart meters and smart grid pages 52-131 (79 pages) **These pulses affect your immune system, cardiovascular, nervous system and cross blood brain barrier.**

14) **Thousands of reports of health effects from smart meters and smart grid** from Texas PUC, California PUC, EMF Safety Network pages 132-138 (6 pages)

15) **Smart Grid and Smart Meters Violate ADA** pages 138-140 (2 pgs)

Isn't ADA under your jurisdiction to look out for?

Since you speak with Governor Youngkin, Mr Greene can you ask him if he understands what conflict of interest is? Whose asking to live in a "smart city"? Does he know these "smart meters" & "smart grids" are harmful to human health or is just about money for him?

Back again request you add care & health back to the system. It appears your funding and grant monies from Industry & Big Pharma prevent that from happening.

I have submitted information on wireless devices before and the harm on multiple occasions now, 11,000 pages of evidence, not enough time to read it, given a one page summary, called VDH to inquire about anyone's knowledge of this topic, and also FOIA'd which came up empty. No department was created to look into these harms to my knowledge. .

Submitting into Public Record a Congressional White Paper (257 pages) with Key Messages in regard to health and Smart Grid & Smart Meters with a plethora of research links. **I do hope you'll find time for 93 Pages.** As you're responsible for looking out for the **PUBLIC's HEALTH RIGHT?** Not sure when you'll be moved to do something about this problem as there is no \$ making vaccine or incentives or drugs Fauci can promote. Please let Gov. Youngkin know that families have been without power for a month here in VA over Thanksgiving & still likely over Christmas with CHILDREN in the HOME!

Meanwhile several families are in the COLD as their power has been shut off by Dominion Energy company for refusing their harmful product. Maybe if we had HEALTH agencies with integrity & Christ filled hearts **listening & TAKING ACTION** this could've been prevented. If Governors can close small businesses can't they help make A UTILITY Company NOT VIOLATE HUMAN RIGHTS & allow paying customers electricity & want to protect their health keep their analog meters?

10) Hacking of Life Saving **Medical Implants** pages 42-46 (4 pages)

11) Smart Zigbee Chips Interacting with **Medical Implants** pages 46-48 (2 pages)

13) Life threatening and debilitating health effects including cancer and neurological illnesses, permanent genetic alteration to lineage from smart meters and smart grid and ASDS (**Adult Sudden Death Syndrome**) via microwave pulse induced heart attack from smart meters and smart grid pages 52-131 (79 pages) **These pulses affect your immune system, cardiovascular, nervous system and cross blood brain barrier.**

14) **Thousands of reports of health effects from smart meters and smart grid** from Texas PUC, California PUC, EMF Safety Network pages 132-138 (6 pages)

15) **Smart Grid and Smart Meters Violate ADA** pages 138-140 (2 pgs)
Isn't ADA under your jurisdiction to look out for?

Since you speak with Governor Youngkin, Mr Greene can you ask him if he understands what conflict of interest is? Whose asking to live in a "smart city"? Does he know these "smart meters" & "smart grids" are harmful to human health or is just about money for him?

“The Court reiterated the long-standing notion that private residences are places in which the individual normally expects privacy free of governmental intrusion not authorized by a warrant, and that expectation is plainly one that society is prepared to recognize as justifiable.¹⁶⁶ Unless there are exigent circumstances, searches and seizures inside a home without a warrant are presumptively unreasonable....¹⁶⁷ The Court ultimately held that the warrantless monitoring of the beeper in the home was a Fourth Amendment violation.¹⁶⁸ *Kyllo* and *Karo* demonstrate that the Supreme Court has defended the home as a sacred site at the core of the Fourth Amendment.¹⁶⁹”

“Smart meters have the potential to produce significantly more information than that derived in *Kyllo* and *Karo*, including what individual appliances we are using; whether our house is empty or occupied; and when we take our daily shower or bath.¹⁷² Further, a look at Figure 1, *supra*, makes it clear that this level of information is much more intimate than prior technologies used by law enforcement.”

Privacy and the Modern Grid

<http://jolt.law.harvard.edu/articles/pdf/v25/25HarvJLTech199.pdf>

Harvard Journal of Law & Technology
Volume 25, Number 1 Fall 2011
PRIVACY AND THE MODERN GRID

“The nationwide deployment of smart meters has begun.¹⁴ This transition, however, brings new threats to privacy. The smart grid’s essential innovation is information.¹⁵ From a privacy standpoint, this signature benefit is also the smart grid’s Achilles’ heel.¹⁶ Because smart meter data is highly granular, it is highly revealing.¹⁷ Data from a smart meter can tell an observer much more about a home than the information from a more traditional meter using older technology.¹⁸”

“Some electric meters and devices, despite not being “smart,” may now collect information more often than once per month, increasing data granularity and potentially triggering privacy concerns. This Note recognizes this complexity but nonetheless treats smart meters as a distinct technological class for two reasons. First, smart meters are uniformly more advanced than traditional meters, and the information that smart meters generate is more refined. Second, smart meters are only one component of the broader transition to the smart grid. This effort, in contrast with past upgrades, is intended to alter permanently the prevailing technological standard for electric meters. The technology’s sophistication and its saturation are each relevant to privacy.”

III. SMART METER DATA AND THE FOURTH AMENDMENT

“The Fourth Amendment sets limits on law enforcement’s investigatory powers, including its ability to obtain data.⁶⁴ Fourth Amendment protections “hinge on the occurrence of a ‘search,’ a legal term of art whose history is riddled with complexity.”⁶⁵ Until *Katz v. United States*,⁶⁶ the Supreme Court generally interpreted the Fourth Amendment to be focused on guarding physical places from scrutiny and limiting the search or seizure of tangible objects.⁶⁷”

“After *Katz*, so long as a person exhibits a subjective expectation of privacy in an object, activity, or statement, and that privacy expectation is one that society finds to be objectively reasonable, the Fourth Amendment protects it from warrantless search.⁷²”

64. The Fourth Amendment states:

“The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the person or things to be seized.”

U.S. CONST. amend. IV.

65. *Widgren v. Maple Grove Twp.*, 429 F.3d 575, 578 (6th Cir. 2005).

66. 389 U.S. 347 (1967). In *Katz*, the Court cemented an expansion of Fourth Amendment protections beyond a property-based model that arguably had already begun in *Warden,*

Maryland Penitentiary v. Hayden, 387 U.S. 294 (1967), *Berger v. New York*, 388 U.S. 41 (1967), and *Camara v. Municipal Court*, 387 U.S. 523 (1967).

67. See *Silverman v. United States*, 365 U.S. 505, 506–12 (1961).

68. See *Goldman v. United States*, 316 U.S. 129, 131–35 (1942).

69. *Katz*, 389 U.S. at 350–52 (“In the first place the correct solution of Fourth Amendment problems is not necessarily promoted by incantation of the phrase constitutionally protected are [What a person] seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected.”).

Five People Who Want to Invade Your Smart Meter Privacy and Why

<http://www.turn.org/issues/smart-meters/sm-five-people-want-invade.html>

“Imagine your health insurance going up because you never use your treadmill or your home insurance going up because you don’t actually set that fancy alarm that got you a discount.”

“Law enforcement traditionally must get a search warrant to access meter data from your utility company, just like they would to search anywhere else in your home. Those protections don’t apply to data revealed to third parties—such as a company that helps you monitor your energy use online or from a smart phone, or a company that makes a counter-top device to monitor energy use.”

The Problems With Smart Grids

<http://www.counterpunch.org/2011/03/18/the-problems-with-smart-grids/>

GE is the largest manufacturer of Smart Meters in the world. It has signed contracts with CenterPoint Energy and Grid Net to deploy **WiMax-enabled radios for use in Smart Meters**. WiMax is the fourth generation network that was earmarked by the FCC and the Obama administration to bring wireless Internet to rural areas.

3) SMART GRID TRANSMUTED INTO UBIQUITOUS CITYWIDE WIFI TO SPY ON CITIZENS



California City Uses Public WIFI to Transmit Smart Grid Data

<http://www.ntca.org/new-edge/data/california-city-uses-public-wifi-to-transmit-smart-grid-data>

“...the Northern California city of Santa Clara, launched a new program to collect smart meter data from customers via a WiFi network. The program, called the MeterConnectSM program, operates on a “free” (emphasis added) outdoor WiFi network with coverage in about 90% of Santa Clara.”

<http://santaclarafreewifi.com/>

“Santa Clara Free Wi-Fi provides outdoor access to the Internet in the City of Santa Clara. **The free Wi-Fi is made possible through the new advanced metering system put in place by Silicon Valley Power (SVP), the City’s municipal electric utility, Called SVP MeterConnectSM, it refers to the advanced meters and the wireless technology powering SVP’s upgrade to modern and secure wireless metering for its electricity customers.”**

UBIQUITOUS WIFI ALLOWS FOR SPYING ON UNSUSPECTING CITIZENS THROUGH THEIR WALLS

Seeing Through Walls With a Wireless Router

<http://www.popsci.com/technology/article/2012-07/seeing-through-walls-wireless-router>

“In the 1930s, U.S. Navy researchers stumbled upon the concept of radar when they noticed that a plane flying past a radio tower reflected radio waves. **Scientists have now applied that same principle to make the first device that tracks existing Wi-Fi signals to spy on people through walls.”**

Seattle Deactivates WIFI Spying Grid

<http://www.youtube.com/watch?v=k4uw5D5KjWI>

4) SMART METERS ENABLE POSSIBLE ACCESS TO PRIVATE INFORMATION ON PERSONAL COMPUTERS

Smart Grid, Smarter Home

<http://www.technologyreview.com/view/422316/ces-smart-grid-smarter-home/>

“General Electric has developed a complete suite of smart appliances, including a fridge, dish washer, electric oven, clothes washer, dryer, and hot water heater that all have Zigbee radios for communicating either directly with a smart meter or with the company’s Nucleus Energy Manager.”

“It uses Zigbee to talk with the smart meter, appliances, and any electric vehicle you might own, and communicates with users via a PC or smartphone interface over WiFi.”

The fact that these smart chips communicate with home computers or cell phones means the threat of accessing personal information on ones home or office computer or cell phone is a real one.

<http://www.intel.com/support/services/smartconnect/sb/CS-033108.htm>

Intel® Smart Connect Technology Features and Requirements

Overview

Intel® Smart Connect Technology is designed to update programs by periodically waking your computer from sleep/standby mode for a short time. This function works with applications that automatically get their data from the Internet, such as Microsoft Outlook*, Microsoft Windows* Live Mail and Seesmic*.

Benefits

Intel® Smart Connect Technology automatically updates applications such as e-mail and social networks when your computer is asleep. With Intel Smart Connect Technology, you do not have to wait for your applications to update when you wake up your computer.

Features

The amount of time the feature waits to wake your computer can be set using the slider bar under the Basic tab of the user interface. The time can be set from every five minutes to every 60 minutes, the longer time between updates, the less power the feature consumes.

Intel® Smart Connect Technology automatically adjusts the update frequency if your computer battery level is dropping, or if the system temperature rises.

If your computer is equipped with an Intel® WiFi card and Intel® PROSet/Wireless Connection Utility, Intel Smart Connect Technology searches for Wi-Fi networks you have previously accessed. Your computer does not update until it recognizes a known Wi-Fi network.

Requirements

Intel® Smart Connect Technology requires features that must be built into the BIOS of your computer system. For this reason, the technology must be included in the computer system at the time of manufacture. If your computer system included Intel Smart Connect Technology, but the feature is not available, make sure that the capability is enabled in your system BIOS. Contact your system manufacturer for instructions on how to access the BIOS.

5) 5th AMENDMENT VIOLATIONS

There are at a minimum, 4 laws within the 5th Amendment that smart meters and smart grid violate:

http://www.law.cornell.edu/wex/fifth_amendment

"The Fifth Amendment of the U.S. Constitution provides, "No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a grand jury, except in cases arising in the land or naval forces, or in the militia, when in actual service in time of war or public danger; nor shall any person be subject for the same offense to be twice put in jeopardy of life or limb; **nor shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation.**"

The utility companies had knowledge of both health effects and fire hazard from smart meters.

http://citizensforaradiationfreecommunity.org/wp-content/uploads/2013/06/COMPLAINT..1st_amended..LASC..Smartmeter_Complaint_SCEA-5a.doc

Whistle blower evidence that PG@E knew of fire hazard with smart meters upon installation:

http://www.youtube.com/watch?feature=player_embedded&v=EnxIoItNUck

1) JEOPARDY OF LIFE AND LIMB

Please see above statement and links.

2) NOR SHALL BE COMPELLED IN ANY CRIMINAL CASE TO BE WITNESS AGAINST HIMSELF

Smart meters (a part of smart grid) compel the citizen in the dwelling or owner of the property to be an involuntary and unwitting witness against themselves by mere virtue of having the smart meter on their dwelling.

Marijuana Bust Shines Light on Utilities

<http://www.postandcourier.com/article/20120129/PC1602/301299979>

“A former state trooper learned that lesson when Dorchester County deputies raided his Ridgeville rental property in January 2010 and discovered a sophisticated indoor marijuana farm.”

“Court papers recently filed in the case revealed that investigators were tipped off by the tenant's utility company.”

Personal and granular information is available through which any law enforcement agency can take full advantage, in addition to which, in the instance of hacking, the smart meter can actually be made to operate as if that person was in the dwelling when they were not, thereby presenting false witness against them in the privacy of their own home or business.

3) NOR DEPRIVED OF LIFE, LIBERTY OR PROPERTY WITHOUT DUE PROCESS OF LAW

As it stands, as of the new addition to “The Patriot Act” the NSA OR OTHER GOVERNMENT AGENCY MAY HOLD WITHOUT TRIAL INDEFINITELY AND EVEN KILL, ANY AMERICAN CITIZEN IT DEEMS TO BE A TERRORIST THREAT. CURRENTLY, ON THE LIST OF US TERRORISTS THAT WE KNOW OF ARE:

FBI Placed Left-Wing Activists On Terrorism Watch List Without Cause

<http://talkingpointsmemo.com/muckraker/fbi-placed-left-wing-activists-on-terrorism-watch-list-without-cause>

<https://www.documentcloud.org/documents/549518-fbi-ows-documents.html>

1. (U//LES) An identified [redacted] as of October planned to engage in sniper attacks against protestors in Houston, Texas, if deemed necessary. An identified [redacted] had received intelligence that indicated the protestors in New York and Seattle planned similar protests in Houston, Dallas, San Antonio, and Austin, Texas. [redacted] planned to gather intelligence against the leaders of the protest groups and obtain photographs, then formulate a plan to kill the leadership via suppressed sniper rifles. (Note: protests continued throughout the weekend with approximately 6000 persons in NYC. “Occupy Wall Street” protests have spread to about half of all states in the US, over a dozen European and Asian cities, including protests in Cleveland 10/6-8/11 at Willard Park which was initially attended by hundreds of protestors).

In case you can't read the above heavily redacted FOIA from the FBI regarding OWS protestors, it speaks of the FBI's plan to gather intelligence on OWS leadership, obtain photos of them and formulate a plan to kill them via suppressed sniper rifles. Disgusting as this is, the FBI has as of yet gone unpunished for this plot to kill the

people of the United States in cold blood, in addition to working to impede our vitally important Constitutional right to gather and peacefully protest. The above article shows how abusive federal governmental agencies can be against law abiding citizens and that the citizens of the United States do not trust them with our granular information, nor do we trust that the microwave emissions coming from smart meters will be used only to "relay electricity usage to the utilities".

US Terrorist Watch List:

- a) American Friends Service Committee**
- b) Catholic Workers**
- c) Greenpeace USA**
- d) Occupy Wall Street - anyone at all, ever involved in with this organization**
- e) PETA**
- f) Other innocent, peaceful and law-abiding citizens we do not currently have knowledge of.**

It is entirely conceivable that smart meters and smart grid can and will be used against ANYONE the NSA, DOH, DoD, CIA or other government considers a "terrorist threat and in the cases above, not only do the citizens of the US consider it illegal and abusive to have the members of those organizations placed on the terrorist list, but the fact that the NSA may indefinitely detain without trial or kill any members of the above law abiding groups and can do so with greater ease via smart meters and with possible false witness of a hacked smart meter is further evidence of a government gone rogue and a non-law abiding nation. If rule of law is not re-instated soon in the US, the smart meter could notify NSA or other government agency, law enforcement entity or "criminal" that the above listed law-abiding US citizens or other US citizens on unidentified US government "watch lists" were in their dwelling and even give granular information on the victim, which could further endanger them to indefinite detainment without trial or possible death.

4) "...NOR SHALL PRIVATE PROPERTY BE TAKEN FOR PUBLIC USE WITHOUT JUST COMPENSATION"

Smart meters operate in mesh networks, with signals hopping from one person's home or business to another, acting as communication devices for the utilities regardless of whether or not that person wants their home to be used as a relay station for the utility and without compensating the home or business owner whose property is being used by the utility as a relay station or communications hub.

6) 10th AMENDMENT

http://www.law.cornell.edu/constitution/tenth_amendment

“The powers not delegated to the United States by the Constitution, nor prohibited by it to the states, are reserved to the states respectively, or to the people.”

Nowhere in the US Constitution does it allow the federal government to impose carcinogenic microwave devices that spy on citizens in their own home or to use their own neighborhoods for the same purposes with the same side effects.

7) 14th AMENDMENT

<http://www.law.cornell.edu/constitution/amendmentxiv>

“...No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the US; nor shall any State deprive any person of life, liberty, or property, without due process of law... “

The federal government is actively abridging the privileges of U.S. citizens through the enforcement of this program, and depriving citizens of life, liberty and property.

9) FALSE AND MISLEADING CLAIMS OF JOB CREATION FOR PRIVATE CORPORATIONS TO GAIN ACCESS TO PUBLIC US TAX PAYER DOLLARS - THOSE NEWLY CREATED JOBS VIA US TAX PAYER DOLLARS ARE THEN SHIPPED OVERSEAS

Though the US is in the deepest recession since the 1930s, and more and more jobs are being shipped over seas, the federal government callously funded smart grid while pitching “job creation” to Congress so they would go along for the ride. However, the funds of course go to utility executives or manufacturers to distribute “within their company” whilst eliminating tens of thousands of meter reader jobs and other manufacturing jobs.

precompetitive principles from the beginning that prohibit barriers to market entry. New 27 entrants need prompt, unfettered and reasonable access to the detailed customer usage data collected by a Smart Meter. And such access needs to reflect consistent, standardized methods across utilities.”

A. No barriers to entry:

“The IOUs should not impose onerous, expensive or cumbersome technical or administrative requirements on third parties that want to participate in the Smart Grid market. Any qualified third party should be able to participate without delay or unnecessary expense. That said, it is understandable that certain safeguards may be necessary to ensure the security and integrity of IOU systems and customer information. But any such network security safeguards should not become a means to impede or delay competitive entry or constrain innovation.”

Privacy laws and rules change. What consumers have a choice about divulging one year, becomes “no choice” the next. If agencies such as the CPUC do not listen to the public, as they have proven not to on this issue, then these issues must be fought with attorneys in courts of law, if members of the public have the money and can find the attorneys to take their cases. This disrupts their lives and livelihoods and puts an undue burden on citizens who depend on the Constitution of the United States to be upheld and not deteriorated simply because someone sees a new way to make money on them at the expense of their of their civil liberties.

CPUC Commissioner Timothy Allen views customer privacy merely as “market interest.”

From the CPUC proceeding on privacy and the Smart Grid, Docket #: R 08-12-009 (July 28, 2011)

• Commissioner Timothy Alan Simon, “I support today’s decision because it adopts reasonable privacy and security rules and **expands consumer and third-party access to electricity usage and pricing information. I hope this decision stimulates market interest in the data.**”

And now of course, the inevitable and dreaded issue of government agencies spying on citizens:

CIA Chief: We’ll Spy on You Through Your Dishwasher

<http://www.wired.com/dangerroom/2012/03/petraeus-tv-remote/>

“More and more personal and household devices are connecting to the internet, from your television to your car navigation systems to your light switches. CIA Director David Petraeus cannot *wait* to spy on you through them.”

“Earlier this month, Petraeus mused about the emergence of an “Internet of Things” — that is, wired devices — at a summit for In-Q-Tel, the CIA’s venture capital firm.

“Transformational’ is an overused word, but I do believe it properly applies to these technologies,” Petraeus enthused, “particularly to their effect on clandestine tradecraft.”

“With the rise of the “smart home,” you’d be sending tagged, geolocated data that a spy agency can intercept in real time when you use the lighting app on your phone to adjust your living room’s ambiance.”

4th Amendment, Invasion of Privacy, Spying and the Law:

Judge Questions Legality of NSA Phone Records

http://www.nytimes.com/2013/12/17/us/politics/federal-judge-rules-against-nsa-phone-data-program.html?_r=1&

“WASHINGTON — A federal district judge ruled on Monday that the National Security Agency program that is systematically keeping records of all Americans’ phone calls most likely violates the Constitution, describing its technology as “almost Orwellian” and suggesting that James Madison would be “aghast” to learn that the government was encroaching on liberty in such a way.”

Drug Dogs Need Warrant to Sniff at Your Front Door

<http://www.csmonitor.com/USA/Justice/2013/0326/Drug-dogs-need-a-warrant-to-sniff-at-your-door-Supreme-Court-rules-video>

“The basic rule is that a search occurs for Fourth Amendment purposes when the government physically intrudes for investigative purposes on one of the areas that the amendment protects: that is, onto persons, houses, papers, or effects,” Scalia said in announcing the decision in open court.

“When it comes to the Fourth Amendment, the home is first among equals,” Scalia wrote. **“At the amendment’s very core stands the right of a man to retreat into his own home and there be free from unreasonable government intrusion.”**

Scalia gets it right

<http://articles.latimes.com/2013/mar/27/opinion/la-ed-warrant-supreme-court-20130327>

“But in 1967, the court adopted a broader definition of an illegal search when it ruled that the 4th Amendment was violated when police affixed a wiretap to the outside of a telephone booth being used by a gambler.”

Smart Meter Data: Privacy and Cybersecurity

Congressional Research Office Pg – 20

www.fas.org/sgp/crs/misc/R42338.pdf

Mosaic and Dragnet Theories

The mosaic theory is grounded in the idea that surveillance of the whole of one’s activities over a prolonged period is substantially more invasive than a look at each item in isolation.¹⁸¹ In the case of smart meters, this is the difference between knowing a person’s monthly energy usage, and being able to discern a person’s daily activities with considerable accuracy.

In *United States v. Jones*, the police used a GPS tracking device to track Jones’s movements for almost a month.¹⁸³ The majority, led by Justice Scalia, held that attaching a GPS device on a vehicle for the purpose of collecting information constituted a “search” under the Fourth Amendment. Justices Alito and Sotomayor both agreed that this was a search, but on different grounds. Both discussed an adaptation of the mosaic theory as prohibiting police from tracking a person for an extended period of time.

Justice Sotomayor agreed with this “incisive” observation, noting that “GPS monitoring generates a precise, comprehensive record of a person’s public movements that reflects a wealth of detail about familial, political, professional, religious, and sexual associations.”¹⁸⁷

“A person who knows all of another’s travels can deduce whether he is a weekly church goer, a heavy drinker, a regular at the gym, an unfaithful husband, an outpatient receiving medical treatment, an associate of particular individuals or political groups—and not just one such fact about a person, but all such facts.”¹⁸⁸

“With smart meters, police would have a rich source of personal data that reveals far more about a person than traditional analog meters. Understanding a person’s daily activities, including what appliances he is using, is a far leap from knowing his monthly energy usage. This is the difference between knowing about a single trip a person took and monitoring his movements over a month-long period. The breadth and granularity of the smart meter data may be seen as warranting application of the mosaic theory and may perhaps find receptive ears on the Court.”

Privacy Implications of Smart Meters

By Cheryl Dancey Balough
Balough Law Offices, LLCV
Chicago, Illinois

<http://www.balough.com/uploadedFiles/Privacy%20Implications%20of%20Smart%20Meters%20-%20Cheryl%20Dancey%20Balough%281%29.pdf>

In 2001, the Court held that warrantless use of the technology to view inside a home was prohibited by the Fourth Amendment.¹²⁶ Warning that use of thermal imaging could disclose intimate details about personal activities, including “at what hour each night the lady of the house takes her daily sauna and bath,” Justice Scalia opined that the Fourth Amendment “draws ‘a firm line at the entrance to the house.’ That line, we think, must be not only firm but also bright.”¹²⁷

Just because a product is funded with our tax dollars, by our federal government without our consent does not put it in the “general public use” category. This is sneaky, low ball tactics to force the public into compromised positions pertaining to their legal and Constitutional rights concerning property, privacy and right not be submitted to constant searches by police and government agencies.

“Given the rich detail of smart meter data, which can reveal intimate details about the electric customer’s life, and the reality that electric customers have no true choice in whether or not to give the data to the utilities, courts might find this data beyond the warrantless reach of law enforcement.”

Defendant’s Motion to Suppress the Fruits of the Warrantless Search

<http://tinyurl.com/m9ptply>

I. SEARCH WARRANT REQUIRED.

The United States and Ohio Constitutions guarantee the people’s right to be secure in their persons and houses against unreasonable searches and seizures. The

13) LIFE THREATENING AND DEBILITATING HEALTH EFFECTS INCLUDING CANCER, MANY NEUROLOGICAL ILLNESSES, PERMANENT GENETIC ALTERATION TO LINEAGE AND ADS (ADULT SUDDEN DEATH SYNDROME) VIA HEART ATTACK FROM MICROWAVE PULSES FROM SMART GRID AND SMART METER EMISSIONS

The range of health effects from smart meters and smart grid is no mystery to many of our federal government agencies such as DOD, CIA, NSA, DHS, DOE, and probably many other agencies as this microwave radiation is the exact same kind of microwave radiation, even sometimes in the same frequency bandwidth that is used by our military as weapons on the battlefield, for crowd control and even have been used by MK ULTRA and other nefarious government agency operations, all with the primary goal of debilitating, controlling, destabilizing in some way, or killing the enemy. But these microwave emissions are also used in medicine to heal bone fracture and are even in the early stages of being used to cure cancer. There is no doubt in anyone's mind that these emissions have an enormous impact on human and environmental biology...no one's mind except the average citizen who trustingly believes everything their federal agencies such as the FDA and FCC tell them about this radiation, that there are NO health effects whatsoever from microwave emissions...a bold and blatant lie.

The evidence of health effects is overwhelming, when looking at independent studies on this issue, but even the biased, industry funded studies show increase in cancer.

Below are a list of symptoms associated with EMF exposure, some documentary films made on this issue, as well as just SOME of the overwhelming scientific evidence of harm from smart meter and other non ionizing, non thermal radiation that the industry and our government deem to be "safe".

List of Symptoms Associated with RF and EMF Exposure

ADD/ADHD

Arthritis, body pain, sharp, stabbing pains

Asthma

Birth Defects

Cancer

Cataracts

Cardiac symptoms, heart palpitations, heart arrhythmias, chest pain

Changes in menstrual cycle

Concentration, memory or learning problems

Cough

Disorientation, dizziness, or balance problems

Endocrine disorders,
Eye problems, including eye pain, pressure in the eyes,
Exacerbation of Pre-existing Conditions
Diabetes
Fatigue, muscle or physical weakness
Headaches, sharp pain or pressure in the head
Heart Attack
High blood pressure
Hyperactivity or changes in children's behavior
Leg cramps, or neuropathy
Leukemia
Lymphoma
Medical Implant Interference and Malfunctions Including Defibrillator Shut Off, Deep Brain
Stimulator Shut Off, Insulin Pump Malfunctions
Nausea, flu-like symptoms
Neurological Illness Including Parkinsons, ALS, Dementia, Multiple Sclerosis,
Nose bleeds Skin rashes, facial flushing
Pre-cancerous cells,
Recurrence of cancer
Reproductive Problems
Respiratory problems,
Ringing in the ears, ear pain, high pitched ringing, stabbing pains in the ear
Seizures
Sinus problems,
Sleep problems (insomnia, difficulty falling asleep, night waking, nightmares)
Stress, agitation, anxiety, irritability
Spontaneous Abortion
Thyroid problems
Urinary problems

Some Very Important Films on This Subject

Take Back Your Power

<http://www.takebackyourpower.net/>

Resonance, Beings of Frequency

http://www.youtube.com/watch?v=QV9dhGv_tTs

Full Signal

<http://fullsignalmovie.com/>

Dumb and Dangerous – The Problems with Smart Grids

<http://www.counterpunch.org/2011/03/18/the-problems-with-smart-grids/>
JOB LOSS

“According to The Wall Street Journal, Palmisano told Browner that a \$10 billion investment was needed to jumpstart Smart Grids. Palmisano also claimed that Smart Grids would create 239,000 new jobs – with half of those resulting from start-up businesses. But his promise was not computed against the jobs lost, such as hundreds of thousands of unemployed meter readers.”

Meter readers are also often the ones who spot gas leaks. They have even responded to other emergency situations on their routes. That layer of oversight is now gone.

The # 1 stated intent of ARRA (American Recovery and Reinvestment Act):

http://www.recovery.gov/About/Pages/The_Act.aspx

- **Create new jobs and save existing ones**

For those utility companies utilizing these funds, this program is in direct conflict with the above stated intent, CREATING new jobs, not eliminating them and further decimating US employment.

US CITIZEN TAX DOLLARS FREELY GIVEN TO GE (General Electric) FOR MANUFACTURING OF SMART PRODUCTS, THEN THOSE JOBS SHIPPED TO CHINA AND OTHER OVERSEAS WORK FORCES

GE Gets 2.3 Federal Energy Grants...Every Month!

<http://www.instituteforenergyresearch.org/2010/10/29/ge-gets-over-2-3-federal-energy-grants-every-month/>

“General Electric CEO Jeff Immelt might have been right when he called the U.S. government’s energy policy “stupid” last month, but if it has been stupid, it has clearly been stupid in Immelt’s favor, giving hundreds of energy grants worth **hundreds of millions of dollars to GE over the last decade.”**

GE CEO Jeffrey Immelt, The Head of Obama's Jobs Council, Is Moving Jobs and Economic Infrastructure to China at a Blistering Pace

<http://theeconomiccollapseblog.com/archives/ge-ceo-jeffrey-immelt-the-head-of-obamas-jobs-council-is-moving-jobs-and-economic-infrastructure-to-china-at-a-blistering-pace>

“Jeffrey Immelt, the head of Barack Obama's highly touted "Jobs Council", is moving even more GE infrastructure to China.”

“Apparently, this is all part of a "plan to invest about \$2 billion across China" over the next few years. But moving core pieces of its business overseas is nothing new for GE. Under Immelt, GE has shipped tens of thousands of good jobs out of the United States. Perhaps GE should change its slogan to "Imagination At Work (In China)".

9) HACKING OF PERSONAL AND GRANULAR DATA RECORDED ON SMART CHIPPED DEVICES

“Made In China, Hacked By China” – International Brotherhood of Electrical Workers

Electrical Union Workers Speak Out Against Smart Meters

<http://www.memphisdailynews.com/news/2013/jul/10/ibew-plans-smart-meter-billboard-protest/>

“Leaders of International Brotherhood of Electrical Workers Local 1288 said Monday, July 8, they intend to put up billboards warning the public of what they say are the dangers of the new meters the utility plans to seek city funding for later this year. “We know it can be hacked in China,” said Donna Bohannon, another opponent of the meters. “Made in China, hacked by China.”

There are more industry and governmental organizations speaking out on the issue of smart grid vulnerability through hacking than any other issue regarding smart meters or smart grid.

Initial Comments of North East Utilities Executive Summary

http://haltmasmartmeters.org/wp-content/uploads/2014/01/NSTAR_R12-76-Comments-7986-POSTED01172014_HIGHLIGHTED.pdf

“AMI introduces a brand new portal into the Companies’ information systems, significantly increasing the cyber-security risk.”

Power Grid Updates Left System Vulnerable to Cyber attacks, Auditors Say

http://www.washingtonpost.com/politics/power-grid-updates-left-system-vulnerable-to-cyberattacks-auditors-say/2012/02/07/gIQAMxBVxQ_print.html

“A rush by the Energy Department to use stimulus money to modernize the country’s power grid has left the system vulnerable to cyberattacks, the agency’s internal watchdog found.”

“Inspector General Gregory H. Friedman found “shortcomings” in the cyber security plans of more than a third of the utility companies that got federal funding for “smart grid” projects — from incomplete strategies to prevent an attack to vague steps for stopping one if it started.”

“Energy officials knew of these weaknesses but approved plans for the projects anyway, auditors said: “The initial weaknesses had not always been fully addressed, and did not include a number of security practices commonly recommended for federal government and industry systems.”

“...the complex computer systems have caused concern about cyber attacks by hackers looking to grab personal information from utility accounts — or even shut down the nation’s power grid.

“Auditors blamed the weak cybers ecurity on the rush to grant the stimulus money.”

“The issues identified were due, in part, to the accelerated planning, development and deployment approach,” auditors wrote.

Another shortcoming: “The Energy Department was so focused on giving out money, it did not ensure that its staff had adequate training to oversee the projects.”

FBI: Smart Meter Hacks Likely to Spread

<http://krebsonsecurity.com/2012/04/fbi-smart-meter-hacks-likely-to-spread/>

“A series of hacks perpetrated against so-called “smart meter” installations over the past several years may have cost a single U.S. electric utility hundreds of millions of dollars annually,”

Ratepayers will be forced to shoulder the costs of hacking and theft of the easily infiltrated smart grid.

“The FBI says...“expects this type of fraud to spread across the country as more utilities deploy smart grid technology.”

“The FBI warns that insiders and individuals with only a moderate level of computer knowledge are likely able to compromise meters with low-cost tools and software readily available on the Internet.”

“The FBI says...former employees of the meter manufacturer and employees of the utility were altering the meters in exchange for cash and training others to do so. “These individuals are charging \$300 to \$1,000 to reprogram residential meters, and about \$3,000 to reprogram commercial meters.”

When Smart Homes Get Hacked: I Haunted a Complete Strangers House Via the Internet

<http://www.forbes.com/sites/kashmirhill/2013/07/26/smart-homes-hack/>

“I can see all of the devices in your home and I think I can control them,” I said to Thomas Hatley, a complete stranger in Oregon who I had rudely awoken with an early phone call on a Thursday morning...” **“...I flipped the light switch with a click, and resisted the Poltergeist-like temptation to turn the television on as well.”** **“They just came on and now they’re off,”** he said.

“You could put someone’s electric bill through the roof by turning on a hot tub heater,” says Bryan.

Hacking For Privacy: 2 Days for Amateur Hacker to Hack Smart Meter, Fake Readings

<http://www.networkworld.com/community/node/79486>

“Hackers analyzed Smart Meter data and were able to identify the number of PCs or LCD TVs in a home, what TV program was being watched, and if a DVD movie being played had copyright-protected material.”

Privacy Rights Activists Worry About Potential Abuse of High Tech Gadgets Featured at CES Event

http://www.washingtonpost.com/business/economy/privacy-rights-activists-worry-about-potential-abuse-of-high-tech-devices-featured-at-ces-event/2012/01/10/gIQAX3kJpP_story.html

“Microsoft’s Kinect game console collects some biometric information that Chief Executive Steve Ballmer said on Monday is a potential springboard for health-care and other industries. “We are collecting data second by second,” said Tivo Senior Vice President Tara Maitra. LG was among several companies to showcase “connected homes,” where appliances are connected to one another as well as energy grids via the Web.”

Dumb and Dangerous – the Problems with Smart Grids

<http://www.counterpunch.org/2011/03/18/the-problems-with-smart-grids/>

“Smart Grids can be penetrated by both wired and wireless networks. In August of 2009, hackers robbed 179,000 Toronto Hydro customers’ names, addresses, and billing information from their e-billing accounts. Security consultant Mike Davis of IOActive, Inc/Seattle has shown how easy it is to install computer worms that can take over the whole grid, and such worms can be programmed to alter billing information, gather information on electricity use for sale to third parties, or shut down hundreds of thousands of households.”

“Ross Anderson and Shailendra Fuloria at Cambridge University’s Computer Laboratory note that **hostile government agencies or terrorist organizations could bring whole countries to their knees by interrupting electrical generation. More so than traditional grids, they stress that Smart Grids create a new strategic vulnerability as the cyber equivalent of a nuclear attack. Smart Grids are also easy to sabotage with simple jamming devices.”**

“...encryption often fails. Imagine the utility - or even a passing cell-phone user - inadvertently turning on your oven when you’re on vacation. Or shutting off the furnace on a subzero night. For insurance purposes, who is liable? What about civil rights violations? Or the legal ramifications of a utility partnering with the police? In the purest sense, Smart Grids offer new opportunities for electronic trespass.”

Smart Meters Not So Clever About Privacy Researchers Find

http://www.pcworld.idg.com.au/article/441028/smart_meters_clever_about_privacy_researchers_find/

“Researchers at the University of South Carolina have discovered that some types of **electricity meter are broadcasting unencrypted information that, with the right software, would enable eavesdroppers to determine whether you're at home.**”

Ember Needs A Wake-Up Call From The CIA

<http://www.forbes.com/sites/jeffreycarr/2011/01/31/ember-needs-a-wake-up-call-from-the-cia/>

“Ember Corporation, a privately-held company based in Boston, MA with offices in the U.K. and China (Hong Kong) is a leading supplier of the “brains” of Smart Grid devices – semiconductor chips that enable the smart meter on your house to wirelessly send data about your power consumption to your power grid provider. It also allows your power company to control the supply of energy to every house in its service area up to and including a complete disconnection of service. It does this through a wireless communications protocol that you’ve probably never heard of called Zigbee.”

“...Ember Corporation caught the attention of In-Q-Tel, the venture capital arm of the CIA back in 2005.”

“Here’s how In-Q-Tel describes the company and its services:”

“Ember’s vision is to help create an “Internet of things” by enabling the eight billion microcontrollers built into products each year to support low-cost, low-power networking applications in any industry.”

“The encryption keys that provide for Zigbees’s vaunted security are transmitted in plain text. **That’s the equivalent of using the word “password” as your password.**”

“...**ZigBee stack for the chip is still vulnerable to this attack, even after recent patches!** A year later, exactly two debugger commands are all that are required to extract keys from nearly every ZigBee SEP device with a Chipcon radio, and no one knows to patch their code! (Do not be smug if you are an Ember customer. The EM2xx chips are un-patch-ably vulnerable to debugger key extraction, and there is no mention of this in the chip’s errata sheet either.)”

“We’re talking about critical infrastructure here. For companies like Eber and Texas Instruments to simply ignore the repeated warnings of respected security researchers like Travis, Josh, Nick D and others is, in my opinion, disgraceful

behavior. And while I'm not a lawyer, if harm is caused to a power company's customers because this well-known and well-publicized flaw was finally exploited by bad guys, I'd bet the mother of all class action lawsuits would be waiting on deck."

Smart Grid Cyber Security: DHS Reports Vulnerability in RuggedCom's Software

<http://www.greentechmedia.com/articles/read/smart-grid-cybersecurity-dhs-reports-vulnerability-in-ruggedcoms-software>

"Another day, another cybersecurity flaw revealed in the IT systems that run the world's critical infrastructure -- and this time, the Department of Homeland Security is getting involved."

"This isn't the first alert from the DHS' Industrial Control Systems Computer Emergency Response Team (ICS-CERT). The federal agency tagged what turned out to be a SCADA system employee logging on from Russia as a potential foreign attack on an Illinois water utility last year. ICS-CERT reported a total of 90 vulnerabilities so far this year, up from 60 in 2011."

New Interest in Hacking as Threat to US Security

<http://www.nytimes.com/2012/03/14/us/new-interest-in-hacking-as-threat-to-us-security.html? r=1>

"James A. Lewis, a senior fellow and a specialist in computer security issues at the Center for Strategic and International Studies, a policy group in Washington, said that **as hacking awareness had increased, attacks had become more common. He said that the attacks on the nation's infrastructure were particularly jarring.**"

"He added: **"We hit rock bottom on this in 2010. Then we hit rock bottom in 2011. And we are still at rock bottom. We were vulnerable before and now we're just more vulnerable. You can destroy physical infrastructure with a cyberattack just like you could with a bomb."**

How hackers can steal electricity from smart grid

A video lesson...

<http://www.youtube.com/watch?v=wGzZG7IWfYo>

Hacking Expert David Chalk Joins Urgent Call to Halt Smart Grid

<http://apps.fcc.gov/ecfs/document/view?id=7520940126>

“The vulnerability of the energy industry's new wireless smart grid will inevitably lead to lights out for everyone, according to leading cyber expert David Chalk. In an online interview for an upcoming documentary film entitled 'Take Back Your Power' (www.ThePowerFilm.org), Chalk says the entire power grid will be at risk to being taken down by cyber attack, and if installations continue it's only a matter of time. “

“We're in a state of crisis,” said Chalk. “The front door is open and there is no lock to be had. There is not a power meter or device on the grid that is protected from hacking - if not already infected - with some sort of Trojan horse that can cause the grid to be shut down or completely annihilated.”

“Every endpoint [meter] is a new potential threat vector,” according to Doug Powell, manager, SMI Security, Privacy & Safety, for Canadian utility BC Hydro.

Senators Debate Security of Electric Grid

<http://www.washingtontimes.com/news/2012/jul/17/senators-debate-security-electricity-grid/>

“The U.S. electricity grid is dangerously vulnerable to sabotage by hackers, spies and terrorists, despite a seven-year effort to protect it from cyberattacks, senators and officials said Tuesday.”

“Set up by the 2005 Energy Policy Act, the system is “not adequate” for protecting the huge and complex power network from an attack via the Internet, the New Mexico Democrat said.”

“Seven years after we passed the law ... we are still waiting for that process to produce the full set of adequately protective standards that we need,” Mr. Bingaman said.”

Cyber Security: Power Grid Grows More Vulnerable to Attack, Report Finds

<http://www.csmonitor.com/USA/2011/1206/Cyber-security-Power-grid-grows-more-vulnerable-to-attack-report-finds>

"Millions of new communicating electronic devices ... will introduce attack vectors -- paths that attackers can use to gain access to computer systems or other communicating equipment. That increase[s] the risk of intentional and accidental communications disruptions," including "loss of control over grid devices, loss of communications between grid entities or control centers, or blackouts."

Utility Cyber Security is in a State of Near Crisis

<http://www.pikeresearch.com/research/utility-cyber-security>

"Utility cyber-security is in a state of near chaos....Many attacks simply cannot be defended."

SCADA Systems Vulnerability Is Key Weakness in Smart Grid Deployments

<http://www.homelandsecuritynewswire.com/dr20111212-scada-systems-vulnerability-key-weakness-in-smart-grid-deployments>

Homeland Security Newswire:

"SCADA systems' vulnerability (is) key weakness in Smart Grid deployments..."

"Many SCADA systems were deployed without security in the belief that SCADA would always be isolated from the Internet," says senior analyst Bob Lockhart. "But it's not, and even when it is, attacks such as Stuxnet can circumvent the isolation by using USB memory sticks to spread.

"Hackers also analyzed Smart Meter data and were able to identify "the number of PCs or LCD TVs in a home, what TV program was being watched, and if a DVD movie being played had copyright-protected material."

CIA Director, Leon Panetta Warns of Cyber Pearl Harbor

<http://abcnews.go.com/News/cia-director-leon-panetta-warns-cyber-pearl-harbor/story?id=12888905>

"I've often said that there's a strong likelihood that the next Pearl Harbor that we confront could very well be a cyber attack that cripples our power systems, our grid."

Leon Panetta: Cyber intruders have already infiltrated US systems

http://usnews.nbcnews.com/_news/2012/10/11/14376572-panetta-cyber-intruders-have-already-infiltrated-us-systems?lite

“In a speech before business executives in New York, Panetta revealed that cyber intruders have already gained access to some of America's critical control systems that run chemical, electric and water systems with the intent to "cause panic, destruction and loss of life."

Former CIA Director James Woolsey:

<https://www.youtube.com/watch?v=MAid1bS8t9U>

“What they're doing now, they're constructing what they call a ‘Smart Grid.’ ... And a so-called ‘Smart Grid’ that is as vulnerable as what we've got is not smart at all, it's a really, really stupid grid.”

How to Hack the Power Grid for Fun and Profit

<http://www.technologyreview.com/news/421112/how-to-hack-the-power-grid-for-fun-and-profit/>

“Attackers could manipulate power-grid data by breaking into substations and intercepting communications between substations, grid operators, and electricity suppliers. This data is used by grid operators to set prices for electricity and to balance supply and demand, the researchers say. **Grid hackers could make millions of dollars at the expense of electricity consumers by influencing electricity markets. They could also make the grid unstable, causing blackouts.**”

“The attacks would be difficult to trace”, Le Xie, an assistant professor of electrical and computer engineering at Texas A&M University, speaking at the IEEE SmartGridComm2010 conference in Gaithersburg, Maryland.

“Deepa Kundur, a professor of electrical and computer engineering at Texas A&M, is developing simulations to help determine the risks involved. **It's not yet clear whether the smart grid will be worth the risks.**”

Behave Yourself! The Utilities Have Got Your Numbers and Next They'll Know Your Habits Too!

<http://smart-grid.tmcnet.com/topics/smart-grid/articles/176270-behave-yourself-utilities-have-got-numbers-next-theyll.htm>

“GridGlo is working with utilities to combine consumer household behavioral data with energy usage data—along with a dollop of data on weather, demographics, motor vehicle registrations, and even satellite imagery—and from all that, to draw strategic operational and marketing conclusions. The process is called data fusion. Behave Yourself! The Utilities 'Have Got Your Numbers' and Next They'll Know Your Habits, Too.”

Hacking Water Meters Is Easier Than It Should Be

<http://venturebeat.com/2011/08/06/hacking-water-meters-is-easier-than-it-should-be/>

“If people want to reduce their water bills, they could hack the sensors. They could also increase the bill paid by a neighbor they don't like, or evade restrictions on the amount of water used. And since the usage of water indicates the presence or absence of the homeowner, the hacked water meters can be used for surveillance purposes.”

SmartMeters Facilitate Cyber War Against US

<http://daviddilworth.com/pol/smartmeters-facilitate-cyber-war-against-us/>

“Smart” meter communication data is in “plain English” — it is readable by anyone with a laptop and WiFi. This means your so-called “Smart”meter is easily controlled by anyone with a laptop and a WiFi. Is this a wild speculative fantasy? No.”

Smart Meter Hacking Tool Released

www.zdnet.com/smart-meter-hacking-tool-released-7000001338/

“As with any release of a hacking tool, there are two sides of the same...”

“Termineter can also be used maliciously to modify consumer data, inflicting financial loss on one or multiple victims.”

FBI Finds Smart Meter Hacking Surprisingly Easy

<http://www.greentechmedia.com/%20articles/%20read/%20fbi-finds-smart-meter-hacking-surprisingly-easy>

“...But for at least one utility in Puerto Rico, **smart meter hacking may have cost the utility hundreds of millions of dollars, according to the Federal Bureau of Investigation**, as reported on the blog [Krebs on Security](#).”

“The security blog obtained a May 2010 cyber intelligence bulletin that said the incident is the first known report of criminals hacking into smart meters and that this **is just the beginning of this type of activity**.”

David Chalk on Smart Meter Hacking - Part 1

<https://www.youtube.com/watch?v=txwBQpiQxy0>

Hacking Expert David Chalk Joins Urgent Call to Halt Smart Grid

<http://www.businesswire.com/news/home/20120412005992/en/Hacking-Expert-David-Chalk-Joins-Urgent-Call#.UzkEc8fsvyw>

"100% certainty of catastrophic failure of energy grid within 3 years," says security expert David Chalk.”

“The front door is open and there is no lock to be had. There is not a power meter or device on the grid that is protected from hacking - if not already infected - with some sort of Trojan horse that can cause the grid to be shut down or completely annihilated... This could actually be worse than a nuclear war, because it would happen everywhere. How governments and utilities are blindly merging the power grid with the Internet, and effectively without any protection, is insanity at its finest.””

10) HACKING MEDICAL IMPLANTS

What could be worse than having your home or the entire grid hacked? Having your medical implant hacked. This could cause instant death. Millions of Americans are at risk. FCC and other government agencies, are WELL AWARE of this risk, including ex vice president Dick Cheney:

Dick Cheneys Fear Heart Device Hacks Justified

<http://abcnews.go.com/Health/dick-cheneys-fear-heart-device-hacks-justified-experts/story?id=20633284>

Black Hat Hacker Can Remotely Attack Insulin Pumps and Kill People

<http://www.cbsnews.com/news/black-hat-hacker-can-remotely-attack-insulin-pumps-and-kill-people/>

“Radcliffe wears an insulin pump that can be used with a special remote control to administer insulin. He found that the pump can be reprogrammed to respond to a stranger's remote.”

“Although an attacker would need to be within a couple hundred feet of the patient to pull this off, a stranger wandering a hospital or sitting behind a target on an airplane would be close enough... With a powerful enough antenna, Radcliffe said, an attacker could be up to a half a mile away.”

“It would only take one person to do this to kill someone and then you have a catastrophe,” he said.”

Black Hat Lethal Hack and Wireless Attack on Insulin Pumps

Implantable Cardioverter Defibrillators

- Require long operating life
- Current consumption is critical

RFM Short-Range Radios

Embedded into hundreds of thousands of medical implant devices

Extend Medical Telemetry Operating Life with Unique RFM Architecture

Lowest current consumption in the market

- 100% power efficiency
- 100% power efficiency
- 100% power efficiency
- 100% power efficiency
- 100% power efficiency

Reduce 10% power during some events for unique resistance

Typical Medical Architecture

Chronology:

On July 30, 2010, California State Assembly Member Jared Huffman (San Rafael) asked the California Council on Science and Technology (CCST) to provide an assessment of the safety of Smart Meters.

On August 16, 2010, CCST agreed to compile and assess the evidence available to address the following two issues:

1. Whether FCC standards for Smart Meters are sufficiently protective of public health taking into account current exposure levels to radiofrequency and electromagnetic fields.
2. Whether additional technology specific standards are needed for Smart Meters and other devices that are commonly found in and around homes, to ensure adequate protection from adverse health effects.

On October 4, 2010, I was invited to be part of a Technical Response Team and, as part of that team, I was asked to provide a written response to two key concerns mentioned above.

On October 12, 2010, I submitted my report to CCST.

On December 13, 2010, I was informed that CCST was not appending any documents to their report, nor were they making these documents available to others, but they were recognizing those who contributed.

On January 11, 2011, CCST released their report “Health Impacts of Radio Frequency from Smart Meters” on their website: Click [here](#) to download this document and to provide comments. CCST is receiving public comments until January 31, 2011. <http://www.ccst.us/news/2011/20110111smart.php>.

Let us hope that this process will be transparent and that all documents CCST receives will be made public on their website.

Seletun Report

Scientific panel on electromagnetic field health risks: consensus points, recommendations, and rationales

Abstract

<http://www.ncbi.nlm.nih.gov/pubmed/21268443>

Full Report

http://thepeoplesinitiative.org/images/pdf/Home/Seletun_Statement_Fragopoulou_et_al_2010b.pdf

“For whole body (in vivo experiments) or cell culture based exposure, the Seletun Scientific Panel finds sufficient evidence to establish a scientific benchmark for adverse health effect at 0.0166 W/kg based on at least 32 scientific studies reporting low intensity effects (defined as studies reporting effects at exposures of 0.1 W/kg or lower)/8-39/.”

“The Panel recommends a provisional whole body limit of 0.00033 W/kg by incorporation of an additional 50 fold safety margin applied to the scientific benchmark of 0.0166 W/kg” This is consistent with both ICNIRP and IEEE/FCC safety factors. An additional 10 fold reduction is applied to take prolonged exposure into account (because **29 of the 32 studies are acute exposure only**), giving a final whole body limit of 0.000033 W/kg (33 μ W/kg). No further safety margin or provision for sensitive populations is incorporated. **This may need to be lowered in the future.**

Based on power density measurements, the Seletun Scientific Panel finds sufficient evidence for a whole body scientific bench mark for adverse health effect exists down to 85 mW/m (0.0085 mW/cm or 8.5 μ W/cm based on at least 17 scientific studies reporting low intensity effects on humans. Taking more recent human studies conducted near base stations, or at base station RF levels, Kundi and Hutter /57/report that the levels must exceed 0.5-1.0 mW/m (0.05 to 0.1 μ W/cm) for effects to be seen; /40-57/.

The Panel recommends a provisional whole body (far field) limit of 1.7 mW/m (also = 0.00017 mW/cm = 0.17 μ W/cm by incorporation of an additional 50 fold safety margin applied to the scientific benchmark of 85 mW/m This is consistent with both ICNIRP and IEEE/FCC safety factors. **This may need to be lowered in the future.** It can be argued that a further 10 fold reduction is not justified since 13 of the 17 studies are already testing for long term RF exposure. However, considering that the latest human population studies as reported by Kundi & Hutter (2009) do not show effects below 0.5-1.0 mW/m, it can also then be argued that an additional 10 fold reduction on precautionary grounds is justified. **If another 10 fold reduction is applied, the recommended level would then be 0.17 mW/m (also 0.000017 mW/cm = 0.017 μ W/cm);**

BioInitiative 2012

www.bioinitiative.org/

A Rationale for Biologically-based
Exposure Standards for Low-Intensity

Electromagnetic Radiation

BioInitiative Working Group 2012

Jitendra Behari, PhD, India
Paulraj Rajamani, PhD, India
Carlo V. Bellieni, MD, Italy
Igor Belyaev, Dr.Sc., Slovak Republic
Carl F. Blackman, PhD, USA
Martin Blank, PhD, USA
Michael Carlberg, MSc, Sweden
David O Carpenter, MD, USA
Zoreh Davanipour, DVM, PhD USA
Adamantia F. Fragopoulou, PhD, Greece
David Gee, Denmark
Yuri Grigoriev, MD, Russia
Kjell Hansson Mild, PhD, Sweden
Lennart Hardell, MD, PhD, Sweden
Martha Herbert, PhD, MD, USA
Paul Héroux, PhD, Canada
Michael Kundi, PhD, Austria
Henry Lai, PhD, USA
Ying Li, PhD, Canada
Abraham R. Liboff, PhD, USA
Lukas H. Margaritis, PhD, Greece
Henrietta Nittby, MD, PhD, Sweden
Gerd Oberfeld, MD, Austria
Bertil R. Persson, PhD, MD, Sweden
Iole Pinto, PhD, Italy
Cindy Sage, MA, USA
Leif Salford, MD, PhD, Sweden
Eugene Sobel, PhD, USA
Amy Thomsen, MPH, MSPAS, USA

Cite this report as: BioInitiative Working Group, Cindy Sage and David O. Carpenter, Editors.
BioInitiative Report: A Rationale for Biologically-based Public Exposure Standards for Electromagnetic Radiation at
www.bioinitiative.org, December 31, 2012

Copyright © 2012 Cindy Sage and David O. Carpenter - Editors. All Rights Reserved

PREFACE

The Organizing Committee thanks the participants of the BioInitiative Working Group for their integrity and intellectual courage in dealing with this controversial and important topic; and for devoting the time and energy to produce their chapters. The information and conclusions in each chapter are the responsibilities of the authors of that chapter. The Group has produced what the authors hope will be a benchmark for good science and

http://blogs.computerworld.com/18744/black_hat_lethal_hack_and_wireless_attack_on_insulin_pumps_to_kill_people

“Dr. William Maisel, assistant professor at Harvard Medical School: “...if a medical device embedded in the body were to glitch out, seemingly malfunction and cause a target's death, who would think to look at it as a long-range wireless assassination which left no smoking gun?”

Watch Where You're Beaming That Signal

www.startribune.com/opinion/commentary/22122349.html

“In January 2006, I had my "battery-operated brain," also known as BOB, installed. What I mean is that I underwent two surgeries to have lead wires with electrodes implanted deep into my brain, which were then hooked up to neurotransmitter "pacemakers" in my chest.”

“Last October, I began having dyskinesia on my left side. I hadn't changed my medication. I couldn't figure out what might be causing it. Many phone calls, several hundred dollars in plane fare to see my neurosurgeon in Cleveland, numerous X-rays and a long session with a programmer revealed that *something* had caused the neurostimulator on my right side, which controls the left side of my body, to be reset to factory settings. The left neurostimulator had maintained its programmed settings. My neurosurgeon said he knew of only two ways this could have happened: equipment failure (which seemed unlikely, because the device was reprogrammed and, within an hour, I felt fine) or exposure to a large source of electromagnetic interference. But I always go out of my way to avoid known sources of EMI. So what could it have been?”

There is NO avoiding smart grid or smart meters. People like the person above will most likely die from smart grid roll out. The US government along with utilities may be held accountable for these deaths.

Finding Wireless Solutions for Connected Healthcare at MD&M 2013

Bluetooth Low Energy / Wi-Fi / ZigBee / MICS
Ultra-Low-Power ICs / FHSS



What do design engineers for a pacemaker, a patient monitoring system, and diagnostic equipment all have in common? These days, they all have to implement wireless connectivity into their designs.

Finding Wireless Solutions for Connected Healthcare at MD&M 2013

<http://www.rfm.com/rfm-and-murata/medical-wireless/>

“What do design engineers for a pacemaker, a patient monitoring system, and diagnostic equipment all have in common? These days, **they all have to implement wireless connectivity into their designs.**”

Letter From Dr. Martin C. Burke, DO

http://interchange.puc.state.tx.us/WebApp/Interchange/Documents/40190_621_736027.PDF

Control Number

40190

Item Number: 621

Addendum StartPage

SECTION OF CARDIOLOGY

.5S4I SOUTH MARYLAND AVENUE • MC 6080 • CHICAGO • ILLINOIS 60637-1470

(773) 702-1757

30 April 2012

Douglas Krieger,

City Manager

City of Naperville

400 E. Eagle St.

Naperville IL 60540-5279

Martin C. Burke, DO

Interim Chief, Section of Cardiology

Director, Heart Rhythm Center

The University of Chicago Medicine

5758 S. Maryland Avenue, MC 9024

Chicago IL 60637

Mr. Krieger:

It has come to my knowledge that one of my patients is being forced to receive the 'smart' meters being installed in your city. Because of the sensitive condition of her heart and potential for interference of the new devices, it is my expert medical opinion that her household not receive the 'smart' meter. The potential complications or interferences are not acceptable with her device. There is potential that this meter may interfere with the function of her cardiac device; this could cause a number of issues including but not limited to inappropriate shocks, cardiac device reprogramming and/or asynchronous pacing. Until more reliable data can be collected on the health and safety of these 'smart' meters, it is not recommended that she has one of these installed in her home.

Please let me know if you have any questions. You may contact my office at 773-702-5988.

Thank you

Martin C. Burke, DO

A Few Quotes From Dr. Zory Glaser

<http://www.magdahavas.com/category/from-zorys-archive/>

By Dr. Zory Glaser:

Microwave

Radiation

Affects the Heart

March 7, 2011.

“We know that pace makers can malfunction if they are exposed to interfering microwave frequencies and people with pace makers are told to stay away from microwave ovens and other microwave emitting devices. The newer pace makers have shielding to prevent interference. But the human heart comes without a shield. So it is not only the child or adult with a pace maker that needs to be careful about their exposure to microwaves, all of us need to be aware that this radiation may affect the heart.”

“Thus, long-term observations showed that the nature and intensity of the cardiovascular reactions to prolonged exposure to microwaves are closely related to neurologic changes, especially those in the autonomic nervous system.”

“The early literature showing cardiovascular dysfunction among microwave workers, our study showing heart rate irregularities with pulsed microwave exposure at a fraction of international microwave exposure guidelines; the complaints of electrically hypersensitive individuals of heart irregularities; student complaints of heart flutters and a racing heart; and the increase in the rate of sudden cardiac arrest among young people to the point that schools are installing defibrillators cannot be ignored.”

11) “SMART ZIGBEE CHIPS” INTERACTING WITH MEDICAL IMPLANTS

If the question is can medical implants be interacted with or hacked, the overwhelming answer is a resounding YES when both the FDA and hackers were asked. Smart grid and smart meters send extremely powerful pulses or blasts of RF microwave radiation into the home or other areas people inhabit, including the street. An overwhelming number of plaintiffs in the CA lawsuits against smart meters and smart grid sight heart arrhythmia, heart attack and medical implant interference as some of the health effects they suffered from smart meters and smart grid. Some of

these plaintiffs have pace makers or defibrillators that they believe is also interacting with the smart grid. Their beliefs are well founded when looking at the warnings the FDA and hackers are issuing. These people live in fear that the smart grid will shut their equipment off or make it go haywire in some life threatening way. Smart meters and smart grid can actually kill people with medical devices more quickly than others.

US Warns of Cyber Attacks on Medical Devices

<http://www.rawstory.com/rs/2013/06/13/u-s-warns-of-cyber-attacks-on-medical-devices/>

“US authorities on Thursday warned makers of medical devices and hospital networks to step up efforts to guard against potential cyber attacks.”

“The US Food and Drug Administration said implanted devices, which could include pacemakers or defibrillators, could be connected to networks that are vulnerable to hackers.”

“It said the agency has recently “become aware of cybersecurity vulnerabilities and incidents that could directly impact medical devices or hospital network operations.”

“These devices or systems could be compromised “by the introduction of malware into the medical equipment or unauthorized access to configuration settings in medical devices and hospital networks,” the FDA said.”

Hacker Barnaby Jack Dies Days Before Revealing His Pacemaker Exploit: One Last Interview

<http://motherboard.vice.com/blog/one-last-interview-with-barnaby-jack>

The below hacker was “found dead” right before he was scheduled to deliver a speech on how to kill pace maker and other wireless device implanted patients via hacking. Indeed, no hacking is necessary when it comes to smart grids interference with pace makers and many other wireless medical implants. Some of the plaintiffs in the CA lawsuits are themselves pace maker patients who have suffered this smart meter and smart grid interference first hand. Below are excerpts from one of the last interviews of hacker, Barnaby Jack.

“Barnaby Jack, the director of embedded device security for computer security firm IOActive, developed software that allowed him to remotely send an electric shock to anyone wearing a pacemaker within a 50-foot radius. He also came up with a system that scans for any insulin pumps that communicate wirelessly within 300 feet, allows you to hack into them

without needing to know the identification numbers and then sets them to dish out more or less insulin than necessary, sending patients into hypoglycemic shock.”

“Having your heart wirelessly hacked and set to explode at 830 volts could be viewed as a bit of a setback if you're considering getting a pacemaker fitted.”

“...the software I developed allows the shutting off of the pacemaker or ICD, reading and writing to the memory of the device and, in the case of ICDs, it allows the delivering of a high voltage shock of up to 830 volts.”

“...we had previously looked at insulin pumps and we found a severe vulnerability in the most popular model.”

CA Plaintiff Lou Donovan On Defibrillator Shut Off After Smart Meter Installation

Heart and Pacemaker Disruption After Smart Meter Installation

Starts at around 6:15

https://www.youtube.com/watch?feature=player_embedded&v=BRDhogkdxW4

12) SMART GRID ENABLES CATASTROPHIC, MULTIPLE NUCLEAR FACILITY MELTDOWNS BASED ON EASIER ACCESS TO HACKING AND TERRORISM ATTACK

Nuclear reactors depend on external electrical power for their energy requirements.

White House and NRC Recommend 50 Mile Fukushima Evacuation, Yet Insist US Safe with Only 10

<https://www.youtube.com/watch?v=xMcj1mnD2PE>

Photograph, lower torso of child of Chernobyl aftermath.

“...the most likely type of a nuclear accident is caused by a loss of offsite power. That is what happened at Fukushima: the power system AROUND the plant broke down.”

“But remember the most likely cause of a nuclear accident is loss of offsite power and that has NEVER been part of an emergency plan, assuming that all of that does not work.”



“If power is disconnected to these facilities, from whatever cause, generators must be relied on instantly to function. Energy must be available constantly to keep fuel rods and reactor cores cool.”

“A failure In this system, a failure in being able to shut down a reactor safely, could result in a nuclear disaster at each and every nuclear reactor, not just in California, but across the United States, affecting all of us.”

“That would create Fukushimas many times over.”

A page from the notebook of an Emergency Diesel Generator expert, R.D. Jacobs, hired to monitor a test for a nuclear reactor’s back-up cooling system...

“This is to record that on my last visit,...I pressed [a company executive] saying that we just did not know what the axial vibration of the crankshaft was doing to the [diesel] units. I was unable to impress him sufficiently.”

“The diesels were “tested” by turning them on for a few minutes at low power. They worked fine. But R.D., a straight shooter, suspected problems. He wanted the motors opened and inspected. He was told by power company management to go to hell.”

“When we forced the plant builder [in Suffolk County, New York] to test the three Emergency Diesel Generators in emergency conditions, one failed almost immediately (the crankshaft snapped, as R.D.[Jacobs} predicted), then the second, then the third. We named the three diesels “Snap, Crackle, and Pop.”

“...I knew that all these diesels were basically designed, or even taken from, cruise ship engine rooms or old locomotives. I’m not an engineer, but I suspect a motor designed for a

leisurely float in Bermuda is not fit for a life-and-death scramble. So, I asked [an industry insider], “They really can’t work at all, the diesels, can they?”

“That’s when he introduced me to the phrase “crash start.”

“On a ship, he explained, you would take half an hour to warm up the bearings, and then slowly build up to “critical” crankshaft speed, and only then add the “load.” the propeller...”

“Worse, to avoid having to buy additional diesels, the nuclear operators turbo-charge them, revving them to 4,000 horsepower in ten seconds when they are designed for half that output.”

“The result: snap, crackle, pop.”

“I learned that, at Fukushima, at least two of the diesels failed before the tsunami hit. What destroyed those diesels was turning them on. In other words, the diesels are junk, are crap, are not capable of getting up to full power in seconds, then run continuously for days....”

”So, you saying emergency diesels can’t work in an emergency?”

“Actually, they’re just not designed for it.”

Excerpt from “Vulture’s Picnic”, by Greg Palast, p. 294-297

This is the present system in place to protect all of us in case of a power outage to nuclear reactors.

Former NRC Chairman Gregory Jaczko: need link

“The events at Fukushima reinforce that any nuclear accident with public health and safety or environmental consequences of that magnitude, is inherently unacceptable. But we focused on the radiological consequences of this event. I believe we cannot ignore the large social and economic consequences such an event poses to any country with a nuclear facility that deals with such a crisis.”

“In Japan, more than 90,000 people remain displaced from their homes and land, with some having no prospect for a return to their previous lifestyle in the foreseeable future. While not easy to characterize, these are significant hardships on these people and they are inherently unacceptable. So as we look to the future and we look in a proactive way, we ultimately will have to address the issue of how do we deal with nuclear events that lead to significant land contamination. And displacement, perhaps permanently, of people from their homes and their livelihoods and their communities.”

<http://scienceblogs.com/gregladen/2008/04/26/meltdown-at-chernobyl-nuclear/>

Arne Gunderson:

“What you have just heard was the Nuclear Regulatory Commission's chairman, Gregory Jaczko, saying that the NRC does not take in to account mass evacuations and people not getting back on their land for centuries when it does a “cost benefit” analysis as to whether or not a nuclear plant should be licensed.”

Please watch the below video from Fairewinds, Arne Gunderson on this issue of cost analysis not including human and environmental health and safety and how this is always a large part of the financial equation in energy infrastructures but is never actually included in the cost analysis reports:

PLEASE NOTE, FAIREWINDS HAS CHANGED THE LINK LOCATIONS ON THEIR SITE. THE BELOW LINK DOES NOT WORK, CORRECTED LINK FORTHCOMING...

<http://fairewinds.org/media/fairewinds-videos/tokyo-soil-samples-would-be-considered-nuclear-waste-in-the-us>

Nor is human and environmental hazard, health and safety taken into account when considering the “cost benefit” analysis of a smart grid.

Video on the after life of the Chernobyl nuclear event.

Meltdown at Chernobyl

<http://scienceblogs.com/gregladen/2008/04/26/meltdown-at-chernobyl-nuclear/>



from exposure to RFR (filed 03/04/13, 167 PRJ). **6A & B are in one filing. PUC # 383. Corrected Filing 03/22/13. PUC # 444.**

6.B Relevant studies found on this topic that have not been listed as being *reviewed* by any scientific groups previously named in 6A above (filed 03/04/13, 10 PRJ).

6.C Evidence of research bias known as the “funding effect” has been found within EMF radiation research conducted to determine Genotoxic effects & cancer (filed 03/04/13).

Intervenor-Filed Submissions by Category & Number

By [MeC2SSM webMS](#)

April 16, 2013 [Activism](#) [Health](#) [Legal](#) [Privacy](#) [Research](#) [Wildlife](#) No comments

Below are Index and Category Lists of evidence filed by the Interveners in MPUC case 2011-00262 (our grassroots effort to stop the exploitative deployment of not-so-smart meters in the State of Maine). In most category PDFs, there are some items shaded in yellow with the notation “Copy Filed in Docket.” These are documents filed in their entirety (not included here). Unbelievably, CMP (Central [Sp]aine Power) has motioned to exclude all filed evidence.

Regardless, these 1,400 or so references in various iterations will be a tremendous resource for anyone working on the “smart” meter issue. In most of the Category Lists, peer-reviewed journals are designated by “PRJ.” Also included are the PUC filing dates and filing numbers. Thanks so much to Dianne Wilkins and Suzanne Foley-Ferguson for compiling this overwhelming body of evidence. It was a herculean task and, if allowed into evidence, it will help our cause as much if not more than anything else. Assuming of course, the Maine PUC staff reads the materials . . . —By *Ed Friedman*

1. Precautionary Principal and Research Gaps

1.A Evidence to support the use of the Precautionary Principal in public policy on RFR (filed 02/01/13, 14 PRJ* studies). **1A-1C are in one filing. PUC # 193. 1A-1.C: Corrected Filing 03/20/13, PUC # 438**

1.B Peer-reviewed, published articles by government agencies on the use of the Precautionary Principal in Public Policy to protect public health (filed 02/01/13, 29 PRJ)

1.C The Precautionary Principal has recently (2008 to 2012) been applied to US public health policies, environmental policies, medical policies, and other industries: (filed 02/1/13, 9 PRJ)

1.D Research gaps in the study of RFR effects on children & long term exposures require the use of precaution (filed 02/01/13, 8 PRJ, 5 other). **PUC # 194**

2. Eye Studies

2.0 Evidence that exposure to RFR can cause adverse biological effects to eyes (filed 03/05/13, 21 PRJ). **PUC # 411**

3. Reproductive System: Sperm, Fertility & Reproductive Studies

3.A Evidence of biological effects of EMF/RF radiation exposure on sperm, reproduction, fertility & pregnancy (filed 02/18/13, 87 PRJ) **3A & B are in one filing. PUC # 251**

3.B Other relevant Reviews on these topics (filed 02/18/13, 2 PRJ)

4. Children and Fetus Studies

4.A Evidence of biological effects of RFR exposure on neonatal, fetus & children (filed 02/18/13, 65 PRJ) **4A & B are in one filing. PUC # 262**

4.B Other reviews of evidence by doctors and scientist that conclude the possibility of adverse biological effects on children/fetus from RFR (filed 02/18/13, 15 PRJ).

5. Genotoxic (DNA) Studies

5. Evidence of genotoxic, gene expression, & chromosomal effects from EMF exposure (filed 02/11/13, 186 PRJ). **PUC # 220, Corrected Filing 04/3/13. PUC # 456**

6. Neurological & Blood Brain Barrier Studies

6.A Evidence of neurodegenerative & neurological effects (includes BBB) biological effects from exposure to RFR (filed 03/04/13, 167 PRJ). **6A & B are in one filing. PUC # 383. Corrected Filing 03/22/13. PUC # 444.**

6.B Relevant studies found on this topic that have not been listed as being reviewed by any scientific groups previously named in 6A above (filed 03/04/13, 10 PRJ).

6.C Evidence of research bias known as the “funding effect” has been found within EMF radiation research conducted to determine Genotoxic effects & cancer (filed 03/04/13).

7. Wildlife, Animal & Plant Studies

7. RFR effects on Wildlife, Animals, and Plants (List filed 03/05/13-PUC file #406; **Corrected Filing 4/09/13; 76 PRJ, 8 other docs) PUC # 468**

8. Telecom/Industry Reports & Studies

8. Telecoms statements, studies, & reports regarding RFR (1 PRJ, 8 other docs) (List filed 3/11/13). **Corrected Filing 4/9/13. PUC # 464.**

9. Insurance & Liability Reports and Studies

9. Insurance and Liability of wireless communication carriers (1 PRJ; 23 documents) (List filed 3/13/13 PUC#433) **Corrected Filing 4-8-13. PUC # 464.**

10. Other Testimony, Including Legal from Other Cases

10. Other testimony of experts on EMF from other EMF cases (23 documents) (List filed 3/29/13 PUC # 449). **Corrected Filing 4/8/13. PUC # 464.**

11. Electrical Hypersensitivity (EHS) Reports, Standards, Studies

11.A Evidence of EMF radiation causing EHS (List filed 03/05/13, 91 PRJ) **11A & B are one filing. PUC # 404.**

11.B Part B -Recognition of EHS in the United States and Other Countries (List filed 03/05/13, 29 studies PRJ). Repeated Filing 4/10/13 PUC 470, **Corrected Filing 4/10/13 PUC # 471**

12. Immune System Studies

12. Evidence of immune effects from exposure to RFR (filed 02/28/13, 36 PRJ). *PUC # 308.*

13. Oxidative Stress Studies

13. A Evidence of adverse biological effects of oxidative stress from RFR exposure (filed 02/26/13, 55 PRJ). *13A & B in one filing. PUC # 286. Corrected Filing 03/28/13 PUC # 448*

13.B Studies describing the role of oxidative stress in DNA damage, cancer, neurodegenerative diseases and human fertility (filed 02/26/13, 6 PRJ)

14. Mechanism of Biological Effects Studies

14. Studies showing mechanisms for RFR effects on biological bodies (filed 03/05/13, 65 PRJ). *PUC # 410*

15. Reviews of Biological Effects

15. Evidence: Comprehensive Reviews of Biological Effects of EMF (filed 02/28/13, last revised filing on 03/05/13, 134 PRJ) *PUC File # 408. Corrected Filing 03/28/13. PUC # 447.*

16. 2.4 GHz Effects Studies

16. Biological effects of EMF at 2.4 GHz of radiofrequency (filed 2/28/13, revised filing on 03/04/13, 79 PRJ). *PUC File # 366. Corrected Filing 04/1/13. PUC # 451.*

17. Low Power Density Effects/Studies

17. Evidence of effects of EMF at low power densities (filed 03/04/13; 45 PRJ). *PUC # 376. Corrected Filing 04/1/13. PUC # 454*

18. Studies of Funding Bias, Effects & Conflict of Interest

18. Studies showing evidence of bias, funding effect, and conflict of interest in EMR Research (13 PRJ studies; 26 other; filed 03/05/13 *PUC # 405, Corrected Filing 04/08/13 PUC # 465*

BIOLOGICAL AND HEALTH EFFECTS OF MICROWAVE RADIO FREQUENCY TRANSMISSIONS A REVIEW OF THE RESEARCH LITERATURE

<http://tinyurl.com/nxnmj76>

A REPORT TO THE STAFF AND DIRECTORS OF THE EUGENE WATER AND ELECTRIC BOARD

June 4, 2013

EXECUTIVE SUMMARY

The FCC regulations for permissible exposures to microwave radio frequency (RF) transmissions are only designed to protect against the thermal effects of high exposure levels. Representatives of the telecommunications industry usually assert that there is “no clear or conclusive” scientific evidence regarding the biological effects of low level or “nonthermal” RF exposures. But in actuality, a large body of scientific research documents that RF exposures at low levels can produce adverse biological or health effects.

The installation of RF-transmitting “smart meters” by our electric utility could significantly increase the level of RF exposure in Eugene’s residential neighborhoods.

Such an increase carries potential health risks. The nature of these risks needs to be carefully considered before making a decision to deploy this technology.

Any decision-making process that ignores this possibility of harm could cause significantly damage both to community health and to EWEB’s goodwill in the community.

ELECTROHYPERSENSITIVITY (EHS)

Microwave RF exposures can produce acute symptoms in some individuals.

These symptoms can include headache, sleep disturbance, difficulty in concentration, memory disturbance, fatigue, depression, irritability, dizziness, malaise, tinnitus, burning and flushed skin, digestive disturbance, tremor, and cardiac irregularities. This syndrome was described by Russian researchers in the 1950’s, who called it “microwave sickness”. Between 1953 and 1978 the Russian government purposefully targeted the U.S. embassy in Moscow with beams of microwave RF, producing symptoms of microwave sickness in many embassy employees.

In recent years, the build out of the wireless telecommunications infrastructure has greatly increased the exposure of the general public to microwave RF, and this has led to an increased number of individuals experiencing symptoms that are now referred to as “Electrohypersensitivity Syndrome” (EHS). Multiple research studies have shown a correlation between these symptoms and residential exposure to radio, radar, and cell tower transmissions.

The prevalence of EHS appears to be increasing, as the exposure of the public to RF continues to expand. Based on recent epidemiologic research, it would be reasonable to assume RF exposures provoke some sort of symptoms in between 3 and 5% of the population of Eugene at the current time. Any significant increase in residential RF exposure is likely to make these individuals more symptomatic, and to produce some new cases of EHS by pushing some other individuals beyond their tolerance limit.

ALTERED PHYSIOLOGY

Laboratory research in animal and human subjects has shown that “nonthermal” levels of RF exposure can alter EEG, immune function, and hormone levels including

adrenal and thyroid hormones, testosterone, prolactin, progesterone.

Research shows that low levels of microwave RF exposure can reduce melatonin levels in humans, and that some individuals are more sensitive than others to this effect.

The adverse effects of nighttime RF exposure on melatonin secretion are particularly disturbing. The nocturnal rise in melatonin levels supports the natural function of sleep, and disrupting this cycle can produce insomnia. Melatonin is an extremely potent antioxidant, and helps to repair damaged DNA and heal the body from other effects of oxidant stress.

Melatonin is also protective against the growth of cancer cells, and disruption of the circadian melatonin cycle has been shown to lead to increased tumor growth in a variety of cancer types. Women who have lower levels of nocturnal melatonin are at greater risk for developing breast cancer. Reduced melatonin levels may also increase the incidence of prostate cancer.

OXIDATIVE STRESS AND DAMAGED DNA

In contrast with Xrays and gamma rays, Microwave radiation does not have sufficient power to directly break covalent bonds in DNA molecules. But microwave RF can produce resonance interactions with ions and with charged macromolecules, and such interactions can significantly alter biochemical functions. A large body of research has shown that microwave RF causes an increased production of free radicals and reactive oxidant species in living tissues, and that this increased oxidant stress damages DNA. This damage can and does occur at power levels well below those levels that could produce damage by thermal mechanisms.

Any chronic exposure to conditions that damage DNA can lead to an increased risk of cancer. Evidence of increased risk of certain types of cancer has been demonstrated in groups with occupational exposure to microwave RF, including radio technicians in private industry, military personnel, commercial airline pilots, and ham radio operators. Elevated levels of cancer have been demonstrated in populations with increased residential exposure to radio transmission towers. And in the last ten years, studies from Israel, Germany, Austria, and Brazil have documented significant increases in breast cancer and other cancers in individuals living less than 500 meters from cell phone towers, with measured exposure levels much lower than those permitted by current FCC guidelines.

Research has also shown that RF exposure levels well within current guidelines can cause DNA damage and reduced fertility in insects, birds, amphibians and mammals, and can lower sperm counts, sperm motility, and sperm motility in human beings.

CONCLUSIONS

Existing scientific research offers strong evidence that the chronic exposure of the public to microwave RF transmissions produces serious acute and chronic health effects in a significant portion of the population.

Electromagnetic fields act via activation of voltage-gated calcium channels to produce beneficial or adverse effects

<http://onlinelibrary.wiley.com/doi/10.1111/jcmm.12088/pdf>

Prof. Martin Pall writes:

“One of the great puzzles about the action of electromagnetic fields is how can they influence the biology of our bodies? The reason that this is such a great puzzle is that these fields are comprised of low energy photons, with energies too low to influence the chemistry of our bodies. So how can they possibly influence our biology? Many have argued that the only thing that they can possibly do is to heat things, and yet it is very clear that levels of exposure that produce only the slightest heating have been repeatedly shown to produce substantial biological effects. Now this puzzle has been solved in a paper with the title of this email, published on line in the Journal of Cellular and Molecular Medicine, freely available on the publisher's web site:”

“That paper reviews 24 different studies in which EMF exposures produce biological effects that can be blocked by using calcium channel blockers, drugs that block the action of voltage-gated calcium channels (VGCCs). Most of these drug studies implicated L-type VGCCs, showing blockage by channel blockers specific for these L-type VGCCs; however three other classes of the voltage gated calcium channels were also implicated in some of these studies. What these and other studies show, is that EMF exposures act by partially depolarizing the electrical charge across the plasma membrane of cells, activating the VGCCs and it is the increased intracellular calcium levels that are responsible for the reaction to EMF exposure. These 24 studies implicate the VGCCs in responses to a variety of EMFs, including extremely low frequency EMFs such as 50 and 60 cycle fields produced by our alternating currents in our wiring, various microwave/radiofrequency EMFs and nanosecond electrical pulses. Static electrical fields also act via VGCCs, not surprisingly because they also influence the electrical charge across plasma membranes.”

“Perhaps more surprisingly, static magnetic fields also act via VGCCs. This is a bit surprising because static magnetic fields do not produce electrical changes in static objects. However as pointed out in the paper, living cells in the body are rarely static, often moving rapidly in such phenomena as cellular ruffling.”

“Having resolved this long-standing puzzle, the paper goes on to consider how VGCC activation can produce two well-documented responses to EMF exposure: stimulating of bone growth and the production of single stranded DNA breaks in EMF-exposed cells. EMF exposures have repeatedly been shown to produce increases in nitric oxide levels, in some cases almost instantaneously. These nitric oxide increases are produced through calcium stimulation of the action of the two nitric oxide synthases in the cell, iNOS and eNOS, which are both calcium-dependent enzymes. Nitric oxide in the cell, acts to produce most physiological effects, by stimulating the production of cycle GMP which stimulates, in turn the G-kinase (this is known as the NO/sGC/cGMP/G-kinase pathway). Most pathophysiological responses to nitric oxide to through another pathway, where nitric oxide acts as a precursor of peroxynitrite, a potent oxidant and reactive free radical precursor. The paper suggests that the EMF stimulation of bone growth, a very promising therapeutic response, goes through the first pathway. It also suggests that induction of single strand breaks in cellular DNA goes through the second pathway. It is possible that possible beneficial effects of EMFs go through the first pathway and adverse, pathophysiological effects go through the second pathway. Clearly we will need a lot of study to test mechanisms of EMF action.”

“This paper may be viewed in a practical setting as being very important in two ways:”

1. “There have been many claims that biological effects of EMF exposures cannot possibly exist because no plausible mechanism of action of such exposures could produce such effects. Clearly these claims are now defunct.”

2. “In studies aimed at understanding the mechanisms of action of EMF exposures we now know where to look. Such studies need to look at roles of VGCCs, intracellular calcium, nitric oxide and possibly cycle GMP or peroxynitrite. It can be argued, therefore, that this paper is very much a game changer, changing a situation where there has been substantial confusion, into one where, specific, targeted questions can be asked and answered experimentally.”

“Finally, this paper says nothing at all about EMF hypersensitivity (often abbreviated EHS), a condition where previous EMF exposure appears to induce high level sensitivity to some types of EMFs. EHS is similar to multiple chemical sensitivity (MCS), where previous chemical exposures produce high level chemical sensitivity. Chemicals act in MCS by indirectly activating the NMDA receptors and NMDA receptors have many similarities in their properties to those of the L-type VGCCs. You should expect, therefore, a future paper

on a detailed proposed mechanism for EHS, with both many similarities and some apparent mechanism of MCS as well as some differences.”

Hirsh Report - Smart Meters Worse Than Cell Phones – Two Orders of Magnitude

Posted on <http://eon3emfblog.net/?p=1724> February 21, 2011 by James Heddle



Debunking ‘Cut-and-Paste Science’

New calculations suggest that continuous whole-body exposure to electro-magnetic radiation from so-called ‘smart’ meters – which operate around the clock – may be between 50 and 160 times worse than from cell phones.

For over 40 years Committee to Bridge the Gap, under the leadership of Dan Hirsch, has provided accurate, authoritative scientific information on the public health dangers posed by ionizing radiation emitted by nuclear materials and technologies – much to the discomfiture of the nuclear industry. Now Hirsch has weighed in on the non-ionizing radiation emitted by ‘smart’ meters, cell phones and other wireless RF devices. [For more on CBG - the Committee to Bridge the Gap - [click here](#).]

Hirsch’s critique of the recent draft report on ‘smart’ meter RF emissions issued by the California Council on Science and Technology (CCST) in response to requests from State legislator Jerad Huffman and others, shows that “the CCST draft report does not appear to include much if any independent work on the subject but rather merely pastes in a table taken from an 8-page pamphlet released a few weeks earlier by the Electric Power Research Institute (EPRI), an advocacy group for the electric power industry.”

Hirsch observes, “The EPRI pamphlet is not a peer-reviewed scientific study. It is a brief item for an advocacy group that is supported by industry. If the elected officials wanted the industry’s views, it would have asked for them. Instead, it wished an independent, science-based study by an entity without the kinds of conflicts of interest EPRI has on this matter. But the CCST draft report is basically simply a cut-and-paste job from the EPRI brochure.”

Working with two graduate student assistants, Hirsch used the CCST's own figures to calculate corrections to the multiple errors he found in the CCST report. His findings focus on whole-body exposure and 'duty cycles,' or the length of time 'smart' meters operate (24/7) as compared with the much shorter normal operation times of cell phone and microwave ovens. They are summarized in the chart below. [[Download a full PDF of the Hirsch critique here.](#)]

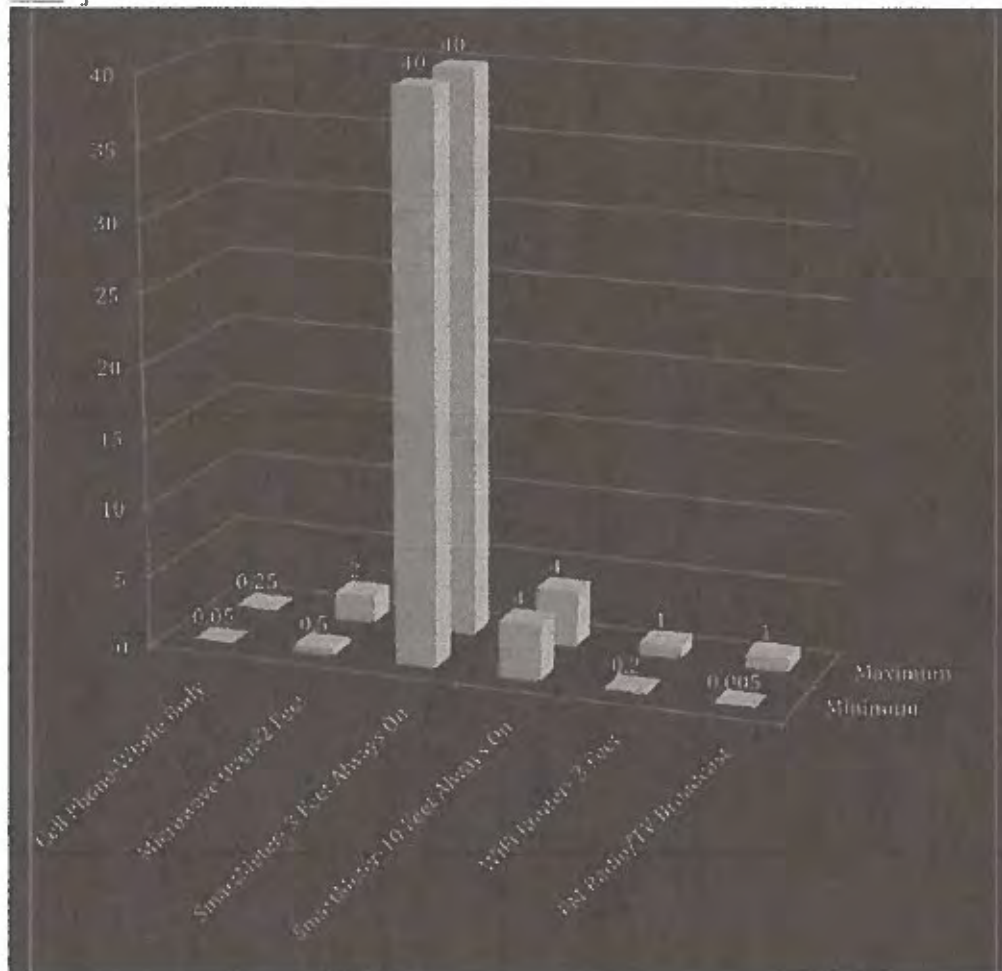


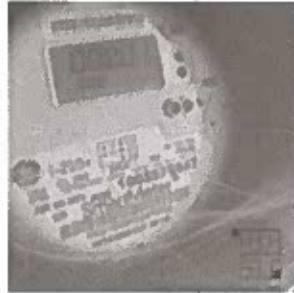
Figure A. Comparison of Radio-Frequency Levels to the Whole Body from Various Sources in $\mu\text{W}/\text{cm}^2$ [microwatts per centimeter squared] over time – corrected for assumed duty cycle and whole body exposure extrapolated from assumed cell phone dose at ear.

← Full Spectrum Resistance to 'Smart' Meters Grows

487% Higher Radiation from Silver Springs/PG&E Smart Meter →

Havas Report on Smart Meters for CCST

[HTTP://WWW.MAGDAHAVAS.COM/2011/01/18/HAVAS-REPORT-ON-SMART-METERS-FOR-CCST/](http://www.magdahavas.com/2011/01/18/havas-report-on-smart-meters-for-ccst/)



January 17, 2011. The California Council on Science and Technology (CCST) released their report on Smart meters “Health Impacts of Radio Frequency from Smart Meters”. Click [here](#) to download this document.

CCST invited me to submit a written report as part of a *Technical Response Team* in October 2010. Note: CCST did not offer, and I did not request, payment for my report.

In December I was informed that neither my report nor any of the others would be appended to the final document nor would they be made available to anyone.

My submission does not support the final conclusions in the CCST report and I provide it here for anyone interested. [For a pdf copy click here.](#)

My overall conclusions are as follows:

In conclusion, I have great concern regarding the **current levels of microwave radiation** in North America. Instead of promoting wireless technology, we should be promoting wired technology and reserving wireless for situations where wired in not possible (while one is traveling for example).

Shortly after X-rays were discovered, they were used in shoe stores to determine shoe-size for young children. Fortunately, we recognized that X-rays were harmful and we restricted their use to essential medical diagnoses. We need to recognize that microwaves are also harmful and we cannot use this technology in a frivolous manner. With more frequencies being used, with the levels of radiation increasing, and with so little research on the long-term, low-level effects of this technology we are creating a potential time bomb. If smart meters are placed on every home, they will contribute significantly to our exposure and this is both unwise and unsafe.

Smart Meters: Correcting the Gross Misinformation

<https://maisonsaine.ca/sante-et-securite/electrosmog/smart-meters-correcting-gross-misinformation.html>

Quebec-based magazine *La Maison du 21e siecle* asked physician *David O. Carpenter*, former founding dean of the University at Albany (NY)'s School of Public Health, to comment on an open letter published in the Montreal daily *Le Devoir* on May 24 2012. This letter claimed wireless smart meters pose no risk to public health. More than fifty international experts contributed to the following rebuttal.

We, the undersigned are a group of scientists and health professionals who together have coauthored hundreds of peer-reviewed studies on the health effects of electromagnetic fields (EMFs). We wish to correct some of the gross misinformation found in the [letter regarding wireless "smart" meters that was published in the Montreal daily *Le Devoir* on May 24](#). Submitted by a group [Quebec engineers, physicists and chemists](#), the letter in question reflects an obvious lack of understanding of the science behind the health impacts of the radiofrequency (RF)/microwave EMFs emitted by these meters. The statement that « Thousands of studies, both epidemiological and experimental in humans, show no increase in cancer cases as a result of exposure to radio waves of low intensity... » is [false \(1\)](#). In fact, [only a few such studies — two dozen case-control studies of mobile phone use](#), certainly not thousands, have reported no elevations of cancer, and most were funded by the wireless industry. In addition, these reassuring studies contained significant experimental design flaws, mainly the fact that the populations followed were too small and were followed for a too short period of time.

Non industry-funded studies have clearly demonstrated a significant increase in cancer cases among individuals who have suffered from prolonged exposure to low-level microwaves, transmitted notably by radio antennas. The effects were best documented in meta-analyses that have been published and that include grouped results from several different studies: [these analyses](#) consistently showed an [increased risk of brain cancer among regular users of a cell phone who have been exposed to microwaves for at least ten years](#). Children and youths are especially vulnerable (2). For example, the [2009 Hardell-Carlberg study](#) reported a consistent association between use of mobile or cordless phones and two types of head tumors, astrocytoma grade I-IV and acoustic neuroma. The authors »found an especially high risk for persons that started use of mobile or cordless phones before the age of 20 years, although based on low numbers «.

Brain Cancer Rates

Furthermore, the argument that brain cancer rates do not indicate an overall increase in incidence is not evidence that cell phones are safe: the latency for brain cancer in adults after environmental exposure can be long, up to 20-30 years. Most North Americans haven't used cell phones extensively for that long. The evidence of the link between long-term cell phone use and brain cancer comes primarily from Northern Europe, where cell phones have been commonly used since the 1990s. Nevertheless, the [most recent collection of primary brain tumors mined from pathology units in Australia](#) showed brain cancer incidence rose by about 35% between 2000 and 2008 in the

Australian Capital Territory and New South Wales (total population : more than 7 million).

In May 2011, after reviewing the published scientific literature regarding cancers affecting cell phone users, the International Agency for Research on Cancer (IARC) classified radiofrequency radiation as a 2B, possible human carcinogen. Despite the absence of scientific consensus, the evidence is sufficiently compelling for any cautious parent to want to reduce their loved one's exposure to RF/microwave emissions as much as possible, as recommended by various countries such as Austria, Belgium, Germany, Russia and the United Kingdom.

Electrosensitivity

Public fears about wireless smart meters are well-founded. They are backed by various medical authorities such as those of the Santa Cruz County(California) Public Health Department. These authorities are worried about the growing number of citizens who say they have developed electrohypersensitivity (EHS), especially since for many of them, the symptoms developed after the installation of such meters (it takes some time for most people to link the two events).

Since the turn of the millennium, people are increasingly affected by ambient microwaves due to the growing popularity of wireless devices such as cell phones and Wi-Fi Internet. Therefore, the mass deployment of smart grids could expose large chunks of the general population to alarming risk scenarios without their consent. According to seven surveys done in six European countries between 2002 and 2004, about 10% of Europeans have become electrosensitive. The most famous person to publicly reveal her electrosensitivity is Gro Harlem Brundtland, formerly Prime Minister of Norway and retired Director of the World Health Organization (WHO).

While there is no consensus on the origins and mechanisms of EHS, many physicians and other specialists around the world have become aware that EHS symptoms (neurological dermatological, acoustical, etc.) seem to be triggered by exposure to EMF levels well below current international exposure limits, which are established solely on short-term thermal effects (3). Organizations such as the Austrian Medical Association and the American Academy of Environmental Medicine have recognized that the ideal way to treat of EHS is to reduce EMF exposure. Therefore, caution is warranted because the growing variety of RF/microwave emissions produced by many wireless devices such as smart meters have never been tested for their potential biological effects.

Well-known bioeffects

While the specific pathways to cancer are not fully understood, it is scientifically unacceptable to deny the weight of the evidence regarding the increase in cancer cases in humans that are exposed to high levels of RF/microwave radiation.



Dr David O. Carpenter, founder, Univ Albany (NY) School of Public Ho

The statement that « there is no established mechanism by which a radio wave could induce an adverse effect on human tissue other than by heating » is incorrect, and reflects a lack of awareness and understanding of the scientific literature on the subject. In fact, more than a thousand studies done on low intensity, high frequency, non-ionizing radiation, going back at least fifty years, show that some biological mechanisms of effect do not involve heat. This radiation sends signals to living tissue that stimulate biochemical changes, which can generate various symptoms and may lead to diseases such as cancer.

Even though RF/microwaves don't have the energy to directly break chemical bonds, unlike ionizing radiation such as X-rays, there is scientific evidence that this energy can cause DNA damage indirectly leading to cancer by a combination of biological effects. Recent publications have documented the generation of free radicals, increased permeability of the blood brain barrier allowing potentially toxic chemicals to enter the brain, induction of genes, as well as altered electrical and metabolic activity in human brains upon application of cell phone RF/microwaves similar to those produced by smart meters.

These effects are cumulative and depend on many factors including RF/microwave levels, frequency, waveform, exposure time, biovariability between individuals and combination with other toxic agents. Clear evidence that these microwaves are indeed bioactive has been shown by the fact that low-intensity EMFs have proven clinically useful in some circumstances. Pulsed EMFs have long been used to successfully treat bone fractures that are resistant to other forms of therapy. More recently, frequency-specific, amplitude-modulated EMFs have been found useful to treat advanced carcinoma and chronic pain.

High frequency EMFs such as the microwaves used in cell phones, smart meters, Wi-Fi and cordless "DECT" phones, appear to be the most damaging when used commonly. Most of their biological effects, including symptoms of electrohypersensitivity, can be seen in the damage done to cellular membranes by the loss of structurally-important calcium ions. Prolonged exposure to these high frequencies may eventually lead to cellular malfunction and death.

Furthermore, malfunction of the parathyroid gland, located in the neck just inches from where one holds a cell phone, may actually cause electrohypersensitivity in some people by reducing the background level of calcium ions in the blood. RF/microwave radiation is also known to decrease the production of melatonin, which protects against cancer, and to promote the growth of existing cancer cells.

Early warning scientists attacked

In recommending that the Precautionary Principle be applied in EMF matters, the European Environment Agency's Director Jacqueline McGlade wrote in 2009: "We have noted from previous health hazard histories such as that of lead in petrol, and methyl mercury, that 'early warning' scientists frequently suffer from discrimination, from loss of research funds, and from unduly personal attacks on their scientific integrity. It

would be surprising if this is not already a feature of the present EMF controversy... »
Such unfortunate consequences have indeed occurred.

The statement in the *Le Devoir* letter that « if we consider that a debate should take place, it should focus exclusively on the effects of cell phones on health » is basically an acknowledgement that there is at least some reason to be concerned about cell phones. However, while the immediate exposure from a cell phone is of much greater intensity than the exposure from smart meters, cell phone use is temporary.

Smart meters

As Australian Associate Professor of neurosurgery Vini G. Khurana reports, adverse neurological effects have been reported in people who sustain close proximity to wireless meters, especially under 10 feet (3 meters).

A wireless smart meter produces radiofrequency microwave radiation with two antennas in approximately the same frequency range (900 MHz to 2.4 GHz) as a typical cell tower. But, depending on how close it is to occupied space within a home, a smart meter can cause much higher RF exposures than cell towers commonly do. If a smart meter is located on a common wall with a bedroom or kitchen rather than a garage wall, for example, the RF exposure can be the same as being within 200 to 600 feet distance of a cell tower with multiple carriers. With both cell towers and smart meters, the entire body is immersed in microwaves that go out in all directions, which increases the risk of overexposure to many sensitive organs such as the eyes and testicles. With a cell phone, people are exposed to microwaves primarily in the head and neck (unless using speaker mode), and only when the device is turned on or in standby mode.

Wireless smart meters typically produce atypical, relatively potent and very short pulsed RF/microwaves whose biological effects have never been fully tested. They emit these millisecond-long RF bursts on average 9,600 times a day with a maximum of 190,000 daily transmissions and a peak level emission two and a half times higher than the stated safety signal, as the California utility Pacific Gas & Electric recognized before that State's Public Utilities Commission. Thus people in proximity to a smart meter are at risk of significantly greater aggregate of RF/microwave exposure than with a cell phone, not to mention the cumulative exposure received by people living near multiple meters mounted together, pole-mounted routers or utility collector meters using a third antenna to relay RF signals from 500 to 5,000 homes.

A technical study performed by Sage Associates in California indicates that RF levels from various scenarios depicting normal smart meter installation and operation may violate even the out-of-date US public safety standards, which only consider acute thermal effects. This can happen when a person stands close to the meter to read the power consumption, or touches it, or shades the meter face with a hand to better read it. Emissions are also increased by reflective materials, such as stainless steel, other metals and mirrors, which can re-radiate stronger than the otherwise unaltered background. Microwaves are absorbed and dissipated by partially conductive materials, such as cement and special RF shielding paints and fabrics.

In addition to the erratic bursts of modulated microwaves emitted by wireless smart meters transferring usage data to electric, gas and water utilities, wireless as well as wired smart (powerline communication) meters are also a major source of “dirty electricity” (electrical interference of high frequency voltage transients typically of kilohertz frequencies). Some scientists, such as American epidemiologist Sam Milham, believe that many of the health complaints about smart meters may also be caused by dirty electricity generated by the « switching » power supply activating all smart meters. Since the installation of filters to reduce dirty electricity circulating on house wiring has been found to relieve symptoms of EHS in some people, this method should be considered among the priorities aimed at reducing potential adverse impacts. Indeed, the Salzburg State (Austria) Public Health Department confirms its concern about the potential public health risk when in coming years almost every electric wire and device will emit such transient electric fields in the kilohertz-range due to wired smart meters.

Rather be safe than sorry

The apparent adverse health effects noted with smart meter exposure are likely to be further exacerbated if smart appliances that use wireless communications become the norm and further increase unwarranted exposure.

To date, there have been few independent studies of the health effects of such sources of more continuous but lower intensity microwaves. However, we know after decades of studies of hazardous chemical substances, that chronic exposure to low concentrations of microwaves can cause equal or even greater harm than an acute exposure to high concentrations of the same microwaves.

This is why so many scientists and medical experts urgently recommend that measures following the Precautionary Principle be applied immediately — such as using wired meters — to reduce biologically inappropriate microwave exposure. We are not advocating the abolishment of RF technologies, only the use of common sense and the development and implementation of best practices in using these technologies in order to reduce exposure and risk of health hazards.

(1) • Scientific papers on EMF health effects

(2) On Nov. 19 2012, we struck from this letter an error propagated in the media claiming that « In May 2012, the U.K.'s Office of National Statistics reported a 50 percent increase in incidence of frontal and temporal lobe tumors in children between 1999 and 2009. »

(3) Explanation and studies on electrosensitivity

(4) Governments and organizations that ban or warn against wireless technology•

David O. Carpenter, MD, Director, Institute for Health & the Environment, University at Albany, USA

• Franz Adlkofer, M.D., Chairman of the Pandora Foundation, Coordinator of the European Reflex Report on DNA-damage by cellphone radiation, Neuendorf, Germany

• M. S. H. Al Salameh, PhD, Professor of Electrical Engineering, University of Science & Technology, Irbid, Jordan

- Jennifer Armstrong, MD, Past President, American Society for Environmental Medicine, Founder, Ottawa Environmental Health Clinic, Ontario, Canada
- Pierre L. Auger, MD, Occupational medicine, Multiclinique des accidentés 1464, Montreal, Quebec, Canada
- Igor Beliaev, PhD, Head research scientist, Cancer Research Institute, Slovak Academy of Sciences, Bratislava, Slovak republic
- Fiorella Belpoggi, PhD, Director Cesare Maltoni Cancer Research Center, Ramazzini Institute, Bologna, Italy
- Dominique Belpomme, MD, Director of the European Cancer and Environment Research Institute, Brussels, Belgium
- Martin Blank, PhD, former President, Bioelectromagnetics Society, Special Lecturer, Department of Physiology and Cellular Biophysics, Columbia University Medical Center, New York, USA
- Barry Breger, MD, Centre d'intégration somatosopique (orthomolecular medicine), Montreal, Quebec
- Simona Carrubba, PhD, Prof. Biophysics, Daemen College, Amherst, NY, Associate Researcher, Neurology, Buffalo General Hospital, Buffalo, NY
- John Cline, MD, Professor, Institute for Functional Medicine, Federal Way, WA, USA, Medical Director, Cline Medical Centre, Nanaimo, BC, Canada
- Alvaro Augusto de Salles, PhD, Professor of Electrical Engineering, Federal University of Rio Grande do Sul, Porto Alegre, Brazil
- Christos Georgiou, Prof. Biochemistry, Biology Department, University of Patras, Greece
- Andrew Goldsworthy, PhD, Honorary lecturer in Biology, Imperial College, London, UK
- Claudio Gómez-Perretta, MD, Director, Centro de Investigación, Hospital Universitario LA Fe, Valencia, Spain
- Livio Giuliani, PhD, Senior Researcher, National Insurance Institute (INAIL), Chief of Radiation and Ultrasounds Research Unit, Rome, Italy
- Yury Grigoriev, PhD, Chair Russian National Committee on Non-Ionizing Radiation Protection, Moscow, Russia
- Settimio Grimaldi, PhD, Director, Institute of Translational Pharmacology (Neurobiology and molecular medicine), National Research Council, Rome, Italy
- Magda Havas, PhD, Centre for Health Studies, Trent University, Canada
- Lennart Hardell, MD, Professor of Oncology, University Hospital, Örebro, Sweden
- Denis L. Henshaw, PhD, Professor of Physics, Head of The Human Radiation Effects Group, University of Bristol, UK
- Ronald B. Herberman, MD, Chairman of Board, Environmental Health Trust, and Founding Director emeritus, University of Pittsburgh Cancer Institute, USA
- Donald Hillman, PhD, Dairy Science, Professor Emeritus, Department of Animal Science, Michigan State University, USA
- Isaac Jamieson, PhD, Environmental Science (electromagnetic phenomena in the built environment), independent architect, scientist and environmental consultant, Hertfordshire, UK
- Olle Johansson, PhD, Professor of Neuroscience (Experimental Dermatology Unit), Karolinska Institute, Stockholm, Sweden
- Yury Kronn, PhD, Soviet authority on physics of nonlinear vibrations and high

frequency electromagnetic vibrations, founder of Energy Tools International, Oregon, USA

- Vini G. Khurana, MBBS, Associate of Professor of Neurosurgery, Australian National University, Australia
- Henry Lai, PhD, Professor of Bioengineering, University of Washington School of Medicine, Seattle, WA, USA
- Abraham R. Liboff, PhD, Professor Emeritus, Department of Physics, Oakland University, Rochester, Michigan, USA
- Don Maisch, PhD, Researcher on radiation exposure standards for telecommunications frequency, EMFacts Consultancy, Tasmania, Australia
- Erica Mallery-Blythe, MD, Emergency Medicine Physician, England
- Andrew A. Marino, MD, Professor of Neurology, LSU Health Sciences Center, Shreveport, LA, USA
- Karl Maret, MD, President, Dove Health Alliance, Aptos, CA, USA
- Fiorenzo Marinelli, PhD, Researcher on biological effects of EMFs, Institute of Molecular Genetics, National Research Council, Bologna, Italy
- Andrew Michrowski, PhD, Director, Planetary Association for Clean Energy, Ottawa, Canada
- Sam Milham, MD, former chief epidemiologist, Washington State Department of Health, USA
- Joel M. Moskowitz, PhD, Director, Center for Family and Community Health, School of Public Health, University of California, Berkeley
- Gerd Oberfeld, MD, Public Health Department, Salzburg State Government, Austria
- Mike O'Carroll, PhD, Professor Emeritus (Applied Mathematics), University of Sunderland, UK
- Jerry L. Phillips, PhD, Director, Center for Excellence in Science, Department of Chemistry and Biochemistry, University of Colorado, USA
- John Podd, PhD, Professor of Psychology (experimental neuropsychology), Massey University, New-Zeland
- William J. Rea, MD, thoracic and cardiovascular surgeon, founder of the Environmental Health Center, Dallas, Tx, USA
- Elihu D. Richter, MD, Professor, Hebrew University-Hadassah School of Public Health and Community Medicine, Jerusalem, Israel
- Leif G. Salford, MD, Senior Professor of Neurosurgery, Lund University, Sweden
- Nesrin Seyhan, MD, Founder and Chair of Biophysics, Medical Faculty of Gazi University, Turkey
- Cyril W. Smith, PhD, lead author of "Electromagnetic Man", retired from Electronic and Electrical Engineering, University of Salford, UK
- Morando Soffritti, MD, Scientific Director of the European Foundation for Oncology and Environmental Sciences "B. Ramazzini" in Bologna, Italy
- Carlos Sosa, MD, surgeon affected by the Microwave syndrome, Medellin, Columbia
- Antoinette "Toni" Stein, PhD, Collaborative on Health and the Environment (CHE-EMF Working Group), Co-Coordinator, Berkeley, CA, USA
- Stanislaw Szmigielski, MD, PhD Professor of Pathophysiology, Consulting Expert, former director of Microwave Safety, Military Institute of Hygiene and Epidemiology,

Warsaw, Poland

- Lauraine Vivian, PhD, Senior Lecturer, Primary Health Care Directorate, Faculty of Health Sciences, University of Cape Town, South Africa.
- Bradford S. Weeks, MD, Director, The Weeks Clinic, Clinton, WA, USA
- Stelios A. Zinelis, MD, Vice-President, Hellenic Cancer Society, Cefallonia, Greece

Maine Coalition To Stop Smart Meters, Evidence for Legal Proceedings On the Issue of Health Impacts Which Both Their Utility and PUC Has Ignored

<http://www.mainecoalitiontostopsmartmeters.org/2013/04/intervenor-evidence/>

1. Precautionary Principal and Research Gaps

1.A Evidence to support the use of the Precautionary Principal in public policy on RFR (filed 02/01/13, 14 PRJ* studies). *1A-1C are in one filing. PUC # 193. 1A-1.C: Corrected Filing 03/20/13, PUC # 438*

1.B Peer-reviewed, published articles by government agencies on the use of the Precautionary Principal in Public Policy to protect public health (filed 02/01/13, 29 PRJ)

1.C The Precautionary Principal has recently (2008 to 2012) been applied to US public health policies, environmental policies, medical policies, and other industries: (filed 02/1/13, 9 PRJ)

1.D Research gaps in the study of RFR effects on children & long term exposures require the use of precaution (filed 02/01/13, 8 PRJ, 5 other). *PUC # 194*

2. Eye Studies

2.0 Evidence that exposure to RFR can cause adverse biological effects to eyes (filed 03/05/13, 21 PRJ). *PUC # 411*

3. Reproductive System: Sperm, Fertility & Reproductive Studies

3.A Evidence of biological effects of EMF/RF radiation exposure on sperm, reproduction, fertility & pregnancy (filed 02/18/13, 87 PRJ) *3A & B are in one filing. PUC # 251*

3.B Other relevant Reviews on these topics (filed 02/18/13, 2 PRJ)

4. Children and Fetus Studies

4.A Evidence of biological effects of RFR exposure on neonatal, fetus & children (filed 02/18/13, 65 PRJ) *4A & B are in one filing. PUC # 262*

4.B Other reviews of evidence by doctors and scientist that conclude the possibility of adverse biological effects on children/fetus from RFR (filed 02/18/13, 15 PRJ).

5. Genotoxic (DNA) Studies

5. Evidence of genotoxic, gene expression, & chromosomal effects from EMF exposure (filed 02/11/13, 186 PRJ). *PUC # 220, Corrected Filing 04/3/13. PUC # 456*

6. Neurological & Blood Brain Barrier Studies

6.A Evidence of neurodegenerative & neurological effects (includes BBB) biological effects

process, which can lead to localised warming if the absorbing molecules are suitably distributed. Liu & Cleary (1995) show in a theoretical model that at the cellular level, membrane bound water can lead to frequency dependent spatial discrepancies in dissipation of the SAR and the induced HF fields. Microthermal effects can also be caused by the non uniformity of thermal conductivity of tissue at microscopic level, especially when the warming is short, strong and local. This is of importance mainly for the evaluation of pulsed fields, because in such fields, even at a low average power flux density, the energy absorbed during a pulse can be very high. **Radiation in the form of short pulses can lead to a very high rate of temperature rise, which can itself trigger thermoelastic waves, a phenomenon, which is linked to the acoustic perception of microwaves. A high peak SAR can also trigger thermally induced membrane phenomena (Foster 1996).**

3.2 Direct Field Effects

3.2.1 Effects from the Electrical Component of the Electromagnetic Field

The electric component of the electromagnetic field exerts a force on electrical charges, permanent dipole moments, induced dipole moments and higher multipole moments. The forces on charges create currents, however these only play a role in the lower HF range, causing changes in membrane potentials (stimulation) or thermal effects (see above). Permanent charge distributions in biomolecules and cells lead to permanent dipole (or higher multipole) moments. The electrical field exerts a torque on dipoles, which tries to align the dipole moment parallel to the field. In alternating fields with not too high frequencies, the interactions lead to oscillations of the dipoles. In dense media, these oscillations are hindered by interactions with the surrounding particles, which lead to heating (see above). If the particles are too large or the surrounding particle density is too high or if the frequency of the field is too high, the oscillations cannot develop.

The threshold field strengths for the orientation of dipolar cells and other objects of similar size (radius of approx. 1 μm) are at 100 V/m, the cut-off frequencies in water (temperature 300K) are at circa 0.05Hz, hence far outside the HF range. DNA molecules and other bio polymers can be put into oscillation by fields with frequencies in the kHz range. Spherical protein molecules (radius approx. 5nm) can still follow fields with frequencies up to 400 kHz, however this requires field strengths of 106V/m (Foster 1996). Such field strengths are not usually reached in the environment.

The interaction between a field and a particle with an induced dipole moment depends on the field strength to the power of 2, that means, a continuous electrical alternating field influences the particle via a constant torque, however the torque of a modulated field follows the modulation. There is no limitation through a cut off frequency for the interaction between a field and an induced dipole moment, however for frequencies over 1 MHz, the forces exerted on the cells are very small unless field strengths of several thousand V/m are used. With such field strengths however, strong dielectrophoretic forces appear, which can lead to

cell deformations, to the orientation of non spherical cells and to the so called coin roll effect, a stringing together of cells. Since the induced dipole moment depends on the polarizability of the particle and the latter on the size of the particle, even higher field strengths are needed for smaller bodies than cells (biopolymers).

Electric fields can induce electrical potentials on cell membranes. The size of these potentials depends on the electric field strength, the dimensions of the cell, the frequency of the field, the electrical conductivity within and outside of the cell as well as the capacitance of the cell membrane.

With frequencies above 1 MHz the membrane is practically short circuited and the induced membrane potentials become very small. However, theoretical rectification processes and non linear phenomena at the cell membrane have been discussed, and these could lead to an intensification of the effect and to membrane potentials that have an effect on cell physiology.

3.2.2 Effects from the Magnetic Component of the Electromagnetic Field

With some exceptions, biological tissue is not magnetic and the mutual effects between the magnetic component of an electromagnetic field and tissue are generally small. **However, the presence of magnetite crystals, which have a strong capacity to absorb the frequency range of 0.5 to 10 GHz which is relevant for mobile telecommunications, has been found in the human brain as well as in the tissue of many animals (*Kirschvink 1996). Under exposure to amplitude modulated or pulse modulated microwaves, the frequency of the crystal vibrations varies according to the modulation frequency, and thus transmits it, for example in the form of an acoustic wave onto the ambient medium and the cell membrane, which possibly leads to changes of the permeability of the membrane (*Kirschvink 1996). Theoretical calculations show that magnetite transmitted effects can only occur at high densities of superparamagnetic particles (*Dobson & St. Pierre 1998).**

3.3 Quantum Effects

The quantum energy from radio and microwaves in the frequency range between 100 MHz to 10 GHz is far too low to break ionic, covalent or hydrogen bonds. Bohr et al. (*1997) have however shown theoretically, that wring resonances can be triggered in chain molecules. The frequencies of these resonances are in the range from 1 to 10 GHz for proteins and 10 MHz to 10 GHz for DNA molecules. The wring modes of molecules manifest themselves as 'torsions' in the molecule chain, which can lead to structural changes.

The influences of microwaves on structural changes in molecules have been found in experiments using the protein β -Lactoglobuline (*Bohr & Bohr 2000). The triggering of resonant wring modes can even lead to chain breaks, since due to White's Theory, the added energy can be concentrated in a very limited part of the molecule during structural changes (*Bohr et al.). In this part, the chain can break.

Other Very Important Videos on Smart Meters, EMFs, Dirty Electricity and Health Effects:

CA Smart Meter/Smart Grid/Health Effects Law Suits Against Edison and PG@E

http://www.youtube.com/watch?v=1Vln-uuu_al

CA Plaintiff, Louis Donovan On Smart Meter Pulses, Heart Attack and Defibrillator Shut Offs

http://www.youtube.com/watch?feature=player_embedded&v=BRDhogkdxW4

Dr. David Carpenter On Smart Meters and Health Effects

http://www.youtube.com/watch?feature=player_embedded&v=n7L21XOC2wA

Dr. Sam Milham on Dirty Electricity and Smart Meters

<http://www.youtube.com/watch?v=ci5GGqEPecE>

General Must Watch Educational Smart Meter/Smart Grid Videos

Rob States Explains Smart Meters

http://www.youtube.com/watch?feature=player_embedded&v=FLeCTaSG2-U

This Video Measure Smart Meter Pulses

http://www.youtube.com/watch?feature=player_embedded&v=uRejDxBE6OE

American Academy of Environmental Medicine Statement on Wireless Smart Meters

<http://tinyurl.com/kwxn8yg>



American Academy of Environmental Medicine

6505 E Central • Ste 296 • Wichita, KS 67206
Tel: (316) 684-5500 • Fax: (316) 684-5709
www.aaemonline.org

Wireless Smart Meter Case Studies

Executive Committee

President

Amy L. Dean, D.O., FAAEM
1955 Pauline Blvd Ste 100D
Ann Arbor, MI 48103

President-Elect

Janette Hope, M.D., FAAEM
304 W Los Olivos
Santa Barbara, CA 93105

Secretary

Jennifer Armstrong, M.D., FAAEM
3364 Carling Ave.
Ottawa, Ontario, Canada

Treasurer

Richard G. Jaeckle, M.D., FAAEM
8220 Walnut Hill Ln Ste 404
Dallas, TX 75231

Immediate Past President

A.L. Barrier, M.D., FAAO-HNS

Advisor

William J. Rea, M.D., FAAEM
Gary R. Oberg, M.D., FAAEM

Board of Directors

Craig Bass, M.D.
Robin Bernhoft, M.D., FAAEM
Martha Grout, M.D., MD(H)
W. Alan Ingram, M.D.
Derek Lang, D.O.
Allan D. Lieberman, M.D., FAAEM
Lisa Nagy, M.D.
Kalpana D. Patel, M.D., FAAEM

Continuing Medical Education

Chair
James W. Willoughby, II, D.O.
24 Main St.
Liberty, MO 64068

Assistant-Chair
Wm. Alan Ingram, M.D.
18015 Oak St Ste B
Omaha, NE 68130

Founded in 1965 as a non-profit medical association, the American Academy of Environmental Medicine (AAEM) is an international organization of physician and scientists interested in the complex relationship between the environment and health.

AAEM physicians and physicians world-wide are treating patients who report adverse, debilitating health effects following the installation of smart meters, which emit electromagnetic frequencies (EMF) and radiofrequencies (RF).

The peer reviewed, scientific literature demonstrates the correlation between EMF/RF exposure and neurological, cardiac, and pulmonary disease as well as reproductive disorders, immune dysfunction, cancer and other health conditions. The evidence is irrefutable. Despite this research, claims have been made that studies correlating smart meter emissions with adverse health effects do not exist.

The AAEM has received a case series submitted by Dr. Federica Lamech, MBBS, *Self-Reporting of Symptom Development from Exposure to Wireless Smart Meters' Radiofrequency Fields in Victoria*. AAEM supports this research. It is a well documented 92 case series that is scientifically valid. It clearly demonstrates adverse health effects in the human population from smart meter emissions.

The symptoms reported in this case series closely correlate not only with the clinical findings of environmental physicians, but also with the scientific literature. Many of the symptoms reported including fatigue, headaches, heart palpitations, dizziness and other symptoms have been shown to be triggered by electromagnetic field exposure under double blind, placebo controlled conditions. Symptoms in this case series also correlate with the Austrian Medical Association's Guidelines for the Diagnosis and Treatment of EMF Related Health Problems.

It is critically important to note that the data in this case series indicates that the "vast majority of cases" were not electromagnetically hypersensitive until *after* installation of smart meters. Dr. Lamech concludes that smart meters "may have unique characteristics that lower people's threshold for symptom development".

This research is the first of its kind, clearly demonstrating the correlation between smart meters and adverse health effects.

Based on the findings of this case series, AAEM calls for:

- Further research regarding smart meter health effects
- Accommodation for health considerations regarding smart meters.
- Avoidance of smart meter EMF/RF emissions based on health considerations, including the option to maintain analog meters.
- A moratorium on smart meters and implementation of safer technology
- Physicians and health care providers to consider the role of EMF and RF in the disease process, diagnosis and treatment of patients.

Passed by the Board of Directors of the American Academy of Environmental Medicine October 23, 2013

Please note: Smart Meter case series research to be released upon publication

American Academy of Environmental Medicine, Smart Meters and Health Effects Advisory:

aaemonline.org/pressadvisoryemf.pdf



American Academy of Environmental Medicine

6505 E Central • Ste 296 • Wichita, KS 67206
Tel: (316) 684-5500 • Fax: (316) 684-5709
www.aaemonline.org

Executive Committee

President
A.L. Barrier, M.D., FFAO-HNS
One Hospital Drive
Columbia, MO 65212

President-Elect
Amy Dean, D.O.
1955 Pauline Blvd Ste 100D
Ann Arbor, MI 48103

Secretary
Charles L. Crist, M.D.
3009 Falling Leaf Cir, Ste 1
Columbia, MO 65201

Treasurer
James W. Willoughby, II, D.O.
24 Main St.
Liberty, MO 64068

Immediate Past President
Robin Bernhoft, M.D., FAAEM

Advisor
Gary R. Oberg, M.D., FAAEM

Board of Directors
Craig Bass, M.D.
Amy Dean, D.O.
Stephen Genuls, M.D., FAAEM
Martha Grout, M.D., MD(H)
Janette Hope, M.D.
W. Alan Ingram, M.D.
Derek Lang, D.O.
Glenn A. Toth, M.D.
Ty Vincent, M.D.

Continuing Medical Education
Chairman
James W. Willoughby, II, D.O.
24 Main St.
Liberty, MO 64068

Executive Director
De Rodgers Fox

Press Advisory
April 12, 2012

Contact Information:
Dr. Amy L. Dean, D.O.
President-Elect
American Academy of Environmental Medicine
(734)213-4901
environmentalmed@yahoo.com
@dramydean

The American Academy of Environmental Medicine Calls for Immediate Caution regarding Smart Meter Installation

Wichita, KS- The American Academy of Environmental Medicine today released its position paper on electromagnetic field (EMF) and radiofrequency (RF) health effects calling for immediate caution regarding smart meter installations. Citing several peer-reviewed scientific studies, the AAEM concludes that "significant harmful biological effects occur from non-thermal RF exposure" showing causality. The AAEM also expresses concern regarding significant, but poorly understood quantum field effects of EMF and RF fields on human health.

"More independent research is needed to assess the safety of 'Smart Meter' technology," said Dr. Amy Dean, board certified internist and President-Elect of the AAEM. "Patients are reporting to physicians the development of symptoms and adverse health effects after 'Smart Meters' are installed on their homes. Immediate action is necessary to protect the public's health."

Dr. William J. Rea, past president of AAEM says, "Technological advances must be assessed for harmful effects in order to protect society from the ravages of end-stage disease like cancer, heart disease, brain dysfunction, respiratory distress, and fibromyalgia. EMF and wireless technology are the latest innovations to challenge the physician whose goal is to help patients and prevent disease." Rea, a thoracic and cardiovascular surgeon and environmental physician adds, "A more thorough review of technological options to achieve society's worthwhile communications objectives must be conducted to protect human health."

The AAEM calls for:

- Immediate caution regarding "Smart Meter" installation due to potentially harmful RF exposure
- Accommodation for health considerations regarding EMF and RF exposure, including exposure to wireless "Smart Meter" technology
- Independent studies to further understand health effects from EMF and RF exposure

World Health Organization Statement on Electromagnetic Radiation and Cancer:

http://www.iarc.fr/en/media-centre/pr/2011/pdfs/pr208_E.pdf

International Agency for Research on Cancer



PRESS RELEASE N° 208 31 May 2011

IARC CLASSIFIES RADIOFREQUENCY ELECTROMAGNETIC FIELDS AS POSSIBLY CARCINOGENIC TO HUMANS

Lyon, France, May 31, 2011 -- The WHO/International Agency for Research on Cancer (IARC) has classified radiofrequency electromagnetic fields as **possibly carcinogenic to humans (Group 2B)**, based on an increased risk for **glioma**, a malignant type of brain cancer, associated with wireless phone use.

Excerpt from Letter from WHO Lead Scientist Dr. Baan to Iris Atzmon Specifying Smart Meters to be a Part of the Class 2b Carcinogen WHO Classification:

<http://citizensforaradiationfreecommunity.org/wp-content/uploads/2012/06/WHO-The-IARC-Working-Group-classified-1.doc>

Robert A Baan PhD
The IARC Monographs
IARC, Lyon, FRANCE

“...the classification 2B, possibly carcinogenic, holds for all types of radiation within the radiofrequency part of the electromagnetic spectrum, including the radiation emitted by base-station antennas, radio/TV towers, radar, Wi-Fi, smart meters, etc. “

by other signals faster than once per 10 years, duration comparable with latent period, epidemiologic studies cannot provide basement for cancer risk assessment from upcoming new signals.

In many cases, because of ELF modulation and additional ELF fields created by the microwave sources, for example by mobile phones, it is difficult to distinguish the effects of exposures to ELF and microwave. Therefore, these combined exposures and their possible cancer risks should be considered in combination.

As far as different types of microwave signals (carrier frequency, modulation, polarization, far and near field, intermittence, coherence, *etc.*) may produce different effects, cancer risks should ideally be estimated for each microwave signal separately.

The Precautionary Principle should be implemented while new standards are in progress.

It should be anticipated that some part of the human population, such as children, pregnant women and groups of hypersensitive persons could be especially sensitive to the non-thermal microwave exposures.

N. EFFECTS OF WEAK-FIELD INTERACTIONS ON NON-LINEAR BIOLOGICAL OSCILLATORS AND SYNCHRONIZED NEURAL ACTIVITY

A unifying hypothesis for a plausible biological mechanism to account for very weak field EMF bioeffects other than cancer may lie with weak field interactions of pulsed RFR and ELF-modulated RFR as disrupters of synchronized neural activity. Electrical rhythms in our brains can be influenced by external signals. This is consistent with established weak field effects on coupled biological oscillators in living tissues. Biological systems of the heart, brain and gut are dependent on the cooperative actions of cells that function according to principles of non-linear, coupled biological oscillations for their synchrony, and are dependent on exquisitely timed cues from the environment at vanishingly small levels (Buzsaki, 2006; Strogatz, 2003). The key to synchronization is the joint actions of cells that co-operate electrically – linking populations of biological oscillators that couple together in large arrays and synchronize spontaneously. Synchronous biological oscillations in cells (pacemaker cells) can be disrupted by artificial, exogenous environmental signals, resulting in desynchronization of neural activity that regulates critical functions (including metabolism) in the brain, gut and heart and circadian rhythms governing sleep and hormone cycles (Strogatz, 1987). The brain contains a population of oscillators with distributed natural frequencies, which pull one another into synchrony (the circadian pacemaker cells). Strogatz has addressed the unifying mathematics of biological cycles and external factors disrupt these cycles (Strogatz, 2001, 2003). “*Rhythms can be altered by a wide variety of agents and that these perturbations must seriously alter brain performance*” (Buzsaki, 2006).

“Organisms are biochemically dynamic. They are continuously subjected to time-varying conditions in the form of both extrinsic driving from the environment and intrinsic rhythms generated by specialized cellular clocks within the organism itself. Relevant examples of the

latter are the cardiac pacemaker located at the sinoatrial node in mammalian hearts (1) and the circadian clock residing at the suprachiasmatic nuclei in mammalian brains (2). These rhythm generators are composed of thousands of clock cells that are intrinsically diverse but nevertheless manage to function in a coherent oscillatory state. This is the case, for instance, of the circadian oscillations exhibited by the suprachiasmatic nuclei, the period of which is known to be determined by the mean period of the individual neurons making up the circadian clock (3–7). The mechanisms by which this collective behavior arises remain to be understood.” (Strogatz, 2001; Strogatz, 2003)

Synchronous biological oscillations in cells (pacemaker cells) can be disrupted by artificial, exogenous environmental signals, resulting in desynchronization of neural activity that regulates critical functions (including metabolism) in the brain, gut and heart and circadian rhythms governing sleep and hormone cycles. The brain contains a population of oscillators with distributed natural frequencies, which pull one another into synchrony (the circadian pacemaker cells). Strogatz has addressed the unifying mathematics of biological cycles and external factors disrupt these cycles.

EMF AND RFR MAKE CHEMICAL TOXINS MORE HARMFUL

EMF acts on the body like other environmental toxicants do (heavy metals, organic chemicals and pesticides). Both toxic chemicals and EMF may generate free radicals, produce stress proteins and cause indirect damage to DNA. Where there is combined exposure the damages may add or even synergistically interact, and result in worse damage to genes.

EMF IS SUCCESSFULLY USED IN HEALING AND DISEASE TREATMENTS

“The potential application of the up-regulation of the HSP70 gene by both ELF-EMF and nanosecond PEMF in clinical practice would include trauma, surgery, peripheral nerve damage, orthopedic fracture, and vascular graft support, among others. Regardless of pulse design, EMF technology has been shown to be effective in bone healing [5], wound repair [11] and neural regeneration [31,36,48,49,51,63,64,65,66]. In terms of clinical application, EMF-induction of elevated levels of hsp70 protein also confers protection against hypoxia [61] and aid myocardial function and survival [20,22]. Given these results, we are particularly interested in the translational significance of effect vs. efficacy which is not usually reported by designers or investigators of EMF devices. More precise description of EM pulse and sine wave parameters, including the specific EM output sector, will provide consistency and “scientific basis” in reporting findings.” “The degree of electromagnetic field-effects on biological systems is known to be dependent on a number of criteria in the waveform pattern of the exposure system used; these include frequency, duration, wave shape, and relative orientation of the fields [6,29,32,33,39,40]. In some cases pulsed fields have demonstrated increased efficacy over static designs [19,21] in both medical and experimental settings.”(Madkan et al, 2009)

ELF-EMF AND RFR ARE CLASSIFIED AS POSSIBLE CANCER-CAUSING AGENTS –

WHY ARE GOVERNMENTS NOT ACTING?

The World Health Organization International Agency for Research on Cancer has classified wireless radiofrequency as a Possible Human Carcinogen (May, 2011)*. The designation applies to low-intensity RFR in general, covering all RFR-emitting devices and exposure sources (cell and cordless phones, WI-FI, wireless laptops, wireless hotspots, electronic baby monitors, wireless classroom access points, wireless antenna facilities, etc). The IARC Panel could have chosen to classify RFR as a Group 4 – Not A Carcinogen if the evidence was clear that RFR is not a cancer-causing agent. It could also have found a Group 3 designation was a good interim choice (Insufficient Evidence). IARC did neither.

NEW SAFETY LIMITS MUST BE ESTABLISHED – HEALTH AGENCIES SHOULD ACT NOW

Existing public safety limits (FCC and ICNIRP public safety limits) do not sufficiently protect public health against chronic exposure from very low-intensity exposures. If no mid-course corrections are made to existing and outdated safety limits, such delay will magnify the public health impacts with even more applications of wireless-enabled technologies exposing even greater populations around the world in daily life.

SCIENTIFIC BENCHMARKS FOR HARM PLUS SAFETY MARGIN = NEW SAFETY LIMITS THAT ARE VALID

Health agencies and regulatory agencies that set public safety standards for ELF-EMF and RFR should act now to adopt new, biologically-relevant safety limits that key to the lowest scientific benchmarks for harm coming from the recent studies, plus a lower safety margin. Existing public safety limits are too high by several orders of magnitude, if prevention of bioeffects and minimization or elimination of resulting adverse human health effects. Most safety standards are a thousand times or more too high to protect healthy populations, and even less effective in protecting sensitive subpopulations.

SENSITIVE POPULATIONS MUST BE PROTECTED

Safety standards for sensitive populations will more likely need to be set at lower levels than for healthy adult populations. Sensitive populations include the developing fetus, the infant, children, the elderly, those with pre-existing chronic diseases, and those with developed electrical sensitivity (EHS).

PROTECTING NEW LIFE – INFANTS AND CHILDREN

Strong precautionary action and clear public health warnings are warranted immediately to help prevent a global epidemic of brain tumors resulting from the use of wireless devices (mobile phones and cordless phones). Common sense measures to limit both ELF-EMF and RFR in the fetus and newborn infant (sensitive populations) are needed, especially with respect to avoidable exposures like baby monitors in the crib and baby isolettes (incubators) in hospitals that can be modified; and where education of the pregnant mother with respect to

laptop computers, mobile phones and other sources of ELF-EMF and RFR are easily instituted. Wireless laptops and other wireless devices should be strongly discouraged in schools for children of all ages.

STANDARD OF EVIDENCE FOR JUDGING THE SCIENCE

The standard of evidence for judging the scientific evidence should be based on good public health principles rather than demanding scientific certainty before actions are taken.

WIRELESS WARNINGS FOR ALL

The continued rollout of wireless technologies and devices puts global public health at risk from unrestricted wireless commerce unless new, and far lower exposure limits and strong precautionary warnings for their use are implemented.

EMF AND RFR ARE PREVENTABLE TOXIC EXPOSURES

We have the knowledge and means to save global populations from multi-generational adverse health consequences by reducing both ELF and RFR exposures. Proactive and immediate measures to reduce unnecessary EMF exposures will lower disease burden and rates of premature death.

DEFINING A NEW 'EFFECT LEVEL' FOR RFR

On a precautionary public health basis, a reduction from the BioInitiative 2007 recommendation of 0.1 uW/cm² (or one-tenth of a microwatt per square centimeter) for cumulative outdoor RFR down to something three orders of magnitude lower (in the low nanowatt per square centimeter range) is justified.

A scientific benchmark of 0.003 uW/cm² or three nanowatts per centimeter squared for 'lowest observed effect level' for RFR is based on mobile phone base station-level studies. Applying a ten-fold reduction to compensate for the lack of long-term exposure (to provide a safety buffer for chronic exposure, if needed) or for children as a sensitive subpopulation yields a 300 to 600 picowatts per square centimeter precautionary action level. This equates to a 0.3 nanowatts to 0.6 nanowatts per square centimeter as a reasonable, precautionary action level for chronic exposure to pulsed RFR.

These levels may need to change in the future, as new and better studies are completed. We leave room for future studies that may lower or raise today's observed 'effects levels' and should be prepared to accept new information as a guide for new precautionary actions.

<http://www.europarl.europa.eu/sides/getDoc.do?language=en&type=IMPRESS&reference=20080903IPR36136>

EMF and RF radiation exposure at non-thermal levels. That report has been taken very seriously overseas, together with its recommendation for a drastic lowering of permitted exposures. European Parliament, September 2008:

Members of the European Parliament are greatly concerned at the Bio-Initiative international report on electromagnetic fields, which highlights the health risks posed by emissions from mobile-telephony devices such as mobile telephones, UMTS, Wifi, Wimax and Bluetooth, and also DECT landline telephones. It notes that the limits on exposure to electromagnetic fields which have been set for the general public are obsolete.

Dr. Andrew Goldsworthy On Smart Meters

<http://inthesenewtimes.com/2010/11/14/andrew-goldsworthy-on-smart-meters/>

Dr Andrew Goldsworthy from the UK, has approved mass posting of his recent letters on smart meters addressed to his local MP.

Dear xxxx

I have not yet received a reply to my earlier email on “The Dark Side of Smart Meters” in which I explained how they were a threat to national security by being prone to cyber attack, how they are likely to affect adversely the health of UK citizens, and how they can infringe privacy when configured to detect which kinds of appliance are currently in use. Since these are not trivial matters, I can only assume that you have not received my email, so I am forwarding it again from my Sent Box.

One thing that I did not mention in my original communication, but is very relevant, is that the enforced introduction of wireless smart meters is a clear contravention of the Nuremberg Code (Seehttp://en.wikipedia.org/wiki/Nuremberg_Code) which forbids the performance of experiments on human beings without their consent. Insofar as the long-term safety of continual irradiation from these devices has never been tested and many people (including many eminent scientists) believe that it is potentially harmful, the whole nation is being made a part of an uncontrolled experiment on their electromagnetic safety.

In fact, it doesn't matter whether they turn out to be harmful or not; the fact that the experiment is being performed at all without the expressed permission of the consumer is a contravention of the Nuremberg Code. If we are to adhere to the Code, no consumer should have a wireless smart meter fitted without their voluntary consent after being warned that some scientists believe them to be a health hazard. Furthermore, should the property change hands, any new consumer should have the right to ask for the meter to be removed and replaced by a conventional one.

Please bring this to the attention of the Prime Minister and relevant members of the Cabinet. I am sure that a contravention of the Nuremberg Code, which was drawn up to prevent a repeat of the Nazi atrocities, is something that the Government would not want to be associated with, especially if they really did turn out to be harmful. It would definitely not be a vote winner.

I have copied this email to a number of my friends and colleagues. Perhaps you could reply to us all, since we would all like to know what your personal views are on this, as well as to have confirmation that the information has been passed up to and beyond Cabinet level.

Yours sincerely

Dr Andrew Goldsworthy

— On Mon, 8/11/10, ANDREW GOLDSWORTHY

<andrew.goldsworthy1@btinternet.com> wrote:

From: ANDREW GOLDSWORTHY <andrew.goldsworthy1@btinternet.com>

Subject: The Dark Side of Smart Meters

Date: Monday, 8 November, 2010, 14:57

Wireless Technology, The Worst Threat to Health, Privacy and National Security

By: Jerry Flynn, retired Canadian armed forces Captain, 26 years, electronic warfare, radio warfare, Signals Intelligence

<http://thepeoplesinitiative.org/wp/wp-content/uploads/2014/01/Jerry-Flynn-Paper.pdf>

This paper is LOADED with pertinent information.

Swisscom International Patents Published Under the Patent Cooperation Treaty (PCT)

<http://americanassociationforcellphonesafety.org/uploads/swiss-com.pdf>

Swisscom brings forth a very interesting dilemma...they sell products that can cause cancer, birth defects and a myriad of serious health problems, yet they want in on the business of protecting people via EMF mitigating inventions – a potential goldmine...but this entails admitting there is a problem with RF products, which Swisscom formally and publicly denies! Ah the trials and tribulations of a business that thrives at the expense of health and life... what's a Telecom giant to do? What a dilemma! Above is a link to the patent applications for which Swisscom applied to help mitigate RF and below are some of the statements from their patent application.

10 The influence of electrosmog on the human body is a known
problem. The health risk from mobile radio transmitters, handys and DECT
telephones has been an explosive subject among the general public at least
since the enormous breakthrough in mobile radio technology in the 1990s. To
meet the concerns of science from the legislative side, the permissible limit
15 values have thus been lowered several times, and technology has been
increasingly focused on this problem. The risk of damage to health through
electrosmog has also become better understood as a result of more recent and
improved studies. When, for example, human blood cells are irradiated with
electromagnetic fields, clear damage to hereditary material has been
20 demonstrated and there have been indications of an increased cancer risk
(Mashevich M., Folkman D., Kesar A., Barbul A., Korenstein R., Jerby E., Avivi
L., Department of Human Genetics and Molecular Medicine, Tel-Aviv
University, Tel-Aviv, Israel, "Exposure of human peripheral blood lymphocytes
to electromagnetic fields associated with cellular phones leads to chromosomal
25 instability," *Bioelectromagnetics*, 2003 Feb., 24(2): 82-90). In this study, for
example, human peripheral lymphocytes were exposed to continuous
electromagnetic fields of 830 MHz in order to examine whether this leads to
losses or gains in chromosomes (aneuploidy). Bigger changes lead to instability
of the genome (= the totality of all genes of a germinal cell) and thereby to
30 cancer. The human peripheral blood lymphocytes (PBL) were irradiated at
different average specific absorption rates (SAR) of 1.6 to 8.8 W/kg over a time
period of 72 hours in an exposure system based on a parallel plate resonator in
a temperature range of 34.5 to 37.5 °C. The average absorption rate (SAR) and

its distribution in the exposed tissue culture flask were determined by combining the measurement results with a numerical analysis based on a finite element simulation code. A linear increase in the chromosome No. 17 -- an aneuploidy (=numerical chromosome aberration) -- was observed as a function of the SAR, demonstrating that this radiation has a genotoxic effect. The SAR-dependent aneuploidy was accompanied by an abnormal mode of replication of the chromosome 17 region engaged in segregation (repetitive DNA arrays associated with the centromere), suggesting that epigenetic alterations are involved in the SAR dependent genetic toxicity. Control experiments (i.e. without any radio frequency radiation) carried out in the temperature range of 34.5 to 38.5 °C showed that elevated temperature is not associated with either the genetic or epigenetic alterations observed following RF radiation, these alterations being the increased levels of aneuploidy and the modification in replication of the centromeric DNA arrays. These findings indicate that the genotoxic effect of electromagnetic radiation is elicited via a non-thermal pathway. Moreover aneuploidy is to be considered as a known phenomenon in the increase of cancer risk.

Thus it has been possible to show that mobile radio radiation can cause damage to genetic material, in particular in human white blood cells, whereby both the DNA itself is damaged and the number of chromosomes changed. This mutation can consequently lead to increased cancer risk. In particular, it could also be shown that this destruction is not dependent upon temperature increases, i.e. is non-thermal. Based on the scientific studies in the field, and owing to increasing pressure from the public, especially in the industrialized countries, epidemiological studies have been systematized by the World Health Organization (WHO) in the last few years, such as e.g. the currently running WHO Interphone Project, in order to be able to assess more precisely the health risks from electrosmog and work out corresponding guidelines.

ECOLOG - Mobile Telecommunications and Health

A report funded and then buried by: T Mobile

http://americanassociationforcellphonesafety.org/uploads/ecolog_2000_formatted_2_.pdf

The following findings are from T Mobile in the year 2000. They commissioned this report but then attempted to disregard it when the science did not come out in their favor. Here are some excerpts along with the studies the scientists looked to draw their conclusions.

3 Primary Reciprocal Effects between High Frequency Electromagnetic Fields and Biological Systems (Biophysical and Biochemical Processes)

3.1 Thermal Effects

3.1.1 Effects of Homogenous Warming

HF electromagnetic fields are absorbed depending on the frequency and polarisation of the fields on the one hand and the dimensions and material characteristics of the biological system on the other hand. They cause electric currents (dominant in the range under 1 MHz), polarisation effects and potential differences on cell membranes (in the range between 1 MHz and 100 MHz) or trigger rotational oscillations of polar molecules (mainly within the GHz range). All these processes can lead to a warming of the biological material if the intensity is sufficient (Ohmic losses in the low frequency range and dielectrical losses in the GHz range). The avoidance of health damaging warming is the base of the concept of SAR, expressed by limiting the specific absorption rate, measured as the energy absorption per unit, to a rate which will exclude overheating based on the body's own thermo-regulative processes. For humans, a whole body exposure of 0.4 W/kg corresponds approximately to half the metabolic base rate. In absence of heat conduction or other thermal dissipation, **a SAR of 0.4 W/kg will lead to a temperature rise of 10 4K/sek (Foster 1996) in soft tissue like muscles or the brain.**

3.1.2 Microthermal Effects

The warming through microwaves is fundamentally different from the warming through a water bath for example. In the latter case the energy is transmitted by stochastic collisions. In microwave heating it is in the simplest case the electrical component which puts polar molecules within the medium collectively in vibration (3.2.1). Because of 'friction' with the dense ambient medium, the energy is quickly transmitted to this medium and further dissipated by collisions. When corresponding inner molecular degrees of freedom exist, the microwave energy can also be absorbed as a quantum and, in a large molecule, stored (3.3.). Compared to conventional warming, the absorption of a microwave quantum is a singular

Several international laboratories have replicated studies showing adverse effects on sperm quality, motility and pathology in men who use and particularly those who wear a cell phone, PDA or pager on their belt or in a pocket (Agarwal et al, 2008; Agarwal et al, 2009; Wdowiak et al, 2007; De Iuliis et al, 2009; Fejes et al, 2005; Aitken et al, 2005; Kumar, 2012). Other studies conclude that usage of cell phones, exposure to cell phone radiation, or storage of a mobile phone close to the testes of human males affect sperm counts, motility, viability and structure (Aitken et al, 2004; Agarwal et al, 2007; Eroglu et al., 2006). Animal studies have demonstrated oxidative and DNA damage, pathological changes in the testes of animals, decreased sperm mobility and viability, and other measures of deleterious damage to the male germ line (Dasdag et al, 1999; Yan et al, 2007; Otitoloju et al, 2010; Salama et al, 2008; Behari et al, 2006; Kumar et al, 2012). There are fewer animal studies that have studied effects of cell phone radiation on female fertility parameters. Panagopoulous et al. 2012 report decreased ovarian development and size of ovaries, and premature cell death of ovarian follicles and nurse cells in *Drosophila melanogaster*. Gul et al (2009) report rats exposed to stand-by level RFR (phones on but not transmitting calls) caused decrease in the number of ovarian follicles in pups born to these exposed dams. Magras and Xenos (1997) reported irreversible infertility in mice after five (5) generations of exposure to RFR at cell phone tower exposure levels of less than one microwatt per centimeter squared ($\mu\text{W}/\text{cm}^2$).

EVIDENCE THAT CHILDREN ARE MORE VULNERABLE

There is good evidence to suggest that many toxic exposures to the fetus and very young child have especially detrimental consequences depending on when they occur during critical phases of growth and development (time windows of critical development), where such exposures may lay the seeds of health harm that develops even decades later. Existing FCC and ICNIRP public safety limits seem to be not sufficiently protective of public health, in particular for the young (embryo, fetus, neonate, very young child).

The Presidential Cancer Panel (2010) found that children *'are at special risk due to their smaller body mass and rapid physical development, both of which magnify their vulnerability to known carcinogens, including radiation.'*

The American Academy of Pediatrics, in a letter to Congressman Dennis Kucinich dated 12 December 2012 states *"Children are disproportionately affected by environmental exposures, including cell phone radiation. The differences in bone density and the amount of fluid in a child's brain compared to an adult's brain could allow children to absorb greater quantities of RF energy deeper into their brains than adults. It is essential that any new standards for cell phones or other wireless devices be based on protecting the youngest and most vulnerable populations to ensure they are safeguarded through their lifetimes."*

FETAL AND NEONATAL EFFECTS OF EMF

Fetal (*in-utero*) and early childhood exposures to cell phone radiation and wireless technologies in general may be a risk factor for hyperactivity, learning disorders and behavioral problems in school.

Fetal Development Studies: Effects on the developing fetus from *in-utero* exposure to cell phone radiation have been observed in both human and animal studies since 2006. Divan et

al (2008) found that children born of mothers who used cell phones during pregnancy develop more behavioral problems by the time they have reached school age than children whose mothers did not use cell phones during pregnancy. Children whose mothers used cell phones during pregnancy had 25% more emotional problems, 35% more hyperactivity, 49% more conduct problems and 34% more peer problems (Divan et al., 2008).

Common sense measures to limit both ELF-EMF and RF EMF in these populations is needed, especially with respect to avoidable exposures like incubators that can be modified; and where education of the pregnant mother with respect to laptop computers, mobile phones and other sources of ELF-EMF and RF EMF are easily instituted.

Sources of fetal and neonatal exposures of concern include cell phone radiation (both paternal use of wireless devices worn on the body and maternal use of wireless phones during pregnancy). Exposure to whole-body RFR from base stations and WI-FI, use of wireless laptops, use of incubators for newborns with excessively high ELF-EMF levels resulting in altered heart rate variability and reduced melatonin levels in newborns, fetal exposures to MRI of the pregnant mother, and greater susceptibility to leukemia and asthma in the child where there have been maternal exposures to ELF-EMF.

A precautionary approach may provide the frame for decision-making where remediation actions have to be realized to prevent high exposures of children and pregnant woman. (Bellieni and Pinto, 2012 – Section 19)

EMF/RFR AS A PLAUSIBLE BIOLOGICAL MECHANISM FOR AUTISM (ASD)

- Children with existing neurological problems that include cognitive, learning, attention, memory, or behavioral problems should as much as possible be provided with wired (not wireless) learning, living and sleeping environments,
- Special education classrooms should observe 'no wireless' conditions to reduce avoidable stressors that may impede social, academic and behavioral progress.
- All children should reasonably be protected from the physiological stressor of significantly elevated EMF/RFR (wireless in classrooms, or home environments).
- School districts that are now considering all-wireless learning environments should be strongly cautioned that wired environments are likely to provide better learning and teaching environments, and prevent possible adverse health consequences for both students and faculty in the long-term.
- Monitoring of the impacts of wireless technology in learning and care environments should be performed with sophisticated measurement and data analysis techniques that are cognizant of the non-linear impacts of EMF/RFR and of data techniques most appropriate for discerning these impacts.
- There is sufficient scientific evidence to warrant the selection of wired internet, wired classrooms and wired learning devices, rather than making an expensive and potentially health-harming commitment to wireless devices that may have to be substituted out later, and
- Wired classrooms should reasonably be provided to all students who opt-out of wireless environments. (Herbert and Sage, 2012 – Section 20)

Many disrupted physiological processes and impaired behaviors in people with ASDs closely resemble those related to biological and health effects of EMF/RFR exposure. Biomarkers and indicators of disease and their clinical symptoms have striking similarities. Broadly speaking, these types of phenomena can fall into one or more of several classes: a) alteration of genes or gene expression, b) induction of change in brain or organismic development, c) alteration of phenomena modulating systemic and brain function on an ongoing basis throughout the life course (which can include systemic pathophysiology as well as brain-based changes), and d) evidence of functional alteration in domains such as behavior, social interaction and attention known to be challenged in ASD. Several thousand scientific studies over four decades point to serious biological effects and health harm from EMF and RFR. These studies report genotoxicity, single-and double-strand DNA damage, chromatin condensation, loss of DNA repair capacity in human stem cells, reduction in free-radical scavengers (particularly melatonin), abnormal gene transcription, neurotoxicity, carcinogenicity, damage to sperm morphology and function, effects on behavior, and effects on brain development in the fetus of human mothers that use cell phones during pregnancy. Cell phone exposure has been linked to altered fetal brain development and ADHD-like behavior in the offspring of pregnant mice. Reducing life-long health risks begins in the earliest stages of embryonic and fetal development, is accelerated for the infant and very young child compared to adults, and is not complete in young people (as far as brain and nervous system maturation) until the early 20's. Windows of critical development mean that risk factors once laid down in the cells, or in epigenetic changes in the genome may have grave and life-long consequences for health or illness for every individual.

All relevant environmental conditions, including EMF and RFR, which can degrade the human genome, and impair normal health and development of species including homo sapiens, should be given weight in defining and implementing prudent, precautionary actions to protect public health.

Allostatic load in autism and autistic decompensation – we may be at a tipping point that can be pushed back by removing unnecessary stressors like EMF/RFR and building resilience.

The consequence of ignoring clear evidence of large-scale health risks to global populations, when the risk factors are largely avoidable or preventable is too high a risk to take. With the epidemic of autism (ASD) putting the welfare of children, and their families in peril at a rate of one family in 88, the rate still increasing annually, we cannot afford to ignore this body of evidence. The public needs to know that these risks exist, that transition to wireless should not be presumed safe, and that it is very much worth the effort to minimize exposures that still provide the benefits of technology in learning, but without the threat of health risk and development impairments to learning and behavior in the classroom.

(Herbert and Sage, 2010 – Section 20)

THE BLOOD-BRAIN BARRIER IS AT RISK

The BBB is a protective barrier that prevents the flow of toxins into sensitive brain tissue.

Increased permeability of the BBB caused by cell phone RFR may result in neuronal damage.

Many research studies show that very low intensity exposures to RFR can affect the blood-

brain barrier (BBB) (mostly animal studies). Summing up the research, it is more probable than unlikely that non-thermal EMF from cell phones and base stations do have effects upon biology. A single 2-hr exposure to cell phone radiation can result in increased leakage of the BBB, and 50 days after exposure, neuronal damage can be seen, and at the later time point also albumin leakage is demonstrated. The levels of RFR needed to affect the BBB have been shown to be as low as 0.001 W/kg, or less than holding a mobile phone at arm's length. The US FCC standard is 1.6 W/kg; the ICNIRP standard is 2 W/kg of energy (SAR) into brain tissue from cell/cordless phone use. Thus, BBB effects occur at about 1000 times lower RFR exposure levels than the US and ICNIRP limits allow. (Salford, 2012 – Section 10)

If the blood-brain barrier is vulnerable to serious and on-going damage from wireless exposures, then we should perhaps also be looking at the blood-ocular barrier (that protects the eyes), the blood-placenta barrier (that protects the developing fetus) and the blood-gut barrier (that protects proper digestion and nutrition), and the blood-testes barrier (that protects developing sperm) to see if they too can be damaged by RFR.

EPIDEMIOLOGICAL STUDIES CONSISTENTLY SHOW ELEVATIONS IN RISK OF BRAIN CANCERS

Brain Tumors: There is a consistent pattern of increased risk of glioma and acoustic neuroma associated with use of mobile phones and cordless phones.

“Based on epidemiological studies there is a consistent pattern of increased risk for glioma and acoustic neuroma associated with use of mobile phones and cordless phones. The evidence comes mainly from two study centers, the Hardell group in Sweden and the Interphone Study Group. No consistent pattern of an increased risk is seen for meningioma. A systematic bias in the studies that explains the results would also have been the case for meningioma. The different risk pattern for tumor type strengthens the findings regarding glioma and acoustic neuroma. Meta-analyses of the Hardell group and Interphone studies show an increased risk for glioma and acoustic neuroma. Supportive evidence comes also from anatomical localisation of the tumor to the most exposed area of the brain, cumulative exposure in hours and latency time that all add to the biological relevance of an increased risk. In addition risk calculations based on estimated absorbed dose give strength to the findings. (Hardell, 2012 – Section 11)

“There is reasonable basis to conclude that RF-EMFs are bioactive and have a potential to cause health impacts. There is a consistent pattern of increased risk for glioma and acoustic neuroma associated with use of wireless phones (mobile phones and cordless phones) mainly based on results from case-control studies from the Hardell group and Interphone Final Study results. Epidemiological evidence gives that RF-EMF should be classified as a human carcinogen.

Based on our own research and review of other evidence the existing FCC/IEE and ICNIRP public safety limits and reference levels are not adequate to protect public health. New public health standards and limits are needed.

EVIDENCE FOR GENETIC EFFECTS

Eighty six (86) new papers on genotoxic effects of RFR published between 2007 and mid-2012 are profiled. Of these, 54 (63%) showed effects and 32 (37%) showed no effects.

Forty three (43) new ELF-EMF papers and two static magnetic field papers that report on genotoxic effects of ELF-EMF published between 2007 and mid-2012 are profiled. Of these, 35 (81%) show effects and 8 (19%) show no effect.

EVIDENCE FOR NEUROLOGICAL EFFECTS

One hundred fifty five (155) new papers that report on neurological effects of RFR published between 2007 and mid-2012 are profiled. Of these, 98 (63%) showed effects and 57 (37%) showed no effects.

Sixty nine (69) new ELF-EMF papers (including two static field papers) that report on genotoxic effects of ELF-EMF published between 2007 and mid-2012 are profiled. Of these, 64 (93%) show effects and 5 (7%) show no effect.

EVIDENCE FOR CHILDHOOD CANCERS (LEUKEMIA)

With overall 42 epidemiological studies published to date power frequency EMFs are among the most comprehensively studied environmental factors. Except ionizing radiation no other environmental factor has been as firmly established to increase the risk of childhood leukemia.

Sufficient evidence from epidemiological studies of an increased risk from exposure to EMF (power frequency magnetic fields) that cannot be attributed to chance, bias or confounding. Therefore, according to the rules of IARC such exposures can be classified as a **Group 1 carcinogen (Known Carcinogen)**.

There is no other risk factor identified so far for which such unlikely conditions have been put forward to postpone or deny the necessity to take steps towards exposure reduction. As one step in the direction of precaution, measures should be implemented to guarantee that exposure due to transmission and distribution lines is below an average of about 1 mG. This value is arbitrary at present and only supported by the fact that in many studies this level has been chosen as a reference.

Base-station level RFR at levels ranging from less than 0.001 uW/cm² to 0.05 uW/cm². In 5 new studies since 2007, researchers report headaches, concentration difficulties and behavioral problems in children and adolescents; and sleep disturbances, headaches and concentration problems in adults.

MELATONIN, BREAST CANCER AND ALZHEIMER'S DISEASE

MELATONIN AND BREAST CANCER

Conclusion: Eleven (11) of the 13 published epidemiologic residential and occupational studies are considered to provide (positive) evidence that high ELF MF exposure can result in decreased melatonin production. The two negative studies had important deficiencies that may certainly have biased the results. There is sufficient evidence to conclude that long-term relatively high ELF MF exposure can result in a decrease in melatonin production. It has not been determined to what extent personal characteristics, e.g., medications, interact with ELF MF exposure in decreasing melatonin production

Conclusion: New research indicates that ELF MF exposure, in vitro, can significantly decrease melatonin activity through effects on MT1, an important melatonin receptor.

ALZHEIMER'S DISEASE

There is strong epidemiologic evidence that exposure to ELF MF is a risk factor for AD. There are now twelve (12) studies of ELF MF exposure and AD or dementia which . Nine (9) of these studies are considered positive and three (3) are considered negative. The three negative studies have serious deficiencies in ELF MF exposure classification that results in subjects with rather low exposure being considered as having significant exposure. There are insufficient studies to formulate an opinion as to whether radiofrequency MF exposure is a risk or protective factor for AD.

There is now evidence that (i) high levels of peripheral amyloid beta are a risk factor for AD and (ii) medium to high ELF MF exposure can increase peripheral amyloid beta. High brain levels of amyloid beta are also a risk factor for AD and medium to high ELF MF exposure to brain cells likely also increases these cells' production of amyloid beta.

There is considerable in vitro and animal evidence that melatonin protects against AD. Therefore it is certainly possible that low levels of melatonin production are associated with an increase in the risk of AD.

(Davanipour and Sobel, 2012 – Section 13)

STRESS PROTEINS AND DNA AS A FRACTAL ANTENNA FOR RFR

DNA acts as a 'fractal antenna' for EMF and RFR. The coiled-coil structure of DNA in the nucleus makes the molecule react like a fractal antenna to a wide range of frequencies. The structure makes DNA particularly vulnerable to EMF damage.

The mechanism involves direct interaction of EMF with the DNA molecule (claims that there are no known mechanisms of interaction are patently false)

Many EMF frequencies in the environment can and do cause DNA changes.

The EMF-activated cellular stress response is an effective protective mechanism for cells exposed to a wide range of EMF frequencies.

EMF stimulates stress proteins (indicating an assault on the cell).

EMF efficiently harms cells at a billion times lower levels than conventional heating.

Safety standards based on heating are irrelevant to protect against EMF-levels of exposure. There is an urgent need to revise EMF exposure standards. Research has shown thresholds are very low (safety standards must be reduced to limit biological responses). Biologically-based EMF safety standards could be developed from the research on the stress response.

EVIDENCE FOR DISRUPTION OF THE MODULATING SIGNAL HUMAN STEM CELL DNA DOES NOT ADAPT OR REPAIR

Human stem cells do not adapt to chronic exposures to non-thermal microwave (cannot repair damaged DNA), and damage to DNA in genes in other cells generally do not repair as efficiently.

Non-thermal effects of microwaves depend on variety of biological and physical parameters that should be taken into account in setting the safety standards. Emerging evidence suggests that the SAR concept, which has been widely adopted for safety standards, is not useful alone for the evaluation of health risks from non-thermal microwave of mobile communication. Other parameters of exposure, such as frequency, modulation, duration, and dose should be taken into account. Lower intensities are not always less harmful; they may be more harmful. Intensity windows exist, where bioeffects are much more powerful.

A linear, dose-response relationship test is probably invalid for testing of RFR and EMF (as is done in chemicals testing for toxicity).

Resonant frequencies may result in biological effects at very low intensities comparable to base station (cell tower) and other microwave sources used in mobile communications.

These exposures can cause health risk. The current safety standards are insufficient to protect from non-thermal microwave effects.

The data about the effects of microwave at super-low intensities and significant role of duration of exposure in these effects along with the data showing that adverse effects of non-thermal microwave from gsm/UMTS mobile phones depend on carrier frequency and type of the microwave signal suggest that microwave from base-stations/masts, wireless routers, WI-FI and other wireless devices and exposures in common use today can also produce adverse effects at prolonged durations of exposure.

Most of the real signals that are in use in mobile communication have not been tested so far. Very little research has been done with real signals and for durations and intermittences of exposure that are relevant to chronic exposures from mobile communication. In some studies, so-called "mobile communication-like" signals were investigated that in fact were **different** from the real exposures in such important aspects as intensity, carrier frequency, modulation, polarization, duration and intermittence.

New standards should be developed based on knowledge of mechanisms of non-thermal effects. Importantly, because the signals of mobile communication are completely replaced

permeability of the blood brain barrier, were then interpreted as a consequence of warming by the HF radiation. However, Appendix Table B.1 lists a whole series of studies in which a greatly increased permeability of the blood brain barrier was produced through pulsed high frequency fields of very low intensity (*Oscar & Hawkins 1977, *Neubauer et al. 1990, *Salford et al.1994, *Fritze et al.1997) amongst others with carrier frequencies and modulation frequencies which corresponded to those of mobile telephony (GSM).

5.2.2 Neurotransmitters

Pulsed and continuous high frequency fields of low intensity may lead to chemical changes in the brain. Inaba et al. (*1992) exposed rats to a continuous 2.45 GHz field with a power flux density of between 50 to 100 W/m² and found a significant reduction in the Noradrenalin content of the Hypothalamus, whilst the two other neurotransmitters

Dihydroxyphenylacetic acid and 5 Hydroxyindolacetic acid were found in the pons and medulla oblongata in significantly increased concentrations. The radiation did not produce significant changes in the dopamine or serotonin concentrations. Lai et al. (*1987, 1989 a, b, see above Lai et al. 1988) found also in experiments using rats that a 2.45 GHz field modulated with 500 Hz pulse modulation influences brain activity, especially in the frontal cortex and the hippocampus, via the most important parasympathetic neurotransmitter acetylcholine. It could be demonstrated that the effect was related to the exposure duration. A 45 minute exposure duration led to significant reductions in choline-uptake, the reduction to 20 minutes exposure produced a significant increase. A similar behaviour was found in animals also as a reaction to stress through the reduction of the freedom of movement and through acoustic white noise.

5.2.3 Electroencephalogram (EEG)

In contrast to the neuroendocrine effects, which can barely be measured directly in the brain of humans, EEG studies can be carried out relatively easily. Several valid studies of that kind do now exist.

Most animal experiments have limited validity, since they were carried out with relatively high power flux density values (see e.g. Chizhenkova 1988: 2.397 MHz, cw, 400 W/m², Chizhenkova & Safroshkina 1996: 799 MHz, cw, 400 W/m², Thuroczy et al. 1994; 2.45 GHz, AM 16 Hz, 100 W/m²). One of the few exceptions are the studies by Vorobyov et al. (*1997), who observed an increase on the left right symmetry in the EEG in rats that were exposed to a 945 MHz field (AM, 4Hz, 1 to 2 W/m², within the first 20 seconds after the start of the exposure. Early experiments by von Klitzing (1995) with EEG recording during the exposure of subjects to pulsed high frequency fields, that were similar to those of mobile telephone fields (150 MHz, 217 Hz, power flux density in the pulse in the brain at a 6 cm depth below 10-2 W/m²), found changes in the awake EEG, these were called into question because of insufficient documentation. In later experiments however, a clear effect was demonstrated in the awake and sleeping EEGs. Reiser et al. (*1995) observed, both with exposures to a 150 MHz field (modulated frequency 9.6 Hz, peak power 0.5 mW, 4 cm distance, near-field conditions) and also in the field of a mobile telephone (902 MHz,

modulation frequency 217 Hz, peak power 8W, 40 cm distance), a significant increase in the energy in the EEG frequency bands - Alpha, Beta 1 and Beta 2.

Experiments by Röschke & Mann (*1997) resulted in no significant difference in the EEGs for exposed and sham exposed subjects under short exposure conditions (3.5 minutes, 900 MHz, GSM, 0.5 W/m²). However, the peak of approx. 9Hz in the presented averaged power density spectra of exposed subjects was clearly lower and narrower than for nonexposed subjects. The same authors (*Mann & Röschke 1996) demonstrated again in the field of a GSM mobile telephone (8W, distance 40 cm power flux density 0.5 W/m²), a reduction of the time taken to fall asleep and a statistically significant reduction of the

duration and the proportion of the REM sleep. Furthermore, the spectral analysis revealed an increased power density of the EEG signal during REM sleep above all in the 'Alpha' frequency band. The REM suppressive effect and the reduction of the time taken to fall asleep were also confirmed by the same research team (*Mann et al.1997, *Wagner et al. 1998). The study carried out in 1997 also found a significant increase in the cortisol concentration in the blood of humans exposed to a 900 MHz/217 Hz field with a power flux density value of 0.2 W/m². Systematic deviations were also observed for the Growth

Hormone and Melatonin levels, but these did not reach significance level.

Whilst in the previously cited studies, changes in the sleep EEG could be demonstrated only as a consequence of the influence of mobile telecommunications fields for several hours, Borbély et al. (1999) were able to demonstrate that changes in sleep were already occurring after 15 to 30 minutes exposure. This research team used also a 900 MHz field, which could be selectively pulse modulated with either 2, 8, 217 or 1736 Hz. As in the other experiments, a statistically significant reduction in the proportion of REM sleep was found at a Specific Absorption Rate of less than 1W/kg. In addition, the waking up phase was noticeably reduced. Freude et al. (*1998, see also Henschel et al. 1999) examined the effect of the radiation from mobile telephones on slow brain potentials. Slow brain potentials are event correlated brain potentials that arise during the preparation for motor action and/or information processing. Changes in the slow brain potentials give an indication about the influences on specific aspects of human information processing. Freude et al. found that the fields of a mobile telephone (916.2 MHz, 217 Hz, SAR 0.882 1.42 W/kg, exposure time 3 to 5 minutes) led to a statistically significant decrease of the slow readiness potentials for specific tasks, in specific brain areas.

5.2.4 Cognitive Functions

Impairments of the brain, e.g. by modification of the choline-uptake, can be expected to cause learning deficits. These were demonstrated in many learning experiments, in which rats were previously exposed to pulsed microwave fields (*Lai et al. 1989, 1994; *Wong & Lai 2000, see above D'Andrea 1999 for older studies). In the study by Lai et al. (*1994), rats were exposed for 45 minutes to a 500 Hz pulsed 2.45 GHz field with a power flux density of 10 W/m². This intensity resulted in a mean whole body SAR of 0.6

W/kg. Following the exposure, the starved rats were placed in a labyrinth with several arms in which food was placed. The researchers measured how effectively the 'exposed rats' and the 'shamexposed rats' searched the labyrinth for food. **For the 'exposed' group, significantly more failed attempts were observed, i.e. searching already emptied labyrinth arms. The authors attributed the low performance of the 'exposed' rats to deficits in spatial memory. The 'handicap' of the EMF exposure could be levelled out in a follow-up experiment, in which the rats were given either the acetylcholine agonist Physostigmin or the opiate antagonist Naltrexone before their exposure. According to the authors, these findings are confirmation of their results from previous studies (see above), in which they had found that high frequency electromagnetic fields influence cholinergic and endogenous opioid neurotransmitter systems in the brain and that this effect can lead to memory deficits. In the meantime, the effect has been confirmed by other experiments (Mickley & Cobb 1998).**

In a further experiment (*Wang & Lai 2000), rats were trained over several sessions to find a platform situated just under the water surface inside a round water basin. Subsequently, they were exposed to pulsed microwave radiation for an hour (2.45 GHz, 500 pulses per second, mean power flux density 2W/m², mean whole body SAR 1.2 W/kg). Testing was then carried out to determine how long the 'exposed rats' needed to find the platform from different starting positions, compared to the 'non exposed rats' or 'sham exposed rats'. **The 'exposed rats' clearly required longer for this, as they spent significantly less time in the correct quadrant of the water basin. Finally, the recorded traces of the swimming lanes used by the 'exposed animals' differed from those of the control groups, this suggests that different strategies were used when searching for the platform. This result confirms the findings from other studies that pulsed high frequency fields can influence specific aspects of memory performance. The effects of a 600 MHz field on the memory of rats were also demonstrated by Mickley et al. (*1994). In this experiment, the capacity of the animals to recognize familiar objects was measured in relation to the radiation they received. Whilst the 'non-exposed control animals and also the animals who were exposed to a SAR of 0.1 W/kg occupied themselves for longer with a novel object compared to a familiar object, the higher exposed animals spent just as much time examining an actually familiar object as with a novel object. The limit for this exposure dependent change in behaviour was between 0.1 and 1.0 W/kg The lowest SAR so far which has been shown to have an effect on cognitive functioning in rats was 0.072 W/kg. However, in this experiment, pulses with a peak of more than 700 MW (megawatts) were used (Raslear et al. 1993). The low SAR in this case resulted only from averaging over time with a very low pulse repetition rate of 0.125 pulses per second and a pulse width of only 80 nsec. It has been shown in experiments by Preece et al. (*1999) that fields like those used in mobile telephony can influence cognitive functions of the brain. In this study, 36 subjects were subjected to a 915 MHz field of a simulated mobile telephone. The field was overlaid either with a 217 Hz sinusoidal modulation or a 217 Hz pulse modulation. In the analogue simulation the net forward power was about one Watt, and in the digital simulation it was 0.125 Watt. Under the conditions 'Exposure to analogue field', 'Exposure to digital field' or 'Sham exposure without any**

field', each of the test persons had to carry out several tests to measure ability to react and various tests of memory performance. **In both exposed groups there was a slight but statistically significant decrease in reaction time, which was more marked for 'Analogue exposure' than for 'Digital exposure'.**

5.3 Hormone Systems

5.3.1 Stress Hormones

Environmental pollution can act as a stressor on the body, like physical and mental stressors, and cause 'alarm reactions'. Such reactions are associated with hormonal changes. The presence of a stress situation can be proved by the presence of hormones like adrenocorticotropin [the adrenocorticotrophic hormone] (ACTH), cortisol and corticosterone in the blood, and also to a lesser extent by changes in the concentration of prolactin and growth hormone.

Electromagnetic fields can clearly cause stress reactions in animals used for experiments. Thus, the experiment by Imaida et al. (*1998a) on rats that were exposed for a duration of 90 minutes daily over a period of 6 weeks to a field with a carrier frequency of 929.9MHz and a 50 Hz pulse modulation, showed a statistically significant increase in the ACTH and corticosterone levels. The whole body SAR value in this experiment was between 0.58 and 0.8 W/kg. The exposure in the 1.439 GHz field, equally with a 50 Hz pulse modulation and a SAR value between 0.453 and 0.680 W/kg had the same effect (*Imaida et al. 1998b). Chou et al. (*1992) exposed rats in a long term experiment (25 months) to 800 MHz pulsemodulated 2.45 GHz field that led to a Specific Absorption Rate of 0.15 to 0.4 W/kg.

Alongside other physiological parameters the corticosterone profile was regularly measured for the first half year of the experiment. Whilst the hormone profile of the exposed animals and the non exposed animals were practically identical in the later stages of the experiment, with the exception of a slight increase in the sham-exposed group of animals in the third phase of the experiment, **the first examination after 6 week's exposure showed a statistically significant increase in the corticosterone profile in the blood of the exposed animals.**

The authors report that their attempt to replicate this effect produced no statistically significant results, however, only 20 animals were tested in this second experiment whilst the actual series of experiments contained 200 animals.

A similarly extensive experiment on rats like that of Chou et al. However, with an unmodulated 435 MHz field showed no difference in the concentration of the hormones ACTH, corticosterone and prolactin between the exposed animals and the non-exposed animals (Toler et al. 1988).

The few experiments previously carried out on humans do not yet produce a clear picture. Mann et al. (*1998) exposed 24 volunteer subjects whilst asleep to the field of a mobile telephone that was transmitted from a separate antenna (900 MHz, 217 Hz, 0.2 W/ m²). Blood samples were withdrawn via a catheter whilst the subjects were asleep and they were analysed for, amongst other things, cortisol and growth hormone concentrations. **There were**

systematic differences between the ‘exposed subjects’ and the ‘sham-exposed subjects’ during the course of the night for both hormones, which only reached statistical significance levels for cortisol.

De Seze et al. (*1998) examined the effect of a GSM mobile telephone (900MHz, 217 Hz) on subjects who were exposed to the field for 2 hours per day, 5 days per week for over a month. Based on nine blood sample withdrawals per week; amongst other things, the change in the concentrations of ACTH, growth hormone and prolactin were determined over time. The authors’ evaluation of their studies was that at one month, intermittent exposure in the radio frequent field from the mobile telephone had no lasting or accumulative effects on the hormone secretions from the anterior lobe of the pituitary gland. **In their data, it is however noticeable that that ACTH and prolactin follow a quite similar profile over time: the concentrations started at high initial values at the start of the exposure and then decreased in the following 3 weeks, and they then rose slightly again.** The growth hormone concentrations are very high for the first measurements during the exposure period, they then fall to the pre exposure concentration levels and maintain these levels until the end of the experiment. Possibly, these measurements show a temporary stress reaction, which reduced in the following weeks.

5.3.2 Melatonin

The hormone melatonin, which is produced in the pineal gland, functions as a regulating hormonal signal that synchronizes the endocrine rhythms of all the hormone glands. It regulates, amongst other things, the daily cycles of ACTH and the cortisol-release and thereby regulates the daily rhythms of many metabolic processes.

Melatonin also exerts influences (inhibitory) on sex hormones and it has a stimulatory effect on the immune system. Melatonin also influences specific cancer illnesses via the regulation of the release of the sex hormones. In addition, melatonin is a free radical scavenger, inactivating radicals such as OH, which amongst other things can be dangerous for the genetic material. Furthermore, during in vivo experiments, it was demonstrated that melatonin hinders changes in DNA produced by chemical carcinogens and it protects lymphocytes from chromosome damage in high frequency electromagnetic fields (*Lai & Singh 1997).

In the previously described experiments carried out by Imaida et al. (*1998 a, b), it was found that the experimental animals that were exposed to a pulse-modulated high frequency field had a reduced melatonin concentrations in the blood. This finding could not be confirmed by Heikkinen et al. (1999), who exposed mice for 17 months to a 900 MHz field with a 217 Hz GSM pulse modulation (SAR: 0.35 to 1.5 W/kg). Studies by Vollrath et al. (1997) using rats and hamsters with a 900 MHz field (217 Hz GSM, SAR: 0.04 to 0.36 W/kg) could not contribute much to the clarification of the problem, since in several sub-sets of the experiment statistically significant differences between ‘exposed animals’ and ‘non-exposed animals’ had been found, but according to the authors these resulted from mistakes in the experimental order.

In experiments by Mann et al. (*1997 see above), the stress hormones were measured as well as the serum melatonin profile. This showed, in the case of the exposed humans, that for a

period of between 3 to 4 hours in the middle of the night there was an increase compared to the control values, but these were not statistically significant according to the evaluation of the authors.

6 Pathological Effects

6.1 Results of Experimental Studies

6.1.1 Cancer

Carcinogenesis

Carcinogenesis is a multi-layered process, at the beginning of which is a certain impact on the level of the genetic material. This can be a direct impact (for example ionizing radiation) or an indirect action via the product of a reaction (for example OH radicals). **A direct or indirect interaction with DNA can lead to damage of the DNA or the chromatin structures (see also Chapter 3). If those damages are not repaired by endogenous processes, the damage will be permanent. Thus, the initiated cell can, if the immunological control fails, under the influence of hormones and promoters develop into a pre neoplastic focus, which can then lead to a malignant tumor.** The different steps of carcinogenesis are summarised in three phases:

- Initiation: Triggering of damage on the DNA and mutations on critical genes
- Promotion: Increased rate of DNA synthesis and proliferation of transformed cells
- Progression: Transition of a pre neoplastic focus to a malignant tumor

A physical or chemical pollutant can in principle be effective in all three phases of carcinogenesis.

- Initiation: Triggering of direct DNA damage or of a substance which causes DNA damage, disruption of repair processes of the DNA
- Promotion: Promotion of the proliferation of transformed cells
- Progression: Suppression of immune reactions and promotion of tumor growth

Results from Animal Experiments

In vivo experiments using animals with an inbred genetic predisposition for certain tumor illnesses or in which animals were injected with cancer cells, yielded very different results (see Appendix C, Table C.1). In the majority of the studies, no cancer promoting effect of high frequency electromagnetic fields could be found, or effects were only observed under certain conditions of exposure (marked in the Table with 'partly'), and even in those cases they were often not statistically significant. However, it needs to be noted that many studies with negative results had very short exposure times and durations of the study itself (for example Chagnaud et al. 1999: 2 weeks, Salford et al. 1993: 2 to 3 weeks) and hence they do not have much relevance to answer the question whether high frequency electromagnetic fields have carcinogenic potential. **Some long term studies have yielded results which indicate a carcinogenic or cocarcinogenic effect of electromagnetic fields with mobile telecommunications frequencies if the animals are exposed over a long period of time.**

public health policy planning. It documents bioeffects, adverse health effects and public health conclusions about impacts of non-ionizing radiation (electromagnetic fields including extremely-low frequency ELF-EMF and radiofrequency/microwave or RFEMF fields).

Societal decisions about this body of science have global implications. Good public health policy depends on acting soon enough, but not without cause, and with enough information to guide intelligent actions. To a great degree, it is the definition of the standard of evidence used to judge the scientific reports that shapes this debate.

Disagreement about when the evidence is sufficient to take action has more to do with the outcome of various reviews and standard-setting proceedings than any other single factor. Whatever “standard of evidence” is selected to assess the strength of the science will deeply influence the outcome of decisions on public policy.

We are at a critical juncture in this world-wide debate. The answers lie not only in the various branches of science; but necessarily depend on the involvement of public health and policy professionals, the regulatory, legal and environmental protection sectors, and the public sector.

This has been a long-term collaboration of international scientists employing a multidisciplinary approach to problem assessment and solving. Our work has necessarily relied on tools and approaches across the physical, biological and engineering sciences; and those of the environmental scientist and public health professional. Only when taken together can we see the whole and begin to take steps that can prevent possible harm and protect future generations.

Signed: _____ Signed: _____

David Carpenter, MD Cindy Sage, MA
Co-Editor Co-Editor

BioInitiative Report BioInitiative Report

BIOINITIATIVE 2012 – CONCLUSIONS Table 1-1

Overall, these 1800 or so new studies report abnormal gene transcription (Section 5); genotoxicity and single-and double-strand DNA damage (Section 6); stress proteins because of the fractal RF-antenna like nature of DNA (Section 7); chromatin condensation and loss of DNA repair capacity in human stem cells (Sections 6 and 15); reduction in free-radical scavengers – particularly melatonin (Sections 5, 9, 13, 14, 15, 16 and 17); neurotoxicity in humans and animals (Section 9), carcinogenicity in humans (Sections 11, 12, 13, 14, 15, 16 and 17); serious impacts on human and animal sperm morphology and function (Section 18); effects on offspring behavior (Section 18, 19 and 20); and effects on brain and cranial bone development in the offspring of animals that are exposed to cell phone radiation during

pregnancy (Sections 5 and 18). This is only a snapshot of the evidence presented in the BioInitiative 2012 updated report.

BIOEFFECTS ARE CLEARLY ESTABLISHED

Bioeffects are clearly established and occur at very low levels of exposure to electromagnetic fields and radiofrequency radiation. Bioeffects can occur in the first few minutes at levels associated with cell and cordless phone use. Bioeffects can also occur from just minutes of exposure to mobile phone masts (cell towers), WI-FI, and wireless utility 'smart' meters that produce whole-body exposure. Chronic base station level exposures can result in illness.

BIOEFFECTS WITH CHRONIC EXPOSURES CAN REASONABLY BE PRESUMED TO RESULT IN ADVERSE HEALTH EFFECTS

Many of these bioeffects can reasonably be presumed to result in adverse health effects if the exposures are prolonged or chronic. This is because they interfere with normal body processes (disrupt homeostasis), prevent the body from healing damaged DNA, produce immune system imbalances, metabolic disruption and lower resilience to disease across multiple pathways. Essential body processes can eventually be disabled by incessant external stresses (from system-wide electrophysiological interference) and lead to pervasive impairment of metabolic and reproductive functions.

LOW EXPOSURE LEVELS ARE ASSOCIATED WITH BIOEFFECTS AND ADVERSE HEALTH EFFECTS AT CELL TOWER RFR EXPOSURE LEVELS

At least five new cell tower studies are reporting bioeffects in the range of 0.003 to 0.05 $\mu\text{W}/\text{cm}^2$ at lower levels than reported in 2007 (0.05 to 0.1 uW/cm^2 was the range below which, in 2007, effects were not observed). Researchers report headaches, concentration difficulties and behavioral problems in children and adolescents; and sleep disturbances, headaches and concentration problems in adults. Public safety standards are 1,000 – 10,000 or more times higher than levels now commonly reported in mobile phone base station studies to cause bioeffects.

EVIDENCE FOR FERTILITY AND REPRODUCTION EFFECTS: HUMAN SPERM AND THEIR DNA ARE DAMAGED

Human sperm are damaged by cell phone radiation at very low intensities in the low microwatt and nanowatt/ cm^2 range (0.00034 – 0.07 uW/cm^2). There is a veritable flood of new studies reporting sperm damage in humans and animals, leading to substantial concerns for fertility, reproduction and health of the offspring (unrepaired de novo mutations in sperm). Exposure levels are similar to those resulting from wearing a cell phone on the belt, or in the pants pocket, or using a wireless laptop computer on the lap. Sperm lack the ability to repair DNA damage.

Studies of human sperm show genetic (DNA) damage from cell phones on standby mode and wireless laptop use. Impaired sperm quality, motility and viability occur at exposures of 0.00034 uW/cm^2 to 0.07 uW/cm^2 with a resultant reduction in human male fertility. Sperm cannot repair DNA damage.

Effects of high frequency electromagnetic fields on the central nervous system are proven for intensities well below the current guidelines. Measurable physiological changes have been demonstrated for intensities from 0.5 W/m². Impairments of cognitive functions are proven for animals from 2W/m².

Electrosensitivity or Electromagnetic Hypersensitivity

The terms ‘electrosensitivity’ or ‘electromagnetic hypersensitivity’ describe disturbances of well being and impairments of health, such as they are suffered by certain sensitive people when working with or being in the presence of devices and equipment emitting electrical, magnetic or electromagnetic fields. The sensitivity manifests in a variety of symptoms including:

- **nervous symptoms such as sleep disturbances, headaches, exhaustion, lack of concentration, irritability, anxiety, stress**
- **cardio-vascular complaints**
- **disruptions of hormones and metabolism**
- **skin complaints**

The composition and strength of the complaints varies enormously in different individuals. The correlation of the complaints with electromagnetic exposures and other environmental influences seems to vary strongly not only between affected persons but also in time, a fact that has so far impeded the conclusive scientific proof of a cause effect relationship in provocation studies. The present results of scientific studies are often not conclusive and partly contradictory. On the other hand, however, there is a wealth of data collected by the self help organisations of affected people, which has not yet been explored.

Conclusion

On the basis of current knowledge it is impossible to estimate the risk of electrosensitive reactions or to make recommendations for guidelines designed to avoid such a risk for the general population, which is composed of sensitive and non sensitive persons.

8 Recommendations

8.1 Precautionary Health Protection in Relation to Exposures to Electromagnetic Fields of Mobile Telecommunications

With mobile telecommunications we have to differentiate to exposure situations:

- **exposure of residents near base stations**
- **exposure of mobile users when using the devices**

To limit exposure to an acceptable degree, if this is possible at all, there need to be different strategies for the two different exposure groups.

Exposures from Base Stations

In humans, harmful organic effects of high frequency electromagnetic fields as used by

mobile telecommunications have been demonstrated for power flux densities from 0.2W/m² (see Chapter 7). Already at values of 0.1 W/m² such effects cannot be excluded. If a security factor of 10 is applied to this value, as it is applied by ICNIRP and appears appropriate given the current knowledge, the precautionary limit should be 0.01W/m². This should be rigorously adhered to by all base stations near sensitive places such as residential areas, schools, nurseries, playgrounds, hospitals and all other places at which humans are present for longer than 4 hours.

We recommend the precautionary limit of 0.01 W/m² independent of the carrier frequency. The rough dependency on frequency with higher limits outside of the resonance range, as it is applied in the concept of SAR, is not justifiable given the results of the scientific studies which conclusively prove non thermal effects of high frequency fields. Also, the current allowed higher exposures for parts of the body, as long as they refer to the head or thorax are not justifiable.

Exposures of Mobile Phone Users

Given the state of technology now and in the foreseeable future, it is currently technically impossible to apply the recommended maximum value for mobile base stations also to the use of mobile phones. **However, a lowering of the guidelines to a maximum of 0.5 W/m² should urgently be considered.**

A particular problem in this exposure group is posed by children and adolescents, not only because their organism is still developing and therefore particularly susceptible, but also because many adolescents have come to be the most regular users of mobile phones.

Advertising towards this population group should be banned. Furthermore, particular efforts should be made to lower the exposures during calls. It would be recommendable to conduct (covert) advertising campaigns propagating the use of headsets. It would also be important to develop communications and advertising aiming at minimising the exposures created by carrying mobile phones in standby mode on the body.

8.2 Scientific Studies Regarding the Health Risk of Mobile Telecommunications

The precautionary limits recommended in Chapter 8.1 are based on the current scientific knowledge. This is, however, still incomplete and in the case of this technology, which is exposing the entire population to its emissions, further research efforts are needed to create a base for the setting of truly reliable guidelines. Based on the scientific knowledge presented in this report, the further research requirements are mainly for studies on living organisms (humans or animals):

Epidemiological studies

■ **studies that metrologically record the exposure on existing radio transmitters (USW), TV transmitters and longer established radio communications and paging networks. (The emissions of this type of equipment with regards to the modulation frequencies may not**

be directly comparable to those of mobile telecommunications, but such studies could nevertheless offer important indications for the assessment of the exposure risks of high frequency electromagnetic fields; the studies should focus on cancer and illnesses of the central nervous system including neurodegenerative diseases as well as cardio-vascular diseases and any diseases caused by a disruption of the immune system; such studies should also address potential clusters of unspecified symptoms and impairments of well-being (electrosensitivity)).

- a meta study with retrospective dosimetry for the studies which examined the residents near emitting base stations (see Appendix D) with the help of measured data from comparable sites
- a cohort study examining the health (see above) of mobile users and residents near mobile base stations
- epidemiological animal studies on pets

Experimental long term studies

Studies of the chronic effects of the fields emitted by mobile telecommunications

- on the central nervous system (preferably on humans)
- on the immune and endocrine system (preferably on humans, but further animal experiments at low intensities would also be helpful for example with regards to EMF-induced stress)
- on the cardio vascular system (variability of heartbeat rates, blood pressure, etc., on humans and on animals)

Experimental short term studies

Studies of the acute effects of the fields emitted by mobile telecommunications

- on the brain in various rest and stress situations (preferably making use of EEG and similar methods)

Beyond these suggestions, it would be important to develop a strategy for the research of the 'electrosensitivity' phenomenon and its incidence, which would acknowledge the failure of traditional scientific methods to address the problem and allow the inclusion of the data available from the self help groups and associations of the affected.

The following are some of the studies the Ecolog report used in determining their findings and recommendations.

3.4 Other Effects

Resonance Phenomena

When the frequency of the electromagnetic wave meets the natural vibrations in the cell structures or in tissue, it can lead to resonances. Rhythmical fluctuations of signal substances, matter-exchange-processes and Ion-conductivity can be found in many neurones, receptors and cell types. These oscillations can influence the membrane potentials and switch certain stimuli on and off. An external field – according to theory – can imprint an external oscillation frequency onto these structures. **Neurones which have been modified in this way can even synchronise the following neurones in the same way. This external synchronisation would even remain after the disappearance of the external stimulus.**

Indirect Effects:

In addition to the previously described triggering of wring resonances, microwaves can possibly damage the genetic substance via the formation of hydroxyl radicals. The input energy of microwaves is sufficient to raise the ratio of oxidants to anti oxidants, a self accelerating chain reaction of free radicals can lead to damage of the DNA (Scott 1992, see also Maes et al. 1995).

3.5 Particular Properties of Pulsed Electromagnetic Fields

In an evaluation of circa 40 studies, in which the biological effects of pulsed high frequency fields were directly compared to those of continuous fields of the same median power density, Postow & Swicord (1996) concluded that in half of the studies, the biological effectiveness of pulsed fields was significantly higher. Only in a few studies were the continuous fields more effective and in the remainder of the studies the effectiveness of both was practically the same. The studies which are mainly discussed in chapter 4 and 5 convey a similar picture.

At first glance, the higher biological effectiveness of pulsed electromagnetic fields in comparison to continuous fields at the same median power flux densities could have an almost trivial cause:

The individual pulses of pulse modulated fields have a higher amplitude than the continuous fields; the possible threshold for the triggering of biological reactions could therefore be passed in these fields during the duration of the pulse. However, numerous experiments found that the biological response depends in a complicated manner on the duration of the pulse and its frequency. **Given that some effects have only been observed at certain pulse frequencies, we presume that in addition to the described effect, there are others which can be originally attributed to the low frequency modulation (see also chapter 4).**

4 Biological Primary Effects of High Frequency

Electromagnetic Fields Effects on Cellular Level

At the cellular level, it is possible that there may be direct effects of the EM field on the genetic material, which we have collated under the heading Gene Toxicity and which will manifest as mutations if the cell's own repair mechanisms fail. On the other hand, it is also possible that the fields influence cellular processes such as gene transcription and gene-translation. Furthermore it is possible that the fields can impact on the cell membranes, the intracellular processes of signal transmission and not least the cell cycle. Just like direct damage of the genetic substance, a disruption of these processes can lead to a transformation of the cell, to disruptions of inter cellular communication and to a changed rate of cell division, which can lead to a slower – or very importantly with respect to a potential carcinogenic effect – faster growth.

4.1 Gene Toxicity

A basic question for the evaluation of the potential dangers of mobile telecommunication is whether the electromagnetic fields used are genotoxic. **If the fields had the potential to damage genetic substance directly, they would not only amplify the effects of other carcinogenic teratogenic or mutagenic substances, but they would induce these effects themselves.** A direct genotoxic effect of electromagnetic fields with frequencies as they are used for mobile telecommunications has been thought to be not likely in the past (Brusick et al. 1998, Moulder et al. 1999, Repacholi 1997, Repacholi 1998, Saunders et al.1991, Verschaeve 1995, Verschaeve & Maes 1998). The reasons for this assumption were on the one hand that the quantum energy contained in EM field in the radio and microwave range was not sufficient to break molecular bonds. **This assumption is no longer tenable after the experiments of Bohr et al. (*1997) and Bohr & Bohr (*2000) (see also chapter 3.3).** On the other hand, it was argued that there was a large number of experiments showing no genotoxic effects. **Our list of papers in Annex A, Table A.1 shows however, that the much debated findings of the work of Lai & Singh (*1995), in which the direct damage of DNA (single strand and double strand breaks) has been proven, have been confirmed by a whole range of other studies, some by the same laboratory, but also by other groups (*Lai & Singh 1996, 1997, *Phillips 1998, *Sarkar 1994).** A study by Varma & Traboulay (1977) on the effect of HF fields on pure DNA had already resulted in hints of direct genotoxic effects, however, this experiment used a relatively high power flux density and therefore significant warming may have occurred, at least locally. Lai and Singh (*1997) found that the dispensation of melatonin and N-Tert-Butylalpha-Phenylnitron (PBN) before the EMF exposure prevented the occurrence of DNA breaks. Melatonin captures free radicals and for PBN it has been proven that it protects cells from cell death induced by free radicals. In Appendix Table A.1 we also list the experiment of Meltz et al. (*1987) and Stagg et al. (*1997) which examined the influences of EMF fields on the DNA repair mechanisms and the DNA synthesis. The term chromosome aberration sums up all anomalies of the DNA double strand level with respect to chromatids and chromosomes. Examples for structural chromosome aberrations are: chromatid and chromosome breaks, chromatid gaps, acentric fragments as well as di- and tetracentric chromosomes. **Chromosome aberrations have been observed in a multitude of experimental conditions, in vivo as well as in vitro (Table A.1).** Maes et al.(*1997) found a rise of chromosome aberrations in human

lymphocytes in workers who were professionally exposed to radiation from mobile equipment, but also in experiments with human blood under controlled exposure conditions (GSM base station, 15 W/m², exposure time of 2 hours). However, this was the only study so far which used the actual fields of a real base station. The incidence of micronuclei indicates whether the distribution of chromosomes into the daughter nuclei after a cell division has been normal and complete. A number of studies have proven a higher incidence of micronuclei under the influence of HF EMF fields, which is interpreted as an indication for chromosome damage (Table A.1). With one exception, the frequencies were all over 1 GHz and in most cases the intensities were relatively high. For the incidence of sister chromatid exchange as a measure for damage at DNA single strand level, only very few studies using typical mobile frequencies and intensities have been done so far (Table A.1). Maes et al. (*1996) found that the radiation of a GSM base station (954 MHz, 217 Hz, duration of exposure: 2 hours) raises the genotoxic effects of Mitomycin C significantly, demonstrated via the sister chromatid exchange. Genetic damage can lead to cell mutation with possibly damaging effects for the living organism. Mutations which promote faster cell division will be discussed in chapter 4.3. Table A.1 shows in its last block some studies which focussed on the evidence of changes in the genetic materials which manifest themselves as changed properties within the organism.

4.2 Cellular Processes

4.2.1 Gene-Transcription and Gene-Translation

The code of the DNA controls protein synthesis in the ribosomes via the RNA. The creation of RNA, i.e. the imprinting of genetic information happens in the cell nucleus (transcription). The encoded information is transported via messenger RNA (mRNA) to the ribosomes and is read there with the help of Transfer RNA (tRNA). According to the transmitted code, proteins are subsequently synthesized. This process of synthesis is called translation. Since one mRNA chain can be used by several ribosomes, the rate of synthesis of the corresponding protein can be a lot higher than that of the mRNA. Mistakes made during the genetic transcription can thus be 'raised to a higher power' at the protein level.

In the first block of Appendix Table A.2, we list several recent studies which demonstrated changes of gene transcription and translation under the influence of electromagnetic fields of mobile telecommunications. Fritze et al. (*1997) observed changed gene transcription in certain areas of the brains of rats which had been exposed to the field of a GSM phone for four hours.

In an in vitro experiment, Ivaschuk et al. (*1997) exposed cells to a pulse modulated HF field (836.55 MHz, TDMA 50Hz) and afterwards extracted and analysed the entire cellular RNA. This showed statistically significant changes with regards to the transcription of the response gene c jun (90W/m², duration of exposure: 20 minutes), however no changes with regards to c fos. The results of the experiments by Goswami et al. (*1999) found a evidence for an influence on the transcription of the response gene c fos by a similar field, whilst for c jun and c myc, no statistically significant effect was

observed. **The intensities at which effects on gene translation had been observed were well below the values at which thermal effects would occur in mammals.**

4.2.2 Membrane Function

There is a large number of experimental evidence that high frequency fields, non-pulsed and pulsed can affect different properties of the ion channels in cell membranes, for example in the form of a lowering of the rate of channel formation or the reduction of frequency of the opening of individual channels (Repacholi 1998). The frequency of openings of ion channels which are activated by acetylcholine was significantly lowered by a microwave field (10.75 GHz) with a power flux density of a few $\mu\text{W}/\text{cm}^2$. (*D'Inzeo et al.1988). Changes of the membranes as a whole have also been observed under the influence of weak fields. Thus, Phelan et al. (*1992) observed that a 2.45 GHz field, with a pulse modulation of 100 Hz could trigger a phase transition from liquid to solid in melatonin containing cells after an exposure of 1 hour at a SAR of 0.2 W/kg.

4.2.3 Signal Transduction

Ca²⁺

The divalent Calcium cation Ca²⁺ plays an important role in the cell-signal transduction: regulating the energy output, the cellular metabolism and the phenotypical expression of cell characteristics.

The signal function of the Ca²⁺ is based on a complicated network of cellular channels and transport mechanisms, which maintains the Ca²⁺ concentration within the cell at a lower level than outside, but which is also linked to dynamic reservoirs. This allows the transduction of extracellular signals (hormones, growth factors) as Ca²⁺ peaks in the cytosol, transmitting information encoded in their intensity and frequency. It is known that this signal process can be disrupted by a variety of toxic chemicals in the environment, which can lead to cell damage and even cell death (Kass & Orrenius 1999). Studies by Bawin et al. (*1975) and Blackman et al. (*1979) showed very early on in vitro experiments that the Ca²⁺ balance of nerve cells and brain tissue can be disrupted by HF fields with low frequency amplitude modulations.

Both studies worked with amplitude modulated 147 MHz fields (with intensities ranging from 5 to 20 W/m²). The maximum effect occurred at a modulation frequency of 16 Hz. Experiments conducted by Dutta et al. (*1984 *1989) and Lin-Liu & Adey (*1982) also showed significant dependence on the modulation frequencies, in some cases at Specific Absorption Rates of as low as 0.5 W/kg. Equally, Somosy et al. (*1993) found that an effect on the distribution of Ca in intestinal cells is only possible within a field modulated with a low frequency. Wolke et al. (*1996) observed in their experiment on myocytes that exposure to fields with mobile-like carrier frequencies of 900 MHz and 1800 MHz resulted in lower intracellular concentrations of Ca²⁺ for all modulation frequencies (16 Hz, 50 Hz, 217 Hz, 30 KHz) compared to exposures to a continuous 900 MHz field or no exposure at all. A statistically significant effect was only found with the combination of a carrier wave of 900MHz and a modulation frequency of 50 Hz. The Specific Absorption Rate for this experiment was between 0.01 and 0.034 W/kg, far below the range which might be relevant for 'thermal' effects.

Enzymes

Protein kinases are enzymes with the property to phosphorylate other enzymes or proteins. Phosphorylation, a covalent modification by addition of a phosphate group, changes the activity or function of a protein. The protein kinases play an important role in the transmission of information from the membrane receptors for hormones and cytokines into the interior of the cell, and thus in the regulation of many intracellular processes such as glucose and lipid metabolisms, protein synthesis, membrane permeability, enzyme intake and transformation by viruses.

An amplitude modulated 450 MHz field is capable of decreasing the activity of protein kinases which are not activated by cyclical Adenosine monophosphate. Byus et al. (*1984) showed that the degree of inactivity depended on the exposure time as well as the modulation frequency. Maximum effects occurred at exposure times of 15 to 30 minutes with a modulation frequency of 16 Hz.

The enzyme ornithine decarboxylase (ODC) determines the speed of the biosynthesis of polyamines. Polyamines are needed for DNA synthesis and cell growth. ODC is also activated in relation to carcinogenesis. The control of ODC activity from the exterior is facilitated via processes on the cell membrane. Byus et al. (*1988) exposed three different cell types (rat hepatoma cells, egg cells of the Chinese hamster, human melanoma cells) for one hour to a 450 MHz field with a 16 Hz amplitude modulation and a power flux density of 10W/m². **The exposure raised ODC activity by a little more than 50%. The heightened ODC activity remained for several hours after the exposure.** Similar fields with a 60 Hz and a 100 Hz modulation had no effects. **Another study (*Penafiel et al. 1997) observed heightened ODC activity after the radiation of L929 cells of mice with a 835 MHz field which had been amplitude modulated at 60Hz or pulse modulated at 50Hz.** No effects whatsoever were observed with an analogue mobile phone, a frequency modulation at 60 Hz and a speech amplitude modulation. This last finding confirms other results by the same group, according to which a minimum coherence time of 10 seconds of the field needs to be present for an effect on ODC activity to manifest (*Litovitz et al.1993, 1997, see also Glaser 1998 and Litovitz 1998). The coherence time of speech modulated fields however is shorter than a second.

Further important proof that low frequency modulation has a determining influence on the effects of electromagnetic fields on enzyme activity was found by Dutta et al. (*1994):

They compared the effects of a low frequency modulated 147 Hz field (0.05 W/kg) and a combined low frequency electric and magnetic field (ELF EM, 21.2V/97nT). **A continuous high frequency field only had a small effect (3.6 per cent) on the activity of enolase in Escheria Coli, a 16 Hz modulated field led to an increase in activity of nearly 62 per cent, a 60 Hz modulated field led to a decrease of activity of 28.5 per cent. At ELF EM a similar response could be observed: increase of enzyme activity by more than 59 per cent at a frequency of 16 Hz and decrease of 24 per cent at 60 Hz.** The results of the experiments by

Behari et al.(*1998) point in the same direction. **They found that a 30 to 35 day long**

exposure of rats to amplitude modulated fields (6.11 – 9.65 W/kg) led to a significant increase in Na⁺ K⁺ ATPase activity, which was independent from the carrier frequency, but characteristically dependent on the modulation frequency, because the effect was always stronger at a 16 Hz modulation than at a 76 Hz modulation.

4.2.4 Cell Cycle

An undisrupted signal transduction or efficient cell cycle control mechanisms which are capable of correcting false information or facilitating repairs are the prerequisite for cell cycle progression if the genomic integrity of the cell is to be maintained (Shackelford et al. 1999). Disturbances of the DNA replication can lead to detrimental mutations and as a consequence to cell death or in multicellular organisms to cancer. The causes for irregularities in the course of the cell cycle are almost always to be found in mistakes during signal transduction and/or the failure of control mechanisms.

In Appendix Table A.2. we list studies which examined disruption of the cell cycle. The only in vivo experiment is the one by Mankowska et al. (*1979) which also used intensities as they are found in the environment of real emitting equipment. **Statistically significant increases of disrupted metaphases with uni, quadri and hexavalencies were demonstrated in this study from a power flux density of 5 W/m². Cleary et al. (81996) found in their experiment that 2.45 GHz fields are roughly twice as effective as 27 MHz fields when it comes to the triggering of cell cycle disturbances. Whilst the 27 MHz fields had no influence on the G₂/M phase of egg cells of the Chinese hamster, disturbances of all phases were observed in a 2.45 GHz field.**

4.3 Cell Transformation and Cell Proliferation

In vitro experiments of the effects of high frequency fields on the rate of division or the rate of proliferation of cells, expressed in the proliferation rate and the (neoplastic) transformation of cells can offer important findings with regards to possible carcinogenic effects of the fields. **The adverse influences of the fields which could not be prevented by the cell's own repair mechanisms manifest themselves in disrupted cell proliferation and cell transformation rates.**

Table A.3 gives an overview of the studies, in which the effects of high frequency fields on cell transformation and cell proliferation rates were the focus of the examinations.

4.3.1 Cell Transformation

Balzer Kubiczek & Harrison (*1985, *1989, *1991) found an increase in neoplastic transformations in cells which had been exposed in vitro to a high frequency field with a low frequency pulse. The effect depended on intensity, but was only observable, if a tumour promoter (TPA) was added after the exposure. Czerska et al. (*1992) found that low frequency pulsed microwave radiation (2.45 GHz) increased the rate of transformation of small inactive lymphocytes into large activated lymphoblasts. Continuous radiation could trigger this effect only at power flux densities that also led to measurable warming. However, the experiments with pulsed radiation which triggered the cell transformation at power flux densities, for which a homogenous warming can be

ruled out, showed that **homogenous warming cannot be responsible for this effect.**

4.3.2 Cell Communication

Disrupted communication between transformed cells and normal cells plays an important role in tumor promotion. Cain et al. (*1997) co cultivated transformed cells with normal cells. The co-culture was exposed for 28 days to a TDMA (50Hz) modulated 836.55 MHz field as well as to the tumor promoter TPA in various concentrations. At power flux densities of 3 and 30 W/m², which corresponded to Specific Absorption Rates of 1.5 and 15 mW/kg, they did not find a statistically significant difference of focus formation between the exposed and the control cultures for any of the TPA concentrations. **The data for the lowest intensity (0.3 W/m²/0.15 mW/kg) show for two of the three TPA concentrations that there was a small but statistically significant difference in the number of foci, and for the lowest TPA concentration also for the surface and density of the foci.**

4.3.3 Cell Proliferation

Anderstam et al. (*1983) found in their experiments with bacteria that some strains reacted to the exposure with an amplitude modulated 2.45 GHz field (500Hz, 35 to 100 W/kg) with an increased proliferation. Also for some species, the number of mutations and the frequency of mutations were increased. These results were confirmed by Hamnerius et al. (*1985) amongst others. Grospietsch et al. (1995) found similar results for 150 MHz fields with several amplitude modulations. Cleary et al. (*1990 a,b) demonstrated on human lymphocytes and on Glioma cells that the rate of cell division was increased after exposure with a continuous 2.45 GHz field. In a newer experiment, the same effect could be observed for exposures with a pulse modulated field of the same carrier frequency (*Cleary et al. 1996). In the first of the two experiments which were conducted with fields displaying all the characteristics of real pulsed mobile emissions (see also Table A.3), an increased DNA synthesis rate was observed, but no faster proliferation of the examined cells was found. (*Stagg et al. 1997). In the second experiment, at similarly low intensities (0.0021 W/kg) however, transmitted by a GSM modulated 960 MHz wave, an increase of the cell proliferation rate was found (*Velizarov et al. 1999). The EMF exposure in this experiment was conducted at two different temperatures, which also applied to the relating control cultures. **The increase of the proliferation rate only happened in the exposed cell cultures.**

Similar experiments to prove that microwaves and 'conventional' heat have different effects, were conducted by La Cara et al. (*1999) on a thermophile bacterium, in which the radiation with a 10.4 GHz field led to an irreversible inactivation of the thermostable enzyme β galactosidase, whilst heating in a water bath had no effect. **This result confirmed the results of Saffer & Profenno (*1992) which had worked with frequencies in the lower GHz range.**

5 Patho-Physiological Effects

5.1 Immune System

The immune system plays a central role in the protection against infectious microorganisms in the environment and, also, against several kinds of cancer cells. Experiments on hamsters, mice and rats found, amongst other things, that there was a reduction in the activity of natural killer cells and an increase in macrophage activity (see e.g. Yang et al. 1983; Ramo Rao et al. 1983; Smialowicz et al. 1983). However, the majority of experiments on living animals were carried out at power flux density levels that produced an increase in body temperature of more than 1°C. On the other hand, it was observed in parallel in vitro experiments, that in vitro heating of macrophages did indeed lead to increased activity; the effect was, however, weaker than that of the in vivo radiation which produced the same temperature (Ramo Rao et al. 1983). **Elekes et al. (*1996) observed that, after exposing mice for a period of 3 hours per day over several days using microwaves (2.45 GHz) with a power flux density of 1W/m² (SAR = 0.14 W/kg), there was an increase in antibody producing cells in the spleen of about 37% with continuous radiation and around 55% with amplitude modulated radiation.**

In contrast to the in vivo experiments, numerous in vitro experiments were carried out with intensities at which an effect due to warming can be excluded. **Thus, Lyle et al. (*1983) observed an inhibition of cytotoxicity of T Lymphocytes in the mouse with a 450 MHz field that was amplitude modulated with various frequencies in the range between 3Hz to 100 Hz. The effect that was demonstrated with a relatively low power flux density of 15 W/m² was greatest at the 60 Hz modulation. The inhibition of cytotoxic effectiveness of the irradiated lymphocytes declined continually for both the lower and higher modulation frequencies.**

The tables in Appendix A list further experiments with (human) leucocytes in which damaging effects were proven at non thermal power flux density levels, especially also with low frequency amplitude modulated fields. The work of Maes et al. (*1995) deserves special consideration. In an in vitro experiment with human leucocytes at a GSM base station and also in the examination of the lymphocytes in the blood of workers who were exposed to the fields of the mobile phone base stations during maintenance work, they found that there was an increase in chromosome damage (chromatid breakage, acentric fragments and some chromosome breaks).

5.2 Central Nervous System

5.2.1 Blood Brain Barrier

The brain of mammals is protected from potentially dangerous materials in the blood by the blood brain barrier, a specialized neurovascular complex. The blood brain barrier functions as a selective hydrophobic filter that can only be easily passed through by small fat soluble molecules. Other non fat soluble molecules, e.g. glucose, can pass through the filter with the help of carrier proteins that have a high affinity for specific molecules.

It is known that a large number of disorders of the central nervous system are caused by disturbances of the barrier function of the blood brain barrier (*Salford et al. 1994). Severe warming of the brain can lead to an increased permeability of the blood brain barrier for those materials whose passage should actually be prevented. The results of first experiments with high frequency fields of high intensity, which led to a higher

(*Repacholi et al. 1997, *Szmigielski et al. 1982 and *Szudinski et al. 1983). Important in this context is also the study of Chou et al. (*1992). This study did not find a statistically significant rise in tumors in a particular organ. However, **the exposed group developed not only a higher number of tumors in total, but also the number of primary malignant and metastatic malignant neoplasms was significantly higher in the exposed animals.** In their discussion of the results, the authors point to the fact that the number of the primary malignant neoplasms in the exposed group compared to the control group is four times higher and that this finding is statistically significant, but then go on to undermine their finding by quoting literature, according to which the tumor incidence of the exposed group should still be within the normal range.

The experiment of Toler et al. (*1997) using animals with a predisposition for chest tumors did not result in a higher incidence of these, **but the number of ovarian tumors was significantly higher in the exposed group compared to the controls. The intensities at which an increase in tumors was found in animals were one to two powers of ten below the values at which one would expect a triggering of ‘thermal’ effects.** According to the presenting results, low frequency modulation does not seem to be responsible for the carcinogenic effect.

6.1.2 Infertility and Teratogenic Effects

Teratogenesis

Teratogenic effects of a pollutant can – as with the carcinogenic effect – either be caused by the triggering of a genetic defect or a harmful impact on the foetal development. The formation of a genetic malformation during its initiation phase is analogous to carcinogenesis, i.e. teratogenic effects are also caused by direct or indirect impact on the DNA and disruptions of the endogenous repair mechanisms. Later damages of the foetus can either be caused by direct effects of the pollutant on the foetus or by reactions to the pollutant within the mother’s organism, which would then be passed on to the foetus.

Results from Animal Experiments

A multitude of studies have demonstrated that high body temperatures in mammals lead to a spermatotoxic and teratogenic effect. Since many studies examining such effects from high frequency electromagnetic fields worked with intensities that were capable of significantly raising body temperature, it cannot be excluded that the observed spermatotoxic and teratogenic effects were caused by a thermal effect, (see for example Berman et al. 1982, 1983, Berman & Carter 1984, Jensch et al. 1983a,b, Kowalczyk et al. 1983, Lary et al. 1983, Nawrat et al. 1985, Saunders et al. 1981, 1983, for the results of older studies, see O’Connor 1980). The results of these studies do not always appear consistent, however, this can possibly be explained by a different thermal susceptibility of the different animal species used. In rats for example, a loss of thermally damaged embryos is often observed, whilst the birth of malformed animals is rare. Other mammals show a wider bandwidth between teratogenic and lethal exposures. (Verschaeve & Maes 1998).

However, there are some indications in the literature for teratogenic effects at intensities that cause no (or, if at all very small) rises in temperature. Magras & Xenos (1997) exposed mice during six months to a real transmitter. The mice had offspring five times during this period and a continuous decrease in offspring was found down to irreversible infertility. The exposure consisted of several radio and TV transmitters in the VHF and UHF bands and measured between 0.00168 and 0.01053 W/m². A repetition of this study would be desirable in order to exclude that the effect was due to problems with the maintenance of the animals or the screening of the control group. Khillare and Behari (*1998) found that male rats that had been exposed to a 200 MHz field (power flux density:14.7W/m², SAR:1.65 to 2.0W/kg) during a period of 35 days for six days per week and two hours per exposure day and which were afterwards mated with unexposed females, produced significantly less offspring than the males in the unexposed control group.

In an experiment by Akdag et al. (1999) male rats were exposed one hour every day to a 9.45 GHz field (power flux density:2.5W/m², SAR:1.8 W/kg) during different periods of 13, 26, 39 or 52 days corresponding to one, two, three and four cycles of the seminal epithelium. At the end of each exposure period the following data were measured and compared to an unexposed control group: number of sperm in the epididymides, morphology of the sperm and weight of the testicles, epididymides, seminal vesicles and prostate. They found amongst other effects a decrease in the number of sperm (statistically significant in the group exposed for 53 days) and an increase of abnormal sperm (statistically significant in the groups exposed for 26, 39 and 52 days). A co teratogenic effect under non-thermal exposures with power flux densities of 10 to 100 W/m² in combination with cytosine arabinoside (CA) was found in a study by Marcickiewicz et al. (*1986). In the experiment, mice were exposed in utero for two hours a day to 2.45 GHz from the first to the 18th day of the pregnancy. The field, which alone was not teratogenic, significantly increased the teratogenic effect of CA. A direct teratogenic effect of microwave radiation with a frequency of 2.45 GHz on the brains of newborn rats was found by Inalöszt et al. (*1997). However the authors declared that the SAR of 2.3W/kg led to a rise of rectal temperature of 1.0°C.

6.2 Results of Epidemiological Studies

Methodological Requirements

In principle, epidemiological studies are an effective instrument to prove potential health risks of a pollutant under real environmental and exposure conditions. Usually, they are carried out by comparing statistical data about the incidence of an illness in an exposed population as opposed to the incidence of this illness in an unexposed population. The exact classification of exposure would require the metrological recording of the pollutant for all participants (exposed and unexposed) during the entire latency period of the illness. This is often not practicable and for long latency periods, which can usually only be addressed via retrospective studies, inherently impossible. Under such circumstances it has to suffice that

surrogates are used, for example having a profession which is linked to a certain exposure or the proximity of the home to an emitting installation. In some cases, if the emitting installations have been used for a long time in the same mode, it is possible to extrapolate past exposures from current measurements. The quality of the exposure classification determines the validity of an epidemiological study. Possible weaknesses, which can lead to wrong results, are:

- People are classified as 'exposed' or 'strongly exposed' although in fact there is no or only little exposure. An example with regards to high frequency fields is the often used exposure classification on the basis of professional categories, such as radar operators or telecommunications engineers, for whom it cannot be excluded that the main occupation is a desk job without exposure.

- It is assumed that the control group is completely unexposed, although the pollutant is actually ubiquitous, which will lead to smaller but still potentially significant exposures in the control group. One known example are mains frequency magnetic fields, which affect the immediate neighbours of power supply equipment, but still exist at non negligible strengths in houses which are further away from such equipment.

Both effects lead to a levelling out between the exposed and unexposed group and hence to an underestimation of the real health risk posed by the pollutant in question.

Another weakness of epidemiological studies can be the presence of unrecognized confounders, i.e. other influences, which also affect the groups studied and influence the development of the illness. This can be environmental factors, such as exposures to other pollutants, but also socio economic and behavioural factors. If not all potentially relevant confounders are factored in, the results can be distorted, either towards an overestimation or an underestimation of the real risk.

The fast development of mobile technology has led to a double dilemma with regards to the study of potential risks through epidemiological studies:

- **For illnesses like cancer with latency periods of many years it is still too early to expect valid results. If mobile telecommunications are indeed linked to a higher incidence of cancer, the illness will only have manifested in a few people so far.** This should at least be valid for the part of the population whose exposures are from base stations only. Potentially it could be different for direct mobile phone users, since these are generally exposed to significantly higher intensities. But also for this group, at this moment in time, we would expect results from epidemiological studies to underestimate the real risk.

- **In some years epidemiological studies will hit a different obstacle: once base stations cover the entire country and a large proportion of the population use a mobile phone, it will become difficult to find the necessary unexposed control groups.** Given this dilemma, epidemiological studies carried out in the past have a certain validity, even if the exposures are not exactly the same as they would be today and the studies do not always correspond to today's quality standards.

The Selection of Studies

At the time of finishing this present report there were only two epidemiological studies of health risks in relation to actual existing mobile telecommunications exposures (*Rothman at

al. 1996, *Hardell et al. 1999). However there are a much larger number of studies available, in which the health effects of high frequency electromagnetic fields in humans were examined (see also Appendix D, Table D.1). Just under a quarter of all results relate to exposures with low frequency pulse or amplitude modulated high frequency fields, such as they are used for mobile telecommunications, even if the carrier and modulation frequencies are in most cases not identical with those of mobile telecommunications. In Appendix Table D.1, the examined illnesses are listed with their evaluated end point (incidence or mortality), data describing the exposure situation is given and the quality of the exposure classification is assessed. Finally, the result of the study is evaluated as 'Relative Risk' (RR) which includes the relevant risk factors in the form of standardized mortality rates, standardised morbidity rates and odds ratios, and the statistical significance is assessed. For each study we list the value for the highest exposure class or if there was a further differentiation of the examined groups, for example according to occupational groups, the highest found value. Values are considered statistically significant (s.s.) if the value $RR=1$ outside of the 95% confidence interval or if $p<0.05$. A statistical evaluation of the results presented in Table D.1 can be found in Table 6.1. Here, we list for every illness how many studies or separate results are available, how many of these show a relative risk $RR > 1$ and how many are statistically significant. Almost all the studies, in which the total cancer risk without any differentiation according to tumor form were examined, showed a risk factor of $RR > 1$. **Half of the studies resulted in statistically significant risk factors with a maximum value of 2.1, which corresponds to a doubling of the statistical risk to develop cancer from exposure to high frequency electromagnetic fields. A similar picture was found in relation to tumors of the nervous system, especially brain tumors. Here, the maximum value for relative risk found was 3.4. Eleven of the total of 15 studies yielded a positive result, more than half of which were statistically significant.** The incidence of breast cancer in relation to high frequency fields must be examined separately for men and women. **All three studies relating to the breast cancer incidence in women yielded risk factors greater than 1, the statistically significant values were 1.15 and 1.5. For men, risk factors of up to 2.9 were found; however, not all were statistically significant.** **Of the total of 16 results for leukaemia without further differentiation of the illness, 13 were positive ($RR > 1$), more than half of these results were statistically significant. The highest statistically significant value for the relative risk was 2.85. Amongst the results of the differentiated studies, the following are notable: lymphatic leukaemia (7 results, 5 positive, 4 statistically significant, RR maximum value: 2.74) and acute myeloid leukaemia (4 different studies, 3 positive results, 2 statistically significant, maximum RR value: 2.89).**

With regards to the correlation of high frequency electromagnetic fields from radar and other sources and testicular cancer, three studies have been conducted. All lead to statistically significant risk factors with a maximum value of 6.9. The studies regarding cardio-vascular diseases did not result in a clear picture, not least because of the multitude of the symptoms examined.

All four studies of fertility problems in relation to the exposure of men to microwaves

Back again request you add care & health back to the system. It appears your funding and grant monies from Industry & Big Pharma prevent that from happening.

I have submitted information on wireless devices before and the harm on multiple occasions now, 11,000 pages of evidence, not enough time to read it, given a one page summary, called VDH to inquire about anyone's knowledge of this topic, and also FOIA'd which came up empty. No department was created to look into these harms to my knowledge. .

Submitting into Public Record a Congressional White Paper (257 pages) with Key Messages in regard to health and Smart Grid & Smart Meters with a plethora of research links. **I do hope you'll find time for 93 Pages.** As you're responsible for looking out for the **PUBLIC'S HEALTH RIGHT?** Not sure when you'll be moved to do something about this problem as there is no \$ making vaccine or incentives or drugs Fauci can promote. Please let Gov. Youngkin know that families have been without power for a month here in VA over Thanksgiving & still likely over Christmas with CHILDREN in the HOME!

Meanwhile several families are in the COLD as their power has been shut off by Dominion Energy company for refusing their harmful product. Maybe if we had HEALTH agencies with integrity & Christ filled hearts **listening & TAKING ACTION** this could've been prevented. If Governors can close small businesses can't they help make A UTILITY Company NOT VIOLATE HUMAN RIGHTS & allow paying customers electricity & want to protect their health keep their analog meters?

10) Hacking of Life Saving **Medical Implants** pages 42-46 (4 pages)

11) Smart Zigbee Chips Interacting with **Medical Implants** pages 46-48 (2 pages)

13) Life threatening and debilitating health effects including cancer and neurological illnesses, permanent genetic alteration to lineage from smart meters and smart grid and ASDS (**Adult Sudden Death Syndrome**) via microwave pulse induced heart attack from smart meters and smart grid pages 52-131 (79 pages) **These pulses affect your immune system, cardiovascular, nervous system and cross blood brain barrier.**

14) **Thousands of reports of health effects from smart meters and smart grid** from Texas PUC, California PUC, EMF Safety Network pages 132-138 (6 pages)

15) **Smart Grid and Smart Meters Violate ADA** pages 138-140 (2 pgs)

Isn't ADA under your jurisdiction to look out for?

Since you speak with Governor Youngkin, Mr Greene can you ask him if he understands what conflict of interest is? Whose asking to live in a "smart city"? Does he know these "smart meters" & "smart grids" are harmful to human health or is just about money for him?

On Nov. 22nd 1.5 Million in FUND GRANTS for Innovative Projects.Virginia Innovation Partnership Authority (VIPA) www.virginiaipc.org/smart-community-testbed who mentioned Smart City in the document & on their website has EQUITY SCORES FOR CITIES-

WE HAVE ALL BEEN LIED TO -

[Dominion Energy reportedly cutting off electricity to homes that refused 'smart' meters - Augusta Free Press](#)

If Time Permits:

List of Symptoms Associated with RF and EMF Exposure ADD/ADHD Arthritis, body pain, sharp, stabbing pains Asthma Birth Defects Cancer Cataracts Cardiac symptoms, heart palpitations, heart arrhythmias, chest pain Changes in menstrual cycle Concentration, memory or learning problems Cough Disorientation, dizziness, or balance problems Endocrine disorders, Eye problems, including eye pain, pressure in the eyes, Exacerbation of Pre-existing Conditions Diabetes Fatigue, muscle or physical weakness Headaches, sharp pain or pressure in the head Heart Attack High blood pressure Hyperactivity or changes in children's behavior Leg cramps, or neuropathy Leukemia Lymphoma Medical Implant Interference and Malfunctions Including Defibrillator Shut Off, Deep Brain Stimulator Shut Off, Insulin Pump Malfunctions Nausea, flu-like symptoms Neurological Illness Including Parkinsons, ALS, Dementia, Multiple Sclerosis, Nose bleeds Skin rashes, facial flushing Pre-cancerous cells, Recurrence of cancer Reproductive Problems Respiratory problems, Ringing in the ears, ear pain, high pitched ringing, stabbing pains in the ear Seizures Sinus problems, Sleep problems (insomnia, difficulty falling asleep, night waking, nightmares) Stress, agitation, anxiety, irritability Spontaneous Abortion Thyroid problems Urinary problems

Back again request you add care & health back to the system. It appears your funding and grant monies from Industry & Big Pharma prevent that from happening.

I have submitted information on wireless devices before and the harm on multiple occasions now, 11,000 pages of evidence, not enough time to read it, given a one page summary, called VDH to inquire about anyone's knowledge of this topic, and also FOIA'd which came up empty. No department was created to look into these harms to my knowledge.

Submitting into Public Record a Congressional White Paper (257 pages) with Key Messages in regard to health and Smart Grid & Smart Meters with a plethora of research links. **I do hope you'll find time for 93 Pages.** As you're responsible for looking out for the **PUBLIC's HEALTH RIGHT?** Not sure when you'll be moved to do something about this problem as there is no \$ making vaccine or incentives or drugs Fauci can promote. Please let Gov. Youngkin know that families have been without power for a month here in VA over Thanksgiving & still likely over Christmas with CHILDREN in the HOME!

Meanwhile several families are in the COLD as their power has been shut off by Dominion Energy company for refusing their harmful product. Maybe if we had HEALTH agencies with integrity & Christ filled hearts **listening & TAKING ACTION** this could've been prevented. If Governors can close small businesses can't they help make A UTILITY Company NOT VIOLATE HUMAN RIGHTS & allow paying customers electricity & want to protect their health keep their analog meters?

10) Hacking of Life Saving **Medical Implants** pages 42-46 (4 pages)

11) Smart Zigbee Chips Interacting with **Medical Implants** pages 46-48 (2 pages)

13) Life threatening and debilitating health effects including cancer and neurological illnesses, permanent genetic alteration to lineage from smart meters and smart grid and ASDS (**Adult Sudden Death Syndrome**) via microwave pulse induced heart attack from smart meters and smart grid pages 52-131 (79 pages) **These pulses affect your immune system, cardiovascular, nervous system and cross blood brain barrier.**

14) **Thousands of reports of health effects from smart meters and smart grid** from Texas PUC, California PUC, EMF Safety Network pages 132-138 (6 pages)

15) **Smart Grid and Smart Meters Violate ADA** pages 138-140 (2 pgs)
Isn't ADA under your jurisdiction to look out for?

Since you speak with Governor Youngkin, Mr Greene can you ask him if he understands what conflict of interest is? Whose asking to live in a "smart city"? Does he know these "smart meters" & "smart grids" are harmful to human health or is just about money for him?

On Nov. 22nd 1.5 Million in FUND GRANTS for Innovative Projects.Virginia Innovation Partnership Authority (VIPA) www.virginiaipc.org/smart-community-testbed who mentioned Smart City in the document & on their website has EQUITY SCORES FOR CITIES-

WE HAVE ALL BEEN LIED TO -

[Dominion Energy reportedly cutting off electricity to homes that refused 'smart' meters - Augusta Free Press](#)

If Time Permits:

List of Symptoms Associated with RF and EMF Exposure ADD/ADHD Arthritis, body pain, sharp, stabbing pains Asthma Birth Defects Cancer Cataracts Cardiac symptoms, heart palpitations, heart arrhythmias, chest pain Changes in menstrual cycle Concentration, memory or learning problems Cough Disorientation, dizziness, or balance problems Endocrine disorders, Eye problems, including eye pain, pressure in the eyes, Exacerbation of Pre-existing Conditions Diabetes Fatigue, muscle or physical weakness Headaches, sharp pain or pressure in the head Heart Attack High blood pressure Hyperactivity or changes in children's behavior Leg cramps, or neuropathy Leukemia Lymphoma Medical Implant Interference and Malfunctions Including Defibrillator Shut Off, Deep Brain Stimulator Shut Off, Insulin Pump Malfunctions Nausea, flu-like symptoms Neurological Illness Including Parkinsons, ALS, Dementia, Multiple Sclerosis, Nose bleeds Skin rashes, facial flushing Pre-cancerous cells, Recurrence of cancer Reproductive Problems Respiratory problems, Ringing in the ears, ear pain, high pitched ringing, stabbing pains in the ear Seizures Sinus problems, Sleep problems (insomnia, difficulty falling asleep, night waking, nightmares) Stress, agitation, anxiety, irritability Spontaneous Abortion Thyroid problems Urinary problems

Back again request you add care & health back to the system. It appears your funding and grant monies from Industry & Big Pharma prevent that from happening.

I have submitted information on wireless devices before and the harm on multiple occasions now, 11,000 pages of evidence, not enough time to read it, given a one page summary, called VDH to inquire about anyone's knowledge of this topic, and also FOIA'd which came up empty. No department was created to look into these harms to my knowledge. .

Submitting into Public Record a Congressional White Paper (257 pages) with Key Messages in regard to health and Smart Grid & Smart Meters with a plethora of research links. **I do hope you'll find time for 93 Pages.** As you're responsible for looking out for the **PUBLIC'S HEALTH RIGHT?** Not sure when you'll be moved to do something about this problem as there is no \$ making vaccine or incentives or drugs Fauci can promote. Please let Gov. Youngkin know that families have been without power for a month here in VA over Thanksgiving & still likely over Christmas with CHILDREN in the HOME!

Meanwhile several families are in the COLD as their power has been shut off by Dominion Energy company for refusing their harmful product. Maybe if we had HEALTH agencies with integrity & Christ filled hearts **listening & TAKING ACTION** this could've been prevented. If Governors can close small businesses can't they help make A UTILITY Company NOT VIOLATE HUMAN RIGHTS & allow paying customers electricity & want to protect their health keep their analog meters?

10) Hacking of Life Saving **Medical Implants** pages 42-46 (4 pages)

11) Smart Zigbee Chips Interacting with **Medical Implants** pages 46-48 (2 pages)

13) Life threatening and debilitating health effects including cancer and neurological illnesses, permanent genetic alteration to lineage from smart meters and smart grid and ASDS (**Adult Sudden Death Syndrome**) via microwave pulse induced heart attack from smart meters and smart grid pages 52-131 (79 pages) **These pulses affect your immune system, cardiovascular, nervous system and cross blood brain barrier.**

14) **Thousands of reports of health effects from smart meters and smart grid** from Texas PUC, California PUC, EMF Safety Network pages 132-138 (6 pages)

15) **Smart Grid and Smart Meters Violate ADA** pages 138-140 (2 pgs)
Isn't ADA under your jurisdiction to look out for?

Since you speak with Governor Youngkin, Mr Greene can you ask him if he understands what conflict of interest is? Whose asking to live in a "smart city"? Does he know these "smart meters" & "smart grids" are harmful to human health or is just about money for him?

On Nov. 22nd 1.5 Million in FUND GRANTS for Innovative Projects.Virginia Innovation Partnership Authority (VIPA) www.virginiaipc.org/smart-community-testbed who mentioned Smart City in the document & on their website has EQUITY SCORES FOR CITIES-

WE HAVE ALL BEEN LIED TO -

[Dominion Energy reportedly cutting off electricity to homes that refused 'smart' meters - Augusta Free Press](#)

If Time Permits:

List of Symptoms Associated with RF and EMF Exposure ADD/ADHD Arthritis, body pain, sharp, stabbing pains Asthma Birth Defects Cancer Cataracts Cardiac symptoms, heart palpitations, heart arrhythmias, chest pain Changes in menstrual cycle Concentration, memory or learning problems Cough Disorientation, dizziness, or balance problems Endocrine disorders, Eye problems, including eye pain, pressure in the eyes, Exacerbation of Pre-existing Conditions Diabetes Fatigue, muscle or physical weakness Headaches, sharp pain or pressure in the head Heart Attack High blood pressure Hyperactivity or changes in children's behavior Leg cramps, or neuropathy Leukemia Lymphoma Medical Implant Interference and Malfunctions Including Defibrillator Shut Off, Deep Brain Stimulator Shut Off, Insulin Pump Malfunctions Nausea, flu-like symptoms Neurological Illness Including Parkinsons, ALS, Dementia, Multiple Sclerosis, Nose bleeds Skin rashes, facial flushing Pre-cancerous cells, Recurrence of cancer Reproductive Problems Respiratory problems, Ringing in the ears, ear pain, high pitched ringing, stabbing pains in the ear Seizures Sinus problems, Sleep problems (insomnia, difficulty falling asleep, night waking, nightmares) Stress, agitation, anxiety, irritability Spontaneous Abortion Thyroid problems Urinary problems

Back again request you add care & health back to the system. It appears your funding and grant monies from Industry & Big Pharma prevent that from happening.

I have submitted information on wireless devices before and the harm on multiple occasions now, 11,000 pages of evidence, not enough time to read it, given a one page summary, called VDH to inquire about anyone's knowledge of this topic, and also FOIA'd which came up empty. No department was created to look into these harms to my knowledge. .

Submitting into Public Record a Congressional White Paper (257 pages) with Key Messages in regard to health and Smart Grid & Smart Meters with a plethora of research links. **I do hope you'll find time for 93 Pages.** As you're responsible for looking out for the **PUBLIC'S HEALTH RIGHT?** Not sure when you'll be moved to do something about this problem as there is no \$ making vaccine or incentives or drugs Fauci can promote. Please let Gov. Youngkin know that families have been without power for a month here in VA over Thanksgiving & still likely over Christmas with CHILDREN in the HOME!

Meanwhile several families are in the COLD as their power has been shut off by Dominion Energy company for refusing their harmful product. Maybe if we had HEALTH agencies with integrity & Christ filled hearts **listening & TAKING ACTION** this could've been prevented. If Governors can close small businesses can't they help make A UTILITY Company NOT VIOLATE HUMAN RIGHTS & allow paying customers electricity & want to protect their health keep their analog meters?

10) Hacking of Life Saving **Medical Implants** pages 42-46 (4 pages)

11) Smart Zigbee Chips Interacting with **Medical Implants** pages 46-48 (2 pages)

13) Life threatening and debilitating health effects including cancer and neurological illnesses, permanent genetic alteration to lineage from smart meters and smart grid and ASDS (**Adult Sudden Death Syndrome**) via microwave pulse induced heart attack from smart meters and smart grid pages 52-131 (79 pages) **These pulses affect your immune system, cardiovascular, nervous system and cross blood brain barrier.**

14) **Thousands of reports of health effects from smart meters and smart grid** from Texas PUC, California PUC, EMF Safety Network pages 132-138 (6 pages)

15) **Smart Grid and Smart Meters Violate ADA** pages 138-140 (2 pgs)
Isn't ADA under your jurisdiction to look out for?

Since you speak with Governor Youngkin, Mr Greene can you ask him if he understands what conflict of interest is? Whose asking to live in a "smart city"? Does he know these "smart meters" & "smart grids" are harmful to human health or is just about money for him?

On Nov. 22nd 1.5 Million in FUND GRANTS for Innovative Projects. Virginia Innovation Partnership Authority (VIPA) www.virginiaipc.org/smart-community-testbed who mentioned Smart City in the document & on their website has EQUITY SCORES FOR CITIES-

WE HAVE ALL BEEN LIED TO -

[Dominion Energy reportedly cutting off electricity to homes that refused 'smart' meters - Augusta Free Press](#)

If Time Permits:

List of Symptoms Associated with RF and EMF Exposure ADD/ADHD Arthritis, body pain, sharp, stabbing pains Asthma Birth Defects Cancer Cataracts Cardiac symptoms, heart palpitations, heart arrhythmias, chest pain Changes in menstrual cycle Concentration, memory or learning problems Cough Disorientation, dizziness, or balance problems Endocrine disorders, Eye problems, including eye pain, pressure in the eyes, Exacerbation of Pre-existing Conditions Diabetes Fatigue, muscle or physical weakness Headaches, sharp pain or pressure in the head Heart Attack High blood pressure Hyperactivity or changes in children's behavior Leg cramps, or neuropathy Leukemia Lymphoma Medical Implant Interference and Malfunctions Including Defibrillator Shut Off, Deep Brain Stimulator Shut Off, Insulin Pump Malfunctions Nausea, flu-like symptoms Neurological Illness Including Parkinsons, ALS, Dementia, Multiple Sclerosis, Nose bleeds Skin rashes, facial flushing Pre-cancerous cells, Recurrence of cancer Reproductive Problems Respiratory problems, Ringing in the ears, ear pain, high pitched ringing, stabbing pains in the ear Seizures Sinus problems, Sleep problems (insomnia, difficulty falling asleep, night waking, nightmares) Stress, agitation, anxiety, irritability Spontaneous Abortion Thyroid problems Urinary problems

Back again request you add care & health back to the system. It appears your funding and grant monies from Industry & Big Pharma prevent that from happening.

I have submitted information on wireless devices before and the harm on multiple occasions now, 11,000 pages of evidence, not enough time to read it, given a one page summary, called VDH to inquire about anyone's knowledge of this topic, and also FOIA'd which came up empty. No department was created to look into these harms to my knowledge. .

Submitting into Public Record a Congressional White Paper (257 pages) with Key Messages in regard to health and Smart Grid & Smart Meters with a plethora of research links. **I do hope you'll find time for 93 Pages.** As you're responsible for looking out for the **PUBLIC'S HEALTH RIGHT?** Not sure when you'll be moved to do something about this problem as there is no \$ making vaccine or incentives or drugs Fauci can promote. Please let Gov. Youngkin know that families have been without power for a month here in VA over Thanksgiving & still likely over Christmas with CHILDREN in the HOME!

Meanwhile several families are in the COLD as their power has been shut off by Dominion Energy company for refusing their harmful product. Maybe if we had HEALTH agencies with integrity & Christ filled hearts **listening & TAKING ACTION** this could've been prevented. If Governors can close small businesses can't they help make A UTILITY Company NOT VIOLATE HUMAN RIGHTS & allow paying customers electricity & want to protect their health keep their analog meters?

10) Hacking of Life Saving **Medical Implants** pages 42-46 (4 pages)

11) Smart Zigbee Chips Interacting with **Medical Implants** pages 46-48 (2 pages)

13) Life threatening and debilitating health effects including cancer and neurological illnesses, permanent genetic alteration to lineage from smart meters and smart grid and ASDS (**Adult Sudden Death Syndrome**) via microwave pulse induced heart attack from smart meters and smart grid pages 52-131 (79 pages) **These pulses affect your immune system, cardiovascular, nervous system and cross blood brain barrier.**

14) **Thousands of reports of health effects from smart meters and smart grid** from Texas PUC, California PUC, EMF Safety Network pages 132-138 (6 pages)

15) **Smart Grid and Smart Meters Violate ADA** pages 138-140 (2 pgs)

Isn't ADA under your jurisdiction to look out for?

Since you speak with Governor Youngkin, Mr Greene can you ask him if he understands what conflict of interest is? Whose asking to live in a "smart city"? Does he know these "smart meters" & "smart grids" are harmful to human health or is just about money for him?

On Nov. 22nd 1.5 Million in FUND GRANTS for Innovative Projects.Virginia Innovation Partnership Authority (VIPA) www.virginiaipc.org/smart-community-testbed who mentioned Smart City in the document & on their website has EQUITY SCORES FOR CITIES-

WE HAVE ALL BEEN LIED TO -

[Dominion Energy reportedly cutting off electricity to homes that refused 'smart' meters - Augusta Free Press](#)

If Time Permits:

List of Symptoms Associated with RF and EMF Exposure ADD/ADHD Arthritis, body pain, sharp, stabbing pains Asthma Birth Defects Cancer Cataracts Cardiac symptoms, heart palpitations, heart arrhythmias, chest pain Changes in menstrual cycle Concentration, memory or learning problems Cough Disorientation, dizziness, or balance problems Endocrine disorders, Eye problems, including eye pain, pressure in the eyes, Exacerbation of Pre-existing Conditions Diabetes Fatigue, muscle or physical weakness Headaches, sharp pain or pressure in the head Heart Attack High blood pressure Hyperactivity or changes in children's behavior Leg cramps, or neuropathy Leukemia Lymphoma Medical Implant Interference and Malfunctions Including Defibrillator Shut Off, Deep Brain Stimulator Shut Off, Insulin Pump Malfunctions Nausea, flu-like symptoms Neurological Illness Including Parkinsons, ALS, Dementia, Multiple Sclerosis, Nose bleeds Skin rashes, facial flushing Pre-cancerous cells, Recurrence of cancer Reproductive Problems Respiratory problems, Ringing in the ears, ear pain, high pitched ringing, stabbing pains in the ear Seizures Sinus problems, Sleep problems (insomnia, difficulty falling asleep, night waking, nightmares) Stress, agitation, anxiety, irritability Spontaneous Abortion Thyroid problems Urinary problems

indicate increased risk. In two studies statistically significant risk factors of up to 2.7 were found.

With regards to irregular courses of pregnancies and malformations in children of mothers which had been exposed to high frequency fields, there are a large number of studies with positive results, of which only two fit into the frequency range relevant to our report. Both of these studies found statistically significant positive results with risk factors of up to 2.36.

Of the studies of cancer risk of children whose fathers had been exposed to electromagnetic fields, only two correspond to the quality criteria required for inclusion into this report. Both indicate an increased risk, but only one result is statistically significant at a value of RR=2.3. (With regards to the cancer risk of children in correlation to the exposure of their parents, see also Colt & Blair 1998).

Regarding the disruption of motor functions as well as psychological functions and well being, there is only one valid study for the frequency bands relevant to this report, which yielded a slightly increased risk factor. However since other studies of transmitters with frequencies below 100 MHz resulted in serious indications of increased risk, indicating that this problem should be given more attention in the future, we also included the study of Zhao et al. (1994), although it didn't meet our quality standards with regards to the statistical evaluation.

Unfortunately, the majority of the studies do not state the actual strength of the exposures. Measurements are only available for the radio and television transmitter used for the studies of Hocking et al. (1996) and McKenzie et al. (1998). The mean power flux densities for all 16 municipalities affected by this transmitter were 3.3 to 10.3 W/m² within the range from 2.6 to 14.6 W/m² (McKenzie et al. 1998). The ICNIRP guidelines for the general population recommend a maximum value of 2 to 2.51 W/m² for the range of frequencies emitted by this transmitter (64.25 to 527.25 MHz). **This means that the exposures in these studies were below the German guidelines by a factor of 10 to 4.**

Table 6.1

Overview over the results of epidemiological studies with regards to the health risks of high frequency electromagnetic exposures (see also Appendix D, Table D.1)

Illness	Number of studies (results)	Studies (results) with RR>1	Statistically significant results
All illnesses	2	0	0
Cancer, unspecified	6 (7)	5 (6)	3
Brain tumours unspecified and tumours of the nervous system unspecified	14 (21)	10 (15)	6 (7)
Cancer (eyes)	1	1	1

Cancer of the respiratory organs, lung cancer 5 2 1
 Chest cancer, men 2 2 0
 Breast Cancer, women 3 3 2
 Cancer of the lymphatic and blood forming
 system unspecified
 4 4 1
 Leukaemia unspecified 12 (16) 9 (13) 5 (7)
 Acute leukaemia unspecified 4 4 0
 Lymphatic leukaemia unspecified 4 (7) 2 (5) 1 (4)
 Acute lymphatic leukaemia 2 2 0
 Chronic lymphatic leukaemia 4 4 1
 Leukaemia, non lymph. non-myelo 1 (4) 1 (4) 1 (2)
 Lymphoma, Hodgkin-Syndrome 5 (7) 3 (4) 1
 Testicular cancer 3 (5) 3 (5) 3 (4)
 Uterine cancer 1 1 1
 Skin cancer 4 3 1
 Cardio-vascular diseases 4 (5) 3 (4) 1
 Infertility, reduced fertility, men 4 (7) 4 (7) 2 (4)
 Infertility, reduced fertility, women 1 1 0
 Miscarriages, stillbirths, malformations and
 other birth defects
 2 (3) 2 (3) 2
 Cancer, offspring (parental exposure) 2 2 1
 Neurodegenerative diseases, Alzheimer's 1 1 0
 Disruptions of motor and psychological
 functions and well-being
 2 (9) 2 (9) 1 (7)

7 Health Risks to Humans Resulting from Exposure to the Electromagnetic Fields of Mobile Telecommunications

The triggering of an illness caused by an (environmental) pollutant and the development of this illness are a multi-phased process, which begins with a biological, biochemical or biophysical primary interaction of the pollutant with the biological system and ends with the manifestation of the illness. During the different phases of the process, the body's own repair mechanisms can intervene and impede the further development of the illness. An assessment of the potential health risks of electromagnetic fields as they are used for mobile telecommunications should therefore be mainly based on studies conducted directly on humans, because extrapolations from animal studies or even in vitro studies on cell cultures only have limited validity for effects in humans, due to the difference in susceptibilities and the lack of organic interactions in cell cultures. However, due to the ethical limits to the research on humans, it is unavoidable to use results from experiments with animals, single

organs or cells in order to discover the biological and physiological mechanisms.

Cancer

Given the results of the present epidemiological studies, it can be concluded that electromagnetic fields with frequencies in the mobile telecommunications range do play a role in the development of cancer. This is particularly notable for tumours of the central nervous system, for which there is only the one epidemiological study so far, examining the actual use of mobile phones. The most striking result of this study was an obvious correlation between the side at which the phone was used and the side at which the tumour occurred. The brain tumour incidence however was only slightly increased. A (hypothetical) explanation of such a finding could for example be that mobile fields have a promoting effect on previously initiated (multiple) tumours, triggering a defence mechanism in the body which is capable of suppressing unpromoted tumours. **Higher risks were also demonstrated for several forms of leukaemia.**

Although the studies in relation to testicular cancer were examining particular exposure conditions (emitting equipment worn partly on the body at hip level), given the high risk factor found, a possible risk cannot be excluded, especially not for mobile users wearing the devices in standby mode on their belts. The epidemiological findings for testicular cancer also need to be interpreted in conjunction with the results of the studies of fertility

problems occurring in relation to high frequency electromagnetic fields.

The risk factors for cancers other than testicular cancer are only moderately increased, but not negligible, considering this technology will potentially reach full coverage of the entire population.

Reliable conclusions about a possible dose-response-relationship cannot be made on the basis of the present results of epidemiological studies, but an increase of cancer risk cannot be excluded even at power flux densities as low as 0.1 W/m^2 .

In long-term animal experiments, the carcinogenic effect of pulse modulated high frequency fields was demonstrated for power flux densities of circa 3 W/m^2 (mouse, exposure duration 18 months, 30 minutes per day, SAR (mouse) circa 0.01 W/kg).

On the cellular level, a multitude of studies found the type of damage from high frequency electromagnetic fields which is important for cancer initiation and cancer promotion:

Direct damage on DNA as well as influences on DNA synthesis and DNA repair mechanisms were demonstrated in in vivo and in vitro experiments for continuous and pulsed fields at power flux densities from 10 W/m^2 and 9 W/m^2 respectively.

Chromosome aberrations and micronuclei occurred at power flux densities from 5 W/m^2 . Neoplastic cell transformation and an enhanced cell proliferation were demonstrated for Specific Absorption Rates of below 0.5 W/kg , and individual studies demonstrated that the obvious disturbance of the communication between cells, which is a prerequisite for the uninhibited proliferation of cells that is characteristic for cancer development, occurs at just a few W/m^2 .

Conclusion:

The results of the studies for all stages of cancer development from the damage of the genetic material via the uninhibited proliferation of cells and debilitation of the immune system (see below) up to the manifestation of the illness prove effects at power flux densities of less than 1 W/m². For some stages of cancer development, intensities of 0.1 W/m² or even less may suffice to trigger effects.

Debilitation of the Immune System

Damaging effects on the immune system which can aid the development of illnesses were demonstrated in animal experiments at power flux densities of 1 W/m² (mouse, exposure duration 6 days, 3 hours per day, SAR (mouse) 0.14W/kg). In in vitro experiments on lymphocytes, defects of the genetic material were demonstrated at power flux densities of circa 10 W/m². The presence of stress hormones, which when permanent can debilitate the immune system, was found to be increased in human experiments from power flux densities of 0.2W/m². In animal experiments (rat) a similar effect was observed at a Specific Absorption Rate of circa 0.2 W/kg.

Conclusion:

Experiments on animals prove harmful effects on the immune system from circa 1 W/m²; at power flux densities of 0.2 W/m² higher secretions of stress hormones in humans have been demonstrated.

Influences on the Central Nervous System and Cognitive Function

The effects of pulsed and continuous high frequency fields on the blood brain barrier and the activity of neurotransmitters were demonstrated in animal experiments for power flux densities of 3 and 10 W/m² respectively.

In humans, influences on the slow brain potentials were found at SAR values of 0.882 to 1.42W/kg, i.e. well below the current guidelines for partial body exposure of 2 W/kg. Changes in the sleep EEG of humans, which showed a shortening of the REM sleep phase occurred at intensities as low as 0.5 W/m².

In animal experiments, changes in the EEG were demonstrated at power flux densities of 1 to 2W/m². Impairment of cognitive functions was found in animal experiments at power flux densities of 2W/m². In humans, there are indications that brain functions are influenced by fields such as they occur when using a mobile telephone.

An epidemiological study of children who had been exposed to pulsed high frequency fields, found a decrease in the capability to concentrate and an increase in reaction times.

Conclusion:

Adey W.R., Byus C.V., Cain C.D., Higgins R.J., Jones R.A., Kean C.J., Kuster N., MacMurray A., Stagg R.B., Zimmermann G., Phillips J.L. & Haggren W.	1999	Spontaneous and nitrosourea-induced primary tumors in the central nervous system in Fischer 344 rats chronically exposed to 836 MHz modulated microwaves	Radiat. Res.	152	293-302
Akdag M.Z., Cetik S., Ketani A., Nergiz Y., Deniz H. & Dasdag S.	1999	Effect of chronic low-intensity microwave radiation on sperm count, sperm morphology, and testicular and epididymal tissues of rats	Electro- Magnetobiol.	18, 2	133-145
Albert E.N.	1979	Reversibility of microwave-induced blood-brain-barrier permeability	Radio Sci.	14, 65	323-327
Alberti E.N. & Kerns J.M.	1981	Reversible microwave effects on the blood-brain barrier	Brain Res.	230	153-164
Anderstam B., Hamnerius Y., Hussain S. & Ehrenberg L.	1983	Studies of possible genetic effects in bacteria of high frequency electromagnetic fields	Hereditas	98	11-32
Antonopoulos A., Elsenbrandt H. & Obe G.	1997	Effects of high-frequency electromagnetic fields on human lymphocytes <i>in vitro</i>	Mutat. Res.		209-214
Balcer-Kubiczek E.K. & Harrison G.H.	1985	Evidence for microwave carcinogenicity <i>in vitro</i>	Carcinogenesis	6 (6)	859-864
Balcer-Kubiczek E.K. & Harrison G.H.	1989	Induction of neoplastic transformation in C3H/10T1/2 cells by 2.45 GHz microwaves and phorbol ester	Radiat. Res.	117	531-537
Balcer-Kubiczek E.K. & Harrison G.H.	1991	Neoplastic transformation of C3H/10T1/2 cells following exposure to 120-Hz modulated 2.45-GHz microwaves and phorbol ester tumor promoter	Radiat. Res.	126	65-72
Balode Z.	1996	Assessment of radio-frequency electromagnetic radiation by the micronucleus test in bovine peripheral erythrocytes	Sci Total Environ	180	81-85
Banerjee R., Goldfeder A. & Mitra J.	1983	Sister chromatid exchanges and chromosome aberrations induced by radio sensitizing agents in bone marrow cells of treated tumor-bearing mice	JNCI	70, 3	517-521
Bawin S.M., Kaczmarek L.K. & Adey W.R.	1975	Effects of modulated VHF fields on the central nervous system	Ann. N. Y. Academ. Sciences	247	74-80
Beall C., Delzell E., Cole P. & Brill I.	1996	Brain tumors among electronics industry workers	Epidemiology	7, 2	125-130
Beechey C.V., Brooker D., Kowalczyk D., Saunders C.I. & Searle A.G.	1986	Cytogenic effects of microwave irradiation on male germ cells of the mouse	Int. J. Radiat. Biol.	50, 5	909-918
Behari J., Kunjilwar K.K. & Pyne S.	1998	Interaction of low level modulated RF radiation with Na ⁺ -K ⁺ -ATPase	Bioelectrochemistry	47	247-252
Berman E., Carter H.B. & House D.	1980	Tests for mutagenesis and reproduction in male rats exposed to 2.45 GHz (CW) microwaves	Bioelectromagnetics	1	65-76
Berman E., Carter H.B. & House D.	1982	Reduced weight in mice offspring after in utero exposure to 2450-MHz (CW) microwaves	Bioelectromagnetics	3	285-291
Berman E. & Carter H.B.	1984	Decreased body weight in foetal rats after irradiation with 2450-MHz (CW) microwaves	Health Phys.	46, 3	537-542
Bernhardt J.H., Matthes R. & Repacholi M.H. (Ed.)	1997	Non thermal effects of RF electromagnetic fields. Proceedings International seminar on biological effects of non-thermal pulsed and amplitude modulated RF electromagnetic fields and related health risks. Munich	ICNIRP	3/97	
Blackman C.F., Elder J.A., Weil C.M., Benane S.G., Eichinger D.C. & House D.E.	1979	Induction of calcium-ion efflux from brain tissue by radio-frequency radiation: effects of modulation frequency and field strength	Radio Sci	14, 65	93-98
Bohr H. & Bohr J.	2000	Microwave enhanced kinetics observed in ORD studies of a protein	Bioelectromagnetics	21	68-72
Bohr H., Brunak S. & Bohr J.	1997	Molecular wriing resonances in chain molecules	Bioelectromagnetics	18	187-189
Borbély A.A., Huber R., Graf T., Fuchs B., Gallmann E. & Achermann P.	1999	Pulsed high-frequency electromagnetic fields affects human sleep and sleep electroencephalogram	Neuroscience Lett.	275	207-210
Bortkiewicz A., Gadzicka E. & Zmyslony M.	1996	Heart rate variability in workers exposed to medium-frequency electromagnetic fields	J. Auton Nerv Syst	59	91-97
Brusick D., Albertini R., McRee D., Peterson D., Williams G., Hanawalt P. und Preston J.	1998	Genotoxicity of Radiofrequency Radiation	Environ. Mol. Mutagenesis	32	1-16
Byus C.V., Kartun K., Pieper S. & Adey W.R.	1988	Increased ornithine decarboxylase activity in cultured cells exposed to low energy modulated microwave fields and phorbol ester tumor promoters	Cancer Res	48	422-426
Byus C.V., Lundak R.L., Fletcher R.M. & Adey W.R.	1984	Alterations in protein kinase activity following exposure of cultured human lymphocytes to modulated microwave fields	Bioelectromagnetics	5	341-351

Cain C.D., Thomas D.L. & Adey W.R.	1997	Focus formation of C3H/10T1/2 cells and exposure to a 836.55 MHz modulated radiofrequency field	Bioelectromagnetics	18	237-243
Cantor K.P., Stewart P.A., Brinton L.A. & Dosemeci M.	1995	Occupational exposures and female breast cancer mortality in the United States	J. Occup. Environ. Med.	37 (3)	336-348
Chagnaud J.-L. & Veyret B.	1999	<i>In vivo</i> exposure of rats to GSM-modulated microwaves: flow cytometry analysis of lymphocyte subpopulations and of mitogen stimulation	Int. J. Radiat. Biol.	75, 1	111-113
Chagnaud J.-L., Moreau J.-M. & Veyret B.	1999	No effect of short-term exposure to GSM-modulated low-power microwaves on benzo(a)pyrene-induced tumours in rat	Int. J. Radiat. Biol.	75, 10	1251-1256
Chizhenkova R.A.	1988	Slow potentials and spike unit activity of the cerebral cortex of rabbits exposed to microwaves	Bioelectromagnetics	9	337-345
Chizhenkova R.A. & Safroshkina A.A.	1996	Electrical reactions of brain to microwave irradiation	Electro-Magnetobiology	15, 3	253-258
Chou C.-K., Guy A.W., Kuriz L.L., Johnson R.B., Crowley J.J. & Krupp J.H.	1992	Long-term, low-level microwave irradiation of rats	Bioelectromagnetics	13	469-496
Claravino V., Meltz M.L. & Erwin D.N.	1991	Absence of synergistic effects between moderate-power radio-frequency electromagnetic radiation and adriamycin on cell-cycle progression and sister chromatid exchange	Bioelectromagnetics	12	289-298
Claravino V., Meltz M.L. & Erwin D.N.	1987	Effects of radiofrequency radiation and simultaneous exposure with mitomycin C on the frequency of sister chromatid exchanges in Chinese hamster ovary cells	Environ. Mutagen.	9	393-399
Cleary S.F., Cao G. & Liu L.-M.	1996a	Effects of isothermal 2.45 GHz microwave radiation on the mammalian cell cycle: comparison with effects of isothermal 27 MHz radiofrequency radiation exposure	Bioelectrochem Bioenerg	39	167-173
Cleary S.F., Cao G., Liu L.-M., Egel P.M. & Shelton K.R.	1997	Stress proteins are not induced in mammalian cells exposed to radiofrequency or microwave radiation	Bioelectromagnetics	18	499-505
Cleary S.F., Du Z., Cao G., Liu L. & McCrady C.	1996b	Effect of isothermal radiofrequency radiation on cytolytic T lymphocytes	FASEB J	10	913-919
Cleary S.F., Liu L.-M. & Merchant R.E.	1990a	<i>In vitro</i> lymphocyte proliferation induced by radio-frequency electromagnetic radiation under isothermal conditions	Bioelectromagnetics	11	47-56
Cleary S.F., Liu L.-M. & Merchant R.E.	1990b	Glioma proliferation modulated <i>in vitro</i> by isothermal radiofrequency exposure	Radiat. Res.	121	38-45
Cole Johnson C. & Spitz M.R.	1989	Childhood nervous system tumours: an assessment of risk associated with paternal occupations involving use, repair or manufacture of electrical and electronic equipment	Int. J. Epidemiol.	18, 4	756-762
Coit J.S. & Blair A.	1998	Parental occupational exposure and risk of childhood cancer	Environ. Health Perspect.	106 (Suppl. 3)	909-925
Czerska E.M., Elson E.C., Davis C.C., Swicord M.L. & Czerki P.	1992	Effects of continuous and pulsed 2450-MHz radiation on spontaneous lymphoblastoid transformation of human lymphocytes <i>in vitro</i>	Bioelectromagnetics	13	247-259
d'Ambrosio G., Lioi M.B., Massa R., Scarfi M.R. & Zeni O.	1995	Genotoxic effects of amplitude-modulated microwaves on human lymphocytes exposed <i>in vitro</i> under controlled conditions	Electro-Magnetobiology	14	157-164
D'Andrea J.A.	1991	Microwave radiation absorption: behavioral effects	Health Physics	61, 1	29-40
D'Andrea J.A.	1999	Behavioral evaluation of microwave irradiation	Bioelectromagnetics	20	64-74
D'Inzeo G., Bernardi P., Eusebi F., Grassi F., Tamburello C. & Zani B.M.	1988	Microwave effects on acetylcholine-induced channels in cultured chick myotubes	Bioelectromagnetics	9	363-372
Dardatho M., Averbek D. & Berteaud A.J.	1981	Studies on possible genetic effects of microwaves in prokaryotic and eukaryotic cells	Radiat Environ Biophys	20	37-51
Dardatho M., Averbek D., Berteaud A.J. & Ravary V.	1985	Thermal aspects of biological effects of microwaves in <i>Saccharomyces cerevisiae</i>	Int J Radiat Biol	48	987-996
Dasdag S., Oflazoglu H., Kelle M. & Akdag Z.	1998	Effects of microwaves on the phagocytic activity of variously treated rat macrophages	Electro- Magnetobiol.	17, 2	185-194
Davis R.L. & Mostoff F.K.	1993	Cluster of testicular cancer in police officers exposed to hand-held radar	Am. J. Indust. Med.	24	231-233
Demers P.A., Thomas D.B., Rosenblatt K.A., Jimenez L.M., McTiernan A., Stalsberg H., Sternhagen A., Douglas W.D., McCrea Curnen M.G., Satariano W., Austin D.F., Isaacson P., Greenberg R.S., et al.	1991	Occupational exposure to electromagnetic fields and breast cancer in men	Am. J. Epidemiol.	134 (4)	340-347
Dobson J. & Pierre T.G.S.	1998	Thermal effects of microwave radiation on biogenic magnetite particles and circuits: theoretical evaluation of cellular phone safety aspects	Electro- Magnetobiol.	17, 3	351-359
Doik H., Elliott P., Shaddick G., Walls P. & Thakrar B.	1997b	Cancer incidence near radio and television transmitters in Great Britain, II All high power transmitters	Am. J. Epidemiol.	145, 1	10-17

Dorp R. van, Marani E. & Boon M. E.	1998	Cell replication rates and processes concerning antibody production <i>in vitro</i> are not influenced by 2.45-GHz microwaves at physiologically normal temperatures.	Methods	15	151-159
Dutta S.K., Ghosh B. & Blackman C.F.	1989	Radiofrequency radiation-induced calcium ion efflux enhancement from human and other neuroblastoma cells in culture	Bioelectromagnetics	10	197-202
Dutta S.K., Subramoniam A., Ghosh B. & Parshad R.	1984	Microwave radiation-induced calcium ion efflux from human neuroblastoma cells in culture	Bioelectromagnetics	5	71-78
Dutta S.K., Verma M. & Blackman C.F.	1994	Frequency-dependent alterations in enolase activity in <i>Escheria coli</i> caused by exposure to electric and magnetic fields	Bioelectromagnetics	15	377-383
Elekes E., Thuróczy G. & Szabó L.D.	1996	Effect on the immune system of mice exposed chronically to 50 Hz amplitude-modulated 2.45 GHz microwaves	Bioelectromagnetics	17	246-248
Finkelstein M.M.	1998	Cancer incidence among Ontario police officers	Am. J. Ind. Med.	34	157-162
Foster K.R.	1996	Interaction of radiofrequency fields with biological systems as related to modulation	Bernhardt et al. (Ed.) 1997		47-63
Frei M.R., Berger R.E., Dusch S.J., Guel V., Jauchem J.R., Merritt J.H. & Stedham M.A.	1998a	Chronic exposure of cancer-prone mice to low-level 2450 MHz radiofrequency radiation	Bioelectromagnetics	19	20-31
Frei M.R., Jauchem J.R., Dusch S.J., Merritt J.H., Berger R.E. & Stedham M.A.	1998b	Chronic, low-level (1.0 W/kg) exposure of mice prone to mammary cancer to 2450 MHz microwaves	Radiat. Res.	150	568-576
Freude G., Ullsperger P., Eggert S. & Ruppe I.	1998	Effects of microwaves emitted by cellular phones on human slow brain potentials	Bioelectromagnetics	19	384-387
Freude G., Ullsperger P., Eggert S., Ruppe I. & Eulitz C.	1999	Untersuchungen zum Einfluß elektromagnetischer Felder von Mobiltelefonen auf langsame Hirnpotentiale im Elektroenzephalogramm des Menschen	in Krause et al. 1999		165-176
Fritze K., Sommer C; Schmitz B; Mies G; Hossmann KA; Kiessling M & Wiessner C.	1997b	Effect of global system for mobile communication (GSM) microwave exposure on blood-brain barrier permeability in rat	Acta Neuropathol.	94	465-470
Fritze K., Wiessner C., Kuster N., Sommer C., Gass P., Herrmann D.M., Kiessling M. & Hossmann K.A.	1997 a	Effect of global system for mobile communication microwave exposure on the genomic response of the rat brain	Neuroscience	81	627-639
Fucic A., Garaj-Vrhovac V., Skara M. & Dimitrovic B.	1992	X-rays, microwaves and vinyl chloride monomer: their clastogenic and aneugenic activity, using the micronucleus assay on human lymphocytes	Mutat. Res.	282	265-271
Garaj-Vrhovac V., Fucic A. & Horvat D.	1992	The correlation between the frequency of micronuclei and specific chromosome aberrations in human lymphocytes exposed to microwave radiation <i>in vitro</i>	Mutation Res.	281	181-186
Garaj-Vrhovac V., Horvat D. & Koren Z.	1990	The effect of microwave radiation on the cell genome	Mutation Res.	243	87-93
Garaj-Vrhovac V., Horvat D. & Koren Z.	1991	The relationship between colony-forming ability, chromosome aberrations and incidence of micronuclei in V79 Chinese hamster cells exposed to microwave radiation	Mutation Res.	263	143-149
Garland F.C., Shaw E., Gorham E.D., Garland C.F., White M.R. & Sinsheimer P.J.	1990	Incidence of leukemia in occupations with potential electromagnetic field exposure in United States navy personnel	Am. J. Epidemiol.	132, 2	293-303
Garson O.M., McRobert T.L., Campbell L.J., Hocking B. & Gordon I.	1991	A chromosomal study of workers with long-term exposure to radio-frequency radiation	Med. J. Austral.	155	289-292
Glaser R.	1998	Do electromagnetic fields really increase the ornithine-decarboxylase (ODC) activity of cells? What happens with the 'coherence time' effect? - A comment to the papers of T.A. Litovitz et al.	Bioelectrochem. Bioenerget.	46	301-302
Goldman H., Lin J.C., Murphy S. & Lin M.F.	1984	Cerebrovascular permeability to 86Rb in the rat after exposure to pulsed microwaves	Bioelectromagnetics	5	323-330
Goswami P.C., Albee L.D., Parsian A.J., Baty J.D., Moros E.G., Pickard W.F., Roti Roti J.L. & Hunt C.R.	1999	Proto-oncogene mRNA levels and activities of multiple transcription factors in C3H 10T1/2 murine embryonic fibroblasts exposed to 836.62 and 847.74 MHz cellular phone communication frequency radiation	Rad. Res.	151	300-309
Grayson J.K.	1996	Radiation exposure, socioeconomic status, and brain tumor risk in the US Air Force: A nested case-control study	Am. J. Epidemiol.	143, 5	480-486
Grospletsch T., Schulz O., Hölzel R., Lamprecht I. & Kramer K.-D.	1995	Stimulating effects of modulated 150 MHz electromagnetic fields on the growth of <i>Escherichia coli</i> in a cavity resonator	Bioelectrochem. Bioenerget.	37	17-23
Gruenau S.P., Oscar K.J., Folker M.T. & Rapoport S.I.	1982	Absence of microwave effects on blood-brain barrier permeability to (14C)sucrose in the conscious rat	Exp. Neurol.	75	299-307
Hamnerius Y., Rasmuson A. & Rasmuson B.	1985	Biological effects of high-frequency electromagnetic fields on <i>Salmonella typhimurium</i> and <i>Drosophila melanogaster</i>	Bioelectromagnetics	6	405-414
Hardell L., Näsman A., Pahlson A., Hallquist A. & Hansson Mld K.	1999	Use of cellular telephones and risk for brain tumours: A case-control study	Int. J. Oncol.	15	113-116
Hayes R.B., Morris Brown L., Pottern L.M., Gomez M., Kardaun J.W.P.F., Hoover R.N., O'Connell K.J., Sutzman R.E. & Javadpour N.	1990	Occupation and Risk for Testicular Cancer: A Case-Control Study	Int J Epidemiology	19,4	825-831

Heikkinen P., Kumlin T., Laitinen J.T., Komulainen H. & Jutilainen J.	1999	Chronic exposure to 50-Hz magnetic fields or 900-MHz electromagnetic fields does not alter nocturnal 6-hydroxymelatonin sulfate secretion in CBA/J mice	Electro-Magnetobiology	18, 1	33-42
Hentschel K., Neuschulz H., Freude G., Ullsperger P., Kaul G., Ruppe I., Eggert S., Enderlein G. & Kettel J.	1999	Einfluss von niederfrequent gepulsten Hochfrequenzfeldern auf den Menschen	Schriftenreihe der BAA Fd 868		
Hentschel K., Neuschulz H., Ruppe I., Eggert S., Freude G., Kaul G., Enderlein G. & Kettel J.	1999	Untersuchungen zum Einfluß von niederfrequent gepulsten elektromagnetischen Feldern von GSM-Mobiltelefonen auf den Menschen	In Krause et al. 1999		1179-1190
Higashikubo R., Cutbreth V.O., Spitz D.R., LaRegina M.C., Pickard W.F., Straube W.L., Moros E.G. & Roti Roti J.L.	1999	Radiofrequency electromagnetic fields have no effect on the <i>in vivo</i> proliferation of the 9L brain tumor	Rad. Res.	152	665-671
Hjollund N.H.I., Bonde J.P.E. & Skotte J.	1997	Semen analysis of personnel operating military radar equipment	Reprod. Toxicol.	11,6	897
Hocking B., Gordon I.R., Grain H.L. & Hatfield G.E.	1996	Cancer incidence and mortality and proximity to TV towers	Med. J. Australia	165	601-605
Holly E.A., Aston D.A., Ahn D.K. & Smith A.H.	1996	Intraocular melanoma linked to occupations and chemical exposures	Epidemiology	7 (1)	55-61
ICNIRP	1998	Guidelines for limiting exposure to time-varying electric, magnetic, and electromagnetic fields (up to 300 GHz)	Health Phys.	74	494-522
Imaida K., Taki M., Yamaguchi T., Ito T., Watanabe S., Wake K., Aimoto A., Kamimura Y., Ito N. & Shirai T.	1998a	Lack of promoting effects of the electromagnetic near-field used for cellular phones (929.2 MHz) on rat liver carcinogenesis in a medium-term liver bioassay	Carcinogenesis	19	311-314
Imaida K., Taki M., Watanabe S., Kamimura Y., Ito T., Yamaguchi T., Ito N. & Shirai T.	1998b	The 1.5 GHz electromagnetic near-field used for cellular phones does not promote rat liver carcinogenesis in a medium-term liver bioassay	Jpn. J. Cancer Res.	89	995-1002
Inaba R., Shishido K.-I., Okada A. & Moroji T.	1992	Effects of whole body microwave exposure on rat brain contents of biogenic amines	Eur. J. Appl. Physiol.	65	124-128
Inalöz S.S., Dasdag S., Ceviz A. & Bilici A.	1997	Acceptable radiation leakage of microwave ovens on pregnant and newborn rat brains	Clin. Exp. Obstet. Gynecol.	24	215-219
Ivashchuk O.I., Jones R.A., Ishida-Jones T., Haggren W., Adey W.R. & Phillips J.L.	1997	Exposure of nerve growth factor-treated PC12 rat pheochromocytoma cells to a modulated radiofrequency field at 836.55 MHz	Bioelectromagnetics	18	223-229
Jensh R.P., Vogel W.H. & Brent R.L.	1983	An evaluation of the teratogenic potential of protracted exposure of pregnant rats to 2450 MHz microwave radiation: II Postnatal psychophysiological analysis	J. Toxicol. Environ. Health	11	37-59
Jensh R.P., Weinberg I. & Brent R.L.	1983a	An evaluation of the teratogenic potential of protracted exposure of pregnant rats to 2450-MHz microwave radiation: I. Morphologic analysis at term	J. Toxicol. Environ. Health	11	23-35
Källén B., Malmquist G. & Moritz U.	1982	Delivery outcome among physiotherapists in Sweden: Is non-ionizing radiation a fetal hazard?	Arch. Environ. Health	37 (2)	81-85
Kass G.E.N. & Orrenius S.	1999	Calcium signalling and cytotoxicity	Env. Health Perspect.	107, S1	25-35
Kerbacher J.J., Meitz M.L. & Erwin D.N.	1990	Influence of radiofrequency radiation on chromosome aberrations in CHO cells and its interaction with DNA damaging agents	Radiat. Res.	123	311-319
Khillare B. & Behari J.	1998	Effect of amplitude-modulated radiofrequency radiation on reproduction pattern in rats	Electro-Magnetobiology	17 (1)	43-55
Kirschvink J.L.	1996	Microwave absorption by magnetite: a possible mechanism for coupling nonthermal levels of radiation to biological systems	Bioelectromagnetics	17	187-194
Klitzing, L. von	1995	Low Frequency pulsed electromagnetic fields influence EEG of man	Physica Medica	11	77-80
Kolodynski A.A. & Kolodynska V.V.	1996	Motor and psychological functions of school children living in the area of the Skrunda radio location station in Latvia	Sci Total Environ	180	87-93
Kowalczuk C.I., Saunders R.D. & Stapleton H.R.	1983	Sperm count and sperm abnormality in mice after exposure to 2.45 GHz microwave radiation	Mutat. Res.	122	155-161
Krause D., Mullins J.M., Penafiel L.M., Meister R. & Nardone R.M.	1991	Microwave exposure alters the expression of 2-5A-dependent RNase	Rad. Res.	127	164-170
La Cara F., Scarfi M.R., D'Auria S., Massa R., d'Ambrosio G., Franceschetti G., Rossi M. & De Rosa M.	1999	Different effects of microwave energy and conventional heat on the activity of a thermophilic beta-galactosidase from bacillus acidocaldarius	Bioelectromagnetics	20	172-176
Lagorio S., Rossi S., Vecchia P., De Santis M., Bastianini L., Fusilli M., Ferrucci A., Desideri E. & Comba P.	1997	Mortality of plastic-ware workers exposed to radiofrequencies	Bioelectromagnetics	18	418-421
Lal H.	1992	Research on the neurological effects of nonionizing radiation at the university of Washington	Bioelectromagnetics	13	513-526
Lal H. & Singh N.P.	1995	Acute low-intensity microwave exposure increases DNA single-strand breaks in rat brain cells	Bioelectromagnetics	16	207-210
Lal H. & Singh N.P.	1996	Single- and double-strand DNA breaks in rat brain cells after acute exposure to radiofrequency electromagnetic radiation	Int. J. Radiat. Biol.	69	513-521

Lai H. & Singh N.P.	1997	Melatonin and a spin trap compound block radiofrequency electromagnetic radiation-induced DNA-strand breaks in rat brain cells	Bioelectromagnetics	18	446-454
Lai H., Carino M.A., Horita A. & Guy A.W.	1989a	Low-level microwave irradiation and central cholinergic activity: a dose-response study	Bioelectromagnetics	10	203-208
Lai H., Carino M.A., Horita A. & Guy A.W.	1989b	Low-level microwave irradiation and central cholinergic systems	Pharmacol. Biochem. Behav.	33	131-138
Lai H., Carino M.A., Horita A. & Guy A.W.	1990	Corticotropin-releasing factor antagonist blocks microwave-induced decreases in high-affinity choline uptake in the rat brain	Brain Res. Bull.	25	609-612
Lai H., Horita A. & Guy A.W.	1988	Acute low-level microwave exposure and central cholinergic activity: studies on irradiation parameters	Bioelectromagnetics	9	355-362
Lai H., Horita A. & Guy A.W.	1994	Microwave irradiation affects radial-arm maze performance in the rat	Bioelectromagnetics	15	95-104
Lai H., Horita A., Chou C.-K. & Guy A.W.	1987	Low-level microwave irradiations affect central cholinergic activity in the rat	J. Neurochem.	48 (1)	40-45
Lancranjan I., Malcanescu M., Rafaila E., Klepsch I. & Popescu H.I.	1975	Gonadic function in workman with long-term exposure to microwaves	Health Physics	29	381-383
Larsen A.I.	1991b	Congenital malformations and exposure to high-frequency electromagnetic radiation among Danish physiotherapists	Scand. J. Environ. Health	17	318-323
Larsen A.I., Olsen J. & Svane O.	1991a	Gender specific reproductive outcome and exposure to high-frequency electromagnetic radiation among physiotherapists	Scand. J. Environ. Health	17	324-329
Lary J.M., Conover D.L. & Johnson P.H.	1983	Absence of embryotoxic effects from low-level (non-thermal) exposure of rats to 100 MHz radiofrequency radiation	Scand. J. Work Environ. Health	9	120-129
Lin R.S., Dischinger P.C., Cond J. & Farrell K.P.	1985	Occupational exposure to electromagnetic fields and the occurrence of brain tumors	J. Occup. Med.	27, 6	413-419
Lin-Liu S. & Adey W.R.	1982	Low frequency amplitude modulated microwave fields change calcium efflux rates from synaptosomes	Bioelectromagnetics	3	309-322
Litovitz T.A.	1998	Can electromagnetic fields modify the activity of ornithine decarboxylase (ODC)? What happens with the 'coherence time' effect? A reply to the comment by R. Glaser	Bioelectrochem. Bioenerget.	46	303-306
Litovitz T.A., Krause D., Penafiel M., Elson E.C. & Mullins J.M.	1993	The role of coherence time in the effect of microwaves on Ornithine Decarboxylase activity	Bioelectromagnetics	14	395-403
Litovitz T.A., Penafiel L.M., Farrel J.M., Krause D., Meister R. & Mullins J.M.	1997	Bioeffects induced by exposure to microwaves are mitigated by superposition of ELF noise	Bioelectromagnetics	18	422-430
Liu L.-M. & Cleary S.F.	1995	Absorbed energy distribution from radiofrequency electromagnetic radiation in a mammalian cell model: effect of membrane-bound water	Bioelectromagnetics	16	160-171
Lloyd D.C., Saunders R.D., Finnon P. & Kowalczuk C.I.	1984	No clastogenic effect from <i>In vitro</i> microwave irradiation of Go human lymphocytes	Int J Radiat Biol	46	135-141
Lloyd D.C., Saunders R.D., Moquet J.E. & Kowalczuk C.I.	1986	Absence of chromosomal damage in human lymphocytes exposed to microwave radiation with hyperthermia	Bioelectromagnetics	7	235-237
Lyle D.B., Schechter P., Adey W.R. & Lundak R.L.	1983	Suppression of T-lymphocyte cytotoxicity following exposure to sinusoidally amplitude-modulated fields	Bioelectromagnetics	4	281-292
Maes A., Collier M., Gorp U. van, Vandoninck S. & Verschaeve L.	1997	Cytogenetic effects of 935.2-MHz (GSM) microwaves alone and in combination with mitomycin C	Mutat. Res.	393	151-156
Maes A., Collier M., Staets D. & Verschaeve L.	1995	Cytogenetic effects of microwaves from mobile communication frequencies (945 MHz)	Electro- Magnetobiol.	14	91-98
Maes A., Collier M., Staets D. & Vershaeve L.	1996	945 MHz microwaves enhance the mutagenic properties of mitomycin C	Environ. Mol. Mutagen.	28	26-30
Maes A., Verschaeve L., Arroyo A., Wagter C. De & Verduyssen L.	1993	<i>In vitro</i> cytogenetic effects of 2450 MHz waves on human peripheral blood lymphocytes	Bioelectromagnetics	14	495-501
Magras I.N. & Xenos T.D.	1997	RF radiation-induced changes in the prenatal development of mice	Bioelectromagnetics	18	455-461
Malyapa R., Ahern E.W., Straube W.L., Moros E.G., Pickard W.F. & Roti Roti J.L.	1997a	Measurement of DNA damage after exposure to 2450 MHz electromagnetic radiation	Radiat. Res.	148	608-617
Malyapa R., Ahern E.W., Straube W.L., Moros E.G., Pickard W.F. & Roti Roti J.L.	1997b	Measurement of DNA damage after exposure to electromagnetic radiation in the cellular phone communication frequency band (835.62 and 847.74 MHz)	Radiat. Res.	148	618-627
Malyapa R.S., Ahern E.W., Bi C., Straube W.L., LaRegina M., Pickard W.F. & Roti Roti J.L.	1998	DNA damage in rat brain cells after <i>In vivo</i> exposure to 2450 MHz electromagnetic radiation and various methods of euthanasia	Radiat. Res.	149	637-645
Manikowska E., Luciani J.M., Servantie B., Czernski P., Obenovitch J. & Stahl A.	1979	Effects of 9.4 GHz microwave exposure on meiosis in mice	Experientia	35 (3)	388-390
Manikowska-Czerska E., Czernski P. & Leach W.M.	1985	Effects of 2.45 GHz microwaves on meiotic chromosomes of male CBA/CAV mice	J. Heredity	76	71-73
Mann K. & Rösche J.	1996	Effects of pulsed high-frequency electromagnetic fields on human sleep	Neuropsychobiology	33	41-47

Mann K. & Röschke J.	1996	REM-Suppression unter dem Einfluß digitaler Funktelefone	Wien. Med. Wschr.	146	285-286
Mann K., Röschke J., Connemann B. & Beta H.	1998	No effects of pulsed high-frequency electromagnetic fields on heart rate variability during human sleep	Neuropsychobiology	38	251-256
Mann K., Wagner P., Brunn G., Hassan F., Hiemke C. & Röschke J.	1997	Effects of pulsed high-frequency electromagnetic fields on the neuroendocrine system	Neuroendocrinology	67	139-144
Marcickiewicz J., Chazan B., Niemiec T., Sokolska G., Troszynski M., Luczak M. & Szmigielski S.	1986	Microwave radiation enhances teratogenic effect of cytosine arabinoside in mice	Biol. Neonate	50	75-82
Marec F., Ondracek J. & Brunnhofer V.	1985	The effect of repeated microwave irradiation on the frequency of sex-linked recessive lethal mutations in <i>Drosophila melanogaster</i>	Mutat. Res.	157	163-167
McKenzie D.R., Yin Y. & Morrell S.	1998	Childhood incidence of acute lymphoblastic leukemia and exposure to broadcast radiation in Sydney - a second look	Aust. N. Z. J. Public Health	22	360-367
Meltz M., Eagan P. & Erwin D.N.	1989	Absence of mutagenic interaction between microwaves and mitomycin C in mammalian cells	Environ. Molec. Mutagen.	13	294-303
Meltz M.L., Eagan P. & Erwin D.N.	1990	Proflavin and microwave radiation: absence of mutagenic interaction	Bioelectromagnetics	11	149-157
Meltz M.L., Walker K.A. & Erwin D.N.	1987	Radiofrequency (microwave) radiation exposure of mammalian cells during UV-induced DNA-repair synthesis	Radiat. Res.	110	255-266
Mickley A., Cobb B.L., Mason P. & Farrel S.	1998	Thermal tolerance reduces hyperthermia-induced disruption of working memory: a role for endogenous opiates?	Physiol. Behav.	63 (5)	855-865
Mickley G.A. & Cobb B.L.	1998	Thermal tolerance reduces hyperthermia-induced disruption of working memory: a role for endogenous opiates?	Physiology & Behavior	63	855-865
Mickley G.A., Cobb B.L., Mason P.A. & Farrel S.	1994	Disruption of a putative working memory task and selective expression of brain c-fos following microwave-induced hyperthermia	Physiol. Behav.	55 (6)	1029-1038
Milham S.	1985	Mortality in workers exposed to electromagnetic fields	Environ. Health Perspect.	62	297-300
Milham S.	1985	Silent keys: leukemia mortality in amateur radio operators	Lancet	6. April	812
Milham S.	1988	Increased mortality in amateur radio operators due lymphatic and hematopoietic malignancies	Am. J. Epidemiol.	127 (1)	50-54
Milhem S.	1982	Mortality from leukemia in workers exposed to electrical and magnetic fields	New Engl. J. Med.	307	249
Moriyama E., Salzman M. & Broadwell R.D.	1991	Blood-brain barrier alterations after microwave-induced hyperthermia is purely a thermal effect: I Temperature and power measurements	Surg. Neurol.	35	177-182
Moulder J.E., Erdreich L.S., Malyapa R.S., Merritt J., Pickard W.F. & Vijayalaxmi	1999	Cell Phones and Cancer: What is the Evidence for a Connection	Radiat. Res.	151	513-531
Nawrot P.S., McRee D.I. & Galvin M.J.	1985	Teratogenic, biochemical, and histological studies with mice prenatally exposed to 2.45-GHz microwave radiation	Radiat. Res.	102	35-45
Neubauer C., Phelan A.M., Kues H. & Lange D.G.	1990	Microwave irradiation of rats at 2.45 GHz activates pinocytotic-like uptake of tracer by capillary endothelial cells of cerebral cortex	Bioelectromagnetics	11	261-268
Novoselova E.G., Fesenko E.E., Makar V.R. & Sadovnikov V.B.	1999	Microwaves and cellular immunity II. Immunostimulating effects of microwaves and naturally occurring antioxidant nutrients	Bioelectrochem. Bioenerget.	49	37-41
Oscar K.J. & Hawkins T.D.	1977	Microwave alteration of the blood-brain barrier system of rats	Brain Res.	126	281-293
Quellet-Heilstrom R. & Stewart W.F.	1993	Miscarriages among female physical therapists who report using radio- and microwave-frequency electromagnetic radiation	Am. J. Epidemiol.	138	775-786
Pazmany T., Szkladanyi A. und Szabo L.D.	1990	The Effect of 2.45 GHz Microwave Irradiation on Human Peripheral Lymphocytes	Acta Biochim. Biophys. Hung.	25	157-163
Penafiel L.M., Litovitz T., Krause D., Desta A. & Mullins J.M.	1997	Role of modulation on the effect of microwaves on ornithine decarboxylase activity in L929 cells	Bioelectromagnetics	18	132-141
Phelan A.M., Lange D.G., Kues H.A. & Luty G.A.	1992	Modification of membrane fluidity in melanin-containing cells by low level microwave radiation.	Bioelectromagnetics	13	131-146
Phillips J.L., Ivaschuk O., Ishida-Jones T., Jones R. A., Campbell-Beachler M. & Haggren W.	1998	DNA damage in Molt-4 T-lymphoblastoid cells exposed to cellular telephone radiofrequency fields <i>in vitro</i>	Bioelectrochem. Bioenerget.	45	103-110
Postow E. & Swicord M.L.	1996	Modulated fields and 'window' effects. In: Polk C. & Postow E.: Handbook of Biological Effects of Electromagnetic Fields, 2nd. Ed.	CRC Press, Boca Raton		535-580
Prato F.S., Wills J.M., Roger J., Frappier H., Drost D.J., Lee T.-Y., Shivers R.R. & Zabel P.	1994	Blood-brain barrier permeability in rats is altered by exposure to magnetic fields associated with magnetic resonance imaging at 1.5 T	Microscopy Res. Techn.	27	528-534
Preece A.W., Iwi G., Davies-Smith A, Wesnes K., Butler S., Lim E & Varey A.	1999	Effect of a 915-MHz simulated mobile phone signal on cognitive function in man	Int. J. Radiat. Biol.	75	447-456
Preston E., Vavasour E.J. & Assenheim H.M.	1979	Permeability of the blood-brain barrier to mannitol in the rat following 2450 MHz microwave irradiation	Brain Research	174	109-117
Rama Rao G., Cain C.A., Lockwood J. & Tompkins W.A.F.	1983	Effects of microwave exposure on the hamster immune system. II. Peritoneal macrophage function	Bioelectromagnetics	4	141-155

Raslear T.G., Akyel Y., Bates F., Belt M. & Lu S.T.	1993	Temporal bisection in rats: the effects of high-peak-power pulsed microwave irradiation	Bioelectromagnetics	14 (5)	459-478
Reiser H., Dimpfel W. & Schober F.	1995	The influence of electromagnetic fields on human brain activity	Eur. J. Med. Res.	1: 27-32	1 27-32
Repacholi M.H.	1997	Radiofrequency field exposure and cancer: what do the laboratory studies suggest?	Environ. Health Perspectives	105 (Suppl 6)	1565-1568
Repacholi M.H.	1998	Low-level exposure to radiofrequency electromagnetic fields: health effects and research needs	Bioelectromagnetics	19	1-19
Repacholi M.H., Basten. A., Gebiski V., Noonan D., Finnie J. & Harris A.W.	1997	Lymphomas in epj-Pim 1 transgenic mice exposed to pulsed 900 MHz electromagnetic fields	Radiat. Res.	147	631-640
Robinette C.D., Siverman C. & Jablon S.	1980	Effects upon health of occupational exposure to microwave radiation (radar)	Am. J. Epidemiol.	112	39-53
Röschke J. & K. Mann	1997	No short-term effects of digital mobile radio telephone on the awake human electroencephalogram	Bioelectromagnetics	18	172-176
Rothman K.J., Loughlin J.E., Funch D.P. & Dreyer N.A.	1996	Overall mortality of cellular telephone customers	Epidemiology	7,3	303-305
Saffer J.D. & Profenno L.A.	1992	Microwave-specific heating affects gene expression	Bioelectromagnetics	13	75-78
Sagripanti J.-L. & Swicord M.L.	1986	DNA structural changes caused by microwave radiation	Int. J. Radiat. Biol.	50	47-50
Sagripanti J.-L., Swicord M.L. & Davis C.C.	1987	Microwave effects on plasmid DNA	Rad. Res.	110	219-231
Salford L.G., Brun A., Eberhardt J.L. & Persson B.R.R.	1993	Permeability of the blood brain barrier induced by 915 MHz electromagnetic radiation, continuous wave and modulated at 8, 16, 50 and 200 Hz	Bioelectrochem. Bioenerg.	30	293-301
Salford L.G., Brun A., Persson B.R.R. & Eberhardt J.	1993	Experimental studies of brain tumour development during exposure to continuous and pulsed 915 MHz radiofrequency radiation	Bioelectrochem. Bioenerg.	30	313-318
Salford L.G., Brun A., Stureson K., Eberhardt J.L. & Persson B.R.R.	1994	Permeability of the blood brain barrier induced by 915 MHz electromagnetic radiation, continuous wave and modulated at 8, 16, 50 and 200 Hz	Micros. Res. Tech.	27	535-542
Santini R., Hosni M., Deschaux P. & Packeon H.	1988	B16 melanoma development in black mice exposed to low-level microwave radiation	Bioelectromagnetics	9	105-107
Sarkar S., Ali S. & Behari J.	1994	Effect of low power microwave on the mouse genome: a direct DNA analysis	Mutation Res.	320	141-147
Saunders R.D. & Kowalczyk C.I.	1981	Effects of 2.45 GHz microwave radiation and heat on mouse spermatogenic epithelium	Int. J. Radiat. Biol.	40	623-632
Saunders R.D., Darby S.C. & Kowalczyk C.I.	1983	Dominant lethal studies in male mice after exposure to 2.45 GHz microwave radiation	Mutat. res.	117	345-356
Saunders R.D., Kowalczyk C.I., Beechey C.V. & Dunford R.	1988	Studies on the induction of dominant lethals and translocations in male mice after chronic exposure to microwave radiation	Int. J. Radiat. Biol.	53	983-992
Saunders R.D., Sienkiewicz Z.J. & Kowalczyk C.I.	1991	Biological effects of electromagnetic fields and radiation	J. Radiol. Prot.	11, 1	27-42
Savitz D.A., Loomis D.P. & Tse C.K.J.	1998	Electrical occupations and neurodegenerative disease: analysis of U.S. mortality data	Arch. Environ. Health		71-74
Scarfi M.R., Llof M.B., d'Ambrosio G., Massa R., Zeni O., Di Pietro R. & Di Berardino D.	1996	Genotoxic effects of mitomycin-C and microwave radiation on bovine lymphocytes	Electro- and Magneto	15 (2)	99-107
Scott G.	1992	Free radicals provide a mechanism for EMFs to promote cancer	Electromagn. News	3	6-8
Shackelford R.E., Kaufmann W.K. & Paules R.S.	1999	Cell cycle control, checkpoint mechanisms, and genotoxic stress	Environ. Health Perspect.	107, 51	5-24
Smiałowicz R.J., Kinn J.B. & Elder J.A.	1979	Perinatal exposure of rats to 2450-MHz CW microwave radiation: Effects on lymphocytes	Radio Sci.	14, 65	147-153
Smiałowicz R.J., Rogers R.R., Garner R.J., Riddle M.M., Luebke R.W. & Rowe D.G.	1983	Microwaves (2.450 MHz) suppress murine natural killer cell activity	Bioelectromagnetics	4	371-381
Smulevich V.B., Solonova L.G. & Belyakova S.V.	1999	Parental occupation and other factors and cancer risk in children: II occupational factors	Int. J. Cancer	83 (7)	718-722
Somosy Z., Thuroczy G. & Kovacs J.	1993	Effects of modulated and continuous microwave irradiation on pyroantimonate precipitable calcium content in junctional complex of mouse small intestine	Scanning Microscopy	7	1255-1261
Stagg R.B., Thomas W.J., Jones R.A. & Adey W.R.	1997	DNA synthesis and cell proliferation in C6 glioma and primary gliat cells exposed to a 836.55 MHz modulated radiofrequency field	Bioelectromagnetics	18	230-236
Szmigielski S.	1996	Cancer morbidity in subjects occupationally exposed to high frequency (radiofrequency and microwave) electromagnetic	Sci. Total Environ.	180	9-17
Szmigielski S., Szudinski A., Pietraszek A., Bielec M. & Wrembel J.K.	1982	Accelerated development of spontaneous and benzopyrene-induced skin cancer in mice exposed to 2450-MHz microwave radiation	Bioelectromagnetics	3	179-191

Szudzinski A., Pietraszek A., Janiak M., Wrembel J., Kalczak M. & Szimglejski S.	1982	Acceleration of the development of benzopyrene-induced skin cancer in mice by microwave radiation	Arch. Dermatol. Res.	274	303-312
Thomas T.L., Stolley P.D., Stembagen A., Fonham E.T.H., Bleecker M.L., Stewart P.A. & Hoover R.N.	1987	Brain tumor mortality risk among men with electrical and electronics jobs: a case-control study	JNCI	79	233-238
Thuroczy G., Kubinyi G., Bodo M., Bakos J. & Szabo L.D.	1994	Simultaneous response of brain electrical activity (EEG) and cerebral circulation (REG) to microwave exposure in rats	Rev. Environ. Health	10, 2	135-148
Toler J., Shelton W.W., Frei M.R., Merritt J.H. & Stedham M.A.	1997	Long-term, low-level exposure of mice prone to mammary tumors to a 435 MHz radiofrequency radiation	Radiat. Res.	148	227-234
Törnqvist S., Knave B., Ahlbom A. & Persson T.	1991	Incidence of leukemia and brain tumors in some 'electrical occupations'	Br. J. Ind. Med.	48	597-603
Tynes T., Andersen A. & Langmark F.	1992	Incidence of cancer in Norwegian workers potentially exposed to electromagnetic fields	Am. J. Epidemiol.	136 (1)	81-88
Tynes T., Hannevik M., Anderson A., Visnes A.I. & Haldorsen T.	1996	Incidence of breast cancer in Norwegian female radio and telegraph operators	Cancer Causes Contr.	7	197-204
Vaagerö D., Ahlbom A., Olin R. & Sahlsten S.	1985	Cancer morbidity among workers in the telecommunications industry	Br. J. Ind. Med.	42 (3)	191-195
Varma M.M. & Traboulay E.A.	1977	Comparison of native and microwave irradiated DNA	Experientia	33	1649-1650
Velizarov S., Raskmark P. & Kwee S.	1999	The effects of radiofrequency fields on cell proliferation are non-thermal	Bioelectrochemistry	48	177-180
Verschaeve L & Maes A.	1998	Genetic, carcinogenic and teratogenic effects of radiofrequency fields	Mutat. Res.	410	141-165
Verschaeve L.	1995	Can non ionizing radiation induce cancer?	Cancer Journal 8:237	8	237-249
Vijayalaxmi, Frei M.R., Dusch S.J., Guel V., Meltz M.L. & Jauchem J.R.	1997a	Frequency of micronuclei in the peripheral blood and bone marrow of cancer-prone mice chronically exposed to 2450 MHz radiofrequency radiation	Rad. Res.	147	495-500
Vijayalaxmi, Mohan N., Meltz M.L. & Wittler M.A.	1997 b	Proliferation and cytogenetic studies in human blood lymphocytes exposed <i>in vitro</i> to 2450-MHz radiofrequency radiation	Int. J. Radiat. Biol.	72	751-757
Vollrath L., Spessert R., Kratzsch T., Keiner M. & Hollmann H.	1997	No short-term effects of high-frequency electromagnetic fields on the mammalian pineal gland	Bioelectromagnetics	18	376-387
Vorobyov V.V., Galchenko A.A., Kukushkin N.I. & Akoev I.G.	1997	Effects of weak microwave fields amplitude modulated at ELF on EEG of symmetric brain areas in rats	Bioelectromagnetics	18	293-298
Wagner P., Röschke J., Mann K., Hiller W. & Frank C.	1998	Human sleep under the influence of pulsed radiofrequency electromagnetic fields: a polysomnographic study using standardized conditions	Bioelectromagnetics	19	199-202
Wang B. & Lai H.	2000	Acute exposure to pulsed 2450-MHz microwaves affects water-maze performance of rats	Bioelectromagnetics	21	52-56
Weyandt T.B., Schrade S.M., Turner T.W. & Simon S.D.	1996	Semen analysis of military personnel associated with military duty assignments	Reprod. Toxicol.	10,6	521-528
Williams W.M., Lu S.-T., Cerro M. del & Michaelson S.M.	1984b	Effect of 2450 MHz microwave energy on the blood-brain barrier to hydrophilic molecules. D. Brain temperature and blood-brain barrier permeability to hydrophilic tracers	Brain Res. Rev.	7	191-212
Wolke S., Nelbig U., Elsner R., Gollnick F. und Meyer R.	1996	Calcium homeostasis of isolated heart muscle cells exposed to pulsed high-frequency electromagnetic fields	Bioelectromagnetics	17	144-153
Wu R.Y., Chiang H., Shao B.J., Li N.G. & Fu Y.D.	1994	Effects of 2.45 GHz microwave radiation and phorbol ester 12-o-tetradecanoylphorbol-13-acetate on dimethylhydrazine-induced colon cancer in mice	Bioelectromagnetics	15	531-538
Yang H.K., Cain C.A., Lockwood J. & Tompkins W.A.F.	1983	Effects of microwave exposure on the hamster immune system. I. Natural killer cell activity	Bioelectromagnetics	4	123-139
Yao K.T.S.	1978	Microwave radiation-induced chromosomal aberrations in corneal epithelium of Chinese hamsters	J. Hered.	69	409-412
Yao K.T.S.	1982	Cytogenetic consequences of microwave irradiation on mammalian cells incubated <i>in vitro</i>	J. Hered.	73	133-138
Zhao Z., Zhang S., Zho H., Zhang S., Su J., & Li L.	1994	The effects of radiofrequency (<30 MHz) radiation in humans	Rev. Environ. Health	10	213-215

15) THOUSANDS OF REPORTS OF HEALTH EFFECTS FROM SMART METERS/SMART GRID TO TEXAS AND CALIFORNIA PUCs

<http://stopsmartgrid.org/evidence/>

Click the Above Link For nearly 2000 health complaints regarding smart meters and smart grid to the California PUC and Over 700 health complaints from smart meters and smart grid to the Texas PUC.

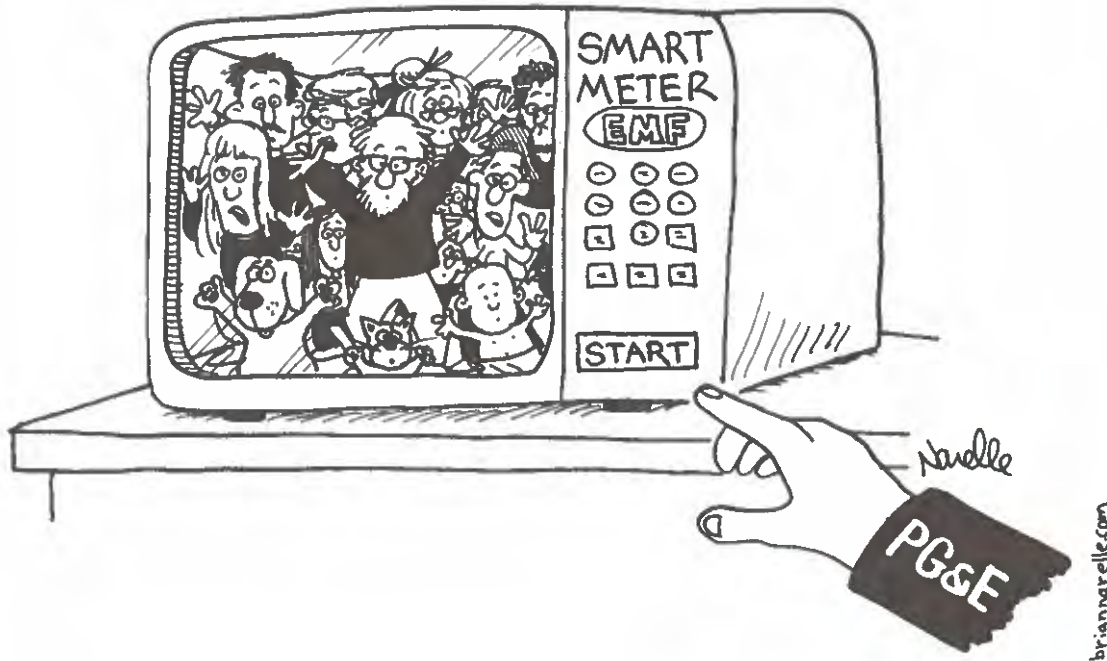
The below link contains health complaints posted on EMF Safety Network from US citizens currently suffering from smart meter and smart grid roll out. These are just a few examples of the health complaints. There are HUNDREDS more.

Smart Meter Health Complaints

<http://emfsafetynetwork.org/smart-meters/smart-meter-health-complaints/>

Do you have headaches, ringing in the ears, or sleep problems since utility smart meters were deployed? *You are not alone!*

Smart meters emit radiation- which is making people sick!



List of symptoms:

- Sleep problems (insomnia, difficulty falling asleep, night waking, nightmares)
- Stress, agitation, anxiety, irritability
- Headaches, sharp pain or pressure in the head
- Ringing in the ears, ear pain, high pitched ringing
- Concentration, memory or learning problems
- Fatigue, muscle or physical weakness
- Disorientation, dizziness, or balance problems
- Eye problems, including eye pain, pressure in the eyes,
- Cardiac symptoms, heart palpitations, heart arrhythmias, chest pain
- Leg cramps, or neuropathy
- Arthritis, body pain, sharp, stabbing pains
- Nausea, flu-like symptoms
- Sinus problems, nose bleeds
- Respiratory problems, cough, asthma
- Skin rashes, facial flushing
- Urinary problems
- Endocrine disorders, thyroid problems, diabetes
- High blood pressure
- Changes in menstrual cycle
- Hyperactivity or changes in children's behavior

- Seizures
- Recurrence of cancer

2013 We had a Smart Meter installed on our home. I got sick and two weeks ago had a mini-stroke. We took the meter off our home after sending Central Hudson (our utility company) several sets of documents – detailing my illness and then my hospitalization – and they did nothing and did not even respond to our requests. After my stroke, we ordered an analog meter online and replaced their radiating meter. We video taped it and sent their meter back to them with a letter, along with all the other correspondence we had sent (return receipt and notarized).

The following Monday the electric company came to our home, with no notice nor explanation, and physically, right in front of me, cut our electric lines with a huge pair of clippers! — New York

2013/ I am the proud parent of six, of the six children we have four children who are under the age of six. In July of last year the LADWP placed on our home a RF meter, the RF meter was placed on the back of our home which is directly located about 25 to 30 feet away from the LADWP power pole that is located on our property. In July of last year our children started to exhibit health symptoms and health signs that alarmed myself and my husband. The children began to have fevers out of no where, essentially their bodies were boiling and their fevers would go from 101 to 104 and sometimes to 105. My husband is a Clinical Partner at Cedar Sinai Hospital in the ICU so he is versed in the area of taking care of patients in extreme health decline, but he was not prepared to handle the weekly and monthly bouts that our smaller children began to have. Our children also began to have problems with the inability to control their bodily fluids, our five year old began peeing and pooping herself, our four year began to display the same problems, soon many of the smaller children were all displaying these symptoms and concerns. The children became depressed, and essentially we began to realize that our children were not the children who we cared for prior to the RF meter being placed on our property. We were the only family in our area to have this new meter so we do not have a frame of reference in our community to measure the health side effects against. Please help us, we are good honest people who have suffered for the past few months trying to put the pieces of this puzzle together.

[Admin's note: *The mother wrote that after the Smart Meter was removed in January the children's symptoms "diminished greatly, they no longer get high fevers, or suffer from loss of their bodily function."* Meanwhile LADWP has terminated their power.]

West Kelowna man claims Smart Meters are killing him "...an Okanagan man claims the meters may be interfering with an important medical device - his pacemaker. Jerry Smith, 70, of West Kelowna is partially paralyzed as a result of the 10 strokes he's had since last August....

I am an engineer. I have used technology my entire adult life - cell phones, smart phones, wi-fi, laptops, you name it. I really enjoyed all of this and had no issues or fears related to technology.

Then, when a bank of smart meters were put next to our apartment, both my wife and I starting experiencing headaches, insomnia, heart palpitations and tinnitus. Within a couple weeks, I could no longer use a cell phone without the same symptoms. Within a month I could feel the microwave radiation from cell towers. I have had to completely change my life because of this. Jeromy [Testimony Jeromy submitted to the CPUC]

"Is there a list of safe communities with no smart meters? Our whole family is being sickened by the smart meters around us and we need to find a place to live quickly."
"We are just miserable here. We can't sleep at night, are dizzy, have headaches, ear pain, and more. We also own our home so it is not easy to just pick up and get away from the smart meters." CA. 2013

Sick with palpitations, chest pain, insomnia, dizziness...

I managed to have smart meter installation delayed at my house, but suddenly became sick overnight with palpitations, chest pain, insomnia, dizziness, inability to concentrate and memory loss and fainting spells. AFTER becoming sick I found out that the day I became suddenly sick was the day the smart meter roll-out was completed in my area and the smart meters were remotely turned on from base.

I can no longer drive, I can't work (I'm a doctor), I have to go and sleep at my mother in law's place (there are no smart meters there yet).

My life is completely ruined and the energy companies and members of Victorian Parliament completely ignore me. Two doctors have confirmed my disability is entirely due to my sensitivity to smart meters' radio transmission and I am 100% sure of that as I can always tell accurately if I am in a smart metered area or not.

We are now planning to move to South Australia to survive. What is happening in Victoria is a complete breakdown of democracy and an affront to social justice of enormous proportions and implications.

What if this is happening to an old lady living alone? Where can she go? We are all morally obliged to speak up and do something about it, if not for ourselves, for the vulnerable amongst us that, if affected, could not do anything about it.

I had no idea that a smart meter would pose a hazard to my health when I agreed to let them install one on my home. Shortly after the smart meter was installed my health took a terrible downturn. I began having heart palpitations, trouble sleeping, unexplained anxiety attacks, dizzy spells, nausea and fatigue. I have been battling anxiety for months and I had no idea why. I've never had these types of symptoms plague me like this before. Then I found out that so many others have had the same reactions to smart meters in their homes and neighborhoods. Smart meters need to be outlawed and all of them must be removed at once. There are enough toxins in our food and the environment without this happening too. I hope I am able to get mine removed, but from what I've read Southern California Edison isn't cooperating. H .M. Orange CA

Since the new Smart Meter has been installed my wife has had a ringing in her ears. The only time she has this is in our home. Outside of the house she does not have the problem. J. F. Sacramento CA

I was not asked permission to have the Smart Meter installed. In fact, when your representative/installer came to my door informing me he would be installing the meter, I specifically told him that I did not want it installed. He told me that I didn't have a choice in the matter.

I am plagued with various health issues because of the Smart Meters, such as insomnia, constant headaches, blurred vision and ringing in my ears, and other various aches and pains. I understand that others are suffering from various health issues throughout the state and country as well. I do not want this device on my home or in my neighborhood. I want the old analog meter re-installed. I also do not want the new digital meter installed. I specifically want the old analog back which worked just fine. I want this Smart Meter removed now! A.S. Bakersfield CA

For the past year, I have been suffering health effects due to the installation of a Smart Meter at my home and the other homes in my neighborhood. I have experienced migraines, disrupted sleep, and electronic sensitivity so that I was unable to use a computer or my cellphone without immediate nausea and headache. I feel constant low-level anxiety when in my house which "magically" goes away every single time we have a power outage. My husband has developed migraines, disrupted sleep, and tinnitus. I am concerned for the long term health consequences on us and on my daughter who is almost 3.

I have called PG&E and they refuse to remove the Smart Meter from my house. Other electricians say that they cannot replace the meter with an analog variety because it would be illegal. This product is making me sick, and even with the money to pay for it, I am not allowed to have it removed.

I would like to see Smart Meters pulled from the market until thorough testing is done and they can be proved safe. It is the responsibility of our government to protect public health from polluting corporations. Charging for the right to "opt-out" is criminal because it subjects the poor to poisonous health effects, and also because people will still receive exposure from their neighbors' properties, especially in urban population-dense environments.

PG&E cannot be relied upon to treat us fairly--my health just does not figure into their bottom line. Sometimes we need people with power to stand up for us.

I have been suffering since the installation of 3 meters in my complex (of 12 units) and from larger multi-unit complexes on both sides of where I live. This means that the radiation coming off all of these meters encroach on me, even though I have opted out and do not have one....Each day I awake with my head buzzing. I now have fatigue and headaches, nausea unexplained and nosebleeds at the oddest times for no other reason. I have lost so many days of working (I work from home) and now there is no place to go. Our entire county, once a pristine, safe and desirable place to call home is now a sea of massive radiation from the thousands of smart meters now installed.

We didn't even know the meter was there when we moved in the house late April, 2011. We'd been feeling strong and well. Suddenly our health started deteriorating rapidly. It was until end of May that I saw the meter and red flags went off. I have been avoiding all

types of radiation since the 80's due to poor health...and here it was now permanently attached to my bedroom wall!! We had no place to go. Complaints and pleas to the utility companies were absolutely fruitless. We have removed it ourself.

I have been suffering horrible migraine headaches since a SmartMeter was installed on my home in the fall of 2010. The meter was installed without my permission. When the installer arrived unannounced, I happened to be home. I told him I did not want a Smartmeter. He responded by telling me I had no choice and walked right in my gate and installed it.

It took almost a year of 15-18 debilitating migraine level headaches before the cause was discovered. I saw doctors and had blood tests, MRI's CT scans, took migraine medications all with no relief. I kept a headache journal as recommended by headache specialists at UCSF and found no connection to headache development and diet, activity, etc. Looking at every variable possible, it was finally discovered that when I am around Smartmeters, I get headaches. When I am not, I don't get headaches.

I am a high school teacher and was able to go visit my Mom in a neighborhood that has no Smartmeters when school let out in June of 2011. For my 9 day visit with my mother, I had no headaches. When I returned home, the headaches resumed on my first day back. The Smartmeter was then suspected. I shielded the SM with simple aluminum shielding, and the migraine headache significantly reduced to a normal headache. When I remove the shield the intense migraines come back; replace the shield, they go away. The shielding is not 100% blockage. I need this meter completely off my home!!

I cannot walk my dog in my own neighborhood. All the buzz from my neighbors meters make me dizzy and don't help my headaches!! I feel trapped. There aren't many places to escape the horrible effects of these meters because they are everywhere. I love my job and I love where I live, but I feel I am being forced to leave. I cannot believe this is happening in this country!

The longer I am exposed to this SmartMeter, the more sensitive I am becoming. My doctor says I have developed electrical sensitivity. I am miserable and there are some days I wish someone would just shoot me. These SmartMeters and the technology they use have turned me from a happy and productive member of society, into a desperate and miserable person. Please help!!!!!!!!!!

I have been severely harmed by the installation of two smart meters on my family's home where I reside with my elderly parents and nephew.

I was forced to go to the emergency room only three hours after the two meters where installed on our home (one for gas and one for electric)from severe nausea, heart palpitations and a severe headache.

After several days, with the help of several highly trained medical doctors and a PA at my personal doctor's office, I finally found a medication that allowed me to stay home and assisted me in not having to continue to visit hospital services.

However, though the nausea was lessen by the mediation they gave me, which by the way is what they give to people who have radiation poisoning, it's side affects where too severe (mild to severe constipation and cramping leading to the need for more medical treatments)to continue for more than a few weeks. I was lucky enough to find an Acupuncturist who helped with these symptoms so at least I can now manage my pain.

I also suffered severe headaches (one meter was right outside my room, only two feet from my bed) and I was forced to move from a private room in front of the family house into the back of the house where the pain is much less.

Now I live my life in our family's den, always intruded upon by the need for my parents and other family members who reside here to work in the same area. I have lost all my privacy and I still suffer headaches every day now. I fear my health is also deteriorating as I keep getting colds. I have had one every month since the smart meters were installed. Even in the warm weather. My immune system is being affected negatively. My only hold on my sanity is my friends and loving mother. Otherwise I would have given up on living months ago. I hold on though I doubt I can withstand a flu or other immune compromised illness. My final act is to stop smart meters here on this planet, if at all feasible.

As I already have fibromyalgia and acid reflex, this is probably the final nail in the coffin for my health. Please stop all smart meter installations and try to get all the ones already installed off people's homes and residences and businesses. I can't hardly go anywhere now without an instant migraine from the fact they are installed everywhere. I hate to think what they are doing to everyone's health in my community. It makes me ill thinking how it is harming our children and elderly right now.

The below link contains the results of a smart meter/health effects survey EMF Safety Network Conducted.

Survey results: wireless meters impact health and safety

<http://emfsafetynetwork.org/?p=5826>

16) SMART GRID VIOLATES ADA

Smart grid and smart meters create untenable, basic lifestyle problems, including being unable to inhabit ones own home. People who are sensitive to microwave radiation are forced to flee their home, however, sleeping in the street and in their car is not much of a better alternative now due to smart grid transmitters and repeaters blanketing entire neighborhoods and communities.

Not only do smart meters and smart grid transmit microwave radiation both inside the home and throughout the neighborhood when they send signals, but smart meters also have now created dirty electricity throughout the home and the entire grid (meaning outside the home as well), due to dirty electricity created through high frequency transients being on all power and electricity lines that contain smart grid transmissions.

This is of course in direct violation of federal rules and regulations for accepting federal funds, all recipients of which must adhere to ADA rules and regulations.

IEQ Indoor Environmental Quality Project

<http://www.access-board.gov/research/completed-research/indoor-environmental-quality/introduction>

“The Board recognizes that multiple chemical sensitivities and **electromagnetic sensitivities may be considered disabilities under the ADA** if they so severely impair the neurological, respiratory or other functions of an individual that it substantially limits one or more of the individual’s major life activities.

Not only does smart grid violate ADA with indoor electromagnetic pollution, but also outdoor being as smart grid BLANKETS entire neighborhoods, cities and even states with uninterrupted RF signals, leaving no area RF free and therefore prohibiting access to many public areas for those with electrosensitivity.

These codes have been on the books for decades. These are associated with the health impact of smart meters:

- **ICD 9 E925.01 Non-Lethal Current/Induction from contact or from transients**
- **ICD 9 E926.0 Radio Frequency Radiation**
- **ICD 9 995.94 Systemic Inflammatory Response Syndrome due to non-infectious process**

National Institute of Buildings and Sciences Indoor Environmental Quality Report:

http://web.archive.org/web/20060714175343/ieq.nibs.org/ieq_project.pdf

Electromagnetic Fields

“...the presence of EMF is an access barrier for people who are electromagnetically sensitive. Therefore, the Committee recommends that measures be taken to reduce EMF whenever possible in order to increase access for these individuals as well as taking a precautionary approach to protecting the health of all.”

“For people who are **electromagnetically sensitive**, the presence of cell phones and towers, portable telephones, computers, fluorescent lighting, unshielded transformers and wiring,

battery re-chargers, wireless devices, security and scanning equipment, microwave ovens, electric ranges and numerous other electrical appliances **can make a building inaccessible.**”

“The National Institute for Occupational Safety and Health (NIOSH) notes that scientific studies have raised questions about the possible health effects of EMF’s. NIOSH recommends the following measures for those wanting to reduce EMF exposure – **informing workers and employers about possible hazards of magnetic fields, increasing workers’ distance from EMF sources, using low-EMF designs wherever possible (e.g., for layout of office power supplies), and reducing EMF exposure times (11).**”

16) UBIQUITOUS DIRTY ELECTRICITY CREATED THROUGH SMART METER/SMART GRID SWITCHING MODE POWER SUPPLY AND PULSED RADIATION MORE HARMFUL THAN CONTINUOUS

*The SWPS or Switching Mode Power Supply in all smart meters and smart grids, create ubiquitous dirty electricity **THROUGHOUT ENTIRE NEIGHBORHOODS EVEN WHEN ELECTRICITY IS SHUT OFF IN THE HOME.** Thus there is no escaping the exposure to this **KNOWN CARCINOGEN** in addition to making opting out of smart meters for health reasons an exercise in futility.*

Health Impacts of Radio Frequency from Smart Meters

Dr. Sam Milham’s Critique of CCST’s report:

<http://sagereports.com/smart-meter-rf/?p=323>

“Smart meters transmit their data via radio frequency (RF) either through the air or on utility wiring. The electronics of all transmitters operate on direct current (DC), which is obtained using inverters and switching power supplies in the meter which interrupt the grid AC current flow and generate dirty electricity which flows back to the grid on the 60 Hz AC throughout the substation service area. Interrupting current flow generates dirty electricity.”

“...the utilities got off the hook by instead of beefing up their neutrals, they simply tied the neutrals to the earth so that now, about 70% of the electricity delivered from the substation, returns there via the ground. **The California PUC rule 33.2 forbids using the earth for return currents, but this didn’t stop PG and E or Edison from running wires**

down every other power pole connecting the neutral to the earth. Here is the PUC rule:”

General Order 95

Section III

Requirements for All Lines

33.2 Ground or Earth as a Conductor

“Ground or earth shall not be used as a normal return or circuit conductor. In direct current supply systems or in single phase or polyphase supply systems, a neutral or any other conductor shall be used under normal use as a return or circuit conductor; however, the grounding of the neutral or any other conductor is not permitted as a normal return or circuit conductor. The neutral or any other conductor is permitted to be grounded only for the purposes of stabilization and protection.”

“Violation of this rule has created health problems in farm animals and families and dirty electricity gets into our homes and offices and schools via ground rods and electrically conductive plumbing. I have measured higher EMFs in homes with the electrical service turned off due to unbalanced current flow.”

“In the last few weeks, I have been contacted by two electrohypersensitive California women, both of whom had to move out of their homes because of illness as smart meters were being introduced into their neighborhoods, before smart meters were attached to their homes. A third east coast woman sent me an oscilloscope wave form obtained in her home with the electrical service turned off and no smart meter on her house. The neighborhood had smart meters deployed, which used utility wiring to submit information to the substation. The frequency of the wave form was exactly that used to transmit smart meter information.”

“...in all three cases, the damaging signal was dirty electricity in the wiring and the ground currents coming from the deployed meters.”

“I’m not making light of or ignoring the RF pollution caused by the smart meters, but think the dirty electricity may be a more serious and intractable problem.”

New Critical Problem with Smart Meters: The Switching Mode Power Supply

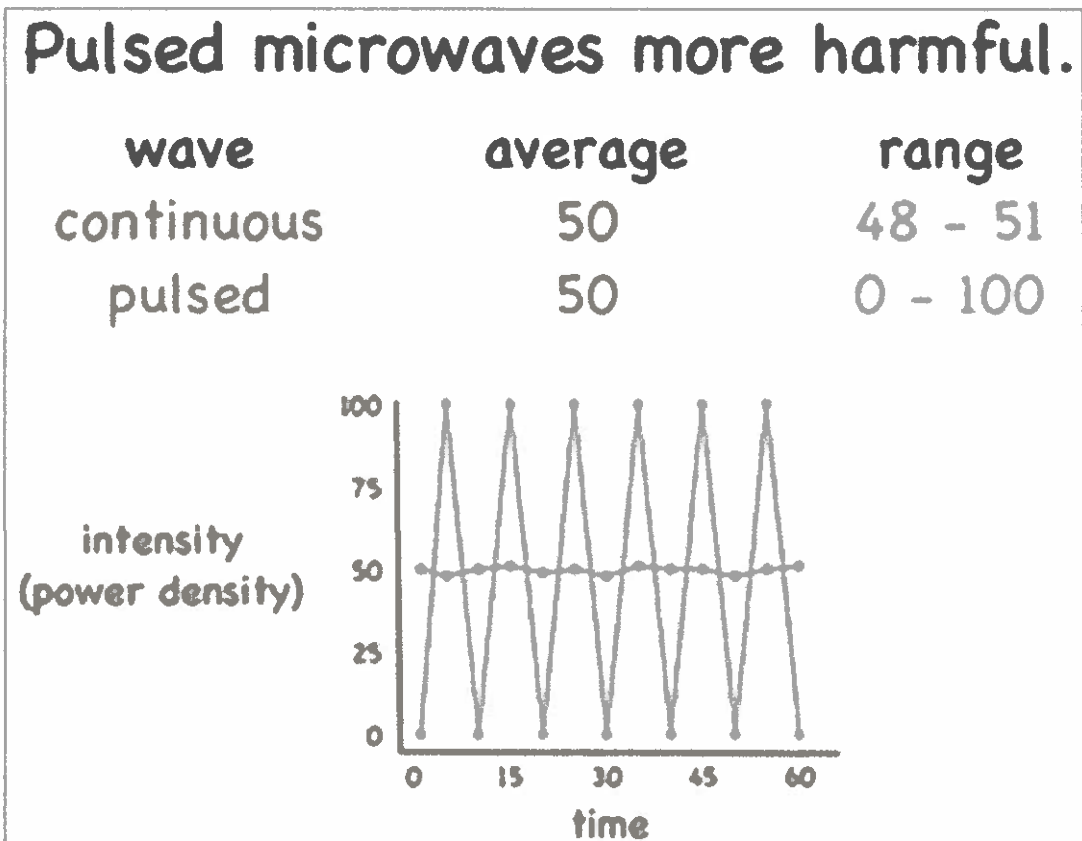
<http://eon3emfblog.net/?p=2180>

“It is well known that switching power supplies can generate spikes of so-called electromagnetic interference (EMI), or high frequency transients, which then travel along the wiring in the walls, radiating outward in the wiring’s electromagnetic field.”

“The SMPS function emits sharp spikes of millisecond bursts constantly, 24/7. The SMPS on the OWS 514 NIC model, for instance, which is the smart meter model widely installed by PG&E throughout its territory, has been measured to emit spikes of up to 50,000 Hz and higher. This constant pulsing of high frequencies, in addition to the RF function, is causing not only interference with other electric and electronic equipment in many homes with smart meters installed, but also is causing havoc with biological systems in its field of exposure.”

PULSED RADIATION MORE HARMFUL THAN CONTINUOUS

Smart meters emit intense millisecond bursts of pulsed radiation as opposed to continuous. Used radiation is much more harmful to biology.



Finally Experts Admit Cellphones Are A Carcinogen

<http://articles.mercola.com/sites/articles/archive/2011/06/18/finally-experts-admit-cellphones-are-a-carcinogen.aspx>

Magda Havas, PhD of Trent University, Canada, agrees pulsed radiation is more dangerous:

"Pulsed radiation is much more harmful and the true intensity is not provided as it is "averaged" during a period of time (30 minutes for public exposure in US). The average of the pulse (maximum reading) and the minimum reading gives a false low reading. Engineers like to measure averages but living organisms react to extremes so these average readings under estimate the potential for harm if the radiation is pulsed."

17) SMART METERS AND SMART GRID VIOLATE FCC RULES AND REGULATIONS ON INTERFERENCE

Power Utility Smart Meters Causing Router Interference, Maine Public Advocate Says Users Not Being Educated

<https://secure.dslreports.com/shownews/Power-Utility-Smart-Meters-Causing-Router-Interference-117120>

"If some appliances, computers or communications equipment have been working oddly lately, the Maine Public Advocate's office said your electric meter may be to blame...The office put out a statement this week saying Central Maine Power Co.'s "smart meters" -- which use low-power radio frequency transmissions to send meter readings to the company -- are interfering with a wide range of household electronic devices, from garage door openers and WiFi devices to security systems."

Readers: Smart Meters Interfere with Baby Monitors and Other Household Gadgets

http://www.mercurynews.com/top-stories/ci_16007725

"Cordless phones and crib monitors, patio speakers and wireless headsets are spitting out static and startling pops and crackles, they complained. Also affected,

they said, are wireless microphones, security systems, motion detectors and remotely controlled garage doors." "Right about the time that SmartMeters were installed, our phone went insane," wrote Jane Meckman of San Jose.

"When Action Line asked PG&E about the complaints, the utility said little and put up a bureaucratic hurdle to get responses to readers' concerns, going so far as to require notarized waivers of confidentiality. That's the definition of stonewalling."

Many people are experiencing interference with their radio stations, WIFI connections (not that we condone WIFI we don't) and other RF interference problems since smart meter installation and smart grid roll out. This interference is in violations of FCC rules and regulations.

Understanding the FCC Regulations for Computers and Other Digital Devices

http://transition.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet62/oet62rev.pdf

FCC technical standards state there is not supposed to be any interference with authorized radio-frequency devices. Yet smart meters are ubiquitously interfering with MANY electrical devices, including MEDICAL.

Section 15.5. OET Bulletin 62.

"Digital devices that are exempt from the technical standards in Part 15 are still not permitted to cause harmful interference to any authorized radio communications."

18) SMART GRID AND SMART METERS VIOLATE THE ALREADY UN-PROTECTIVE FCC STANDARDS

Although the FCC "safety" standards for RF microwave radiation are already un-protective, the collocation of smart meters and smart grid actually violates these un-protective and health damaging "safety" standards. Additionally, placement of many smart meters violate orders to keep 20 centimeters (approx. 8 inches) away from the meters.

The FCC Grants of Equipment Authorization, which govern the rules upon which FCC compliance is based, warns that RF exposure compliance depends on specific conditions. The conditions include one or more of the following, depending on the specific make and model of Smart Meter.

- limited single module approval requires professional installation;
- **antenna(s) must provide a separation distance of at least 20 cm from all persons;**
- **antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter;**
- **end-users and installers must be provided with antenna installation and transmitter operating conditions for satisfying RF exposure compliance**

“Smart Meters are often co-located in banks of multiple meters. Co-location also occurs within Smart Meters because electric Smart Meters include at least two internal RF antennas. One antenna is used for the mesh network system and the other is for the Home Area Network (HAN) systems. Antennas are designed to work in conjunction with the HAN and RF appliances and with other Smart Meters in a mesh network. Antennas have separate Grants of Equipment Authorization, which suggests that manufacturers have tested antennas in isolation and individually, and not in combination, which is how the Smart Meter and the Smart Grid system were designed to operate....”

EMF Safety Network, A. 10-04-018, Declaration p, 1. Jan. 5, 2011

<http://emfsafetynetwork.org/emf-safety-network-legal-work/>

“...Network alleges one or more FCC exposure compliance violations for the following meters PG&E is deploying: FCC ID numbers: OWS-NIC514, OWS-NIC507, and LLB6327PWM.”

“Furthermore, “antenna(s) must provide a separation distance of at least 20 cm (8 in.) from all persons,” yet there are no warning labels on Smart Meters, and PG&E has actually encouraged people to get close to their meters to read them.”

“Many Smart Meters are installed within 20 cm of public access. In some cases the meters are installed inside homes and businesses. In many situations Smart Meters are easily accessible to the public. This rule is clearly violated.”



photograph courtesy Amy O'Hair

FCC compliance violations are likely to occur under normal conditions of installation and operation of smart meters and collector meters.

Assessment of Radiofrequency Microwave Radiation Emissions From Smart Meters

<http://sagereports.com/smart-meter-rf/>

“The emissions from one meter are strong enough that the public is put at risk from exposures outward from the meter from approximately one foot to over six feet, depending on the reflection factor,” says Cindy Sage, Sage Associates. “For multiple meters at the same location, the zone of impact where FCC limits may be violated is somewhere between three feet and 19 feet, depending on the reflection factor.”

Assessment of Radiofrequency Microwave Radiation Emissions from Silver Springs OWS-NIC514 Model Wireless Electric Meter

http://sagereports.com/smart-meter-rf/?page_id=429

“Violations of FCC safety limits for uncontrolled public access are identified at distances out to a distance of more than one foot for a single meter, and several feet for multiple meters, even under the most restrictive FCC formula using only a 60% reflection factor.”

Smart Grid and Smart Meters Exceed the Already Dangerously Inadequate FCC Health and Safety Guidelines

<http://sagereports.com/smart-meter-rf/>

http://sagereports.com/smart-meter-rf/docs/Smart-Meter_Report.B-Tables.pdf

http://sagereports.com/smart-meter-rf/docs/Smart-Meter_A-Tables2.pdf

“In addition to exceeding FCC public safety limits under some conditions of installation and operation, smart meters can produce excessively elevated RF exposures, depending on where they are installed.”

“Consumers may also have (*unknowingly – verbiage added*) already increased their exposures to radiofrequency radiation in the home through the voluntary use of wireless devices (cell and cordless phones), PDAs like BlackBerry and iPhones, wireless routers for wireless internet access, wireless home security systems, wireless baby surveillance (baby monitors), and other emerging wireless applications.”

No Baseline RF Assessment

“Smart meter and collector meter installation are taking place in an information vacuum. FCC compliance testing takes place in an environment free of other sources of RF, quite unlike typical urban and some rural environments. There is no assessment of baseline RF conditions already present (from AM, FM, television and wireless communication facilities (cell towers), emergency and dispatch wireless, ham radio and other involuntary RF sources. Countless properties already have elevated RF exposures from sources outside their own control.”

“Consumers who for whatever reason have already eliminated all possible wireless exposures from their property and lives, may now face excessively high RF exposures in their homes from 7 smart meters on a 24-hour basis.”

“People who are afforded special protection under the federal Americans with Disabilities Act are not sufficiently acknowledged nor protected.”

“People who have medical and/or metal implants or other conditions rendering them

vulnerable to health risks at lower levels than FCC RF limits may be particularly at risk (Tables 30-31)."

"This is also likely to hold true for other subgroups, like children and people who are ill or taking medications, or are elderly, for they have different reactions to pulsed RF."

"Children's' tissues absorb RF differently and can absorb more RF than adults (Christ et al, 2010; Wiart et al, 2008). The elderly and those on some medications respond more acutely to some RF exposures."

"Safety standards for peak exposure limits to radiofrequency have not been developed to take into account the particular sensitivity of the eyes, testes and other ball shaped organs."

"In summary, no positive assertion of safety can be made by the FCC, nor relied upon by the CPUC, with respect to pulsed RF when exposures are chronic and occur in the general population. Indiscriminate exposure to environmentally ubiquitous pulsed RF from the rollout of millions of new RF sources (smart meters) will mean far greater general population exposures, and potential health consequences."

RF Exposure from mobile phone base stations

Worldwide Limits and Guidelines (in microwatts per sq. meter - $\mu\text{W}/\text{m}^2$)

Prepared by Peter Schlegel, www.buergerwelle-schweiz.org based on a list published in "Warum Grenzwerte schädigen, nicht schützen [Why exposure limits are not protective, but harmful]" by the Competence Initiative www.broschuerenreihe.net/international/index.html (September 28, 2009). Printed here with permission.

10000000	US Army, Navy, and Air Force; Bell Telephone; General Electric Company (1957/58) "Microwave Conference", USA 1955 [Brodeur, 1980]
10,000,000 4,500,000	USA, Canada, UK, Germany, Sweden, Finland, Japan, Austria, and many others. Switzerland total sum of RF at any place. Limit values depending on carrier frequency. ICES; ICNIRP: derived from biological effects of short-term, high-level exposures causing a rise in temperature
2000000	Australia and NZ for GSM 900
1200000	Belgium without Wallonia Law (2001)
1161000	Italy, sum total of RF at any place
1000000	Former GDR, exposure \leq 2 hours - OHS Regulation:TGL 22314 (1969)
100000	Former GDR, exposure \leq 20 hours - OHS Regulation:TGL 22314 (1969)
100000	Former Soviet Union , mid-20 th century
100000	Italy, exposure $>$ 4 hours
100,000 42,500	Switzerland, indoor exposure level from one transmitter site ¹ . Limit values depending on carrier frequency. ¹ A transmitter site may consist of one or more mobile phone base stations, its perimeter (ca. 40-100 m) depends on the radiated power of the particular adjacent base stations. Ordinance (2000) (Decision of Swiss Federal High Court, 30 Aug 2000)
24000	Law (2007 and 2009)
1000	Lichtenstein: indoor exposure level from one transmitting site; implementation by end of 2012 - Law and Ordinance (2009)
1000	France, testing period decided by 60 cities - (Sep 2009)
1000	Salzburg Resolution (1998), sum total of GSM
100	European Parliament, STOA Report - (2001)
100	BUND, prevention of hazards BUND – German Alliance for Environmental and Nature Protection (2008)
1	BUND, precautionary principle
1	Salzburg Precautionary Value, indoor exposure level for sum total of GSM - (2002)
< 0.1	Building Biology Evaluation Guidelines (SBM 2008) specifically designed for sleeping areas and empirically established on the basis of many thousands of individual cases, including EHS sufferers. Generally adopted by all Building Biology environmental consultants who conduct professional RF surveys in homes, at workplaces, for EHS sufferers.

The second significant issue associated with communication towers involves impacts from non-ionizing electromagnetic radiation emitted by these structures. Radiation studies at cellular communication towers were begun circa 2000 in Europe and continue today on wild nesting birds. Study results have documented nest and site abandonment, plumage deterioration, locomotion problems, reduced survivorship, and death (*e.g.*, Balmori 2005, Balmori and Hallberg 2007, and Everaert and Bauwens 2007). Nesting migratory birds and their offspring have apparently been affected by the radiation from cellular phone towers in the 900 and 1800 MHz frequency ranges – 915 MHz is the standard cellular phone frequency used in the United States. However, the electromagnetic radiation standards used by the Federal Communications Commission (FCC) continue to be based on thermal heating, a criterion now nearly 30 years out of date and inapplicable today. This is primarily due to the lower levels of radiation output from microwave-powered communication devices such as cellular telephones and other sources of point-to-point communications; levels typically lower than from microwave ovens. The problem, however, appears to focus on very low levels of non-ionizing electromagnetic radiation. For example, in laboratory studies, T. Litovitz (personal communication) and DiCarlo *et al.* (2002) raised concerns about impacts of low-level, non-thermal electromagnetic radiation from the standard 915 MHz cell phone frequency on domestic chicken embryos – with some lethal results (Manville 2009, 2013a). Radiation at extremely low levels (0.0001 the level emitted by the average digital cellular telephone) caused heart attacks and the deaths of some chicken embryos subjected to hypoxic conditions in the laboratory while controls subjected to hypoxia were unaffected (DiCarlo *et al.* 2002). To date, no independent, third-party field studies have been conducted in North America on impacts of tower electromagnetic radiation on migratory birds. With the European field and U.S. laboratory evidence already available,

independent, third-party peer-reviewed studies need to be conducted in the U.S. to begin examining the effects from radiation on migratory birds and other trust species.

Here are some studies on animals and echo systems:

Electromagnetic pollution from phone masts. Effects on wildlife.

<http://www.ncbi.nlm.nih.gov/pubmed/19264463>

“A review on the impact of radiofrequency radiation from wireless telecommunications on wildlife is presented. Electromagnetic radiation is a form of environmental pollution which may hurt wildlife. **Phone masts located in their living areas are irradiating continuously some species that could suffer long-term effects, like reduction of their natural defenses, deterioration of their health, problems in reproduction and reduction of their useful territory through habitat deterioration. Electromagnetic radiation can exert an aversive behavioral response in rats, bats and birds such as sparrows. Therefore microwave and radiofrequency pollution constitutes a potential cause for the decline of animal populations and deterioration of health of plants living near phone masts. To measure these effects urgent specific studies are necessary.**”

Mobile phone mast effects on common frog (*Rana temporaria*) tadpoles: the city turned into a laboratory.

90% of tadpoles died when exposed to cell phone antennas at a distance of 140 meters (approx. 450 feet) from the antennas located on top of a nearby city roof.

<http://www.ncbi.nlm.nih.gov/pubmed/20560769>

Abstract

An experiment has been made exposing eggs and tadpoles of the common frog (*Rana temporaria*) to electromagnetic radiation from several mobile (cell) phone antennae located at a distance of 140 meters. The experiment lasted two months, from the egg phase until an advanced phase of tadpole prior to metamorphosis. Measurements of electric field intensity (radiofrequencies and microwaves) in V/m obtained with three different devices were 1.8 to 3.5 V/m. In the exposed group (n = 70), **(number of tadpoles in the experiment was 70)** low coordination of movements, an asynchronous **(not in synchronicity; tadpoles were growing at radically different rates from one another. Tadpoles usually grow at the same rates) growth, resulting in both big and small tadpoles, and a high mortality (90%) was observed.** Regarding the control group (n = 70) under the same conditions but inside a Faraday cage **(metal cage that screens out radio waves)**, the coordination of movements was normal, the development was synchronous, **(all grew together at same rate)** and a mortality of 4.2% was obtained. These results indicate that radiation emitted by phone masts in a real situation may affect the development and may cause an increase in mortality of exposed tadpoles. This research **may have huge implications for the natural world**, which is now exposed to high microwave radiation levels from a multitude of phone masts.

CHAPTER 3 COASTAL RESOURCES PLANNING AND MANAGEMENT POLICIES

Section 30240(b) of the CA Coastal Act states:

<http://www.coastal.ca.gov/fedcd/cach3.pdf>

“Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.”

Yet smart grid has been deployed with ZERO environmental impact reports or consideration of these endangered species or the Endangered Species Act, which will undoubtedly

negatively impact these species by completely blanketing sensitive areas in pulsed microwave smart grid radiation.

Impacts of radio-frequency electromagnetic field (RF-EMF) from cell phone towers and wireless devices on biosystem and ecosystem – a review

<http://www.omicsonline.com/open-access/0974-8369/0974-8369-4-179.pdf?aid=12830>

BMID: BM-8 p209

“The most affected of the species are bees, birds, and bats and without these pollinators visiting flowers, 33% of fruits and vegetables would not exist, and as the number of pollinators decline, the agricultural crops will fall short and the price of groceries will go up (Kevan and Phillips, 2001).”

Studies on Plants (p206)

“Tops of trees tend to dry up when they directly face the cell tower antennas and they seem to be most vulnerable if they have their roots close to the water (Belyavskaya, 2004). (snip) According to Levitt (2010), trees, algae, and other vegetation may also be affected by RF-EMF.”

Studies on Insects (p206-7)

“Colony collapse disorder (CCD) was observed in beehives exposed to 900 MHz for 10 minutes, with sudden disappearance of a hive’s inhabitants, leaving only queen, eggs, and a few immature workers behind. With navigational skills affected, worker bees stopped coming to the hives after 10 days and egg production in queen bees dropped drastically to 100 eggs/day compared to 350 eggs. (Sharma and Kumar, 2010)”

“Studies performed in Europe documented navigational disorientation, lower honey production, and decreased bee survivorship (Kimmel *et al.*, 2007).”

“A study by the University of Athens on fruit flies exposed to 6 minutes of 900 MHz pulsed radiation for 5 days showed reduction in reproductive capacity (Panagopoulos *et al.*, 2004).”

Studies on Amphibians and Reptiles (p207)

“Salamanders and turtles have navigational abilities based on magnetic sensing as well as smell. Many species of frogs have disappeared all over the world in the last 3–5 years. Amphibians can be especially sensitive because their skin is always moist, and they live close to, or in water, which conducts electricity easily (Hotary and Robinson, 1994)”

“Toads when exposed to 1425 MHz at a power density of 0.6 mW/cm² developed arrhythmia (Levitina, 1966).”

“In a two-month study in Spain in common frog tadpoles on the effects of mobile phone mast located at a distance of 140 m noted low coordination of movements, an asynchronous growth, resulting in both big and small tadpoles, and a high mortality (90%) in exposed group. For the unexposed group in Faraday cage, the coordination of movements was normal, the development was synchronous, and a mortality of 4.2% was obtained (Balmori, 2009)”

Studies on Birds (p207-208)

“Tower-emitted microwave radiation affected bird breeding, nesting, and roosting in Valladolid, Spain (US Fish & Wildlife Service, 2009).”

“In chick embryos exposed to ELF pulsed EMR, a potent teratogenic effect was observed, leading to microphthalmia, abnormal trunkal torsion, and malformations on the neural tube (Lahijani and Ghafoori, 2000).”

“Evidence of a connection between sparrow decline in UK and the introduction of phone mast GSM was established (Balmori, 2009).”

“Deformities and deaths were noted in the domestic chicken embryos subjected to low-level, non-thermal radiation from the standard 915 MHz cell phone. frequency under laboratory conditions (US Fish & Wildlife Service, 2009).”

Studies on Mammals (p208)

“In a study on cows and calves on the effects of exposure from mobile phone base stations, it was noted that 32% of calves developed nuclear cataracts, 3.6% severely. Oxidative stress was increased in the eyes with cataracts, and there was an association between oxidative stress and the distance to the nearest mast (Hässig *et al.*, 2009).”

“Death in domestic animals like hamsters and guinea pigs were noted (Balmori, 2003). Bats use electromagnetic sensors in different frequencies. Since 1998, a study on a free-tailed bat colony, having *Tadarida teniotis* and *Pipistrellus pipistrellus* has been carried out in Spain and a decrease in number of bats were noted with several phone masts 80 m from the colony. A dead specimen of *Myotis myotis* was found near a small antenna in the city centre (Balmori, 2009).”

VIOLATION OF COASTAL ACCESS PROVISION SECTION 30252 AND ADA

Any decision made by a local or state government that restricts access granted to, or mobility of a class of citizens because of a medical condition or disability is a violation of the Americans with Disabilities Act, and of Coastal Access provisions in section 30252 of the Coastal Act:

“New development should maintain and enhance public access to the coast.”

Electrosensitivity has also been documented in peer-reviewed, published scientific studies, is acknowledged as a disability and functional impairment in many countries and is recognized as a disability under the ADA in the US.

Lack of access resulting from adverse health consequences of wireless technology is subject to the rules and regulations of the Americans with Disabilities Act. Yet citizens who currently enjoy access to this area of states that have smart grid are essentially being denied access to these areas and even their own neighborhoods including their own homes!!

20) RAPID, DELETERIOUS AND COSTLY IMPACT ON BUILDING STRUCTURAL INTEGRITY

Curtis Bennett, Thermographix Consulting Corporation, warns about the “molecular earthquakes” and fire separation hazard from Smart Meters and other wireless devices that threaten building integrity.

Letter to Energy Minister, Government of British Columbia, March 7, 2012 Radio Frequencies Compromising Buildings, Fire Separations, Electrical Systems, Fire Safety, Infrastructure, etc.

www.thermoguy.com/urbanheat.html

Building Code and Fire Separations

“Blanketing areas with frequencies for ease of communication has serious ramifications on buildings and infrastructure that requires immediate attention. (British Columbia) Building Code and Part 4 don’t want buildings subjected to molecular earthquakes. If you aggressively vibrate or electromagnetically induce everything, engineers, education, fire services and professionals at many levels have to be informed. You will have catastrophic failures with a domino effect at several levels....”

“Natural EMFs like solar radiation are so important and impactful, it is addressed in building codes....”

“We wire and construct building development as well as infrastructure to keep people safe from EMFs. We run cables instead of single conductors so the 60 Hz EMFs from each conductor cancel each other out. When we don’t, the expanding and collapsing EMFs from singular wires would impact anything they interact with...”

“Frequencies blasting across the atmosphere to communicate with smart devices will interact with all infrastructure including industry. Electromagnetic induction and high speed vibrations penetrating concrete isn’t our objective. Whether smart meters on buildings or Wi-Fi in schools, frequencies are going through walls and structures. Towers, collectors or wireless infrastructure is communicating with meters and meter banks. The frequencies are blasting buildings, everything on the way there and going through structural components as well as fire separations. **900 MHz [electric Smart Meters] going through walls is going to cause molecules of construction material to change direction 1.8 billion times per second. 2.4 GHz [HAN frequencies] or 5 GHz in schools means 4.8 or 10 billion times per second...Smart meters and smart grid add a dangerously powerful level of microwave emissions to the already microwave stressed and fatigues building infrastructure.**”

“Design Professionals including professional engineers, fire services have to be informed when a structure will be vibrated billions of times per second. Buildings subjected to frequencies have to be designed for it I.e. RF Engineer from Norad reported their buildings had grounded copper mesh to address the potential charge from frequencies.”

“Engineers, municipalities, building inspection, etc. can’t rule out the building’s structure and fire separations compromised as a result of frequency interaction. Multiple smart devices under more load will increase the intensity of the molecular earthquakes caused to structures, fire separations, electrical systems, etc. Meter banks on high-rises are in the basement or on the ground floor and vibrating the structure holding up the high-rise.”

“Professionals signing off on buildings, municipalities, developers, fire services, insurers and banks haven’t been informed the function of their building has changed, as would liability. It brings complex liabilities forward which require clarification from the authorities having jurisdiction...every minute of this subtle radiation compounds problems.”

“We design fire separations to contain a fire and fire rated drywall changing direction 1.8 to 10 billion times **per second** with frequency exposure is going to impact fire separation integrity and perceived safety of fire fighters.”

“Wi-Fi, smart meters and cellphones are determined to be low emissions devices that can be used 24/7. At billions of times per second, 24 hours per day and 7 days a week, how much can a structure or fire separation take before the building isn’t safe?”

Although cell phones, WIFI and cell towers stress and fatigue structural integrity of buildings, smart meters and smart grid actually ride in on the wiring of the building, now stressing it from the inside out. This is bound to have significant deleterious effects on the building in possibly ways we have not seen yet with regard to cell tower, WIFI and other radiation stress.

21) FIRE HAZARD CAUSED BY SMART METERS

There are many reasons why smart meters are known to cause fires in homes. One of the very basic ones is simply that the meters are too big to fit into the boxes that previously housed the analog meters. But installers (who are rarely licensed electricians) just jam them in anyway because they are in most cases paid per meter, just as the electric companies are only paid if they hit a certain level of smart meter roll out saturation in their service area.

However, there are also other reasons why smart meters start fires, having to do with electrical wiring incompatibility with the technology.

Besides entire houses burning down and smaller house fires, there have been many instances of "fried appliances", electrical wire arcing, burned outlets, exploding meters, overheating meters, burning meters and of course interference with AFCIs (arc fault interrupters) and GFCIs (ground fault circuit interrupters).

Wireless Smart Meters and Potential For Electrical Fire

<http://eon3emfblog.net/wp-content/uploads/2010/09/Wireless-Smart-Meters-and-Potential-for-Electrical-Fires.pdf>

“Typical gauge electrical wiring that provides electricity to buildings (60 Hz power) is not constructed or intended to carry high frequency harmonics that are increasingly present on normal electrical wiring...”

The use of smart meters will place an entirely new and significantly increased burden on existing electrical wiring because of the very short, very high intensity wireless emissions (radio frequency bursts) that the meters produce to signal the utility about energy usage... “

“Reports detail that the meters themselves can smoke, smolder and catch fire, they can explode, or they can simply create over-current conditions on the electrical circuits... “

“Electrical wiring was never intended to carry this - what amounts to an RF pollutant - on the wiring. The higher the frequency, the greater the energy contained.”

“Faulty wiring, faulty grounding or over-burdened electrical wiring may be unable to take the additional energy load.”

PG&E Whistle Blower “PG&E knows smart metes cause fires and they are covering it up.”

http://www.youtube.com/watch?feature=player_embedded&v=EnxIoItNUek

Man Dies in Smart Meter Fire – PG&E Settles Out of Court But Continues Proliferating Deadly Smart Meter Installations

<http://stopsmartmeters.org/2013/06/21/when-smart-meters-kill-the-story-of-larry-nikkel-details-emerge-of-vacaville-ca-smart-meter-fire-death/>

Lawsuit of Defects of Sensus Smart Meters

<http://www.smartenergyuniverse.com/ami/4621-lawsuit-on-defects-of-sensus-smart-meters>

“A lawsuit has been filed by Don Baker, former employee of Sensus, a smart meter manufacturer.”

“The suit states: “Mr. Baker has direct personal knowledge that Sensus and Southern Company [the utility] have installed approximately one million iConA meters in Alabama homes with knowledge that the meters are seriously defective and pose a substantial fire hazard and that at least two Alabama homes have burned as a result.”

Florida TV News – Smart Meter Sparks Fire

<http://www.wfla.com/story/23278891/lakeland-fire-sparks-concerns-about-smart-meters>

Livonia fire officials - DTE Energy Investigates Home Blaze

<http://www.detroitnews.com/article/20131025/METRO01/310250117>

Smart Meters Cause Fires Amongst Other Life Threatening Problems - Australia

http://www.youtube.com/watch?feature=player_embedded&v=4e71qAr_qGk

Smart Meters Spark Controversy

<http://www.myfoxdc.com/story/22240644/fox-5-investigates-smart-meters-spark-controversy#ixzz2TIPxfMII>

Is Your Electric Meter Dangerous?

<http://www.wxyz.com/dpp/news/is-your-electric-meter-dangerous>

Smart Meter Explosion in Detroit and Across Country

<http://spectrum.ieee.org/energywise/energy/the-smarter-grid/smart-meter-fire-reports>

“Obviously all companies with smart meter programs, and all their suppliers and sub-contractors, are going to have to take a close look at the issue of fire hazards.”

“We are seeing a spate of report from around the United States—and indeed around the world—of fires believed to have been caused by smart meters that were faulty, incorrectly installed, or connected to circuits where there were unfortunate and unforeseen effects. This appears to be not just a matter of freak incidents that may or may not have taken place here or there. “

“In some cases fires appear to have originated in the meters themselves, in other cases in appliances like microwave ovens or refrigerators (as in the photo above), because of power surges.”

“...just last week Commonwealth Edison of Illinois confirmed three smart meter fires in its operating area, and earlier last month its sibling company Peco Energy suspended smart meter installations in the Mid-Atlantic states after 15 reports of smart meter fires, one in Philadelphia.

This is just the beginning of a difficult story...”

Power Surge Raises Questions About Smart Meter Safety

http://www.paloaltoonline.com/news/show_story.php?id=22378

“Katz said the advantage of the analog meter is that it doesn't have internal electronics. When a power surge hits a digital meter, the extra jolt of electricity can disrupt the flow of data or even shut down the meter, she said.”

“...“In the collective memory of TURN, we have not seen similar incidents with analog meters,” (Mindy Spatt of TURN) said.”

Fires Linked to Smart Meters?

<http://www.3aw.com.au/blogs/breaking-news-blog/fires-linked-to-smart-meters/20111107-1n2jz.html>

The Australian Metropolitan Fire Brigade launched an official investigation into fires, linked to Smart Meters (November 2011). They ordered **“all firefighters to report fires, where smart meters are present and has advised officers not to allow power companies to take the meters from the scene.”**

Electrical Trades Union again calls for suspension of smart meter rollout

<http://www.heraldsun.com.au/news/more-news/smart-meter-death-fears/story-fn7x8me2-1226285463342>

“The state's electrical union fears someone will have to die before safety concerns about controversial smart meters are addressed.”

New Zealand

Fire Prone Meter Boxes Causing Concern

<http://www.3news.co.nz/Fire-prone-meter-boxes-causing-concern/tabid/423/articleID/159133/Default.aspx#.UpWWco0kNFU>

“Front line firefighters are concerned about the number of household power meter boxes that are bursting into flames. “

“There have been 67 callouts in Christchurch to electrical malfunctions so far this year, and new smart meters have been involved in three in the last five days.”

“Graham Hobbs considers himself lucky. He was woken at 4:30am to find his smart meter on fire.”

"I lifted this up it was still glowing and smoking, and slammed it shut to try and seal it off."

"The following night Kelvin Dixon, who lives nearby, suffered a similar fate."

"I pulled into my drive way and found my meter box on fire great amounts of smoke."

"Mr. Dixon is a registered electrician and says the contractor that sits beneath the smart meter caught fire and melted."

"I have suspicions that maybe the installation the terminals weren't tightened enough."

"It was very dangerous," says station officer Murray Jamieson. "The whole thing burnt out completely, last night's one was a melt down and it was significantly dangerous."

Fire captain finds hazardous power surges follow Smart Meter installations

<http://emfsafetynetwork.org/?p=9013>

"A California Fire Captain came forward to detail how his household electronics malfunctioned repeatedly and two surge protectors melted down after two different Smart Meter installations."

*Although **THOUSANDS** of these stories exist, please see the below link for **hundreds of smart meter/fire stories.***

<http://emfsafetynetwork.org/smart-meters/smart-meter-fires-and-explosions/>

22) FALSE AND MISLEADING CLAIMS OF SAFETY OF MICROWAVE RADIATION AS EMITTED BY SMART GRID AND SMART METERS

*When customers call their utilities with complaints of health effects they are attributing to the smart meters, they are consistently **LIED TO** by the utilities regarding even the possibility of health effects from smart meters or smart grid.*

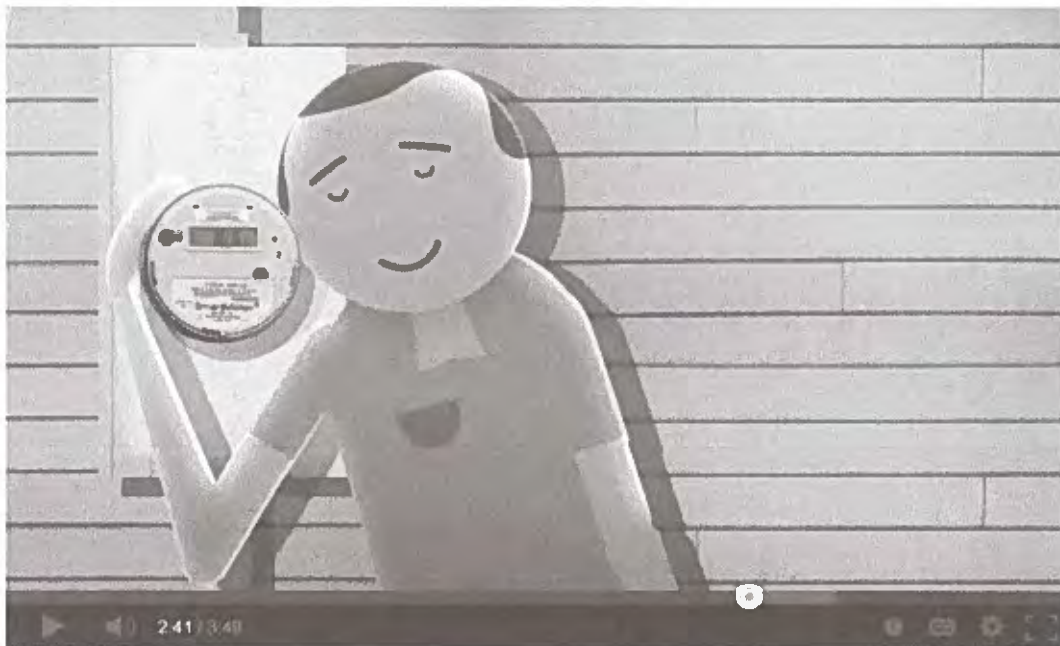
The Problems With Smart Grids

<http://www.counterpunch.org/2011/03/18/the-problems-with-smart-grids/>

“Utilities don’t release numbers for peak pulses, but one estimate by Southern California Edison – since voided for P.R. reasons – **puts peak pulses at 229,000 microwatts per square centimeter at eight inches from the transmitter.** That means if you sleep next to a wall with a smart appliance on the other side, strong UHF signals could be spiking several times a minute all night long – right into your brain.”

The Truth About Smart Meters

http://www.youtube.com/watch?v=Nij-_gAMj-4&feature=youtu.be



Separating the Facts from the Fiction about Smart Meters

 SmartGridCC · 4 videos

49 155

The above picture, picture and accompanying video was produced by SGCC, Smart Grid Consumer Collaborative, (pretty much a 100% industry organization despite the name) clearly misleads the consumers into thinking getting this close to a smart meter is actually

okay to do. All smart meters clearly state not to get within 20 cm (approx. 8 inches) of it or you will exceed those already un-protective FCC standards on radiation exposure. Not only that but the video flat out LIES about granular information the smart meter can in addition to misleading about bill increases with smart meters.

The Stealth Meters: Analog Meters with Hidden Transmitters

<http://www.eiwellspring.org/smartmeter/StealthMeters.htm>



Analog meter with hidden PLC transmitter. The serial number has been blanked out to protect privacy.



A General Electric meter with a PLC transmitter mounted on the bottom. The green circuit board can be seen. The Turtle logo on the white label identifies the meter as a PLC transmitter. The white label has a bar code on it, which is blanked out for privacy.

The above picture shows the lengths utilities and possibly even manufacturers will go to mislead consumers into thinking they have a safe analog meter when in fact what they have is a “Trojan smart meter” or a hidden smart meter disguised with an analog facade.

Utilities Lying About Smart Meters:

<http://smartmeterwarnings.wordpress.com/2011/11/10/utilities-lying-about-smart-meters/>

Do the radio waves that transmit the smart meter data pose a health risk? Answer: “No, they do not. The radio frequency (RF) power density from smart meters is minimal – about one one-thousandth as much as a typical cell phone. In fact, smart meters operate well below the Federal Communications Commission’s adopted Maximum Permissible Exposure (MPE) limits for radio transmitters of all types, smart meters included. Plus, the smart meters are on the outside of your home. And each smart meter is only ‘on’ for a minimal portion of the day – a maximum of 100 seconds total – to regularly communicate your energy consumption data.”

San Francisco resident Amy O’Hair has a radio frequency meter and decided to check up on the utility claims. “Remember, the crappy science methods of the utilities mean that they ‘time-average’ the RF—meaning something like if you have a 3-millisecond pulse of 100 microwatts/CM², followed by 5,997 milliseconds of no RF, they call that 6 seconds of 0.05 microwatts/CM² of RF energy. **When they say the meter only emits ‘45 seconds per day’ they don’t tell you that means 15,000 pulses. Only when you yourself measure can you discover the truth behind these shady and dangerous deceptions.”**

According to the Youtube video of Amy's meter readings Smart meters at close range emit 5-40 microwatts of RF radiation per centimeter squared. **Standing next to a cell phone tower her readings were about 5 times less. If your apartment is behind the bank of meters for the entire apartment, you are getting bombarded with 30-200 watts/cent sq. according to her meter, and because the pulsing overlaps it is nearly a constant radiation.**

EPB Electric Power: Smart Meters

<https://www.epb.net/power/home/products/smart-meters/>

The below questions were being asked of energy provider, EPB and COUNTLESS utility companies across the nation:

Do the radio waves that transmit the smart meter data pose a health risk?

Answer: "No, they do not. The radio frequency (RF) power density from smart meters is minimal – about one one-thousandth as much as a typical cell phone...Plus, the smart meters are on the outside of your home."

Clearly, EPB was attempting to mislead the consumer into a false sense of security by implying that since the smart meter was located on the outside of the home, they were safe as the signals they were worried about would not be able to "get them" if they are inside the home. Nothing could be further from the truth, as radiation of course goes through walls and signal strength and frequencies are even used as selling points when manufacturers advertise their smart meters:

Silver Spring Networks:

<http://tinyurl.com/mohdaex>

"Radios offering the highest permissible power to penetrate walls, basements and other "hard-to-hear" areas"

"900 MHz provides superior propagation characteristics, allowing the signal to travel longer distances and penetrate obstructions better"

Additionally, as we see in the Santa Cruz Dept. of Public Health study, Dan Hirsh's graph of how much radiation is emitted from a cell phone as compared with a smart meter, the smart meter clearly surpasses radiation levels by several orders of magnitude.

The utilities have turned to the FCC to back their stance of “no harm” from smart meters and smart grid. The FCC “safety standards” are based solely on heating or thermal effects, completely and totally void of any and all non-thermal effects from pulse modulation, phase modulation, frequency, low power and higher power density.

Although the below example refers only to cell phones, the same theory applies of course to all microwave radiation emitting products and infrastructures.

The Legislators Guide to Warning Labels on Cell Phones and The Layman’s Guide to the Science Behind Non Thermal Effects from Wireless Devices and Infrastructure

http://www.thepeoplesinitiative.org/images/pdf/Home/Non_Thermal_Paper_10-10_AAA.pdf

NON-THERMAL...A PUBLIC POLICY DEFINITION AS OPPOSED TO A SCIENTIFIC DEFINITION

Regarding cell phone microwave radiation transmissions: It is important to note that when we use the term “**non thermal**”, we are only referring to levels below 1.6 W/kg (**watts per kilogram of tissue**) since that is the number by which the FCC has set our current health and safety standards. This threshold for health effects was set by the FCC with consult from **industry associations.**”

“According to our government agencies, anything over 1.6 W/kg is in danger of heating or thermal effects. Anything *under* 1.6 W/kg is according to our government agencies, “*non-thermal*” and *not* in danger of heating or thermal effects, therefore, supposedly not a threat to human health. Thermal energy is created by the oscillation of cells or even the vibration of atoms. Technically the term “non-thermal” could mean no heat, or no vibration of atoms. However, when used in the context of EMF, the term non-thermal refers to “no temperature rise”. **Some scientists believe *all non-ionizing radiation is thermal, even at very minuscule levels, because the cells are oscillating or atoms are vibrating, thereby generating a certain amount of heat even if it is infinitesimal.***”

“Additionally, there are **properties or characteristics** of the transmissions or radio waves that are also considered to be **non-thermal, but highly toxic and potentially deadly**. Some of these non-thermal properties are discussed in this paper and can be considered to be **in a different category than temperature**. **They are simply parts of the way the information on the radio wave is delivered to our bodies.**”

“The most important thing to understand throughout, is that regardless of what is considered

thermal and non-thermal, there are biological and health effects found far *below* the threshold of 1.6 W/kg, that the evolution of this technology is advancing very fast with absolutely no regard for the impact on human health, **that there are characteristics of the transmissions that can be considered in a different category than heat altogether and that the current SAR safety standards do not account for any of this and do not protect human health from a myriad of deadly health effects and illnesses, including cancer and genetic damage. So this means either heat is found below 1.6 W/kg, or there is something else going on in the transmission that is unrelated to heat that is causing the biological and health effects, or both. We address both of these non-thermal issues in this paper.**"

Thermal Vs Non Thermal Debate (*A red herring*)

<http://sagereports.com/smart-meter-rf/?p=328>

Magda Havas, BSc, PhD

- .1 Thermal vs. Non-thermal Debate.** The thermal vs. non-thermal debate is largely a **red herring** that has been perpetuated for decades and has influenced the type of research done in the United States. The FCC standard is based on a **thermal** effect. It was originally based on the amount of radiation that would heat an adult male in the US military exposed to radar. While the heating effect is not disputed, **biological effects, some of which have adverse health consequences, occur well below the thermal guideline (Inglis 1970).** As a consequence various countries in the world are opting for a **"biologically"** based guideline rather than a **"thermal"** guideline, **which takes into account not only adult males in peak physical conditions but children, pregnant women, the elderly, and those who have developed electrohypersensitivity (EHS).** I will return to the concept of EHS later.

Non Thermal Effects and Mechanisms of Interaction Between Electromagnetic Fields and Living Matter

http://www.icems.eu/papers/ramazzini_library5_part1.pdf

Dr. Livio Giuliani: **"A Fairy Tale"**

"We know very well the interaction between electromagnetic fields and living organisms: it is thermal interaction. Thus the standards internationally accepted to protect workers and the public are adequate. "

"This is a fairy tale. Since the 1970s the non thermal effects of electromagnetic fields on living organisms has been investigated. Nevertheless until today we have been

condemned to listen to representatives from international institutions repeating the same old refrain above.”

23) Smart Grid and Smart Meters Violate FTC Act of the Federal Trade Commission

<http://www.federalreserve.gov/boarddocs/supmanual/cch/ftca.pdf>

“An act or practice may be found to be Unfair where it “causes or is likely to cause substantial injury to consumers which is not reasonably avoidable by consumers themselves and not outweighed by countervailing benefits to consumers or to competition.”⁸ A representation, omission, or practice is deceptive if it is likely to mislead a consumer acting reasonably under the circumstances and is likely to affect a consumer’s conductor decision regarding a product or service.”

“The standards for unfairness and deception are independent of each other. While a specific act or practice may be both unfair and deceptive, an act or practice is prohibited by the FTC Act if it is either unfair or deceptive.”

Smart grid certainly injures consumers and certainly consumers are unable to avoid both the dirty electricity that smart meters and smart grid put onto the electrical wiring throughout the home and entire neighborhood that is within the smart gridded area, in addition to the pulsed RF microwave emissions that is also inescapable, no matter where the customer goes and in most cases, even if they opt out.

Customers have been CONTINUALLY and CONSISTENTLY misled in the areas of health effects, over billing, fire hazard and the privacy aspect of smart grid and smart meters.

24) FALSE AND MISLEADING CLAIMS OF ENERGY SAVINGS/SMART APPLIANCES AND ENERGY STAR AS HOAX TO GAIN TAX PAYER DOLLARS

Smart meters are appliances that run 24/7, that you CANNOT SHUT OFF, as is the case with ALL Smart appliances. The smart meters running 24/7 on every appliance in the home or

*office, including the meter on the structure used to measure all the other HAN (home area network) smart metered appliances, will account for an enormous INCREASE in electricity usage that did not exist prior to the introduction of smart meters and smart metered appliances! Analog meters in contrast, use an infinitesimal amount of energy, relying primarily on the magnetic fields of electricity usage to spin. **The consumer ends up footing the bill for the smart meters and smart appliances extra energy usage! This is something that has been TOTALLY unaccounted for in industry and government calculations when talking energy conservation – one of the primary selling points the government has used to push this violating program on the public. If we have approx. 314 million people in the US, or approx. 100 million households, plus another 30 million businesses, all with their own smart meters, plus the smart grid metering infrastructure, all of which have is required to run its devices 24/7, this is an increase use in energy that is simply STAGGERING when comparable to what the analog meter used. This may account for part of why most consumers see enormous bill increases and also energy usage increases upon installation of a smart meter. Think about it...ANY appliance that is left on 24/7 is an energy “vampire”.***

The extremely clever manufacturers vying for free public tax payer funds on the federal stimulus give away also came up with this ingenious master plan:

Smart Appliances and Energy Star As Hoax To Gain Tax Payer Dollars

<http://stopsmartgrid.org/wp-content/uploads/2013/11/Smart-Appliances-and-the-Energy-Star-Hoax-1A.doc>

“Energy Star appliances, sold to the public and Congress as using less energy, less carbon emissions and less utility bills, in many circumstances actually consume MORE energy than NON Energy Star appliances. This is no accident. This exception for Energy Star to be able to consume more energy than other appliances and still receive tax credits was actually LOBBIED for by Energy Star Manufacturers.”

“Smart appliance manufacturers lobbied for an allowance for their products to be able to increase energy usage, but be able to qualify for the federal discount program. Thus the Energy Star rating is actually a hoax to enable Energy Star product producers to receive US citizen tax payer money while in fact exceeding energy usage when compared with non-Energy Star appliances”

Smart grid and smart appliances in connection with Energy Star are NOT MORE energy efficient

“The rollout of Smart Appliances poses a challenge for manufacturers and policy makers because they are more expensive and may consume more energy than non-smart appliances because of the additional functionality. The more expensive piece is usually not a challenge for policy makers as they have the ability to write energy efficiency legislation that provides either tax credits or grants and programs to consumers to subsidize the cost. These incentives spur sales. The problem? For decades now, these subsidies are only given to products that achieve the “Energy Star” designation.”

“In order to resolve the problem of the “Energy Star” designation, the Association of Home Appliance Manufacturers (“AHAM”) proposed that “Smart” appliances be given a “5% Connected Allowance”. What this allowance does is allows smart appliances to consume more energy than non-smart appliances and still get an Energy Star designation and qualify for the financial incentives.”

“The problem with this “connected allowance” is that a smart appliance on its own does not save energy or provide energy efficiencies. It needs to be coupled with other smart paraphernalia, such as a “Home Energy Controller” unit, utility programs *and* be used by the consumer (many appliances have override features).

So in reality, this is a hoax. If the consumer buys the smart appliance and uses it like a non-smart appliance i.e., doesn’t sign up for a utility demand response program, have the Zigbee enabled HEMS (Home Energy Management system – a Zigbee enabled platform which acts as a conduit between the smart appliances and smart meter) or have other energy using smart paraphernalia such as a smart meter paraphernalia or set the delay features, etc.), taxpayers will be subsidizing a device that actually uses *MORE* energy.”

“The Department of Energy and the EPA jointly run the Energy Star Program. They are therefore colluding in this hoax as they just approved this 5% connected allowance in the new Energy Star requirements for refrigerators/freezers. Policy makers are also in on the hoax as there appear to be many energy efficiency bills in process to allocate funds through grants to incentivize the purchase of smart appliances.”

“The Association of Home Appliance Manufacturers (AHAM) got together in 2010 and developed a joint resolution to petition the EPA (who jointly runs Energy Star with the Dept. of Energy) to give smart grid ready appliances a 5% credit. Their smart grid policy statement can be found here:”

<http://www.aham.org/industry/ht/d/sp/i/46155/pid/46155>

"AHAM believes that in order for the Smart Grid to be successful, there are three essential requirements for the Smart Grid's interaction with consumers:

- 1. Pricing must provide incentives to manage energy use more efficiently and enable consumers to save money.**

2. **Communication standards must be open, flexible, secure and limited in number.**
3. **Consumer choice & privacy must be respected; the consumer is the decision maker.**

AS THIS ARTICLE AND DOCUMENT ATTEST, NONE OF THE ABOVE OBJECTIVES HAVE BEEN ACCOMPLISHED.

The joint resolution was sent to the EPA in Jan 2011 to petition them for a credit,

<http://www.aham.org/ht/a/GetDocumentAction/i/51594>

The Joint Stakeholder Proposal

1. **The Joint Proposal is to provide a five percent credit to the energy performance level required to meet ENERGY STAR eligibility criteria for the smart-grid enabled appliances that are included in the Joint Proposal, which includes residential refrigerator/freezers, clothes washers, clothes dryers, room air-conditioners, and dishwashers. A five percent credit means that smart appliances would be allowed to use five percent more energy than non-smart products that earn the Energy Star designation.**

“If you look at the presentation the EPA did on July 25 2011 and go to pages 30-37 where they deal with the smart grid, you will see on page 33 the "hoax". “

https://www.energystar.gov/products/specs/system/files/V5.0_Specification_Framework_Presentation.pdf



Smart Grid Allowance: An Illustrative Example



	Current ENERGY STAR (kWh/year)	Smart Grid Functionality Allowance (kWh/year)	ENERGY STAR with Smart Grid (kWh/year)
Top-Freezer (18 cu-ft)	387	19	406
Bottom Freezer (21.5 cu-ft)	462	23	485
Side-by-Side (23.5 cu-ft)	561	28	589
Upright Freezer (16 cu-ft)	601	30	631

EPA requests stakeholder comment on this proposed approach to facilitating the deployment of smart grid functionality in refrigerators and freezers, including EPA's intent to propose a 5% allowance for refrigerators and freezers with smart grid functionality and highlight products with this functionality on the QPL.



"It is a "hoax" because they will be allowing smart grid capable appliances, which actually consume **MORE** energy, to get the Energy Star designation based on the "POTENTIAL" to reduce energy and peak load demands. The California Association of Investor Owned Utilities, which includes PG&E, argued against this credit – rightfully so..."

https://www.energystar.gov/products/specs/sites/products/files/California_IOUs_Comments_V5_Refrigerator_Framework.pdf

"...the financial benefits and peak demand savings of smart, DR capable appliances will depend on a number of unknown future factors, such as: The number of demand reduction events, the percent of customers who can receive DR signals and act upon them using smart products or other means, the percent of customers who are willing to shift loads or otherwise curtail demand, and the percent of load shifted for a particular appliance."

"Bottom line, we could be subsidizing someone buying a smart appliance but does not use the smart features and therefore does not result in energy savings or reduction of peak loads."

The EPA went on to approve the 5% credit in it's newly issued Energy Star specifications on May 31, 2013 to take effect in 2014.

<https://www.energystar.gov/products/specs/sites/products/files/ENERGY%20STAR%20Final%20Version%205.0%20Residential%20Refrigerators%20and%20Freezers%20Specification.pdf>

As stated in this article, they will use the energy star rating to encourage these smart connected appliances:

<http://www.fiercesmartgrid.com/story/epaenergy-star-appliances-encourage-smart-grid-functionality/2013-07-02>

References

SmartGrid.Gov – The Smart Home - http://www.smartgrid.gov/the_smart_grid#smart_home

Pacific Northwest National Laboratory, Use of Residential Smart Appliances for Peak-Load Shifting and Spinning Reserves Cost/Benefit Analysis REPORT, December 2010
<http://www.aham.org/ht/a/GetDocumentAction/i/51596>

June 28, 2010 presentation by Chuck Goldman, Lawrence Berkeley National Laboratory, at the Mid-Atlantic Conference of regulatory Utility Commissioners “Smart Grid – Metering, Cost recovery, Demand Response”
<http://smartresponse.lbl.gov/reports/ma-meters062510.pdf>

Demand Response Enabled Appliances – Key to the Smart Home, David Najewicz
General Electric Consumer and Industrial , June 8 2009, Santa Clara CA
http://eetd.lbl.gov/sites/all/files/connectivity_week_najewicz-web.pdf

INITIAL COMMENTS OF NORTHEAST UTILITIES EXECUTIVE SUMMARY

http://haltmasmartmeters.org/wp-content/uploads/2014/01/NSTAR_R12-76-Comments-7986-POSTED01172014_HIGHLIGHTED.pdf

“...customers value price and reliability above all else and the implementation of AMI serves neither of these objectives.”

“An Advance Metering System is not a “basic technology platform” for grid modernization and is not needed to realize “all of the benefits of grid modernization.”

“The Department identified four objectives for grid modernization, all of which can be achieved without the implementation of an advanced metering system.”

“Meters do not reduce the number of outages; metering systems are not the only option for optimizing demand or reducing system and customer costs; and metering systems are not necessary to integrate distributed resources or to improve workforce and asset management. Therefore, it is not correct that advanced metering functionality is a “basic technology platform” that must be in place before all of the benefits of grid modernization can be fully realized, as the Department suggests.”

“Accordingly, not only is there a flaw in the Department’s premise that an advanced metering system is a “basic technology platform” for grid modernization, but also the implementation of a costly, advanced metering system is at odds with policies designed to promote the growth of distributed energy resources.”

“...Northeast Utilities consistently raised the concern that the costs associated with AMI are currently astronomical, while the incremental benefits for customers are small in comparison.”

“The decision to implement AMI goes against the best business judgment of the Companies and cannot be rationally cost justified in terms of a net benefit for the overall customer base that will pay for the investment over the long term.”

“...there is no cost justification that can support the implementation of AMI.”

“Last, but not least, there is little confidence that the incremental benefits of moving to an AMI platform will be sufficient to warrant the cost. “

“There is ample evidence that this technology choice will be unduly costly for customers and that the objectives of grid modernization are achievable with technologies and strategies that rank substantially higher in terms of cost-effectiveness. For customers who will pay the price of this system, there is no rational basis for this technology choice.”

“...there is no rational basis for the implementation of AMI. Among many other considerations, achievement of the Department’s four grid-modernization objectives does not require the implementation of AMI, despite the Department’s suggestion that it does.”

“Meters do not reduce the number of outages; metering systems are not the only option for optimizing demand or reducing system and customer costs; and metering systems are not necessary to integrate distributed resources or to improve workforce and asset

management. Therefore, it is not correct that advanced metering functionality is a “basic technology platform” that must be in place before all of the benefits of grid modernization can be fully realized, as the Department suggests.”

“Accordingly, not only is there a flaw in the Department’s premise that an advanced metering system is a “basic technology platform” for grid modernization, but also the implementation of a costly, advanced metering system is at odds with policies designed to promote the growth of distributed energy resources.”

“...the incremental benefit of AMI is largely limited to the communications element, which can be addressed in other ways without incurring the cost of the meter. “

“It is also unclear whether the incremental benefits, if any, would begin accruing to customers prior to the implemented AMI platform being rendered obsolete. In any event, the cost remains unjustified by the benefits.”

“Department has in effect created a recovery mechanism for the most expensive grid-modernization technology with the least certain benefits,”

“An Advance Metering System is not a “basic technology platform” for grid modernization and is not needed to realize “all of the benefits of grid modernization.”

25) FALSE AND MISLEADING CLAIMS OF CONSUMER CONTROL AND EROSION OF CONSUMER RIGHTS WITH SMART METERS AND SMART GRID

Not only do vulnerable citizens have no freedom of choice as to whether or not they wish to be exposed to the deleterious biological and health effects that the pulsed microwave emissions smart meters and smart grid emit, which can also dangerously interact with medical device implants, but they also have no control as to who gets to see their electricity, water or gas usage, including granular utility usage, be it government entities, hackers, burglars or adverse actors of any kind.

Consumer profiling

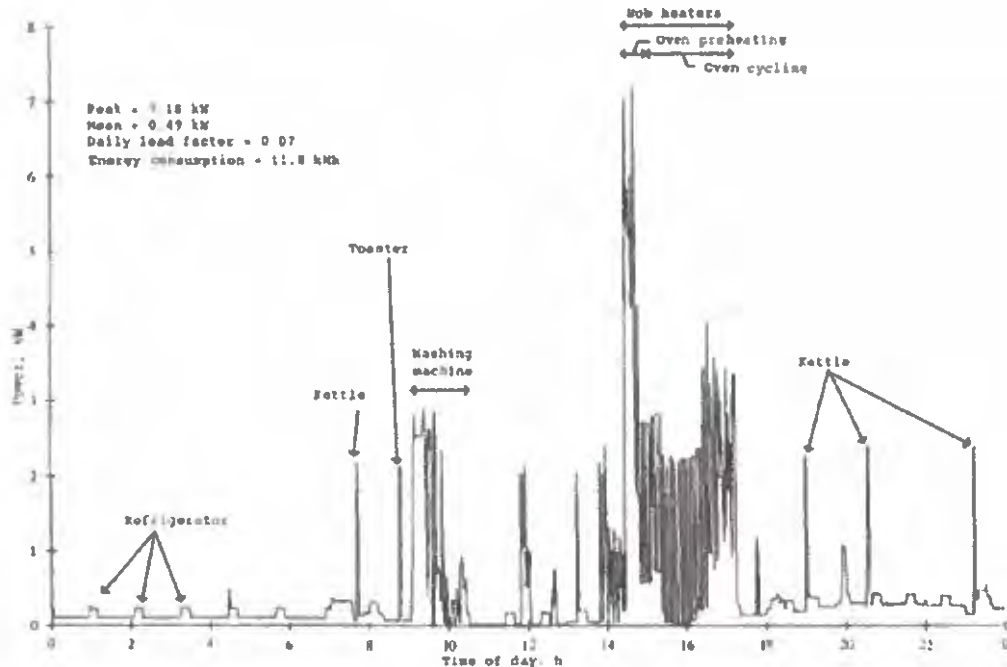


Image: National Institute of Standards and Technology

What appliances were being used, at what time and for how long are clearly visible from the above graph.

Additionally, apparently smart meters also relay significant amounts of private information about the activities of the inhabitants of the home even without the use of the HAN (Home Area Network):

EPB Electric Power

<https://www.epb.net/power/home/products/smart-meters/>

What if I don't want you to have more information about my power consumption?

"Rest assured that you are in control of your power consumption. The information we will be able to access with the smart meters is no different than the information that we are able to access currently."

Will the smart meter be able to tell what appliances I am using in my home?

“Only if you want it to. If you choose to install smart appliances or devices that monitor how much electricity is used to run specific appliances, you will be able to see how much power is being used by which appliances. However, we will not have access to that information unless you want to share it with us.”

Clearly, both of the above statements from EPB are totally false. The following excerpt is from Naperville, Illinois, where an electricity customer had only a smart meter on her home, no HAN (home area network) connected and sent her information to another person – a non utility employee – in other words, a layman. This layman was able to deduce exact activity within the customer’s home down to the minute...

Naperville Smart Meters Keep Track of Household Activates Down to the Minute

<http://thetruthaboutsmartgrids.org/2013/10/03/smart-meter-data-reveals/>

“The granular energy usage data for the first page of the document I had been sent was for April 26, 2013. I scanned it for a few seconds and noted clear patterns in the numbers (and without initially graphing the information) wrote the following message to the Naperville resident:”

“Incidentally, for example, it appears on April 26, you got up pretty early? You have increased energy usage starting at about 4:30 am. Do you [normally] get up that early? Particularly high usage from 5:45 am to 6:00 am. ... Then it looks like no one was home from about 8:30 am until 3:00 pm. You likely went to bed about 10:15. Does that sound about right?”

The resident wrote back and was quite shocked at what I was able to deduce from just a quick scan of the information I had been sent.”

*All this is **WITHOUT** the HAN (home area network)!!*

*Further erosion of consumer control are **remote disconnects**, which also come with large fees paid to the utilities when consumers have their utility disconnects reversed. This is not only a cash cow for the utilities but a brand new unnecessary financial burden to consumers. However, there are other even bigger problems with remote disconnects:*

In addition to opt outs being a fraud, customers will also be and are now, at the mercy of dishonest utility companies lying about the frequencies, power densities, pulse modulations, everything having to do with smart meter emissions will be 100% up to the utility, leaving the customer 100% in the dark about their exposure to these harmful emissions.

Power Shut Offs Increase with Arise in Smart Meters

http://abclocal.go.com/kgo/story?section=news/7_on_your_side&id=7555472

“Family dies due to house fire from candles after remote disconnect by PG@E. Pages remote disconnects surged the amount of disconnects by approx. 10 fold, from 4,300 before smart meter installation, to 53,000 after smart meter installation.”

Jump in Service Disconnections Sparks Move by California

<http://articles.latimes.com/2010/feb/05/business/la-fi-puc-disconnect5-2010feb05>

“PUC members said they were alarmed that growing numbers of recession-racked Californians were getting their lights turned off because they couldn't pay their bills. What's worse, they're getting hit with disconnection and reconnection fees that range from \$270 to \$681, the PUC said.”

If we take the equation of 53,000 shut offs – 4,300 shut offs = 48,700 more shut offs per year, then multiply that by the average amount of a re-connect fee which according to the below article is approx. \$425, this means \$425 re-connect fee x 48,700 extra shut offs per year = \$20,697,500.00 extra income for PG@E and loss of funds for PG@E customers. Remote shut offs are a cash cow for the utilities and an enormous financial liability for customers.

Also from the report, nearly 50% of the shut offs were for low income families.

Other burdensome and life threatening impact of remote disconnects have been documented as follows:

Remote Disconnections – An Erosion of Customer Rights

AARP, National Consumer Law Center and Public Citizen Comments to: DEPARTMENT OF ENERGY Smart Grid RFI: Addressing Policy and Logistical Challenges

http://energy.gov/sites/prod/files/oeprod/DocumentsandMedia/AARPNCLCPublic_CitizenCommentsDOE1101.pdf

“Smart meters have been touted by industry proponents as offering the benefit of remote disconnection. From a consumer perspective, this is not a benefit but rather an erosion of fundamental consumer rights.”

“When a CMP worker physically visits the premises to disconnect the power it not only reduces the chance of a wrongful disconnection, it also gives a non-paying customer one last chance to pay and avoid the dark. These benefits and protections vanish with AMI.”

“Particularly in hot summer or cold winter areas, or those who have medical devices or must keep the temperature at a certain level because of health problems, the risk to human life is substantial.”

“What if people cannot pay their bill during hot or cold weather? What if elderly people who have become forgetful, forget to pay their bill? What if there is a mistake? There may be no second chance when the power is disconnected. A simple check by a human can remind someone to pay the bill, or give information on financial help to pay the bill, or verify that it is the right address. “

“Residential customers who are remotely disconnected without a last chance to make payment arrangements, or who shut themselves off with no utility contact (when their prepayment card runs out of funds) are at great risk in terms of health and safety.”

“A recent investigative news report from Texas (where deregulated electricity commodity vendors can offer service on a pre-paid only basis) tells of vulnerable pre-payment electricity customers being cut off without notice...A paraplegic who requires air conditioning to maintain a safe body temperature lost his electricity on days when the temperature exceeded 100 degrees.”

“A heart failure patient who needed power for an oxygen machine was cut off twice by her pre-payment meter in one summer.”

“The risks of disconnection by remote control or by automatic action of a pre-payment meter or service limiter are also shown in the case of a 90-year old Michigan man who froze to death in his own kitchen last winter. When he was found, there were funds to pay for his bill on the table. But he had missed a payment and the utility had installed a service limiter. When the service limiter tripped, the gentleman could not or did not know how to reset the limiter.”

“Customers whose utilities are disconnected have died from hypothermia, from fires set by candles used for lighting in the absence of electricity, and from other consequences of loss of power. The concern of consumer advocates over the dangers of involuntary remote controls on household usage cannot be overstated.”

And with a remote shut-off, what are the possibilities of the signal going to the wrong house? With potential for mistakes, especially with this wirelessly involved system, the wrong household pays the consequences.

There are too many ways for this system to fall apart and harm people, especially with utility companies that already exhibit a disregard for the public's welfare or have difficulty with existing record-keeping. It's just too easy to flip a switch back at the head office.

However, of much greater impact is the threat of intentional disconnection by really anyone with little or great technical know-how, whether on purpose or by accident. They could disconnect an individual home, a neighborhood, a city, a region, or our nation. The cost of injury and death, and damage to our society is beyond calculating.

If the goal of the government truly was to promote energy reduction, it would simply give citizens a simple measurement instrument that costs around \$20 and give them free online access to their power consumption, which since the roll out of smart meters and smart grid, has been completely dismantled.

Google Power Meter

http://en.wikipedia.org/wiki/Google_PowerMeter

"Google PowerMeter was a software project of Google's philanthropic arm, Google.org, to help consumers track their home electricity usage.^[1] ...It was launched on October 5, 2009 and ended on September 16, 2011.^[2]"

"The software was designed to record the user's electricity usage in near real-time."

Lower energy usage could also be incentivized through lower rates for lower energy usage, plain and simple. Thus we are forced to believe that lower energy usage is not the true goal of smart meters or the smart grid. However, there are other more nefarious uses of smart meters and smart grid that WOULD require this type of metering system...

Smart Meters Are An Even Larger Threat Than I Had Thought: A More Detailed Consideration of Smart Meters' Microwave Technology, and Its Threats to Health and Civil Liberties

<http://www.non-toxicnurse.com/smart-meters-are-an-even-larger-threat-than-i-had-thought-a-more-detailed-consideration-of-smart-meters-microwave-technology-and-its-threats-to-civil-liberties/>

Remote Customization Capabilities of Smart Meters: Paving the Way for the Age-Old "Bait and Switch" Tactic

“In an effort to win community approval of smart meter roll-outs, the power industry can install smart meters that do not have their 2.4 GHz HAN capabilities activated at the time of installation. These meters do however contain the internal Zigbee chip/RFR transmitter. Therefore, at a later date, when citizen concern regarding the exact operating frequencies of the smart networks has died down, the utility company can proceed with remotely activating the 2.4 GHz ZigBee RFR transmitters inside the smart meters. Citizens not in possession of RF meters and the time or desire to supervise the operating habits of their smart meter, will be none the wiser. Therefore, citizens need to be aware that electric companies that claim their smart meters will be operating only at the 900 MHz frequency – which is also, contrary to public knowledge, biologically harmful - just as all RF frequencies are, are typically misleading the public and again, the utilities are using deceptive business tactics in order to ensure roll out of smart grid and therefore reap citizen tax payer funds, offered by the federal government for full service area smart meter and smart grid penetration.”

26) “TIME AVERAGED” MISLEADING REGARDING SMART METER AND SMART GRID MICROWAVE EMISSIONS

“Time-averaging” RF pulses emitted by smart meters or smart grid is a mathematical method the utilities and their pundits use to mislead the public into thinking not much is happening in terms of RF exposure. Instead of providing the true maximum, or “peak” power, of those RF pulses, time-averaging takes the time intervals of the pulses, and averages it with the intervals of time when the meter is not pulsing; an example would be to fire a gun ten times in a day, then average the intervals of the actual firing of the gun with all the time when the gun not fired. The resulting number for impact or pounds per square inch or velocity is meaningless, a junk number. It is designed to lessen the impact of the firing of the gun in the mind of the person looking at the numbers, when in reality, firing a gun is firing a gun. It is only the split second of the gun firing that matters, not the time in between when the gun is not fired. The mere act of firing the gun into human flesh causes the harm, not the time when the gun is not fired into human flesh.

PG@E Understanding Radiofrequency (RF)

<http://www.pge.com/myhome/edusafety/systemworks/rf/>

“Consider that SmartMeters™ transmit only about 45 seconds a day”

Although the above statement turned out to be false, what the utilities do not tell customers is that those few minutes are not all at once, they are divided up into thousands of powerful millisecond bursts, 24/7, spread out all through the day so the customer is essentially pummeled all day long by bursts of harmful radiation. The below confession to the CPUC by PG@E (after keeping this information from customers) shows the actual amount of pulses emitted throughout the day for any given smart meter.

PG&E's Big Confession

<http://emfsafetynetwork.org/?p=6030>

"PG&E says the average number of RF pulses for the electric meter would be about 9,900, per meter, per day and the maximum number over 190,000". See below page from PG@E CPUC filing.

PACIFIC GAS AND ELECTRIC COMPANY'S RESPONSE TO ADMINISTRATIVE LAW JUDGE'S OCTOBER 18, 2011 RULING DIRECTING IT TO FILE CLARIFYING RADIO FREQUENCY INFORMATION

http://emfsafetynetwork.org/wp-content/uploads/2011/11/PGERFDataOpt-outalternatives_11-1-11-3pm.pdf

Question 2:

How many times in total (average and maximum) is a smart meter scheduled to transmit during a 24-hour period?

Response 2:

Electric: Table 2-1 presents scheduled electric SmartMeter™ system messages and their durations. As noted in Response 1, the information presented applies only to the 900 MHz radio. Table 2-1 presents data for all “scheduled” messages; i.e., those inherently required to sustain communications in the network that occur routinely without user intervention. “Non-Scheduled” messages created only at non-recurring times are addressed in Response 3.

TABLE 2-1

Electric System Message Type [a]	Transmission Frequency Per 24-Hour Period:	Transmission Frequency Per 24-Hour Period:
	Average [b]	Maximum (99.9 th Percentile) [c]
Meter Read Data	6	6
Network Management	15	30
Time Synch	360	360
Mesh Network Message Management	9,600	190,000
Weighted Average Duty Cycle	45.3 Seconds⁴	875.0 Seconds

The electric system message types are defined as:

- Meter Read Data refers to the messages generated by each meter to transmit energy usage data.
- Network Management refers to network tasks that need to be performed to maintain the health of the network (e.g., route establishment).
- Time Synch refers to network administration messages needed to update the internal clock in the NIC.
- Mesh Network Message Management refers to activities required to forward routed messages.

Gas: Table 2-2 presents scheduled gas SmartMeter™ system messages and their durations.

TABLE 2-2

Gas System Message Type [a]	Transmission Frequency Per 24-Hour Period:	Transmission Frequency Per 24-Hour Period:
	Average [b]	Maximum [c]
Meter Read Data	4.228	4.305
Weighted Average Duty Cycle	0.676 Seconds	0.689 Seconds

⁴ As stated in Response 1, a small number of electric SmartMeters™ communicate somewhat longer than 45 seconds-per-day, which resulted in an overall mean duration of approximately 62 seconds.

27) FALSE AND MISLEADING CLAIMS OF FINANCIAL SAVINGS AND RAMPANT, UBIQUITOUS OVER BILLING

SMART METERS BRING NO SAVINGS BUT SUBSTANTIAL COST INCREASE TO CONSUMER

<http://www.ocregister.com/taxdollars/strong-478754-sce-smart.html>

“After studying SCE's plans to deploy the meters, three analysts said that economic benefits to consumers have not necessarily been accruing at the rate Edison promised, some may be delayed and others may be lost all together.”

“...the program may cost more than initially projected and the consumer may receive less savings.”

“The SmartConnect business case implicitly included post-deployment costs of \$1.582 billion in addition to the explicitly approved deployment costs of \$1.634 billion,” the study said.”

“SCE customers in aggregate have so far experienced a revenue requirement increase in excess of \$193.1 million to cover these costs. This is a real cost increase, one which will certainly rise as more meters are purchased and deployed, and as SCE begins to incur post-deployment costs.”

“Total SmartConnect costs paid by customers will actually be more than \$5 billion, DRA said, including post-deployment and financing costs over the 20 year life of the SmartConnect system.”

“...billions of dollars in U.S. federal subsidies for smart meters have been misspent because the technology will not lead to energy sustainability or contribute to the possibility of a more efficient and responsive electricity grid”

Pilot test of ComEd's smart grid shows few consumers power down to save money

<http://www.chicagobusiness.com/article/20110528/ISSUE01/305289982/pilot-test-of-comeds-smart-grid-shows-few-consumers-power-down-to-save-money>

“A new report by independent researchers shows that less than 9% of about 8,000 randomly selected households used their newly installed smart meters to save money by adjusting thermostats or turning off appliances during the afternoon or on hot days. As part of the test, ComEd imposed higher rates or offered rebates during peak- demand hours to encourage

consumers to cut back. Overall, reduced demand from those paying variable rates was “statistically insignificant,” the report says. In a few cases, some households inexplicably used more energy during peak hours when rates were higher...”

“It’s devastating to their plan,” says Susan Satter, senior assistant Illinois attorney general for public utilities. **The report shows “zero statistically different result in usage, compared to business as usual.”**

Connecticut Attorney General warns that the pilot results showed that smart meters had no beneficial impact on total energy usage or bill savings and that the advanced technology is very expensive.

GUARANTEED HIKES

“The bill, which would increase ComEd’s electricity rates to pay for up to \$2.6 billion in new equipment over the next decade, is near veto-proof approval by the Illinois General Assembly, despite strong opposition from consumer interests...” Overall, reduced demand from those paying variable rates was “statistically insignificant,” the report says. In a few cases, some households inexplicably used more energy during peak hours when rates were higher, which the report called “counterintuitive”

Skyrocketing water bills mystify, anger residents

<http://www.cnn.com/2011/US/03/01/water.bills.war/index.html>

“Over two months last summer, her family’s monthly water bill, shot up to \$1,805 in July and then \$1,084 in August, leaving a balance due of more than \$3,000. She said in the past her bill has averaged \$200 to \$250.”

‘Smart’ Meters Draw Complaints of Inaccuracy

http://www.nytimes.com/2010/11/13/business/13meter.html?pagewanted=all&_r=0

“In his case, he says it is inaccurately measuring his family’s power use and driving up his bills — some months by as much as 50 percent, to as high as \$320 — since it was installed in December. This, he said, is despite his efforts to cut back on energy use.”

“I’ve done two tours in Iraq, and when I come home I’m getting ripped off by my electric meter,” said Sergeant Robertson, who with his wife, Kim, is raising four children on a tight budget.”

“In Maryland earlier this year, state regulators, aware of the discontent around the country, temporarily blocked a utility’s smart-meter proposal, sighting inadequate planning and the potential cost to consumers.”

Not-So-Smart Meters Overbilling Californians

<http://www.forbes.com/sites/williampentland/2011/05/03/not-so-smart-meters-overbilling-californians/>

“The utility, Pacific Gas and Electric Company, admitted yesterday that about 1,600 so-called “smart meters” had charged customers for phantom power.”

Action 9 investigates smart meter rates

<http://www.wftv.com/news/news/local/action-9-investigates-smart-meter-rates/nSQ2r/>

Christine Strong moved everything into storage since she can't pay the power bill at her one bedroom apartment. One month after Florida Power and Lights installed a Smart Meter, Strong said she got a \$400 bill.

The month before, Strong’s bill was \$52. Strong said she can't afford to see next month's smart meter bill. "I'm being forced out by the new meter," she said.

Germany Rejects Smart Meters

<http://www.greentechmedia.com/articles/read/smart-meters-sluggish-policy-germany-rejects-fast-smart-meter-rollout>

“Ernst & Young’s study found higher costs than benefits for average households. If only customers that received a meter paid for them, it would cost €89 (\$118) per household per year to cover device and installation costs, which is more than the expected monetary benefits.”

Texas utilities admit billing errors with SmartMeters

<http://abclocal.go.com/kgo/story?id=7386817>

“Hundreds of consumers have blamed SmartMeters for overcharges and sudden spikes in their bills.”

“Smart meters over bill consumers from Texas to California.”

Pepco customers find smart meter billing abnormalities

<http://www.wtop.com/41/3189937/Pepco-customers-find-smart-meter-billing-abnormalities->

“Two major utilities in Texas have confirmed that some customers received inaccurate and sometimes inflated bills after turning to SmartMeters to measure their energy usage.”

“Hundreds of consumers have blamed SmartMeters for overcharges and sudden spikes in their bills.”

“Patricia Driscoll says her family's **bill is up 114% over the same time last year**. She's lived in the house in the North Farm area for 29 years.”

Man disputes \$11,857 bill from PG&E

<http://www.kget.com/news/local/story/Man-disputes-11-857-bill-from-PG-E/CWMFzCRF30-rmQ5ygd2moQ.csp>

“A business owner contacted 17 News after PG&E sent him a bill for nearly \$12,000 for a piece of farm equipment that hasn't been running on any electricity for the past three months.”

“He says this month's bill to run his gyp-silo, a farm silo that mixes calcium into soil, is so ridiculously high, it's comical. In past years, **the electric bills have ranged from \$26 to around \$80, but after a new SmartMeter was installed, that bill shot up to \$11,857.99.**”

Oncor Sued for Fraud Over Smart Meters

<http://www.greentechmedia.com/articles/read/oncor-sued-for-fraud-over-smart-meters>

“After weeks of mounting anger, a class action lawsuit was filed last Friday accusing Oncor of fraud.”

“Skyrocketing electricity bills are crushing innocent Texas consumers as a result of Oncor's installation of 'smart' meters,” the suit proclaims.

“The suit alleges that Oncor is purposely rolling out smart meters in low-income areas first and that smart meters are a ploy for utilities to “line their pockets” in a deregulated market.”

“The Cordts found their bills skyrocketed from \$400 to \$700 a month to \$1,800 after a

smart meter was installed. In three months they racked up nearly \$5,000 in electricity bills.”

Legal challenge to smart meters

<http://calcoastnews.com/2010/12/legal-challenge-to-smart-meters/>

Here in California, residents of Bakersfield filed a class action suit against PG&E for substantial billing increases after smart meters were installed. California Senator Dean Florez, the majority Democratic leader in the Senate, demanded a halt to smart meter installations. **“People think these meters are fraud meters,” said Florez. “They feel they’re being defrauded. They’re getting no benefit from these things.”**

AUSTRALIA

As shown in the chart below, Victorian metering charges increased by approximately \$60 per meter per year after the introduction of AMI cost recovery from customers in 2010 and a projected increase to 125.73 by 2016-2017.^[25]

Annual meter charge increases with smart meter costs in 2010 and projections to 2017 (\$)

Distributor	2005	2006	2007	2008	2009	2010	2011	2012	2013	2015	2016 2017
SP AusNet	17.49	17.49	17.49	17.49	17.49	86.1	93.83	101.02	108.75	117.08	126.04
United Energy Distribution	6.60	6.60	6.60	6.60	6.60	69.21	89.18	99.57	107.62	116.33	125.73
Jemena Electricity Networks	12.87	12.87	12.87	12.87	12.87	134.63	136.7	155.84	159.86	162.34	164.88
Citipower	15.20	15.20	15.20	15.20	15.20	104.79	108.4	93.38	95.26	97.17	99.13
Powercor	17.20	17.20	17.20	17.20	17.20	96.67	105.35	92.72	93.91	95.12	96.34

ATTORNEY GENERAL GEORGE JEPSEN

JEPSEN URGES STATE REGULATORS TO REJECT CL&P’S PLAN TO REPLACE ELECTRIC METERS

http://www.ct.gov/ag/lib/ag/press_releases/2011/020811clpmeters.pdf

“...to replace existing electric meters with advanced technology would be very expensive and would not save enough electricity for its 1.2 million customers to justify the expense...”

“CL&P’s proposal would force the company’s ratepayers to spend at least \$500 million on new meters that are likely to provide few benefits in return,” Jepsen said.

“The pilot results showed no beneficial impact on total energy usage,” Jepsen said. “And, the savings that were seen in the pilot were limited to certain types of customers and would be far outweighed by the cost of installing the new meter systems,”

There are thousands of cases of smart meter over billing in the US. It is yet another RAMPANT issue with smart meters.

28) UNJUST ENRICHMENT AND TRESPASS VIA SMART GRID MICROWAVE RADIATION EMISSIONS

<http://legal-dictionary.thefreedictionary.com/unjust+enrichment>

A general equitable principle that **no person should be allowed to profit at another's expense without making restitution for the reasonable value of any property, services, or other benefits** that have been unfairly received and retained.

Regarding unjust enrichment, we have 2 issues.

- 1) Utilities are profiting via smart grid at the expense of citizen's health and life.
Utilities are profiting via smart grid at the expense of citizen's property rights.

<http://www.cell-tower-leases.com/how-much-does-each-cellular-antenna-lease-pay-in-new-jersey.html>

How Much Does Each Cellular Antenna Lease Pay in NJ?

“A friend of mine has an industrial property in Passaic County, NJ with a cellular T MOBILE flag tower paying \$2000 monthly but his 2nd antenna lease only pays him \$1400 on the same tower.”

Every smart meter is a part of the smart grid, so every owner of every smart meter would qualify for being subject to unjust enrichment by the utilities. However, there are more extreme circumstances whereby the customer is unwittingly being exposed to hundreds of times more microwave pulses than their neighbors are by virtue of being the keeper of a “collector meter” or “Medusa meter”.

ADVANCED METERING – “COLLECTOR METER” OR “MEDUSA METER”

Someone in the neighborhood has the Medusa Meter or the Collector Meter, receiving thousands or millions of more pulses than everyone else. Utilities are not telling neighbors who has this meter, nor are they informing the keeper of the meter whose property it sits on that their property is being used by the utilities to trillions of more pulses of microwave radiation than the average microwave radiation from an average (but also damaging and deadly) smart or wireless meter. The utilities are in effect, using people’s homes and property to carry their telecommunications transmissions, not compensating people for doing so and not informing them of the extra burden of trillions more microwave pulses their meter will be receiving in comparison to their neighbor’s meters.

<http://stopsmartmetersirvine.com/2012/03/03/medusa-collector-smart-meter-ladera-heights-california-and-dead-bees-on-walkway-near-smart-meter-irvine-california/>

“The first sighting ever of a “Medusa” or “collector meter” which I want to share so you know what it looks like. The collector meter is the same diameter as the other smart meters (called relay meters) but it rests on a “cuff” so it extends out more. It contains three antennas instead of two. They call it a “collector” meter because it collects the information from several hundred other smart meters and then transmits that information wirelessly to the utility company. Because it is more “active,” it emits even more radiation.”

Aside from the Medusa Meter, regular smart grid requires the utilities microwave radiation pulses meters to actually trespass onto other peoples property in order to reach its destination to the collector or Medusa meter, then the cell tower and ultimately back to the utility. This calls to mind references from “The Clean Air Act” which prohibit this kind of trespassing onto ones property with ones “dirty air emissions” without the property owners express permission. Perhaps the Clean Air Act needs some updating to include deadly microwave radiation.

The Federal government in collusion with the utilities have rendered many properties uninhabitable. Even if the property owners are currently unaware of the issues of habitability that smart meters and smart grid create within their property, these home owners may see de-valuation of their property depending on if they have a smart meter or if they “opted out” and the utility put a smart meter up on a poll right in front of the “opt out” property in order to retain uninterrupted signal. The utility engorges itself with new smart meter/smart grid fees, rate hikes and opt out fees at the home owners expense.

Required Disclosures When Selling US real Estate

<http://www.nolo.com/legal-encyclopedia/required-disclosures-selling-real-estate-30027.html>

“When selling your home, you may be obligated to disclose problems that could affect the property's value or desirability. In most states, it is illegal to fraudulently conceal major physical defects in your property...”

Smart meters and smart grid clearly create major physical defects within and around the home and neighborhood that has been smart gridded.

Also If a buyer were to have a pace maker or other medical implant, this would be an even more serious situation and cause the seller to lose the sale, or if the buyer were to buy the home, would put the buyers life in very serious jeopardy and potentially expose the seller to legal action for not disclosing his/her new pulsed microwave radiation emitting smart meter, prior to the sale of the home.

29) RECKLESS ENDANGERMENT

RCW 9A.36.050

Reckless Endangerment Law & Legal Definition

<http://definitions.uslegal.com/r/reckless-endangerment/>

Reckless endangerment is a **crime consisting of acts that create a substantial risk of serious physical injury to another person. The accused person isn't required to intend the resulting or potential harm, but must have acted in a way that showed a disregard for the foreseeable consequences of the actions.** The charge may occur in various contexts, such as, among others, **domestic cases**, car accidents, construction site accidents, **testing sites**, domestic/child abuse situations, and hospital abuse. **State laws and penalties vary, so local laws should be consulted.**

Washington State Law, Reckless endangerment

<http://apps.leg.wa.gov/rcw/default.aspx?cite=9A.36.050>

(1) A person is guilty of reckless endangerment when he or she recklessly engages in conduct not amounting to drive-by shooting but that creates a substantial risk of death or serious physical injury to another person.

(2) Reckless endangerment is a gross misdemeanor.

[1997 c 338 § 45; 1989 c 271 § 110; 1975 1st ex.s. c 260 § 9A.36.050.]

The following is an abridged account from one of the plaintiffs in the current lawsuit against Edison for health effects from smart meters.

Edison Meters Suspected In Long Beach Throat Cancer Case

<http://stopsmartmeters.org/2013/03/17/edison-meters-suspected-in-long-beach-throat-cancer-case/>

“I’m not quite sure of the date when a utility worker from the Corix company came to my house to change my old analog electric meter over to the new smart meter.”

“It was not long after that when I started to notice that I had developed a constant ringing in my ears and was always fatigued along with heart palpitations but I couldn’t figure out why I might be having these issues. I went and had my hearing tested and was diagnosed with tinnitus.”

“The way my computer desk was set up put me directly in front of the smart meter- about 4 feet away from where I would sit most of the time.”

“In about May of 2012, after about a month of sitting in front of the smart meter, I noticed on the right side of my neck what looked like a burn. Later my skin looked like it had been cooked. The burn was about 2 inches long by about a half inch wide. Shortly after that I reported it to my doctor at the VA Medical Center and was given Triamcinolone Acetonide Cream to apply. It took close to maybe a month before the burn cleared up but then I started noticing that I was having a problem swallowing pills.”

“After several complaints to Edison to remove the meter I was getting quite desperate and feeling quite ill. The last night before they removed it I could not even sleep in my bedroom which was on the same side of the house as the smart meter approximately 15 feet or so from my bed. I ended up sleeping on the floor that night in the living room.”

“...I did not want anything to do with smart meters or any Trojan horse replacement meters made up to look like analog meters. I asked the Edison installer several times if this was a true analog replacement meter that was not set up for transmitting or collecting information and his exact words were “well it might send out a ping”. I told him if that’s the case then it’s not a true analog meter like the original meter I had before Corix installed the smart meter. At any rate he installed the replacement meter which was made up to look like an analog meter and left.”

“After he left I went on line and did a Google search for the meter the Edison worker had installed and found that it indeed had transmitting and data collecting abilities. Upon discovering that, I was really pissed off that Edison would try to be so deceitful.”

“I went online and found a place where I could buy my own legal analog meter and purchased one. I gave Edison fair notice and asked them to come out and remove it or I would replace it with the one I purchased. In addition I also purchased an Electrosmog meter so that I could measure the EMF’s coming off all my devices.”

“A few days after I sent Edison the letter asking them to remove the Trojan meter which goes by the name of “Landis Gyr + MX Family” at around 9:30 in the evening my ears began ringing really loud. Something told me to check the new Edison meter with my Electrosmog meter and I saw that it was registering for about 20 minutes that the Edison meter was transmitting a signal. The next day I removed the Landis Gyr meter and sent it back to Edison and had an electrician install my replacement meter.”

“After that Edison became very hostile and began to threaten that they would turn off my power. They sent out one of their Revenue Protection agents - a Mr. Anthony Medina who claimed I was stealing electricity because I did not have one of their meters on my house. The new analog meter that I had installed could be easily read and had been calibrated by the factory but I was told it was not acceptable as far as Edison was concerned. Mr. Medina wanted to reinstall the same meter that I had sent back to Edison and I told him that I didn’t want it. He said that he could get an analog meter that would be a non-transmitting meter but that he would have to drive all the way back to his office in Fullerton to get it. He was back in about 30 minutes with the same meter claiming it was different then the first one. I knew he was lying because there is no way he could drive from my house to Fullerton and back in 30 minutes.”

“Edison left me alone for a few weeks and then I got two more threatening phone calls from a woman at Edison threatening now to turn off my power immediately and also a fine for \$250 for tampering with Edison equipment. Shortly after that Mr. Medina came back out and reinstalled the same Landis Gyr + MX meter on my house that I had returned to them. The \$250 fine shortly followed which I paid. I was just tired of fighting with them.”

“I also wrote a letter complaining to the California Public Utilities Commission about the Trojan meter the Landis Gyr+ MX meter that Edison was forcing me to take and I got a reply back from Ana Montes telling me that Edison was not in the wrong and that the meter was perfectly acceptable as far as the CPUC was concerned.”

“...Anyway, when I get home later that evening I was drinking a cup of tea when all of a sudden I spit up what looked like a piece of raw hamburger with blood in it about the

size of quarter. Since it was on a Friday and late in the evening the only thing I could think of was to quickly put the specimen in a small glass jar and freeze it.”

“On Tuesday, November 20th I went to the VA Medical Center in Long Beach CA to the ENT department to see a Dr. Ge, where I dropped off the specimen. When I came back for a follow-up visit on 12/12/12 that was when I got the diagnosis that the specimen was cancerous. So the cancer that I have is at the bottom right side of the back of my tongue the same side as the burn on my neck and has to be treated with radiation and chemo because I was told that it’s too much of a high risk for complications to do surgery on.”

“Well they wanted me to do 35 days of radiation treatments along with one session of Chemo a week. I made it up to day 28 with the radiation before I got sick taking the pain medication which has given me severe constipation. So I have missed my last 2 days of radiation. I will see how I feel next week and try to see if I can complete the treatment. It is really indescribably brutal and there have been a few other patients here who just dropped out because they could not take it.”

“After they make a plastic mesh type mask of your head neck and shoulders each treatment they bolt the mask down with you inside of it to the table. The fit is so tight that when they finish you can see the mesh out lines on my face when they are done. They also restrain both of your hands. The treatments are about 10 to 20 minutes long.”

“Some other down sides to the radiation treatments that I want to mention is that it totally wiped out my taste buds and the sore throat is unbelievable. Knowing that could be a problem they inserted a stomach tube in me so that I can take nourishment by tube feedings. The tube feeding are 6 cans of a liquid formula called Jevity which give me serious heart burn even after one 8 oz can. At first I was taking all my meals by mouth until the third week of radiation when my taste buds just vanished and everything I would try to eat had no taste at all. No matter what I would eat it all tasted the same like eating dry cardboard. It’s not even possible to quench my thirst with a cold glass of water because the water tends to have a chemically, metal after taste to it. It got to the point where I could not even stand the smell of food cooking.”

“My salivary glands are also all dried out so my mouth is constantly dry except for when this other gland in my mouth kicks in. I found out there is another gland in the mouth that also makes spit except the spit it makes is a real thick kind of mucous which it over produces to the point where I am constantly spitting it out to keep from choking on it. That routine goes on all day long everyday. Also, not to mention the constant nose bleeds.”

EVIDENCE – THOUSANDS of Health Effects Reports to Texas and California PUCs

<http://stopsmartgrid.org/evidence/>

Please click on the above link for nearly 2,000 reports of health effects from smart meters and smart grid reported to the California CPUC and approx. 700 reports of health effects from smart meters and smart grid.

For **hundreds** of accounts of **heath effects from smart meters**, please see:
Smart Meter Health Complaints

http://emfsafetynetwork.org/?page_id=2292

“2013 We had a Smart Meter installed on our home. I got sick and two weeks ago had a mini-stroke. We took the meter off our home after sending Central Hudson (our utility company) several sets of documents – detailing my illness and then my hospitalization – and they did nothing and did not even respond to our requests. After my stroke, we ordered an analog meter online and replaced their radiating meter. We video taped it and sent their meter back to them with a letter, along with all the other correspondence we had sent (return receipt and notarized).

The following Monday the electric company came to our home, with no notice nor explanation, and physically, right in front of me, cut our electric lines with a huge pair of clippers!”

30) OPT OUTS, A FARCE AT EXPENSE OF PUBLIC HEALTH AND SAFETY

- A) Opt Outs Are Extortion
- B) Opt Outs Are Discriminatory
- C) Opt Outs Are Fraud and Deceit

With opt out fees citizens are being charged for something that they:

- a) are not getting what they are paying for**
- b) should not be paying for it in the first place**

- c) are already paying for in their bills
- d) are still being forced to pay for smart meters through embedded fee in their bills – even though they don't want a smart meter and are not using one
- e) are in many cases not going to be able to afford and will have to take a pass on.

Public Utilities Code Section 328-328.2

<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=puc&group=00001-01000&file=328-328.2>

Code 328.2(b) **“No customer should have to pay separate fees for utilizing services that protect public or customer safety.”**

Additionally:

Energy Policy Act of 2005

<http://www.gpo.gov/fdsys/pkg/PLAW-109publ58/pdf/PLAW-109publ58.pdf>

“(14) Time-based metering and communications,-(A) Deadline.

Not later than 18 months after the date of enactment of this paragraph, each electric utility shall offer each of its customer classes, and provide individual customers upon customer request, a time-based rate schedule, under which the rate charged by the electric utility varies during different time periods and reflects the variance, if any, in the utility's costs of generating and purchasing electricity at the wholesale level.”

Per the Energy and Commerce Policy Act of 2005, the customer was to be “offered” a smart meter, not extorted when refusing one or have their utilities shut off when refusing one. This is a discrepancy that must be addressed when examining how the utilities were able to cash in on the billions of tax payer cash give away from the federal government. The actions involved in rolling out smart grid were clearly all VIOLATIONS of the bill that enabled the utilities to receive those tax payer funds. Because of this, we believe those funds were gotten through illegal means and should be returned to the US Treasury. Most utilities in the US (Vermont being the only exception) are choosing the tactic of extortion - charging the customer not to invade their privacy or not to harm them with pulsed microwave radiation emitting smart meters. Some customers wealthy enough to afford the “opt out fees” will pay them just to try and save their own health and life, the lives of their children and loved ones. But they are in the end not even getting what they have been extorted for because in most cases they are still being exposed to either their neighbors smart meter or in many cases, a repeater or collector meter is put up where the opt out customer is to “fill the gap” in the grid...in other words, smart grid is blanketed, ubiquitous, pulsed, microwave exposure for

which in reality, there IS NO ESCAPE and therefore nullifying to a large extent the opt out of the citizens who does not wish to risk life and limb for this physically punishing surveillance program.

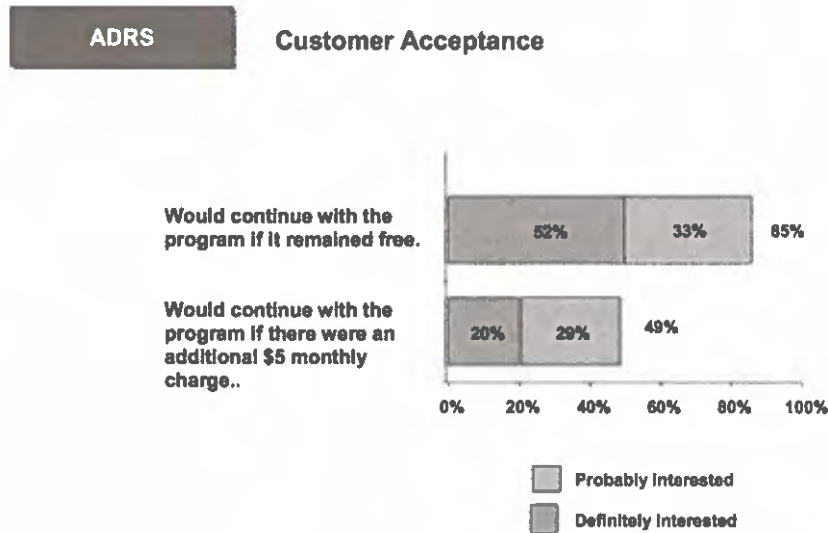
*Although having to pay the utility to spare the customers life or health is not only in the category of extortion, but even if the “opt out” customer allows themselves to be extorted (the other option being having their utilities CUT OFF) the utility still does not deliver what the customer has paid for...to not be exposed to the pulsed microwave emissions. Therefore, the act of charging a customer to “not harm or violate them” by “opting out” of what is by law, a voluntary program is illegal and an act of extortion and fraud and deceit as the customer is clearly NOT getting what they are paying for and **should never have had to pay to retain their Constitutional rights to health, life, liberty and property and privacy in the first place.***

Here is a study that is in the CPUCs possession regarding opt outs and charging customers only a \$5.00 fee. This study clearly shows that by even charging and extra \$5.00 a month, the customer will not engage in the program.

CPUC AND UTILITIES ARE AWARE 80% OF CUSTOMERS WOULD NOT “OPT OUT” IF CHARGED ONLY \$5.00. SO THEY CHARGED \$75.00 TO SEAL THE DEAL. See below chart.

Statewide Pricing Pilot Overview and Results

http://www.nwcouncil.org/media/4505/drrc_presentation.pdf



Source: ADRS Customer Insight: Research Results, Boice Dunham Group, A Report to Working Group III, January 7, 2005.

31) DISCRIMINATION

<http://www.merriam-webster.com/dictionary/discrimination>

“The practice of unfairly treating a person or group of people differently from other people or groups of people.”

*Charging opt out fees to those who are physically in pain or disabled by smart meters is not just inhumane, it is also **illegal and discriminatory**. ([link to health complaints](#))*

The poor are also forced to sacrifice health and safety due to the inability for them to pay the “opt out” fees imposed by utilities when customers do not wish to be exposed to carcinogenic microwave emissions from smart meters nor wish to have their privacy invaded.

NV Energy Admits Lying To Customers and Overt Discrimination Against Low Income and Disabled Residents

<http://www.national-toxic-encephalopathy-foundation.org/lies.pdf>

“NV Energy (NVE) and their contracted installers, Scope Services, have intentionally lied to customers to get them to approve the installation of a smart meter upon their homes.”

“Schad Koon, the Director of Customer Service, in 2011, told customers that if they did not accept the smart meter, which was federally mandated they would be denied service. This was reiterated and reaffirmed by Peter Easler, Director of Deployment.”

“At a 2012, Nevada Public Utilities (PUC) hearing, Koon, admitted to them, that there was no federal mandate to install the meters. During the same PUC meeting, Koon went on the record stating that NVE would not allow any financial assistance to low income customers who wanted to opt out of the smart meter program.”

There are countless stories similar to the above example with Nevada Energy

State regulators reveal 'opt-out' plan for PG&E SmartMeters

http://www.mercurynews.com/ci_19394080

“The proposed fees outrage PG&E customers like Liz Keogh of Bakersfield. Keogh, 68, is a retired social worker who carefully monitors her electric use and had concerns about the accuracy of her SmartMeter. But she complains **she can't afford to opt out.**”

“I don't think a whole lot of people will opt out,” Keogh said. “There will be pockets of people in the Bay Area who will take advantage of it, but who can afford it?”

Business Owners Discriminated Against with Wanton Disregard for Health, Life, Privacy and Property Rights

<http://www.ratical.org/corporations/SCvSPR1886.html>

“In 1886, . . . in the case of *Santa Clara County v. Southern Pacific Railroad Company*, the U.S. Supreme Court decided that **a private corporation is a person and entitled to the legal rights and protections the Constitutions affords to any person.**”

Edison's official “opt out” policy is different for businesses than it is for residents. Business owners may NOT opt out of receiving a smart meter whereas a resident may. Since corporations are people in the eyes of the law, Edison is in violation of the law and again, taking the law into their own hands and doing whatever necessary to receive the freely

given citizen tax money from the federal government, based on smart meter territory penetration level.

Further, to charge those with electromagnetic radiation sensitivities or other health ailments, to retain their health is also in the category of extortion. Also, being that most utility companies received federal funding, this is in direct violation of the ADA...

32) SMART METERS AND SMART GRID VIOLATE CITY AND COUNTY FRANCHISE AGREEMENTS

Most utilities have franchise agreements with the city or county in which they operate. Smart meters and smart grid inherently violate these franchise agreements as they have not been given permission by the city or county to blanket entire neighborhoods let alone homes, with continuous, pulsed, RF microwave radiation.

Below is a sample franchise agreement from LA County for the Gas Co.

“Section 1. The right, privilege, and franchise is hereby granted to the Southern California Gas Company, a company organized and existing under and by virtue of the laws of the state of California, to lay, construct, erect, install, operate, maintain, use, repair, replace, and remove pipes, pipe lines, mains, services, traps, vents, vaults, manholes, meters, gauges, regulators, valves, conduits, attachments, and other appurtenances for transmitting and distributing gas...”

In the case with smart meters and smart grid, they are transmitting and distributing not just gas, but also RF microwave radiation. Nowhere in the franchise agreement did it permit for the distribution of this toxin.

Additionally, by virtue of how the smart grid and smart meters operate, the utilities have further emboldened themselves to add invasive spying to the list of “easements” they are giving themselves with the deployment and installation of this metering system. Spying or surveillance is also clearly not included in the franchise agreement for delivering utilities to the public.

33) UTILITIES CLAIM IMPLIED CONSENT BUT IMPLIED CONSENT IS NON EXISTENT

IMPLIED CONSENT

<http://dictionary.law.com/Default.aspx?selected=904>

“n. Consent when surrounding circumstances exist which would lead a reasonable person to believe that this consent had been given, although no direct, express or explicit words of agreement had been uttered.”

A reasonable person would not wish to expose themselves to the inherent problems that smart meters bring. They cannot give their implied consent because that would mean they had also been INFORMED of all the “benefits” mentioned in this paper, inherent to smart meters and smart grid, which of course they were not. Utilities are consistently failing to inform customers of:

- a) Potential health risk or even that there is currently legal controversy over potential health risk in regards to RF radiation exposure as emitted by smart meters/smart grid.
- b) That the SMPS (switching mode power supply) creates dirty electricity – a known carcinogen, throughout households and entire neighborhoods where smart grid is deployed.
- c) That they are aware the meters pose a potential fire hazard.
- d) That over billing has been a consistent part of the legacy of smart meters.
- e) That the citizen’s information may be both hacked by intruders, given or sold to other industries and/or law enforcement to do with what they will.
- f) That they are not being justly compensated for use of their property as a relay station for utility’s smart grid networks.

Implied consent is 100% nonexistent in regards to every single one of the above smart grid scenarios.

34) EXTORTION AND VIOLATION OF HUMAN RIGHTS AND PROPERTY RIGHTS

A violation of 2404 HOBBS ACT UNDER COLOR OF OFFICIAL and an act of extortion:

2404 Hobbs Act – Under Color of Official Right

http://www.justice.gov/usao/eousa/foia_reading_room/usam/title9/crm02404.htm

“In addition to the “wrongful use of actual or threatened force, violence, or fear,” the Hobbs Act (18 U.S.C. § 1951) defines extortion in terms of **“the obtaining of property from another, with his consent . . . under color of official right.”**

EXTORTION

<http://legal-dictionary.thefreedictionary.com/extortion>

“The obtaining of property from another induced by wrongful use of actual or threatened force, violence, or fear, or under color of official right.”

Also, utilities are rendering entire sections of homes unlivable due to smart meter radiation exposure. This would be considered to be a “taking” of property by the utility for their use of smart grid.

Utilities are threatening to cut off service and actually HAVE cut off service and even ARRESTED citizens not wishing to be exposed to carcinogenic microwave emissions from smart meters nor those who wish to have their privacy left intact, unless they are paid a premium opt out fee plus a monthly “protection” fee.

Some mothers in Naperville, Illinois did not want their children being exposed to the microwave radiation, so they refused a smart meter: They were arrested on their own property simply for refusing the meters in order to protect their children.

<http://www.youtube.com/watch?v=4qBz-rXcF6c>

Naperville Reacts

<http://www.youtube.com/watch?v=Ltzcw70Iujg>

35) MILITARY USE OF EMR (ELECTROMAGNETIC RADIATION) AS WEAPONRY – US FEDERAL GOVERNMENT HAS FULL KNOWLEDGE OF HEALTH EFFECTS RF MICROWAVE RADIATION

**Jerry Flynn - Retired Captain, Canadian Armed Forces (ex-Royal Canadian Navy)
Canadian National Defense Headquarters, Electronics Warfare Office in the
Directorate of Electronic Warfare**

http://www.bcuc.com/Documents/Proceedings/2012/DOC_32964_E-65_09-29-2012-Janko-Letter-of-Comment.pdf

Letter by Jerry Flynn
re FortisBC AMI CPCN,
Project No. 3698682 -
CEC Clarification Comments on Community Input Sessions
From: Jerry Flynn
Date: September 21, 2012
To: Commission.Secretary@bcuc.com
Subject: FortisBC AMI CPCN, Project No. 3698682 - CEC Clarification Comments on
Community Input Sessions

“I personally have a long military background much of it spent in SIGINT (signals intelligence) and EW(electronic warfare), including two years in Canada’s National Defense Headquarters, where I served as an Electronics Warfare Officer in the Directorate of Electronic Warfare for two years. I have an entirely different and a very real appreciation for the undeniable dangers that accrue from any pulsed wireless EMR-emitting technology, including those which electric utilities and the telecom industry continue to impose on our uninformed, unsuspecting and unprotected society.”

“Certainly, within the military intelligence community, at least, it has long been known that both the former U.S.S.R. and the U.S. militaries have experimented for more than 60 years - and continue to do so - with the non-thermal low-intensity, long term effects of pulsed microwave EMR on humans!”

“It is further known that both Russia and the U.S. have developed an arsenal of microwave weapons capable of disabling, maiming and even killing humans ... plus they have pulsed microwave weapons capable of mind control. Of the specific frequencies the Soviet's in particular experimented with and whose lethality they now fully understand one stands out: 2.4 GHz! as this is the very same frequency used in today's wi-fi routers, DECT phones and the ZigBee radios inside every Smart Meter.”

“Significantly, too, the Soviets' effective radiated power (ERP) was estimated to be lower than that currently permitted by both Health Canada's or the FCC's "Guidelines"! History has been written; the de-classified government documents are there to be seen; the Internet is full of evidence, which is unassailable. No informed person can question that microwave weapons exist or that the long term, low intensity EMR emitted by pulsed microwave devices are injurious to not just humans but to all life forms.”

By Jerry Flynn: Wireless Technology, The Worst Threat To Health, Personal Privacy, Democracy and National Security, In Canada's Entire History

<http://thepeoplesinitiative.org/wp/wp-content/uploads/2014/01/Jerry-Flynn-Paper.pdf>

There are too many quotes and incredibly harrowing facts about this radiation to list them all here. Please just upload the Power Point Presentation and read in its entirety.

“Western Alliance” countries (U.K., Canada, Australia and New Zealand) led by a corrupt U.S. government/military/industrial complex, are aggressively pushing wireless technology globally for military purposes and for unprecedented economic gain.”

“Russia has systematically studied electromagnetic bio-effects on all life forms: plants, animals & people since 1933 found harmful effects from even the weakest radiation intensities - depended greatly on frequency used and cumulative effect. Caused the Russians to drastically reduce their own safety levels by a factor of 1,000!”

“1956–US Dept. of Defense (DOD) Directed the U.S. Army, Navy & Air Force to investigate the biological effects of exposure to Radio frequency / Microwave (RF/ MW) radiation. In 1957 they reported many implications: serious damage to the eye, evidence it can cause cancer, damage to major organs and disruption of important biological processes. Pulsed radiation appears to be more harmful than non-pulsed radiation.”

“The safe exposure limit set for the general public in Czechoslovakia was in the range of 1 $\mu\text{W}/\text{cm}^2$ - a thousand times lower than that in the United States (10 mW/cm^2)!” <http://www.i-sis.org.uk/FOI3.php>

Eldon Byrd, a scientist for the Naval Surface Weapons Centre, USN, said about M/W radiation in 1986: 'We can alter the behavior of tissues, cells, organs and whole organisms.... you can cause up to six times higher Fetus mortality and birth defects in

laboratory animals, and it is known how to induce malignant diseases in human cells ... and how to cure them..."

<http://www.youtube.com/watch?v=xehJzyttZr8>

Utility Sale Whistle Blower Speaks

<http://www.castanet.net/news/Kelowna/81081/Utility-sale-whistle-blower=>

“The increase in the spread of wireless (technology) is consistent with the spread of all these diseases...the linkage is undeniable. ”

Flynn points to the Moscow embassy incident in 1976 when Soviet officials admitted beaming microwave weapons at the American embassy. Dozens of U.S. officials working in the embassy successively died or suffered from similar cancers.

Here are some enormous files on the work of Dr. Zory Glaser from the US military on microwave weaponry and their effects:

<http://www.magdahavas.com/category/from-zorys-archive/>

<http://www.magdahavas.com/pick-of-the-week-19-index-of-publications-on-biological-effects-of-electromagnetic-radiation-0-1-00-ghz/>

ABSTRACT

Considerable research effort has been made into the biological effects of electromagnetic radiation over the frequency range of 0-100 GHz. This work intensified since 1966 when occupational exposure guidelines were made by the American Standards Institute – C95.9. During this period and especially in the last several years it has become clear that a cumulative bibliography of peer reviewed publications reporting this research was needed.

“This publication lists 3,627 articles published in world literature dealing with the biological effects of electromagnetic radiation over the frequency range of 0-100 GHz. The contents have been compiled from the data bases of the U.S. Environmental Protection Agency and the Navy Department. The bibliography covers the published work that was available to March 1980.”

Barrie Trower, retired British military intelligence expert in microwave weapons:

<http://tinyurl.com/kfcjt7u>

https://www.youtube.com/watch?v=z99_SzoXZdY

Declaration, Civil Action No. Cv-739-MO, Alexandra Helene Morrison and David Mark Morrison v. Portland Public Schools

<http://www.stetzerizerus.com/research/Microwaves%20and%20Children%20at%20School%20-%20Barrie%20Trower%20Testimony.pdf>

“Debriefing spies during The Cold War extended my military education into the full diversity of stealth microwave warfare and communication systems. In so doing, I learned a list of approximately 30 pulse frequencies that could induce some 50 physical and mental ailments by entrainment. “

Declaration of Barrie Trower

Shawn E. Abrell, WSBA No. 41054,

Pro Hac Vice 3405 NW 31st

Circle, Camas, Washington 98607

Tel.: 503.512.7712; Fax: 503.222.0693

E-Mail: shawn.e.abrell@gmail.com

Lead Counsel for Plaintiffs

Tyl W. Bakker, OSB No. 90200

621 SW Alder, Suite 621, Portland, Oregon 97205

Tel.: 503.244.4157; Fax: 503.220.1913

E-Mail: twbpc@pcez.com

Local Counsel for Plaintiffs

United States District Court

District of Oregon

Portland Division

Alexandra Helene Morrison, by and through her Guardian ad litem and father, David Mark Morrison, and David Mark Morrison, individually, v. Portland Public Schools, Defendant.

Civil Action No. Cv-739-MO

Declaration of Barrie Trower

I, Barrie Trower, under penalty of perjury pursuant to 28 U.S.C. § 1746, hereby make the following declaration in support of a preliminary and permanent injunction enjoining Portland Public Schools' use of WI-FI:

1.I trained at the Government (Ministry of Defense) microwave warfare establishment(s) early in the 1960s covering all aspects of microwave technology, uses and health dangers. Later works included under water bomb-disposal which incorporated microwave technology.

2.In the late 1960's and 1970's a part of my task was to extract confidential (hitherto secret) information from master criminals, terrorists, and spies. This included Cold War microwave technology.

3.My first degree is in Physics with a specialization in microwaves. My second degree is a research degree. I have a teaching diploma in human physiology. Before retiring, I taught advanced physics and mathematics at South Dartmoor College.

4.I am Scientific Advisor to the Radiation Research Trust and the H.E.S.E. (Human Ecological Social Economical) Project.

5.I am the author of both Tetra Reports for the Police Federation of England and Wales and the Public and Commercial Service Union.

6.My work is done entirely free of charge and I have never accepted money from any person or organization in the years I have been doing this research. I consider myself absolutely independent.

Origins

7. To my knowledge, 'microwave or radiowave sickness' was first reported in August 1932 with the symptoms of: severe tiredness, fatigue, fitful sleep, headaches, intolerability and high susceptibility to infection. Hecht, K et al.,
Overloading of Towns and Cities with Radio Transmitters (Cellular Transmitter): a hazard for the human health and a disturbance of ecoethics, International Research Centre of Healthy Ecological Technology (IRCHET), Berlin-Germany, at ¶ 3 (2007). These symptoms were reported to be from athermal effects.

8. By 1971, the US Naval Medical Research Institute (NMRI) referenced 2300 research articles listing in excess of 120 illnesses attributed to radio frequency and non-ionizing microwave radiation. Biography of Reported Biological Phenomena ('Effect') and Clinical Manifestations Attributed to Microwave and Radio-Frequency Radiation, Research Report. MF12.524.015-0004B, Report No. 2. NMRI, National Naval Medical Centre (1971). Under the Freedom of Information Act, extracts from published US Defense Intelligence Agency Documents confirmed the NMRI research and stated: 'If the more advanced nations of the

West are strict in enforcement of stringent exposure standards, there could be unfavorable effects on industrial output and military functions.' Defense Intelligence Agency Documents: DST - 1810S - 076-76, ST-c5-01-169-72, DST-1810S-074-76 (1972-1983).

9. In 1975, after an extensive study, the United States Defense Intelligence Agency warned all of its personnel of the risk from low level microwaves including illnesses ranging from microwave sickness (flu like symptoms, depression, suicidal tendencies) to cancers and leukemia. Biological effects of electromagnetic radiation (radio waves and microwaves) – Eurasian Communist Countries, Defense Intelligence Agency: DST-1810S-074-76, March (1976).

10. During the Cold War, the Russian Embassy microwaved the United States Embassy in Moscow with low level microwaves for many years from across the road; why and how is outside the scope of this Declaration. After many changes of staff for multiple cancers / leukemia's and other illnesses to both male and female employees and their children, the late John R. Goldsmith, M.D., was invited to investigate this matter. His investigative report on this incident showed that continuous long term low level microwaves were responsible for those illnesses. Goldsmith, J. R., Radiofrequency Epidemiology, Environmental Health Perspectives, Vol 105, at 1585, Supp 6, Table 8, Dec (1997). Dr. Goldsmith held 11 Professorships and was the World Health Organization (WHO) representative for Europe. Interestingly the power of the microwaves used by the Russians in some cases was less than the power used by modern day transmitters. Dr. Goldsworthy, http://www.radiationresearch.org/goldsworthy_bio_weak_em_07.pdf; Warning on health and fertility, <http://omega.twoday.net/stories/1755556/>.

11. Debriefing spies during The Cold War extended my military education into the full diversity of stealth microwave warfare and communication systems. In so doing, I learned a list of approximately 30 pulse frequencies that could induce some 50 mental and physical ailments by entrainment.

12. As soon as ordinary microwave transmitters became common place residents started to complain of illnesses and cancer clusters. Independent researcher Sue Webster took data from just 19 transmitters and found approx 92 cancers (breast, thyroid, bowel, leukemia) the average age of those affected was roughly 39. Health Dangers from Wireless Laptops, Sue Webster was quoted in Canceractive's ICON magazine in January 2003 article,

<http://www.canceractive.com/shop/product.php?productid=16157&cat=255&page=1>.

13. Microwave sickness was well documented by 1997 where over 100 further research documents were referenced. Grant, L., Microwave Sickness, Electrical Sensitivity News, Vol I No 6, Vol 2 Nos 1-4 (1997).

14. Portland Public Schools is transmitting electromagnetic frequencies (EMFs) at low levels (2.5 GHz to 5 GHz frequency that means between 2.4 and 5.8 billion Hz). When I realized that similar frequencies and powers that were used as weapons during the Cold War were being used as WI-FI in schools, I decided to come out of retirement and travel around the world free of charge and explain exactly what the problem is going to be in the future.

15. HAARP was originally researched by Sister Dr. Rosalie Bertell who was concerned about electromagnetic interference to our atmosphere. HAARP reflects electromagnetic waves off the ionosphere and can influence any part of the air or land on this Planet. This has the potential to cause physiological and neurological effects on humans, animals and plants.

16. The paradox of course is how can microwave radiation be used as a weapon to cause illness or death and at the same time be used as a safe communications instrument. Therefore, I fail to see how WI-FI can possibly be safe for the school children and teachers exposed to it. Also, why is there still an on-going stealth microwave warfare industry, continuing from the 1950's.

Technology

17. The International Commission for Non-Ionizing Radiation (ICNIRP) classifies microwaves as electromagnetic waves from 300 MHz to 300 GHz. ICNIRP Guidelines, Guidelines for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (Up to 300 GHz), Health Physics April 1998, Vol 74, No 4, 522, www.icnirp.de/documents/emfgdl.pdf. Therefore, everything discussed in this report is in the microwave 'band.'

18. Microwaves react very differently in our water-based bodies to radio waves. The term 'Radio Frequency' is often used to describe microwave based communication systems. It is important that the term 'Radio Frequency' is not associated with Radio Waves, but associated with microwaves. Microwaves are the preferred medium for communication, over radiowaves, due to their superior penetrative properties

19. What is all this really about? Imagine the field around a magnet and imagine ordinary everyday static electricity. If you put the force field from the magnet with the force field from the static electricity you make a wave. This wave is called an electromagnetic wave. There are lots of different types of electromagnetic waves but they are all made of the same two things, magnetic and static fields. The main difference between these waves is their wavelength or the length of the wave hence the number of waves that can be produced per second, i.e. the frequency. All electromagnetic waves are put into a table called the electromagnetic spectrum.

20. At one end of this electromagnetic spectrum you have the very short waves,

namely gamma rays and x-rays, and at the other end of the spectrum you have the very long waves, namely TV and radio. All waves have the same properties. They can be reflected, diffracted, and they all travel at the same speed, which is the speed of light. For interest, if you were one wave of light you would be able to travel around the world nearly seven times every second; that is the speed of light. The electromagnetic spectrum is ordered; starting with the short wave end you have gamma rays, x-rays, ultra-violet, visible light, infra red, microwaves, TV and radio being the longest, in that order. The ultra-violet and above are known as ionizing waves and there is no argument as to the damage they can cause when entering the body. Longer than ultraviolet is said to be non-ionizing and this is where arguments occur between scientists as to whether damage can occur inside the human body through exposure to these waves. The microwaves used in the WI-FI system are in the non-ionizing section of the electromagnetic spectrum and I will be discussing the arguments concerning microwaves and health herein.

Adverse Health Effects

21. There is a plethora of extensive, well-researched documents highlighting illnesses caused by microwave sickness around the world. These papers (in their thousands) highlight the illnesses caused by low level (below thermal) microwaves as: arrhythmia, heart attack, cell death, diseases of the blood, interference to bone marrow, brain tumors, DNA damage, altered calcium level in cells, reduction in night-time melatonin, suppression of the immune system, arthritis, rheumatism, skin problem, lymphatic diseases, vaginal discharge, vascular system disease, tinnitus, leukemia, childhood cancer, sleep problems, mental problems involving depression, irritability, memory loss, difficulty in concentrating, headache, dizziness and fatigue, suicidal tendencies, miscarriage and infertility.

22. It is often argued that these illnesses are psychosomatic. For example, when a neighborhood sees the erection of a transmitter, any illness is instantly blamed on that transmitter. Psychologically the mast is deemed to have caused the illnesses. However, an argument against this are the many cases where disguised, stealth, or concealed transmitters have been erected without local knowledge and similar illnesses still occur.

23. Before I go further, I wish to comment on the telecommunication industry's own research. In February 2007, I was invited to give a short presentation concerning low-level microwave irradiation and cancer at London's Great Ormond Street Hospital for Children. One of the other speakers present was Dr. George Carlo. Sharing the same hotel afforded me the opportunity to engage in several conversations with Dr. Carlo during the two days we were in London. Dr. Carlo explained how he was commissioned by the mobile industry to conduct research on its products. His study (www.health/concerns.org) involved 200 research doctors and 15 epidemiological studies (1993-1999), at a cost of 28.5 million US dollars. 'Our data showed increased risk to children, concerning tumors, genetic damage and other problems,' explained Dr Carlo. He continued, 'my results were suppressed by the telecommunications industry.'

24. Further discussion of industry influence is warranted as The University of Berne, Switzerland, published a data synthesis of 59 research studies involving possible ill health from low level microwave irradiation. Concluding, the Department of Social and Preventive Medicine stated: 'Studies funded exclusively by industry reported the largest number of outcomes, but were least likely to report 0 statistically significant result. The interpretation of results * * * should take sponsorship into account.' Huss, A. et al., Source of Funding and Results of Studies of Health effects of Mobile Phone Use: Systematic Review of experimental Studies, (2006), University of Berne, Finkenhubelweg II, Switzerland (egger@ispm.unibe.ch).

25. Moreover, the 'Journal of Industrial Medicine' published its concern over industrial affiliation being concealed by research scientists; suggesting biases from conflicting interests in risk assessments cannot be evaluated properly. Hardell, L., et al., Secret Ties to Industry and Conflicting Interests in Cancer Research, American Journal of Industrial Medicine, at 1, May (2006), [Wiley-Liss Inc.]; www.interscience.wiley.com; Dept of Oncology, University Hospital, Orebro University, Sweden.. Examples of these problems from Sweden, the United Kingdom and the United States are presented.

26. Notwithstanding industry's attempts to influence research, even their own studies continued to find adverse health effects. One example is a worldwide epidemiological study (commissioned by T-Mobile, on its own product) that concluded, 'On the cellular level, a multitude of studies found the type of damage from high frequency electromagnetic fields which is important for cancer initiation and cancer promotion.' Mobile Telecommunications and Health, ECOLOG Institute, Sec 7, April (2000) (mailbox@ecolog-institut.de). This document also describes DNA damage on the same page.

27. Nearer in time, following a spate of illnesses in their surgeries, On October 9, 2002, a group of doctors produced the Freiburger Appeal. <http://omega.twoday.net/stories/555926/>, scroll down for cluster listing. Initially signed by 270 medical consultants, scientists, GPs, MPs and physicians, it now has many thousands of Signatories worldwide. It is a warning to decision makers concerning illnesses from low level microwaves. This appeal lists 13 severe chronic illnesses and various disorders involving: behavior, blood, heart, cancers, migraines, tinnitus, susceptibility to infections and sleeplessness, all ascribed to: 'pulsed microwaves from mobile communications technology.' Interdisziplina re Gesellschaft fur Umweltmedizin e. V., <http://www.esmognrw.denews/skandal/wewelsburg/HESEProject!FreiburgerAppell/LivelistenderunterschriftensammlungfurdenFreiburgerAppellArztelists.htm>.

28. International schools published a list of illnesses amongst staff and students with frightening numbers of cancer clusters/illnesses. Schools and Cell Tower Antennas, (2003), <http://members.aol.com/gotemf/emf/schools.htm>; www.omega.twoday.net/stories/555926 (47 cancer clusters around schools).

29. Another report (School References (school and cell tower antennas)) from 138 schools dated November 2003, lists miscarriages, brain tumors, cancers, breast cancers and teachers ill within this report. One single school had transmitters on its roof in the Saint-Cyr-l'Ecole quarter of France where eight cases of cancer were confirmed among children in the district.

30. The Stewart Report 2004 asks that anecdotal evidence be taken seriously in the absence of long-term epidemiological studies, concerning illnesses around the area of mobile phone transmitters. Such anecdotal evidence produced July 2002 refers to 92 cases of cancer around just 19 mobile phone transmitters. Other illnesses on the same paper refer to breast cancers, thyroid, bowel and blood problems.

31. In 2007, an international group of scientists studied 2000 peer reviews and published research papers. They recommended an acceptable level of radiation of not more than 0.6 v/m (outdoors) and 0.2 v/m indoors, based on the interaction between low-level microwaves and the cellular processes. This became known as the Bioinitiative Level.

32. A project called EU-Reflex or European Union Risk Evaluation of Potential Environmental Hazards from Low Frequency Electromagnetic Field Exposure using sensitive in Vitro Methods shows that cells exposed to cell phone radiation exhibit chromosomal damage well below the exposure guidelines of the WHO.

33. NAILA/WOLF/HUTTER/SANTINI/OBERFELD/BAMBERG etc. All show increased cancers/illnesses from low-level microwave irradiation. A good summary of these studies, with details, can be found on the Radiation Research Trust's website www.radiationresearch.org.

34. The International Association of Fire Fighters opposes the use of fire stations as transmitter sites, because of the health problems of its members. International Association of Fire Fighters, www.iaff.org/safe/content/celltower/celltowerfinal.htm.

35. The world renowned winning Irish Doctors Association listed 70 research papers showing the dangers from low level microwaves, Dr. Santini listed 20 similar studies, the EM Radiation Research Trust listed 9 studies, Dr. Blackwell listed 6 similar studies in his report, and finally 4 international universities completed the Spanish Study, which verified all of these known illnesses. The authors of the Spanish study (The Microwave Syndrome-Further Aspects of a Spanish Study 2004) recommended a level 10 million times below ICNIRP guidelines (discussed below). Dr. Gerd Oberfeld, one of the authors of the study, is the Director of the Public Health Office in Salzburg, Austria, which lowered its precautionary value for indoor exposures to GSM frequencies to comply with the recommendation made by the study. See: <http://www.ideaireland.org/emrresearch.htm>; Santini paper (2006): <http://nextup.org/pdf/>

Roger_SANTINI_Scientific_arguments_to_prove_application_of_precaution_principle_mobile_phone.pdf, Dr. Grahame - Six studies showing ill effect: <http://www.starweave.com/>

masts/; The Microwave Syndrome Further Aspects of a Spanish Study: http://www.hese-project.org/hese-uk/en/papers/navarro_n%20045%20_p353%20-%20p358_.pdf.

36. Listing and referencing all such epidemiological studies would be too extensive and repetitive for this article; suffice to say, by 2006, it was reported that 80 percent of the epidemiological studies on the WHO database lists illnesses from microwave sickness to a fourfold increase in cancers from low level microwaves. Guilmot, Jean-luc., WHO EMF Database, Watch - Understand - Act 26, Sept (2006), www.001be.cx. I was curious to investigate the remaining 20 percent that showed no symptoms. However, this had already been looked at by Swiss scientists who said 'the interpretation of results * * * should take sponsorship into account.' By that time, Michael Meacher, Minister for the Environment 1997-2003 (United Kingdom), had published a report blaming some universities for accepting lucrative contracts in favour of reporting favourable results from scientific research. In the same month, United States Congressman Henry Waxman published a similar report in Scientific American stating that science was being corrupted by industry. <http://www.next-up.org/pdf/OpenLetterWHODrvanDeventer.pdf>; Swiss Study on funding sources; <http://www.ehponline.org/docs/2006/9149/abstract.html>; Michael Meacher quote, <http://www.epolitix.com/EN/MPWebsites/Michael+Meacher/c8afdecc-b15e-41ad-b9cf-25354790d2dc.htm>, also published in The Times, May (2004); Henry Waxman in The Scientific American, <http://www.sciam.com/article.cfm?articleID=0000FF81-A7DD-1084-A73E83414B7F0000> (May 2004).

37. Likewise, the WHO's Guidelines are based on the short-term effects of this radiation. No long-term experiments have been done in terms of safety levels.

Current Regulations and Thermal Heating

38. It is a serious thing, even low levels of microwave radiation I Emphasis supplied.

39. Advancement in microwave technology since the Cold War necessitated concurrent experimentation. Thousands of research studies exist concerning ill effects from low level, below thermal irradiation levels, involving almost every organ in the body. Possibly the most comprehensive explanation for this phenomenon is written by Dr. A. Goldsworthy of Imperial College London: The biological effects of weak electromagnetic fields (2007), <http://tinyurl.com/2nfujj>; also: a.goldsworthy@imperial.ac.uk.

40. The safety levels set by ICNIRP and the National Radiological Protection Board (NRPB), and which are followed by the United States, are the highest in the world. Being thermally based (no account whatsoever is given to the effect of the electric and magnetic of the wave interacting with the physiology of the body) it is very unlikely, if not impossible for any person to receive the take exception to arguments suggesting that weak, low intensity EMF cannot interact with tissue. There are plausible mechanistic explanations for EMF induced

effects that occur below present ICNRP guidelines and exposure recommendations by the EU.

46. A confidential note (document number DST-1810S-074-76) to its military personnel in March 1976, states, 'personnel exposed to microwave radiation below thermal effects experience more neurological, cardio-vascular and haemodynamic disturbances than do their unexposed counterparts.' This document from the United States Defense Intelligence Agency continues to warn personnel of headache, fatigue, dizziness, menstrual disorders, sleeplessness, depression, anxiety and so on.

47. Professor Adey, a Fellow of the American Academy of Scientists and a distinguished visitor of the Royal Society of Medicine said 'of his own research in parallel with similar studies in Russia in the early 1980's showed that radio frequency and the lower microwave range affected enzyme systems that regulate growth and division of white blood cells.

48. Clearly there is experts' world opinion both military and from Universities showing that radiation below thermal effects can impinge on our physiological functions.

49. In its 2009 report, the ICNRP writes: "Another gap in the research is children. No study population to date has included children * * *." ICNRP, ICNRP Statement on the "Guidelines for Limiting Exposure to Time-Varying Electric, Magnetic and Electromagnetic Fields (Up to 300 GHz.), Health Physics, Vol 97, No 3, at 257, Sept (2009). No matter the level of radiation in the room, there is no safety level for microwave radiation for children.

50. Further, It should be noted that whilst professional bodies have noticed the effects of pulsed microwaves on the physiology of the body, no experiments have been done to determine the safety levels from the pulsed microwaves exhibited by all microwave communication systems,

56. Transmissions can be increased, by possibly up to 40 percent, with side lobe technology. Vector mathematics can demonstrate whether any of these transmissions are incident upon another transmitted wave such as a low frequency radio wave, as there can be a piggy-back effect (constructive interference). It is argued (Curry, Dr. BP, Amplification of the Radiation from two Collated Cellular System Antennas by the Ground Wave of and AM Broadcast Station, (undated), BPCurry@MCS.com) that this amplification of electromagnetic signal can pose a health risk for those in close proximity to a transmitter.

57. The Health Council of the Netherlands Radio Frequency Radiation Committee say in their 200 page 1997 report, concerning frequencies of 300 Hz to 300 GHz: 'The experimental data indicate that the effects of EM fields occur at lower power densities when the object is exposed to pulsed electromagnetic fields.' In other words, you will get illnesses quicker if the microwaves are pulsed. Health Council of the Netherlands: Radiofrequency Radiation Committee, Radiofrequentie elektromagnetische velden (300 Hz – 300 GHz), at 134 (1997).

58. Professor Salford at Lund University in Sweden has shown in his work in the year 2000 that pulsing can alter the permeability of the blood/brain barrier in rats. If occurring in humans, this could have profound effects on brain function.

59. The Freiburger Appeal (2002) signed by approximately 2,000 doctors and scientists says 'One can no longer evade these pulsed microwaves. They heighten the risk of already present chemical/physical influences, stress the body's immune system and can bring the body's still functioning regulatory mechanisms to a halt. Pregnant women, children, adolescents, elderly and sick people are especially at risk.'

60. Assimilating knowledge from the Cold War and other sources, I accumulated a plethora of data describing how pulsed / modulated microwaves interfere with our cellular biochemistry. Believing the communications industry to be spiraling out of control with its new innovations, I published my list on the internet (The Communications Industry is in the position where it is spiraling out of any person's ability to control it, An open letter from Barrie Trower (undated); <http://omega.twoday.net/search?qBarry+Trower>; <http://www.mastsanity.org>), in the hope that the industry would take note.

Children

61. I find Portland Public School's decision to install WI-FI in conflict with its decision against (see Correspondence, Patrick Wolfe, Complaint Ex. B) installing any cell mast technology on its buildings when a classroom of computers could exceed the power from an ordinary mobile phone transmitter. It is a common misconception that as WI-FI uses a small transmitter, such a low dose of radiation must be harmless (see further discussion below, ¶ 75-80). As shown earlier there are now many studies showing illnesses from these transmitters, and this is confirmed by the WHO.

62. What should be happening is you should be measuring the amount of radiation in the room to determine if it is safe for children. However, I can tell you without looking that it is not. Because unlike medication, where there is an adult dose and a children's dose, there is no safety level for microwave radiation for children, not one. My position as scientific advisor requires that I read and translate papers from all around the world, and, I have never, ever, no matter which country I lecture in, which paper I have read, I have never seen a single scientist brave enough to submit for peer review a safety level of microwave radiation for a child or embryo. There is not one that exists.

63. Children are particularly susceptible to microwaves, they do not have our immune systems, and they are not developed. As well, their skulls are thin and their bones (which are producing stem cells that make their immune systems and all other parts of their bodies) are soft allowing the microwaves to penetrate very easily (Cherry (1998),

<http://www.emfguru.org/EMF/genotoxic/Genotoxic-EMR-paper.htm>, scroll down to figure 45,

(there is research to show that stem cells, in the bone marrow can absorb microwaves)).

Finally, they act like antennas and absorb more radiation than adults because they are smaller, they are nearer the wavelength.

64. Children are not small adults. Children are physiologically and neurologically immature; their systems have not yet formed. Microwave radiation alters the blood brain barrier so toxins leak into the brain, which can cause psychiatric problems amongst many other problems. Auditory hallucinations that make people think they are hearing sounds, difficulty concentrating, sleeplessness and irritability are among the symptoms of blood brain barrier damage. Likewise, a child's immune system, which fights off infection, takes 18 years to develop. Additionally 122 layers of protein insulate the electrically generated signals used by the nervous system to control muscles and organs. These layers of protein take 22 years to develop: microwave radiation has been shown to affect protein synthesis. This could lead to muscular dystrophy like symptoms in later life.

65. I have always predicted that any school which allows itself to be 'bathed' in microwaves from whatever source will see its sicknesses rise and behavior fall. I have received many phone calls to confirm this. In all of the schools I have visited around the world with WI-FI, every one has reported the same symptoms in students: fatigue, headaches, nausea, chest pain, vision problems. I argue that you could experience psychiatric problems, increase in aggression and other bad behaviour, as well as reduced immune systems, leading to more colds, coughs, longer colds, longer coughs, longer illnesses, depression, anxiety, thence, suicidal tendencies or taken to its ultimate – leukemia.

66. Research suggests children and women (females have more complex hormone based systems to be disrupted than males) exhibit more vulnerability to illnesses from irradiation than adult males.

67. The problem with young girls is that microwave irradiation has been shown to damage the genetic structure in their ovaries. Girls are born with all of the eggs they need in their ovaries at birth. They are immature eggs, hence susceptible to damage during growth.

Microwaves are genotoxic(experiments can be linked to children showing low level mobile telephony radiation disrupts the bio-chemistry of follicle cells in a mammalian egg chamber), hence the microwaves irradiation could affect the genetic structure within the eggs. The problem here is that the mitochondrial DNA, the genes inside the ovaries, is irreparable. If you have a little girl who damages, through this mechanism, the genetic structure in one of her eggs and she has a daughter, that daughter will carry that genetic problem, because it is irreparable. And her daughter will carry that genetic problem, because it is irreparable. And every female forever, in that line, will carry that problem in perpetuity, because it is irreparable.

68. I believe the most important research I have read is from Dr. Goldsworthy, *The biological effects of weak electromagnetic fields*(2007), <http://tinyurl.com/2nfuj>; also, a.goldsworthy@imperial.ac.uk. Dr. Goldsworthy not only shows the mechanism by which microwaves disrupt cells, but also predicts that a genetically damaged sperm and egg can lead to mutant offspring maybe generations away. If you think of children with these transmitters near their laps, the question must be, 'why take this risk for the sake of a piece of cable and a plug, which could replace WI-FI with no loss of performance?'

69. The mechanics of this process is understood as permanent low level microwave exposure induces chronic nitrosative and oxidative stress. Warnke, http://www.heseproject.org/de/emf/WissenschaftForschung/Warnke_Dr.%20rer.%20nat._Ulrich/20050219_VortragDrWarnke.pdf (2005) (in German, English translation in progress). It is known that chronic nitrosative/oxidative stress damages the mitochondria, the "powerhouses" of each cell in the body. Mitochondropathy is at the root of many of today's chronic illnesses, such as MS, Alzheimers, Parkinsons, Fibromyalgia Diabetes, Artherosclerosis and Obesity. Kuklinski, http://www.kpu-berlin.de/For_Neu_Kuklinski_1_en.html (2004). Even more disturbingly, when chronic nitrosative and oxidative stress is present, irreversible mitochondrial DNA damage will occur sooner or later (see also Kuklinski, http://www.kpuberlin.de/For_Neu_Kuklinski_1_en.html (2004)). The mitochondrial DNA is ten times more susceptible to nitrosative / oxidative stress than the DNA in the cell nucleus. Whilst regular cell DNA has in-built repair mechanisms, mitochondrial DNA is irreparable due to its low histone protein content. The mitochondropathy is therefore irreversibly transmitted to the children by the maternal egg cell causing cumulative irreparable damage to future generations.

70. No matter the level of radiation in the room, there is no safety level for microwave radiation for children.

Electro-sensitivity

71. The World Health Organization (WHO) recognizes and describes electro-sensitivity. Electro-sensitivity is best described rather like a food allergy that can only get worse the more you are exposed to it.

72. In Sweden, it is published that 3.15 percent of its population is medically recognized and registered as being handicapped from electro-sensitivity. This number is comparable in California and it is believed Australia. However, the Irish Doctors Association believe this figure may be as high as 15 percent.

73. Therefore, if this number were compared with the population of the Mount Tabor Middle School, at a minimum, 20 to 90 schoolchildren (out of an approximate enrolment of 600 children) are electro-sensitive and could be at a greater risk of developing neurological and

physiological illnesses. This is not to say that non electro-sensitive children could not also be affected.

Experimentation

74. In 2008, the European Parliament wrote to its 27 countries urging them to ignore WHO guidelines and set exposure limits at lower levels. Ries, European Parliament 2004-2009 Commission on the Environment. Public Health and Food Safety, 2008/2211/INI (translation by www.nexyt-up.org) Editor: Frederique Ries (2008). In response, the WHO (which only began studying microwave radiation effects on children in 2009) stated they will not comment on microwave radiation effects on people until 2015, when it will be able to establish effects on human beings. They are watching people to see how many will become sick. We are being experimented upon.

The Accumulative Dose

75. Professors Sosskind, Provsnitz, Lai, and Cherry and a Russian International Medical Commission have all warned about the cumulative effect of these microwaves.

76. Professor Sosskind and Provsnitz write, 'an accumulated cellular level damage mechanism is not necessarily related to the intensity but can relate to total dose.' This is not surprising; a property of the electromagnetic spectrum is that these waves are accumulative. By way of example, if we go out on a cloudy day we can still get sunburned, it just takes longer.

77. In the report Mobile telephones, their base stations and health, from the French Health General Directorate, January (2001), they warn of the cumulative exposure over the lifetime of a child. This body concluded with an interesting sentence stating, 'biological effects occur at energy levels that do not cause any rise in local temperature.' As it may be argued that biological effects may not be hazardous, the responsibility for this decision concerning children should lay with the parents, guardians or those in loco-parentis and not the school.

78. Based upon a review of the Mount Tabor WI-FI Floor Plan (Complaint, Ex. A), schoolchildren will be exposed to as much as 30-40 hours per week of constant digitally encoded pulsed WI-FI signals from each wireless device in the child's vicinity, making the cumulative exposure over a child's lifetime successively higher.

79. As the amount of WI-FI radiation is accumulative, when reviewing this case, it occurred to me, to compare the relative accumulative dose of WI-FI in the classrooms with a commonly known device that emits the same frequencies. That device is a microwave oven. Both WI-FI and microwave ovens operate at 2.4 GHz. An average WI-FI transmitter operates at 0.2 J/s [0.2 Watts]. Therefore, if using only 20 computer/laptop transmitters in a classroom, there is a combined 4 J/s [4 Watts]. A typical microwave oven (output) is 800 J/s [800 Watts]

(magnetron input equals 1,200 J/s [1,200 Watts]). Therefore, a classroom equals 4 J/s [4 Watts]; a microwave oven 800 J/s [800 Watts]. A ratio of 1:200. Therefore, if WI-FI is used in morning and afternoon sessions, 200 seconds in a classroom (at 4 J/s [4 Watts]) equals 1 second inside a microwave oven (at 800 J/s [800 Watts]); over a school day the equivalent of 2 minutes in a microwave oven; 10 minutes per week.¹¹ It should be noted these calculations will vary according to the following factors: i. There can be approximately 13 mathematical variations to wave formulae; ii. The $1/d^2$ rule will apply to distance; iii. The wall transmitter and main transmitter are not included/calculated; iv. Constructive interference patterns are not calculated; v. WI-FI sets and transmitters in nearby classrooms are not included/calculated; and vi. Reflective materials are unknown: i.e. wall insulation. Ideally, a reading will be taken in a classroom with 20 or more fully operational computers and WI-FI transmission devices next to other classrooms (below, above, adjacent, etc.) with 20 or more fully operational transmission devices in each of those rooms.

80. As a final word about accumulative dose, it must be stressed that a long-low dose can be more dangerous than a short-high dose. By way of example, as I wrote in my published paper (Co-written with Scientist Andrea Klein), *Wireless Laptops and Their Transmitters Using Microwaves in Schools*, <http://www.mastsanity.org/wifi/17/154-wireless-laptops-and-their-transmitters-using-microwaves-in-schools-a-report-by-barrie-trower.html>, permanent low level microwave exposure can induce chronic nitrosative/oxidative stress; hence damage to mitochondrial DNA.

Conclusion

81. There is a simple solution, use a cable and a plug to deliver the internet, or fiber optic cable.

82. With all of this evidence pointing to mental, physical and long term disorders (cancers ~ mutant newborns), is this honestly worth the risk to our next generations for the sake of just a few meters of wire and a plug. As shown, the dangers of low level, below thermal microwaves, have been known to governments for 50 years. I was educated in microwave technology by the Military (United Kingdom) in the early 1960's, and even then we were instructed of these dangers. Nothing has changed to suddenly make microwaves safe.

83. The evidence for adverse effects of low-level microwave irradiation is currently strong and grows stronger with each new study. Using a cabled internet system does not increase exposure.

84. I ask you, if a drink was reported in the 1950's to cause cancer, countless reports and studies since showed this hypotheses to be correct, and the WHO printed a list of an 80 percent likelihood of illness/cancer from drinking it, which was confirmed by international studies, would you give this to your child to drink, knowing they have their whole lives ahead of them? So what is the difference? It is simple. This product is backed and financed

by the most powerful industry on the planet. An industry that does not have to prove its product is safe (unlike a drug company). You have to prove it is not! Thence take this industry to court with your list of illnesses, cancers, leukemia's, deaths, etc. It seems few are prepared to stand against such a Goliath in defense of our children.

85. Within the relevant scientific community it is generally accepted that that many bioeffects and adverse health effects occur at far lower levels of radiofrequency exposure where no measurable heating occurs; some effects are shown to occur at several hundred thousand times below the existing public safety limits.

86. In my opinion, Portland Public Schools' use of WI-FI is causing and will continue to cause Alexandra Morrison, other students, and school staff and faculty adverse health effects and should be discontinued immediately.

Dated this ____ day of June 2011.

/s/ Barrie Trower

BARRIE TROWER

3 Flowers Meadow

Liverton

Devon, United Kingdom

TQ12 6UP

Barrie Trower, retired British military intelligence expert in microwave weapons:

[http://www.stetzerizerus.com/research/
MicrowavesandChildrenatSchoolBarrieTrowerTestimony.pdf](http://www.stetzerizerus.com/research/MicrowavesandChildrenatSchoolBarrieTrowerTestimony.pdf)

https://www.youtube.com/watch?v=z99_SzoXZdY

Dr. Magda Havas – Most Lethal Microwave Frequencies – Pick of the Week

<http://www.magdahavas.com/2010/09/06/pick-of-the-week-9-0-95-and-2-45-ghz-most-lethal-microwave-frequencies/overview>

Microwave signaling Smart Meters are a powerful technology with very suppressive properties “deployed” on every building throughout the United States.

The Smart Meter Home Area Network antenna transmits at 2.4 GHz.

A single Smart Meter, at 3 feet, is already an estimated 53-160 times the whole body radiation exposure from a cell phone held to the head. It is emitting a Class 2B carcinogen.

Microwave radiation kills quickly at high doses. This was demonstrated by the Stanford Research Institute study, testing 950 MHz and 2.45 GHz as low as 200,000 microW/cm² – almost identical to the frequencies used by electric Smart Meters. This study found that 950 MHz, the lowest frequency they tested, was the most lethal.

Mortality In Rats Exposed to CA Microwave Radiation At 0.95, 2.45, 4.45, and 7.44 GHz

http://www.magdahavas.com/wordpress/wp-content/uploads/2010/09/Mortality_in_Rats_Exposed_to_CW_Microwave_Radiation.pdf

PG&E Smart Meters are capable of 2 ½ watts, which equals 2 ½ million microwatts. Peaks have already been detected at over 20,000 microwatts per cm². That's 10% of a lethal dose at these frequencies.

Robert Becker:

“Since 1986 the American Walter Reed Army Institute of Research has been working on the development of a new type of microwave weapons. In this research it was found that microwave energy within the range of 1 to 15 GHz enters all organ systems of the body, and that microwave pulses tend to couple with the central nervous system.... (This) constitutes a danger to all organ systems. The test program, which commenced in 1986, dealt with four areas:

1. Effect on immediate debilitation;
2. Immediate stimulation/irritation through acoustic effects;
3. Effects on influencing or prevention of work (activities), and
4. Effect on stimulus-controlled behavior.

In “The Spark of Life”, 1991; cited by Wolfgang Volkrodt, “**Are Microwaves faced with a fiasco similar to that experienced by nuclear energy?**” pgs. 7, 9

Electromagnetic weapons helpful in the fight against mass disorders

http://voiceofrussia.com/2012_04_25/72924745/

“Russian military have worked out non-lethal electromagnetic weapons that are presently undergoing tests... **The USA is the leader in this field**, and Russia has become the second state in the world that has started developing electromagnetic weapons.”

“Sources in Moscow say Mr. Putin has described the guns, which use electromagnetic radiation like that found in microwave ovens, as ‘entirely new instruments for achieving political and strategic goals’. Mr. Putin added: ‘Such high-tech weapons systems will be comparable in effect to nuclear weapons, but will be more acceptable in terms of political and military ideology.’

“Experts say that in the 21st century the military-scientific community will work in secret laboratories to develop new types of weapons, including ray, psychophysical, geophysical and wave weapons. Thus, we see that what was fantasy some time ago is becoming a reality today.”

Putin targets foes with 'zombie' gun which attack victims' central nervous system

<http://www.dailymail.co.uk/news/article-2123415/Putin-targets-foes-zombie-gun-attack-victims-central-nervous-system.html#ixzz1rgW2NZUw>

“Mind-bending ‘psychotronic’ guns that can effectively turn people into zombies have been given the go-ahead by Russian president Vladimir Putin.”

“The futuristic weapons – which will attack the central nervous system of their victims – are being developed by the country’s scientists.”

Mr. Putin added: ‘Such high-tech weapons systems will be comparable in effect to nuclear weapons, but will be more acceptable in terms of political and military ideology.’

“Mr. Serdyukov said: ‘The development of weaponry based on new physics principles – direct-energy weapons, geophysical weapons, wave-energy weapons, genetic weapons, psychotronic weapons, and so on – is part of the state arms procurement programme for 2011-2020.’”

“Research into electromagnetic weapons has been secretly carried out in the US and Russia since the Fifties.”

“However, previous research has shown that low-frequency waves or beams can affect brain cells, alter psychological states and make it possible to transmit suggestions and commands directly into someone’s thought processes.”

“High doses of microwaves can damage the functioning of internal organs, control behaviour or even drive victims to suicide. Anatoly Tsyganok, head of the Military Forecasting Centre in Moscow, said: ‘This is a highly serious weapon.’”

“Still, we know very little about this weapon and even special forces guys can hardly cope with it.”

“The long-term effects are not known, but two years ago a former major in the Russian foreign intelligence agency, the GRU, died in Scotland after making claims about such a weapons programme to MI6.”

“Sergei Serykh, 43, claimed he was a victim of weapons which he said were ‘many times more powerful than in the Matrix films’.”

“Mr. Serykh died after falling from a Glasgow tower block with his wife and stepson in March 2010. While his death was assumed to be suicide, his family fear there was foul play.”

Electromagnetic Radiation as Powerful as the Atomic Bomb

<http://web.archive.org/web/20120629200521/http://mindjustice.org/emr13.htm>

This is an ENORMOUS document, LOADED with excellent info on the subject.

A very common complaint after Smart Meter installation is tinnitus or hearing ringing or buzzing. It was discovered in the 1950’s that microwave radiation could be “heard,” and researchers like Allen Frey worked to discover the mechanism and to see what uses it could be put to. A report for the U.S. Army elaborates some of the possibilities,

Bioeffects of Selected Non Lethal Weapons

http://www.wired.com/images_blogs/dangerroom/files/Bioeffects_of_Selected_Non-Lethal_Weapons.pdf

Incapacitating Effect: Microwave Hearing

“Microwave hearing is a phenomenon, described by human observers, as, the sensations of buzzing, ticking, hissing, or knocking sounds that originate within or immediately behind the head. There is no sound propagating through the air like normal sound.”

“... This technology makes use of a phenomenon first described in the literature over 30 years ago. Different types of sounds were heard depending on the particular of the pulse characteristics....One study (in 1975) using human volunteers, identified the threshold energy of microwave-auditory responses in humans as a function of pulse width for 2450 MHz radiofrequency energy. [Electric HAN network – 2450 MHz]”

Tunability

“The phenomenon is tunable in that the characteristic sounds and intensities of those sounds depend on the characteristics of the RF energy as delivered. ...it could only be heard within a person’s head. In one experiment, communication of the words from one to ten using “speech modulated” microwave energy was successfully demonstrated. Microphones next to the person experiencing the voice could not pick up the sound. Additional development of this would open up a wide range of possibilities.”

Recovery/Safety

“Humans have been subjected to this phenomenon for many years. The energy deposition required to produce this effect is so small that it is not considered hazardous.”

Possible Influence on Subject(s)

Application of the microwave hearing technology could facilitate a private message transmission, It may be useful to provide a disruptive condition to a person not aware of the technology. Not only might it be disruptive to the sense of hearing, it could be psychologically devastating if one suddenly heard “voices within one’s head.”

“Technological Status of Generator/Aiming Device

“This technology requires no extrapolation to estimate its usefulness, Microwave energy can be applied at a distance, and the appropriate technology can be adapted from existing radar units... Signals can be transmitted long distances (hundreds of meters) using current technology.”

p. 8-12

“Incapacitating Effect: Disruption of Neural Control

The nature of the incapacitation is a rhythmic-activity synchronization of brain neurons that disrupts normal cortical control of the corticospinal and corticobulbar pathways; this disrupts normal functioning of the spinal motor neurons which control muscle contraction and body movements. Persons suffering from this condition lose voluntary

control of their body. This synchronization may be accompanied by a sudden loss of consciousness and intense muscle spasms.”

“Mechanism to Reproduce the Desired Effects

Application of electromagnetic pulses is also a conceptual nonlethal technology that uses electromagnetic energy to induce neural synchrony and disruption of voluntary muscle control. The effectiveness of this concept has not been demonstrated. However, from past work in evaluating the potential for electromagnetic pulse generators to affect humans, it is estimated that sufficiently strong internal fields can be generated within the brain to trigger neurons.”

“...The ionic basis and biochemical substrate of this activation have been areas of considerable study but still leaves many questions unanswered. What are the basic cellular properties, present in normal cells and tissues, that could contribute to the generation of abnormal activity? What parts of the system are low threshold and function as trigger elements?”

“Different types of technologies could be employed to influence wide areas or single individuals. Because this technology is considered to be tunable, the influence on subjects could vary from mild disruption of concentration to muscle spasms and loss of consciousness. The subject(s) would have varying degrees of voluntary control depending on the chosen degree of incapacitation.”

“Technological Status of Generator/Aiming Device

An electric field strength of roughly 100Kv/m over a time period of 1 nanosecond is approximately the condition thought to be necessary to produce the desired effect when provided to an overall repetition rate of 15 Hz. Such a field may be developed during a radar-like, high-peak-power, pulsed source or an electromagnetic pulse generator operating at 15 Hz. These technologies exist today sufficient to evaluate the disabling concept. Power requirements are not high because the duty factor is so low... Because there were no open literature reports from which to make inferences, there is some uncertainty about the power levels required.

Barrie Trower, former MI6 Microwave Weapons Expert

http://www.youtube.com/watch?feature=player_embedded&v=ZdB-tbzJSrk

More from Barrie Trower

http://www.youtube.com/watch?feature=player_embedded&v=mRLSPWviyzQ

Barrie Trower on Targeting Individuals with Microwave Radiation

http://www.youtube.com/watch?feature=player_embedded&v=09mpvscHiKI

Expert tells doctors of impending tragedy from EMF radiation as health of nations laid waste by technology

<http://www.stopthecrime.net/trower%20to%20irish.pdf>

“...microwave signals and radiation cause damage to living organisms and the built environment. Furthermore he is living testimony that governments have used that evidence to inflict pain and suffering on their opponents. Trower claims that there is no defense against a microwave assault and that by alternating pleasure and pain frequencies broadcast from a van parked nearby “anyone can be broken in 30 hours.”

“...there are 8,300 military papers proving microwaves cause severe neurological and physiological damage.”

• TOP SECRET: From a U.S. conference, 1986. “Concerning low level microwaves, we can change behaviour of cells, tissue... Whole organisms have a six times higher fetal mortality rate, birth defects and induce malignant tumours in human cells.”

• TOP SECRET: Course No. 11, 2001-07. “Students (scientists) will be familiar with current knowledge, i.e. cancer, memory, brain function damage to the eye, skin, birth defects from low level microwave radiation.”

• TOP SECRET: Naval Medical Research Institute: Biological and Clinical Manifestations Attributed to Microwave Radiation (Low-Level) which lists 2,000 medical references with the main paper, Altered Menstrual and Fetal Development.

• TOP SECRET: World Health Organization (W.H.O.), 1973. Biological Effects: Health and Excess Mortality from Artificial Irradiation of Radio Frequency, Microwave Radiation. The paper was the result of a symposium held in Warsaw and has been referred to by experts such as Dr. Magda Havas, Trent University, Canada, Henry Lai, of the University of Washington and by the Seletun Declaration signed by Prof. Olle Johansson, of the Karolinska Institute, among others.

”The damage caused by microwave radiation is irrefutable,” says Trower, “There never is any doubt. There never was.”

Nonlethal Weapons Could Target Brain, Mimic Schizophrenia

<http://www.wired.com/dangerroom/2008/02/report-nonletha/>

“Among those discussed are weapons that could disrupt the brain, as well as my longtime obsession, the “Voice of God” device, which creates voices in people’s heads. As the report notes, “Application of the microwave hearing technology could facilitate a private message transmission.”

“Because the frequency of the sound heard is dependent on the pulse characteristics of the RF energy, it seems possible that this technology could be developed to the point where words could be transmitted to be heard like the spoken word, except that it could only be heard within a person’s head. In one experiment, communication of the words from one to ten using “speech modulated” microwave energy was successfully demonstrated. Microphones next to the person experiencing the voice could not pick up the sound. Additional development of this would open up a wide range of possibilities.”

US Electromagnetic Weapons and Human Rights

<http://www.projectcensored.org/wp-content/uploads/2010/05/ElectromagneticWeapons.pdf>

“This research explores the current capabilities of the US military to use electromagnetic (EMF) devices to harass, intimidate, and kill individuals and the continuing possibilities of violations of human rights by the testing and deployment of these weapons.”

The above paper is filled with stunning quotes and revelations about the military industrial complex and their desire to control the planet and their ability to do so through microwave weapon technology.

Making people hear voices, making people believe they are schizophrenic, is a powerful capability. Representative Jim Guest of the Missouri Legislature has become an advocate for Americans who presently claim they are being electronically harassed.

In 2006, Project Censored, Sonoma State University, reported on capabilities already in use, including the LRAD – Long Range Acoustical Device – a “non-lethal” weapon, that has already been used against demonstrators and that can permanently injure and kill with internally experienced sound, as well as Voice to Skull weapons, “which uses microwave transmission of sound into the skull of persons or animals by way of pulse-modulated microwave radiation.”

Now with the deployment of smart meter technology in the home of every citizen, personalized microwave targeting becomes much easier as does blanket microwave targeting of entire populations in addition to the overall microwaving of entire populations.

Microwaving Iraq

Investigative journalist and veteran William Thomas, in "Microwaving Iraq," describes the use of "poppers" or "domes" which use multiple frequencies to have specific disruptive physical and psychological effects, but also have unintended effects.

Microwaving Iraq: 'Pacifying' Rays Pose New Hazards In Iraq, 1-25-2005

"On the rooftop of a shrapnel-pocked building in the ruins of Fallujah, a team of GI's stealthily sets up a gray plastic dome about two-feet in diameter. Keeping well back from the sight lines of the street and nearby buildings, they plug the cable connectors on the side of the "popper" into a power unit. The grunts have no clue what the device does. They are just following orders."

"Most of the worker-bees that are placing these do not even know what is inside the "domes" just that they were told where to place them by Intel weenies with usually no nametag," reports my source, a very well informed combat veteran I will call "Hank".

"The grunts call the plastic devices "poppers" or "domes". Once activated, each hidden transmitter emits a widening circle of invisible energy capable of passing through metal, concrete and human skulls up to half a mile away. "They are saturating the area with ULF, VLF and UHF freqs," Hanks says, with equipment derived from US Navy undersea sonar and communications..."

"The "poppers, are capable of using a combo of ULF, VLF, UHF and EHF wavelengths in any combination at the same time, sometimes using one as a carrier wave for the others," Hank explains, in a process called superheterodyning. **The silent frequencies daily sweeping Fallujah and other trouble spots are the same Navy "freqs that drove whales nuts and made them go astray onto beaches."**

"...He is concerned that innocent Iraqi families and unsuspecting GIs alike are being used as test subjects for a new generation of "psychotronic" weapons using invisible beams across the entire electromagnetic spectrum to selectively alter moods, behavior and bodily processes."

"According to Hank's front-line buddies, Iraqis exposed to secret beam weapons "get laid back, confused and mellow, and then blast out in a rage, as opposed to our folks going on what could only be called a "bender" and turning into a mean drunk for a while."

"Once they wander away from direct electromagnetic-fire, startled GIs come to their senses. They return to their units, Hank explains, saying, "What was I thinking?"

“...The recovery rate among US troops "seems to be about a day or so, where the locals are not getting over it in less than a week or more on average," Hank has learned.”

“While the mobile microwave weapons currently deployed in Iraq may or may not lead to lasting harm, rooftop "poppers" and "domes" left to radiate for days at a time are irradiating unsuspecting families already coping with illness, wounds, hunger and the stress of losing homes and loved ones...”

“...Very Low Frequency (VLF) weapons include the dozens of "poppers" currently deployed in Iraq, which can be dialed to or "long wave" frequencies capable of traveling great distances through the ground or intervening structures. As air force Lt Col. Peter L. Hays, Director of the Institute for National Security Studies reveals, **"Transmission of long wavelength sound creates biophysical effects; nausea, loss of bowels, disorientation, vomiting, potential internal organ damage or death may occur."**

“Hays calls VLF weapons "superior" because their directed energy beams do not lose their hurtful properties when traveling through air to tissue. A French weapon radiating at 7 hertz "made the people in range sick for hours."

Measurement by a member of the public has found the electric Smart Meter frequency of 900-928 MHz modulated by an ELF frequency of 11-15 Hz – brainwave range. Nausea, vomiting, dizziness and disorientation are symptoms people experience after Smart Meter installation, as well as sleep disturbance, inability to concentrate, memory problems and mood disorders.

Reports periodically come out in the press about experiments conducted on the general public or on groups in our society by agencies within our own government or the military. Plutonium injections, syphilis experiments, Agent Orange denied and soldiers still denied benefits, Gulf War illness denied and veterans denied benefits, patented genetically engineered “bugs” showing up in the general population, MKULTRA, atomic bomb experiments on soldiers, and on and on. The public usually learns about this decades after the incidents occur and after responsible parties are no longer alive. It is important to bear this in mind, as well as the danger from other nations and groups participating in directed energy development and applications.

Researchers from University of Nevada at Reno, have been working on various applications for the U.S. military.

Non-Lethal Weapons for Use Radiofrequency/Microwave Energy for Stunning/Immobilization

<http://www.stormingmedia.us/46/4684/A468405.html>

“This basic research initiative is geared ultimately toward developing effective and safe non-lethal technologies that alter skeletal muscle contraction and/or neural functioning via radiofrequency (RF)/microwave (MW) electromagnetic radiation. Major accomplishments included 1) near completion of studies examining the effect of 1 to 6 GHz MW fields on catecholamine release from chromaffin cells; 2) initiating studies using a novel exposure system for real-time imaging of intracellular effects in chromaffin cells in response to high electric field RF/MW pulse modulated radiation, broadband Gaussian pulses or RF/MW modulated Gaussian pulses with the frequency spectrum centered in the band 0.75-6 GHz; 3) completion of studies on the effect of 0.75 to 1 GHz RF fields on skeletal muscle contraction using fixed frequencies and just recently implementing frequency sweep paradigms; 4) initiation of studies to examine the effect of nanosecond electric pulses of high intensity on catecholamine release from chromaffin cells.”

Sponsorship by U.S. Air Force

Naval Studies Board on Directed-Energy Non-Lethal Weapon

www.bioinitiative.org (2007)

“The first radiofrequency non-lethal weapons, VMADS, is based on a biophysical susceptibility known empirically for decades. More in-depth health effects studies were launched only after the decision was made to develop that capability as a weapon. The heating action of RF signals is well understood and can be the basis for several additional directed-energy weapons. Leap-ahead non-lethal weapons technologies will probably be based on more subtle human/RF interactions in which **the signal information within the RF exposure causes an effect other than simply heating: for example, stun, seizure, startle and decreased spontaneous activity. Recent developments in the technology are leading to ultrawideband, very high peak power and ultrashort signal capabilities, suggesting the phase space to be explored for subtle, yet potentially effective non-thermal biophysical susceptibilities is vast. Advances will require a dedicated effort to identify useful susceptibilities.”**

National Academy of Sciences - National Research Council

An Assessment of Non-Lethal Weapons Science and Technology
by the Naval Studies Board,

Division of Engineering and Physical Sciences (National Academies Press (2002)
(prepublication copy, page 2-13)

Cited in Bioinitiative Report, Section 4, p. 11, 12

“At a foggy military base in Northern California years ago, an experiment was made with frequency to see if the fog could be eliminated. Someone stationed there agreed that frequency is powerful, recalling, “We didn’t get rid of the fog, but we did kill all the wild turkeys.”

“This description of what women protesting at Greenham Common in England experienced:”

“A preview of what lies in store for long-suffering families in Iraq can be gleaned from Greenham Common, where the British Army reportedly used an electromagnetic weapon against 30,000 women who had camped for nearly two decades around that UK military base to protest the deployment of nuclear-tipped US cruise missiles.”

“One day in the summer of 1984, more than 2,000 British troops suddenly pulled back, leaving the fence unguarded. Peace mom Kim Besley recalls that as curious women approached the gate, they “started experiencing odd health effects: swollen tongues, changed heartbeats, immobility, feelings of terror, pains in the upper body.”

“Besley found her 30-year-old daughter too ill to stand. Other symptoms typical of electromagnetic exposure included skin burns, severe headaches, drowsiness, post-menopausal menstrual bleeding and menstruation at abnormal times. Besley’s daughter’s cycle changed to 14 days and took a year to return to normal.”

“Two late-term spontaneous miscarriages, impaired speech, and an apparent circulatory failure prompted the women to begin monitoring for a directed-energy beam, Using an EMR meter, they measured beams sweeping their camp at 100-times normal background levels.”

Though utility companies claim aspects like duty cycles are fixed, it is important to note:

CPUC Opt-out decision, 2-9-12, p. 9, #7

“(Smart Meters have) the ability for remote installation of meter or communication board firmware which may be required for upgradability.“

If the meters can be remotely controlled, hacked and “upgraded,” what are the possibilities for damage and harm, beyond what the harm the meters are presently causing? The answer is LIMITLESS. We are already being lied to by the utilities and the federal government with regard to this radiation and nearly every aspect of this roll out. It is sobering to realize how

these devices and this infrastructure could additionally and intentionally bring harm to our communities, even on an individual and targeted basis.

36) FRAUD AND DECIET

<http://legal-dictionary.thefreedictionary.com/deceit>

"A Misrepresentation made with the express intention of defrauding someone, which subsequently causes injury to that person."

"In order for a statement to be deceit, it must be untrue, made with knowledge of its falsity, or made in reckless disregard of the truth. The misrepresentation must be such that it causes harm to another individual."

Burbank Water and Power Smart Grid FAQ

<http://www.burbankwaterandpower.com/download/SmartGridFAQ.pdf>

"In response to public concerns over the safety of Smart Grid infrastructure, the California Public Utilities Commission instituted an independent study to determine any health risks. The results of that study were that the Smart Grid infrastructure being deployed throughout California does not pose a health risk..."

What BWP does NOT tell it's citizens is that THOUSANDS of studies exist which state smart meters DO in fact cause a very serious health risk, that the CPUC is run by Michael Peevey with an inherent conflict of interest being the ex-president of Edison and having current business dealings with PG@E and has consistently disregarded nearly ALL of the almost 2,000 complaints of health effects from smart meters from the public.

Also, when a customer opts out, they are almost always still being exposed to their neighbors smart meter emissions or other smart grid infrastructure such as the utility wanting to retain signal, so they put a repeater up where the opt out customer is or other smart grid infrastructure so as to have uninterrupted, blanketed RF coverage of the entire area, including the property of the opt out customer.

<http://www.lawyers.com/Ask-a-Lawyer/Ask-a-Question.html?msg=confirm&questionid=595666&aopid=841>

Message:

I'm in an apartment and have a group of banked smart meters. Me & husband experience ringing in ears. Opted out (radio-off meter is only option). Radio turned off on (1) of the 9 meters. Both still have ringing in ears. I was charged \$68 to opt out, but since hasn't produced the desired result (no more ringing in ears), I want my money back."

"I now have an added \$10 per month for meter."

"If you aren't laughing by now, consider that before the smart meter program, I did not have to pay a meter reading fee. Now that smart metering is going forward, I now have to pay for something that didn't cost me before."

Currently watching bank-bal go lower, not making the money in part-time work that hoped for, and now have a shutoff notice because the opt-out fees put me over what I normally pay/ mo.

The following was taken directly from the FCC's website in 2010. The FCC has since CHANGED their website to soften the blow of what they were informing consumers about wireless devices and cancer.

Letter of Inquiry FCC

http://www.americanassociationforcellphonesafety.org/uploads/Letter_of_Inquiry_FCC_Final_7-11-10.doc

"Recent reports by some health and safety interest groups have suggested that wireless device use can be linked to cancer and other illnesses."

"Also, some parties assert that any potential health risks are probably greater for children than for adults."

Also at that time found on the FCC website

In the "kids zone" evidently grades 9-12 were asking the question...

Do cell phones cause brain cancer?

FCC answer... "There is no scientific evidence to date that proves that wireless phone usage can lead to cancer or a variety of other health effects, including headaches, dizziness or memory loss."

"Not only are these statements factually incorrect and misleading to minors, but there are multitudes of studies and evidence to date of all of the above illnesses and health problems and more. Yet the FCC stated none of this in the "kids' zone" section of their website. They do go on to say..."

"...the FDA, which has primary jurisdiction for investigating mobile phone safety, stated that **it did not have enough information at that time to rule out the possibility of risk, but if**

such a risk exists, "it is probably small."

"Clearly, this statement implies there is inherent risk with the cell phone and by omission states that the cell phone has not been proven to be safe."

"If the risk is "probably small", does this imply that the FDA and the FCC has no obligation to inform consumers of such a risk even if it is as small as say, 1 in 10 as in cigarette smokers? Quantification of the word "small" is imperative in order for adults to make informed decisions about their usage of wireless devices."

"This directly contradicts the FCCs other statement on their website that there is no evidence of illness with cell phones. "

"We ask the question, which statement is true? The one from the Kids Zone or the one from the Consumer facts/mobile phone area of the FCC website? Giving two different answers to the same question is difficult to legally reconcile. CLEARLY there are doubts even in the industry run federal agencies regarding the safety of wireless devices. Not only that, but there is also LEGAL controversy currently in the courts on the issue of wireless devices and health effects."

The FCC has since changed their website language, so we are unable to provide the link for the above statements, however if this were to ever go to trial it could easily be proven that these statements were in 2010, on the FCC website for all to see.

37) FRAUD AND MISREPRESENTATION

Fraud and Misrepresentation exist on this issue both at the federal level and at the local utility level. The DOE never made it a mandatory part of smart meter or smart grid deployment, that the federal government or the utilities notify citizens of the following:

- a) Potential health risk or even that there is currently legal controversy over potential health risk in regards to RF radiation exposure as emitted by smart meters/smart grid*
- b) That the SMPS (switching mode power supply) creates dirty electricity throughout entire neighborhoods where smart grid is deployed.*
- c) That the meters are a potential fire hazard*
- d) That over billing has been a consistent part of the legacy of smart meters*
- e) That their information may be both hacked by intruders, given or sold to other industries and/or law enforcement to do with what they will.*

f) That they are not being justly compensated for use of their property as a relay station for utilities smart grid networks.

In fact, when customers inquire about the above issues with their utilities in most states throughout the country and with their federal agencies, they are being misled or lied to on a consistent basis.

38) MISREPRESENTATION

<http://legal-dictionary.thefreedictionary.com/Misrepresentation>

"An assertion or manifestation by words or conduct that is not in accord with the facts."

These meters were represented as SAFE to consumers before, during and after they were rolled out and even after the utilities received all of the health complaints.

Nearly 100% of these documented complaints to the California and Texas PUC were first made to the utilities themselves to no avail.

39) NEGLIGENCE

<http://legal-dictionary.thefreedictionary.com/negligence>

"Conduct that falls below the standards of behavior established by law for the protection of others against unreasonable risk of harm. A person has acted negligently if he or she has departed from the conduct expected of a reasonably prudent person acting under similar circumstances."

As per state law, the utilities are required to deliver SAFE electricity, gas and water. Smart meters and smart grid violate this requirement. Citizens are also protected by the US Constitution, which smart meters and smart grid inherently violate.

Smart Meters and Smart Grid Violate:

SB 17: On October 11, 2009, SB 17 was signed into law by former California Governor Arnold Schwarzenegger. The bill states that it is the policy of California to “modernize the states electrical transmission and distribution system to maintain **safe**, reliable, efficient and **secure electrical service**”.

California Public Utilities (PU) Code § 8360-69,

<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=puc&group=08001-09000&file=8360-8369>

“It is the policy of the state to modernize the state's electrical transmission and distribution system to maintain **safe**, reliable, efficient, and **secure** electrical service...”

40) GROSS NEGLIGENCE

<http://legal-dictionary.thefreedictionary.com/Gross+negligence>

“An indifference to, and a blatant violation of, a legal duty with respect to the rights of others.”

California Civil Jury Instructions (CACI)

<http://www.justia.com/trials-litigation/docs/caci/400/425.html>

Gross negligence is the lack of any care or an extreme departure from what a reasonably careful person would do in the same situation to prevent harm to oneself or to others. A person can be grossly negligent by acting or by failing to act.

Customers and citizens have the right and expectation NOT to be harmed by their utility meters and/or utility's grid. This has not been the case with smart grid and smart meters. The utilities have failed to act in good faith regarding this matter and have acted with wanton disregard for all human health and life and multiple legal and other rights granted by the US Constitution as expressed throughout this entire document.

41) Malice and Aforethought

<http://legal-dictionary.thefreedictionary.com/malice+aforethought>

A predetermination to commit an act without legal justification or excuse. A malicious design to injure. An intent, at the time of a killing, willfully to take the life of a human being, or **an intent willfully to act in callous and wanton disregard of the consequences to human life**; but malice aforethought does not necessarily imply any ill will, spite or hatred towards the individual killed.

Residents Sue California Utilities, Edison and PG&E for Health Effects From Smart Meters/Smart Grid

http://citizensforaradiationfreecommunity.org/wp-content/uploads/2013/06/COMPLAINT_1st_amended..LASC_..Smartmeter_Complaint_SCEA-5a.doc

“Defendants, and each of them failed to disclose to the Plaintiffs that: (a) industry experts and scientific study results differ as to the risks and biological effects that (may) arise from smart meter use;”

(c) that the SAR measurements is not the product of a rigid testing and review, but rather obtained through a self-certification process, and failed to inform its users of the uncertainties and controversies that have been raging in our court system and scientific community for decades relating to telecommunication systems standards as to cause and effect, inter alia, all of which has produced limited choices to its users, due to a failure to exercise due diligence.”

1. “...that the SAR measurements is not the product of a rigid testing and review, but rather obtained through a self-certification process, and measures only the potential aspects of harm from short term exposure as opposed to the potential non thermal aspects of harm from prolonged exposure; which is where the controversy lies.
2. California Civil Code section 1708 provides that all persons must abstain from injuring the person or property of another or infringing upon the rights of another.

3. California Civil Code section 1709 provides that one who willfully deceives another is liable for damages.
4. California Civil Code section 1710 defines deceit as an untrue assertion or suppression of a fact so as to mislead, or a false promise.
5. California Civil Code section 1714(a) provides that liability for injuries arises from want of ordinary care or skill.
6. California Public Utilities Code section 8360 requires the safe, reliable, efficient deployment of the modern Smart Grid, including (h) providing customers with timely information and control options.
7. California Public Utilities Code section 8363 requires implementations of the Smart Grid in a manner which does not compromise safety, integrity or reliability.
8. Defendants, and each of them, as industry members, were aware, or should have been aware of numerous studies and experiments that demonstrated the health risks, hazards and detrimental biological effects of RFR. Peer-review research indicated, among other things, adverse biological effects resulting from exposure to varying levels of RFR because RFR is absorbed into human tissue, which produces harmful biological effects.
9. Defendants, and each of them did not inform Plaintiffs that that they would be the subjects of a state-wide experiment on the health effects of smart meter radiation.
10. Defendants, and each of them did not obtain the Plaintiffs' consent to participate in the experiment.

1. Defendants' wrongful conduct as herein alleged was willful, wanton, intentional, malicious, oppressive, and fraudulent in nature and justify the awarding of exemplary and punitive damages in an amount to be determined at trial.
2. As a result of the above referenced acts, Defendants fraudulently induced the Plaintiffs to pay utility fees and rental costs for the smart meters. At no time were the Plaintiffs aware of the dangers posed or connected with the smart meters.
3. Defendants and each of them suppressed material facts, and made certain misrepresentations of fact for the sole purpose of inducing the Plaintiffs to pay utility costs and rental fees for the smart meters.
11. At the time the suppressions of material facts and misrepresentations of fact were made by Defendants, Defendants had full knowledge of their falsity, and had no reasonable grounds for believing these misrepresentations to be true.
12. The true facts were that the Defendants were aware of the health risks posed by the smart meters and failed to disclose them to the Plaintiffs and the general public. The Defendants, and each of them, failed to disclose to the Plaintiffs that the defendants installed smart meters on the Plaintiffs' residences in order to secure revenue for said smart meters.
109. Defendants and each of them concealed these material facts from the Plaintiffs.
110. In reliance on these suppressions of material facts and misrepresentations of facts, the Plaintiffs acted as alleged above without knowledge of the true facts.
111. The aforementioned conduct of Defendants was an intentional misrepresentation, deceit, or concealment of a material fact known to the Defendants with the

intention on the part of the Defendants of thereby depriving Plaintiffs of property, loss of habitat or legal rights or otherwise causing injury, and was despicable conduct that subjected Plaintiffs to a cruel and unjust hardship in conscious disregard of Plaintiffs' rights, so as to justify an award of exemplary and punitive damages.

42) PUBLIC ENDANGERMENT

<http://en.wikipedia.org/wiki/Endangerment>

Public endangerment is a criminal act that can be prosecuted in a court. It is usually applied to crimes which place the public in some form of danger, although that danger can be more or less severe according to the crime.

The public is being put in danger. Life threatening and permanent health effects from the pulsed microwave radiation, including death, have been reported all across the country upon installation of smart meters/smart grid, (not to mention the fire hazards they create and injury and death that have been caused by smart meter fires). There is absolutely no way that the US Federal government and the military industrial corporations in receipt of smart grid and smart meter funding had no knowledge of the health effects of pulsed microwave RF radiation as this is currently the US weapon of choice in both stealth and non-stealth operations on and off the battlefield.

43) Wanton And Reckless Disregard for Human Life and The Rights of Citizens Under the Constitution

<http://legal-dictionary.thefreedictionary.com/wanton>

Grossly careless or negligent; reckless; malicious.

The term *wanton* implies a reckless disregard for the consequences of one's behavior. A *wanton act* is one done in heedless disregard for the life, limbs, health, safety, reputation, or property rights of another individual. Such an act is more than Negligence or gross negligence; it is equivalent in its results to an act of willful misconduct. A *wanton*

injury is one precipitated by a conscious and intentional wrongful act or by an omission of a known obligation with reckless indifference to potential harmful consequences.

Utilities and PUCs were made aware of health problems when smart meters were being installed in peoples homes. Most chose to completely and totally disregard ALL COMPLAINTS in this area. THAT is WANTON and RECKLESS disregard for human health and life.

44) EXEMPLARY DAMAGES

<http://legal-dictionary.thefreedictionary.com/exemplary+damages>

“Exemplary damages n. often called punitive damages, these are damages requested and/or awarded in a lawsuit when the defendant's willful acts were malicious, violent, oppressive, fraudulent, wanton, or grossly reckless.”

CAL. PUC. CODE § 2106 : California Code - Section 2106

<http://codes.lp.findlaw.com/cacode/PUC/1/d1/1/11/s2106#sthash.z1nLcL5s.dpuf>

“Any public utility which does, causes to be done, or permits any act, matter, or thing prohibited or declared unlawful, or which omits to do any act, matter, or thing required to be done, either by the Constitution, any law of this State, or any order or decision of the commission, shall be liable to the persons or corporations affected thereby for all loss, damages, or injury caused thereby or resulting there from. If the court finds that the act or omission was willful, it may, in addition to the actual damages, award exemplary damages. An action to recover for such loss, damage, or injury may be brought in any court of competent jurisdiction by any corporation or person.”

45) SMART GRID VIOLATES STATE LAW

UTILITIES CODE OF TEXAS

<http://codes.lp.findlaw.com/txstatutes/UT/2/A/17/A/17.004>

TITLE 2. PUBLIC UTILITY REGULATORY ACT

SUBTITLE A. PROVISIONS APPLICABLE TO ALL UTILITIES

CHAPTER 17. CUSTOMER PROTECTION

SUBCHAPTER A. GENERAL PROVISIONS

Sec.17.004.CUSTOMER PROTECTION STANDARDS.

(a) All buyers of telecommunications and retail electric services are entitled to:

(1) **Protection from fraudulent, unfair, misleading, deceptive, or anticompetitive practices, including protection from being billed for services that were not authorized or provided;**

(2) Choice of a telecommunications service provider, a retail electric provider, or an electric utility, where that choice is permitted by law, and to have that choice honored;

(d) The commission shall coordinate its enforcement efforts regarding the prosecution of fraudulent, misleading, deceptive, and anticompetitive business practices with the office of the attorney general in order to ensure consistent treatment of specific alleged violations.

California Public Utilities (PU) Code § 8360-69

<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=puc&group=08001-09000&file=8360-8369>

“It is the policy of the state to modernize the state's electrical transmission and distribution system to maintain **safe**, reliable, efficient, and **secure** electrical service...”and the California and US constitutions¹²

Opt out fees are illegal:

California Public Utilities Code Section 453:

<http://law.onecle.com/california/utilities/453.html>

(a) No public utility shall, as to rates, charges, service, facilities, or in any other respect, make or grant any preference or advantage to any corporation or person or subject any corporation or person to any prejudice or disadvantage.

(b) No public utility shall prejudice, disadvantage, or require different rates or deposit amounts from a person because of ancestry, medical condition, marital status or change in marital status, occupation, or any characteristic listed or defined in Section 11135 of the Government Code...

(c) No public utility shall establish or maintain any unreasonable difference as to rates, charges, service, facilities, or in any other respect, either as between localities or as between classes of service.

By failing to accommodate citizens with disabilities, not allowing corporations to opt out at all, only allowing certain residential customers to truly opt out of all smart RF meters and forcing them to withstand RF meters even after they paid an illegal opt out fee, "The Projects", and each of them, have breached the condition of accepting federal "bail out" or "stimulus" funds which must honor the ADA.

PUBLIC UTILITIES CODE SECTION 328-328.2

<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=puc&group=00001-01000&file=328-328.2>

328. The Legislature finds and declares both of the following:

(a) In order to ensure that all core customers of a gas corporation continue to receive safe basic gas service in a competitive market, each existing gas corporation should continue to provide this essential service.

(b) No customer should have to pay separate fees for utilizing services that protect public or customer safety.

CAL. PUC. CODE § 394.25 : California Code - Section 394.25

<http://codes.lp.findlaw.com/cacode/PUC/1/d1/1/2.3/12/s394.25>

(b) An electric service provider may have its registration suspended or revoked, immediately or prospectively, in whole or in part, for any of the following acts:

(1) Making material misrepresentations in the course of soliciting customers, entering into service agreements with those customers, or administering those service agreements.

(2) Dishonesty, fraud, or deceit with the intent to substantially benefit the electric service provider or its employees, agents, or representatives, or to disadvantage retail electricity customers.

(3) Where the commission finds that there is evidence that the electric service provider is not financially or operationally capable of providing the offered electric service.

(4) The misrepresentation of a material fact by an applicant in obtaining a registration pursuant to Section 394.

There are SO MANY EXAMPLES of misrepresentation, fraud and deceit with smart meters and smart grid it is hard to know where to start.

Michigan Penal Code, Act 328 of 1931

MCL 750.539a

<http://www.legislature.mi.gov/%28S%28tak3tm554ezjag4531mc4tu1%29%29/mileg.aspx?page=getObject&objectName=mcl-750-539a>

This law defines “Private Place”, “Eavesdrop”, Surveillance” and “Person”

(1) “Private place” means a place where one may reasonably expect to be safe from casual or hostile intrusion or surveillance but does not include a place to which the public or substantial group of the public has access.

(2) “Eavesdrop” or “eavesdropping” means to overhear, record, amplify or transmit any part of the private discourse of others without the permission of all persons engaged in the discourse. Neither this definition or any other provision of this act shall modify or affect any law or regulation concerning interception, divulgence or recording of messages transmitted by communications common carriers.

(3) “Surveillance” means to secretly observe the activities of another person for the purpose of spying upon and invading the privacy of the person observed.

(4) "Person" means any individual, partnership, corporation or association.

THE MICHIGAN PENAL CODE (EXCERPT)

Act 328 of 1931

MCL 750.539d

<http://www.legislature.mi.gov/%28S%28tak3tm554ezjag4531mc4tu1%29%29/mileg.aspx?page=getObject&objectName=mcl-750-539d>

750.539d Installation, placement, or use of device for observing, recording, transmitting, photographing or eavesdropping in private place.

(1) Except as otherwise provided in this section, a person shall not do either of the following:

(a) Install, place, or use in any private place, without the consent of the person or persons entitled to privacy in that place, any device for observing, recording, transmitting, photographing, or eavesdropping upon the sounds or events in that place.

(b) Distribute, disseminate, or transmit for access by any other person a recording, photograph, or visual image the person knows or has reason to know was obtained in violation of this section.

(3) A person who violates or attempts to violate this section is guilty of a crime as follows:

(a) For a violation or attempted violation of subsection (1)(a):

(i) Except as provided in subparagraph (ii), the person is guilty of a felony punishable by imprisonment for not more than 2 years or a fine of not more than \$2,000.00, or both.

(ii) If the person was previously convicted of violating or attempting to violate this section, the person is guilty of a felony punishable by imprisonment for not more than 5 years or a fine of not more than \$5,000.00, or both.

(b) For a violation or attempted violation of subsection (1)(b), the person is guilty of a felony punishable by imprisonment for not more than 5 years or a fine of not more than \$5,000.00, or both.

(4) This section does not prohibit a person from being charged with, convicted of, or punished for any other violation of law committed by that person while violating or attempting to violate subsection (1)(a) or (b).

Civil Rights, An Overview

http://www.law.cornell.edu/wex/civil_rights

“A civil right is an enforceable right or privilege, which if interfered with by another gives rise to an action for injury. Examples of civil rights are freedom of speech, press, and assembly; the right to vote; **freedom from involuntary servitude; and the right to equality in public places. Discrimination occurs when the civil rights of an individual are denied or interfered with because of their membership in a particular group or class.** Various jurisdictions have enacted statutes to prevent discrimination based on a person's race, sex, religion, age, previous condition of servitude, **physical limitation**, national origin, and in some instances sexual orientation.”

46) Energy Companies Using Smart Grid to For Financial Gain, To Try To Remain Relevant and Slow the Inevitable Death of Their Unsustainable Business Model, As Natural Resources Dry Up and Sustainable Resources Take Over, Potentially Enabling Citizens to LEAVE Their Energy Suppliers In the Dust

Electrical Companies Try and Quash Sustainable Energy Solutions Like Solar!

On Rooftops, A Rival For Utilities

<http://www.nytimes.com/2013/07/27/business/energy-environment/utilities-confront-fresh-threat-do-it-yourself-power.html?ref=dianecardwell>

“For years, power companies have watched warily as solar panels have sprouted across the nation’s rooftops. **Now, in almost panicked tones, they are fighting hard to slow the spread.**”

“Alarmed by what they say has become an existential threat to their business, utility companies are moving to roll back government incentives aimed at promoting solar energy and other renewable sources of power.”

“In Arizona, for example, the country’s second-largest solar market, the state’s largest utility is pressuring the Arizona Corporation Commission, which sets utility rates, to reconsider a generous residential credit and impose new fees on customers, months after the agency eliminated a commercial solar incentive. In North Carolina, Duke Energy is pushing to institute a new set of charges for solar customers as well.”

“Making more power closer to where it is used, advocates say, can reduce stress on the grid and make it more reliable, as well as save utilities from having to build and maintain more infrastructure and large, centralized generators.”

“Utilities generally make their profits by making investments in infrastructure and designing customer rates to earn that money back with a guaranteed return, set on average at about 10 percent.”

The following video shows how utility companies like Edison DO NOT WANT SOLAR ENERGY!...

Save Rooftop Solar

<http://www.saverooftopsolar.com/>

California's AB-327 Officially Signed Into Law

<http://www.renewableenergyworld.com/rea/news/article/2013/10/californias-ab-327-officially-signed-into-law>

“In its initial form, AB-327 was criticized for its language that would have empowered utilities to flatten their rate structures while also charging consumers flat monthly fees, seen as **squarely targeting rooftop solar growth in the state.**”

Current smart meter and smart grid technology will most likely be obsolete in 5 years. This has sweeping ramifications to tax payers and utility customers not interested in wasting money.

The Smart Meter Cost

<http://canadafreepress.com/index.php/article/55399>

“The Smart Meter is a propaganda device to benefit utility companies, the electronic industry, and the global government”

“How expensive and accurate are the old meters? The general manager for a rural electric co-op covering five counties explained to me that contract meter readers on foot get paid approximately 80 cents to read an old, traditional meter, for a total of \$10 per year. And they are using their own cars and gas. We can assume less cost in urban areas due to the proximity of meters. “Electromechanical meters installed in the late 1940s are still functioning and are accurate. Most have zero maintenance. Power companies are selling electromechanical meters for \$2 each, which are nearly new, because they are surplus equipment to the power companies switching to smart meters.”

“On the other hand, the average life of a smart meter is about 10 years or less due to baking in the sun, exposure to the elements and to the overheating of the meter itself. The electronic displays are the most common part to fail. A laptop computer can read the count sometimes; otherwise the reading is estimated in order to preset it on the replaced meter. The cheapest smart meter cost \$135 per unit, plus the installation cost of at least \$30 per hour, a car, electrical training, equipment training and other materials, pension, and healthcare benefits.”

Getting Smarter About the Smart Grid

Full Report:

http://gettingsmarteraboutthesmartgrid.org/pdf/SmartGrid_Report_PDF-2012-11-26-Final.pdf

Short form

http://gettingsmarteraboutthesmartgrid.org/press_release_shortform.html

“WASHINGTON, D.C., Nov 26, 2012 (BUSINESS WIRE) -- A new policy report focused on the electric grid and economy of energy, "Getting Smarter About the Smart Grid", was published today by the National Institute for Science, Law & Public Policy (NISLAPP) in Washington, D.C. The report states that billions of dollars in federal subsidies for "smart" utility meters have been misspent on meter technology that will not lead to energy sustainability or contribute to the possibility of a more efficient and responsive electricity grid.”

Press Release:

http://www.gettingsmarteraboutthesmartgrid.org/press_release.html

Smart Grid Funding Misspent On Obsolete Technologies, Says New Report: Billions spent with taxpayer dollars on "smart meters" will not lead to U.S. sustainability; Place citizens and economy at risk

WASHINGTON, D.C. — November 26, 2012. A new policy report focused on the electric grid and economy of energy, *"Getting Smarter About the Smart Grid"*, was published today by the National Institute for Science, Law & Public Policy (NISLAPP) in Washington, D.C. The report states that **billions of dollars in federal subsidies for "smart" utility meters have been misspent on meter technology that will not lead to energy sustainability or contribute to the possibility of a more efficient and responsive electricity grid.**



"Getting Smarter About the Smart Grid" is authored by smart grid technology expert Timothy Schoechle, PhD, an international consultant in computer engineering and standardization, high-tech entrepreneur and former Faculty member of the University of Colorado, College of Engineering and Applied Science.

***"Getting Smarter About the Smart Grid"* states that Congress, state and local governments, as well as ratepayers, have been misled about the potential energy and cost saving benefits of the new "smart" meters, paid for in large part with taxpayer dollars, as well as ratepayer dollars.**

Dr. Schoechle, who has been engaged in development of electric utility meters, home automation systems, gateways, and energy management systems for over 25 years, and who sits on several international standards setting committees related to the smart grid, **calls the smart meter being rolled out across the U.S. "a canard—a story or hoax based on specious claims about energy benefits..."**

Schoechle says the present policy approach to electricity infrastructure in the U.S. evidences a "fundamental lack of understanding of the problems associated with the future of electricity and energy".

***"Getting Smarter About the Smart Grid"* recognizes the growing grass roots rebellion against smart meters now happening in 18 states, such as CA, VT, AZ, TX, FL, PA, ME, IL, OR and the District of Columbia, as only the "tip of the iceberg"—one that conceals a deeply dysfunctional energy economy needing urgent federal, state and local attention. Ratepayers' desire to "opt-out" of the new wireless meters on privacy, security, reliability, cost and potential public health grounds may herald, the report says, "an epochal transformation of the political economy of energy".**

***“Getting Smarter About the Smart Grid”* exposes inherent conflicts in the monopoly utility business model preventing the nation from moving to a renewable energy economy. It defines the technology investments, and standardization, as well as regulatory action, needed for an electricity grid that is wealth-creating, interconnected, secure, and empowering of people. The report says the nation’s energy and economic future can no longer be left in the hands of a monopoly power industry dis-incentivized to take the necessary steps toward renewable energy and sustainability.**

Jim Turner, Esq., Chairman of the National Institute for Science, Law and Public Policy and partner in the D.C. law firm Swankin-Turner, says **“A key element in a successful transition to a renewable energy economy will be establishing a clear ‘demarcation’ line between monopoly utility space and customer premises space, where the home gateway belongs to the consumer, not the utility.”**

Such a demarcation (or ‘demarc’), a concept already embodied in electricity policy in Germany and in the Netherlands, was a critical element in the breakup of the landline telephone monopoly in the U.S. and **lead to significant growth in the consumer electronics industry as market forces moved to better meet customer needs.** In Germany and the Netherlands, together with feed-in tariffs, where homeowners are compensated for energy produced, this demarcation has opened the way for home-based energy management technologies to flourish and facilitate the growth of renewable technologies, while eliminating the potential for significant privacy invasions, with the homeowner in control of their meter data.

Key Points in "Getting Smarter About the Smart Grid"

9 Problems With the Present Electricity Approach:

- 1. Data to be collected by the smart meters, including intimate personal details of citizens' lives, is not necessary to the basic purpose of the smart grid, such as supply/demand balancing, demand response (DR), dynamic pricing, renewable integration, or local generation and storage, as promoters of the meters, and uninformed parties, routinely claim.**
- 2. Federal, state and local governments have mistakenly believed that the installation of smart meters will somehow lead to reduction in use of fossil fuels, greater electricity efficiency and long-term energy economy benefits for the U.S. In fact, efforts to further develop and standardize those technologies that could achieve those goals have languished, while investments with stimulus funding have instead been made in technologies that merely serve the short-term economic interests of the utility industry and its suppliers instead of the interests of a true smart grid which could economically integrate renewable technologies and distributed, or decentralized, power generation.**
- 3. Much of the \$ multi-billion dollar federal subsidy for smart meters does not benefit ratepayers, nor support economic growth, but primarily benefits meter and meter networking manufacturers, while financially propping up unsustainable Investor-Owned Utilities (IOUs). Regulated utilities can charge back their capital investments to ratepayers, with a guaranteed 10-13% rate of return (ROR) on assets, by law. Thus, investors in utilities gain from the smart meter deployment, as they would from any other capital expenditure, while there is no clear gain and significant new risks (privacy, security, health & safety, costs) for the ratepayer. The allocation of stimulus dollars to subsidize smart meters has also been a net job destroyer, eliminating meter readers and creating manufacturing jobs overseas, while being an egregious waste of federal resources that only supports corporate interests and delays the needed transformation of the electricity grid.**

Getting Smarter About the Smart Grid

Why are federal government stimulus programs underwriting billions of dollars of 'dumb' smart meters for utility companies—with taxpayer dollars—meters that will soon be obsolete and not integrate with, or enable, the 'smart grid' of the future on which U.S. energy sustainability depends?



Authored by a veteran communications technology expert, in collaboration with the National Institute for Science, Law & Public Policy, "Getting Smarter About the Smart Grid" offers a roadmap to a truly "smart" decentralized electricity grid capable of integrating "distributed" power generation and renewable energy sources without the privacy, security, reliability, economic, or potential public health impacts of our present 20th century centralized and wasteful utility infrastructure investment approach.

National Institute for Science,
Law & Public Policy
November 2012

4. **Because Investor-Owned Utilities (IOUs) are paid on a per-kilowatt-of-energy-sold basis, and also receive a guaranteed ROR on assets, they do not have a financial incentive to encourage less energy usage, or to invest in technologies that would help citizens reduce energy consumption.**
 5. **Because coal plants must run at near capacity to achieve necessary economies of scale, adding renewable energy to the power mix may be in fact cost-additive for utilities, not cost-reducing, and ultimately cost-additive for ratepayers. Thus, there is an inherent conflict between coal-based power generation, the dominant means of electricity generation in the U.S., and a transition to renewable energy technologies that could lead to sustainability.** The report recommends the U.S. “move away from dependency on baseload generation, particularly coal, as quickly as possible” to facilitate renewable integration and reach our potential for energy independence.
 6. **Despite paying lip service to the public’s interest in incorporating renewable energy, as evidence in their marketing materials, utilities actually ‘curtail’, or waste, much of the renewable energy now generated in order to protect the economics of investor-owned coal plants.** *“Getting Smarter About the Smart Grid”* explains why state initiatives wanting to fulfill the promise of a 30% or higher renewable portfolio standard (RPS) is practically impossible in a coal baseload system.
 7. **U.S. policy statements “reflect the mistaken belief that the basic solutions involve fixing or modernizing the existing electricity grid, rather than complete structural transformation of electrical service, which goes beyond particular ‘smart’ technologies.”** In reality, shaving peak energy usage by shifting loads may actually increase energy bills as well as CO2 emissions by increasing dependency on coal baseload generation—the most expensive generation there is when considering the totality of subsidies and externalized costs. Increasing baseload dependency will not lower energy costs, as it appears our Administration believes, and it will further obstruct integration of renewable sources.
 8. **Expected growth in electric vehicles within a coal-based system will only worsen the nation’s baseload dependency, thus making the needed shift away from coal to a renewable energy future that much more pressing.**
 9. **Leadership in the energy sector is unlikely to come from the top, due to ‘regulatory capture’, unless caused by a catastrophic event or consequence.** At present, there appears to be little evidence utilities and their regulators want to or know how to make the needed changes to the utility business model, leaving it to the American public, through community-based initiatives and municipalization efforts, to drive the needed change toward renewable technologies and distributed, non-centralized power generation—as is now happening in such places as Boulder, Colorado.
- 7 Opportunities to Intelligently Move Forward:**
1. **The U.S. must move away from dependency on coal baseload power generation and toward renewable sources.**
 2. **Free, renewable energy resources must be prioritized and local opportunities for power generation and storage pursued.** We must stop subsidizing a

centralized, wasteful infrastructure approach that will not lead to sustainability or empower citizens to contribute to the grid.

3. **A clear legal and policy demarcation between customer premises space and utility space must be established.** Utilities should not be the sole “gatekeeper” for access to energy applications controlling consumer use, storage, and generation of electricity. As occurred in the telecommunications industry, establishing a clear market demarcation could unleash the creativity and competitive market strength of consumer electronics, appliance manufacturers, homebuilders, solar installers, apps developers, etc.
5. **Localize electric power, using distributed renewable sources, instead of large solar and wind farms where the economies of scale are not significantly greater than at small scale.** Localization of power generation avoids the energy loss and environmental and capital costs that come with long-distance energy transmission, keeps money in the community, with a 3.5x multiplier effect, and enhances reliability, responsiveness and grid security.
6. **State legislatures should enable PUCs to fundamentally change the utility business model so it can be sustainable.** Utilities must move to a service model that is not based on the present economics of commodity sale of electricity and rate of return regulation (ROR) that encourages unwise capital investments. Generation must be deregulated and separated from distribution, and the customer premises opened up to market competition in products and services for the premises-based generation, storage, management, and use of electricity. For example, some states are already moving to deregulate renewable generation for the charging of electric vehicles.
7. **Local communities must take it upon themselves to understand and obtain the safest and most secure technological options available for utility meters...**

In the Foreword to *“Getting Smarter About the Smart Grid”*, journalist and political analyst Duncan Campbell summarizes, *“Dr. Schoechle examines and explains the prevailing confusion about the “smart grid” and offers a clear path forward, lucidly showing an alternative to patching up our overly-complex, vulnerable, and increasingly expensive energy system—thus creating a truly smart and genuinely sustainable electricity system.”*

[Download “Getting Smarter About the Smart Grid”](#)

Educational Audio and Video Quadrilogues with Tim Schoechle, PhD and others involved with the production of *“Getting Smarter About the Smart Grid”* can be found at www.GettingSmarterAbouttheSmartGrid.org/audio.html

Smart Grid Speakers Bureau – Tim Schoechle, PhD, Duncan Campbell, Esq. and others involved in electricity municipalisation efforts in CO, are available to address communities on this topic.

www.GettingSmarterAbouttheSmartGrid.org

47) DOE Violates Record Keeping Laws and Stonewalls Investigations Into “Smart” Money Give Away and Other Record Keeping

Watchdog group: DOE violates records laws

<http://dailycaller.com/2013/09/17/watchdog-group-doe-violates-records-laws/#ixzz2jyY1ZSaW>

“Cause of Action asked the Energy Department for records regarding the identity and creditworthiness of the 460 applicants who had applied to the agency’s loan program, which guaranteed loans to green energy companies such as Solyndra, Abound Solar and Fisker.”

“However, CoA received a response that caused them to question the Energy Department’s record-keeping practices. **The agency failed to produce letters they are required to send to the Internal Revenue Service when assessing the creditworthiness of a loan applicant.**”

“This could be in violation of the Federal Records Act, according to CoA.”

“The Federal Records Act requires each agency head to make and preserve records,” said Dan Epstein, CoA’s executive director. “By failing to preserve these records, the DOE may have violated the Federal Records Act and its own regulations implementing the Act.”

“Cause of Action was given 131 letters that the IRS submitted in response to the DOE’s tax delinquency requests for loan applicants. This means there should have been 131 corresponding letters from the DOE to match the IRS records. However, the DOE only has corresponding letters for eleven of the 131 letters — **meaning it was missing 120 corresponding letters to the IRS.**”

“The DOE told CoA that it does not actually maintain letters it sends to the IRS.”

48) GOVERNMENT OFFICIALS MAY BE HELD PERSONALLY LIABLE FOR CIVIL RIGHTS VIOLATIONS AND OTHER LEGAL AND CONSTITUTIONAL VIOLATIONS

Although these citations are in no way meant to be taken as threats, they should be taken seriously and at face value. It is important for government officials and agency personnel to know that lawsuits are being filed around the country on the issue of smart meters and smart grid and that as people are becoming aware of what is going on in terms of violations to the US Constitution and human rights, so are any and all legal options for remedy and justice at this time are being explored.

18 USC § 241 Conspiracy Against Rights

<http://www.law.cornell.edu/uscode/text/18/241>

This statute makes it unlawful for two or more persons to **conspire to injure, oppress, threaten, or intimidate any person** of any state, territory or district **in the free exercise or enjoyment of any right or privilege secured to him/her by the Constitution or the laws of the United States, (or because of his/her having exercised the same).**

42 U.S.C. 1986 - Action for Neglect to Prevent with Civil Rights:

<http://www.law.cornell.edu/uscode/text/42/1986>

“Every person who, having knowledge that any of the wrongs conspired to be done, and mentioned in section 1985 of this title, are about to be committed, and having power to prevent or aid in preventing the commission of the same, neglects or refuses so to do, if such wrongful act be committed, shall be liable to the party injured, or his legal representatives, for all damages caused by such wrongful act, which such person by reasonable diligence could have prevented; and such damages may be recovered in an action on the case; and any number of persons guilty of such wrongful neglect or refusal may be joined as defendants in the action; and if the death of any party be caused by any such wrongful act and neglect, the legal representatives of the deceased shall have such action therefore...”

18 USC 242 - Deprivation of Rights Under Color of Law

<http://www.law.cornell.edu/uscode/text/18/242>

Whoever, under color of any law, statute, ordinance, **regulation**, or custom, **willfully subjects any person** in any State, Territory, Commonwealth, Possession, or District to the **deprivation of any rights, privileges, or immunities secured or protected by the Constitution or laws of the United States**, or to different punishments, pains, or penalties, on account of such person being an alien, or by reason of his color, or race, than are prescribed for the punishment of citizens, **shall be fined under this title or imprisoned not more than one year, or both; and if bodily injury results from the acts committed in violation of this section or if such acts include the use, attempted use, or threatened use of a dangerous weapon, explosives, or fire, shall be fined under this title or imprisoned not more than ten years, or both; and if death results from the acts committed in violation of this section or if such acts include kidnapping or an attempt to kidnap, aggravated sexual abuse, or an attempt to commit aggravated sexual abuse, or an attempt to kill, shall be fined under this title, or imprisoned for any term of years or for life, or both, or may be sentenced to death.**

<http://www.thefreedictionary.com/alien>

Alien:

1. Belonging to, characteristic of, or constituting another and very different place, society, or person; strange. (*electrosensitives – people who experience physical pain from microwave emissions, qualify for this category*)
2. “Dissimilar, inconsistent...” (*electrosensitives – people who experience physical pain from microwave emissions, qualify for this category*)
3. A person who is not included in a group; an outsider. (*electrosensitives – people who experience physical pain from microwave emissions, qualify for this category*)

Emmy Award Winning Producer, Jerry Day on this subject...

To Utility Companies

<http://www.youtube.com/watch?NR=1&feature=endscreen&v=UPLSwAm9DkQ>



COMMONWEALTH of VIRGINIA

Department of Health
P O BOX 2448
RICHMOND, VA 23218

TTY 7-1-1 OR
1-800-828-1120

MEMORANDUM

DATE: February 1, 2023

TO: Virginia State Board of Health

FROM: Seth Austin, Director of the Office of Vital Records

SUBJECT: Regulations Governing Vital Records (12VAC5-550) – Fast Track Amendments

The purpose of the fast track amendments is to conform the requirements of the following sections to recent changes in the Code of Virginia:

- 12VAC5-550-440, 12VAC5-550-450, 12VAC5-550-460: Amending death certificates and requirements to conform with §32.1-269.1;
- 12VAC5-550-125: Stillbirth certificate fee removal to conform with §32.1-258.1;
- 12VAC5-550-520: Updating fees for vital records requests, amendments or delayed registrations to conform with §32.1-273;
- 12VAC5-550-320: Change of sex on birth certificate requirements to conform with §32.1-261; and
- 12VAC5-550-130: Removing the item “race” on marriage and divorce certificates to conform with §§32.1-267, 32.1-268 and 32.1-268.1.

The fast track amendments also update definitions in the Virginia Administrative Code (12VAC5-550-5) to provide clarity to Virginia regulations; repeal sections (12VAC5-550-20; 12VAC5-550-30, 12VAC5-550-50, 12VAC5-550-60) which are not regulatory in nature; and update forms used by sections impacted by the action (12VAC5-550-140, 12VAC5-550-9998.)

The Board of Health is requested to approve the Fast Track Action; if approved it shall be published in the Virginia Register of Regulations. A 30-day public comment period begins and a public comment forum Town Hall opens. The regulations become effective 15-days after the public comment period ends unless there is objection by member(s) of the applicable committee of the Senate or House of Delegates, member(s) of the Joint Commission on Administrative Rules, or 10 or more members of the public; where the Fast Track regulation will serve as Notice of Intended Regulatory Action and the standard rulemaking process shall be followed to promulgate the regulation.



townhall.virginia.gov

Fast-Track Regulation Agency Background Document

Agency name	State Board of Health
Virginia Administrative Code (VAC) Chapter citation(s)	12VAC5-550
VAC Chapter title(s)	Board of Health Regulation Governing Vital Records
Action title	Amend Regulations Following Statutory Changes
Date this document prepared	1/20/2023

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Order 19 (2022) (EO 19), any instructions or procedures issued by the Office of Regulatory Management (ORM) or the Department of Planning and Budget (DPB) pursuant to EO 19, the Regulations for Filing and Publishing Agency Regulations (1 VAC 7-10), and the *Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code*.

Brief Summary

Provide a brief summary (preferably no more than 2 or 3 paragraphs) of this regulatory change (i.e., new regulation, amendments to an existing regulation, or repeal of an existing regulation). Alert the reader to all substantive matters. If applicable, generally describe the existing regulation.

The purpose of the fast track amendments is to amend the Regulations to reflect several recent changes in the Code of Virginia, including changes to §32.1-258.1, §32.1-269.1, §32.1-261, and §32.1-267. Several sections will be repealed, as these sections were not regulatory in nature. The amendment to 12VAC5-550-520 changes the certification fee from \$10 to \$12 because this fee was changed in the Code and implemented several years ago.

Chapter 171 of the 2022 Acts of Assembly removed the authority to charge a fee to obtain a stillbirth certificate. The business operations of the Office of Vital Records have already been changed to conform to the new law, but the regulations have not yet been changed. Chapters 209, 210, and 211 of the 2020 Acts of Assembly removed race from the data to be collected regarding marriages, divorces, and annulments. Chapters 465 and 466 of the 2020 Acts of Assembly amended the process to change one's sex on a birth certificate. Chapters 116 and 117 of the 2022 Acts of Assembly changed the process and timelines associated with amending a death certificate.

The amendments improve the regulatory language used in the Virginia Administrative Code so that both the public and government organizations have better direction concerning the responsibilities and requirements needed to perform their duties. This should reduce time spent dealing with challenges to processes that are presented by members of the public and will make the operations of the Office of Vital Records more efficient.

Acronyms and Definitions

Define all acronyms used in this form, and any technical terms that are not also defined in the "Definitions" section of the regulation.

There are no acronyms used in this Agency Background Document that are not also defined in the "Definitions" section of the regulation.

Statement of Final Agency Action

Provide a statement of the final action taken by the agency including: 1) the date the action was taken; 2) the name of the agency taking the action; and 3) the title of the regulation.

Mandate and Impetus

Identify the mandate for this regulatory change and any other impetus that specifically prompted its initiation (e.g., new or modified mandate, petition for rulemaking, periodic review, or board decision). For purposes of executive branch review, "mandate" has the same meaning as defined in the ORM procedures, "a directive from the General Assembly, the federal government, or a court that requires that a regulation be promulgated, amended, or repealed in whole or part."

Consistent with Virginia Code § 2.2-4012.1, also explain why this rulemaking is expected to be noncontroversial and therefore appropriate for the fast-track rulemaking process.

Chapter 171 (2022) removed the authority to charge a fee to obtain a stillbirth certificate. Chapters 209, 210, and 211 (2020) removed race from the data to be collected regarding marriages, divorces, and annulments. Chapters 465 and 466 (2020) amended the process to change one's sex on a birth certificate. Chapters 116 and 117 (2022) changed the process and timelines associated with amending a death certificate. Additionally, sections 20, 30, 50, and 60 will be repealed because the provisions do not meet the statutory definition of a "regulation" in § 2.2-4001.

The rulemaking is expected to be non-controversial because the substantive changes being made are to comply with changes to the Code of Virginia. Additionally, the style and form changes are not substantive but will make the regulations clearer and more readable for both the public and agency staff.

Legal Basis

Identify (1) the promulgating agency, and (2) the state and/or federal legal authority for the regulatory change, including the most relevant citations to the Code of Virginia and Acts of Assembly chapter number(s), if applicable. Your citation must include a specific provision, if any, authorizing the

promulgating agency to regulate this specific subject or program, as well as a reference to the agency's overall regulatory authority.

The regulation is promulgated by the State Board of Health under the authority of §§ 32.1-12 and 32.1-250 of the Code of Virginia.

Section 32.1-12 grants the Board of Health the legal authority to make, adopt, promulgate, and enforce regulations necessary to carry out the provisions of Title 32.1 of the Code and other laws of the Commonwealth administered by it. Section 32.1-250 of the Code of Virginia requires the Board of Health to install, maintain and operate the only system of vital records throughout the Commonwealth.

Specific changes being made are authorized by Chapters 209, 210, 211, 465, and 466 (2020) and 116, 117, and 171 (2022). The fee amount in Section 520 is being updated to reflect the amount in Item 290 A, Chapter 2 of the 2022 Acts of Assembly, Special Session I.

Purpose

Explain the need for the regulatory change, including a description of: (1) the rationale or justification, (2) the specific reasons the regulatory change is essential to protect the health, safety or welfare of citizens, and (3) the goals of the regulatory change and the problems it is intended to solve.

This fast track action is essential to ensure the regulations that govern the business processes of the Office of Vital Records are in conformance with provisions of the Code of Virginia. This fast track action also seeks to increase the clarity, accuracy, and completeness of the regulations governing vital records.

Substance

Briefly identify and explain the new substantive provisions, the substantive changes to existing sections, or both. A more detailed discussion is provided in the "Detail of Changes" section below.

- 12VAC5-550-5. Definitions are updated to make the Regulations easier to understand.
- 12VAC5-550-20, 12VAC5-550-30, 12VAC5-550-50, and 12VAC5-550-60 have been repealed. These provisions do not meet the statutory definition of a "regulation" in § 2.2-4001 and are unnecessary.
- 12VAC5-550-125. Certificate of birth resulting in a stillbirth. The changes remove the fee for this type of vital record.
- 12VAC5-550-130. Marriage return and certificate items. The changes identify the specific form that will be used for this action, which facilitates the removal of race as a certificate item.
- 12VAC5-550-140. Report of divorce or annulment. The changes identify the specific form that will be used for this action, which facilitates the removal of race as a certificate item.
- 12VAC5-550-320. Change of Sex. The changes identify the specific form that will be used for this action, clarify the language, and conform the regulation to the Code of Virginia.
- 12VAC5-550-440. Applications for correction. The changes update the timeframe for amending a death certificate and clarify how the amendment can be accomplished consistent with the Code.

- 12VAC5-550-450. Evidence required for corrections or amendments. The changes add to and clarify the requirements for changes made to a death record.
- 12VAC5-550-460. Methods of correcting or altering certificates. The changes define “amendment” to bring consistency and clarity to the regulations.
- 12VAC5-550-520. Fees. This fee is being updated to reflect Item 290 A, Chapter 2 of the 2022 Acts of Assembly, Special Session I.
- 12VAC5-550-9998 FORMS. Forms that are only used internally by OVR staff are being removed, the effective dates of all necessary forms are being updated, along with links to the documents.

Issues

Identify the issues associated with the regulatory change, including: 1) the primary advantages and disadvantages to the public, such as individual private citizens or businesses, of implementing the new or amended provisions; 2) the primary advantages and disadvantages to the agency or the Commonwealth; and 3) other pertinent matters of interest to the regulated community, government officials, and the public. If there are no disadvantages to the public or the Commonwealth, include a specific statement to that effect.

The primary advantages to the public, the Agency, and the Commonwealth include the enhanced integrity of the regulations governing vital records and in turn the system of vital records within the Commonwealth. There are no known disadvantages to the public, regulated entities, business entities, or the Commonwealth.

Requirements More Restrictive than Federal

Identify and describe any requirement of the regulatory change which is more restrictive than applicable federal requirements. Include a specific citation for each applicable federal requirement, and a rationale for the need for the more restrictive requirements. If there are no applicable federal requirements, or no requirements that exceed applicable federal requirements, include a specific statement to that effect.

There are no requirements of this proposal which are more restrictive than applicable federal requirements.

Agencies, Localities, and Other Entities Particularly Affected

Consistent with § 2.2-4007.04 of the Code of Virginia, identify any other state agencies, localities, or other entities particularly affected by the regulatory change. Other entities could include local partners such as tribal governments, school boards, community services boards, and similar regional organizations. “Particularly affected” are those that are likely to bear any identified disproportionate material impact which would not be experienced by other agencies, localities, or entities. “Locality” can refer to either local governments or the locations in the Commonwealth where the activities relevant to the regulation or regulatory change are most likely to occur. If no agency, locality, or entity is particularly affected, include a specific statement to that effect.

- Other State Agencies Particularly Affected: No other agency will be affected by these fast track amendments.

- Localities Particularly Affected: There are no localities that will be affected by these fast track amendments.
- Other Entities Particularly Affected: Members of the public filing or amending vital records are affected by the process changes – however, because the regulatory changes are to comply with previous changes in the Code, no other entity will be affected solely by the regulatory changes.

Economic Impact

Consistent with § 2.2-4007.04 of the Code of Virginia, identify all specific economic impacts (costs and/or benefits), anticipated to result from the regulatory change. When describing a particular economic impact, specify which new requirement or change in requirement creates the anticipated economic impact. Keep in mind that this is the proposed change versus the status quo.

Impact on State Agencies

<i>For your agency:</i> projected costs, savings, fees or revenues resulting from the regulatory change, including: a) fund source / fund detail; b) delineation of one-time versus on-going expenditures; and c) whether any costs or revenue loss can be absorbed within existing resources	The projected cost to the Virginia Department of Health to implement and enforce this regulatory proposal is negligible. It will not interrupt or affect business operations within the Office of Vital Records.
<i>For other state agencies:</i> projected costs, savings, fees or revenues resulting from the regulatory change, including a delineation of one-time versus on-going expenditures.	There is no projected cost to other state agencies to implement and enforce this regulatory proposal.
<i>For all agencies:</i> Benefits the regulatory change is designed to produce.	None

Impact on Localities

If this analysis has been reported on the ORM Economic Impact form, indicate the tables (1a or 2) on which it was reported. Information provided on that form need not be repeated here.

Projected costs, savings, fees or revenues resulting from the regulatory change.	Implementing and enforcing this regulatory proposal will not produce a cost to any localities.
Benefits the regulatory change is designed to produce.	None

Impact on Other Entities

If this analysis has been reported on the ORM Economic Impact form, indicate the tables (1a, 3, or 4) on which it was reported. Information provided on that form need not be repeated here.

Description of the individuals, businesses, or other entities likely to be affected by the regulatory change. If no other entities will be affected, include a specific statement to that effect.	The analysis has been reported in tables 1a, 3, and 4 on the ORM Economic Review form.
---	--

<p>Agency's best estimate of the number of such entities that will be affected. Include an estimate of the number of small businesses affected. Small business means a business entity, including its affiliates, that:</p> <ul style="list-style-type: none"> a) is independently owned and operated and; b) employs fewer than 500 full-time employees or has gross annual sales of less than \$6 million. 	<p>The analysis has been reported in tables 1a, 3, and 4 on the ORM Economic Review form.</p>
<p>All projected costs for affected individuals, businesses, or other entities resulting from the regulatory change. Be specific and include all costs including, but not limited to:</p> <ul style="list-style-type: none"> a) projected reporting, recordkeeping, and other administrative costs required for compliance by small businesses; b) specify any costs related to the development of real estate for commercial or residential purposes that are a consequence of the regulatory change; c) fees; d) purchases of equipment or services; and e) time required to comply with the requirements. 	<p>The analysis has been reported in tables 1a, 3, and 4 on the ORM Economic Review form.</p>
<p>Benefits the regulatory change is designed to produce.</p>	<p>The analysis has been reported in tables 1a, 3, and 4 on the ORM Economic Review form.</p>

Alternatives to Regulation

Describe any viable alternatives to the regulatory change that were considered, and the rationale used by the agency to select the least burdensome or intrusive alternative that meets the essential purpose of the regulatory change. Also, include discussion of less intrusive or less costly alternatives for small businesses, as defined in § 2.2-4007.1 of the Code of Virginia, of achieving the purpose of the regulatory change.

If this analysis has been reported on the ORM Economic Impact form, indicate the tables on which it was reported. Information provided on that form need not be repeated here.

There are no viable alternatives to the proposal considered. The regulatory action is necessary to make corrections to the existing regulations, provide clarification to regulatory language, and add additional regulatory sections required by changes to the Code of Virginia.

Regulatory Flexibility Analysis

Consistent with § 2.2-4007.1 B of the Code of Virginia, describe the agency's analysis of alternative regulatory methods, consistent with health, safety, environmental, and economic welfare, that will accomplish the objectives of applicable law while minimizing the adverse impact on small business. Alternative regulatory methods include, at a minimum: 1) establishing less stringent compliance or reporting requirements; 2) establishing less stringent schedules or deadlines for compliance or reporting requirements; 3) consolidation or simplification of compliance or reporting requirements; 4) establishing performance standards for small businesses to replace design or operational standards required in the proposed regulation; and 5) the exemption of small businesses from all or any part of the requirements contained in the regulatory change.

No alternative regulatory methods are available to the agency. These changes are being made to comply with the Code of Virginia and make non-substantive changes for the purpose of clarity and readability; they do not address compliance and reduce reporting requirements, and the regulations do not impact small businesses.

Public Participation

Indicate how the public should contact the agency to submit comments on this regulation, and whether a public hearing will be held, by completing the text below.

Consistent with § 2.2-4011 of the Code of Virginia, if an objection to the use of the fast-track process is received within the 30-day public comment period from 10 or more persons, any member of the applicable standing committee of either house of the General Assembly or of the Joint Commission on Administrative Rules, the agency shall: 1) file notice of the objections with the Registrar of Regulations for publication in the Virginia Register and 2) proceed with the normal promulgation process with the initial publication of the fast-track regulation serving as the Notice of Intended Regulatory Action.

If you are objecting to the use of the fast-track process as the means of promulgating this regulation, please clearly indicate your objection in your comment. Please describe the nature of, and reason for, your objection to using this process.

The Virginia Department of Health is providing an opportunity for comments on this regulatory proposal, including but not limited to (i) the costs and benefits of the regulatory proposal and any alternative approaches, (ii) the potential impacts of the regulation, and (iii) the agency's regulatory flexibility analysis stated in this background document.

Anyone wishing to submit written comments for the public comment file may do so through the Public Comment Forums feature of the Virginia Regulatory Town Hall web site at: <https://townhall.virginia.gov>. Comments may also be submitted by mail, email or fax to

Yolanda Aponte, Office of Vital Records,
P. O. Box 1000
Richmond, VA 23218,
Phone: (804) 482-7939,
Fax: (804) 662-6256,
Email: yolanda.aponte@vdh.virginia.gov.

In order to be considered, comments must be received by 11:59 pm on the last day of the public comment period.

Detail of Changes

List all regulatory changes and the consequences of the changes. Explain the new requirements and what they mean rather than merely quoting the text of the regulation. For example, describe the intent of the language and the expected impact. Describe the difference between existing requirement(s) and/or agency practice(s) and what is being proposed in this regulatory change. Use all tables that apply, but delete inapplicable tables.

If an existing VAC Chapter(s) is being amended or repealed, use Table 1 to describe the changes between existing VAC Chapter(s) and the proposed regulation. If existing VAC Chapter(s) or sections are being repealed and replaced, ensure Table 1 clearly shows both the current number and the new number for each repealed section and the replacement section.

Table 1: Changes to Existing VAC Chapter(s)

Current chapter-section number	New chapter-section number, if applicable	Current requirements in VAC	Change, intent, rationale, and likely impact of new requirements
15VAC5-550-5		<p>“In addition to the words and terms defined in § 32.1-249 of the Code of Virginia, the following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:</p> <p>...</p> <p>“Primary evidence” means valid first-hand documentation established before the registrant’s 18th birthday, such as school admission records, physician’s records, immunization records, passport, federal census abstracts, baptismal records and insurance applications.</p> <p>“Registrant” means the person whose personal information is registered and filed in the systems of vital records.</p> <p>“Secondary evidence” means valid documentation established after the registrant’s eighteenth birthday such as marriage records, child’s birth certificate, school records, social security records, driver’s records, work permit and employment records. Such evidence must be at least five years old.”</p>	<p>CHANGE: The definition of “primary evidence” is being updated to replace the words “such as” with “including.” The definition for “registrant” is being updated to mean the person whose personal information is “<u>primarily registered on a vital record...</u>” (new language underlined.) The definition of “secondary evidence” is being updated to replace “such as” with “including,” make a style change, and remove reference to the requirement that the evidence be at least five years old. A definition for “registrar” is also being added.</p> <p>INTENT: The intent is to increase the clarity of those definitions being amended. The update to the definition of “registrant” is intended to specify the person considered to be a registrant, as the information of more than one person may be included on a vital record. For example, a parent’s information is included on their child’s birth certificate, but the child is considered the registrant. The intent of adding a definition for “registrar” is to be able to identify tasks that can be performed by the State Registrar or any other in the Commonwealth.</p> <p>RATIONALE: The rationale is that clearer regulations are better for the public and for agency staff administering them. The definition for “secondary evidence” also contained a substantive requirement, which should not be included in a “Definitions” section.</p> <p>LIKELY IMPACT: The likely impact is that the regulations will be more readable.</p>
12VAC5-550-20		<p>This section identified the purpose of the regulations.</p>	<p>CHANGE: The section is being repealed</p> <p>INTENT: The intent is to repeal non-regulatory provisions, which are unnecessary.</p> <p>RATIONALE: The rationale is that the provisions are not regulatory in nature pursuant to the definition of a regulation in § 2.2-4001. The Registrar of Regulations, pursuant to 1VAC7-10-40 (C) has the authority to omit non-regulatory and unnecessary provisions from publication.</p>

			<p>LIKELY IMPACT: The regulations will be shorter and not contain unnecessary language.</p>
12VAC5-550-30		This section identifies the “administration” of the chapter.	<p>CHANGE: The section is being repealed</p> <p>INTENT: The intent is to repeal non-regulatory provisions, which are unnecessary.</p> <p>RATIONALE: The rationale is that the provisions are not regulatory in nature pursuant to the definition of a regulation in § 2.2-4001. By nature of being promulgated by the Board of Health under its basic laws, the administration of the chapter is already set forth in the Code of Virginia. The Registrar of Regulations, pursuant to 1VAC7-10-40 (C) has the authority to omit non-regulatory and unnecessary provisions from publication.</p> <p>LIKELY IMPACT: The regulations will be shorter and not contain unnecessary language.</p>
12VAC5-550-50		This section indicates that the Administrative Process Act (APA) applies to the regulation.	<p>CHANGE: The section is being repealed</p> <p>INTENT: The intent is to repeal non-regulatory provisions, which are unnecessary.</p> <p>RATIONALE: The rationale is that the provisions are not regulatory in nature pursuant to the definition of a regulation in § 2.2-4001. The APA applies without including a statement to that effect in the regulation. The Registrar of Regulations, pursuant to 1VAC7-10-40 (C) has the authority to omit non-regulatory and unnecessary provisions from publication.</p> <p>LIKELY IMPACT: The regulations will be shorter and not contain unnecessary language.</p>
12VAC5-550-60		“The board reserves the right to authorize any procedure for the enforcement of this chapter that is not inconsistent with the provisions set forth herein and the provisions of Chapter 7 of Title 32.1 of the Code of Virginia.”	<p>CHANGE: The section is being repealed</p> <p>INTENT: The intent is to repeal non-regulatory provisions, which are unnecessary. The Registrar of Regulations, pursuant to 1VAC7-10-40 (C) has the authority to omit non-regulatory and unnecessary provisions from publication.</p> <p>RATIONALE: The rationale is that the provisions are not regulatory in nature pursuant to the definition of a regulation in § 2.2-4001. The section does not define or specify any specific power or procedure to be followed by a regulated entity or by the</p>

			<p>agency, and the Board's powers are already set forth in the Code of Virginia.</p> <p>LIKELY IMPACT: The regulations will be shorter and not contain unnecessary language.</p>
<p>12VAC5-550-125</p>		<p>This section describes the process by which a parent may receive a Certificate of Birth Resulting in Stillbirth.</p>	<p>CHANGE: The change is to remove the requirement to pay a fee to receive a Certificate pursuant to the section. Multiple changes in style and form are also made.</p> <p>INTENT: The intent is to provide stillbirth certificates free of charge. The requirements for the certificate have been re-organized for clarity and to make the section consistent with the Registrar of Regulations' <i>Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code ("Style Requirements")</i>.</p> <p>RATIONALE: Chapter 171 (2022) removed the authority to charge a fee associated with obtaining a stillbirth certificate. Also, regulatory language should conform to the <i>Style Requirements</i> to ensure concise, clear, and consistent regulatory language.</p> <p>LIKELY IMPACT: The impact of the change is negligible, as there are very few stillbirth certificates produced each year, and the loss of revenue is minimal. In Virginia, there were approximately 2,800 stillbirths between 2018 and 2020 and these led to only 229 applications for certificates. For those wishing to obtain a certificate, though, they can do so free of charge. The language will also be more readable.</p>
<p>12VAC5-550-130</p>		<p>This section included the form to be used to register a marriage and the items to be included on the form.</p>	<p>CHANGE: The section will be updated to reference the process by which an officer issuing marriage license is to report those marriages to the State Registrar of Vital Records, including the form. It will also reference the form required to be used by members of the public to obtain a certified copy of a marriage certificate. The word "items" is also being stricken from the section title, as the section no longer lists the items in the form but makes reference to the form itself, instead.</p> <p>INTENT: The intent is make the regulations clearer and more reflective of the processes governed by the State Registrar and to reference the required forms to be used. In effect, because the forms no longer require race to be reported, it removes the current requirement which is unenforceable.</p>

			<p>RATIONALE: The rationale is that Chapters 209, 210, and 211 (2020), prompted by the order in a federal court case, <i>Rogers v. Virginia State Registrar</i>, 507 F. Supp. 3d 664 (E.D. Va. 2019), removed the reporting of race from marriage applications, licenses, and records.</p> <p>LIKELY IMPACT: The regulations will comply with the Code of Virginia.</p>
<p>12VAC5-550-140</p>		<p>This section included the form to be used to register a divorce or annulment and the items to be included on the form.</p>	<p>CHANGE: The section will be updated to reference the process by which a clerk of the court granting decrees of divorce and annulment to the State Registrar of Vital Records, including the form. It will also reference the form required to be used by members of the public to obtain a certified copy of a divorce or annulment certificate. The word “items” is also being stricken from the section title, as the section no longer lists the items in the form but makes reference to the form itself, instead.</p> <p>INTENT: The intent is make the regulations clearer and more reflective of the processes governed by the State Registrar and to reference the required forms to be used. In effect, because the forms no longer require race to be reported, it removes the current requirement which is unenforceable.</p> <p>RATIONALE: The rationale is that Chapters 209, 210, and 211 (2020), prompted by the order in a federal court case, <i>Rogers v. Virginia State Registrar</i>, 507 F. Supp. 3d 664 (E.D. Va. 2019), removed the reporting of race from divorce and annulment records.</p> <p>LIKELY IMPACT: The regulations will comply with the Code of Virginia.</p>
<p>12VAC5-550-320</p>		<p>This section describes the process by which a person may obtain a new birth certificate to reflect a change in sex and associated name change. The regulations currently require evidence of specific surgical procedures and diagnoses and a court order.</p>	<p>CHANGE: The section still describes the process but makes reference to the specific form to be used, which is to be completed by a healthcare provider who has provided clinically appropriate treatment. It removes the requirement to submit a court order changing one’s sex and to have undergone and provide evidence of a surgical procedure. The section also still references the process by which a person changing the sex on their birth certificate may change their name but specifies the evidence that may be required. The amendment also updates the style and form of the language.</p> <p>INTENT: The intent is conform the process to the Code of Virginia and clarify the process and form to change one’s sex as it appears on a birth certificate. The intent is</p>

			<p>also to include in the regulations a reference to the evidence requirements the State Registrar’s Office may need to accurately identify the birth certificate corresponding to the person requesting the change of sex. Also, regulatory language should conform to the <i>Style Requirements</i> to ensure concise, clear, and consistent regulatory language.</p> <p>RATIONALE: The rationale is that Chapters 465 and 466 (2020) amended the process to change one’s sex on their birth certificate in the Code of Virginia and prohibited requirements for evidence or documentation of any medical procedure. Additionally, the court order itself may not contain enough information to accurately identify the person’s birth certificate, as multiple people born in the Commonwealth have the same name, so the Office of Vital Records may need to inspect additional information, which the person would have submitted to the Circuit Court to obtain the court order changing their name, to accurately make that identification.</p> <p>LIKELY IMPACT: The regulations will comply with the Code of Virginia and more clearly and accurately reflect the process to change one’s sex and name.</p>
<p>12VAC5-550-440</p>		<p>This section describes the process and requirements to correct or amend a vital record.</p>	<p>CHANGE: The subsections related to amending a birth certificate or marriage, divorce, or annulment record will be updated to make style and form changes. The death certificate amendment procedure will also be updated to allow for changes to be made administratively (i.e. without a court order) within 45 days instead of 30 and beyond 45 days in certain circumstances.</p> <p>INTENT: The intent of the style and form changes is to conform the section to the <i>Style Requirements</i>. The intent of the substantive change is to clarify the process by which a person may amend a death certificate, which includes an additional 15 days to request an administrative amendment.</p> <p>RATIONALE: The rationale is that the death certificate amendment process in the Code of Virginia was changed by Chapters 465 and 466 (2022). Also, regulatory language should conform to the <i>Style Requirements</i> to ensure concise, clear, and consistent regulatory language.</p> <p>LIKELY IMPACT: The regulations will comply with the Code of Virginia and</p>

			<p>members of the public who wish to amend a death certificate will utilize the new process and timelines. Additionally, the regulation will be clearer and more readable.</p>
<p>12VAC5-550-450</p>		<p>This section describes the evidence that a person is required to submit to request an amendment to a vital record.</p>	<p>CHANGE: The requirements related to amending birth and death certificates are separated. There are also minimal style changes made to the first paragraph of subsection A.</p> <p>INTENT: The intent is to clarify the difference between the evidence required to change a birth certificate vs. a death certificate. Also, regulatory language should conform to the <i>Style Requirements</i> to ensure concise, clear, and consistent regulatory language.</p> <p>RATIONALE: The rationale is that the process by which a death certificate can be amended, and subsequently the evidence needed, were changed by Chapters 465 and 466 (2022). The current regulatory requirements do not distinguish between the two types of certificates, though the process for each is now different.</p> <p>LIKELY IMPACT: The regulations will comply with the Code of Virginia and members of the public who wish to amend a death certificate will utilize the new process and timelines. Additionally, the regulation will be clearer and more readable.</p>
<p>12VAC5-550-460</p>		<p>This section describes the manner by which the registrar makes requested and authorized amendments to vital records.</p>	<p>CHANGE: The changes are mostly non-substantive and in only style and form. Subsection A will be amended to change the provision that a birth certificate on which a name is amended within seven years will not be considered to be amended – that time period will be reduced to one year.</p> <p>INTENT: The intent is of the style changes is to conform the regulations to the <i>Style Requirements</i>. The change regarding the time in which a name may be changed without considering a birth certificate to be amended is intended to comply with § 32.1-269 (B) of the Code.</p> <p>RATIONALE: Regulatory language should conform to the <i>Style Requirements</i> to ensure concise, clear, and consistent regulatory language. Also, § 32.1-269 (B) requires the Board to “prescribe by regulation the conditions under which omissions or errors on certificates[...]may be corrected within one year after the date of the event without the certificate being marked amended.” The process will be</p>

			<p>updated to reflect that one year point instead of seven years.</p> <p>LIKELY IMPACT: The changes are for the most part to clarify the language, but also include a clarification of the timeline associated with the term “amendment” to now refer to changes made after one year from the date of the vital event. This change is needed to support the other changes to Regulations pertaining to vital records amendments which are necessary due to Chapters 116 and 117 of the 2022 Acts of Assembly.</p>
<p>12VAC5-550-520</p>		<p>A. The fee to be charged by the State Registrar or by the city or county registrar shall be \$10 for each full certification or short form certification of a vital record, or for a search of the files or records when no copy is made.</p> <p>B. When documents are amended or delayed birth registration is requested, the requester shall be charged an administrative fee of \$10.</p>	<p>CHANGE: The change is to update the fee for a certified copy from \$10 to \$12 unless otherwise directed in the Code. There are also style and form changes made to the section.</p> <p>INTENT: The intent is to conform the regulations to the Appropriation Act, which sets the fee at \$12 and to make reference to the special circumstances in which no fee is to be charged. The intent is also to conform the language to the <i>Style Requirements</i>.</p> <p>RATIONALE: Item 309 A, Chapter 4 of the 2004 Acts of Assembly, Special Session I initially updated the “standard vital records fee” to \$12. Item 290 A, Chapter 2 of the 2022 Acts of Assembly, Special Session I, includes that language. Also, regulatory language should conform to the <i>Style Requirements</i> to ensure concise, clear, and consistent regulatory language.</p> <p>LIKELY IMPACT: The regulations will conform to the Appropriation Act language.</p>
<p>FORMS (12VAC5-550)</p>		<p>The section listed 17 forms used by the State Registrar of Vital Records.</p>	<p>CHANGE: Forms only used by the Office of Vital Records, which include vital record templates, will be removed. The applications for a Birth Record, Marriage-Divorce Record, Death record, Stillbirth Certificate, form to change sex designation, and request to amend a birth certificate are all added. Additionally, the report of adoption, acknowledgement of paternity, and affidavit for correction of a record are all updated to reflect the most updated effective version of the Form.</p> <p>INTENT: The intent is to only list those forms that are used by the public and to ensure access to the most up to date versions of the forms.</p> <p>RATIONALE: The rationale is that forms listed in the section should include access to</p>

			<p>printable or downloadable versions of the form and vital record / certificate templates should not be publicly accessible. The forms that members of the public do need or are required to use should be listed and accessible.</p> <p>LIKELY IMPACT: The public will have access via the regulations in the VAC online to all relevant forms. Also, the section will be more concise with the removal of unnecessary references to other forms.</p>
--	--	--	--

Office of Regulatory Management
Economic Review Form

Agency name	State Board of Health
Virginia Administrative Code (VAC) Chapter citation(s)	12VAC5-550
VAC Chapter title(s)	Board of Health Regulations Governing Vital Records
Action title	Amend Regulations Following Statutory Changes
Date this document prepared	11/1/2022
Regulatory Stage (including Issuance of Guidance Documents)	Fast Track Action

Cost Benefit Analysis

Complete Tables 1a and 1b for all regulatory actions. You do not need to complete Table 1c if the regulatory action is required by state statute or federal statute or regulation and leaves no discretion in its implementation.

Table 1a should provide analysis for the regulatory approach you are taking. Table 1b should provide analysis for the approach of leaving the current regulations intact (i.e., no further change is implemented). Table 1c should provide analysis for at least one alternative approach. You should not limit yourself to one alternative, however, and can add additional charts as needed.

Report both direct and indirect costs and benefits that can be monetized in Boxes 1 and 2. Report direct and indirect costs and benefits that cannot be monetized in Box 4. See the ORM Regulatory Economic Analysis Manual for additional guidance.

Table 1a: Costs and Benefits of the Proposed Changes (Primary Option)

<p>(1) Direct & Indirect Costs & Benefits (Monetized)</p>	<p>There are no monetized costs associated with any of the proposed regulatory changes.</p> <p>There are no monetized benefits associated with the proposed changes to the following sections:</p> <ul style="list-style-type: none"> • 12VAC5-550-5 • 12VAC5-550-20 • 12VAC5-550-30 • 12VAC5-550-50 • 12VAC5-550-60 • 12VAC5-550-130 • 12VAC5-550-140 • 12VAC5-550-9998 (FORMS) • All style and form changes throughout the chapter <p>The monetized benefits associated with proposed changes are detailed below:</p> <ul style="list-style-type: none"> • The regulatory action will amend the Certificate of birth resulting in a stillbirth regulation (12VAC5-550-125) removing the requirement of a fee to be established for this certificate type. This action is required to conform to Chapter 171 of the 2022 Acts of Assembly. Benefits: Individuals requesting a certificate of birth resulting in a stillbirth will no longer be charged a \$12 fee. From 2018 through 2020, the Office of Vital Records issued 229 of these certificates, equaling an average savings of \$916 per year if fees were not charged during that time period. • The regulatory action will amend the Change of sex (12VAC5-550-320) to update the requirements for changing the sex on a birth certificate to conform to Chapter 466 of the 2020 Acts of Assembly. Benefits: Individuals seeking to change the sex on their birth certificate can now accomplish this through a simplified administrative process which does not require court costs. Legal fees can range widely so VDH does not have a way to calculate this potential benefit. • The regulatory action will amend the Applications for correction (12VAC5-550-440), Evidence required for corrections or amendments (12VAC5-550-450), and Methods of correcting or altering certificates (12VAC5-550-460) to allow information on a death certificate to be amended with supporting evidence for 45 days after the filing of the death certificate, and to clarify amendment forms and processes to create internal consistency within the Regulations. This action is required to conform to Chapter 117 of the 2022 Acts of Assembly. The change to Section 460 is to conform to § 32.1-269 (B) of the Code of Virginia.
---	--

	Benefits: Individuals seeking to amend a death certificate no longer need to pay court fees in order to obtain a court order to request an amendment to the decedent’s name, informant’s name, name of spouse, marital status, name of parents and place of residency when outside of the Commonwealth, if an amendment is made within 45 days of filing the death certificate. Legal fees can range widely so VDH does not have a way to calculate this potential benefit.	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0	(b) \$9,160 (over 10 years)
(3) Net Monetized Benefit	\$8,048	
(4) Other Costs & Benefits (Non-Monetized)	<p>There are no non-monetized costs for any of the proposed changes. Non-monetized benefits for the following changes are listed below:</p> <ul style="list-style-type: none"> <p>● The regulatory action will amend Definitions (12VAC5-550-5). Minimal updates clarify language used in the Regulations to support a clearer understanding of the requirements and information included in 12VAC5-550.</p> <p>Benefits: Individuals will benefit inasmuch as the regulatory language will be more clear and easier to understand.</p> <p>● The regulatory action will repeal 12VAC5 – 550-20, 12VAC5 – 550-30, 12VAC5 – 550-50, 12VAC5 – 550-60 which are not regulatory in nature</p> <p>Benefits: The benefit of this change is to reduce the length of the regulation by removing unnecessary language.</p> <p>● The regulatory action will amend the Marriage return and certificate items (12VAC5-550-130) and Report of divorce or annulment items (12VAC5-550-140) removing the item “race” on marriage and divorce certificates. This action is required to comply with Chapters 209, 210, and 211 of the 2020 Acts of Assembly.</p> <p>Benefits: The benefits of this change are that the regulations will comply with the Code of Virginia.</p> <p>● The regulatory action will amend the Change of sex (12VAC5-550-320) to update the requirements for changing the sex on a birth certificate to conform to Chapter 466 of the 2020 Acts of Assembly.</p> <p>Benefits: The change will conform the regulation to the Code, reducing confusion about the process to change their sex on their birth certificate.</p> <p>● The regulatory action will amend the Applications for correction (12VAC5-550-440), Evidence required for corrections or amendments (12VAC5-550-450), and Methods of correcting or altering certificates (12VAC5-550-460) to allow information on a death certificate to be</p> 	

	<p>amended with supporting evidence for 45 days after the filing of the death certificate, and to clarify amendment forms and processes to create internal consistency within the Regulations. This action is required to conform to Chapter 117 of the 2022 Acts of Assembly. The change to Section 460 is to conform to § 32.1-269 (B) of the Code of Virginia.</p> <p>Benefits: The change will conform the regulation to the Code, reducing confusion about the process to amend a death certificate.</p> <ul style="list-style-type: none"> ● In addition to substantive changes mentioned above, a number of style and form changes are also being made to conform the language to the <i>Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code</i>. If these changes were promulgated in their own action, they would be exempt from the requirements of Article 2 of the Administrative Process Act, pursuant to § 2.2-4006 (A)(3): <p>Benefits: The language will conform to the <i>Form and Style Requirements</i> and be clearer and more readable.</p> <ul style="list-style-type: none"> ● The regulatory action will amend the Fees (12VAC5-550-520) to document the fee charged for a vital record as established by Chapter 534 of the 2013 Acts of Assembly and the 2004 Budget Bill – (Chapter 4). <p>Benefits: Individuals will benefit insomuch as the Regulatory language will be more clear and easier to understand when it is consistent with the Code.</p> <ul style="list-style-type: none"> ● The regulatory action will amend the Forms (12VAC5-550-9998) to document and link to forms being explicitly referenced in these amendments, while removing those forms not referenced in the Regulations, and updating the effective dates. <p>Benefits: Forms will be easier to find.</p>
(5) Information Sources	Report of the number of certificates of birth resulting in stillbirth issued from the Virginia Vital Events and Screening Tracking System (VVESTS) for years 2018 - 2020

Table 1b: Costs and Benefits under the Status Quo (No change to the regulation)

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>Monetized costs and benefits:</p> <p>The changes made in this action are required to conform to Chapters 116, 117 and 171 of the 2022 Acts of Assembly; Chapters 209, 210, 211, 465, and 466 of the 2020 Acts of Assembly; Item 290 (A), Chapter 2, 2022 Acts of Assembly, Special Session I; and § 32.1-269 (B). These changes are non-discretionary.</p> <p>The repeal of sections 20, 30, 50, and 60 is intended to conform the chapter to the definition of a “regulation” in § 2.2-4001 and reflect the intent of 1VAC7-10-40(C), which indicate that the provisions are non-regulatory in nature and should be omitted from the regulation.</p>
--	--

	<ul style="list-style-type: none"> • The “status quo” option would be to just leave the sections in the regulation. There are no cost or benefits associated with that option. <p>The style and form changes are to conform with the <i>Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code</i> and could be considered non-discretionary.</p> <ul style="list-style-type: none"> • The “status quo” option would be to leave the language in its current style and form, for which there are no associated costs or benefits. 	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0	(b) \$0
(3) Net Monetized Benefit	\$0	
(4) Other Costs & Benefits (Non-Monetized)	There are no non-monetized costs or benefits from maintaining the “status quo” option.	
(5) Information Sources		

Table 1c: Costs and Benefits under Alternative Approach(es)

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>Monetized costs & benefits: There are no monetized costs or benefits for this regulatory action.</p> <p>The changes made in this action are required to conform to Chapters 116, 117 and 171 of the 2022 Acts of Assembly; Chapters 209, 210, 211, 465, and 466 of the 2020 Acts of Assembly; Item 290 (A), Chapter 2, 2022 Acts of Assembly, Special Session I; and § 32.1-269 (B). These changes are non-discretionary and not subject to consideration of alternative approaches.</p> <p>The repeal of sections 20, 30, 50, and 60, along with the style and form changes, make no substantive changes to regulatory requirements associated with the chapter, are non-regulatory, and do not affect the rights or powers of any person or agency. As such, there are no viable alternative approaches to be considered.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0	(b) \$0
(3) Net Monetized Benefit	\$0	

(4) Other Costs & Benefits (Non-Monetized)	There are no non-monetized costs or benefits under alternative approach(es) associated with this regulatory action:
(5) Information Sources	

Impact on Local Partners

Use this chart to describe impacts on local partners. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 2: Impact on Local Partners

(1) Direct & Indirect Costs & Benefits (Monetized)	Monetized costs: There are no monetized costs to local partners associated with this regulatory action. Monetized benefits: There are no monetized benefits to local partners associated with this regulatory action.	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0	(b) \$0
(3) Other Costs & Benefits (Non-Monetized)	There are no non-monetized costs or benefits to local partners associated with this regulatory action.	
(4) Assistance		
(5) Information Sources		

Impacts on Families

Use this chart to describe impacts on families. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 3: Impact on Families

(1) Direct & Indirect Costs & Benefits (Monetized)	Monetized costs: There are no costs to families associated with this regulatory action. Monetized benefits: As stated in Table 1a, families who experience a stillbirth within the Commonwealth and require a certificate of birth resulting a stillbirth will not be required to pay the \$12 administrative fee for the certificate (12VAC5-550-125).	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits

	(a) \$0	(b) \$916/year benefits throughout the entire Commonwealth.
(3) Other Costs & Benefits (Non-Monetized)	<p>Style and form changes made to regulations to conform to the <i>Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code</i> will make the regulatory language more clear, easier to understand and more readable.</p> <p>Removing forms not referenced in the regulations will make the forms easier to find by family members.</p>	
(4) Information Sources		

Impacts on Small Businesses

Use this chart to describe impacts on small businesses. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 4: Impact on Small Businesses

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>Costs: none.</p> <p>Benefits: none.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0	(b) \$0
(3) Other Costs & Benefits (Non-Monetized)	There are no other costs or benefits to small businesses associated with this regulatory action.	
(4) Alternatives		
(5) Information Sources		

Changes to Number of Regulatory Requirements

For each individual VAC Chapter amended, repealed, or promulgated by this regulatory action, list (a) the initial requirement count, (b) the count of requirements that this regulatory package is adding, (c) the count of requirements that this regulatory package is reducing, (d) the net change in the number of requirements. This count should be based upon the text as written when this stage was presented for executive branch review. Five rows have been provided, add or delete rows as needed. In the last row, indicate the total number for each column.

Table 5: Total Number of Requirements

	Number of Requirements			
Chapter number	Initial Count	Additions	Subtractions	Net Change
12VAC5-550 (only the sections included in this action)	33	13	13	0
TOTAL	33	13	13	0

Project 7299 - Fast-Track

Department of Health

Amend Regulations following Periodic Review - Amendments to comply with the Code of Virginia.

1 **12VAC5-550-5. Definitions.**

2 In addition to the words and terms defined in § 32.1-249 of the Code of Virginia, the
3 following words and terms when used in this chapter shall have the following meanings unless
4 the context clearly indicates otherwise:

5 "Board" means the State Board of Health.

6 "Commissioner" means the State Health Commissioner.

7 "Department" means Virginia Department of Health.

8 "Immediate family" means a registrant mother, father (name must be shown on the
9 certification), sibling, current spouse and adult children.

10 "Informant" means person providing information to complete the filing of a vital record in
11 order to document a vital event.

12 "Midwife" means a registered nurse who has met the additional requirements of education
13 and examination for licensure as a nurse practitioner in the Commonwealth.

14 "Primary evidence" means valid first-hand documentation established before the registrant's
15 18th birthday, ~~such as~~ including school admission records, physician's records, immunization
16 records, passport, federal census abstracts, baptismal records and insurance applications.

17 "Registrant" means the person whose personal information is primarily registered on a vital
18 record and filed in the systems of vital records.

19 "Registrar" means the State Registrar of Vital Records or a county, city, or special registrar
20 to whom the State Registrar of Vital Records has delegated functions or duties.

21 "Secondary evidence" means valid documentation established after the registrant's
22 eighteenth birthday ~~such as~~ including marriage records, ~~child's a~~ birth certificate, school records,
23 social security records, driver's records, work permit and employment records. ~~Such evidence~~
24 ~~must be at least five years old.~~

25 **Statutory Authority**

26 §§ 32.1-12 and 32.1-250 of the Code of Virginia.

27 **Historical Notes**

28 Derived from Virginia Register Volume 19, Issue 26, eff. October 8, 2003.

29 **~~12VAC5-550-20. Purpose of chapter. (Repealed.)~~**

30 ~~The board has promulgated this chapter to facilitate the vital record registration activities~~
31 ~~and health statistical services in a manner to ensure the uniform and efficient administration of~~
32 ~~the system. Required certificates, reports, and forms shall be prescribed, where feasible, to~~
33 ~~include data collected nationally for the benefit of all citizens. The protection of individual data~~
34 ~~from casual perusal is essential to the validity of the program as well as a desirable shield of~~
35 ~~sensitive personal information while providing health statistics for the protection of society as a~~
36 ~~whole.~~

37 **Statutory Authority**

38 § 32.1-273 of the Code of Virginia.

39 **Historical Notes**

40 Derived from VR355-29-100 § 1.2, eff. April 1, 1995.

41 **12VAC5-550-30. Administration of chapter. (Repealed.)**

42 This chapter is administered by the board, the commissioner, and the State Registrar of Vital
43 Records and Health Statistics.

44 The State Registrar shall carry out the provisions of Chapter 7 (§ 32.1-249 et seq.) of Title
45 32.1 of the Code of Virginia and the regulations of the board.

46 **Statutory Authority**

47 §§ 32.1-12 and 32.1-250 of the Code of Virginia.

48 **Historical Notes**

49 Derived from VR355-29-100 § 1.3, eff. April 1, 1995; amended, Virginia Register Volume 19,
50 Issue 26, eff. October 8, 2003.

51 **12VAC5-550-50. Application of Administrative Process Act. (Repealed.)**

52 Except where specifically provided otherwise by statute, the provisions of the Virginia
53 Administrative Process Act, which is codified as Chapter 1.1:1 of Title 9 of the Code of Virginia,
54 shall govern the adoption, amendment, modification, and revision, of this chapter, and the
55 conduct of all proceedings hereunder.

56 **Statutory Authority**

57 § 32.1-273 of the Code of Virginia.

58 **Historical Notes**

59 Derived from VR355-29-100 § 1.6, eff. April 1, 1995.

60 **12VAC5-550-60. Powers and procedures of chapter not exclusive. (Repealed.)**

61 The board reserves the right to authorize any procedure for the enforcement of this chapter
62 that is not inconsistent with the provisions set forth herein and the provisions of Chapter 7 of
63 Title 32.1 of the Code of Virginia.

64 **Statutory Authority**

65 § 32.1-273 of the Code of Virginia.

66 **Historical Notes**

67 Derived from VR355-29-100 § 1.7, eff. April 1, 1995.

68 **12VAC5-550-125. Certificate of birth resulting in a stillbirth.**

69 In accordance with A. Pursuant to § 32.1-258.1 of the Code of Virginia, a certificate of birth
70 resulting in a stillbirth shall be issued upon request from the parent the State Registrar shall,
71 upon the request of either individual listed as the parent on a report of fetal death in Virginia,
72 issue a Certificate of Birth Resulting in Stillbirth for a fetal death occurring after a gestational
73 period of 20 weeks or more gestation and payment of the appropriate fee for a vital record. This
74 .

75 B. The certificate shall contain the following information; name (optional), :

76 1. The registrant's name, if one is provided,

77 2. The mother's maiden name,

78 3. The father's name (if indicated), if indicated,

79 4. The date of event the fetal death, and

80 5. The hospital of occurrence or location the fetal death occurred.

81 When C. If no report of spontaneous fetal death is available to establish the event,
82 documentation from the following sources is acceptable: the parent may provide documentation
83 from the following sources to establish that the fetal death occurred:

84 1. The licensed physician or licensed nurse midwife who provided care to the mother,
85 documentation from the

86 2. The medical record maintained at the hospital of occurrence, copy of the report of
87 spontaneous fetal death or documentation from where the fetal death occurred, or

88 3. The funeral service director (if such services were provided). if funeral services were
89 provided.

90 **Statutory Authority**

91 §§ 32.1-12 and 32.1-250 , and 32.1-258.1 of the Code of Virginia.

92 **Historical Notes**

93 Derived from Virginia Register Volume 19, Issue 26, eff. October 8, 2003.

94 **12VAC5-550-130. Marriage return and certificate items.**

95 ~~The record of marriage to be used shall be the Marriage Return and Certificate,~~
96 ~~Commonwealth of Virginia, and shall contain the following items: city or county of the court of~~
97 ~~issuance; court clerk's number; for the groom: full name, age, date and place of birth, social~~
98 ~~security number or control number issued by the Department of Motor Vehicles, race, marital~~
99 ~~status if previously married, number of marriage, education, usual residence, the names of~~
100 ~~parents; for the bride: full name, maiden name, age, date and place of birth, social security~~
101 ~~number or control number issued by the Department of Motor Vehicles, race, marital status if~~
102 ~~previously married, number of marriage, education, usual residence, and names of parents;~~
103 ~~signature of clerk of court and date of license; date and place of marriage; whether civil or~~
104 ~~religious ceremony; certification and signature of officiant indicating title, address, and year and~~
105 ~~court of qualification; date received by clerk of court from officiant; and state file number.~~

106 A. An officer issuing marriage licenses shall, on or before the tenth day of each calendar
107 month, forward to the State Registrar a record of each marriage filed with him during the
108 preceding calendar month pursuant to § 32.1-267.

109 B. To request a certified copy of a certificate of marriage, an applicant shall submit to the
110 registrar a completed form VS6MD.

111 **Statutory Authority**

112 §§ 32.1-12 and 32.1-250 of the Code of Virginia.

113 **Historical Notes**

114 Derived from VR355-29-100 § 3.4, eff. April 1, 1995; amended, Virginia Register Volume 19,
115 Issue 26, eff. October 8, 2003.

116 **12VAC5-550-140. Report of divorce or annulment items.**

117 ~~The report of divorce or annulment to be used shall be the Report of Divorce or Annulment,~~
118 ~~Commonwealth of Virginia, and shall contain the following items: city or county of court of~~
119 ~~issuance; for the husband: full name, date and place of birth, social security number or control~~
120 ~~number issued by the Department of Motor Vehicles, education, number of marriage, usual~~
121 ~~residence; for the wife: full maiden name, date and place of birth, social security number or~~
122 ~~control number issued by the Department of Motor Vehicles, education, number of the marriage,~~
123 ~~usual residence; date and place of marriage; identity of plaintiff and to whom divorce granted;~~
124 ~~number and custody of children under 18 in this family; date of separation; date of divorce; legal~~
125 ~~grounds or cause of divorce; signature of attorney or petitioner; certification and signature of~~
126 ~~clerk of court indicating type of decree; court file number; date final order entered; and state file~~
127 ~~number.~~

128 A. A clerk of court shall, on or before the tenth day of each calendar month, forward to the
129 State Registrar the report of each final decree of divorce and annulment granted during the
130 preceding calendar month pursuant to § 32.1-268.

131 B. To request a certified copy of a certificate of divorce or annulment, an applicant shall
132 submit to the registrar a completed form VS6MD.

133 **Statutory Authority**

134 §§ 32.1-12 and 32.1-250 of the Code of Virginia.

135 **Historical Notes**

136 Derived from VR355-29-100 § 3.5, eff. April 1, 1995; amended, Virginia Register Volume 19,
137 Issue 26, eff. October 8, 2003.

138 **12VAC5-550-320. Change of sex.**

139 ~~Except as provided in subdivision 3 of 12VAC5-550-450, upon presentation of acceptable~~
140 ~~evidence (preoperative diagnosis, postoperative diagnosis and description of procedure) and a~~
141 ~~notarized affidavit from the physician performing the surgery, a new certificate of birth may be~~
142 ~~prepared by the State Registrar for a person born in this Commonwealth whose sex has been~~
143 ~~changed by surgical gender reassignment procedure. A certified copy of the court order~~
144 ~~changing the name of the registrant as well as designating the sex of the registrant must be in~~
145 ~~the possession of the State Registrar together with a request that a new certificate be prepared.~~

146 A. The State Registrar shall issue a new certificate of birth to a show a change of sex of the
147 registrant upon request of a registrant or the registrant's legal representative and submission of
148 a complete Changing Sex Designation, VS42 Form, which shall be completed by a health care
149 provider from whom the registrant has received treatment stating that the registrant has
150 undergone clinically appropriate treatment for gender transition.

151 B. The State Registrar shall also issue, upon request of a registrant or the registrant's legal
152 representative requesting a change of sex pursuant to this section, a new certificate of birth to
153 show a new name if the registrant or the registrant's legal representative submits (i) a certified
154 copy of a court order changing the registrant's name and (ii) if requested by the State Registrar,
155 other evidence necessary to verify the facts of the registrant's birth.

156 **Statutory Authority**

157 §§ 32.1-12 and 32.1-250 of the Code of Virginia.

158 **Historical Notes**

159 Derived from VR355-29-100 § 9.5, eff. April 1, 1995; amended, Virginia Register Volume 19,
160 Issue 26, eff. October 8, 2003.

161 **Part XI**

162 **Correction and Amendment**

163 **12VAC5-550-440. Applications for correction.**

164 ~~A. After 30 days from the date of filing, no change or alteration in any birth or death~~
165 ~~certificate on file with the State Registrar or on file in any city or county of this Commonwealth~~
166 ~~shall be made except upon application to the State Registrar.~~

167 ~~1. To change or alter a birth certificate, such application shall be made by the reporting~~
168 ~~source, one of the parents, guardian, or legal representative of the child, or, if the person~~
169 ~~whose certificate is involved is 18 years of age or over, by the person himself.~~

170 ~~2. To change or alter a death certificate, such application shall be made by the surviving~~
171 ~~spouse or the next of kin of the deceased, attending funeral service licensee, or other~~
172 ~~reporting source, such as hospital medical records.~~

173 ~~3. Changes or alterations of the medical certification of cause of death may be requested~~
174 ~~only by the attending physician or by the medical examiner.~~

175 ~~B. Within 30 days from the date of filing, A. The State Registrar may enter missing data or~~
176 ~~corrected information may be entered on a birth or death certificate by the State Registrar or by~~
177 ~~the city or county registrar when the original record is in his possession. If the missing or~~
178 ~~corrected data is obtained at the initiative of the State Registrar within 30 calendar days from~~
179 ~~the date of filing, the State Registrar shall not consider the record to be amended.~~

180 B. The following persons may request an amendment to a birth certificate by filing an
181 application with the State Registrar in the form of a written letter or the Birth Certificate
182 Amendment Request, VS43 Form:

183 1. If the registrant is under 18 years of age, the informant who filed the birth certificate,
184 the registrant's parent, guardian, or legal representative, or

185 2. If the registrant is 18 years of age or over or has been emancipated pursuant to Article
186 15 (§ 16.1-331 et seq.) of Chapter 11 of Title 16.1 of the Code of Virginia, the registrant
187 or the registrant's legal representative.

188 ~~1. Applications for changes or alterations may be made by persons outlined in~~
189 ~~subdivision A 1 or A 2 of this section.~~

190 ~~2. Missing or corrected data may be obtained at the initiative of the city or county~~
191 ~~registrar by personal call, telephone, or query form from the reporting source responsible~~
192 ~~for filing the birth or death certificate. Data so obtained by the registrar shall not be~~
193 ~~deemed an amendment.~~

194 C. The State Registrar shall, upon receipt of an application pursuant to subsection B of this
195 section, advise the person whether the amendment can be made administratively, subject to the
196 evidence requirements of this chapter or if the amendment requires a court order.

197 ~~C. Marriage and D. The registrar may amend a record of marriage, divorce, or annulment~~
198 ~~records on file with the State Registrar may be amended only by upon notification from the clerk~~
199 ~~of court in which the original record is filed. Such The notification to the State Registrar shall~~
200 ~~indicate what which items have been amended on the original record and shall indicate that the~~
201 ~~State Registrar's registrar's copy should shall be amended accordingly. Evidence The court in~~
202 ~~which the original record is filed shall determine the evidence required for amending a record of~~
203 ~~marriage and divorce or annulment records shall be determined by the court in which the~~
204 ~~original record is filed.~~

205 E. A person may request the State Registrar to amend a death certificate by submitting an
206 affidavit and supporting documentary evidence testifying to the corrected information to be
207 amended. The State Registrar shall amend the death certificate to reflect the new information
208 upon receipt of the affidavit and supporting documentary evidence.

209 F. Pursuant to § 32.1-269.1, if more than 45 calendar days have elapsed since the filing of a
210 death certificate, the surviving spouse or immediate family of the registrant, attending funeral
211 service licensee, or other reporting source may file a petition, along with a sworn affidavit under
212 oath that supports the request, with the circuit court of the county or city in which the registrant
213 resided at the time of his death or the Circuit Court of the City of Richmond requesting an order
214 to amend a death certificate other than correction of the following information by the State
215 Registrar:

216 1. The spelling of the name of the registrant, registrant's parent or spouse, or the
217 informant;

218 2. The sex, age, race, date of birth, place of birth, citizenship, social security number,
219 education, occupation or kind of business, military status, or date of death of the
220 registrant;

221 3. The place of residence of the registrant, if located within Virginia; or

222 4. The name of the institution, county, city, town, street, or place where the death
223 occurred.

224 G. The State Registrar shall amend the death certificate upon receipt from the clerk of the
225 circuit court of the county or city in which the registrant resided at the time of his death or the
226 Circuit Court of the City of Richmond a certified copy of the court's order to amend the death
227 certificate in accordance with the order.

228 H. Only the provider who completed the registrant's medical certification pursuant to § 32.1-
229 263 may request a change or amendment to the medical certification of cause of death.

230 **Statutory Authority**

231 §§ 32.1-12 and 32.1-250 , and 32.1-269.1 of the Code of Virginia.

232 **Historical Notes**

233 Derived from VR355-29-100 § 11.1, eff. April 1, 1995; amended, Virginia Register Volume 19,
234 Issue 26, eff. October 8, 2003.

235 **12VAC5-550-450. Evidence required for corrections or amendments.**

236 Every A. A person shall include a correction affidavit and documentary evidence pursuant to
237 this section with an application for a correction or amendment of to amend a birth or death
238 certificate shall be accompanied by appropriate documentary evidence as follows: .

239 1. Except as provided in subdivisions 2 and 3 of this section, name changes, other than
240 minor corrections in spelling involving the given names or surname of a registrant, or the
241 given names or surnames of the parents or of a spouse as listed on a certificate, shall
242 require that a certified or attested copy of a court order changing the name be obtained.

243 a. In cases where the mother's married surname is listed instead of her maiden
244 name, a correction can be made administratively with a correction affidavit and copy
245 of her birth record.

246 b. In cases where the given name shown on a birth certificate was not used or known
247 to the registrant and this fact can be proven by the registrant, the birth certificate can
248 be amended administratively with primary evidence showing the name at birth and a
249 correction affidavit.

250 2. Within one year of birth, the given names listed on a birth certificate may be changed
251 by the affidavit of:

252 a. Both parents;

253 b. The mother in the case of a child born out of wedlock;

254 c. The father in the case of the death or incapacity of the mother;

255 d. The mother in the case of the death or incapacity of the father; or

256 e. The guardian or agency having legal custody of the registrant.

257 3. In cases of hermaphroditism or pseudo-hermaphroditism, given names of a registrant
258 may be changed on a birth certificate by affidavit of the parents or guardian as listed in
259 subdivision 2 of this section, or by affidavit of the registrant if 18 years of age or older.
260 Additionally, a statement from a physician must be submitted which certified the birth
261 record of the registrant contains an incorrect designation of sex because of congenital
262 hermaphroditism, pseudo-hermaphroditism, or ambiguous genitalia which has since
263 been medically clarified.

264 4. Except as otherwise provided in the Code of Virginia or this chapter, after one year
265 from the date of birth, any change of name shall be made only by court order, and any
266 second change of name within one year shall be made only by court order.

- 267 5. Within seven years after birth, given names may be added to a birth certificate where
268 such information has been left blank by use of an affidavit only prepared by the parent,
269 guardian, or legal representative of the child.
- 270 6. If the date of birth on a birth certificate is to be changed more than one year, a
271 certified copy of a court order changing the date of birth shall be submitted. Evidence to
272 be supplied to the court in support of such change should include a federal census
273 transcript from the Bureau of the Census.
- 274 7. If the date of birth on a birth certificate is to be changed to one year or less from the
275 date of birth, a federal census transcript from the Bureau of the Census shall be required
276 as documentary evidence.
- 277 8. If a federal census transcript cannot be obtained, an affidavit shall be obtained which
278 sets forth: the identity of the incorrect record, the incorrect data as it is listed, the correct
279 data as it should be listed, and the documentary evidence supporting the facts. In
280 addition to the affidavit, a document or certified or true copy of such document must be
281 obtained which was written before the registrants' eighth birth date and will establish the
282 identity of the certificate to be altered or corrected and will support the true and correct
283 facts. Any item of a vital record which has been previously corrected may only be
284 changed again by court order.
- 285 9. All documents, except the affidavit, shall be returned to the applicant after review.

286 B. To amend a death certificate pursuant to 12VAC5-550-440, an applicant shall submit to
287 the State Registrar a certified copy of a court order obtained pursuant to § 32.1-269.1 or a
288 correction affidavit and primary or secondary documentary evidence testifying to the amended
289 information.

290 **Statutory Authority**

291 §§ 32.1-12 and 32.1-250 of the Code of Virginia.

292 **Historical Notes**

293 Derived from VR355-29-100 § 11.2, eff. April 1, 1995; amended, Virginia Register Volume 19,
294 Issue 26, eff. October 8, 2003.

295 **12VAC5-550-460. Methods of correcting or altering certificates.**

296 A. ~~A The registrar shall record a new name authorized by court order ~~shall be recorded~~ by~~
297 ~~drawing a single line through the name appearing on the certificate record and inserting the new~~
298 ~~name above it or to the side of it ~~the new name~~. In addition, ~~there shall be inserted on the~~~~
299 ~~certificate the registrar shall insert on the record a statement that the name was changed by~~
300 ~~court order and the date and place of such the court order. ~~The~~ The registrar shall also insert~~
301 ~~the word "Amended" ~~shall be written~~ in the top margin of the certificate record. ~~Certificates on~~~~
302 ~~which given names are added within seven years after birth or on which given names have~~
303 ~~been changed The registrar shall not consider a record as amended if the registrant's name is~~
304 ~~amended within one year of the vital event that was recorded, or if the name is amended at any~~
305 ~~time pursuant to subdivision 3 of 12VAC5-550-450 ~~shall not be considered as amended~~.~~

306 B. ~~In all other cases, corrections or alterations shall be made~~ The registrar shall record
307 ~~amendments to other items by drawing a single line through the incorrect item, if listed, and by~~
308 ~~inserting the correct or missing data immediately above it or to the side of it, or by completing~~
309 ~~the blank item, ~~as the case may be~~. In addition, ~~there shall be inserted on the certificate~~ the~~
310 ~~registrar shall insert a statement identifying the affidavit and documentary evidence used as~~
311 ~~proof of the ~~correct facts~~ amended information and the date the ~~correction~~ amendment was~~
312 ~~made. If the registrar receives the request to amend a record three months ~~have elapsed from~~~~
313 ~~after the date of filing, the registrar shall insert the word "Amended" ~~shall be written~~ in the top~~
314 ~~margin of the certificate unless otherwise stated in this chapter.~~

315 **Statutory Authority**

316 § 32.1-273 of the Code of Virginia.

317 **Historical Notes**

318 Derived from VR355-29-100 § 11.3, eff. April 1, 1995.

319 **12VAC5-550-520. Fees.**

320 A. ~~The fee to be charged by the State Registrar or by the city or county registrar shall be~~
321 ~~\$10 , except if otherwise directed in the Code of Virginia, charge a fee of \$12 for each full~~
322 ~~certification or short form certification of a vital record, or for a search of the files or records~~
323 ~~when no copy is made.~~

324 B. ~~When documents are amended or delayed birth registration is requested, the requester~~
325 ~~shall be charged an administrative fee of \$10. The registrar shall charge a fee of \$10 to amend~~
326 ~~a vital record or register a delayed birth registration.~~

327 **Statutory Authority**

328 §§ 32.1-12 and 32.1-250 of the Code of Virginia.

329 **Historical Notes**

330 Derived from VR355-29-100 § 13.2, eff. April 1, 1995; amended, Virginia Register Volume 19,
331 Issue 26, eff. October 8, 2003.

332 FORMS (12VAC5-550)

333 ~~Certificate of Live Birth, VS1 (eff. 1/93).~~

334 ~~Certificate of Death, VS2 (eff. 1/89).~~

335 ~~Certificate of Death (Medical Examiner's Certificate), VS2A (eff. 1/89).~~

336 ~~Marriage Register, VS3 (eff. 1/90).~~

337 ~~Report of Divorce or Annulment, VS4 (eff. 1/90).~~

338 ~~Report of Spontaneous Fetal Death, VS5 (eff. 1/93).~~

339 ~~Report of Induced Termination of Pregnancy, VS5A (eff. 1/90).~~

340 ~~Application for Certification of a Vital Record, VS6 (eff. 7/02).~~

341 ~~Out-of-State Transit Permit, VS10 (eff. 7/85).~~

342 ~~Permit for Disinterment, Transit, and Reinterment, VS11 (eff. 7/85).~~

343 ~~Delayed Certificate of Birth, VS12 (eff. 4/85).~~

344 [Birth Record Application VS6B \(eff. 07/2020\)](#)

345 [Marriage-Divorce Record Application VS6MD \(eff. 02/2020\)](#)

346 [Death Record Application VS6D \(eff. 07/2022\).](#)

347 [Stillbirth Application VS6FD \(eff. 07/2022\).](#)

348 ~~Report of Adoption, VS21 (eff. 7/85).~~

349 [Report of Adoption, VS21 \(eff. 07/2012\).](#)

350 ~~Acknowledgement of Paternity, VS22 (eff. 9/93).~~

351 [Acknowledgement of Paternity, VS22 \(eff. 07/2004\).](#)

352 ~~Affidavit for Correction of a Record, VS32 (eff. 1/87).~~

353 [Affidavit for Correction of a Record, VS32 \(eff. 09/2005\).](#)

354 ~~Hospital Monthly Vital Statistics Report, VS33 (eff. 7/89).~~

355 ~~Funeral Director's Monthly Vital Statistics Report, VS33-A (eff. 3/90).~~

- 356 ~~Court Order Establishing Record of Birth, VS40 (eff. 10/88).~~
- 357 [Form for Changing Sex Designation, VS42 \(eff. 07/2020\).](#)
- 358 [Birth Certificate Amendment Request Form, VS43 \(eff. 07/2021\).](#)



COMMONWEALTH of VIRGINIA

Department of Health
P O BOX 2448
RICHMOND, VA 23218

TTY 7-1-1 OR
1-800-828-1120

MEMORANDUM

DATE: January 24, 2023

TO: Virginia State Board of Health

FROM: Julie Henderson, Office of Environmental Health Services

SUBJECT: Fast Track Revision – Regulations Governing Fees for Onsite Sewage Disposal Systems, Alternative Discharge Systems, and Private Wells 12VAC5-620

The Regulations Governing Fees for Onsite Sewage Disposal Systems, Alternative Discharge Systems, and Private Wells (the Regulations) establish procedures for determining the fees, refunds of fees, and waiver of fees for services provided by the Virginia Department of Health (VDH) for onsite sewage systems, alternative discharge systems, and private wells. The Board of Health (the Board) last revised the Regulations in 2016. The Appropriation Act has been amended since then to mandate the fees charged for Repair Permits, Voluntary Upgrades, and Safe, Adequate, and Proper Evaluations, and does not give VDH any discretion in the amount of the fees charged. The Appropriation Act also added a waiver for Repair Permit fees for property owners at or below 200 percent of the federal poverty guidelines. The Code of Virginia requires VDH to provide a refund when an application for a principal place of residence is denied.

The intent of this regulatory action is to conform the Regulations to the Appropriation Act and provide consistency for issuance of refunds pursuant to the Code. These revisions were shared with the Sewage Handling and Disposal Advisory Committee (SHADAC) and there were no objections to the amendments.

Upon approval by the Board of Health, the proposed fast-track regulations will be submitted for executive branch review and, upon approval by the Governor, will be published in the Virginia Register of Regulations with provision for a 30-day public comment period. The Regulations will become effective 15 days after the close of the public comment period. If 10 or more members of the public comment, then the fast-track regulation will serve as the Notice of Intended Regulatory Action and the standard rulemaking process is followed to promulgate the regulations.



townhall.virginia.gov

Fast-Track Regulation Agency Background Document

Agency name	State Board of Health
Virginia Administrative Code (VAC) Chapter citation(s)	12VAC5-620
VAC Chapter title(s)	Regulations Governing Fees for Onsite Sewage Disposal Systems, Alternative Discharging Systems, and Private Wells
Action title	State Budget Addition of Fees for Repairs, Voluntary Upgrades, and Safe, Adequate, and Proper Evaluations
Date this document prepared	January 19, 2023

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Order 19 (2022) (EO 19), any instructions or procedures issued by the Office of Regulatory Management (ORM) or the Department of Planning and Budget (DPB) pursuant to EO 19, the Regulations for Filing and Publishing Agency Regulations (1 VAC 7-10), and the *Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code*.

Brief Summary

Provide a brief summary (preferably no more than 2 or 3 paragraphs) of this regulatory change (i.e., new regulation, amendments to an existing regulation, or repeal of an existing regulation). Alert the reader to all substantive matters. If applicable, generally describe the existing regulation.

Chapter 831 of the 2018 Acts of Assembly directed VDH to eliminate evaluation and design services provided by the local health departments for onsite sewage systems and private wells. Beginning July 1, 2019, all applicants were required to submit private sector evaluations and designs for onsite sewage systems unless the owner met the means testing requirements established in Chapter 831 (2018) or the hardship guidelines established by VDH. In addition to this legislation, Item 292, Chapter 2 of the 2018 Acts of Assembly, Special Session I (The 2018 Appropriation Act) required VDH to begin charging for certain onsite sewage system services previously provided at no cost to the applicant. These additional fees have remained in all subsequent Appropriation Acts.

VDH’s current fees for onsite sewage system and private well services are summarized in 12 VAC5-620-70. The fee amendments initially enacted by the 2018 Appropriation Act affect onsite sewage system Repair Permits, Safe Adequate and Proper Evaluations under § 32.1-165 of the Code of Virginia, and onsite sewage system Voluntary Upgrade permits. The Appropriation Act directed VDH to charge specific fees for these services. VDH does not have discretion on the amount to charge for these services.

Acronyms and Definitions

Define all acronyms used in this form, and any technical terms that are not also defined in the “Definitions” section of the regulation.

“Repair” means the construction or replacement of all or parts of an onsite sewage system or alternative discharging system to correct a failing, damaged, or improperly functioning system when such construction or replacement is required by the Board of Health’s regulations.

“Voluntary Upgrade” means an improvement to an existing onsite sewage disposal system or alternative discharging system that (i) is not required for compliance with any law or regulation and (ii) results in no net increase in the permitted volume or strength of sewage dispersed by the system.

“Safe, Adequate, and Proper Evaluation” means request for written authorization from the State Health Commissioner or his agent pursuant to § 32.1-165 of the Code of Virginia.

Statement of Final Agency Action

Provide a statement of the final action taken by the agency including: 1) the date the action was taken; 2) the name of the agency taking the action; and 3) the title of the regulation.

Mandate and Impetus

Identify the mandate for this regulatory change and any other impetus that specifically prompted its initiation (e.g., new or modified mandate, petition for rulemaking, periodic review, or board decision). For purposes of executive branch review, “mandate” has the same meaning as defined in the ORM procedures, “a directive from the General Assembly, the federal government, or a court that requires that a regulation be promulgated, amended, or repealed in whole or part.”

Consistent with Virginia Code § 2.2-4012.1, also explain why this rulemaking is expected to be noncontroversial and therefore appropriate for the fast-track rulemaking process.

Item 292(A) of the 2018 Appropriation Act directed the Commissioner to charge specific fees for onsite sewage system Repair Permits with and without private sector design; Safe Adequate and Proper Evaluations under §32.1-165; and onsite sewage system Voluntary Upgrade permits. These fees were in addition to other fees already established in preceding Appropriation Acts and

included in the Regulations. Specifically, the 2018 Act introduced the following new fees under Item 292 (A):

“7. Notwithstanding § 32.1-163 through § 32.1-176, Code of Virginia, and starting July 1, 2019, the State Health Commissioner shall charge a fee of \$425.00, for a permit to repair an onsite sewage system or an alternative discharging system designed for less than 1,000 gallons per day not supported with certified work from an onsite soil evaluator or a professional engineer working in consultation with an onsite soil evaluator. This fee shall be waived for persons with income below 200 percent of the federal poverty guidelines as established by the United States Department of Health and Human Services when the application is for a pit privy or for a repair of a failing onsite or alternative discharging sewage system.

8. Notwithstanding § 32.1-163 through § 32.1-176, Code of Virginia, and starting July 1, 2019, the State Health Commissioner shall charge a fee of \$225.00, for a permit to repair or voluntarily upgrade an onsite sewage system or alternative discharging system designed for less than 1,000 gallons per day supported with certified work from an onsite soil evaluator or a professional engineer. This fee shall be waived for persons with income below 200 percent of the federal poverty guidelines as established by the United States Department of Health and Human Services when the application is for a pit privy or for a repair of a failing onsite or alternative discharging sewage system.

9. Notwithstanding § 32.1-163 through § 32.1-176, Code of Virginia, and starting July 1, 2019, the State Health Commissioner shall charge a fee of \$150.00, to provide written authorizations pursuant to § 32.1-165 not supported with certified work from a qualified professional.

10. Notwithstanding § 32.1-163 through § 32.1-176, Code of Virginia, and starting July 1, 2019, the State Health Commissioner shall charge a fee of \$100.00, to provide written authorizations pursuant to § 32.1-165 supported with certified work from a qualified professional.

11. Notwithstanding § 32.1-163 through § 32.1-176, Code of Virginia, and starting July 1, 2019, the State Health Commissioner shall charge a fee of \$1,400.00, for a permit to repair or voluntarily upgrade an onsite sewage system designed for more than 1,000 gallons per day.”

Section 32.1-164 (C) of the Code of Virginia states that if VDH denies an onsite sewage system or alternative discharging system permit for land on which the applicant seeks to construct their principal place of residence, then the application fee shall be refunded to the applicant. This language had not been included in the Regulations.

This regulatory action is expected to be non-controversial because it contains only non-discretionary updates to conform the Regulations to the Appropriation Act and Code of Virginia and non-substantive changes in style and form, and is therefore appropriate for the Fast Track process.

Legal Basis

Identify (1) the promulgating agency, and (2) the state and/or federal legal authority for the regulatory change, including the most relevant citations to the Code of Virginia and Acts of Assembly chapter number(s), if applicable. Your citation must include a specific provision, if any, authorizing the promulgating agency to regulate this specific subject or program, as well as a reference to the agency's overall regulatory authority.

The promulgating agency is the State Board of Health.

Section 32.1-12 provides the Board of Health authority to make, adopt and promulgate regulations necessary to carry out the provisions of Title 32.1 of the Code of Virginia and other laws administered by the Virginia Department of Health.

Item 294 (A)(7) of Chapter 2 of the 2022 Acts of Assembly, Special Session I (“2022 Appropriation Act”) states that starting July 1, 2019, the State Health Commissioner shall charge a fee of \$425.00, for a permit to repair an onsite sewage system or an alternative discharging systems designed for less than 1,000 gallons per day not supported with certified work from an onsite soil evaluator or a professional engineer working in consultation with an onsite soil evaluator. Item 294 part A.7 states this fee shall be waived for persons with income below 200 percent of the federal poverty guidelines as established by the United States Department of Health and Human Services.

Items 294 (A)(8) of the 2022 Appropriation Act states that starting July 1, 2019, the State Health Commissioner shall charge a fee of \$225.00, for a permit to repair or voluntarily upgrade an onsite sewage system or alternative discharging system designed for less than 1,000 gallons per day supported with certified work from an onsite soil evaluator or a professional engineer. Item 294 part A.8 states this fee shall be waived for persons with income below 200 percent of the federal poverty guidelines as established by the United States Department of Health and Human Services.

Item 294 (A)(9) of the 2022 Appropriation Act states that starting July 1, 2019, the State Health Commissioner shall charge a fee of \$150.00, to provide written authorizations pursuant to § 32.1-165 not supported with certified work from a qualified professional.

Item 294 (A)(10) of the 2022 Appropriation Act states that starting July 1, 2019, the State Health Commissioner shall charge a fee of \$100.00, to provide written authorizations pursuant to §32.1-165 supported with certified work from a qualified professional.

Item 294 (A)(11) of the 2022 Appropriation Act states that starting July 1, 2019, the State Health Commissioner shall charge a fee of \$1,400.00, for a permit to repair or voluntarily upgrade an onsite sewage system designed for more than 1,000 gallons per day.

Section 32.1-164 (C) of the Code of Virginia states that if VDH denies an onsite sewage system or alternative discharging system permit for land on which the applicant seeks to construct their principal place of residence, then such fee shall be refunded to the applicant.

Purpose

Explain the need for the regulatory change, including a description of: (1) the rationale or justification, (2) the specific reasons the regulatory change is essential to protect the health, safety or welfare of citizens, and (3) the goals of the regulatory change and the problems it is intended to solve.

The purpose of these fast track amendments to the Regulations is to conform the Regulations with provisions in the Appropriation Act that took effect on July 1, 2018. These amendments are justified because VDH was required to begin collecting fees for Repair Permits, Voluntary Upgrades, and Safe, Adequate, and Proper Evaluations on July 1, 2019. The 2018 and subsequent Appropriation Acts set a specific fee that the agency must charge, so there is no discretion in setting the amount.

The fast track amendments also seek to establish refunds for denials and withdrawals of Repair Permits, Voluntary Upgrades, and Safe, Adequate and Proper Evaluations. The rationale is to provide a consistent process for refunds as provided for other permit fees and as required pursuant to § 32.1-164 (C) of the Code of Virginia.

The amendments are essential to ensure clear consistent implementation of onsite sewage system permits and to ensure transparency of fees to the public. Proper permitting of onsite sewage systems is necessary to ensure proper disposal of sewage occurs to protect the health and safety of Virginians. The goal of the proposed amendments is to provide consistency between the Code of Virginia, the Appropriation Act, and the Regulations, and provide consistency in refund processes for all application fees.

Substance

Briefly identify and explain the new substantive provisions, the substantive changes to existing sections, or both. A more detailed discussion is provided in the "Detail of Changes" section below.

The proposed amendments include a fee of \$425.00 for a Repair Permit for an onsite sewage system or an alternative discharging system designed for less than 1,000 gallons per day not supported with certified work from an onsite soil evaluator or a professional engineer working in consultation with an onsite soil evaluator. For a Repair Permit or Voluntary Upgrade of an onsite sewage system or alternative discharging system designed for less than 1,000 gallons per day with supporting work from an onsite soil evaluator or professional engineer, the fee is \$225.00. The fee for a Repair Permit or Voluntary Upgrade of an onsite sewage system designed for more than 1,000 gallons per day is \$1,400.00.

The proposed amendments include a fee of \$150.00 for Safe, Adequate, and Proper Evaluations without a private sector certification, and \$100.00 for evaluations with a private sector certification. The proposed amendments also mirror language in the Appropriation Act to provide a Repair Permit or Voluntary Upgrade fee waiver for persons with income below 200 percent of the federal poverty guidelines.

The proposed amendments also strike the fee waiver in Section 80 of the Regulations for all Repair Permit fees for onsite sewage disposal systems or alternative discharging systems to bring the Regulations in alignment with the Appropriation Act.

The proposed amendments revised Section 90 of the Regulations to include Repair Permits, Voluntary Upgrades, and Safe, Adequate, and Proper Evaluations to applications that allow for a refund when the application is denied or withdrawn. VDH is required by the Code of Virginia to provide a refund when an onsite sewage system or alternative discharging system permit is denied for a principal place of residence.

This rulemaking also contains several non-substantive edits to conform the language to the *Form, Style and Procedure Manual for Publication of Virginia Regulations*.

Issues

Identify the issues associated with the regulatory change, including: 1) the primary advantages and disadvantages to the public, such as individual private citizens or businesses, of implementing the new or amended provisions; 2) the primary advantages and disadvantages to the agency or the Commonwealth; and 3) other pertinent matters of interest to the regulated community, government officials, and the public. If there are no disadvantages to the public or the Commonwealth, include a specific statement to that effect.

The primary advantage of the proposed amendments is providing alignment between the Code of Virginia, the Appropriation Act, and the Regulations, which avoids confusion for onsite sewage system owners, private sector professionals, and VDH staff. This alignment applies to fees, waivers of fees, and refunds of fees.

It is important to note that VDH currently collects fees pursuant to the requirements contained in the Appropriation Act, and there is no discretion in the amount of fee charged. There are no disadvantages to the public or the Commonwealth in promulgating these amendments.

Requirements More Restrictive than Federal

Identify and describe any requirement of the regulatory change which is more restrictive than applicable federal requirements. Include a specific citation for each applicable federal requirement, and a rationale for the need for the more restrictive requirements. If there are no applicable federal requirements, or no requirements that exceed applicable federal requirements, include a specific statement to that effect.

There are no federal requirements, other than non-enforceable general guidance, addressing the design, construction, and permitting of onsite sewage systems and private wells.

Agencies, Localities, and Other Entities Particularly Affected

Consistent with § 2.2-4007.04 of the Code of Virginia, identify any other state agencies, localities, or other entities particularly affected by the regulatory change. Other entities could include local partners such as tribal governments, school boards, community services boards, and similar regional organizations. "Particularly affected" are those that are likely to bear any identified disproportionate material impact which would not be experienced by other agencies, localities, or entities. "Locality" can refer to either local governments or the locations in the Commonwealth where the activities relevant to the regulation or

regulatory change are most likely to occur. If no agency, locality, or entity is particularly affected, include a specific statement to that effect.

There are no other agencies, localities, or entities particularly affected by the proposed amendments, as the fees are already charged to property owners pursuant to the Appropriation Act.

Economic Impact

Consistent with § 2.2-4007.04 of the Code of Virginia, identify all specific economic impacts (costs and/or benefits), anticipated to result from the regulatory change. When describing a particular economic impact, specify which new requirement or change in requirement creates the anticipated economic impact. Keep in mind that this is the proposed change versus the status quo.

Impact on State Agencies

<p><i>For your agency:</i> projected costs, savings, fees or revenues resulting from the regulatory change, including:</p> <ul style="list-style-type: none"> a) fund source / fund detail; b) delineation of one-time versus on-going expenditures; and c) whether any costs or revenue loss can be absorbed within existing resources 	<p>The projected cost of these amendments on VDH are expected to be below \$2,500. In 2022, there were no Repair Permit or Voluntary Upgrade applications withdrawn based on data in the Environmental Health Database. However, each year several owners statewide seek a withdrawal. Owners that qualify for VDH direct services for Repair Permits typically also qualify for a fee waiver based on income given the transition of direct services; more than 90% of designs included supporting private sector work. The proposed amendments ensure the applicable owners would receive a refund for an application withdrawal. VDH anticipated ten or less Repair Permit or Voluntary Upgrade withdrawals each year. This would require VDH to refund approximately \$2,250 annually. These costs can be absorbed with existing resources. Fees for Repair Permits, Voluntary Upgrades, and Safe, Adequate, and Proper Evaluations are already collected pursuant to the Appropriation Act and refunded as appropriate pursuant to § 32.1-164 (C).</p>
<p><i>For other state agencies:</i> projected costs, savings, fees or revenues resulting from the regulatory change, including a delineation of one-time versus on-going expenditures.</p>	<p>VDH does not anticipate any additional costs or savings for other state agencies.</p>
<p><i>For all agencies:</i> Benefits the regulatory change is designed to produce.</p>	<p>The benefit of the regulatory change is that it brings the Regulations in alignment with the Appropriation Act and § 32.1-164 (C). This is not anticipated to impact savings, and costs can be absorbed with existing resources.</p>

Impact on Localities

If this analysis has been reported on the ORM Economic Impact form, indicate the tables (1a or 2) on which it was reported. Information provided on that form need not be repeated here.

Projected costs, savings, fees or revenues resulting from the regulatory change.	See Table 2 of the ORM Economic Impact form.
Benefits the regulatory change is designed to produce.	See Table 2 of the ORM Economic Impact form.

Impact on Other Entities

If this analysis has been reported on the ORM Economic Impact form, indicate the tables (1a, 3, or 4) on which it was reported. Information provided on that form need not be repeated here.

Description of the individuals, businesses, or other entities likely to be affected by the regulatory change. If no other entities will be affected, include a specific statement to that effect.	See Tables 3 and 4 of the ORM Economic Impact form.
Agency's best estimate of the number of such entities that will be affected. Include an estimate of the number of small businesses affected. Small business means a business entity, including its affiliates, that: a) is independently owned and operated and; b) employs fewer than 500 full-time employees or has gross annual sales of less than \$6 million.	See Tables 3 and 4 of the ORM Economic Impact form.
All projected costs for affected individuals, businesses, or other entities resulting from the regulatory change. Be specific and include all costs including, but not limited to: a) projected reporting, recordkeeping, and other administrative costs required for compliance by small businesses; b) specify any costs related to the development of real estate for commercial or residential purposes that are a consequence of the regulatory change; c) fees; d) purchases of equipment or services; and e) time required to comply with the requirements.	See Tables 3 and 4 of the ORM Economic Impact form.
Benefits the regulatory change is designed to produce.	See Tables 3 and 4 of the ORM Economic Impact form.

Alternatives to Regulation

Describe any viable alternatives to the regulatory change that were considered, and the rationale used by the agency to select the least burdensome or intrusive alternative that meets the essential purpose of the regulatory change. Also, include discussion of less intrusive or less costly alternatives for small businesses, as defined in § 2.2-4007.1 of the Code of Virginia, of achieving the purpose of the regulatory change.

An alternative is for VDH to continue to collect the applicable fees pursuant to the Appropriation Act and providing refunds pursuant to § 32.1-164 (C) without an amendment to the Regulations. The existing inconsistency between the Code of Virginia, the Appropriation Act, and the

Regulations would create or continue confusion for the public, regulated entities, and VDH staff, and as such is not considered to be viable. Therefore, VDH believes the proposed amendments create the least intrusive alternative on the agency and stakeholders. There is no alternative for small businesses as the Appropriation Act makes no exceptions or alternate fees for small businesses.

Regulatory Flexibility Analysis

Consistent with § 2.2-4007.1 B of the Code of Virginia, describe the agency’s analysis of alternative regulatory methods, consistent with health, safety, environmental, and economic welfare, that will accomplish the objectives of applicable law while minimizing the adverse impact on small business. Alternative regulatory methods include, at a minimum: 1) establishing less stringent compliance or reporting requirements; 2) establishing less stringent schedules or deadlines for compliance or reporting requirements; 3) consolidation or simplification of compliance or reporting requirements; 4) establishing performance standards for small businesses to replace design or operational standards required in the proposed regulation; and 5) the exemption of small businesses from all or any part of the requirements contained in the regulatory change.

The fees in the proposed amendments are already collected pursuant to the Appropriation Act, which provides the agency no authority or discretion to offer discounted fee rates for small businesses. Therefore, VDH does not anticipate the amendments to these Regulations to adversely impact small businesses.

Public Participation

Indicate how the public should contact the agency to submit comments on this regulation, and whether a public hearing will be held, by completing the text below.

Consistent with § 2.2-4011 of the Code of Virginia, if an objection to the use of the fast-track process is received within the 30-day public comment period from 10 or more persons, any member of the applicable standing committee of either house of the General Assembly or of the Joint Commission on Administrative Rules, the agency shall: 1) file notice of the objections with the Registrar of Regulations for publication in the Virginia Register and 2) proceed with the normal promulgation process with the initial publication of the fast-track regulation serving as the Notice of Intended Regulatory Action.

If you are objecting to the use of the fast-track process as the means of promulgating this regulation, please clearly indicate your objection in your comment. Please also indicate the nature of, and reason for, your objection to using this process.

The Virginia Department of Health is providing an opportunity for comments on this regulatory proposal, including but not limited to (i) the costs and benefits of the regulatory proposal and any alternative approaches, (ii) the potential impacts of the regulation, and (iii) the agency's regulatory flexibility analysis stated in this background document.

Anyone wishing to submit written comments for the public comment file may do so through the Public Comment Forums feature of the Virginia Regulatory Town Hall web site at: <https://townhall.virginia.gov>. Comments may also be submitted by mail, email or fax to:

Lance Gregory, Office of Environmental Health Services,
 109 Governor Street 5th Floor
 Richmond, Virginia 23219
 phone (804) 864-7491; fax (804) 864-7454
Lance.Gregory@vdh.virginia.gov.

In order to be considered, comments must be received by 11:59 pm on the last day of the public comment period.

A public hearing will not be held following the publication of this regulatory action.

Detail of Changes

List all regulatory changes and the consequences of the changes. Explain the new requirements and what they mean rather than merely quoting the text of the regulation. For example, describe the intent of the language and the expected impact. Describe the difference between existing requirement(s) and/or agency practice(s) and what is being proposed in this regulatory change. Use all tables that apply, but delete inapplicable tables.

If an existing VAC Chapter(s) is being amended or repealed, use Table 1 to describe the changes between existing VAC Chapter(s) and the proposed regulation. If existing VAC Chapter(s) or sections are being repealed and replaced, ensure Table 1 clearly shows both the current number and the new number for each repealed section and the replacement section.

Table 1: Changes to Existing VAC Chapter(s)

Current chapter-section number	New chapter-section number, if applicable	Current requirements in VAC	Change, intent, rationale, and likely impact of new requirements
12VAC5-620-70		No fee for onsite sewage system and alternative discharge Repair Permits, Voluntary Upgrades, and Safe, Adequate, and Proper Evaluation.	CHANGE: The proposed amendments change this section by adding the following fees: i) \$425 for Repair Permits for systems less than 1,000 gallons per day without a private sectors design; ii) \$225 for Repair Permits for systems less than 1,000 gallons per day with a private sector design; iii) \$1,400 for Repair Permits for systems greater than 1,000 gallons per day; iv) \$225 for Voluntary Upgrades less than 1,000 gallons per day; v) \$1,400 for Voluntary Upgrades greater than 1,000 gallons per day; vi) \$150 for Safe, Adequate, and Proper Evaluations without private sector documentation; and vii) \$100 for Safe, Adequate, and Proper Evaluations with private sector documentation. The proposed amendments also include stylistic changes consistent with the Register Style Manual.

			<p>INTENT: The intent of these fees is to align with fees pursuant to the Appropriation Act. The intent of the stylistic changes is to improve readability of the Regulations.</p> <p>RATIONALE: The rationale for inclusion of these fees is to reduce confusion as the fees are already collected by VDH as required in the Appropriation Act. The rationale for the stylistic changes were in accordance with the Register Style Manual.</p> <p>LIKELY IMPACT: These amendments will likely reduce confusion by eliminating inconsistencies between the Appropriation Act and the Regulations.</p>
<p>12VAC5-620-80</p>		<p>Fee waivers are only provided to owners whose family income is at or below the federal poverty guidelines.</p>	<p>CHANGE: The proposed amendment to 12VAC5-620-80 (A) is to provide an updated reference to the federal poverty guidelines and to include a fee waiver for owners whose income is at or below 200 percent of the federal poverty guidelines for Repair Permits. The proposed amendment to 12VAC5-620-80 (C) is to eliminate the fee waiver for all Repair Permits. The proposed amendment to 12VAC5-620-80 (D) removes duplicative language from the Regulations. The proposed amendments also include stylistic changes consistent with the Register Style Manual.</p> <p>INTENT: The intent of these amendments are to align with fee waivers provided pursuant to the Appropriation Act, and to eliminate redundant language in the Regulations. The intent of the stylistic changes is to improve readability of the Regulations.</p> <p>RATIONALE: The rationale for inclusion of the fee waiver is the waiver is already required pursuant to the Appropriation Act. The rationale for removing section 12VAC5-620-80 (D) is the language is duplicative to portions of 12VAC5-620-90, and therefore unnecessary. The rationale for the stylistic changes were in accordance with the Register Style Manual.</p>

			<p>LIKELY IMPACT: These amendments will likely reduce confusion by eliminating inconsistencies between the Appropriation Act and the Regulations.</p>
<p>12VAC5-620-90</p>		<p>Provides a refund to applicants for construction permits and certification letters whose application is denied, when the owner intends to use the building as a principal place of residence.</p>	<p>CHANGE: The proposed amendment to 12VAC5-620-90 (A) adds Repair Permits, Voluntary Upgrades, and Safe, Adequate, and Proper Evaluations to the list of applications eligible for a refund when the application is denied, and the owner uses the building as a principal place of residence. The proposed amendment to 12VAC5-620-90 (B) adds Repair Permits, Voluntary Upgrades, and Safe, Adequate, and Proper Evaluations to the list of applications eligible for a refund when the application is withdrawn. The proposed amendments also include stylistic changes consistent with the Register Style Manual.</p> <p>INTENT: The intent of these amendments are to align with refunds as required by § 32.1-164 (C) of the Code of Virginia and to provide consistency among all application types of refunds for application denials and withdrawals in the Regulations. The intent of the stylistic changes is to improve readability of the Regulations.</p> <p>RATIONALE: The rationale to extend refunds for these application types is that § 32.1-164 (C) of the Code of Virginia requires VDH to provide the refund for a principal place of residence. VDH did not charge a fee for these application types; therefore, an allowance for a refund was unnecessary. Now that a permit fee is required, an allowance for a refund is consistent with current agency practice for other applications. The rationale for the stylistic changes were in accordance with the Register Style Manual.</p> <p>LIKELY IMPACT: These amendments will likely reduce confusion by eliminating inconsistencies between the Appropriation Act and the Regulations. The amendments will also likely result in an average of 66 more applicants per year who will be eligible to receive a refund. This is based on the number of average number of Repair Permit,</p>

			<p>Voluntary Upgrade, and Safe, Adequate, and Proper Evaluations withdraws since July 1, 2019.</p>
	<p>12VAC5-620-9998. FORMS</p>		<p>CHANGE: Added refund affidavit form.</p> <p>INTENT: The intent is to reference the form to be used to apply for a refund of an application fee.</p> <p>RATIONALE: Having one, standard form, referenced in the regulation, ensures an efficient process across the Commonwealth and avoids potential confusion regarding the form.</p> <p>LIKELY IMPACT: Applicants who wish to request a refund will continue using the form, and will be able to access the form via the regulations themselves on VAC Online.</p>

Office of Regulatory Management
Economic Review Form

Agency name	State Board of Health
Virginia Administrative Code (VAC) Chapter citation(s)	12 VAC 5 – 620
VAC Chapter title(s)	Regulations Governing Fees for Onsite Sewage Disposal Systems, Alternative Discharging Systems, and Private Wells
Action title	State Budget Addition of Fees for Repairs, Voluntary Upgrades, and Safe, Adequate, and Proper Evaluations.
Date this document prepared	February 13, 2023
Regulatory Stage (including Issuance of Guidance Documents)	Fast Track Action

Cost Benefit Analysis

Complete Tables 1a and 1b for all regulatory actions. You do not need to complete Table 1c if the regulatory action is required by state statute or federal statute or regulation and leaves no discretion in its implementation.

Table 1a should provide analysis for the regulatory approach you are taking. Table 1b should provide analysis for the approach of leaving the current regulations intact (i.e., no further change is implemented). Table 1c should provide analysis for at least one alternative approach. You should not limit yourself to one alternative, however, and can add additional charts as needed.

Report both direct and indirect costs and benefits that can be monetized in Boxes 1 and 2. Report direct and indirect costs and benefits that cannot be monetized in Box 4. See the ORM Regulatory Economic Analysis Manual for additional guidance.

Table 1a: Costs and Benefits of the Proposed Changes (Primary Option)

<p>(1) Direct & Indirect Costs & Benefits (Monetized)</p>	<ul style="list-style-type: none"> <p>• The regulatory action will amend Establishing Fees (12VAC5-620-70). Adding fees for Repair Permits, Voluntary Upgrades, and Safe, Adequate, and Proper Evaluations pursuant to the Item 292, Chapter 2, of the 2018 Acts of Assembly, Special Session I (The Appropriation Act). Also includes stylistic changes consistent with the Register Style Manual.</p> <p>Monetized Costs: There are no monetized costs associated with this change, as the fees are already being collected pursuant to the Appropriation Act.</p> <p>Monetized Benefits: There are no monetized benefits associated with this change.</p> <p>• The regulatory action will amend Waiver of Fees (12VAC5-620-80). Updates the reference to the federal poverty guidelines and includes a fee waiver for owners whose income is at or below 200 percent of the federal poverty guidelines for Repair Permits. Removes the blanket fee waiver for all Repair Permits. Removes duplicative language regarding fee waivers for replacement wells. Also includes stylistic changes consistent with the Register Style Manual.</p> <p>Monetized Costs: There are no monetized costs associate with this change.</p> <p>Monetized Benefits: There are no direct monetized benefits associated with this change, as this fee waiver is already in effect pursuant to the Appropriation Act.</p> <p>• The regulatory action will amend Refund of Application Fee (12VAC5-620-90). Adds Repair Permits, Voluntary Upgrades, and Safe, Adequate, and Proper Evaluations to the list of applications eligible for a refund when the application is denied and the owner uses the building as a principle place of residence. Adds Repair Permits, Voluntary Upgrades, and Safe, Adequate, and Proper Evaluations to the list of applications eligible for a refund when the application is withdrawn. Also includes stylistic changes consistent with the Register Style Manual.</p> <p>Monetized Costs: The cost to the agency due to refunded fees is being counted as a benefit to the property owners and can be absorbed by VDH without adverse impact.</p>
---	---

	<p>Monetized Benefits: The property owners seeking a permit withdrawal will have a direct monetized benefit of approximately \$14,850 per year from providing refunds for withdrawals of Repair Permits, Voluntary Upgrades, and Safe, Adequate, and Proper Evaluations. Since July 1, 2019, VDH has averaged 66 permit withdrawals per year for Repair Permits, Voluntary Upgrades, or Safe, Adequate, and Proper Evaluations. Owners that qualify for VDH direct services for Repair Permits typically would also qualify for a fee waiver, and all Voluntary Upgrades require private sector designs. The vast majority of application are for systems less than 1,000 gallons per day; therefore, the majority of application include a \$225 fee that would be refunded for a withdrawal.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$55,199 over 4 years.	(b) \$55,199 over 4 years.
(3) Net Monetized Benefit	\$0	
(4) Other Costs & Benefits (Non-Monetized)	<p>Non-Monetized Costs: There are no non-monetized costs associated with this regulatory action.</p> <p>Non-Monetized Benefits: Individuals will receive a non-monetized benefit from reduce confusion by eliminating inconsistencies between the Appropriation Act and the Regulations.</p>	
(5) Information Sources	Direct cost and benefits were calculated based on permit withdrawals in VDH’s Environmental Health Database and fees collected pursuant to the Appropriation Act.	

Table 1b: Costs and Benefits under the Status Quo (No change to the regulation)

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>Monetized Costs:</p> <p>The changes made to add fees for Repair Permits, Voluntary Upgrades, and Safe, Adequate, and Proper Evaluations in this action are required to conform to the Appropriation Act. The proposed revision to 12VAC5-620-90 to provide a refund for the withdrawal of Repair Permits, Voluntary Upgrades, and Safe, Adequate, and Proper Evaluations is not mandated by the Code of Virginia or the Appropriation Act, but is consistent with refunds provide for other application types.</p> <ul style="list-style-type: none"> The “status quo” option would be to not amend the Regulations and continue collection fees pursuant to the Appropriation Act.
--	--

	<p>The direct monetized costs of maintaining the status quo is property owners may not receive a refund for permit withdrawals.</p> <p>The style and form changes are to conform with the <i>Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code</i> and could be considered non-discretionary.</p> <ul style="list-style-type: none"> • The “status quo” option would be to leave the language in its current style and form, for which there are no associated direct monetized costs or benefits. <p>Other Monetized Costs: There are no indirect monetized cost associated with the “status quo” option listed above. Maintaining the “status quo” would allow VDH to keep approximately \$14,850 per year in proposed permit refunds, which could be considered a cost to the property owners, though they do not currently receive that refund.</p> <p>Direct Monetized Benefits: Maintaining the “status quo” would allow VDH to keep approximately \$14,850 per year in proposed permit refunds</p> <p>Indirect Monetized Benefits: There are no indirect monetized benefits associated with the “status quo” option listed above.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$55,199 over 4 years.	(b) \$55,199 over 4 years.
(3) Net Monetized Benefit	\$0	
(4) Other Costs & Benefits (Non-Monetized)	<p>Other Non-monetized Cost: Maintaining the “status quo” option could lead to confusion where the Regulations do not align with the non-discretionary requirements of the Appropriation Act.</p> <p>Other Non-monetized Benefits: There are no other non-monetized benefits of maintaining the “status quo” option.</p>	
(5) Information Sources	Direct cost and benefits were calculated based on permit withdrawals in VDH’s Environmental Health Database and fees collected pursuant to the Appropriation Act.	

Table 1c: Costs and Benefits under Alternative Approach(es)

<p>(1) Direct & Indirect Costs & Benefits (Monetized)</p>	<p>Direct Monetized Cost and Benefits: There are no alternative approaches beyond the “status quo” option. The fees for Repair Permits, Voluntary Upgrades, and Safe, Adequate, and Proper Evaluations are not discretionary, are required pursuant to the Appropriation Act, and are already collected by VDH. Likewise, refunds for permit denials for principal place of residence are require by the Code of Virginia. The only alternative to providing the proposed refunds for permit withdrawals is to maintain the “status quo” of no refunds.</p> <p>The style and form changes are not substantive changes to regulatory requirements associated with the chapter, are non-regulatory, and do not affect the rights or powers of any person or agency. As such, there are no viable alternative approaches to be considered.</p> <p>Indirect Monetized Cost: There are no indirect monetized costs associated with the “status quo” option listed above.</p> <p>Indirect Monetized Benefits: There are no indirect monetized benefits associated with the “status quo” option listed above.</p>	
<p>(2) Present Monetized Values</p>	<p>Direct & Indirect Costs</p>	<p>Direct & Indirect Benefits</p>
	<p>(a) NA</p>	<p>(b) NA</p>
<p>(3) Net Monetized Benefit</p>	<p>NA</p>	
<p>(4) Other Costs & Benefits (Non-Monetized)</p>	<p>NA</p>	
<p>(5) Information Sources</p>	<p>NA</p>	

Impact on Local Partners

Use this chart to describe impacts on local partners. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 2: Impact on Local Partners

<p>(1) Direct & Indirect Costs & Benefits (Monetized)</p>	<p>• Monetized Costs: There are no direct monetized costs to local partners associated with this regulatory action.</p>
---	--

	<p>• Direct Monetized Benefits: There are no direct monetized benefits to local partners associated with this regulatory action.</p> <p>Indirect Monetized Costs: There are no indirect monetized costs to local partners associated with this regulatory action.</p> <p>Indirect Monetized Benefits: There are no indirect monetized benefits to local partners associated with this regulatory action.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0	(b) \$0
(3) Other Costs & Benefits (Non-Monetized)		
(4) Assistance		
(5) Information Sources		

Impacts on Families

Use this chart to describe impacts on families. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 3: Impact on Families

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>Direct Monetized Costs: There are no direct monetized costs to families associated with this regulatory action.</p> <p>Indirect Monetized Costs: There are no indirect monetized costs to families associated with this regulatory action.</p> <p>Direct Monetized Benefits: The direct benefits of this proposed change are property owners will receive refunds for permits withdrawals. Since July 1, 2019, VDH has averaged 66 permit withdrawals per year for Repair Permits, Voluntary Upgrades, or Safe, Adequate, and Proper Evaluations. Families that qualify for VDH direct services for Repair Permits typically would also qualify for a fee waiver, and all Voluntary Upgrades require private sector designs. The vast majority of application are for systems less than 1,000 gallons per day; therefore the majority of application include a \$225 fee that would be refunded for a withdrawal.</p>
--	---

	<p>Refunds for permit denials are already provided pursuant to the Code of Virginia.</p> <p>Monetized Benefits: There are no indirect monetized benefits to families associated with this regulatory action.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0	(b) Up to \$1,400 per family per permit withdrawal.
(3) Other Costs & Benefits (Non-Monetized)	Families will benefit from reduce confusion by eliminating inconsistencies between the Appropriation Act and the Regulations.	
(4) Information Sources	Direct cost and benefits were calculated based on permit withdrawals in VDH's Environmental Health Database and fees collected pursuant to the Appropriation Act	

Impacts on Small Businesses

Use this chart to describe impacts on small businesses. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 4: Impact on Small Businesses

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>Direct Monetized Costs: There are no direct monetized costs to small businesses associated with this regulatory action.</p> <p>Indirect Monetized Costs: There are no indirect monetized costs to small businesses associated with this regulatory action.</p> <p>Direct Monetized Benefits: The direct benefits of this proposed change are small business will receive refunds for permits withdrawals. Since July 1, 2019, VDH has averaged 66 permit withdrawals per year for Repair Permits, Voluntary Upgrades, or Safe, Adequate, and Proper Evaluations. All non-residential applications require private sector designs, which have a fee of \$225 to \$1,400 depending on the proposed sewage flow volume. Refunds for permit denials are already provided pursuant to the Code of Virginia.</p> <p>Indirect Monetized Benefits: There are no indirect monetized benefits to families associated with this regulatory action.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0	(b) Up to \$1,400 per small business per permit withdrawal.

(3) Other Costs & Benefits (Non-Monetized)	Small businesses will benefit from reduce confusion by eliminating inconsistencies between the Appropriation Act and the Regulations.
(4) Alternatives	The agency is not exercising any discretion with regard to the substantive provisions of this chapter. The only alternative is to maintain the “status quo” option, which may cost small businesses up to \$1,400 if they choose to withdrawal an application.
(5) Information Sources	Direct cost and benefits were calculated based on permit withdrawals in VDH’s Environmental Health Database and fees collected pursuant to the Appropriation Act.

Changes to Number of Regulatory Requirements

For each individual VAC Chapter amended, repealed, or promulgated by this regulatory action, list (a) the initial requirement count, (b) the count of requirements that this regulatory package is adding, (c) the count of requirements that this regulatory package is reducing, (d) the net change in the number of requirements. This count should be based upon the text as written when this stage was presented for executive branch review. Five rows have been provided, add or delete rows as needed. In the last row, indicate the total number for each column.

Table 5: Total Number of Requirements

	Number of Requirements			
Section number	Initial Count	Additions	Subtractions	Net Change
70	2	7	0	9
80	9	1	1	9
90	6	2	0	8
TOTAL	17	10	1	26

1 **Project 7469 - Fast-Track**

2 **Department of Health**
3 **State Budget Addition of Fees for Repairs, Voluntary Upgrades, and Safe, Adequate, and**
4 **Proper Evaluations**

5 **12VAC5-620-70. Establishing fees.**

6 A. ~~The commissioner shall establish a schedule of fees to be charged by the department~~
7 ~~charge a fee for services related to construction, maintenance, and repair or replacement of onsite~~
8 ~~sewage disposal systems, alternative discharge systems, and private wells and for appeals before~~
9 ~~the Review Board.~~

10 B. ~~In establishing fees, the commissioner, which shall consider the actual or estimated~~
11 ~~average cost to the agency of delivering each service included in the schedule of fees.~~

12 ~~The in accordance with the following fee schedule is hereby established:~~

SCHEDULE OF FEES	
Application or Service	Fee
Certification letter, no onsite soil evaluator/professional engineer (OSE/PE) documentation (no charge for well)	\$350
Certification letter with OSE/PE documentation, ≤1,000 gpd	\$320
Certification letter with OSE/PE documentation, >1,000 gpd	\$1,400
Construction permit for treatment works only, no OSE/PE documentation	\$425
Combined well and treatment works construction permit, no OSE/PE documentation	\$725
Combined well and treatment works construction permit with OSE/PE documentation, ≤1,000 gpd	\$525
Construction permit for treatment works only with OSE/PE documentation, ≤1,000 gpd	\$225
Construction permit for treatment works only with OSE/PE documentation, >1,000 gpd	\$1,400
Combined well and treatment works construction permit with OSE/PE documentation, >1,000 gpd	\$1,700
Private well construction or abandonment permit, with or without OSE/PE documentation	\$300
Closed-loop geothermal well system (one fee per well system)	\$300
Alternative discharge system inspection fee	\$75
Minor modification to an existing system	\$100
Appeal before the Review Board	\$135

<u>Repair permit for a treatment works, < 1,000 gpd without OSE/PE documentation</u>	<u>\$425</u>
<u>Repair permit for a treatment works, < 1,000 gpd with OSE/PE documentation</u>	<u>\$225</u>
<u>Repair permit for a treatment works, > 1,000 gpd with OSE/PE documentation</u>	<u>\$1,400</u>
<u>Voluntary Upgrade for a treatment works, < 1,000 gpd with OSE/PE documentation</u>	<u>\$225</u>
<u>Voluntary Upgrade for a treatment works, > 1,000 gpd with OSE/PE documentation</u>	<u>\$1,400</u>
<u>Safe, adequate, and proper evaluation without OSE/PE/Installer/Operator documentation</u>	<u>\$150</u>
<u>Safe, adequate, and proper evaluation with OSE/PE/Installer/Operator documentation</u>	<u>\$100</u>

13 **Statutory Authority**

14 §§ 32.1-12, 32.1-164, and 32.1-176.4 of the Code of Virginia.

15 **Historical Notes**

16 Derived from VR355-34-03 § 3.1, eff. July 1, 1989; amended, Virginia Register Volume 32, Issue
17 10, eff. February 12, 2016.

18 **12VAC5-620-80. Waiver of fees.**

19 A. ~~Any~~ The department may not charge an owner whose family income is at or below the 2013
20 ~~Poverty Income Guidelines for the 48 Contiguous States and the District of Columbia established~~
21 ~~by the Department of Health and Human Services, 78 FR 5182 (January 24, 2013), or any~~
22 ~~successor guidelines~~ poverty guidelines, updated periodically in the Federal Register by the U.S.
23 Department of Health and Human Services under the authority of 42 U.S.C. 9902(2), shall not be
24 charged a fee pursuant to this chapter.

25 B. The department may not charge an owner whose family income is at or below 200 percent
26 of the poverty guidelines, updated periodically in the Federal Register by the U.S. Department of
27 Health and Human Services under the authority of 42 U.S.C 9902(2), an application fee if the
28 application is for a pit privy or for a repair of a failing onsite or alternative discharging sewage
29 system.

30 ~~Any~~ C. The department may not charge a person applying for a permit to construct a pit
31 ~~privy shall not be charged a fee for filing the application.~~ an application fee.

32 C. ~~Any person applying for a permit to repair an onsite sewage disposal system or alternative~~
33 ~~discharging system shall not be charged a fee for filing the application.~~

34 D. ~~Any person applying for a construction permit for the replacement of a private well may be~~
35 ~~charged a fee for filing the application. Any application fee paid for a construction permit for a~~
36 ~~replacement well shall be refunded in full upon receipt by the department of a Uniform Water Well~~
37 ~~Completion Report, pursuant to 12VAC5-630-310, indicating that the well that was replaced has~~
38 ~~been permanently and properly abandoned or decommissioned.~~

39 ~~Any~~ D. The department may not charge a person applying for a permit to properly and
40 permanently abandon or decommission an existing well on property that is his principal place of
41 residence ~~shall not be charged a fee for filing the application.~~ an application fee.

42 F. ~~Any~~ E. The department may not charge a person who applies to renew a construction
43 permit for an onsite sewage disposal system, alternative discharge system, or private well ~~shall~~
44 ~~not be charged a fee for filing the application, provided that:~~ an application fee if:

- 45 1. The site and soil conditions upon which the permit was issued have not changed;
46 2. The legal ownership of the property has not changed;
47 3. A building permit for the facility to be served by the sewage system or well has been
48 obtained or construction of the facility has commenced;
49 4. No previous renewal of the permit has been granted;
50 5. The ~~expiration date of the renewed permit shall be~~ expires no later than the date 18
51 months following the expiration date of the original permit; and
52 6. ~~Where~~ If the construction permit is for an alternative discharging system, the permit
53 ~~must comply~~ complies with 9VAC25-110, ~~Virginia Pollutant Discharge Elimination System~~
54 ~~(VPDES) General Permit for Domestic Sewage Discharges of Less Than or Equal to 1,000~~
55 ~~Gallons per Day, issued by the State Water Control Board.~~

56 ~~G. Any~~ F. A person whose application for a certification letter or for a permit to construct an
57 onsite sewage disposal system, alternative discharging system, or private well is denied may file
58 one subsequent application for the same site-specific construction permit ~~for which the application~~
59 ~~fee shall be waived, provided that:~~ without paying another application fee if:

- 60 1. The subsequent application is filed within 90 days of receiving the notice of denial for
61 the first application;
62 2. The denial is not currently under appeal; and
63 3. The application fee for the first application has not been refunded.

64 **Statutory Authority**

65 §§ 32.1-12, 32.1-164, and 32.1-176.4 of the Code of Virginia.

66 **Historical Notes**

67 Derived from VR355-34-03 § 3.2, eff. July 1, 1989; amended, Virginia Register Volume 32, Issue
68 10, eff. February 12, 2016.

69 **12VAC5-620-90. Refunds of application fee.**

70 A. An applicant for a construction permit, repair permit, voluntary upgraded, safe, adequate,
71 and proper evaluation, or certification letter whose application is denied may apply for a refund of
72 the application fee. The ~~department shall refund the application fee shall be refunded~~ to the owner
73 or agent, if applicable, if the department denies an application for the land upon which the owner
74 intends to build his principal place of residence. ~~When~~ If the application was ~~made~~ for both a
75 sewage disposal system and a private well, the department may refund both fees may be
76 ~~refunded~~ at the owner's request. ~~Any such~~ The department shall consider the request shall be
77 ~~considered~~ for refund of an application fee to be a withdrawal of the application.

78 B. An applicant for a construction permit, repair permit, voluntary upgrade, safe, adequate,
79 and proper evaluation, or a certification letter may request a refund of the application fee if the
80 applicant voluntarily withdraws ~~his~~ the application before the department issues the requested
81 permit. The ~~department shall refund the application fee will be refunded~~ if the applicant withdraws
82 the application ~~is withdrawn~~ before the department makes a site visit for the purpose of evaluating
83 the application.

84 C. ~~An applicant who has paid~~ The department may charge an application fee for a construction
85 permit for the replacement of a private well shall be refunded the application fee , which the
86 department shall refund in full upon receipt ~~by the department~~ from the applicant of a Uniform
87 Water Well Completion Report, pursuant to 12VAC5-630-310, showing that the well that was
88 replaced has been properly and permanently abandoned or decommissioned.

89 D. ~~All applications for refunds must be made~~ An applicant whose application was denied or
90 who withdrew an application may apply for a refund of the application fee to the department no
91 later than 12 months following the date upon which the applicant receives notification that his
92 application for a construction permit or certification letter has been denied, within 12 months

93 ~~following the date upon which his application was withdrawn, or within 12 months following the~~
94 ~~date upon which any appeals of the denial of the application have been concluded. after (i) the~~
95 ~~date the applicant withdrew the application, (ii) the date the applicant received notification of the~~
96 ~~denial, or (iii) if the applicant appealed the denial, the conclusion of the appeal process.~~

97 E. ~~All applications for refunds shall be made in writing in a form approved by the~~
98 ~~department. To request a refund, an applicant shall submit the Sewage System and Private Well~~
99 ~~Application Refund Affidavit form pursuant to this section.~~

100 F. ~~Applications that have~~ An application that has been withdrawn ~~are is~~ not subject to appeal.

101 **Statutory Authority**

102 §§ 32.1-12, 32.1-164, and 32.1-176.4 of the Code of Virginia.

103 **Historical Notes**

104 Derived from VR355-34-03 § 3.3, eff. July 1, 1989; amended, Virginia Register Volume 32,
105 Issue 10, eff. February 12, 2016.

106 FORMS (12VAC5-620)

107 Sewage System and Private Well Application Refund Affidavit (eff. 12/2014)



COMMONWEALTH of VIRGINIA

Department of Health

P O BOX 2448
RICHMOND, VA 23218

TTY 7-1-1 OR
1-800-828-1120

MEMORANDUM

DATE: February 17, 2023

TO: State Board of Health

FROM: Julie Henderson
Director, Office of Environmental Health Services

SUBJECT: Final Amendments - Amend Regulations for Bedding and Upholstered Furniture Inspection Program (12VAC5-125) following Periodic Review

Enclosed for your review are final amendments to the Regulations for Bedding and Upholstered Furniture Inspection Program (12VAC5-125), hereafter, "Regulations" following a periodic review.

The Regulations, upon initial promulgation, were designed to protect the health, safety, and welfare of the public through licensure requirements for mattresses, box-springs, pillows, comforters, cushions, and all upholstered furniture, including products designed for infants and small children. Licensure and inspection activities are performed in order to protect and promote public health through ensuring that all new bedding and upholstered furniture is properly labeled with the type of concealed filling materials found in the item. Upon conclusion of the proposed stage, the proposed text was further amended to improve clarity and formatting and align terminology to shifts in national standards since the proposed stage. The final text does not contain any substantive changes from the proposed stage.

The Office of Environmental Health Services recommends the State Board of Health approve this final regulatory action. Upon approval by the Board, it will be submitted for Executive Branch Review, publication in the *Register of Regulations*, and final adoption.



August 2022

townhall.virginia.gov

Final Regulation Agency Background Document

Agency name	Virginia Department of Health
Virginia Administrative Code (VAC) Chapter citation(s)	12 VAC5-125
VAC Chapter title(s)	Regulations for Bedding and Upholstered Furniture Inspection Program
Action title	Amend Regulations Following Periodic Review
Date this document prepared	February 1, 2023

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Order 19 (2022) (EO 19), any instructions or procedures issued by the Office of Regulatory Management (ORM) or the Department of Planning and Budget (DPB) pursuant to EO 19, the Regulations for Filing and Publishing Agency Regulations (1 VAC 7-10), and the *Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code*.

Brief Summary

Provide a brief summary (preferably no more than 2 or 3 paragraphs) of this regulatory change (i.e., new regulation, amendments to an existing regulation, or repeal of an existing regulation). Alert the reader to all substantive matters. If applicable, generally describe the existing regulation.

The Regulations for Bedding and Upholstered Furniture Inspection Program (12VAC5-125), hereinafter referred to as the Regulations, outline health, safety, and licensure requirements for mattresses, box-springs, pillows, comforters, cushions, and all upholstered furniture, including products designed for infants and small children. Licensure and inspection activities are performed in order to protect and promote public health through ensuring that all new bedding and upholstered furniture is properly labeled with the type of concealed filling materials found in the item. This law also ensures that consumers are informed about any animal hair, feathers, and down used as filling material, and the presence of any concealed material that may be an allergen to the members of the consumer's household.

The Regulations also protect Virginia consumers from diseases and insect pests spread through unsanitary secondhand bedding and upholstered furniture through permitting and inspection of Sanitizers, Reupholsterers, and Renovators.

The intent of this action is to: i) update the regulation by reducing conflicts with other states' bedding and upholstered furniture regulations, ii) transparently outline existing requirements for use of animal hair, feathers, or down, iii) establish consumer notifications on law labels for the use of reclaimed and reprocessed materials, iv) clarify licensing and permitting requirements and operating standards, and v) address concerns expressed by the General Assembly and Office of the Attorney General regarding certain items in the regulation. The overarching goal of this regulatory action is to protect the health and safety of consumers of new and secondhand bedding and upholstered furniture in the Commonwealth with a minimally intrusive regulation that is clear and easy to understand and implement.

Acronyms and Definitions

Define all acronyms used in this form, and any technical terms that are not also defined in the "Definitions" section of the regulation.

"VRRM" refers to the Virginia Register of Regulations Form, Style and Procedure Manual for Publication of Virginia Regulations (April 2014).

"VDH" means the Virginia Department of Health.

Statement of Final Agency Action

Provide a statement of the final action taken by the agency including: 1) the date the action was taken; 2) the name of the agency taking the action; and 3) the title of the regulation.

Mandate and Impetus

List all changes to the information reported on the Agency Background Document submitted for the previous stage regarding the mandate for this regulatory change, and any other impetus that specifically prompted its initiation. If there are no changes to previously reported information, include a specific statement to that effect.

The only change to the information reported at the Proposed stage is as follows:
During the Periodic Review, the Office of the Attorney General noted that the Board did not have the authority to enforce the exemption of antiques. HB 2173 and SB 1016 of the 2023 General Assembly codifies the Board's authority to exempt "antiques" as defined in the final proposed regulations, and thus the potential legality of the existing exemption for antiques is no longer an impetus of concern for this action.

Legal Basis

Identify (1) the promulgating agency, and (2) the state and/or federal legal authority for the regulatory change, including the most relevant citations to the Code of Virginia and Acts of Assembly chapter

number(s), if applicable. Your citation must include a specific provision, if any, authorizing the promulgating agency to regulate this specific subject or program, as well as a reference to the agency's overall regulatory authority.

The State Board of Health ("Board") is the promulgating agency.

The Board has general authority to promulgate regulations pursuant to § 32.1-12 of the Code of Virginia, which states the Board shall make, adopt, promulgate, and enforce regulations necessary to carry out the provisions of the title to protect the public health and safety.

Sections 32.1-212 through 32.1-226 of the Code of Virginia require every entity importing, manufacturing, renovating, or reupholstering any bedding or upholstered furniture, or processing or selling any filling material to be used in articles of bedding or upholstered furniture, to obtain a license from the Commissioner of VDH. Every entity renting, selling, or bartering a secondhand item of bedding and upholstered furniture must sanitize the item before it is rented, sold, or otherwise disposed of in a commercial manner, and must obtain a permit to do so from the Commissioner. Section 32.1-218 of the Code of Virginia authorizes the Board to establish fees for licensing and permitting. Additionally, every item of bedding or upholstered furniture sold, rented, or otherwise commercially distributed in the Commonwealth must be tagged with a law label accurately describing the item.

Purpose

Explain the need for the regulatory change, including a description of: (1) the rationale or justification, (2) the specific reasons the regulatory change is essential to protect the health, safety, or welfare of citizens, and (3) the goals of the regulatory change and the problems it is intended to solve.

Nationwide, one independent locality and 32 other states regulate bedding and upholstered furniture. These localities use the Uniform Registry Number (URN) system, in which all localities recognize registration numbers issued by other localities, and allow Manufacturers and Importers to use these numbers in the licensing and registration of their products across the country. These numbers are used on the "law labels" required on bedding and upholstered furniture. However, law label requirements in Virginia contain conflicts with other states' standards, which creates an unnecessary burden on industry. Eliminating the conflicts between Virginia regulations and national standards will reduce the burden on the regulated industry, bring Virginia in line to national standards, and still be protective of public health.

Additionally, during development of the proposed amendments, the regulated industry and representatives from other states' bedding and upholstered furniture regulatory programs requested Virginia address standards for reclaimed and reprocessed filling materials. Public demand for products made with post-consumer materials has increased in recent years, and is only expected to further increase in the future. New technologies have allowed recycled materials, such as polyester generated from recycled plastic and post-consumer reclaimed down, to be processed with methods resulting in products with equal or better quality and cleanliness than those made with virgin materials. The language of the regulation must be updated to reflect these modern practices in industry.

The text of the regulation is currently vague about certain licensing requirements, implying multiple licenses must be held by Importers and Distributors working with multiple Manufacturers. Additionally, permitting requirements for Reupholsterers and Renovators who also need to sanitize secondhand bedding and upholstered furniture are not clear, and the implications of exemptions for individuals who sell their household goods through consignment are not well set out. Overall, the language of all licensing, permitting, inspection, and enforcement sections require revision and streamlining to make administrative procedures clearer and more transparent to the regulated public.

HB 891 of the 2018 General Assembly Session would have eliminated the licensing and fee requirements for manufacturers, importers, and reupholsterers of bedding and upholstered furniture. The bill was not reported from committee, but the chairman of the House Health, Welfare and Institutions Committee sent VDH a letter in January of 2018 requesting that VDH issue reupholsterers an operating permit instead of a license (this is a semantic change only), and consider reducing the fee associated with this permit. Both of these requests were addressed in the proposed amendments and carry through to the final amendments.

Substance

Briefly identify and explain the new substantive provisions, the substantive changes to existing sections, or both. A more detailed discussion is provided in the "Detail of Changes" section below.

The proposed amendment revises defined terms, adds new sections to expand on or clarify existing standards or practices, updates cross-references to sections of the Code of Virginia, corrects sentence structure, grammar, typographical errors, and aligns formatting with the VRRM. Substantive changes include:

- Chapter title amended from "Regulations for Bedding and Upholstered Furniture Inspection Program" to "Regulations for Bedding and Upholstered Furniture."
- Definitions revised to provide clarity to key or frequently used terms throughout the regulations; amended to align with defined terms found in Title 32.1 of the *Code of Virginia*.
- Update and clarify license, permit, and uniform registry number requirements and application; added new section on application process and change reporting.
- Added newly revised application forms.

Issues

Identify the issues associated with the regulatory change, including: 1) the primary advantages and disadvantages to the public, such as individual private citizens or businesses, of implementing the new or amended provisions; 2) the primary advantages and disadvantages to the agency or the Commonwealth; and 3) other pertinent matters of interest to the regulated community, government officials, and the public. If there are no disadvantages to the public or the Commonwealth, include a specific statement to that effect.

The primary advantage of the proposed amendments is that they will provide greater organization and clarity to the existing text, which will better facilitate the public's and regulated industry's understanding of the regulation.

Under the amendments, Importers and Distributors will maintain one license. These license holders will save significant time and effort in comparison to their current administrative burden of maintaining multiple licenses when they contract with multiple Manufacturers (in some cases, up to 86 fewer licenses will be required for an importing entity). Fee adjustments will ensure there is no overall revenue change associated with this amendment.

The amendments will also provide industry a compliant pathway for the use and labeling of products with recycled filling materials, which are not currently addressed in the regulation. These new provisions will respond to and address a growing sector in the industry, and better meet public demand for safe and healthy eco-friendly products.

Amendments to sanitizing requirements, most notably the addition of steam as a sanitizing method, are designed to provide additional options for businesses that do not want to use the currently approved method of spraying items with isopropyl-alcohol based chemicals.

The agency will benefit from the clarity of the revisions, as they may reduce the time and effort staff spend on explaining procedures that are not well outlined in the current text. The agency also expects to observe a slight reduction in licensing administrative procedures (e.g. returned, incomplete license applications). There were no disadvantages to the public or the Commonwealth identified.

Requirements More Restrictive than Federal

List all changes to the information reported on the Agency Background Document submitted for the previous stage regarding any requirement of the regulatory change which is more restrictive than applicable federal requirements. If there are no changes to previously reported information, include a specific statement to that effect.

There are no requirements that exceed applicable federal requirements; there are no federal requirements that directly overlap with the scope of this regulation.

Agencies, Localities, and Other Entities Particularly Affected

List all changes to the information reported on the Agency Background Document submitted for the previous stage regarding any other state agencies, localities, or other entities that are particularly affected by the regulatory change. If there are no changes to previously reported information, include a specific statement to that effect.

There are no changes to previously reported information.

Public Comment

Summarize all comments received during the public comment period following the publication of the previous stage, and provide the agency's response. Include all comments submitted: including those received on Town Hall, in a public hearing, or submitted directly to the agency. If no comment was received, enter a specific statement to that effect.

There were no comments received on Virginia Regulatory Town Hall or directly to the agency during the public comment period.

Detail of Changes Made Since the Previous Stage

*List all changes made to the text since the previous stage was published in the Virginia Register of Regulations and the rationale for the changes. For example, describe the intent of the language and the expected impact. Describe the difference between existing requirement(s) and/or agency practice(s) and what is being proposed in this regulatory change. Explain the new requirements and what they mean rather than merely quoting the text of the regulation. * Put an asterisk next to any substantive changes.*

Current chapter-section number	New chapter-section number, if applicable	New requirement from previous stage	Updated new requirement since previous stage	Change, intent, rationale, and likely impact of updated requirements
CHAPTER TITLE		This change does not impose a new requirement; the proposed change amends the chapter's title.	None.	<p>Change: Title changed to "Regulations for Bedding and Upholstered Furniture."</p> <p>Intent: Clarify regulatory program's purpose.</p> <p>Rationale: Grammatical correction of title.</p> <p>Impact: None.</p>
12VAC5-125-10		This change does not impose a new requirement. Definitions are added for the following: "Board" "Department" "Antiques"	None.	<p>Change: Add definitions for "Board" and "Department" as referenced in the Code of Virginia; strike and correct relative pronouns, "that" and "who"; amend definitions for "Importer" and "Secondhand" for clarity. Update "Reclaimed and Reprocessed" to "Recycled", as the new term no longer conflicts with other states' laws. This last edit was done throughout the regulation. Amend definitions to unstrike "Antiques", a term removed during the proposed stage.</p> <p>Intent: To align defined terms used in the Regulation with the § 32.1 of the <i>Code of Virginia and</i> to add clarity to codified exemptions(HB 2173 of the 2023 General Assembly Session).</p> <p>Rationale: When defined in statute, regulations should use statutory definitions of terms to avoid confusion. The</p>

				<p>relative pronoun changes are based on regulatory language standards.</p> <p>Impact: Improved understanding and application of the regulations.</p>
<p>12VAC5-125-40</p>		<p>This change reinserts antiques as an article exempt from regulation.</p>	<p>None.</p>	<p>Change: Grammatical corrections, an update of statutory citations, removal of term “valid”, and unstriking item 2 regarding the exemption of antiques.</p> <p>Intent: Update and clarify exemptions to regulations. The intent is also to maintain an exemption from the regulations for bedding and upholstered furniture over 75 years old.</p> <p>Rationale: Changes will improve grammar and accuracy of wording. During the Periodic Review, the Office of the Attorney General indicated that the Board did not have the statutory authority to exempt antiques from the Regulations. VDH sought, via the legislative proposal process, an amendment to the Code which would grant such authority. HB2173 and SB1016 in the 2023 General Assembly Session codify the antique exemption. As of the writing of this document, the two identical bills have been enrolled and are expected to go into effect July 1, 2023.</p> <p>Impact: Improved understanding and application of the regulations. Antique</p>

				furniture dealers will not need to comply with the Regulations, preventing a significant administrative and cost burden on the industry and agency.
12VAC5-125-50		This change does not impose a new requirement; restructured section for clarification, minor grammatical and terminology corrections.	None.	<p>Change: Restructure of section for clarification, separating application procedures from licensing requirements; minor terminology change.</p> <p>Intent: Restructure section to provide clarity to licensing/permitting requirements.</p> <p>Rationale: Changes will improve grammar and accuracy of wording.</p> <p>Impact: Improved understanding and application of the regulations.</p>
	125-55	This change does not impose a new requirement; provisions from Section 50 were moved to this proposed section for clarity.	None.	<p>Change: Add section to clarify the application procedure, termination of permits/licenses, and when to report changes.</p> <p>Intent: Simplify application submission process, provide clarification to regulants' obligation to report changes to the Department.</p> <p>Rationale: Existing regulation combines general provisions for licensure, procedures to obtain a license/permit, and license/permit maintenance. Creating a new section combines related information in one location.</p> <p>Impact: Improved understanding and application of the regulations.</p>

<p>12VAC5-125-60</p>		<p>The change does not impose a new requirement, only clarifies existing provisions and creates more realistic timelines for the agency and the permit holder for administrative procedures.</p>	<p>None.</p>	<p>Change: Revises section to clarify timelines for the suspension and revocation of a license/permit and process to conduct an informal fact finding conference; “license” or “permit” as necessary to improve understanding of applicability of regulations; revises the number of days the department has to conduct an informal fact finding conference from three working days to seven, and the number of days a former permit holder has to request an IFFC from 10 to 30.</p> <p>Intent: To provide clarity to informal fact-finding procedures and timelines.</p> <p>Rationale: Revised procedures are more reflective of current practice and are more inclusive of options and procedures provided by the Administrative Process Act.</p> <p>Impact: Regulated entities and VDH staff will have increased clarity regarding the administrative processes.</p>
<p>12VAC5-125-80</p>		<p>The change does not impose a new requirement, the previous regulatory text did not comply with VRRM styling requirements.</p>	<p>None.</p>	<p>Change: Section amended to comply with regulatory styling requirements, to improve grammar, and adds the term “license” and “permit holder” to improve understanding of applicability of regulations (clarifies when standards apply to permittees or licensees); amends section B to correct cross reference.</p>

				<p>Intent: Clarifies when standards apply to permit or license holders; improved clarity.</p> <p>Rationale: Clarify the context of these requirements.</p> <p>Impact: Improved understanding and application of the regulations.</p>
12VAC5-125-90		The proposed change will not impose new requirements, but will create more flexibility for the regulated industry.	None.	<p>Change: Section amended to comply with VRRM Style requirements, includes grammatical edits deemed necessary to improve understanding of applicability of regulations, adds black as an ink option for recycled material law labels, and strikes “manufacturer” and inserts “retailer.”</p> <p>Intent: To update and clarify standards for law labels.</p> <p>Rationale: Clarifies the context of these requirements and corrects a long-standing error in the Sanitizer law label.</p> <p>Impact: Improved understanding and application of the regulations.</p>
12VAC5-125-100		The change will not impose new requirements, but restricts a long-standing provision’s applicability to permit holders as defined by the chapter.	None.	<p>Change: Section amended to comply with VRRM Style requirements, includes grammatical edits, substitutes “sanitation” for “sanitization”, and adds language restricting the scope of an existing provision.</p> <p>Intent: Update and clarify requirements.</p>

				<p>Rationale: Clarifies the context of these requirements, corrects a long-standing terminology error, and ensures a provision will not be incorrectly applied to new furniture stores.</p> <p>Impact: Improved understanding and application of the Regulations.</p>
12VAC5-125-145		The change does not impose a new requirement to the agency or regulants; amended language provides clarification on regarding business vs. calendar days.	None.	<p>Change: Section amended to provide clarity regarding business vs. calendar days when providing a variance request decision.</p> <p>Intent: Update and clarify variance requirements and timelines for submission and processing.</p> <p>Rationale: Clarifies the context of these requirements.</p> <p>Impact: Improved understanding and application of the regulations.</p>
	12VAC-125 (FORMS)	The change does not impose a new requirement as regulants are required to submit an application for licensure or permit. This change publishes, as required, reporting forms.	None.	<p>Change: To provide a standardized application form for potential license and permit holders.</p> <p>Intent: To provide a standard application form to potential applicants.</p> <p>Rationale: A standard application form simplifies the application process for potential applicants and ensures vital information is captured for staff to process applications.</p> <p>Impact: Improved application processing.</p>

Detail of All Changes Proposed in this Regulatory Action

List all changes proposed in this action and the rationale for the changes. For example, describe the intent of the language and the expected impact. Describe the difference between existing requirement(s) and/or agency practice(s) and what is being proposed in this regulatory change. Explain the new requirements and what they mean rather than merely quoting the text of the regulation. * Put an asterisk next to any substantive changes.

Current chapter-section number	New chapter-section number, if applicable	Current requirements in VAC	Change, intent, rationale, and likely impact of updated requirements
CHAPTER TITLE		Regulations for Bedding and Upholstered Furniture Inspection Program	<p>Change: Title changed to "Regulations for Bedding and Upholstered Furniture."</p> <p>Intent: Clarify regulatory program's purpose.</p> <p>Rationale: Grammatical correction of title.</p> <p>Impact: None.</p>
12VAC5-125-10		<p><u>Definitions. (Deletions)</u> "As is" "Board" "Commissioner" "Department" "Designee or designated officer or agent" "Inspector" "Soiled or torn" "Used" "Wholesaler" "Filling material definitions will be in accordance with definitions published in the 2004 Edition of the International Sleep Products Association Handbook."</p> <p><u>Definitions. (Amendments)</u> "Bedding" "Bedding Program" "Distributor/wholesaler" "Filling material" "Importer" "Law label" "License" "Licensing state" "Manufacturer"</p>	<p>Change: Defined terms were deleted, amended, or added as outlined.</p> <p>Intent: To provide clarity to terms, remove obsolete terminology, improve understanding of terms and regulations.</p> <p>Rationale: The proposed changes will remove obscure terminology, align definitions with industry standards and statutory definitions. Additional edits were necessary to comply with the VRRM.</p> <p>Impact: Streamlined regulation with no erroneous or unnecessary references.</p>

		<p>"New" "Permit" "Person" "Renovator" "Retailer" "Reupholsterer" "Secondhand" "Sell" "Shoddy" "Shoddy pad" "Supply dealer" "Uniform registry number" "Upholstered furniture"</p> <p>Definitions. (Additions) "Board" "Department"</p>	
<p>12VAC5-125-20</p>		<p>Administration. Describes rights of the Board to enact the regulations.</p>	<p>Change: Repeal the section.</p> <p>Intent: To remove unnecessary language from the regulation.</p> <p>Rationale: These authorities are established in §§32.1- 212 through 226; Statements are not integral to the chapter.</p> <p>Impact: Removal of the language streamlines the chapter, but does not affect any of the described authorities.</p>
<p>12VAC5-125-30</p>		<p>Powers and procedures of chapter not exclusive. The Board may pursue enforcement options not listed in the chapter.</p>	<p>Change: Changes title to "Compliance" with the "Virginia Administrative Process Act" and outlines the chapter will be enforced in accordance with this act.</p> <p>Intent: Provide improved understanding of enforcement provisions in relation to regulatory text.</p> <p>Rationale: All enforcement procedures must be compliant with the Administrative Process Act.</p> <p>Impact:None.</p>
<p>12VAC5-125-40</p>		<p>Exemptions. Establishes list of exemptions from chapter.</p>	<p>Change: Includes reference to consignment in exemption for an individual selling personal household goods. Adds two exemption types relocated from section 100. In addition, the section was restructured for clarity, minor</p>

			<p>grammatical edits. In addition, statutory citations were updated and term “valid” was removed.</p> <p>Intent: Provide improved understanding, clarity, and application of regulations as it relates to exemptions..</p> <p>Rationale: Consignment is the sale of an item by an individual, through a broker, and is equivalent to sale through a yard or garage sale, or listing on online self sell platforms (examples exempt through the provision for individual sale). The exemption for individuals selling household items currently applies to consignment; inclusion of the new language is for clarity. Relocated exemptions logically belong in this exemptions section.</p> <p>Impact: Requirements for consignment will be more transparent; no change in regulation results from the amendment; improved understanding of an application of the regulations.</p>
<p>12VAC5-125-50</p>		<p>Licenses, permits, and registration numbers.</p> <p>Establishes the requirement for licenses and permits. Outlines transferability, application procedures, and issuance procedures for licenses and permits. Establishes that Importers and Distributors must obtain a separate license for each branch factory they contract with (i.e. each Manufacturer/Uniform Registry Number they import or distribute from).</p>	<p>Change: Revises section title to Licenses, permits, and uniform registry numbers. Reorganizes and reorders subsections. Changes terminology for Reupholsterer and Renovator authorizations from license to permit. Clarifies that the processes used by Sanitization and Sterilizer permit applicants must comply with the regulations. Outlines use of uniform registry numbers. Removes requirement for Importers and Distributors to obtain a separate license for each branch factory they contract with (i.e. each Manufacturer/URN they import or distribute from). In addition, the section was restructured for clarity, minor grammatical edits.</p> <p>Intent: Update and clarify requirements; restructure section for licensing/permitting requirements for ease of understanding.</p>

			<p>Rationale: The terminology change of license to permit was requested as a result of HB891 of the 2018 General Assembly Session; the agency agrees permit better suits the operations of a facility; license carries the connotation of an authorized entity, rather than an operating facility. Amendments will ensure this provision is more clearly stated. Uniform registry number assignment and use varies between licensee types, which is existing national practice, and this should be clearly stated in the chapter. The requirement for Importers and Distributors to obtain a separate license for each branch factory they contract with is a significant administrative burden to industry. This requirement is not reflected in the Code language requiring licensure (§32.1-217).</p> <p>Impact: Regulation is clearer, more transparent, and easier to understand. Terminology for Reupholsterers and Renovators is aligned to other regulated counterparts (operating facilities v. licensed entities). Revising Importer and Distributor licensure requirements lifts a significant administrative burden to industry. There is no revenue impact associated with this change (see Section 180). In addition, edits will improve understanding of an application of the regulations.</p>
	12VAC5-125-55	None.	<p>Change: Add section to clarify the application procedure, termination of permits/licenses, and when to report changes.</p> <p>Intent: Simplify application submission process, provide clarification to regulants' regarding reporting changes to the Department.</p> <p>Rationale: Existing regulation combines general provisions for licensure, procedures to obtain a license/permit, and license/permit maintenance. Creating a new</p>

			<p>section combines related information in one location.</p> <p>Impact: Improved understanding and application of the regulations.</p>
12VAC5-125-60		<p>Revocation of a license or permit.</p> <p>Outlines revocation of licenses and permits.</p>	<p>Change: Revises section title to Enforcement, Notices, Informal Conferences (second and third term capitalized because they are proper nouns); content updates with modern language on revocations, suspensions, and informal conferences.</p> <p>Intent: To provide clarity to informal fact-finding procedures and timelines.</p> <p>Rationale: Revised procedures are more reflective of current practice and are more inclusive of options and procedures provided by the Administrative Process Act; added language is adapted from other Environmental Health Regulations.</p> <p>Impact: Improved understanding and application of the regulations.</p>
12VAC5-125-70		<p>Application after revocation. Describes permit or license application after revocation</p>	<p>Repealed</p> <p>Change: Content addressed in section 60.</p> <p>Intent: Update and clarify requirements.</p> <p>Rationale: Content more applicable in section 60.</p> <p>Impact: Improved understanding and application of the regulations.</p>
12VAC5-125-80		<p>Inspections.</p> <p>Outlines six types of complaints that may result in an inspection. Late or nonrenewal of permit may result in an inspection. Permit holders must self report any infestations at their place of business to the Bedding Program.</p>	<p>Change: Revises and restructures the entire section. Complaint types will be consolidated to one item. Inspection types will be organized in a new structure: inspections of unlicensed/unpermitted entities, and inspections of licensed/permitted entities. Infestation reporting will be relocated to section 100. Adds inspection documentation requirements. In addition, adds the term “license” or “permit holder” as necessary to designate which license type is applicable.</p>

			<p>Intent: Update and clarify requirements.</p> <p>Rationale: Listing six types of complaints was unnecessary; all types are more effectively described once, simply as complaints. Restructuring the presentation of inspection types does not reflect change from the current regulation; the edit is for clarity only. Infestation reporting is more logically located in section 100 with other operating standards for secondhand businesses. Statement on documentation added to improve transparency on public expectations of the enforcement of this chapter.</p> <p>Impact: Increase in organization, simplicity, and clarity.</p>
<p>12VAC5-125-90 Row 1 of 2 for this section TEXT</p>		<p>Law labels conforming to the Virginia law.</p> <p>Description of general provisions for law labels, when they must be attached; includes both new and secondhand law labels.</p>	<p>Change: Section amended to comply with VRRM style requirements and grammatical edits. Changes section title to Law label requirements. All content will be reorganized and rephrased; all requirements remain the same, except: Reference to requirements for bold font will be removed. Adds three choices for declaring a percentage of new filling materials as “reclaimed and reprocessed” (all are optional):</p> <ol style="list-style-type: none"> 1. Statement in ‘Other Information’ section of standard new product law label (table 1; see next row for label table changes), 2. Use of new ‘Reclaimed and Reprocessed’ law label (table 2), or 3. Both. <p>Intent: Update and clarify requirements for law labels.</p> <p>Rationale: Reorganization of content and renaming of sections was necessary to update and modernize language, and to improve clarity and sentence structure. Bold font is not a clearly evaluated standard (non-bold font on one tag may be printed with same intensity as bold on a different</p>

		<p>tag). This change will not mean bold is not allowed, only that Virginia will not regulate bold font. Standards for declaring reclaimed and reprocessed materials have been requested by industry; however, restrictions in place in other states require these standards be introduced thoughtfully, in a manner allowing a tiered approach:</p> <ol style="list-style-type: none"> 1. All language on reclaimed and reprocessed is optional. Reclaimed and reprocessed materials are new materials, and use of the new materials law label with no other addition is legal. 2. Where a product will be sold in Virginia and states that allow the reference to reclaimed and reprocessed in the 'Other Information' section, this statement can be added to the new materials law label. 3. Where the product will be sold only in Virginia, or in Virginia and in other states without a bedding law or law label standards, (and in the future, in any state adopting the green font reclaimed and reprocessed label), the product can use the green font reclaimed and reprocessed law labels. 4. To ease burden on manufacturing, both may be used on products sold in Virginia (Manufacturers may attach both and remove one for sale in other states, or other states may allow the reclaimed and reprocessed label only if the standard national new label is also present). <p>Impact: Virginia better responds to public demand, industry requests, and a key component of bedding and upholstered furniture law: consumer notification. These standards pave the way for national acceptance of reclaimed and reprocessed materials in bedding and upholstered furniture products. Green-font labels will draw consumer attention and increase the relevancy of law labels to the public. Several states have</p>
--	--	--

			<p>expressed interest in adopting the reclaimed and reprocessed standards and templates established in this regulatory action.</p>
<p>12VAC5-125-90 Row 2 of 2 for this section TABLES</p>		<p>Law labels conforming to the Virginia law.</p> <p>Seven “Attachments”, each with a table demonstrating a law label template, footnotes, and margin notes. Each attachment has identical margin notes. Template types/names:</p> <ol style="list-style-type: none"> 1. All new material, 2. All new material articles with extra cushions as an integral part of unit, 3. Animal hair, feathers, or down and other materials requiring sterilization, 4. Secondhand items remade or renovated for a consumer, 5. Secondhand items, 6. Secondhand items remade or renovated for resale, and 7. Filling materials (in bulk). 	<p>Change: Removes all seven existing law label template tables (referred to as “Attachments” in text, and all footnotes associated with them.</p> <p>Adds three new tables compiling templates for law labels: Table 1- New (not secondhand) bedding and upholstered furniture labels Table 2- New (not secondhand) OPTIONAL bedding and upholstered furniture labels for entities that choose to declare a percentage of new materials are reclaimed and reprocessed. Table 3- Secondhand bedding and upholstered furniture labels. All individual law label templates are identical to pre-amendment versions, except: “Date of Delivery ” and font size requirement for certification statement will be removed. Items will be re-ordered on secondhand product law labels, and a combination Sanitizer and Renovator/Reupholsterer law label will be established.</p> <p>Intent: Update and clarify requirements.</p> <p>Rationale: The existing seven tables are difficult for regulated industries to review and compare. The repetition of footnotes gives the illusion of varying requirements for each tag. The consolidation into three tables will make it easier to find the pertinent label for each product. Removed items (date of delivery and font size for certification statement) are not required elsewhere in the country, have no impact to public health, and represent a burden to industry; law label printing is a significant cost to industry, and there is no reason</p>

			<p>Virginia should require a different law label template than other states.</p> <p>Creating an optional label, with “reclaimed and reprocessed” at the top of the label, provides maximum notification to the consumer about the type of concealed filling materials in the item. This label may not yet be legal in several states (although they have expressed interest in changing their laws to model new tags established in this regulatory change), so it is deemed optional. Manufacturers may attach it when the product will not be sold in a state where it is not a legal law label (also see above row on section 90 text changes for context on this label change). Reordering items on secondhand labels and creating a combination Sanitizer and Renovator/Reupholsterer label in column 3 of table 3, will make the labels easier to compare and use.</p> <p>Impact: Industry will not have to maintain compliance with certain law label requirements that are not required elsewhere in the country, and that do not impact public health. Industry will have multiple legal options to declare that a percentage of the new materials are reclaimed and reprocessed, with built in flexibility for adapting to national standards, and the continuing evolution of bedding and upholstered furniture laws in America. No impact for secondhand label changes.</p>
12VAC55-125-100		<p>Sanitization of Used Bedding and Upholstered Furniture.</p> <ol style="list-style-type: none"> 1. Secondhand products must be sanitized, tagged, and logged, 2. Use of two spray products, named by brand (SteriFab and Microban), are approved sanitizing methods, and 3. Description of two exemption types. 	<p>Change: Section amended to comply with VRRM style requirements and grammatical edits. Changes section title to Secondhand bedding and upholstered furniture. Adds language to clarify when reupholstered and renovated items must be sanitized. Removes brand names, outlines general process by which a person may apply for approval of sanitizing product (specific brand name or specific methodology), and outlines two</p>

			<p>categories of approved methods: isopropyl alcohol-based spray, and thermal (heat or steam). Relocates requirement for delivery vehicle sanitization from section 110, adds requirement for vehicle sanitizing events to be logged, and removes date sold tracking requirements for all sanitizing logs. Relocates requirement that premises must be clean from section 110. Strikes exemptions (moved to section 40).</p> <p>Intent: Update and clarify requirements.</p> <p>Rationale: Name change reflects true scope of section (all secondhand industries: Sanitizers, Reupholsterers, and Renovators). Distinction of when remade items require sanitization is existing, but was previously only outlined in the titles of law label templates, and thus was not immediately obvious. Brand names should not be included in regulation; the currently listed products (SteriFab and Microban) will still be approved for use, and are described by the isopropyl alcohol spray category. Heat and steam are two established methods for pathogen destruction (and killing bedbugs and their eggs; serious concerns for secondhand furniture). Heat is already in use by the secondhand rental industry (on a case by case basis), and steam is added for consideration of antique dealers working with older fabrics where conservation is a concern. Relocated secondhand industry items to create one section for secondhand item provisions (previously two, separated by a section on animal derived filling materials). The requirement for vehicle sanitization logging was added to ensure there is a method to check compliance for the existing requirement to sanitize the vehicle; this will create little to no burden for industry. The prescriptive log requirement (date sold), used by inspectors to crosscheck current</p>
--	--	--	--

			<p>inventory and logged sanitization events, was replaced with a performance measure (easily identifiable connection between log and inventory) to decrease burden on regulants. The stricken provision (date sold) is a common complaint of the regulated industry. Exemptions relocated, as they belong in the exemptions section.</p> <p>Impact: All item relocations will result in a regulation more easily understood by the public. Creation of a pathway for new sanitizing product approvals in policy will allow flexibility for industry without requiring a regulatory amendment (when brand names were listed in regulation). New sanitizing methods of heat and steam will allow flexibility while still being protective of public health and safety.</p>
--	--	--	---

<p>12VAC5-125-110</p>		<p>Sterilization of new animal hair, feathers and down. Animal-derived filling materials must be sterilized before use.</p>	<p>Change: Revises existing provision for grammar. Adds subsection on approved processes for sterilization; including pressurized steam, streaming steam, heat, and washing.</p> <p>Intent: Update and clarify requirements.</p> <p>Rationale: The methods added to this section are taken from sterilization laws in Utah and Pennsylvania. Without standards in place, past Virginia practice has been to send applicants for Sterilizer permits to Pennsylvania to obtain a permit before issuing one in Virginia. This practice evolved from Pennsylvania refusing reciprocity for Virginia-issued sterilization permit URNs, as Virginia had no standards for Sterilizers. This practice is common in other states as well. Utah has recently added Pennsylvania standards to their law to initiate reciprocity for Sterilizer URNs with Pennsylvania. Adding these standards, which are already national practice, will lead to transparency of current practice, and opportunity for future reciprocity of Sterilizer URNs with Pennsylvania and other states.</p> <p>Impact: Standards for sterilization will be transparent to regulated industry. Virginia will no longer have to advise applicants that they should seek permitting in Pennsylvania prior to obtaining a permit in Virginia. There will be no process impact on regulants, as the described methods are already standard practice in industry.</p>
<p>12VAC5-125-120</p>		<p>Separation and storage of new and sanitized items.</p> <ol style="list-style-type: none"> 1. Separation of sanitized and unsanitized goods, 2. Delivery vehicle sanitization, and 3. Mattresses must be stored six inches or the height of one standard pallet off the floor. 	<p>Repealed</p> <p>Change: Items 1 and 2 will move to section 100.</p> <p>Intent: Clarify requirements by relocating standards for ease of readability.</p>

			<p>Rationale: (Items 1-2) All sanitization provisions should be in one section of the regulation for ease of access.</p> <p>Impact: Improved compliance with sanitation standards due to increased clarity and organization of regulations.</p>
<p>12VAC5-125-130</p>		<p>Violation of regulations. Establishes:</p> <ol style="list-style-type: none"> 1. Retailer responsibility for compliance, 2. Authority to order Sanitizers with significant violations to cease selling secondhand merchandise until violations are corrected (placarding), 3. Violations of this chapter are also violations of the Virginia Consumer Protection Act, 4. Authority to order a violating product to be returned to a Manufacturer, 5. Authority to refuse to issue a permit or license to persons who fail to appear in court to answer a charge of violation, and 6. Violations of this chapter are Class 2 misdemeanors. 	<p>Change: Provides grammar and word choice updates for items 1- 3. Removes reference to items 4-6.</p> <p>Intent: Update and clarify requirements.</p> <p>Rationale: Increases clarity and simplicity of items 1- 3. Items 4- 6 are not integral to the chapter. All three enforcement outcomes are appropriate for the most flagrant, continued violations with serious threat to health; they have not been sought in any bedding regulation violation since the creation of this chapter. Inclusion is misleading to the regulated public.</p> <p>Impact: No impact for revision to items 1- 3. The removal of items 4-6 does not impede the Board or Commonwealth’s authority to pursue these actions.</p>
<p>12VAC5-125-140</p>		<p>Enforcement of regulation.</p> <p>Contains explanations on nature of Commissioner issued enforcement orders, other enforcement options available to the Commissioner, and outlines differences between informal hearings and adjudicatory hearings.</p>	<p>Repealed</p> <p>Change: Removes language unnecessary to the regulation.</p> <p>Intent: Update and clarify requirements.</p> <p>Rationale: The described enforcement outcomes are possible for any violation of Title 32.1; inclusion in a bedding specific chapter is unnecessary. The outcomes are appropriate for the most flagrant, continued violations with serious threat to health; they have not been sought in any bedding regulation violation since the creation of this chapter. Inclusion is misleading to the regulated public. Statements on hearings are not integral to the</p>

			<p>chapter, and provide unnecessary detail.</p> <p>Impact: None. The removal of enforcement option references does not impede the Board or Commonwealth’s authority to pursue these enforcement avenues.</p>
<p>12VAC5-125-145</p>		<p>None.</p>	<p>Change: Section amended to provide clarity regarding business vs. calendar days when providing a variance request decision.</p> <p>Intent: Update and clarify variance requirements and timelines for submission and processing.</p> <p>Rationale: Clarify the context of these requirements.</p> <p>Impact: Improved understanding and application of the regulations.</p>
<p>12VAC5-180</p>		<p>Fees.</p> <p>Manufacturers, Importers, and Distributors pay \$100 per license.</p> <p>Sanitizers pay a \$60 fee.</p> <p>Supply Dealers, Renovators, and Reupholsterers pay \$25.</p>	<p>Change: Importers’ and Distributors’ fees will be changed to a sliding scale structure. Small Renovators and Reupholsterers (self-employed with no employees) will be excluded from the fee. Sterilizers will be charged a \$60 fee.</p> <p>Intent: The more manufacturers or URNS an entity imports or distributes from, the higher fee they will pay.</p> <p>Rationale: Importer and Distributor fees must be adjusted to maintain current operating revenue while allowing the amendment to section 50 removing the requirement for these entities to maintain multiple licenses. A sliding scale allows some mid-year URN additions without mid-year fees. The reduction in the Renovator and Reupholster fee was requested via a letter from the Chair of the House Health, Welfare and Institutions Committee in 2018.</p> <p>Sterilizers were traditionally charged the Sanitizer permit fee, as these items have been grouped together in Code and Regulation, but there</p>

			<p>has not been a specific line item for the Sterilizer permit in the fee scale.</p> <p>Impact: No impact, fee scale is designed to maintain revenue that is budget neutral from Importer and Distributor licenses (see Economic Impact Form for more detailed context). Permit fees from Renovator and Reupholsterer permits are a negligible part of the chapter's revenues (%1), and can be absorbed by the program, even if all permit holders are eligible for the fee exclusion. No change for Sterilizer permit fees.</p>
	<p>12VAC-125 (FORMS)</p>	<p>None</p>	<p>Change: To provide a standardized application form for potential license and permit holders.</p> <p>Intent: To provide a standard application form to potential applicants.</p> <p>Rationale: A standard application form simplifies the application process for potential applicants and ensures vital information is captured for staff to process applications.</p> <p>Impact: Improved application processing.</p>

Office of Regulatory Management
Economic Review Form

Agency name	Virginia Department of Health
Virginia Administrative Code (VAC) Chapter citation(s)	12VAC5-125
VAC Chapter title(s)	Regulations for Bedding and Upholstered Furniture Inspection Program
Action title	Amend Regulations Following Periodic Review
Date this document prepared	February 6, 2023
Regulatory Stage (including Issuance of Guidance Documents)	Final

Table 1a: Costs and Benefits of the Proposed Changes (Primary Option)

<p>(1) Direct & Indirect Costs & Benefits (Monetized)</p>	<ul style="list-style-type: none"> ● Following the conclusion of the proposed regulatory stage, the agency proposes to finalize the proposed regulatory language for the Bedding and Upholstered Furniture Inspection Program (Regulations). ● This final regulatory action will further amend Definitions (12VAC5-125-10). This section was amended to provide clarification of terms and usage of terms throughout the regulations, resolve conflicts with statutory definitions, and to conform with the Virginia Register of Regulations Form, Style, and Procedure Manual (RSM). <p>There are no direct or indirect monetized costs or benefits associated with this change.</p> <ul style="list-style-type: none"> ● This final regulatory action will further clarify Exemptions (12VAC5-125-40). This section outlines the exemptions to the Regulations. <p>There are no direct or indirect monetized costs or benefits associated with this change.</p>
---	---

- **This final regulatory action will clarify the requirements necessary to obtain a license or permit and the steps necessary to maintain a license or permit (12VAC5-125-50 and 12VAC5-125-55).**

There are no direct or indirect monetized costs or benefits associated with this change.

- **This final regulatory action will reorganize and rephrase required language on law labels for products. In addition, the amended language will update and modernize language, and to improve clarity and sentence structure. This amendment was at the request of industry. Law label requirements (12VAC5-125-90).**

There are no direct or indirect monetized costs or benefits associated with this change.

- **This final regulatory action will amend Secondhand bedding and upholstered furniture (12VAC5-125-100). This section adds language to clarify when reupholstered and renovated items must be sanitized. In addition, the amendment removes brand names, outlines general process by which a person may apply for approval of sanitizing product and restructures this section for ease of understanding.**

There are no direct or indirect monetized costs or benefits associated with this change.

- **This final regulatory action will amend Fees (12VAC5-125-180). This section will adjust importers' and distributors' fees to a sliding scale; the more manufacturers/URNs they import or distribute from, the higher the fee.**

The sliding scale fee schedule will maintain current budget-neutral fee revenue.

To construct the proposed fee schedule, 2018 Importer and Distributor accounts were analyzed for distributions of the number of licenses held by each discrete entity; various fee schedules were modeled on this distribution until an ideal schedule was selected. This schedule has the least total fee change for entities, results in neutral revenue, and reflects the cost to the agency of administering each account. Currently, these entities pay \$100 per license; one license corresponds to one Manufacturer Uniform Registry Number (URN) from which they

	<p>import or distribute. In the new schedule, all URNs from which they import or distribute from will be tied to a singular Importer or Distributor license with one fee. A sliding scale was selected to reduce mid-year administrative burden to industry when Importers and Distributors add new Manufacturer URNs to their license. The proposed fee schedule will allow this flexibility and will result in negligible income difference compared to the current fee schedule (modeled outcome with 2018 licenses: \$212,600 under current schedule vs. \$216,180 for new schedule). Creation of a fee exemption for single-employee Renovators and Reupholsterers is not expected to have a significant fiscal impact to the agency. The agency has no estimate of how many permit holders will qualify for this exemption, but total revenue for these permit types is less than 1% of all fee revenues (\$4,500 of \$695,865 for active accounts at time of 2018 analysis).</p> <p>Importers and Distributors will see significant costs savings from only having to maintain one license, but these costs cannot be generalized, as they will vary on the individual business’s size and internal structure. Currently, these entities pay \$100 per license, and entities maintain 1-84 licenses each.</p> <p>The majority of the fees are unchanged, with implementation of a sliding fee scale, Importers and Distributors will pay a slightly higher license fee. Contacted stakeholders with the largest increased fees report satisfaction with this proposal, as administrative savings associated with only having one license to maintain more than offset the fee increase. The agency presented these fees to industry at a national conference and in a public webinar and have received no objections to the slight increases. Reupholsterers and Renovators with no additional employees (one-individual business) will be exempt from the \$25 fee.</p> <ul style="list-style-type: none"> • In addition to substantive changes mentioned above, a number of style and form changes are also being made to conform the language to the RSM and Virginia Administrative Code. <p>There are no direct or indirect monetized costs or benefits associated with this change.</p>
--	--

(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0.00	(b) \$0.00

(3) Net Monetized Benefit	N/A
(4) Other Costs & Benefits (Non-Monetized)	<ul style="list-style-type: none"> <p>• This final regulatory action will further amend Definitions (12VAC5-125-10). This section was amended to provide clarification of terms and usage of terms throughout the regulations, resolve conflicts with statutory definitions, and to conform with the RSM.</p> <p>Non-Monetized Costs: There are no costs (non-monetized) associated with this change.</p> <p>Non-Monetized Benefits: Non-monetized benefit associated with the proposed changes includes improved application of regulations and increased ease of understanding.</p> <p>• This final regulatory action will further clarify Exemptions (12VAC5-125-40). This section outlines the exemptions to the Regulations.</p> <p>Non-Monetized Costs: There are no costs (non-monetized) associated with this change.</p> <p>Non-Monetized Benefits: Non-monetized benefits associated with the proposed change includes improved application of regulations, increased ease of understanding, and alignment of regulatory text with amendments found in HB 2173 of the 2023 General Assembly Session.</p> <p>• This final regulatory action will clarify the requirements necessary to obtain a license or permit and the steps necessary to maintain a license or permit (12VAC5-125-50 and 12VAC5-125-55).</p> <p>Non-Monetized Costs: There are no costs (non-monetized) associated with this change.</p> <p>Non-Monetized Benefits: Non-monetized benefits associated with the proposed changes includes an improved application process.</p> <p>• This final regulatory action will reorganize and rephrase required language on law labels for products. In addition, the amended language will update and modernize language, and to improve clarity and sentence structure. This amendment was at the request of industry. Law label requirements (12VAC5-125-90).</p>

Non-Monetized Costs: There are no costs (non-monetized) associated with this change.

Non-Monetized Benefits: Non-monetized benefits associated with the proposed changes will ease the burden to manufacturers (optional labeling) and assist the public understanding regarding reprocessed materials in bedding and upholstered furniture products. Industry will not have to maintain compliance with certain law label requirements that are not required elsewhere in the country, and that do not impact public health.

- **This final regulatory action will amend Secondhand bedding and upholstered furniture (12VAC5-125-100). This section adds language to clarify when reupholstered and renovated items must be sanitized. In addition, the amendment removes brand names, outlines general process by which a person may apply for approval of sanitizing product and restructures this section for ease of understanding.**

Non-Monetized Costs: There are no costs (non-monetized) associated with this change.

Non-Monetized Benefits: Non-monetized benefits associated with the proposed changes includes an improved application process.

- **This final regulatory action will amend Fees (12VAC5-125-180). This section will adjust importers' and distributors' fees to a sliding scale; the more manufacturers/URNs they import or distribute from, the higher the fee.**

Non-Monetized Costs: There are no costs (non-monetized) associated with this change.

Non-Monetized Benefits: Non-monetized benefits associated with the proposed changes includes an improved application process.

- **In addition to substantive changes mentioned above, a number of style and form changes are also being made to conform the language to the RSM and Virginia Administrative Code.**

Non-Monetized Costs: There are no costs(non-monetized) associated with this change.

	<p>Non-Monetized Benefits: Non-monetized benefits associated with the proposed changes includes conformance to the RSM and increased readability and understanding of regulatory requirements.</p>
(5) Information Sources	N/A

Table 1b: Costs and Benefits under the Status Quo (No change to the regulation)

(1) Direct & Indirect Costs & Benefits (Monetized)	<ul style="list-style-type: none"> • The Regulations outline health, safety, and licensure/permitting requirements for mattresses, box-springs, pillows, comforters, cushions, and all upholstered furniture, including products designed for infants and small children in addition to administrative processes, inspection, and enforcement. The Regulations also provide standards for the sale of secondhand bedding to the people of the Commonwealth. <p>Direct Monetized Costs: Total revenue from licenses and permits (majority from companies outside the United States) is approximately \$650,000 a year.</p> <p>Direct Monetized Benefits: There are no direct monetized benefits associated with this retaining the regulations as is.</p> <p>Indirect Monetized Costs: There are no indirect monetized costs associated with retaining the regulations as is.</p> <p>Indirect Monetized Benefits: There are no indirect monetized benefits associated with retaining the regulations as is.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$650,000.00	(b) \$00.00
(3) Net Monetized Benefit	\$0(status quo would retain the current costs associated with administering the program which are outlined in 2(a))	
(4) Other Costs & Benefits (Non-Monetized)	Non-Monetized Costs: There are no costs(non-monetized) associated with retaining the regulations as is.	

	Non-Monetized Benefits: There are no benefits(non-monetized) associated with retaining the regulations as is.
(5) Information Sources	N/A

Table 1c: Costs and Benefits under Alternative Approach(es)

<p>(1) Direct & Indirect Costs & Benefits (Monetized)</p>	<ul style="list-style-type: none"> ● Alternative options are limited as standards for upholstered furniture and bedding are mandated by statute (Article 7, Section 32.1-212 et seq. of the Code of Virginia). ● Direct Monetized Costs: No direct monetized costs were identified under an alternative approach as the Virginia Department of Health is mandated to promulgate standards as outlined in state law. The proposed language represents the least burdensome or intrusive standard to maintain health, safety, welfare, and environment of Commonwealth. ● Direct Monetized Benefits: No direct monetized benefits were identified under an alternative approach as the Virginia Department of Health is mandated to promulgate standards as outlined in state law. The proposed language represents the least burdensome or intrusive standard to maintain health, safety, welfare, and environment of Commonwealth. ● Indirect Monetized Costs: No indirect monetized costs were identified under an alternative approach as the Virginia Department of Health is mandated to promulgate standards as outlined in state law. The proposed language represents the least burdensome or intrusive standard to maintain health, safety, welfare, and environment of Commonwealth. ● Indirect Monetized Benefits: No indirect monetized benefits were identified under an alternative approach as the Virginia Department of Health is mandated to promulgate standards as outlined in state law. The proposed language represents the least burdensome or intrusive standard to maintain health, safety, welfare, and environment of Commonwealth. 	
<p>(2) Present Monetized Values</p>	<p>Direct & Indirect Costs</p>	<p>Direct & Indirect Benefits</p>

	(a) \$0.00	(b) \$0.00
(3) Net Monetized Benefit	0	
(4) Other Costs & Benefits (Non-Monetized)	<ul style="list-style-type: none"> ● Non-Monetized Costs: There are no costs(non-monetized) identified under an alternative approach as the Virginia Department of Health is mandated to promulgate standards as outlined in state law. The proposed language represents the least burdensome or intrusive standard to maintain health, safety, welfare, and environment of Commonwealth. ● Non-Monetized Benefits: There are no benefits(non-monetized) identified under an alternative approach as the Virginia Department of Health is mandated to promulgate standards as outlined in state law. The proposed language represents the least burdensome or intrusive standard to maintain health, safety, welfare, and environment of Commonwealth. 	
(5) Information Sources	N/A	

Impact on Local Partners

Use this chart to describe impacts on local partners. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 2: Impact on Local Partners

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>Direct Monetized Costs: There are no direct monetized costs to local partners associated with this change.</p> <p>Direct Monetized Benefits: There are no direct monetized benefits to local partners associated with this change.</p> <p>Indirect Monetized Costs: There are no indirect monetized costs to local partners associated with this change.</p> <p>Indirect Monetized Benefits: There are no indirect monetized benefits to local partners benefits associated with this change.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0.00	(b) \$0.00

(3) Other Costs & Benefits (Non-Monetized)	<p>Non-Monetized Costs: There are no costs(non-monetized) to local partners associated with retaining the regulations as is.</p> <p>Non-Monetized Benefits: There are no benefits(non-monetized) to local partners associated with retaining the regulations as is.</p>
(4) Assistance	N/A
(5) Information Sources	N/A

Impacts on Families

Use this chart to describe impacts on families. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 3: Impact on Families

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>Direct Monetized Costs: There are no direct monetized costs to families associated with this change.</p> <p>Direct Monetized Benefits: There are no direct monetized benefits to families associated with this change.</p> <p>Indirect Monetized Costs: There are no indirect monetized costs to families associated with this change.</p> <p>Indirect Monetized Benefits: There are no indirect monetized benefits to families associated with this change.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0.00	(b) \$0.00
(3) Other Costs & Benefits (Non-Monetized)	<p>Non-Monetized Costs: There are no costs(non-monetized) to families associated with the proposed change.</p> <p>Non-Monetized Benefits: There are no benefits(non-monetized) to families associated with the proposed change.</p>	
(4) Information Sources	N/A	

Impacts on Small Businesses

Use this chart to describe impacts on small businesses. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 4: Impact on Small Businesses

<p>(1) Direct & Indirect Costs & Benefits (Monetized)</p>	<p>Direct Monetized Costs: There are no direct monetized costs to small businesses associated with this change.</p> <p>Direct Monetized Benefits: There are no direct monetized benefits to small businesses associated with this change.</p> <p>Indirect Monetized Costs: There are no indirect monetized costs to small businesses associated with this change.</p> <p>Indirect Monetized Benefits: There are no indirect monetized benefits to small businesses associated with this change.</p>	
<p>(2) Present Monetized Values</p>	<p>Direct & Indirect Costs</p>	<p>Direct & Indirect Benefits</p>
	<p>(a) 0.00</p>	<p>(b) \$0.00</p>
<p>(3) Other Costs & Benefits (Non-Monetized)</p>	<p>Non-Monetized Costs: There are no costs(non-monetized) to small businesses associated with the proposed change.</p> <p>Non-Monetized Benefits: There are no benefits(non-monetized) to small businesses associated with the proposed change.</p>	
<p>(4) Alternatives</p>	<p>The agency is unable to determine any equally effective alternatives that would reduce regulatory burden on small businesses. The proposed amendments in the final regulatory action should eliminate nationwide conflicts, streamline administrative processes, and increase the clarity of health and safety standards for facilities that sell used bedding and upholstered furniture.</p>	
<p>(5) Information Sources</p>	<p>N/A</p>	

Changes to Number of Regulatory Requirements

For each individual VAC Chapter amended, repealed, or promulgated by this regulatory action, list (a) the initial requirement count, (b) the count of requirements that this regulatory package is adding, (c) the count of requirements that this regulatory package is reducing, (d) the net change in the number of requirements. This count should be based upon the text as written when this stage was presented for executive branch review. Five rows have been provided, add or delete rows as needed. In the last row, indicate the total number for each column.

Table 5: Total Number of Requirements

	Number of Requirements			
Chapter number	Initial Count	Additions	Subtractions	Net Change
125	18	1(Agency)		+1
TOTAL				

1 **Project 5798 - Proposed**

2 **Department of Health**

3 **Amend Regulations Following Periodic Review UPDATED 125**

4 Chapter 125

5 Regulations for Bedding and Upholstered Furniture [~~Inspection Program~~]

6 **12VAC5-125-10. Definitions.**

7 The following words and terms ~~when~~ used in this chapter shall have the following meanings
8 unless the context clearly indicates otherwise:

9 ["Antique" means any product that is at least 75 years old.]

10 ~~"As is" means a sales term to describe bedding and upholstered furniture products as any~~
11 ~~condition other than in new or undamaged condition.~~

12 "Bedding" means any mattress, mattress pad, box spring, upholstered bed, davenport, futon,
13 upholstered sofa bed, quilted pad, packing pads, hammock pad, comforter, quilt, bolster, cushion,
14 pillow, featherbed, sleeping bag, studio couch, or any other bag, case, pillow, cushion, or cover
15 made of leather, textile, or other material that is stuffed or filled in whole or in part with concealed
16 ~~substance that~~ filling material and can be used by any a human ~~being~~ for sleeping or reclining
17 purposes.

18 "Bedding Program" means the Bedding and Upholstered Furniture [~~Inspection~~] Program, a
19 unit of the Virginia Department of Health authorized by the [health] commissioner to carry out
20 the duties and responsibilities of this chapter.

21 ["Board" means the State Board of Health.]

22 ~~"Commissioner" means the State Health Commissioner, his duly designated officer or agent.~~
23 ["Commissioner" means the State Health Commissioner.]

24 ~~"Department" means the State Department of Health.~~

25 ~~"Designee" or "designated officer or agent" means any person or group of persons designated~~
26 ~~by the commissioner to act on his behalf.~~

27 ~~"Distributor/wholesaler" "Distributor" means any person who receives bedding, upholstered~~
28 ~~furniture, or filling materials from another company~~ inside the United States for the purpose of
29 resale.

30 "Filling material" means cotton, wool, feathers, kapok, down, hair, liquid, plant or vegetable
31 fibers, or any other material or substance or combination thereof, loose or in batting, or pads, or
32 in any prefabricated form, concealed or not concealed, ~~that is used or that may be~~ potentially
33 used in articles of bedding or upholstered furniture.

34 [~~"Health commissioner" means the chief executive officer of the State Board of Health or~~
35 ~~authorized agent.~~]

36 "Importer" means any person who ~~for the purpose of manufacture or resale~~ receives from
37 another company [, outside of the United States, any] bedding, upholstered furniture, or filling
38 material [~~from any country other than the United States~~] for the purpose of resale.

39 ~~"Inspector" means department employees designated by the commissioner to inspect,~~
40 ~~examine, investigate, evaluate and conduct tests, review documentation, interview witnesses,~~
41 ~~take samples and provide testimony in the enforcement of Title 32.1 of the Code of Virginia and~~
42 ~~§ 59.1-200 of the Virginia Consumer Protection Act.~~

43 "Law label" means the tag bearing legal notice and information concerning the contents and
44 manufacturing location as required by ~~§ 32.1-219 of the Code of Virginia~~. A white tag certifies all
45 new materials. A yellow label indicates used materials 12VAC5-125-90.

46 "License" means ~~permission~~ authorization granted in accordance with ~~§ 32.1-217 of the Code~~
47 ~~of Virginia for every by the [health] commissioner that allows a person manufacturing, importing,~~
48 ~~distributing/wholesaling, processing or selling to manufacture, distribute, or import bedding and~~
49 ~~upholstered furniture or any filling materials to be used in new bedding and upholstered furniture,~~
50 ~~and reupholstering or renovating bedding or upholstered furniture being returned to its original~~
51 ~~owner.~~

52 "Licensing state" means any of the United States that require a manufacturer, importer,
53 ~~distributor/wholesaler~~ distributor, supply dealer, sanitizer, reupholsterer, or renovator to apply for
54 a license or permit in order to sell bedding and upholstered furniture products in that state.

55 "Manufacturer" means a person who, using new materials, makes or ~~has employees or~~
56 employs agents who make any article of bedding or upholstered furniture in whole or in part, or
57 who covers or upholsters any unit thereof.

58 "New" means not previously used for any purpose. Uncovered floor models and customer
59 returns ~~shall not be~~ are not considered new. Manufacturing process, including manufacturing
60 of [~~reclaimed and reprocessed~~ recycled materials] , shall not be considered prior use.

61 "Permit" means ~~consent granted in accordance with § 32.1-216 of the Code of Virginia to~~
62 ~~approve a process~~ authorization by the [health] commissioner that allows a person to sanitize
63 ~~or sterilize filling material, or to sanitize, reupholster, or renovate secondhand~~ bedding or
64 ~~upholstered furniture by a person treating used products for resale.~~

65 "Person" means ~~an individual, corporation, partnership, association~~ any individual or group of
66 individuals, named party, partnership, firm, private or public association or corporation, state,
67 county, city, town, or anyone that by covenant, restriction, or agreement has care, control,
68 custody, ownership, or management of property or parts thereof, or any combination, or any other
69 legal entity.

70 [~~"Reclaimed and reprocessed"~~ "Recycled"] means filling materials recovered from sources
71 that would have otherwise been disposed of as waste or used for energy recovery [; ~~that~~] have
72 been recovered as material input in lieu of virgin material, and reprocessed using a manufacturing
73 process identical to the processing of like virgin material to quality and cleanliness standards
74 comparable to [~~non-reclaimed non-recycled~~] material. [~~Reclaimed and reprocessed~~
75 Recycled] filling materials are considered new.

76 "Renovator" means a person [~~that who~~] , either solely or through agents, rebuilds, repairs,
77 ~~makes over, re-covers,~~ recovers, restores, renovates, or renews used bedding secondhand
78 mattresses and box springs.

79 "Retailer" means any person engaged in commerce [~~that who~~] sells any article of bedding,
80 upholstered furniture, or filling materials to a consumer of the article as purchased.

81 "Reupholsterer" means a person [who] (i) [~~that~~] , either by himself solely or through
82 employees or agents, rebuilds, repairs, reupholsters, recovers, restores, or renews [bedding
83 (except mattresses and box springs) and] upholstered furniture [and bedding, with the exception
84 of mattresses and box springs]; or [who] (ii) [~~that~~] makes to order and specification of the user
85 [any article of bedding (except mattresses and box springs) and] upholstered furniture [or any
86 article of bedding, with the exception of mattresses and box springs] , using either new or
87 secondhand materials or the owner's materials.

88 "Sanitize" means to reduce the level of microbiological agents to a level not injurious to health.

89 "Sanitizer" means a person [~~that who~~] , either solely or through agents, sanitizes articles of
90 bedding or upholstered furniture.

91 "Secondhand" means ~~having been previously owned,~~ made prior use of or, containing any
92 previously used filling material of which ~~prior use has been made,~~ or that has having been in a
93 customer's possession outside of the place of purchase. [~~Reclaimed Recycled~~] materials or
94 customer-purchased items in the uninterrupted possession of a retailer are not secondhand.

95 "Sell" or any of its ~~variants~~ tenses, ~~includes means and includes~~ any of, or any combination
96 of, the following: to possess with an intent to sell, sell, offer or expose for sale, barter, trade,
97 deliver, give away, rent, ~~consign,~~ lease, ~~possess with an intent to sell~~ or dispose of in any other
98 commercial manner.

99 "Shoddy" means any material ~~that has been~~ spun into yarn, knit, or woven into fabric and
100 subsequently, cut up, torn up, broken, or ground up.

101 "Shoddy pad" [~~(also called "insulator pad")~~ or "insulator pad"] means a nonwoven material
102 made from byproducts of textile or manufacturing processes ~~and is free from dirt, insects, and~~
103 ~~other contamination.~~

104 "~~Soiled or torn~~" means ~~articles of new or used bedding or upholstered furniture that contain~~
105 ~~stains, dirt, ripped edges or covers, or damaged frames.~~

106 "Sterilize" means to render free of viable microbiological agents.

107 "Supply dealer" means a person who manufactures, processes, or sells any felt, batting, pads,
108 woven or plastic fabrics, or loose material in bags or containers, concealed or not concealed, to
109 be used ~~or that could be used~~ in articles of upholstered furniture or bedding.

110 "Uniform registry number" [(~~also called "registration number,"~~ [~~URN, "URN,"~~] and "REG.
111 NO." [~~)~~] means a unique number assigned ~~to a licensee~~ by a licensing state to identify the name
112 and ~~each~~ location of a manufacturer, reupholsterer, sanitizer, sterilizer, or renovator, ~~or importer~~
113 of bedding and upholstered ~~products~~ furniture. The ~~Uniform Registry Number~~ uniform registry
114 number begins with the initials of the licensing state, followed by the assigned number, ~~then~~ and
115 ends with the initials of the state or country where the manufacturer, reupholsterer, sanitizer,
116 sterilizer, or renovator, ~~or importer~~ is physically located. Each location of a manufacturer,
117 reupholsterer, sanitizer, sterilizer, or renovator, ~~or importer~~ uses only one ~~Uniform Registry~~
118 ~~Number~~ uniform registry number.

119 "Upholstered furniture" means any ~~article of furniture designed to be~~ item used for sitting,
120 resting, or reclining ~~that is~~ by a human, including limbs, wholly or partly stuffed or filled with any
121 concealed filling material. Upholstered furniture may include, ~~but is not limited to,~~ children's
122 furniture, ~~furniture used exclusively for the purpose of physical fitness and exercise,~~ fitness and
123 exercise equipment, and medical equipment, or furniture or seats in RVs, boats or automobiles
124 recreational vehicles. Upholstered furniture may be movable or stationary, ~~made of~~ and may be
125 sold with loose or attached cushions or pillows, ~~loose or attached,~~ or is itself stuffed or filled in
126 whole or in part with any substance or material, hidden or concealed by fabric or any other
127 covering, including cushions or pillows belonging to or forming a part thereof, together with the
128 structural units, the filling material and its container and its covering that can be used as a support
129 for the body of a human being, or his limbs and feet.

130 "Used" means bedding or upholstered furniture that has been previously owned or used by
131 another person.

132 "Wholesaler" means a person who, on his own account, sells any article of upholstered
133 furniture or bedding or filling materials to another for the purpose of resale.

134 Filling material definitions will be in accordance with definitions published in the 2004 Edition
135 of the International Sleep Products Association Handbook.

136 **Statutory Authority**

137 § 32.1-12 of the Code of Virginia.

138 **Historical Notes**

139 Derived from Virginia Register Volume 23, Issue 23, eff. September 1, 2007.

140 **12VAC5-125-20. Administration. (Repealed.)**

141 A. ~~The board has the responsibility to promulgate, amend and repeal regulations necessary~~
142 ~~to protect the public health and the environment.~~

143 B. ~~The State Health Commissioner is the chief executive officer of the State Department of~~
144 ~~Health. In accordance with §§ 32.1-20 and 32.1-22 of the Code of Virginia, the commissioner has~~
145 ~~the authority to act for the board when it is not in session, subject to such rules and regulations~~
146 ~~as may be prescribed by the board, and may employ such personnel as are necessary for the~~
147 ~~proper performance of his duties as executive officer of the board.~~

148 C. ~~In addition to other authority granted by law, the commissioner has the authority to do the~~
149 ~~following:~~

150 1. ~~Approve the process of sanitizing or sterilizing filling materials, bedding, or upholstered~~
151 ~~furniture.~~

152 2. ~~Issue licenses/permits and assign a uniform registry number to importers,~~
153 ~~manufacturers, renovators, reupholsterers, or sanitizers.~~

154 3. ~~Order the return of any item of bedding or upholstered furniture or any filling material~~
155 ~~made, remade, renovated, reupholstered, prepared, processed, labeled or not labeled in~~
156 ~~violation of the provisions of this chapter to the manufacturer or importer thereof.~~

157 4. ~~Inspect the premises of a holder of a license or permit issued by the commissioner,~~
158 ~~subject to the requirements set forth at 12VAC5-125-80.~~

159 5. ~~Refuse to issue, suspend or revoke the license or permit of any person (i) who violates~~
160 ~~any provision of this chapter, any regulation of the board pursuant to this chapter or any~~
161 ~~order of the board or commissioner or (ii) who is not a resident of the Commonwealth and~~
162 ~~fails or refuses to enter an appearance in any circuit court in the Commonwealth to answer~~
163 ~~a charge or charges of violation of any provision of this chapter, regulation of the board or~~
164 ~~order of the board or commissioner.~~

165 **Statutory Authority**

166 ~~Statutory Authority § 32.1-12 of the Code of Virginia.~~

167 **Historical Notes**

168 Derived from Virginia Register Volume 23, Issue 23, eff. September 1, 2007.

169 **12VAC5-125-30. Powers and procedures of chapter not exclusive Compliance with the**
170 **Virginia Administrative Process Act.**

171 ~~The board reserves the right to authorize a procedure for enforcement of this chapter that is~~
172 ~~not inconsistent with the provisions set forth herein and the provisions of Chapter 1 (§ 32.1-1 et~~
173 ~~seq.) of Title 32.1 of the Code of Virginia. The provisions of the Virginia Administrative Process~~
174 ~~Act (§ 2.2-4000 et seq. of the Code of Virginia) shall govern the promulgation and administration~~
175 ~~of this chapter, including the procedures for rendering and appealing any case decision.~~

176 **Statutory Authority**

177 § 32.1-12 of the Code of Virginia.

178 **Historical Notes**

179 Derived from Virginia Register Volume 23, Issue 23, eff. September 1, 2007.

180 **12VAC5-125-40. Exemptions.**

181 [A.] The provisions of this chapter shall not apply to:

182 1. Any item of bedding or upholstered furniture sold under the order of any court or, ~~in~~
183 ~~enforcement of lien~~ in enforcement of a lien] pursuant to [~~§ 55-419~~ §55.1-2902] of the
184 Code of Virginia, or any sale settlement of a decedent's estate [;] ~~or any sale by any~~
185 ~~individual of his household effects.~~
186 2. ~~Upholstered furniture and bedding products that are antiques as defined in 12VAC5-~~
187 ~~125-10. Any sale by any individual of their household effects, either directly to another~~
188 ~~individual or through consignment [;]~~
189 [~~3. Upholstered furniture and bedding products that are antiques as defined in 12VAC5-~~
190 ~~125-10;]~~
191 [~~3. 4.] Any interstate public carrier [;]~~
192 [~~4. 5.] Any state institution, agency, or department, unless such institution, agency, or~~
193 ~~department manufactures, reupholsters, or renovates bedding or upholstered furniture~~
194 ~~and offers items for sale to the public items of bedding or upholstered furniture~~
195 ~~manufactured, reupholstered or renovated by it [;]~~
196 [~~5. 6.] Any retailer who sells, gives away, or rents used upholstered furniture that has~~
197 ~~been purchased by the retailer as new furniture and has been used in the course of~~
198 ~~business when such used furniture has been is (i) conspicuously identified as used~~
199 ~~furniture and (ii) reduced in price, sold at auction, donated to charity, or made available~~
200 ~~for a rental fee, and so tagged [; or]~~
201 [~~6. 7.] Any person who sells at retail, exclusively on a consignment basis, articles of~~
202 ~~bedding that are handmade by individuals and whose gross annual receipts from the sale~~
203 ~~of such articles are not in excess of do not exceed \$2,000 shall be deemed to be the~~
204 ~~manufacturer of such articles and shall not be required to obtain a license to make such~~
205 ~~articles. Each such article However, each handmade article of bedding shall have a~~
206 ~~securely attached label affixed stating the kind of filling materials used in such the article~~
207 ~~but shall be exempt from any other requirement as to tags set forth in this chapter.~~

208 [Persons B. A person] engaged in commerce, not otherwise exempt from this chapter as
209 provided by this section, who [donate donates] secondhand articles of bedding and upholstered
210 furniture [are is] not required to sanitize those articles if the donation is to a holder of
211 a [valid] sanitizing permit, and the articles are not represented as sanitized.

212 **Statutory Authority**

213 § 32.1-12 of the Code of Virginia.

214 **Historical Notes**

215 Derived from Virginia Register Volume 23, Issue 23, eff. September 1, 2007.

216 **12VAC5-125-50. Licenses, permits, and registration uniform registry numbers.**

217 [~~A. Licenses for manufacturers, importers, distributors, wholesalers, renovators,~~
218 ~~reupholsterers, supply dealers. General provisions:~~

219 ~~1.] Every importer and every person manufacturing, renovating or reupholstering any bedding~~
220 ~~or upholstered furniture or processing or selling any filling material to be used in articles of bedding~~
221 ~~or upholstered furniture, such as a distributor/wholesaler or supply dealer, shall first obtain a~~
222 ~~license from the commissioner for each place of business, subsidiary, branch or branch factory~~
223 ~~operated or contracted by him for such purpose. [A. Only persons complying with the~~
224 ~~requirements of this chapter and §§ 32.1-212 through 32.1-226 of the Code of Virginia shall~~
225 ~~receive or retain a license or permit. Licenses and permits shall expire one year from the date of~~
226 ~~issue, are nontransferable, and void upon change of ownership or Federal Taxpayer Identification~~
227 ~~Number.~~

228 ~~2. Such license shall be numbered; shall, unless sooner revoked, All licenses and permits~~
229 ~~shall expire one year from the date of issue; shall be renewable annually through receipt~~
230 ~~of a fee; and shall not be transferable. The commissioner shall assign a uniform registry~~
231 ~~number to each licensee.~~

232 ~~3. Each branch, branch factory and subsidiary shall be responsible for the contents and~~
233 ~~for the tagging, as provided in this chapter, of items of bedding and upholstered furniture~~
234 ~~made, remade, renovated, reupholstered, or imported by it and offered for sale or use in~~
235 ~~the Commonwealth. Licenses and permits are nontransferable and void upon change of~~
236 ~~ownership or Federal Taxpayer Identification Number.~~

237 ~~4. Every person who, on his own account or for others, sells or distributes either directly~~
238 ~~or indirectly to any person either at wholesale or retail any bedding, filling material, shoddy~~
239 ~~pad, or upholstered furniture by means of a permanent location, car, truck, catalog, office,~~
240 ~~Internet sales or in any other manner, shall obtain from the commissioner a license for~~
241 ~~each such method of sale or distribution. A new license or permit is not required for a~~
242 ~~change of company name or address; however, licenses and permits are void if a license~~
243 ~~or permit holder fails to notify the Bedding Program of any address change within 30 days.~~
244 ~~Reapplication for the purposes of having a new permit issued shall be the responsibility of~~
245 ~~the former license or permit holder, and such reapplication shall be handled as an initial~~
246 ~~application.~~

247 ~~5. Any person subject to this section doing business at the same address under more than~~
248 ~~one firm name shall obtain a license or permit for each firm name.~~

249 ~~B. Permits for sterilizers and sanitizers. Procedure for obtaining a license or permit.~~

250 ~~1. A person applying to obtain a license or permit shall submit an application on a form~~
251 ~~provided by the Bedding Program. The required fee, as provided in 12VAC5-125-180,~~
252 ~~shall be submitted together with the application.~~

253 ~~2. Before license or permit issuance, the Bedding Program must conduct one or more~~
254 ~~preoperational inspections of all manufacturers, supply dealers, sterilizers, sanitizers,~~
255 ~~reupholsterers, and renovators located in the Commonwealth of Virginia not licensed or~~
256 ~~permitted in the previous year. This preoperational inspection must demonstrate the~~
257 ~~manufacturer, supply dealer, sterilizer, sanitizer, reupholsterer, or renovator complies with~~
258 ~~the requirements of this chapter.~~

259 ~~C. Licenses. B.] Every manufacturer, importer, distributor, and supply dealer shall obtain a~~
260 ~~license for each business, subsidiary, or branch where bedding and upholstered furniture~~
261 ~~products are manufactured, imported, or distributed before offering those products for sale in or~~
262 ~~delivery to the Commonwealth of Virginia. Each location of a manufacturer must obtain a separate~~
263 ~~license for each place of manufacture.~~

264 ~~1. [Importers and distributors An importer or distributor] shall be licensed to import or~~
265 ~~distribute only from manufacturers listed on the license application. To add a manufacturer~~
266 ~~to this list during the license year, the importer or distributor shall notify the Bedding~~
267 ~~Program in writing on an approved form and ensure the license fees paid during that~~
268 ~~license year are current with the new total number of manufacturers [(as provided by the~~
269 ~~fee schedule at 12VAC5-125-180). as provided by the fee schedule in 12VAC5-125-180~~
270 ~~].~~

271 ~~2. A manufacturer must be licensed as required under this chapter prior to an importer or~~
272 ~~distributor obtaining a license to import or distribute from that manufacturer.~~

273 ~~[D. Permits.] [C.] Every person who, on his own account or for others, is a sterilizer or a~~
274 ~~sanitizer sterilizer, sanitizer, reupholsterer, and renovator shall obtain from the commissioner a~~
275 ~~permit for each location at which sterilizing or sanitizing operations occur. Any person applying~~

276 for approval of a process by which filling materials, bedding, or upholstered furniture are sanitized
277 or sterilized shall submit to the commissioner a description of the process, test results and any
278 apparatus and method to be used in such process. Upon approval of such process by the
279 commissioner and payment of the current annual permit fee by the applicant, a numbered permit
280 for use of such process shall be issued. Such permit shall expire one year from the date of issue.
281 Nothing herein shall prevent any person from having any sanitizing or sterilization required by this
282 chapter performed by any person who has a valid permit for such purposes, provided the number
283 of such permit appears on the tag attached to each article as required by ~~§ 32.1-219~~ of the Code
284 of Virginia place of business where bedding and upholstered furniture are sterilized, sanitized,
285 reupholstered, or renovated before offering those products for sale in or delivery to the
286 Commonwealth of Virginia.

287 1. Any person applying for a sanitizer or sterilizer permit must submit a description of the
288 process by which filling materials, bedding, or upholstered furniture will be sanitized or
289 sterilized.

290 2. All processes used to sanitize bedding and upholstered furniture shall comply with the
291 requirements of 12VAC5-125-100.

292 3. All processes used to sterilize animal feathers, hair, or down shall comply with the
293 requirements of 12VAC5-125-110.

294 C. General provisions.

295 1. Any person subject to this section must obtain a new license or permit when there is
296 change of ownership or a change of Federal Taxpayer Identification Number (TIN). A new
297 license or permit is not required for a change of company name or address if the ownership
298 remains the same, but the person must notify the commissioner of such change within 30
299 days after such change. Licenses and permits are nontransferable.

300 2. Every person subject to this section doing business at the same address under more
301 than one firm name shall obtain a license for each firm name.

302 D. Procedure for obtaining a license or permit.

303 1. Submit a written application for license or permit to the Bedding Program on a form
304 provided by the Bedding Program prior to selling in the Commonwealth.

305 2. With the application, submit the required application fee, in accordance with the fee
306 schedule, in the form of a check in U.S. dollars.

307 E. Issuance of license or permit. The Bedding Program shall issue the appropriate license or
308 permit to the applicant after:

309 1. A properly completed application is submitted;

310 2. The appropriate fee, if required, is submitted;

311 3. A preoperational inspection shows that the manufacturer, importer, distributor,
312 wholesaler, renovator, reupholsterer, or supply dealer is in compliance with the
313 requirements of this chapter.

314 [~~E. Uniform registry numbers.~~ D.] Licensed or permitted manufacturers, supply dealers,
315 sterilizers, sanitizers, reupholsterers, and renovators will be assigned a [~~uniform registry number~~
316 (URN) URN] . The Bedding Program will recognize a URN [~~issued licensed~~] by another state
317 and assign the URN if the applicant has a currently valid license for that URN from the issuing
318 state at the time of application, and the URN and copy of the valid license are supplied together
319 with the license or permit application.

320 1. [~~Manufacturers, supply dealers, sterilizers, sanitizers, reupholsterers, and renovators~~
321 A manufacturer, supply dealer, sterilizer, sanitizer, reupholster, and renovator] shall use
322 their assigned URN on all law labels as provided in 12VAC5-125-90.

323 2. ~~[Importers and distributors~~ An importer and distributor] shall use the URNs assigned
324 to the licensed manufacturers of the imported or distributed product on all law labels as
325 provided in 12VAC5-125-90.

326 **Statutory Authority**

327 § 32.1-12 of the Code of Virginia.

328 **Historical Notes**

329 Derived from Virginia Register Volume 23, Issue 23, eff. September 1, 2007.

330 **12VAC5-125-55. Application procedure, change of company name or address, or**
331 **termination.**

332 [A. A person applying to obtain a license or permit shall submit a Bedding and Upholstery
333 License/Permit application provided by the Bedding Program. The required fee, as provided in
334 12VAC5-125-180, shall be submitted together with the application.

335 B. Before license or permit issuance, the Bedding Program shall conduct one or more
336 preoperational inspections. This preoperational inspection shall demonstrate the manufacturer,
337 supply dealer, sterilizer, sanitizer, reupholsterer, or renovator complies with the requirements of
338 this chapter.

339 C. A new license or permit is not required for a change of company name or address; however,
340 a license or permit is void if a license or permit holder fails to notify the Bedding Program of any
341 address change within 30 business days of the change.

342 D. A person subject to this section doing business at the same address under more than one
343 firm name shall obtain a license or permit for each firm name.]

344 **Statutory Authority**

345 §32.1-12 of the Code of Virginia.

346 **Historical Notes**

347 Derived from Virginia Register Volume 23, Issue 23, eff. September 1, 2007.

348 **12VAC5-125-60. Revocation of a license or permit Enforcement, notices, and informal**
349 **conferences.**

350 A. The [health] commissioner may, after providing an opportunity for a hearing, revoke a
351 license or permit for flagrant or continuing violation of any of the requirements of this chapter.

352 Prior to revocation, the commissioner shall notify in writing the holder of the license or permit
353 of the specific reason for which the license or permit is to be revoked. The license or permit shall
354 be revoked at the end of the 15 days following service of such notice unless a written request for
355 a hearing is filed before then with the commissioner. If no request for a hearing is filed within the
356 15-day period, the revocation of the license or permit shall be final. a notice of intent to revoke a
357 license or permit and after providing an opportunity for an informal conference in accordance with
358 § 2.2-4019 of the Code of Virginia, revoke a license or permit for [flagrant or continuing continued
359 violation a violation] of this chapter. [Any A] person to whom a notice of revocation is directed
360 shall immediately comply with the notice. Upon revocation, the former license or permit holder
361 shall be given an opportunity for appeal of the revocation in accordance with the Administrative
362 Process Act (§ 2.2-4000 et seq. of the Code of Virginia). [Any A] person whose license or permit
363 has been revoked may apply for a new license or permit by following the procedures outlined
364 in [~~12VAC5-125-50.~~ 12VAC5-125-55.]

365 B. The [health] commissioner may summarily suspend a [sanitizer, reupholsterer, or
366 renovator license or] permit if continued operation constitutes a substantial and imminent threat
367 to public health. Upon receipt of [such a] notice that [a the license or] permit is suspended,
368 the [license or] permit holder shall cease [permitted] operations immediately. [Whenever
369 if] a [license or] permit is suspended, the [department shall provide written notification to the

370 former license or permit holder of the permit shall be notified in writing by certified mail or by hand
371 delivery. Upon service of notice that the The license or permit is immediately suspended, the
372 former license or permit holder shall be and given an of the) opportunity for an informal
373 conference in accordance with § 2.2-4019 of the Code of Virginia. The request for an informal
374 conference shall be in writing and shall be filed with the Bedding Program by the former holder of
375 the [license or] permit. If [a] written request for an informal conference is not [filed
376 received] within [~~40-working~~ 30 business] days after the service of notice, the suspension is
377 sustained. Each holder of a suspended [license or] permit shall be afforded an opportunity for
378 an informal conference within [~~three-working~~ seven business] days of receipt of a request for the
379 informal conference. The [health] commissioner may end the suspension at any time if the
380 reasons for the suspension no longer exist. [Working days means days on which the central office
381 of the Virginia Department of Health is open for business and does not include holidays and
382 closures.]

383 C. [~~Any A~~] person affected by a determination issued in connection with the enforcement of
384 this chapter may challenge such determination in accordance with the provisions of the
385 Administrative Process Act (§ 2.2-4000 et seq. of the Code of Virginia).

386 D. The [health] commissioner may enforce this chapter through any means lawfully available
387 pursuant to § 32.1-27 of the Code of Virginia, and nothing in this chapter shall be construed as
388 preventing the [health] commissioner from making efforts to obtain compliance through warning,
389 conference, or any other appropriate enforcement means.

390 **Statutory Authority**

391 Statutory Authority§ 32.1-12 of the Code of Virginia.

392 **Historical Notes**

393 Derived from Virginia Register Volume 23, Issue 23, eff. September 1, 2007.

394 **12VAC5-125-70. Application after revocation. (Repealed.)**

395 Any person whose license or permit has been revoked, may apply for a new license or permit
396 by following the procedures outlined in ~~12VAC5-125-50~~.

397 **Statutory Authority**

398 Statutory Authority§ ~~32.1-12~~ of the Code of Virginia.

399 **Historical Notes**

400 Derived from Virginia Register Volume 23, Issue 23, eff. September 1, 2007.

401 **12VAC5-125-80. Bedding and upholstered furniture inspections Inspections.**

402 A. [~~Inspections of license and permit holders.~~] Inspection of the premises of a holder of a
403 license or license or permit issued holders under this chapter ~~will~~ may be initiated upon in the
404 following complaints ~~when they relate to a violation of this chapter~~ circumstances:

405 1. Upon complaints received by the commissioner. Upon receipt of a complaint relating to
406 a violation of law, including a complaint of insect infestation required by 12VAC5-125-100
407 G: [and or]

408 2. Upon complaints received by the Bedding Program Pursuant to alleged violations of
409 this chapter observed during a previous inspection and any subsequent steps taken by
410 the permit holder to comply with this chapter, or as necessary to verify compliance.

411 3. Upon complaints received by the Department of Agriculture and Consumer Services
412 and reported to the commissioner or Bedding Program.

413 4. Upon complaints made to an inspector in the course of a routine inspection and reported
414 to the Bedding Program.

415 5. Upon complaints against a licensee made by an inspector when noted in the course of
416 a routine inspection of an ancillary operation (such as a sanitizer, distributor/wholesaler or
417 retailer) and reported to the Bedding Program.

418 6. Upon complaints (or findings of violations) against a licensee by the authorities of a
419 government jurisdiction outside the Commonwealth that the licensee has sold bedding in
420 violation of laws, regulations or standards of that jurisdiction dealing with tagging,
421 sanitization, or consumer protection requirements.

422 7. Upon late or nonrenewal of permit or license by a licensee or permit holder or upon late
423 notification of a change of location. Renewal application and payment not received by the
424 due date contained in the renewal notice and a failure to timely notify the commissioner of
425 a change of address shall result in the licensee being moved to an unlicensed status and
426 may result in an inspection by the Bedding Program to determine if the licensee continues
427 in business. If the licensee continues to operate, a license or permit shall not be issued
428 until a program inspection occurs and the requirements of the law are satisfied.

429 Inspections will be carried out and completed as required under the law.

430 B. Request for information, documents; verifications.

431 1. Upon complaint, the commissioner may request that a licensee provide information and
432 documentation to substantiate its compliance with the requirements of this chapter. The
433 commissioner may also require that the accuracy and completeness of such information
434 and documentation be verified.

435 2. Upon a finding that a licensee has failed to timely and fully comply with a request for
436 information and documents issued by the commissioner, or failed to substantiate the
437 accuracy and completeness of such information and documentation, a review may be
438 conducted by the Bedding Program.

439 3. Any holder of a license or permit is required to report to the Bedding Program any
440 occurrences of insect infestation at the licensee's or permit holder's place of business or
441 in any article of new or used bedding or upholstered furniture offered for sale, rent, or use.

442 C. ~~[B. Inspections of unlicensed entities. Inspections of unlicensed entities]~~ and of retailers
443 of bedding and upholstered furniture ~~[may be conducted in]~~ accordance with § 32.1-25 of the
444 Code of Virginia.

445 Inspections shall be conducted upon receipt of application for a permit or license by an
446 unlicensed entity. ~~[the following circumstances: B. The Bedding Program may conduct an~~
447 ~~inspection if:]~~

448 1. ~~[Upon receipt of an application for a license or permit; An entity submits an application~~
449 ~~for a license or permit;]~~

450 2. ~~[Upon nonrenewal of a sanitizer, reupholsterer, or renovator permit or upon failure by~~
451 ~~a permit holder to notify the health commissioner of a change of address within timelines~~
452 ~~established by 12VAC5-125-50 A resulting in a former permit holder being moved to an~~
453 ~~unlicensed status; A license or permit holder fails to renew their license or permit;]~~

454 ~~[3. A license or permit holder fails to notify the commissioner of a change of address within~~
455 ~~the timelines established by 12VAC5-125-55C resulting in the former permit or license~~
456 ~~holder being moved to an unlicensed or unpermitted status;]~~

457 ~~[3. To verify 4. To determine] retailer compliance with this chapter; [and or]~~

458 ~~[4. Pursuant to alleged violations of 5. Alleged violations of this chapter are] observed~~
459 ~~during inspections resulting from circumstances in subdivision 1, 2, [or 3 3, or 4] of this~~
460 ~~subsection [.] [, any subsequent steps taken by the permit holder to comply with this~~
461 ~~chapter, or as necessary to verify compliance.]~~

462 C. All inspections shall be conducted in accordance with § 32.1-25 of the Code of
463 Virginia. ~~[Whenever an inspection is conducted, a completed inspection report shall be provided~~
464 ~~to the license or permit holder or inspected retailer.~~ The Bedding Program shall provide a written
465 inspection report to the applicant, license or permit holder, or inspected entity upon conclusion of
466 the inspection.] The inspection report shall contain descriptions of observations made and
467 citations to the alleged violations of this chapter. The report shall provide an opportunity for due
468 process in accordance with the Administrative Process Act (§ 2.2-4000 et seq. of the Code of
469 Virginia).

470 **Statutory Authority**

471 Statutory Authority§ 32.1-12 of the Code of Virginia.

472 **Historical Notes**

473 Derived from Virginia Register Volume 23, Issue 23, eff. September 1, 2007.

474 **12VAC5-125-90. Law labels conforming to the Virginia law label requirements.**

475 A. Every importer of and every person manufacturing a new item of bedding or upholstered
476 furniture shall attach securely thereto a substantial ~~[General provisions.]~~ No law label required
477 by this chapter ~~[shall may]~~ contain false or misleading statements, terms, or
478 designations. ~~[Filling materials shall be listed by generic textile names in order of descending~~
479 ~~predominance.~~ The law label shall list filling materials by general textile names in order of
480 descending predominance.] The removal, defacement, or alteration of any law label prior to retail
481 sale is prohibited. ~~[Law labels shall~~ The law label may] contain no advertising matter or anything
482 that detracts from the required statements. No person ~~[shall may]~~ place a mark, tag, sticker, or
483 any other device on a law label that covers the required statements indicated in Figures 1, 2, and
484 3 unless the Bedding Program provides written approval. No person ~~[shall may]~~ use any law
485 label unless licensed or permitted under this chapter.

486 [B.] All stamp or print on ~~[law labels~~ a law label] required by this section shall be legible
487 and at least one-eighth of an inch in height and capitalized, unless otherwise indicated in Figures
488 1, 2, and 3.

489 ~~[B. New bedding and upholstered furniture, filling material. C.]~~ A white cloth tag (law label)
490 or equivalent, visible law label shall be securely attached in a position where it can be conveniently
491 examined on the outside covering of such every item and not less than of new bedding or
492 upholstered furniture, or any filling material, however contained. ~~[Law labels shall be made of A~~
493 ~~law label shall be]~~ durable, tear-resistant white cloth or equivalent and shall be at least six square
494 inches in size, upon which . All label printing shall be resistant to fading, bleeding, and abrasion,
495 and all text shall be plainly stamped or printed, in English, the name and address of the
496 manufacturer, importer, or distributor, the registration number of the manufacturer or importer, the
497 kind of filling material used therein, a statement that the filling materials are new, and the number
498 of the permit issued to the person sterilizing any new feathers, hair, or down in such item. and
499 clearly legible. New bedding, upholstered furniture, and filling material shall use the appropriate
500 law label from either Figure 1, Figure 2, or both; use of a Figure 2 law label in addition to the
501 corresponding Figure 1 law label is not a violation of this chapter. Law label contents shall conform
502 to the layout and requirements indicated by Figures 1 and 2, as appropriate. If the filling materials
503 are ~~[reclaimed and reprocessed recycled]~~ as defined in 12VAC5-125-10, law labels from Figure
504 1 may contain this statement in the ~~[Other Information~~ "Other Information"] section: "New filling
505 material is composed of (entirely, partially, or %) ~~[reclaimed and reprocessed recycled material]~~
506 ." ~~[Law labels~~ A law label] for new bedding and upholstered furniture shall be securely attached
507 to the article at the point of manufacture; ~~[law labels a law label]~~ for filling material shall be
508 securely attached to shipment packaging or printed directly on retail packaging ~~[]~~ prior to
509 delivery or shipment.

Figure 1. White tags with black ink for new materials, with or without a percent of [reclaimed and reprocessed recycled] materials.

<p><u>BEDDING, SINGLE-COMPONENT ARTICLES, FILLING MATERIAL</u></p>	<p><u>FURNITURE, MULTIPLE-COMPONENT ARTICLES WHERE EACH COMPONENT IS AN INTEGRAL PIECE OF THE ITEM</u></p>	<p><u>ITEMS CONTAINING MATERIALS REQUIRING STERILIZATION</u></p>	
<p><u>UNDER PENALTY OF LAW THIS TAG NOT TO BE REMOVED EXCEPT BY THE CONSUMER</u></p>	<p><u>UNDER PENALTY OF LAW THIS TAG NOT TO BE REMOVED EXCEPT BY THE CONSUMER</u></p>	<p><u>UNDER PENALTY OF LAW THIS TAG NOT TO BE REMOVED EXCEPT BY THE CONSUMER</u></p>	
<p><u>ALL NEW MATERIAL consisting of</u></p>	<p><u>ALL NEW MATERIAL consisting of (BODY) (CUSHIONS)</u></p>	<p><u>ALL NEW MATERIAL consisting of (FEATHERS) (DOWN) (SPECIFIC TYPE ANIMAL HAIR) CONTENTS STERILIZED</u></p>	<p><u>Uppercase text in these rows shall be at least 1/8th inch.</u></p>
<p><u>REG NO.</u></p> <p><u>Certification is made by the manufacturer that the materials in this article are described in accordance with law.</u></p>	<p><u>REG NO.</u></p> <p><u>Certification is made by the manufacturer that the materials in this article are described in accordance with law.</u></p>	<p><u>REG NO. PER NO.</u></p> <p><u>Certification is made by the manufacturer that the materials in this article are described in accordance with law.</u></p>	<p><u>The 1/8th inch font size requirement does not apply to this section.</u></p>
<p><u>MADE BY (or MADE FOR)</u></p> <p><u>Name and address of manufacturer, importer, or distributor as appropriate</u></p>	<p><u>MADE BY (or MADE FOR)</u></p> <p><u>Name and address of manufacturer, importer, or distributor as appropriate</u></p>	<p><u>MADE BY (or MADE FOR)</u></p> <p><u>Name and address of manufacturer, importer, or distributor as appropriate</u></p>	<p><u>Uppercase text in these rows shall be at least 1/8th inch.</u></p>
<p><u>(Other Information section)</u></p>	<p><u>(Other Information section)</u></p>	<p><u>(Other Information section)</u></p>	

			<p><u>This section may contain dimensions, FTC, RN#, or other information. No advertising material is allowed. The 1/8th inch font size requirement does not apply to this section.</u></p> <p><u>If filling materials are [reclaimed and reprocessed recycled] as defined in 12VAC5-125-10, this section may contain the statement "New filling material is composed of (entirely, partially, or %) [reclaimed and reprocessed recycled] materials".</u></p>
<u>MADE IN (COUNTRY)</u>	<u>MADE IN (COUNTRY)</u>	<u>MADE IN (COUNTRY)</u>	

Figure 2. White tags with [black or] green ink, for use only if new materials contain a percent of [~~reclaimed and reprocessed~~ recycled] materials as defined in 12VAC5-125-10.

<u>BEDDING, SINGLE-COMPONENT ARTICLES, FILLING MATERIAL</u>	<u>FURNITURE, MULTIPLE-COMPONENT ARTICLES WHERE EACH COMPONENT IS AN INTEGRAL PIECE OF THE ITEM</u>	<u>ITEMS CONTAINING MATERIALS REQUIRING STERILIZATION</u>	
<u>UNDER PENALTY OF LAW THIS TAG NOT TO BE REMOVED EXCEPT BY THE CONSUMER</u>	<u>UNDER PENALTY OF LAW THIS TAG NOT TO BE REMOVED EXCEPT BY THE CONSUMER</u>	<u>UNDER PENALTY OF LAW THIS TAG NOT TO BE REMOVED EXCEPT BY THE CONSUMER</u>	
<p><u>ALL NEW MATERIAL (% [RECLAIMED AND REPROCESSED RECYCLED] MATERIAL) consisting of</u></p>	<p><u>ALL NEW MATERIAL (% [RECLAIMED AND REPROCESSED RECYCLED] MATERIAL) consisting of (BODY) (CUSHIONS)</u></p>	<p><u>ALL NEW MATERIAL (% [RECLAIMED AND REPROCESSED RECYCLED] MATERIAL) consisting of (FEATHERS) (DOWN) (SPECIFIC TYPE ANIMAL HAIR) CONTENTS STERILIZED</u></p>	<p><u>Uppercase text in these rows shall be at least 1/8th inch.</u></p>
<u>REG NO.</u>	<u>REG NO.</u>	<u>REG NO. PER NO.</u>	

<u>Certification is made by the manufacturer that the materials in this article are described in accordance with law.</u>	<u>Certification is made by the manufacturer that the materials in this article are described in accordance with law.</u>	<u>Certification is made by the manufacturer that the materials in this article are described in accordance with law.</u>	<u>The 1/8th inch font size requirement does not apply to this section.</u>
<u>MADE BY (or MADE FOR)</u> <u>Name and address of manufacturer, importer, or distributor as appropriate</u>	<u>MADE BY (or MADE FOR)</u> <u>Name and address of manufacturer, importer, or distributor as appropriate</u>	<u>MADE BY (or MADE FOR)</u> <u>Name and address of manufacturer, importer, or distributor as appropriate</u>	<u>Uppercase text in these rows shall be at least 1/8th inch.</u>
<u>(Other Information section)</u>	<u>(Other Information section)</u>	<u>(Other Information section)</u>	<u>This section may contain dimensions, FTC, RN#, or other information. No advertising material is allowed. The 1/8th inch font size requirement does not apply to this section</u>
<u>MADE IN (COUNTRY)</u>	<u>MADE IN (COUNTRY)</u>	<u>MADE IN (COUNTRY)</u>	

511 B. Law labels for new bedding and upholstered furniture shall be securely attached to the
512 article or filling material at the point of manufacture, in a position where they can be conveniently
513 examined. Law labels shall contain no advertising matter, nor anything that detracts or is likely to
514 detract from the required statements. No mark, tag, sticker, or any other device shall be placed
515 upon law labels by any dealer or any other person in such a way as to cover the required
516 statements. No one may possess such law labels outside that facility unless by prior approval of
517 the commissioner for correction purposes.

518 [C. D.] Any person sanitizing, remaking, renovating, or reupholstering any [Secondhand,
519 reupholstered, or renovated articles.] A yellow law label shall be securely attached in a position
520 where it can be conveniently examined to every secondhand item of bedding or upholstered
521 furniture, or manufacturing any item of bedding or upholstered furniture containing any shoddy or
522 secondhand filling material, shall attach securely to it a substantial yellow cloth tag or equivalent
523 (law label), visible on the outside of such item and not less than . The law label shall be made of
524 durable yellow cardstock paper, cloth, or equivalent and shall be at least six square inches in size,
525 upon which shall be [All writing Writing] on the law label shall be resistant to fading, bleeding,
526 and abrasion, and all text shall be [plainly stamped or printed,] in English, the kind of filling

527 materials used therein, a statement that the item or filling materials are secondhand, and the
 528 number of the permit issued to the person who sanitized such item or filling material. The label
 529 contents shall be composed according to the layout and requirements indicated by Figure 3, as
 530 appropriate. This requirement shall not apply to mattresses that contain a shoddy pad unless it
 531 otherwise contains secondhand filling materials.

Figure 3. Yellow tags with black ink for secondhand materials.

<p><u>SECONDHAND BEDDING OR UPHOLSTERED FURNITURE REQUIRING SANITIZATION</u></p>	<p><u>REUPHOLSTERED OR RENOVATED ARTICLES TO BE RETURNED TO ORIGINAL OWNER, NOT REQUIRING SANITIZATION</u></p>	<p><u>ITEMS CONTAINING MATERIALS REQUIRING STERILIZATION</u></p>	
<p><u>UNDER PENALTY OF LAW THIS TAG NOT TO BE REMOVED EXCEPT BY THE CONSUMER</u></p>	<p><u>UNDER PENALTY OF LAW THIS TAG NOT TO BE REMOVED EXCEPT BY THE CONSUMER</u></p>	<p><u>UNDER PENALTY OF LAW THIS TAG NOT TO BE REMOVED EXCEPT BY THE CONSUMER</u></p>	
<p><u>THIS ARTICLE CONTAINS ALL SECOND-HAND MATERIAL CONTENTS SANITIZED</u> Date Sanitized: _____</p>	<p><u>THIS ARTICLE CONTAINS THE SAME MATERIAL RECEIVED BY THE OWNER, TO WHICH HAS BEEN ADDED THE FOLLOWING NEW MATERIAL: (LIST)</u></p>	<p><u>THIS ARTICLE CONTAINS SECONDHAND MATERIAL, TO WHICH HAS BEEN ADDED THE FOLLOWING NEW MATERIAL: (LIST) CONTENTS SANITIZED</u> Date Sanitized: _____</p>	<p><u>Uppercase text in these rows shall be at least 1/8th inch.</u></p>
<p><u>PERMIT NO.</u></p>	<p><u>PERMIT NO.</u></p>	<p><u>SAN. PERMIT NO. RE. PERMIT NO.</u></p>	
<p><u>Certification is made by the [<u>manufacturer retailer</u>] that the materials in this article are sanitized in accordance with law.</u></p>	<p><u>Certification is made by the [<u>manufacturer retailer</u>] that the materials in this article are described in accordance with law.</u></p> <p><u>The following work has been done:</u></p> <p><u>YES NO</u></p> <p><u>Old covering removed</u></p>	<p><u>Certification is made by the [<u>manufacturer retailer</u>] that the materials in this article are described and sanitized in accordance with law.</u></p>	<p><u>The 1/8th inch font size requirement does not apply to this section.</u></p>

	<u>Frame repaired</u>		
	<u>Spring retied and/or repaired</u>		
	<u>Other:</u>		
	<u>This article must not be sold, it is the property of & must be returned to: Name and address of owner</u>	<u>SANITIZED BY: Name and address of Sanitizer</u>	<u>Uppercase text in these rows shall be at least 1/8th inch.</u> <u>These rows may be combined in Tag 3 if Sanitizer and (Reupholsterer or Renovator) Permits are held by the same person.</u>
<u>SANITIZED BY:</u>	<u>REUPHOLSTERED (or RENOVATED) BY:</u>	<u>REUPHOLSTERED (or RENOVATED) BY:</u>	
<u>Name and address of Sanitizer</u>	<u>Name and address of Reupholsterer or Renovator</u>	<u>Name and address of Reupholsterer or Renovator</u>	
<u>(Other Information section)</u>	<u>(Other Information section)</u>	<u>(Other Information section)</u>	<u>The 1/8th inch font size requirement does not apply to this section.</u>

Figure 3. Yellow tags with black ink for secondhand materials.

SECONDHAND BEDDING OR UPHOLSTERED FURNITURE REQUIRING SANITIZATION	REUPHOLSTERED OR RENOVATED ARTICLES TO BE RETURNED TO ORIGINAL OWNER, NOT REQUIRING SANITIZATION	ITEMS CONTAINING MATERIALS REQUIRING STERILIZATION
<p>UNDER PENALTY OF LAW THIS TAG NOT BE BE REMOVED EXCEPT BY THE CONSUMER</p> <p>THIS ARTICLE CONTAINS ALL SECOND-HAND MATERIAL CONTENTS UNKNOWN</p> <p>CONTENTS SANITIZED Date Sanitized: _____</p> <p>PERMIT NO. _____</p> <p>Certification is made by the manufacturer that the materials in this article are sanitized in accordance with law.</p>	<p>UNDER PENALTY OF LAW THIS TAG NOT BE BE REMOVED EXCEPT BY THE CONSUMER</p> <p>THIS ARTICLE CONTAINS THE SAME MATERIAL RECEIVED BY THE OWNER, TO WHICH HAS BEEN ADDED THE FOLLOWING NEW MATERIAL: (LIST)</p> <p>PERMIT NO. _____</p> <p>Certification is made by the manufacturer that the materials in this article are described in accordance with law. The following work has been done: YES NO Oil covering removed Frame repaired Spring retied and/or repaired Other _____</p> <p>This article must not be sold, it is the property of & must be returned to: Name and address of owner</p>	<p>UNDER PENALTY OF LAW THIS TAG NOT BE BE REMOVED EXCEPT BY THE CONSUMER</p> <p>THIS ARTICLE CONTAINS SECONDHAND MATERIAL, TO WHICH HAS BEEN ADDED THE FOLLOWING NEW MATERIAL: (LIST)</p> <p>CONTENTS SANITIZED Date Sanitized: _____ SAN, PERMIT NO. _____ RE, PERMIT NO. _____</p> <p>Certification is made by the manufacturer that the materials in this article are described and sanitized in accordance with law.</p>
<p>SANITIZED BY: Name and address of Sanitizer (Other Information section)</p>	<p>REUPHOLSTERED (or RENOVATED) BY: Name and address of Reupholsterer or Renovator (Other Information section)</p>	<p>SANITIZED BY: Name and address of Sanitizer REUPHOLSTERED (or RENOVATED) BY: Name and address of Reupholsterer or Renovator (Other Information section)</p>

Uppercase text in these rows shall be at least 1/8th inch.

The 1/8th inch font size requirement does not apply to this section.

Uppercase text in these rows shall be at least 1/8th inch. These rows may be combined in Tag 3 if Sanitizer and (Reupholsterer or Renovator) Permits are held by the same person.

The 1/8th inch font size requirement does not apply to this section.

532

533 ~~D. Any person shipping or delivering filling material, however contained, shall have~~
534 ~~conspicuously attached thereto a law label upon which shall be stamped or printed, as provided~~
535 ~~in § 32.1-219 of the Code of Virginia or as provided in this chapter, the kind of material, whether~~
536 ~~the material is new or secondhand, the name, address, and registration number of the~~

537 manufacturer or importer, and the permit number of the person who sterilized or sanitized such
538 material.

539 E. The stamp or print on law labels required by this section shall be in type not less than three
540 millimeters in height.

541 F. It shall be unlawful to use any false or misleading statement, term or designation on any
542 tag required by this chapter or to remove, deface or alter, or to attempt to remove, deface or alter
543 any such tag or the statement of filling materials made thereon, prior to retail sale.

544 G. No person shall use or have in his possession with intent to use any tag provided for in this
545 chapter unless such person holds a license or permit issued to him pursuant to this chapter. No
546 person shall sell, give or in any way provide such law labels to anyone who does not have a
547 license, or permit issued to him pursuant to this chapter, or is not allowed to use such a tag
548 pursuant to this provision.

549 (~~Specific law label requirements contained in Attachments 1 through 7~~)

550 ATTACHMENT 1

551 THE FOLLOWING LABELS COMPLY WITH THE VIRGINIA LAW

552 NO. 1

553 WHITE LABEL FOR ALL NEW MATERIAL

554 For Filling Material NOT Requiring Sterilization

SPACE TO ATTACH →	
In bold, black ink, minimum type size 3mm in height	UNDER PENALTY OF LAW THIS TAG NOT TO BE REMOVED EXCEPT BY CONSUMER
→	
Space for description of filling material.	ALL NEW MATERIAL
Printing to be in English using capital letters not less than 3mm in height	CONSISTING OF
→	
See NOTE (3) at bottom of page. →	REG. NO.
Required in Virginia →	Certification is made by the manufacturer that the materials in this article are

"Date of Delivery" line of Manufacturer's stock information, etc., here.

→

described in accordance with law.

MADE BY

(NAME OF MANUFACTURER OR VENDOR)

(ADDRESS OF MANUFACTURER OR VENDOR)

Date of Delivery

(Additional Information)

555 Note:

556 (1) All above printing in black ink on white vellum cloth or a material of comparable quality,
557 which shall not flake out when abraded.

558 (2) Size of label: Exclusive of the portion required to affix the tag to the article, the minimum
559 size of the tag shall be not less than (six) square inches, but may be greater as the need demands.

560 (3) Virginia approves and recognizes the uniform registry number and will accept the registration
561 number issued by another state, if registrant so desires, providing such registration follows the
562 policy of uniform registration. This policy is intended to benefit the registrant by requiring but
563 one registration to be imprinted on the law label used, regardless of where merchandise may be
564 shipped. The registration number shall be preceded by name of state (may be abbreviated)
565 issuing REG. NO. and if factory is located in another state than that issuing REG. NO., then
566 name of state in which factory is located shall follow the registration number in parenthesis.

567 ATTACHMENT 2

568 NO. 2

569 WHITE LABEL FOR ALL NEW MATERIAL

570 ARTICLES WITH EXTRA CUSHIONS AS AN

571 INTEGRAL PART OF UNIT

572 For Filling Material NOT Requiring Sterilization

SPACE TO ATTACH →

In bold, black ink, minimum type size 3mm in height	UNDER PENALTY OF LAW THIS TAG NOT TO BE REMOVED EXCEPT BY CONSUMER
→	
Space for description of filling material.	ALL NEW MATERIAL
Printing to be in English using capital letters not less than 3mm in height	CONSISTING OF
→	BODY
	CUSHIONS
See NOTE (3) at bottom of page. →	
Required in Virginia →	REG. NO.
"Date of Delivery" line of Manufacturer's stock information, etc., here.	
→	Certification is made by the manufacturer that the materials in this article are described in accordance with law.
	MADE BY
	(NAME OF MANUFACTURER OR VENDOR)
	(ADDRESS OF MANUFACTURER OR VENDOR)
	Date of Delivery _____
	(Additional Information)

573 Note:

574 (1) All above printing in black ink on white vellum cloth or a material of comparable quality,
575 which shall not flake out when abraded.

576 (2) Size of label: Exclusive of the portion required to affix the tag to the article, the minimum
577 size of the tag shall be not less than (six) square inches, but may be greater as the need demands.

578 (3) Virginia approves and recognizes the uniform registry number and will accept the registration
 579 number issued by another state, if registrant so desires, providing such registration follows the
 580 policy of uniform registration. This policy is intended to benefit the registrant by requiring but
 581 one registration to be imprinted on the law label used, regardless of where merchandise may be
 582 shipped. The registration number shall be preceded by name of state (may be abbreviated)
 583 issuing REG. NO. and if factory is located in another state than that issuing REG. NO., then
 584 name of state in which factory is located shall follow the registration number in parenthesis.

585 ATTACHMENT 3

586 NO. 3

587 WHITE LABEL FOR ALL NEW MATERIAL

588 For Animal and Fowl and Any Other Filling Material Requiring Sterilization

SPACE TO ATTACH →	
In bold, black ink, minimum type size 3mm in height	UNDER PENALTY OF LAW THIS TAG NOT TO BE REMOVED EXCEPT BY CONSUMER
→	
Space for description of filling material.	ALL NEW MATERIAL
Printing to be in English using capital letters not less than 3mm in height	CONSISTING OF
→	
See NOTE (3) at bottom of page. →	REG. NO. PERMIT NO.
Required in Virginia →	Certification is made by the manufacturer
"Date of Delivery" line of Manufacturer's stock information, etc., here.	that the materials in this article are described in accordance with law.
→	
	CONTENTS STERILIZED

	<p>MADE BY</p> <p>(NAME OF MANUFACTURER OR VENDOR)</p> <p>(ADDRESS OF MANUFACTURER OR VENDOR)</p>
	<p>Date of Delivery _____</p> <p>(Additional Information)</p>

589 Note:

590 (1) All above printing in black ink on white vellum cloth or a material of comparable quality,
 591 which shall not flake out when abraded.

592 (2) Size of label: Exclusive of the portion required to affix the tag to the article, the minimum
 593 size of the tag shall be not less than (six) square inches, but may be greater as the need demands.

594 (3) Virginia approves and recognizes the uniform registry number and will accept the registration
 595 number issued by another state, if registrant so desires, providing such registration follows the
 596 policy of uniform registration. This policy is intended to benefit the registrant by requiring but
 597 one registration to be imprinted on the law label used, regardless of where merchandise may be
 598 shipped. The registration number shall be preceded by name of state (may be abbreviated)
 599 issuing REG. NO. and if factory is located in another state than that issuing REG. NO., then
 600 name of state in which factory is located shall follow the registration number in parenthesis.

601 (4) Virginia will accept the PERMIT NO. issued by another state if applicant so desires
 602 providing approval is granted and a Virginia Sterilization Permit is issued to applicant bearing
 603 such number.

604 ATTACHMENT 4

605 NO. 4

606 ~~YELLOW LABEL FOR ARTICLES THAT HAVE BEEN REMADE AND~~

607 ~~RENOVATED FOR CONSUMER AND THAT CONTAIN~~

608 ~~SECONDHAND MATERIAL IN WHOLE OR IN PART~~

609 If new filling material has been added, state type in space provided

SPACE TO ATTACH →

In bold, black ink, minimum type size 3mm in height

→

Space for description of filling material.

Printing to be in English using capital letters

not less than 3mm in height

→

Registration number or name of person or firm that renovated article →

UNDER PENALTY OF LAW THIS TAG NOT TO BE REMOVED EXCEPT BY CONSUMER

This article contains the same material received from the owner, to which has been added the following New material.

The following work has been done:

YES NO

Old covering completely removed

Frame repaired

Spring retied and/or repaired

OTHER: _____

REG. NO. VA. _____

This article must not be sold, it is the property of and must be returned to:

Name _____

Address _____

REMADE AND RENOVATED BY

Date _____

(Additional Information)

610 Note:

611 (1) All above printing in black ink on yellow vellum cloth or a material of comparable quality,
612 which shall not flake out when abraded.

613 (2) Size of label: Exclusive of the portion required to affix the tag to the article, the minimum
614 size of the tag shall be not less than (six) square inches, but may be greater as the need demands.

615 (3) If secondhand filling material is added instead of new, article is required to be sanitized and
616 Law Label No. 6 shall be used stating Permit No. of person or firm doing the sanitizing.

617 ATTACHMENT 5

618 NO. 5

619 YELLOW LABEL FOR ARTICLES CONTAINING

620 ALL SECONDHAND MATERIAL OFFERED

621 FOR SALE OR RENT "AS IS"

622 REQUIRED TO BE SANITIZED

SPACE TO ATTACH →	
In bold, black ink, minimum type size 3mm in height	UNDER PENALTY OF LAW THIS TAG NOT TO BE REMOVED EXCEPT BY CONSUMER
→	
Space for description of filling material.	THIS ARTICLE CONTAINS
Printing to be in English using capital letters	ALL SECOND-HAND MATERIAL
not less than 3mm in height	CONTENTS UNKNOWN
→	
Permit number of person or firm who sanitized	PERMIT NO.
article →	
Required in Virginia →	Certification is made by the manufacturer
	that the materials in this article are

	described in accordance with law.
	<hr/> <hr/>
	SANITIZED
	<hr/> <hr/>
	SANITIZED BY
	Date Sanitized
<hr/> <hr/>	
(Additional Information)	

623 Note:

624 ~~(1) All above printing in black ink on yellow vellum cloth or a material of comparable quality,~~
625 ~~which shall not flake out when abraded.~~

626 ~~(2) Size of label: Exclusive of the portion required to affix the tag to the article, the minimum~~
627 ~~size of the tag shall be not less than (six) square inches, but may be greater as the need demands.~~

628 ~~ATTACHMENT 6~~

629 ~~NO. 6~~

630 ~~YELLOW LABEL FOR ARTICLES THAT HAVE BEEN RENOVATED~~

631 ~~FOR RESALE AND THAT CONTAIN~~

632 ~~SECONDHAND MATERIAL IN WHOLE OR IN PART~~

633 ~~REQUIRED TO BE SANITIZED~~

SPACE TO ATTACH →	<hr/> <hr/>
In bold, black ink, minimum type size 3mm in height	UNDER PENALTY OF LAW THIS TAG NOT TO BE REMOVED EXCEPT BY CONSUMER
→	<hr/> <hr/>
Space for description of filling material.	THIS ARTICLE CONTAINS

Printing to be in English using capital letters	SECOND HAND MATERIAL
not less than 3mm in height	TO WHICH HAS BEEN ADDED
→	_____
Registration number of person or firm who	REG. NO. PERMIT NO.
renovated article. Permit number of person	_____
or firm who sanitized article	_____
→	Certification is made by the manufacturer
Required in Virginia →	that the materials in this article are
	described in accordance with the law.

	CONTENTS
	SANITIZED

	REMADE AND RENOVATED BY
	RENOVATOR NAME _____
	RENOVATOR ADDRESS _____
	Date Sanitized

	(Additional Information)

634 Note:

635 (1) All above printing in black ink on white vellum cloth or a material of comparable quality,
 636 which shall not flake out when abraded.

637 (2) Size of label: Exclusive of the portion required to affix the tag to the article, the minimum
 638 size of the tag shall be not less than (six) square inches, but may be greater as the need demands.

639 ATTACHMENT 7

- 640 NO. 7
- 641 ~~WHITE LABEL FOR ALL NEW MATERIAL~~
- 642 ~~ARTICLES IMPORTED INTO THE UNITED STATES~~
- 643 For Filling Material NOT Requiring Sterilization

SPACE TO ATTACH →	
In bold, black ink, minimum type size 3mm in height	UNDER PENALTY OF LAW THIS TAG NOT TO BE REMOVED EXCEPT BY CONSUMER
→	
Space for description of filling material.	ALL NEW MATERIAL
Printing to be in English using capital letters not less than 3mm in height	CONSISTING OF
→	
See NOTE (3) at bottom of page. →	REG. NO.
Required in Virginia →	Certification is made by the manufacturer
"Date of Delivery" line of Manufacturer's stock information, etc., here.	that the materials in this article are described in accordance with law.
→	
Name of country where factory is located	IMPORTED BY
→	Date of Delivery _____
	MADE IN

- 644 Note:
- 645 (1) All above printing in black ink on white vellum cloth or a material of comparable quality,
- 646 which shall not flake out when abraded.
- 647 (2) Size of label: Exclusive of the portion required to affix the tag to the article, the minimum
- 648 size of the tag shall be not less than (six) square inches, but may be greater as the need demands.

649 (3) Virginia approves and recognizes the uniform registry number and will accept the registration
650 number issued by another state, if registrant so desires, providing such registration follows the
651 policy of uniform registration. This policy is intended to benefit the registrant by requiring but
652 one registration to be imprinted on the law label used, regardless of where merchandise may be
653 shipped. The registration number shall be preceded by name of state (may be abbreviated)
654 issuing REG. NO. and the two letter abbreviation of the country in which factory is located shall
655 follow the registration number in parenthesis.

656 Statutory Authority

657 Statutory Authority§ 32.1-12 of the Code of Virginia.

658 Historical Notes

659 Derived from Virginia Register Volume 23, Issue 23, eff. September 1, 2007.

660 **12VAC5-125-100. Sanitization of used Secondhand bedding and upholstered furniture.**

661 [~~A. No person engaged in commerce article of secondhand bedding or upholstered furniture~~
662 ~~shall rent, offer or expose for sale, barter, give away, or dispose of in any other commercial~~
663 ~~manner any article of bedding or upholstered furniture made, remade, reupholstered or renovated~~
664 ~~in violation of § 32.1-213 or 32.1-214 of the Code of Virginia or any secondhand article of bedding~~
665 ~~or upholstered furniture be sold unless since last used use such secondhand article has been~~
666 ~~sanitized by a reasonable process approved by the commissioner permitted sanitizer in~~
667 ~~accordance with this chapter.]~~

668 However, a retailer may sell, give away, or rent used upholstered furniture when the used
669 upholstered furniture has been purchased by the retailer as new furniture and has been used in
670 the course of business. Such used furniture shall be (i) conspicuously identified as used furniture,
671 and (ii) reduced in price, sold at auction, donated to charity, or made available for a rental fee,
672 and so tagged.

673 [~~A. No person shall sell an article of secondhand bedding or upholstered furniture unless~~
674 ~~since last use, a permitted sanitizer sanitizes the secondhand article in accordance with this~~
675 ~~chapter.]~~

676 B. [~~B.] No person [shall may] use in the making, remaking, reupholstering, or renovating of
677 any bedding or upholstered furniture any [shoddy] or any fabric from which shoddy is made or
678 any secondhand [shoddy.] filling material or any secondhand, feathers, animal hair, or down, in
679 the manufacture, reupholstery, or renovation of bedding and upholstered furniture unless such
680 shoddy, secondhand filling material, feathers, animal hair, or down has been sanitized by a
681 reasonable process approved by the commissioner permitted sanitizer in accordance with this
682 chapter.~~

683 [~~C. Any No person may sell] reupholstered or renovated bedding or upholstered
684 furniture [sold] to a customer who was not the original owner of the item [must be before it has
685 been] sanitized by a permitted sanitizer in accordance with this chapter.~~

686 C. Steri-Fab or Microban, or a comparable product approved by the commissioner meeting all
687 the qualities and specifications of these chemicals, are the industry recognized chemicals for
688 sanitizing and disinfecting mattresses, bedding or upholstered furniture. This process is required
689 for any business sanitizing used, secondhand or renovated mattresses, box springs, or similar
690 articles of bedding or upholstered furniture offered for resale or rent in Virginia. The use of these
691 chemicals in compliance with the specific instructions from the product manufacturers is deemed
692 a reasonable sanitization process approved by the commissioner. All licensees are required to
693 follow all product application, safety, storage, and disposal instructions provided by the product
694 manufacturers. It is a violation of federal law to use Steri-Fab or Microban disinfectant in a manner
695 inconsistent with its labeling. Diluting or mixing with other chemicals is prohibited. [~~B. Persons D.~~

696 A person] applying for approval of a process by which filling materials, bedding, or upholstered
697 furniture are sanitized shall submit to the Bedding Program a description of the process, test
698 results, apparatus, and method to be used in such process. The following general processes are
699 considered approved methods of sanitization; a list of specific approved products and methods
700 shall be maintained by the Bedding Program:

701 1. The application of an approved isopropyl-alcohol solution via direct spray onto the filling
702 materials, bedding, or upholstered furniture item. Application shall reach and treat all
703 surfaces, seams, piping, and other design features of the item. Application, storage, and
704 disposal of the isopropyl-alcohol solution shall be performed according to instructions
705 provided by the product manufacturers.

706 2. Heat treatment, via containment in a heat chamber or direct application of steam. All
707 submersion heat treatment methods shall exceed the temperature and time duration
708 necessary to reach the thermal death point for bedbugs (113°F (45°C) for 90 minutes). All
709 steam applications shall be designed to reach and treat all surfaces, seams, piping, and
710 other design features of the article to be sanitized and shall be conducted at a pace of 12
711 inches of article per 30 seconds, unless otherwise approved as provided in subsection B
712 of this section.

713 [~~C. E.~~] Unsanitized secondhand bedding and upholstered furniture shall be separated from
714 new or sanitized secondhand bedding or upholstered furniture by a dividing wall or a distance of
715 at least 20 feet.

716 [~~D. F.~~] Yellow law labels must [~~shall~~] in compliance with 12VAC5-125-90 [~~shall~~] be
717 attached and dated to all sanitized articles as soon as the approved sanitizing process is
718 completed.

719 [~~E. G.~~] Persons donating (no monetary exchange) secondhand articles of bedding and
720 upholstered furniture are not required to sanitize those articles if the donation is to a holder of a
721 valid sanitizing permit. Any items sold (monetary exchange) must be sanitized first. [~~A delivery~~
722 vehicle used to transport secondhand unsanitized bedding and upholstered furniture must be
723 sanitized by a process approved by subsection B of this section before it is used to transport new
724 or secondhand sanitized products. Such] [~~A delivery vehicle transporting secondhand~~
725 unsanitized and upholstered furniture may not transport new or secondhand sanitized products
726 before the vehicle is sanitized by a process approved by subsection D of this section.] [~~Such~~
727 sanitization Sanitization] shall include the entirety of the inside of the transport portion of the
728 vehicle; however, any area not used for transport separated from the storage portion of the vehicle
729 by a wall or partition shall not require sanitization.

730 [~~F. Persons H. A person] dealing in used selling secondhand bedding and upholstered~~
731 furniture, unless otherwise exempt from this chapter as considered in 12VAC5-125-40, shall
732 maintain a log of sanitized items bedding and upholstered furniture, indicating the identification of
733 each sanitized item, and the date the item was sanitized, and date rented or sold. Identification
734 shall be by visual description, of sufficient detail to allow identification of any sanitized item offered
735 for sale or by a unique number also printed in the [~~Other Information "Other Information"] section~~
736 of the yellow law label. A separate log shall be maintained in each vehicle sanitized as required
737 by subsection E of this section; this log shall indicate the dates of all sanitization events for that
738 vehicle within the previous 12 months.

739 [~~G. I.~~] To ensure effective sanitation is maintained, [a permit holder shall
740 store] mattresses [~~shall be stored at least~~] six inches or the height of one standard pallet off the
741 floor in a dry room and spaced to allow a four-inch separation around the four sides of the
742 mattresses. All areas where secondhand bedding or upholstered furniture are stored, rebuilt,
743 recovered, or presented for sale shall be kept clean and free of trash, hazardous waste, insects,
744 rodents, pets, or other animals. [~~Permit holders A permit holder~~] shall report to the Bedding

745 Program [~~any infestations~~ an infestation] of insects or rodents at the permit holder's place of
746 business, or in any bedding or upholstered furniture offered for sale by the permit holder.

747 **Statutory Authority**

748 Statutory Authority§ 32.1-12 of the Code of Virginia.

749 **Historical Notes**

750 Derived from Virginia Register Volume 23, Issue 23, eff. September 1, 2007.

751 **12VAC5-125-110. Sterilization of new animal hair, feathers and down.**

752 [~~A. No person shall use in the making, remaking, reupholstering or renovating of any bedding~~
753 ~~or upholstered furniture any new animal hair, new feathers, or new down [article of new bedding~~
754 ~~or upholstered furniture using animal hair, feathers, or down for filling material shall be sold or~~
755 ~~offered for sale unless such new animal hair, new feathers, or new down shall have has been~~
756 ~~sterilized by a reasonable process approved by the commissioner permitted sterilizer in~~
757 ~~accordance with this chapter.]~~

758 [A. No person may sell or offer for sale any article of new bedding or upholstered furniture
759 using animal hair, feathers, or down for filling material unless the animal hair, feathers, or down
760 is sterilized by a permitted sterilizer in accordance with this chapter.]

761 B. [Persons A person] applying for approval of a process by which animal hair, feathers, or
762 down are sterilized shall submit to the Bedding Program a description of the process, test results,
763 and any apparatus and method to be used in such process. The following general processes are
764 considered approved methods of sterilization; a list of specific methods and products shall be
765 maintained by the Bedding Program.

766 1. Treatment by steam under pressure, at 15 pounds maintained for 30 minutes or at 20
767 pounds maintained for 20 minutes. A gauge for registering steam pressure visible from
768 the outside of the room shall be provided.

769 2. Treatment by two applications of streaming steam, maintained for a period of one hour
770 each, and applied at intervals of not less than six nor more than 24 hours. Valved outlets
771 shall be provided near the top and bottom of the room.

772 3. Containment in a closed container held at a temperature of 235°F (113°C) for two hours.

773 4. Washing at a temperature of at least 140°F (60°C), followed by complete drying at a
774 temperature of at least 158°F (70°C).

775 **Statutory Authority**

776 § 32.1-12 of the Code of Virginia.

777 **Historical Notes**

778 Derived from Virginia Register Volume 23, Issue 23, eff. September 1, 2007.

779 **12VAC5-125-120. Separation and storage of new and sanitized items. (Repealed.)**

780 A. New and sanitized upholstered furniture, bedding and filling materials shall be kept
781 separate from any secondhand upholstered furniture, bedding and filling materials that have not
782 been sanitized. To prevent contamination, a distance of at least 20 feet or a dividing wall must be
783 kept between new and sanitized articles, and unsanitized used articles of bedding and
784 upholstered furniture.

785 B. Delivery vehicles shall be disinfected before delivering new or sanitized items if that vehicle
786 has been used to previously transport unsanitized used merchandise, not limited to bedding and
787 upholstered furniture.

788 C. Mattresses shall be stored at least six inches from the floor or the height of one standard
789 pallet (whatever is greater) in a dry room preferably above ground, and so spaced to allow a four
790 inch separation around the four sides of the mattresses. The storage as well as workroom areas

791 for sanitized items shall be clean and free from trash, vermin, insects, filth and any hazardous
792 waste. Pets and other animals shall be prohibited in storage and workroom areas.

793 **Statutory Authority**

794 Statutory Authority § 32.1-12 of the Code of Virginia.

795 **Historical Notes**

796 Derived from Virginia Register Volume 23, Issue 23, eff. September 1, 2007.

797 **12VAC5-125-130. Violation of regulations.**

798 A. ~~It is the responsibility of the retailer to~~ The retailer shall] make certain ensure [that] any
799 article of bedding or upholstered furniture ~~that he offers~~ offered for sale in the Commonwealth of
800 Virginia, regardless of where manufactured, is properly labeled and ~~is~~ in compliance with all
801 provisions of ~~the law~~ this chapter.

802 B. ~~Upon a complaint made to the commissioner as provided in § 32.1-224 of the Code of~~
803 ~~Virginia, the commissioner may order the return of any item of bedding or upholstered furniture~~
804 ~~or any filling material made, remade, renovated, reupholstered, prepared, processed, labeled, or~~
805 ~~not labeled in violation of the provisions of this chapter to the manufacturer or importer thereof.~~
806 ~~The manufacturer or importer shall be liable to the person returning such item for the costs of~~
807 ~~crating, shipping and the invoice price to the purchaser. Failure of a manufacturer or importer to~~
808 ~~pay such costs to the person returning such item shall be grounds for revocation or suspension~~
809 ~~of a license issued pursuant to this chapter.~~

810 C. ~~B.~~ ~~The commissioner or his designee~~ [health] commissioner may order "off sale" all any
811 improperly sanitized or unsanitized articles of secondhand bedding or upholstered furniture "off
812 sale". ~~[A significant number of violations in any one business location will~~ Violations of this chapter
813 amounting to an imminent health hazard] may result in a sign being placed on the business door
814 taking off sale all used bedding and upholstered items in the store. These items may not be
815 bartered, given away, rented, or disposed of in any manner inconsistent with this chapter until
816 properly sanitized.

817 D. ~~The commissioner may refuse to issue, may suspend or may revoke the license or permit~~
818 ~~of any person who violates any provision of this chapter, or who is not a resident of the~~
819 ~~Commonwealth and fails or refuses to enter an appearance in any circuit court in the~~
820 ~~Commonwealth to answer a charge or charges of violation of any provision of this chapter, or~~
821 ~~order of the board or commissioner within 25 days after service upon him of a notice by certified~~
822 ~~mail.~~

823 E. ~~Any violation of the provisions of this chapter shall constitute a prohibited practice in~~
824 ~~accordance with § 59.1-200 of the Code of Virginia and shall be subject to any and all of the~~
825 ~~enforcement provisions of the Virginia Consumer Protection Act (§ 59.1-196 et seq. of the Code~~
826 ~~of Virginia)~~ C. Any person who violates this chapter shall be subject to enforcement provisions of
827 the Virginia Consumer Protection Act (§ 59.1-196 et seq. of the Code of Virginia) and penalties
828 provided by § 32.1-27 of the Code of Virginia.

829 F. ~~Any person violating any provision of this chapter shall be guilty of a Class 2 misdemeanor~~
830 ~~pursuant to § 32.1-226 of the Code of Virginia.~~

831 **Statutory Authority**

832 Statutory Authority § 32.1-12 of the Code of Virginia.

833 **Historical Notes**

834 Derived from Virginia Register Volume 23, Issue 23, eff. September 1, 2007.

835 **12VAC5-125-140. Enforcement of regulation. (Repealed.)**

836 A. ~~This chapter shall be enforced by the board and the commissioner, as executive officer of~~
837 ~~the board.~~

838 B. All persons shall operate in compliance with the requirements set forth in this chapter and
839 shall not operate without a valid license or permit.

840 C. Pursuant to the authority granted in § 32.1-224 of the Code of Virginia, the commissioner
841 may issue orders to require any license or permit holder or other person to comply with the
842 provisions of this chapter. The order may require the following:

- 843 1. The immediate cessation and correction of the violation;
- 844 2. Appropriate remedial action to ensure that the violation does not continue or recur;
- 845 3. The submission of a plan to prevent future violations;
- 846 4. Any other corrective action deemed necessary for proper compliance with the
847 regulations, and safety and health of the consumers of the Commonwealth.

848 D. Before the issuance of an order, the commissioner must comply with the requirements of
849 § 32.1-26 of the Code of Virginia.

850 E. All orders issued pursuant to subsection C of this section shall become effective not less
851 than 15 days after mailing a copy thereof by certified mail to the last known address of the license
852 or permit holder or person violating this chapter.

853 F. The commissioner may act as the agent of the board to enforce all effective orders and
854 these regulations. Should any license or permit holder fail to comply with any effective order or
855 these regulations, the commissioner may:

- 856 1. Institute a proceeding to revoke the license or permit in accordance with 12VAC5-125-
857 60;
- 858 2. Request the attorney for the Commonwealth to bring a criminal action;
- 859 3. Request the Attorney General to bring an action for civil penalty, injunction, or other
860 appropriate remedy; or
- 861 4. Do any combination of the above.

862 G. Not exclusive means of enforcement. Nothing contained in this section shall be interpreted
863 to require the commissioner to issue an order prior to seeking enforcement of any regulations or
864 statute through an injunction, mandamus or criminal prosecution.

865 H. Hearings before the commissioner or his designee shall include any of the following forms
866 depending on the nature of the controversy and the interests of the parties involved:

- 867 1. Informal hearings. An informal hearing is a meeting with the Bedding Program
868 Supervisor presiding and held in conformance with § 2.2-4019 of the Code of Virginia.
- 869 2. Adjudicatory hearing. The adjudicatory hearing is a formal, public adjudicatory
870 proceeding before the commissioner, or his designated hearing officer, and held in
871 conformance with § 2.2-4020 of the Code of Virginia.

872 **Statutory Authority**

873 Statutory Authority § 32.1-12 of the Code of Virginia.

874 **Historical Notes**

875 Derived from Virginia Register Volume 23, Issue 23, eff. September 1, 2007.

876 **12VAC5-125-145. Variances.**

877 A. [One The commissioner may grant a variance to one] or more of the provisions in this
878 chapter [may be waived] in whole or in part [when, as determined by the health commissioner,
879 if, in the commissioner's discretion,] the hardship imposed by the provision, which may be
880 economic, outweighs the benefits that may be received by the public and that granting [such a
881 the] variance does not subject the public to unreasonable health risks. [Variances shall be issued
882 in writing by the health commissioner. The commissioner shall issue variances in writing.]

883 B. [Any A] person who seeks a variance shall apply in writing to the Bedding Program. The
884 application shall include:

- 885 1. A citation to the regulation from which a variance is requested;
886 2. The nature and duration of the variance requested;
887 3. Evidence that establishes that the public health and welfare would not be adversely
888 affected if the variance were granted;
889 4. Suggested conditions that might be imposed on the granting of a variance that would
890 limit the detrimental impact on the public health and welfare;
891 5. Other information believed pertinent by the applicant; and
892 6. Such other information as the Bedding Program or [health] commissioner may require.

893 C. If the [health] commissioner proposes to grant the variance request, the [commissioner
894 shall notify the] applicant [shall be notified] in writing of this decision within 90 [calendar] days
895 of receipt of the variance request. If the [health] commissioner proposes to deny the variance
896 request, the [health] commissioner shall notify the applicant of the proposed denial within 90 [
897 calendar] days of receipt of the variance request and provide an opportunity for an informal fact-
898 finding conference as provided in § 2.2-4019 of the Code of Virginia.

899 **Statutory Authority**

900 § of the Code of Virginia.

901 **Historical Notes**

902 Derived from Virginia Register Volume , Issue , eff. Month dd, yyyy.

903 **12VAC5-125-150. Request for hearing. (Repealed.)**

904 ~~A request for an informal hearing shall be made by sending the request in writing to the~~
905 ~~Bedding Program. Requests for hearings shall cite the reasons for the hearing request and shall~~
906 ~~cite the section(s) of these regulations involved and must be received within 15 days of the~~
907 ~~decision by the department that lead to the hearing request.~~

908 **Statutory Authority**

909 ~~Statutory Authority § 32.1-12 of the Code of Virginia.~~

910 **Historical Notes**

911 ~~Derived from Virginia Register Volume 23, Issue 23, eff. September 1, 2007.~~

912 **12VAC5-125-160. Hearing as a matter of right. (Repealed.)**

913 ~~Any person holding a license or permit or named party whose rights, duties, or privileges have~~
914 ~~been, or may be affected by any case decision of the board or its subordinates in the~~
915 ~~administration of these regulations, shall have a right to both informal and adjudicatory hearings.~~
916 ~~The commissioner may require participation in an informal hearing before granting the request for~~
917 ~~a full adjudicatory hearing. Exception: No person other than an owner shall have the right to an~~
918 ~~adjudicatory hearing to challenge the issuance of a license or permit unless the person can~~
919 ~~demonstrate at an informal hearing that the minimum standards contained in these regulations~~
920 ~~have not been applied and that he will be injured in some manner by the issuance of the license~~
921 ~~or permit.~~

922 **Statutory Authority**

923 ~~Statutory Authority § 32.1-12 of the Code of Virginia.~~

924 **Historical Notes**

925 ~~Derived from Virginia Register Volume 23, Issue 23, eff. September 1, 2007.~~

926 **12VAC5-125-170. Penalties, injunctions, civil penalties and charges for violations.**
927 **(Repealed.)**

928 A. Any person willfully violating, or refusing, failing, or neglecting to comply with any
929 regulations or order of the board or commissioner, or any provision of this chapter, shall be guilty
930 of a Class 2 misdemeanor unless a different penalty is specified. Each day of violation shall
931 constitute a separate offense.

932 B. Any person violating, or failing, neglecting, or refusing to obey any order of the board or
933 commissioner, or any provision of this chapter may be compelled, in a proceeding instituted in an
934 appropriate court by the board or commissioner, to obey and comply with such regulations, order,
935 or any applicable provision of Title 32.1 of the Code of Virginia. The proceeding may be by
936 injunction, mandamus, or other appropriate remedy.

937 C. Without limiting the remedies that may be obtained pursuant to subsection B of this section,
938 any person violating or failing, neglecting, or refusing to obey any injunction, mandamus, or other
939 remedy obtained pursuant to subsection B of this section shall be subject, in the discretion of the
940 court, to a civil penalty not to exceed \$25,000 for each violation. Each day of violation shall
941 constitute a separate offense.

942 D. With the consent of any person who has violated or failed, neglected or refused to obey
943 any regulation or order of the board or commissioner or any applicable provision of Title 32.1 of
944 the Code of Virginia, the board may provide, in an order issued by the board against such person,
945 for the payment of civil charges for past violations in specific sums not to exceed the limit set forth
946 in subsection C of this section. Such civil charges shall be in place of any appropriate civil penalty
947 that could be imposed under subsection C of this section.

948 **Statutory Authority**

949 Statutory Authority § 32.1-12 of the Code of Virginia.

950 **Historical Notes**

951 Derived from Virginia Register Volume 23, Issue 23, eff. September 1, 2007.

952 **12VAC5-125-180. Fees.**

953 The board [State Board of Health board] shall set the annual fees imposed for licenses and
954 permits issued pursuant to this chapter. All fees collected shall be deposited and held by the
955 department in a separate fund, from which shall be paid all expenditures necessary in carrying
956 out the provisions of this chapter.

957 The board shall review the fees being charged for the services delivered by the department
958 pursuant to Article 7 (§ 32.1-212 et seq.) of Chapter 6 of Title 32.1 as such services and fees
959 were in effect prior to July 1, 2003, and shall revise such fees, as appropriate, consistent with the
960 level of services required by this chapter.

The fee <u>Table 1. Fee schedule established by the board is as follows:</u>	
<u>Vendor Description: License or Permit Type</u>	<u>Annual Fee: (U.S. Dollars)</u>
Manufacturer of bedding	\$100
Manufacturer of upholstered furniture	\$100
Renovator (bedding)*	\$25
Reupholsterer*	\$25

Supply dealer	\$25
Importer	\$100 <u>see Table 2</u>
Sanitizer	\$60
Sterilizer	\$60
Distributor/wholesaler <u>Distributor</u>	\$100 <u>see Table 2</u>
*Self-employed renovators and reupholsterers with no employees are excluded from this fee.	

<u>Table 2. Importer and distributor license fees</u>	
<u># of Associated URNs</u>	<u>Importer Annual Fee (U.S. Dollars)</u>
<u>1</u>	<u>\$100</u>
<u>2</u>	<u>\$100</u>
<u>3</u>	<u>\$300</u>
<u>4</u>	<u>\$400</u>
<u>5-9</u>	<u>\$805</u>
<u>10-14</u>	<u>\$1,380.00</u>
<u>15-19</u>	<u>\$1,995.00</u>
<u>20-24</u>	<u>\$2,530.00</u>
<u>25-29</u>	<u>\$3,105.00</u>
<u>30-34</u>	<u>\$3,680.00</u>
<u>35-39</u>	<u>\$4,255.00</u>
<u>40-44</u>	<u>\$4,830.00</u>
<u>45-49</u>	<u>\$5,405.00</u>
<u>50-54</u>	<u>\$5,980.00</u>
<u>55-59</u>	<u>\$6,555.00</u>
<u>60-64</u>	<u>\$7,130.00</u>
<u>65-69</u>	<u>\$7,705.00</u>
<u>70-74</u>	<u>\$8,280.00</u>
<u>75-79</u>	<u>\$8,855.00</u>
<u>80-84</u>	<u>\$9,430.00</u>
<u>85-89</u>	<u>\$10,005.00</u>
<u>90-94</u>	<u>\$10,580.00</u>

95-99	\$11,155.00
For 100 or more licenses, the additional fee for each increment of five licenses is \$575.	

- 962 **Statutory Authority**
- 963 § 32.1-12 of the Code of Virginia.
- 964 **Historical Notes**
- 965 Derived from Virginia Register Volume 23, Issue 23, eff. September 1, 2007.

- 966 FORMS (12VAC5-125)
- 967 [[Application for Bedding and Upholstery License \(rev. 10/2022\)](#)]
- 968 [[Application for Bedding and Upholstery Permit \(rev. 10/2022\)](#)]
- 969 ~~Documents Incorporated by Reference (12VAC5-125)(Repealed)~~
- 970 ~~DOCUMENTS INCORPORATED BY REFERENCE (12VAC5-125)~~
- 971 ~~2004 Manual of Labeling Laws, Registration Requirements, International Sleep Products~~
- 972 ~~Association.~~



COMMONWEALTH of VIRGINIA

Department of Health
P O BOX 2448
RICHMOND, VA 23218

TTY 7-1-1 OR
1-800-828-1120

MEMORANDUM

DATE: February 23, 2023

TO: Virginia State Board of Health

FROM: Julie Henderson, Director
Office of Environmental Health Service

SUBJECT: Notice of Intent for Regulatory Action (NOIRA) - Regulations Governing Tourist Establishment Swimming Pools and Other Public Pools (12VAC5-460) following Periodic Review

Enclosed for your review is a NOIRA to repeal and replace the Regulations Governing Tourist Establishment Swimming Pools and Other Public Pools (12VAC5-460, hereafter, "Regulations"). The Department conducted a periodic review of the Regulations and in its finding, filed on April 8, 2022, the Department recommended the regulation be amended. Through review of the proposed amendments and communication with the stakeholder workgroup, the Department found that the more appropriate action is to repeal and replace the Regulations. The NOIRA to amend the regulations was withdrawn on January 23, 2023, and the Department submits this NOIRA with the intention to repeal and replace 12VAC5-460.

The Regulations were promulgated to protect public health and safety at public swimming pools, saunas, and other similar water recreational facilities located at permitted establishments (campgrounds, hotels, and summer camps). Upon conclusion of a periodic review and communication with stakeholders, it was determined the Regulations require repeal and replacement as they do not appear to reflect current safety and health standards, and the necessary reorganization is sufficient to replace the entire chapter. Examples of items requiring updates include standards for disinfection and filtration, facility maintenance, safety equipment, staffing, and general operations, all of which could mitigate the risks of pool-associated illnesses, injuries, and death, including cuts, falls, diving or fall-associated spinal cord or head injuries, entrapment evisceration, and drowning.

The Office of Environmental Health Services ("OEHS") proposes to repeal and replace the Regulations to ensure the standards for tourist establishment swimming pools and water recreational facilities represent the latest science and current industry practices regarding health and safety, are inclusive of the needs and wants of public and private community partners, and align with our mission to promote and protect the health of all Virginians. OEHS recommends the approval of this NOIRA.



townhall.virginia.gov

Notice of Intended Regulatory Action (NOIRA) Agency Background Document

Agency name	Virginia Department of Health
Virginia Administrative Code (VAC) Chapter citation(s)	12VAC5-460
VAC Chapter title(s)	Regulations Governing Tourist Establishment Swimming Pools and Other Public Pools
Action title	Repeal and replace 12VAC5-460 as a result of a periodic review
Date this document prepared	February 21, 2023

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Order 19 (2022) (EO 19), any instructions or procedures issued by the Office of Regulatory Management (ORM) or the Department of Planning and Budget (DPB) pursuant to EO 19, the Regulations for Filing and Publishing Agency Regulations (1 VAC 7-10), and the *Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code*.

Brief Summary

Provide a brief summary (preferably no more than 2 or 3 paragraphs) of the subject matter, intent, and goals of this regulatory change (i.e., new regulation, amendments to an existing regulation, or repeal of an existing regulation).

The Regulations Governing Tourist Establishment Swimming Pools and Other Public Pools (hereafter, "Regulations") protect public health and safety at public swimming pools, saunas, and other similar water recreational facilities located at tourist establishments (campgrounds, hotels, and summer camps). This action, following a periodic review concluded in April of 2022, seeks to repeal and replace the regulatory text to ensure an effective regulatory program governing water facility safety is maintained throughout the Commonwealth. This action will: remove outdated information; add and replace text to reflect best practices and the latest science from industry, academia, public health experts, and other stakeholders; and clarify regulatory and enforcement standards.

Acronyms and Definitions

Define all acronyms or technical definitions used in this form.

“Board” or “State Board” means the State Board of Health.

"Bed-and-breakfast" means a residential-type establishment that provides (i) two or more rental accommodations for transient guests and food service to a maximum of 18 transient guests on any single day for five or more days in any calendar year or (ii) at least one rental accommodation for transient guests and food service to a maximum of 18 transient guests on any single day for 30 or more days in any calendar year.

"Campground" means any area, place, parcel, or tract of land, by whatever name called, on which three or more campsites are occupied or intended for occupancy, or facilities are established or maintained, wholly or in part, for the accommodation of camping units for periods of overnight or longer, whether the use of the campsites and facilities is granted gratuitously, or by rental fee, lease, or conditional sale, or by covenants, restrictions, and easements, including any travel trailer camp, recreation camp, family campground, camping resort, or camping community. "Campground" does not mean a summer camp, migrant labor camp, or park for manufactured homes as defined in this section and in §§ 32.1-203 and 36-85.3, or a construction camp, storage area for unoccupied camping units, or property upon which the individual owner may choose to camp and not be prohibited or encumbered by covenants, restrictions, and conditions from providing his sanitary facilities within his property lines.

“Department” and “VDH” mean the Virginia Department of Health.

"Hotel" means any establishment offering to the public for compensation transitory lodging or sleeping accommodations, overnight or otherwise, including but not limited to facilities known by varying nomenclatures or designations as hotels, motels, travel lodges, tourist homes, or hostels and similar facilities by whatever name called that consist of two or more lodging units. This definition of a hotel includes bed and breakfast facilities as defined in 12VAC5-431 and § 35.1-1.

“PPM” means part per million.

"Summer camp" means any building, tent, or vehicle, or group of buildings, tents, or vehicles, if operated as one place or establishment, or any other place or establishment, public or private, together with the land and waters adjacent thereto, that is operated or used in this Commonwealth for the entertainment, education, recreation, religious instruction or activities, physical education, or health of persons under 18 years of age who are not related to the operator of such place or establishment by blood or marriage within the third degree of consanguinity or affinity, if 12 or more such persons at any one time are accommodated, gratuitously or for compensation, overnight and during any portion of more than two consecutive days.

“Tourist establishment,” for the purposes of this review, means any facility or establishment offering to the public lodging or sleeping accommodations, overnight or otherwise, including but not limited to facilities such as hotels, campgrounds or summer camps as determined by varying nomenclature, that is permitted by the Department.

Mandate and Impetus

Identify the mandate for this regulatory change and any other impetus that specifically prompted its initiation, (e.g., new or modified mandate, petition for rulemaking, periodic review, or board decision). For purposes of executive branch review, “mandate” has the same meaning as defined in the ORM

procedures, “a directive from the General Assembly, the federal government, or a court that requires that a regulation be promulgated, amended, or repealed in whole or part.”

The Department conducted a periodic review of the Regulations pursuant to Executive Order 14 (as amended, July 16, 2018). In its finding, filed on April 8, 2022, the Department recommended the regulation be amended. Through review of the proposed amendments and communication with the stakeholder workgroup, the Department found that the more appropriate action is to repeal and replace the Regulations. The NOIRA to amend the regulations was withdrawn on January 23, 2023, and the Department submits this NOIRA with the intention to repeal 12VAC5-460 and replace it with 12VAC5-461.

Legal Basis

Identify (1) the promulgating agency, and (2) the state and/or federal legal authority for the regulatory change, including the most relevant citations to the Code of Virginia and Acts of Assembly chapter number(s), if applicable. Your citation must include a specific provision, if any, authorizing the promulgating agency to regulate this specific subject or program, as well as a reference to the agency’s overall regulatory authority.

The promulgating agency is the Virginia Department of Health (VDH). Chapter 2 of Title 35.1 of the Code of Virginia enumerates the legal authority for VDH to regulate certain public swimming pools, saunas, and other similar facilities, including personnel standards and the operation thereof.

Section 35.1-11 of the Code of Virginia states,

“The Board shall make, adopt, promulgate, and enforce regulations necessary to carry out the provisions of this title and to protect the public health and safety. In promulgating regulations, the Board shall consider the accepted standards of health including the use of precautions to prevent the transmission of communicable diseases, hygiene, sanitation, safety, and physical plant management.”

Section 35.1-13 of the Code of Virginia states,

“Regulations of the Board governing hotels shall provide minimum standards for, but shall not be limited to: (i) food preparation and handling; (ii) physical plant sanitation; (iii) the provision, storage, and cleansing of linens and towels; (iv) general housekeeping and maintenance practices; (v) requirements for approved water supply and sewage disposal systems; (vi) vector and pest control; (vii) swimming pools, saunas, and other similar facilities, including personnel standards for the operation thereof; (viii) ice machines and dispensers of perishable food items; and (ix) a procedure for obtaining a license.”

Section 35.1-16 of the Code of Virginia states,

“The regulations of the Board governing summer camps shall include, but not be limited to: (i) an approved drinking water supply; (ii) an approved sewage disposal system; (iii) an approved solid waste disposal system; (iv) the adequate and sanitary preparation, handling, protection and preservation of food; (v) the proper maintenance of buildings, grounds, and equipment; (vi) vector and pest control; (vii) toilet, swimming, and bathing facilities, including shower facilities; (viii) a procedure for obtaining a license.”

Lastly, Section 35.1-17 of the Code of Virginia states,

“The regulations of the Board governing campgrounds shall include minimum standards for (i) an approved drinking water supply; (ii) an approved sewage disposal system; (iii) an approved solid waste disposal system; (iv) the proper maintenance of buildings, grounds, and equipment; (v)

vector and pest control; (vi) toilet, swimming, and bathing facilities, including shower facilities; (vii) effective measures for the control of animals and pets; (viii) appropriate procedures and safeguards for hazardous situations, including specifically the maintenance and sale of propane gas or other explosives and combustibles; and (ix) a procedure for obtaining a license.”

Purpose

Describe the specific reasons why the agency has determined that this regulation is essential to protect the health, safety, or welfare of citizens. In addition, explain any potential issues that may need to be addressed as the regulation is developed.

While the Regulations are essential to protecting the health and safety of patrons at pools, spas, and recreational water facilities at tourist establishments located within the Commonwealth, they are also statutorily mandated as outlined in §§35.1-13, 35.1-16, and 35.1-17 of the Code of Virginia.

The Regulations have not undergone a comprehensive review in sixty years. In their current form, they lack provisions to address adequate disinfection and filtration standards to prevent communicable illnesses such as cryptosporidiosis, giardiasis, shigellosis, and legionellosis. In addition, the public would benefit from repealing and replacing the text to include up-to-date standards related to facility maintenance, safety equipment, staffing, and general operations which could mitigate the risks of pool-associated injuries and death, including cuts, falls, diving or fall-associated spinal cord or head injuries, entrapment evisceration, and drowning.

While the current regulation contains some provisions addressing these issues, incorporating developments from recent advancements in science and emerging technologies will bring the chapter up to current standards.

Substance

Briefly identify and explain the new substantive provisions that are being considered, the substantive changes to existing sections that are being considered, or both.

Repeal and replacement of the Regulations will result in substantive revisions and new substantive provisions to the regulation that will include repealing, replacing, and adding text related to administrative and enforcement provisions, definitions, pool operation and maintenance (including water treatment and chemical handling), signage and safety provisions, management, and other provisions or standards deemed necessary.

Alternatives to Regulation

Describe any viable alternatives to the regulatory change that were considered, and the rationale used by the agency to select the least burdensome or intrusive alternative that meets the essential purpose of the regulatory change. Also, include discussion of less intrusive or less costly alternatives for small businesses, as defined in § 2.2-4007.1 of the Code of Virginia, of achieving the purpose of the regulatory change.

No viable alternatives for achieving the purpose of the regulation could be determined. The regulations enable the Department to fulfill its statutory mandates as established in Chapter 2 of Title 35.1 of the Code of Virginia. Further, the regulation is necessary to ensure that the Department’s statutory

requirements are executed in the least burdensome and most efficient and cost-effective manner possible while protecting the health, safety and welfare of the citizens of Virginia.

Periodic Review and Small Business Impact Review Announcement

If you wish to use this regulatory action to conduct, and this NOIRA to announce, a periodic review (pursuant to § 2.2-4017 of the Code of Virginia and the ORM procedures), and a small business impact review (§ 2.2-4007.1 of the Code of Virginia) of this regulation, keep the following text. Modify it as necessary for your agency. Otherwise, delete the paragraph below and insert “This NOIRA is not being used to announce a periodic review or a small business impact review.”

This NOIRA is not being used to announce a periodic review or small business impact review.

Public Participation

Indicate how the public should contact the agency to submit comments on this regulation, and whether a public hearing will be held, by completing the text below. In addition, as required by § 2.2-4007.02 of the Code of Virginia, describe any other means that will be used to identify and notify interested parties and seek their input, such as regulatory advisory panels or general notices.

The Department is providing an opportunity for comments on this regulatory proposal, including but not limited to (i) the costs and benefits of the regulatory proposal, (ii) any alternative approaches, and (iii) the potential impacts of the regulation.

Anyone wishing to submit written comments for the public comment file may do so through the Public Comment Forums feature of the Virginia Regulatory Town Hall website at: <https://townhall.virginia.gov>. Comments may also be submitted by mail, email or fax to Briana Bill, briana.bill@vdh.virginia.gov; or fax (804) 864-7475. In order to be considered, comments must be received by 11:59 pm on the last day of the public comment period.

A public hearing will not be held following the publication of the proposed stage of this regulatory action.



COMMONWEALTH of VIRGINIA

Department of Health
P O BOX 2448
RICHMOND, VA 23218

TTY 7-1-1 OR
1-800-828-1120

MEMORANDUM

DATE: February 10, 2023

TO: State Board of Health

FROM: Rebekah E. Allen, JD
Senior Policy Analyst, Office of Licensure and Certification

SUBJECT: Proposed Stage – Regulations for the Licensure of Home Care Organizations – Amend the Regulation after Enactment of Chapter 470 (2021 Acts of Assembly, Special Session I)

Enclosed for your review are proposed amendments to the Regulations for the Licensure of Home Care Organizations (12VAC5-381-10 *et seq.*).

Chapter 470 of the 2021 Acts of Assembly, Special Session I amended Code of Virginia § 32.1-162.12 to direct the State Board of Health to promulgate regulations for home care organizations that govern the delivery of personal care services shall provide for supervision of home care attendants providing personal care services by a licensed nurse through use of interactive audio or video technology. This regulatory action will be used to amend 12VAC5-381-10 *et seq.* to address remote supervision of personal care services by home care organizations.

The proposed amendments include: adding and amending definitions; allowing either RNs or LPNs to supervise home care attendants; specifying what needs to be documented about supervision and each visit; specifying the RN should include supervision frequency and whether remote supervision is an acceptable alternate to in-person supervision; clarifying that review of the plan of care should be documented in writing; specifying the frequency of RN assessment of a client or patient; specifying the client or patient may refuse or withdraw consent for remote interactive audio and video supervision and that HCOs cannot decrease frequency of supervision in response; and setting the interval at which remote interactive supervision must take place.

The State Board of Health is requested to approve the proposed amendments. Should the Board of Health approve them, they will be submitted to the Office of the Attorney General to begin the Executive Branch review process. Following Executive Branch review and approval, the proposed amendments will be submitted to the Virginia Register of Regulations and the Virginia Regulatory Town Hall website for publication with a 60-day comment period. Following the close of that public comment period, VDH will draft the final amendments.



townhall.virginia.gov

Proposed Regulation Agency Background Document

Agency name	State Board of Health
Virginia Administrative Code (VAC) Chapter citation(s)	12VAC5-381-10 <i>et seq.</i>
VAC Chapter title(s)	Regulations for the Licensure of Home Care Organizations
Action title	Amend the Regulation after Enactment of Chapter 470 (2021 Acts of Assembly, Special Session I)
Date this document prepared	February 10, 2023

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Order 19 (2022) (EO 19), any instructions or procedures issued by the Office of Regulatory Management (ORM) or the Department of Planning and Budget (DPB) pursuant to EO 19, the Regulations for Filing and Publishing Agency Regulations (1 VAC 7-10), and the *Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code*.

Brief Summary

Provide a brief summary (preferably no more than 2 or 3 paragraphs) of this regulatory change (i.e., new regulation, amendments to an existing regulation, or repeal of an existing regulation). Alert the reader to all substantive matters. If applicable, generally describe the existing regulation.

Chapter 470 of the 2021 Acts of Assembly, Special Session I amended Code of Virginia § 32.1-162.12 to direct the State Board of Health to promulgate regulations for home care organizations that govern the delivery of personal care services shall provide for supervision of home care attendants providing personal care services by a licensed nurse through use of interactive audio or video technology. This regulatory action will be used to amend 12VAC5-381-10 *et seq.* to address remote supervision of personal care services by home care organizations.

Acronyms and Definitions

Define all acronyms used in this form, and any technical terms that are not also defined in the "Definitions" section of the regulation.

“Board” means the State Board of Health.

“HCO” means home care organization.

“LPN” means licensed practical nurse.

“RN” means registered nurse.

“VDH” means the Virginia Department of Health.

Mandate and Impetus

Identify the mandate for this regulatory change and any other impetus that specifically prompted its initiation (e.g., new or modified mandate, petition for rulemaking, periodic review, or board decision). For purposes of executive branch review, “mandate” has the same meaning as defined in the ORM procedures, “a directive from the General Assembly, the federal government, or a court that requires that a regulation be promulgated, amended, or repealed in whole or part.”

Section 32.1-162.12 of the Code of Virginia requires the Board to adopt regulations for HCOs as may be necessary to protect the public health, safety, and welfare. Chapter 470 (2021 Acts of Assembly, Special Session I) amended this section to also require the Board to adopt regulations addressing supervision of home care attendants providing personal care services by a licensed nurse through use of interactive audio or video technology

Legal Basis

Identify (1) the promulgating agency, and (2) the state and/or federal legal authority for the regulatory change, including the most relevant citations to the Code of Virginia and Acts of Assembly chapter number(s), if applicable. Your citation must include a specific provision, if any, authorizing the promulgating agency to regulate this specific subject or program, as well as a reference to the agency’s overall regulatory authority.

Section 32.1-12 of the Code of Virginia gives the Board the responsibility to make, adopt, promulgate, and enforce such regulations as may be necessary to carry out the provisions of Title 32.1 of the Code of Virginia. Section 32.1-162.12 requires the Board to adopt regulations governing the activities and services provided by HCOs.

Purpose

Explain the need for the regulatory change, including a description of: (1) the rationale or justification, (2) the specific reasons the regulatory change is essential to protect the health, safety or welfare of citizens, and (3) the goals of the regulatory change and the problems it is intended to solve.

By enacting § 32.1-162.12, the General Assembly required the Board to adopt regulations governing the activities and services provided by HCOs, as may be necessary to protect the public health, safety, and welfare. Section 32.1-162.12 further requires such regulations to address supervision of home care attendants providing personal care services by a licensed nurse through use of interactive audio or video technology.

Substance

Briefly identify and explain the new substantive provisions, the substantive changes to existing sections, or both. A more detailed discussion is provided in the “Detail of Changes” section below.

Section 10. Definitions

Amended the definition of

- “client record” to include patients of an HCO
- “functional limitation” to remove reference to RNs

Section 360. Personal care services

Amended to:

- add section-specific definitions for “client”, “patient”, and “plan of care”;
- allow RN or LPNs to supervise home care attendants;
- specify what needs to be documented on each visit in the client record or patient record;
- clarify that the plan of care must be developed prior to any personal care services being delivered;
- specify that the registered nurse should include frequency of supervision and whether remote supervision is an acceptable alternate to in-person on-site supervision;
- clarify that the review of the plan of care between the home care attendant and their supervisor should be documented in writing;
- specify when and how often a RN should assess a client or patient;
- specify that the client or patient may refuse or withdraw consent for remote interactive audio and video supervision;
- require that HCOs must tell clients and patients of the right to refuse or withdraw consent for remote interactive audio and video supervision;
- specify that HCOs cannot decrease frequency of supervision because a client or patient has refused or withdrawn consent for remote interactive audio and video supervision;
- set the interval at which remote interactive audio and video supervision must take place; and
- specify what information about supervision must be documented in the client record or patient record.

Issues

Identify the issues associated with the regulatory change, including: 1) the primary advantages and disadvantages to the public, such as individual private citizens or businesses, of implementing the new or amended provisions; 2) the primary advantages and disadvantages to the agency or the Commonwealth; and 3) other pertinent matters of interest to the regulated community, government officials, and the public. If there are no disadvantages to the public or the Commonwealth, include a specific statement to that effect.

The primary advantages to the public are flexibility in supervision of personal care services provided by HCOs balanced against clients’ and patients’ privacy. There are no primary disadvantages to the public. The primary advantages to VDH or the Commonwealth are improved documentation of supervision and more explicit supervision standards. There are not primary disadvantages to VDH or the Commonwealth.

Other pertinent areas of interest to the regulated community, government officials, and the public is the competing interests in a client or patient’s privacy in their own home, in effective supervision, and in workforce demands for health care workers. The Board recognizes that the health care workforce, both statewide and nationally, remains under strain and technology may help ease that burden. The Board does note that audio and video technology for remote supervision would require connectivity to telecommunications; given the rurality of some regions of the Commonwealth, the lack of robust broadband internet access, electronic devices and even cellular networks may not be available or stable enough for remote supervision. Remote interactive supervision requires audio and video technology that typically has

recording capabilities and the Board recognizes that clients and patients may be ill at ease at the choice between receiving care and compromising their privacy. While there is some privacy compromise when in-person on-site supervision takes place, the compromise is limited to those persons physically at a client's or patient's residence; that is not necessarily true when remote interactive audio and/or video supervision takes place. The Board sought to address the privacy concerns by allowing the client or patient to refuse or withdraw consent for remote interactive audio and video supervision without fear of termination from care for that refusal or withdrawal. In-person supervision remains the default supervision method, unless an RN determines that remote supervision is an appropriate alternative when assessing the client's or patient's care needs and the client or patient does not refuse or withdraw consent for remote supervision.

Requirements More Restrictive than Federal

Identify and describe any requirement of the regulatory change which is more restrictive than applicable federal requirements. Include a specific citation for each applicable federal requirement, and a rationale for the need for the more restrictive requirements. If there are no applicable federal requirements, or no requirements that exceed applicable federal requirements, include a specific statement to that effect.

There are no applicable federal requirements.

Agencies, Localities, and Other Entities Particularly Affected

Consistent with § 2.2-4007.04 of the Code of Virginia, identify any other state agencies, localities, or other entities particularly affected by the regulatory change. Other entities could include local partners such as tribal governments, school boards, community services boards, and similar regional organizations. "Particularly affected" are those that are likely to bear any identified disproportionate material impact which would not be experienced by other agencies, localities, or entities. "Locality" can refer to either local governments or the locations in the Commonwealth where the activities relevant to the regulation or regulatory change are most likely to occur. If no agency, locality, or entity is particularly affected, include a specific statement to that effect.

Other State Agencies Particularly Affected

None.

Localities Particularly Affected

None.

Other Entities Particularly Affected

Home care organizations that offer or intend to offer personal care services.

Economic Impact

Consistent with § 2.2-4007.04 of the Code of Virginia, identify all specific economic impacts (costs and/or benefits) anticipated to result from the regulatory change. When describing a particular economic impact, specify which new requirement or change in requirement creates the anticipated economic impact. Keep in mind that this is the proposed change versus the status quo.

Impact on State Agencies

<p><i>For your agency:</i> projected costs, savings, fees, or revenues resulting from the regulatory change, including:</p> <ul style="list-style-type: none"> a) fund source / fund detail; b) delineation of one-time versus on-going expenditures; and c) whether any costs or revenue loss can be absorbed within existing resources. 	<p>There are no projected costs, savings, fees, or revenues resulting from the regulatory change for VDH.</p>
<p><i>For other state agencies:</i> projected costs, savings, fees, or revenues resulting from the regulatory change, including a delineation of one-time versus on-going expenditures.</p>	<p>There are no projected costs, savings, fees, or revenues resulting from the regulatory change for other state agencies.</p>
<p><i>For all agencies:</i> Benefits the regulatory change is designed to produce.</p>	<p>The benefits the regulatory change is designed to produce is balancing the health care workforce shortages and emerging technologies against clients' and patients' privacy and need for quality personal care services.</p>

Impact on Localities

If this analysis has been reported on the ORM Economic Impact form, indicate the tables (1a or 2) on which it was reported. Information provided on that form need not be repeated here.

<p>Projected costs, savings, fees, or revenues resulting from the regulatory change.</p>	<p>There are no projected costs, savings, fees, or revenues resulting from the regulatory change for localities.</p>
<p>Benefits the regulatory change is designed to produce.</p>	<p>The benefits the regulatory change is designed to produce is balancing the health care workforce shortages and emerging technologies against clients' and patients' privacy and need for quality personal care services.</p>

Impact on Other Entities

If this analysis has been reported on the ORM Economic Impact form, indicate the tables (1a, 3, or 4) on which it was reported. Information provided on that form need not be repeated here.

<p>Description of the individuals, businesses, or other entities likely to be affected by the regulatory change. If no other entities will be affected, include a specific statement to that effect.</p>	<p>HCOs that offer or intend to offer personal care services. Patients or clients receiving or anticipated to receive personal care services from an HCO.</p>
<p>Agency's best estimate of the number of such entities that will be affected. Include an estimate of the number of small businesses affected. Small business means a business entity, including its affiliates, that:</p> <ul style="list-style-type: none"> a) is independently owned and operated, and; b) employs fewer than 500 full-time employees or has gross annual sales of less than \$6 million. 	<p>It is estimated that there are 1,800 HCOs that offer or intend to offer personal care services. Based on anecdotal evidence, VDH believes nearly all HCOs, regardless of the services provided, would be small businesses.</p> <p>VDH does not have sufficient data to estimate how many patients or clients are receiving or anticipated to receive personal care services from an HCO.</p>
<p>All projected costs for affected individuals, businesses, or other entities resulting from the</p>	<p>See table 1a and 4 of the ORM Economic Impact form.</p>

<p>regulatory change. Be specific and include all costs including, but not limited to:</p> <ul style="list-style-type: none"> a) projected reporting, recordkeeping, and other administrative costs required for compliance by small businesses; b) specify any costs related to the development of real estate for commercial or residential purposes that are a consequence of the regulatory change; c) fees; d) purchases of equipment or services; and e) time required to comply with the requirements. 	
<p>Benefits the regulatory change is designed to produce.</p>	<p>The benefits the regulatory change is designed to produce is balancing the health care workforce shortages and emerging technologies against clients' and patients' privacy and need for quality personal care services.</p>

Alternatives to Regulation

Describe any viable alternatives to the regulatory change that were considered, and the rationale used by the agency to select the least burdensome or intrusive alternative that meets the essential purpose of the regulatory change. Also, include discussion of less intrusive or less costly alternatives for small businesses, as defined in § 2.2-4007.1 of the Code of Virginia, of achieving the purpose of the regulatory change.

No alternative was considered because the General Assembly required the Board to adopt regulations governing the licensure of home care organizations and amending the regulation is the least burdensome method to accomplish the purpose of this action. Because VDH estimates that nearly all HCOs would qualify as small businesses as defined in § 2.2-4007.1 of the Code of Virginia, creating less intrusive or less costly alternatives would lower standards across the entire industry and potentially jeopardize health and safety.

If this analysis has been reported on the ORM Economic Impact form, indicate the tables on which it was reported. Information provided on that form need not be repeated here.

Regulatory Flexibility Analysis

Consistent with § 2.2-4007.1 B of the Code of Virginia, describe the agency's analysis of alternative regulatory methods, consistent with health, safety, environmental, and economic welfare, that will accomplish the objectives of applicable law while minimizing the adverse impact on small business. Alternative regulatory methods include, at a minimum: 1) establishing less stringent compliance or reporting requirements; 2) establishing less stringent schedules or deadlines for compliance or reporting requirements; 3) consolidation or simplification of compliance or reporting requirements; 4) establishing performance standards for small businesses to replace design or operational standards required in the proposed regulation; and 5) the exemption of small businesses from all or any part of the requirements contained in the regulatory change.

In developing the proposed regulations, the Board considered that the affected industry consists primarily—or even exclusively—of small businesses. Providing a small business exemption would result in the overwhelming number of HCOs being exempt from the requirements, just as establishing performance standards or less stringent requirements specific to small business would have the effect of lowered standards and requirements in nearly every case. Consequently, there are no other alternative regulatory methods to minimizing the adverse impact on small businesses that the Board could utilize without being

inconsistent with health, safety, environmental, and economic welfare while accomplishing the objectives of the General Assembly mandates.

If this analysis has been reported on the ORM Economic Impact form, indicate the tables on which it was reported. Information provided on that form need not be repeated here.

**Periodic Review and
Small Business Impact Review Report of Findings**

If you are using this form to report the result of a periodic review/small business impact review that is being conducted as part of this regulatory action, and was announced during the NOIRA stage, indicate whether the regulatory change meets the criteria set out in EO 19 and the ORM procedures, e.g., is necessary for the protection of public health, safety, and welfare; minimizes the economic impact on small businesses consistent with the stated objectives of applicable law; and is clearly written and easily understandable. In addition, as required by § 2.2-4007.1 E and F of the Code of Virginia, discuss the agency's consideration of: (1) the continued need for the regulation; (2) the nature of complaints or comments received concerning the regulation; (3) the complexity of the regulation; (4) the extent to which the regulation overlaps, duplicates, or conflicts with federal or state law or regulation; and (5) the length of time since the regulation has been evaluated or the degree to which technology, economic conditions, or other factors have changed in the area affected by the regulation. Also, discuss why the agency's decision, consistent with applicable law, will minimize the economic impact of regulations on small businesses.

This form is not being used to report the result of a periodic review/small business impact review.

Public Comment

Summarize all comments received during the public comment period following the publication of the previous stage, and provide the agency's response. Include all comments submitted: including those received on Town Hall, in a public hearing, or submitted directly to the agency. If no comment was received, enter a specific statement to that effect.

No comment was received during the public comment period following publication of the previous stage.

Public Participation

Indicate how the public should contact the agency to submit comments on this regulation, and whether a public hearing will be held, by completing the text below.

The Board is providing an opportunity for comments on this regulatory proposal, including but not limited to (i) the costs and benefits of the regulatory proposal, (ii) any alternative approaches, (iii) the potential impacts of the regulation, and (iv) the agency's regulatory flexibility analysis stated in that section of this background document.

Anyone wishing to submit written comments for the public comment file may do so through the Public Comment Forums feature of the Virginia Regulatory Town Hall web site at: <https://townhall.virginia.gov>. Comments may also be submitted by mail, email or fax to Rebekah E. Allen, Senior Policy Analyst, Virginia Department of Health, Office of Licensure and Certification, 9960 Mayland Drive, Suite 401, Henrico, VA 23233; email: regulatorycomment@vdh.virginia.gov; phone: (804) 367-2157; fax: (804) 527-4502. In order to be considered, comments must be received by 11:59 pm on the last day of the public comment period.

A public hearing will not be held following the publication of this stage of this regulatory action.

Detail of Changes

List all regulatory changes and the consequences of the changes. Explain the new requirements and what they mean rather than merely quoting the text of the regulation. For example, describe the intent of the language and the expected impact. Describe the difference between existing requirement(s) and/or agency practice(s) and what is being proposed in this regulatory change. Use all tables that apply, but delete inapplicable tables.

Table 1: Changes to Existing VAC Chapter(s)

Current chapter-section number	New chapter-section number, if applicable	Current requirements in VAC	Change, intent, rationale, and likely impact of new requirements
381-10	N/A	<p>12VAC5-381-10. Definitions. The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:</p> <p style="text-align: center;">* * *</p> <p>"Client record" means the centralized location for documenting information about the client and the care and services provided to the client by the organization. A client record is a continuous and accurate account of care or services, whether hard copy or electronic, provided to a client, including information that has been dated and signed by the individuals who prescribed or delivered the care or service.</p> <p style="text-align: center;">* * *</p> <p>"Functional limitations" means the level of a client's need for assistance based on an assessment conducted by the supervising nurse...</p>	<p>CHANGE: The Board is proposing the following change:</p> <p>12VAC5-381-10. Definitions. The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:</p> <p style="text-align: center;">* * *</p> <p>"Client record" or "<u>patient record</u>" means the centralized location for documenting information about the client <u>or patient</u> and the care and services provided to the client <u>or patient</u> by the organization. A client record <u>or patient record</u> is a continuous and accurate account of care or services, whether hard copy or electronic, provided to a client <u>or patient</u>, including information that has been dated and signed by the individuals who prescribed or delivered the care or service.</p> <p style="text-align: center;">* * *</p> <p>"Functional limitations" means the level of a client's need for assistance based on an assessment conducted by the <u>supervising registered nurse</u>...</p> <p>INTENT: The intent of the new requirement is to distinguish between persons receiving only personal care services and those who are receiving</p>

			<p>skilled care services and personal care services and to update the language to reflect the new statutory mandate.</p> <p>RATIONALE: The rationale for the new requirement is that the regulations should be consistent with both statutory language and with current industry practice and terminology.</p> <p>LIKELY IMPACT: The likely impact of the new requirement is improved clarity for regulants.</p>
381-360	N/A	<p>12VAC5-381-360. Personal care services.</p> <p>A. An organization may provide personal care services in support of the client's health and safety in his home. The organization shall designate a registered nurse responsible for the supervision of personal care services.</p> <p>B. The personal care services shall include:</p> <ol style="list-style-type: none"> 1. Assistance with the activities of daily living. A need for assistance exists when the client is unable to complete an activity due to cognitive impairment, functional disability, physical health problems, or safety. The client's functional level is based on the client's need for assistance most or all of the time to perform the tasks of daily living in order to live independently; 2. Administration of normally self-administered drugs as allowed in § 54.1-3408 of the Virginia Drug Control Act (Chapter 34 (§ 54.1-3400 et seq.) of Title 54.1 of the Code of Virginia); 3. Taking and recording vital signs, if specified in the plan of service; 4. Recording and reporting to the supervisor any 	<p>CHANGE: The Board is proposing the following change:</p> <p>12VAC5-381-360. Personal care services.</p> <p>A. For the purposes of this section:</p> <ol style="list-style-type: none"> 1. "Client" means an individual who <u>receives personal care services from an HCO.</u> 2. "Patient" means an individual who <u>receives skilled services from an HCO and may receive personal care services as a client from an HCO.</u> 3. "Plan of care" means a <u>written plan of personal care services to provide direction on the type of care to be provided that address the client's or patient's care needs and that is developed, signed, and periodically reviewed by a registered nurse employed or contracted by an HCO.</u> <p>A. An organization B. <u>The HCO may provide personal care services in support of the client's or patient's health and safety in his home residence. The organization shall designate a registered nurse responsible for the supervision of personal care services. and shall employ or contract with:</u></p> <ol style="list-style-type: none"> 1. <u>A registered nurse responsible for performing assessments of clients, patients, or both, as prescribed by subsection G of this section; and</u> 2. <u>A registered nurse or licensed practical nurse responsible for the supervision of personal care services as prescribed by subsection I of this section.</u> <p>B. The C. <u>In providing personal care services, the HCO shall include:</u></p> <ol style="list-style-type: none"> 1. Assistance with the activities of daily living <u>ADLs</u>. A need for

		<p>changes regarding the client's condition, behavior or appearance; and</p> <p>5. Documenting the services delivered in the client's record.</p> <p>Personal care services may also include the instrumental activities of daily living related to the needs of the client.</p> <p>C. Such services shall be delivered based on a written plan of services developed by a registered nurse, in collaboration with the client and client's family. The plan shall include at least the following:</p> <ol style="list-style-type: none"> 1. Assessment of the client's needs; 2. Functional limitations of the client; 3. Activities permitted; 4. Special dietary needs; 5. Specific personal care services to be performed; and 6. Frequency of service. <p>D. The plan shall be retained in the client's record. Copies of the plan shall be provided to the client receiving services and reviewed with the assigned home attendant prior to delivering services.</p> <p>E. Supervision of services shall be provided as often as necessary as determined by the client's needs, the assessment of the registered nurse, and the organization's written policies not to exceed 90 days.</p> <p>F. A registered nurse or licensed practical nurse shall be available during all hours that personal care services are being provided.</p> <p>G. Home attendants providing personal care services shall receive at least 12 hours annually of inservice training and education. Inservice training</p>	<p>assistance exists when if the client or patient is unable to complete an activity <u>ADL</u> due to cognitive impairment, functional disability, physical health problems, or safety. The client's or patient's functional level is based on the client's <u>his</u> need for assistance most or all of the time to perform the tasks of daily living <u>ADLs</u> in order to live independently;</p> <ol style="list-style-type: none"> 2. Administration of normally self-administered drugs as allowed in § 54.1-3408 of the Virginia Drug Control Act (Chapter 34 (§ 54.1-3400 et seq.) of Title 54.1 of the Code of Virginia); 3. Taking and recording vital signs, if specified in the plan of service <u>care</u>; 4. Recording and reporting to the supervisor any changes regarding the client's or patient's condition, behavior, or appearance; and 5. Documenting <u>in the client record or patient record</u>: <ol style="list-style-type: none"> a. <u>The date on which personal care services were delivered;</u> b. <u>By whom the personal care services were delivered; and</u> c. <u>The specific type of personal care services provided in the client's record.</u> <p>D. The HCO's Personal <u>personal</u> care services may also include the instrumental activities of daily living related to the needs of the client <u>or the patient</u>.</p> <p>C. Such services shall be delivered <u>E. The HCO shall deliver personal care services</u> based on a written plan of services <u>care</u> developed:</p> <ol style="list-style-type: none"> 1. by <u>By a the</u> registered nurse <u>with whom the HCO has employed or contracted pursuant to subdivision A 1 of this section;</u> 2. in <u>In</u> collaboration with the client <u>or patient and client's his</u> family; <u>and</u> 3. <u>Prior to the delivery of personal care services by a home care attendant.</u> <p>F. The HCO shall ensure that the <u>registered nurse with whom the HCO has employed or contracted pursuant to subdivision A 1 of this section includes in each plan of care shall include at least the following</u>:</p> <ol style="list-style-type: none"> 1. Assessment of the client's <u>or patient's</u> needs;
--	--	--	---

		<p>may be in conjunction with on-site supervision.</p>	<p>2. Functional limitations of the client or patient;</p> <p>3. Activities permitted;</p> <p>4. Special dietary needs;</p> <p>5. Specific personal care services to be performed; and</p> <p>6. Frequency of personal care services;</p> <p>7. Frequency of supervision; and</p> <p>8. Whether supervision should be in-person on-site at the client's or patient's residence.</p> <p>D. <u>G. The HCO shall:</u></p> <p>1. <u>Retain The the plan of care shall be retained in the client's client record or patient record;</u></p> <p>2. <u>Provide a copy Copies of the plan of care shall be provided to the client or patient receiving personal care services; and</u></p> <p>3. <u>Ensure and document in writing that the plan of care has been reviewed with by the assigned home care attendant with their supervisor prior to delivering services.</u></p> <p>E. <u>Supervision of services shall be provided as often as necessary as determined by the client's needs, the assessment of the registered nurse, and the organization's written policies not to exceed 90 days.</u></p> <p>H. <u>The registered nurse with whom the HCO has employed or contracted pursuant to subdivision A 1 of this section shall perform an in-person on-site client or patient assessment:</u></p> <p>1. <u>Prior to the initiation of personal care services by the HCO;</u></p> <p>2. <u>As often as necessary to reassess the client's or patient's needs, not to exceed 60 calendar days from the last assessment or reassessment, unless:</u></p> <p>a. <u>The client or patient experiences a significant change in condition;</u></p> <p>b. <u>The client or patient has been discharged and returns to the same HCO during the 60-day calendar period; or</u></p> <p>c. <u>The client or patient has transferred to a different HCO during the 60-day calendar period;</u></p> <p>3. <u>Within 48 hours of the client's or patient's return to the residence from a hospital stay of 24 hours or more for any reason other than diagnostic tests, or on the health care</u></p>
--	--	--	---

			<p><u>practitioner-ordered resumption date; and</u></p> <p><u>4. At discharge from the HCO.</u></p> <p><u>F. I. If the plan of care does not require in-person on-site supervision of the client's or patient's residence, the HCO may not provide remote interactive audio and video supervision of personal care services without the client's or patient's signed consent.</u></p> <p><u>1. The HCO shall disclose in writing to the client or patient that:</u></p> <p><u>a. He may refuse to consent to remote interactive audio and video supervision of personal care services;</u></p> <p><u>b. He may withdraw previously given consent to remote interactive audio and video supervision of personal care services at any time; and</u></p> <p><u>c. The HCO may not terminate the client's or patient's care for refusing or withdrawing consent to remote interactive audio and video supervision of personal care services.</u></p> <p><u>2. The HCO may not terminate the client's or patient's care for refusing or withdrawing consent to remote interactive audio and video supervision of personal care services.</u></p> <p><u>3. The HCO and any employee or contractor of the HCO may not decrease the frequency of supervision in the plan of care if the client or patient refuses withdraws to consent to remote interactive audio and video supervision of personal care services.</u></p> <p><u>J. A The registered nurse or licensed practical nurse with whom the HCO has employed or contracted with pursuant to subdivision A 2 of this section shall:</u></p> <p><u>1. Supervise home care attendants as often as necessary as determined by the assessment of the registered nurse and the HCO's written policies, provided that:</u></p> <p><u>a. Remote interactive audio supervision of personal care services occurs at least once every 15 calendar days;</u></p> <p><u>b. Remote interactive audio and video supervision of personal care services occurs at least once every 30 calendar days;</u></p>
--	--	--	---

			<p>c. <u>In-person on-site supervision of personal care services occurs at least once every 60 calendar days, which may be in conjunction with the periodic assessment of the client or patient pursuant to subsection H of this section; and</u></p> <p>d. <u>The time, date, duration, and type of supervision is documented in writing in the client record or patient record by the registered nurse or licensed practical nurse who performs the supervision; and</u></p> <p>2. be <u>Be</u> available during all hours that personal care services are being provided.</p> <p>G. <u>K.</u> The HCO shall ensure that <u>Home</u> <u>home</u> attendants providing personal care services shall receive at least 12 hours annually of inservice training and education-, which <u>inservice training</u> may be in conjunction with <u>in-person</u> on-site supervision.</p> <p>INTENT: The intent of the new requirement is to implement the mandate found in Chapter 470 (2021 Acts of Assembly, Special Session I) while ensuring necessary protections of the public health, safety, and welfare.</p> <p>RATIONALE: The rationale for the new requirement is that the type of supervision should be a medically-driven decision that remote audio or audio-visual supervision should be more frequent than in-person supervision to ensure services being provided are adequate, that improved recordkeeping by HCOs about supervision will help VDH assess the effectiveness and utility of remote supervision, and that aligning reassessment frequency with federal requirements will make it easier for HCOs to acquire federal certification as a home health agency or to become accredited—either option then allowing them to apply for an exemption from licensure.</p> <p>LIKELY IMPACT: The likely impact of the new requirement is HCOs may choose to reduce personnel costs by using LPNs as supervisors, may branch out into the use of remote supervision as may be appropriate, and may seek</p>
--	--	--	---

			accreditation or certification in order to obtain a licensure exemption.
--	--	--	--

Office of Regulatory Management
Economic Review Form

Agency name	State Board of Health
Virginia Administrative Code (VAC) Chapter citation(s)	12VAC5-381-10 <i>et seq.</i>
VAC Chapter title(s)	Regulations for the Licensure of Home Care Organizations
Action title	Amend the Regulation after Enactment of Chapter 470 (2021 Acts of Assembly, Special Session I)
Date this document prepared	February 10, 2023
Regulatory Stage (including Issuance of Guidance Documents)	Proposed

Cost Benefit Analysis

Table 1a: Costs and Benefits of the Proposed Changes (Primary Option)

<p>(1) Direct & Indirect Costs & Benefits (Monetized)</p>	<ul style="list-style-type: none"> • Minimum documentation requirements for each visit in the client record or patient record <ul style="list-style-type: none"> ○ Direct Costs (monetized): As home care organizations (HCOs) are already required to document the services delivered, specifying that documenting must include the date of services, who delivered services, and the type of services delivered is anticipated to cost an additional \$0 per HCO, as this can be absorbed within an HCO’s existing resources. ○ Direct Benefits (monetized): VDH is not aware of any monetized direct benefits currently. ○ Indirect Costs (monetized): VDH is not aware of any monetized indirect costs currently. ○ Indirect Benefits (monetized): VDH is not aware of any monetized indirect benefits currently. • Review of the plan of care between the home care attendant and their supervisor must be documented in writing <ul style="list-style-type: none"> ○ Direct Costs: As HCOs are already required to review the plan of care with home care attendants prior to delivering services, requiring that review to be documented is anticipated to cost an additional \$0 per HCO, as this can be absorbed within an HCO’s existing resources.
---	--

	<ul style="list-style-type: none"> ○ Direct Benefits (monetized): VDH is not aware of any monetized direct benefits currently. ○ Indirect Costs (monetized): VDH is not aware of any monetized indirect costs currently. ○ Indirect Benefits (monetized): VDH is not aware of any monetized indirect benefits currently. <ul style="list-style-type: none"> ● HCOs must tell clients and patients of the right to refuse or withdraw consent for remote interactive audio and video supervision <ul style="list-style-type: none"> ○ Direct Costs (monetized): As HCOs are already required to make several disclosures to clients and patients, including a single additional disclosure is anticipated to cost an additional \$0 per HCO, as this can be absorbed within an HCO’s existing resources. ○ Direct Benefits (monetized): VDH is not aware of any monetized direct benefits currently. ○ Indirect Costs (monetized): VDH is not aware of any monetized indirect costs currently. ○ Indirect Benefits (monetized): VDH is not aware of any monetized indirect benefits currently. <p>Other Direct Costs (monetized): VDH is not aware of any other monetized direct costs currently.</p> <p>Other Direct Benefits (monetized): VDH is not aware of any other monetized direct benefits currently.</p> <p>Other Indirect Costs (monetized): VDH is not aware of any other monetized indirect costs currently.</p> <p>Other Indirect Benefits (monetized): VDH is not aware of any other monetized indirect benefits currently.</p>	
--	--	--

(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0	(b) \$0

(3) Net Monetized Benefit	\$0
---------------------------	-----

(4) Other Costs & Benefits (Non-Monetized)	<ul style="list-style-type: none"> ● Minimum documentation requirements for each visit in the client record or patient record <ul style="list-style-type: none"> ○ Other Costs (non-monetized): VDH is not aware of any non-monetized costs. 	
--	---	--

	<ul style="list-style-type: none"> ○ Other Benefits (monetized): Documentation of service provided reduces likelihood of fraud and increases likelihood that an HCO is adhering to a client of patient’s plan of care. It also helps HCOs demonstrate compliance during biennial inspections and complaint inspections. ● Review of the plan of care between the home care attendant and their supervisor must be documented in writing <ul style="list-style-type: none"> ○ Other Costs (non-monetized): VDH is not aware of any non-monetized costs. ○ Other Benefits (monetized): Documenting review of the plan of care with the home care attendant increases the likelihood that the home care attendant will provide the services call for in the plan and be held accountable if they do not. It also helps HCOs demonstrate compliance during biennial inspections and complaint inspections. ● HCOs must tell clients and patients of the right to refuse or withdraw consent for remote interactive audio and video supervision <ul style="list-style-type: none"> ○ Other Costs (non-monetized): VDH is not aware of any non-monetized costs. ○ Other Benefits (monetized): Clients and patients will be fully informed of their rights as a client or patient of an HCO. ● Registered nurses (RNs) must include frequency of supervision and whether remote supervision is an acceptable alternate to in-person on-site supervision <ul style="list-style-type: none"> ○ Other Costs (non-monetized): VDH is not aware of any non-monetized costs. ○ Other Benefits (monetized): RNs, who would be most familiar with a client’s or patient’s needs via their assessments and reassessments, are more able to make decision whether remote supervision is appropriate given the services needed. ● RNs should reassess a client or patient every 60 days <ul style="list-style-type: none"> ○ Other Costs (non-monetized): RNs already to have to assess patients and clients every 90 days; this proposed change would reduce the interval to 60 days, consistent with federal requirements for home health agencies. VDH does not have sufficient data to estimate the total volume of HCO clients and patients, the average or median length of the client or patient relationship with HCOs, or the average distance an RN must drive to reach a client or patient; therefore, VDH cannot estimate the direct cost. However, using the wage information from the May 2021 BLS for RNs (Code 29-1141) in home health care services, we estimate that the hourly rate of an RN
--	---

is \$51.99 per hour, including fringe benefits based on September 2022 BLS for the South Atlantic area. Assuming a patient or client was with an HCO for an entire year, that would currently be 1 assessment plus 3 reassessments. Moving to a 60-day interval would be 1 assessment plus 5 reassessments (i.e., 2 additional reassessments). Assuming that reassessment would take 45 minutes per client or patient, this would be an additional cost of \$39 per client or patient per fourth reassessment or any subsequent reassessment thereafter.

- Other Benefits (non-monetized): The change would bring HCOs into alignment with federal requirements for home health agencies. Aligning reassessment frequency with federal requirements will make it easier for HCOs to acquire federal certification as a home health agency or to become accredited—either option then allowing them to apply for an exemption from licensure.
- Licensed practical nurses (LPNs) may supervise home care attendants
 - Other Costs (non-monetized): As HCOs would be given the option to use either RNs or LPNs, VDH cannot quantify the cost of this change as it does not have sufficient data to estimate how many HCOs will choose to use LPNs for supervision; HCOs using LPNs for supervision would likely have reduced personnel costs since the wage information from the May 2021 BLS for LPNs (Code 29-2061) in home health care services is \$35.02 per hour (including fringe benefits), compared to \$51.99 per hour for RNs (Code 29-1141) in home health services. Fringe benefits are based on September 2022 BLS for the South Atlantic area.
 - Other Benefits (non-monetized): VDH is not aware of any non-monetized benefit currently.
- The client or patient may refuse or withdraw consent for remote interactive audio and video supervision
 - Other Costs (non-monetized): As remote supervision is new, VDH cannot quantify the cost of this change as it does not have sufficient data to estimate how many clients or patients will choose to refuse or withdraw consent for remote supervision. Additionally, VDH does not have data about how much cost savings, if any, there will be for HCOs; while they may save on travel with remote supervision, they may also have to expend capital on remote supervision technologies and ongoing costs in support of those technologies.
 - Other Benefits (non-monetized): Clients or patients can prioritize privacy in their own home.

	<ul style="list-style-type: none">• HCOs cannot decrease frequency of supervision because a client or patient has refused or withdrawn consent for remote interactive audio and video supervision<ul style="list-style-type: none">○ Other Costs (non-monetized): As remote supervision is new, VDH cannot quantify the cost of this change as it does not have sufficient data to estimate how many clients' or patients' care will be assessed as appropriate for remote supervision or how many clients or patients will choose to refuse or withdraw consent for remote supervision, which would result in having to conduct supervision in-person. Additionally, VDH does not have data about how much cost savings, if any, there will be for HCOs; while they may save on travel with remote supervision, they may also have to expend capital on remote supervision technologies and ongoing costs in support of those technologies.○ Other Benefits (non-monetized): Clients or patients will not be penalized for prioritizing privacy in their own home. • Set the interval at which remote interactive audio (15 days) and video (30 days) supervision must take place<ul style="list-style-type: none">○ Other Costs (non-monetized): As remote supervision is new, VDH cannot quantify the cost of this change as it does not have sufficient data to estimate how many clients' or patients' care will be assessed as appropriate for remote supervision. Additionally, VDH does not have data about how much cost savings, if any, there will be for HCOs; while they may save on travel with remote supervision, they may also have to expend capital on remote supervision technologies and ongoing costs in support of those technologies.○ Other Benefits (non-monetized): Specifying more frequent supervision if conducted through audio or visual means ensures that the lack of in-person visitation does not compromise client or patient health and safety. • Minimum documentation information about supervision must be documented in the client record or patient record<ul style="list-style-type: none">○ Other Costs (non-monetized): Because HCOs would have the option to use either LPNs or RNs for supervision, VDH cannot quantify the cost of this change as it does not have sufficient data to estimate which type of supervisor an HCO will choose, how many home care attendants need to be supervised, what supervisor-to-home-care-attendant ratio an HCO may use, or how many clients or patients an HCO has. Documenting the time, date, duration, and type of supervision should take no more than 10 minutes per service visit, which would be a cost of \$8.67 per client or patient per service visit if an RN was used or \$5.84 per client or patient per service visit if an LPN was
--	---

	<p>used. This information was calculated using the the wage information from the May 2021 BLS for LPNs (Code 29-2061) in home health care services and RNs (Code 29-1141) in home health services. Fringe benefits are based on September 2022 BLS for the South Atlantic area.</p> <ul style="list-style-type: none"> ○ Other Benefits (non-monetized): Documentation of supervision provided reduces likelihood of fraud and increases likelihood that an HCO is adhering to regulatory requirements. It also helps HCOs demonstrate compliance during biennial inspections and complaint inspections.
(5) Information Sources	<p>VDH has numerous challenges and constraints that limit a cost benefit analysis, including limited data availability and insufficient analytical models.</p> <p>To the extent costs and benefits could be calculated, VDH used information from the U.S. Bureau of Labor Statistics, VDH historical records, the current number of HCOs licensee, and anecdotal information from its inspectors (who themselves are health care practitioners such as RNs).</p>

Table 1b: Costs and Benefits under the Status Quo (No change to the regulation)

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>Other Direct Costs (monetized): VDH is not aware of any other monetized direct costs currently.</p> <p>Other Direct Benefits (monetized): VDH is not aware of any other monetized direct benefits currently.</p> <p>Other Indirect Costs (monetized): VDH is not aware of any other monetized indirect costs currently.</p> <p>Other Indirect Benefits (monetized): VDH is not aware of any other monetized indirect benefits currently.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0	(b) \$0
(3) Net Monetized Benefit	\$0	
(4) Other Costs & Benefits (Non-Monetized)	<ul style="list-style-type: none"> • Minimum documentation requirements for each visit includes documenting the services delivered 	

	<ul style="list-style-type: none"> ○ Other Costs (non-monetized): VDH does not have sufficient data about the number of clients and patients or the average or median annual service visits, so it cannot calculate the cost of this requirement. ○ Other Benefits (non-monetized): Documentation of service provided reduces likelihood of fraud and increases likelihood that an HCO is adhering to a client of patient’s plan of care. <ul style="list-style-type: none"> ● Review of the plan of care between the home care attendant and their supervisor must occur <ul style="list-style-type: none"> ○ Other Costs (non-monetized): VDH does not have sufficient data about the number of clients and patients, or the number of home care attendants employed or contracted, so it cannot calculate the cost of this requirement. ○ Other Benefits (non-monetized): Reviewing the plan of care with the home care attendant increases the likelihood that the home care attendant will provide the services call for in the plan. <ul style="list-style-type: none"> ● In-person supervision is required <ul style="list-style-type: none"> ○ Other Costs (non-monetized): VDH does not have sufficient data about the number of clients and patients or the average or median travel costs of HCOs, so it cannot calculate the cost of this requirement. ○ Other Benefits (non-monetized): As clients and patients are allowing strangers into their homes at a time in which they need assistance with their care, in-person supervision gives the client or patient the opportunity to speak directly with supervisors about concerns they may have without having the home care attendant as an intermediary (who may, intentionally or unintentionally, distort or omit information the client or patient wishes to provide). It also allows the supervisor an unobstructed, unfiltered view of the care being provided and allows for correction in real-time through demonstration by the supervisor. <ul style="list-style-type: none"> ● Supervision must be an RN <ul style="list-style-type: none"> ○ Other Costs (non-monetized): VDH does not have sufficient data about the number RNs employed or contracted to provide supervision and the average or median hours of supervision provided by RNs working for HCOs, so it cannot calculate the cost of this requirement. Using the wage information from the May 2021 BLS for RNs (Code 29-1141) in home health care services, it would cost an HCO \$51.99 per hour for an RNs (including fringe benefits). Fringe benefits are based on September 2022 BLS for the South Atlantic area.
--	---

	<ul style="list-style-type: none"> ○ Other Benefits (non-monetized): RNs have a wider scope of practice than LPNs and have the authority to delegate certain nursing tasks and procedures. LPNs provide basic nursing care under the direction of an RN, licensed medical practitioner, or licensed dentist. ● Reassessment occurs every 90 days <ul style="list-style-type: none"> ○ Other Costs (non-monetized): VDH does not have sufficient data to estimate the total volume of HCO clients and patients, the average or median length of the client or patient relationship with HCOs, or the average distance an RN must drive to reach a client or patient; therefore, VDH cannot estimate the direct cost. However, using the wage information from the May 2021 BLS for RNs (Code 29-1141) in home health care services, we estimate that the hourly rate of an RN is \$51.99 per hour, including fringe benefits based on September 2022 BLS for the South Atlantic area. Assuming a patient or client was with an HCO for an entire year, that would currently be 1 assessment plus 3 reassessments. Assuming that reassessment would take 45 minutes per client or patient, this would be a cost of \$39 per client or patient per reassessment. ○ Other Benefits (non-monetized): As it is unlikely that a client’s or patient’s needs would remain static, periodic reassessment is required to ensure that the services being provided are responsive to the client’s or patient’s needs.
(5) Information Sources	<p>VDH has numerous challenges and constraints that limit a cost benefit analysis, including limited data availability and insufficient analytical models.</p> <p>To the extent costs and benefits could be calculated, VDH used information from the U.S. Bureau of Labor Statistics, VDH historical records, the current number of HCOs licensee, and anecdotal information from its inspectors (who themselves are health care practitioners such as RNs).</p>

Table 1c: Costs and Benefits under Alternative Approach(es)

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>Other Direct Costs (monetized): VDH is not aware of any other monetized direct costs currently.</p> <p>Other Direct Benefits (monetized): VDH is not aware of any other monetized direct benefits currently.</p> <p>Other Indirect Costs (monetized): Using the wage information from the May 2021 BLS for medical and health service managers (Code 11-9111)</p>
--	--

	<p>in home health care services, we estimate that the cost of reviewing the new regulatory changes is \$68.12 per hour, including fringe benefits based on September 2022 BLS for the South Atlantic area. Assuming an average reading speed and assuming each reviewer reads approximately 50 percent of the rule, we estimate that it would take approximately 13 minutes for the staff to review half of this rule. For each facility that reviews the rule, the estimated cost is \$14.76 (.22 hours × \$68.12). Therefore, we estimated that the total cost of reviewing this regulation is \$26,568 (\$14.76 × 1,800 reviewers).</p> <p>Other Indirect Benefits (monetized): VDH is not aware of any other monetized indirect benefits currently.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$26,568	(b) \$0
(3) Net Monetized Benefit	-\$26,568	
(4) Other Costs & Benefits (Non-Monetized)	<ul style="list-style-type: none"> • Reassessment occurs every 90 days <ul style="list-style-type: none"> ○ Other Costs (non-monetized): VDH does not have sufficient data to estimate the total volume of HCO clients and patients, the average or median length of the client or patient relationship with HCOs, or the average distance an RN must drive to reach a client or patient; therefore, VDH cannot estimate the direct cost. However, using the wage information from the May 2021 BLS for RNs (Code 29-1141) in home health care services, we estimate that the hourly rate of an RN is \$51.99 per hour, including fringe benefits based on September 2022 BLS for the South Atlantic area. Assuming a patient or client was with an HCO for an entire year, that would currently be 1 assessment plus 3 reassessments. Assuming that reassessment would take 45 minutes per client or patient, this would be a cost of \$39 per client or patient per reassessment. ○ Other Benefits (non-monetized): As it is unlikely that a client's or patient's needs would remain static, periodic reassessment is required to ensure that the services being provided are responsive to the client's or patient's needs. • Registered nurses (RNs) do not include frequency of supervision and whether remote supervision is an acceptable alternate to in-person on-site supervision <ul style="list-style-type: none"> ○ Other Costs (non-monetized): As RNs already to have to assess patients and clients, including frequency and type of supervision 	

	<p>in their assessment is estimated to take an additional 10 minutes per patient or resident. Eliminating this requirement would be</p> <ul style="list-style-type: none"> ○ Other Benefits (non-monetized): HCOs would have discretion to use remote supervision regardless of the appropriateness of that type of supervision for the complexity and scope of a client's or patient's needs. <ul style="list-style-type: none"> ● RNs should reassess a client or patient every 75 days <ul style="list-style-type: none"> ○ Other Costs (non-monetized): RNs already have to assess patients and clients every 90 days; this proposed change would reduce the interval to 75 days, consistent with federal requirements for home health agencies. VDH does not have sufficient data to estimate the total volume of HCO clients and patients, the average or median length of the client or patient relationship with HCOs, or the average distance an RN must drive to reach a client or patient; therefore, VDH cannot estimate the direct cost. However, using the wage information from the May 2021 BLS for RNs (Code 29-1141) in home health care services, we estimate that the hourly rate of an RN is \$51.99 per hour, including fringe benefits based on September 2022 BLS for the South Atlantic area. Assuming a patient or client was with an HCO for an entire year, that would currently be 1 assessment plus 3 reassessments. Moving to a 60-day interval would be 1 assessment plus 4 reassessments (i.e., 2 additional reassessments). Assuming that reassessment would take 45 minutes per client or patient, this would be an additional cost of \$39 per client or patient per fourth reassessment or any subsequent reassessment thereafter. ○ Other Benefits (non-monetized): The change would bring HCOs into closer, but not full, alignment with federal requirements for home health agencies. This might make it easier for HCOs to acquire federal certification as a home health agency or to become accredited—either option then allowing them to apply for an exemption from licensure. ● HCOs can decrease frequency of supervision because a client or patient has refused or withdrawn consent for remote interactive audio and video supervision <ul style="list-style-type: none"> ○ Other Costs (non-monetized): As remote supervision is new, VDH cannot quantify the cost of this change as it does not have sufficient data to estimate how many clients or patients could be subject to remote supervision or how many clients or patients would otherwise choose to refuse or withdraw consent for remote supervision, which would result in having to conduct supervision in-person. Additionally, VDH does not have data about how much cost savings, if any, there will be for HCOs;
--	--

	<p>while they may save on travel with remote supervision, they may also have to expend capital on remote supervision technologies and ongoing costs in support of those technologies.</p> <ul style="list-style-type: none"> ○ Other Benefits (non-monetized): HCOs can prioritize profit when clients or patients are uncooperative with remote supervision attempts. <ul style="list-style-type: none"> ● Set the interval at which remote interactive audio (30 days) and video (45 days) supervision must take place <ul style="list-style-type: none"> ○ Other Costs (non-monetized): As remote supervision is new, VDH cannot quantify the cost of this change as it does not have sufficient data to estimate how many clients’ or patients’ care will be assessed as appropriate for remote supervision. Additionally, VDH does not have data about how much cost savings, if any, there will be for HCOs; while they may save on travel with remote supervision, they may also have to expend capital on remote supervision technologies and ongoing costs in support of those technologies. ○ Other Benefits (non-monetized): Specifying more frequent supervision if conducted through audio or visual means ensures that the lack of in-person visitation does not compromise client or patient health and safety.
(5) Information Sources	<p>VDH has numerous challenges and constraints that limit a cost benefit analysis, including limited data availability and insufficient analytical models.</p> <p>To the extent costs and benefits could be calculated, VDH used information from the U.S. Bureau of Labor Statistics, VDH historical records, the current number of HCOs licensee, and anecdotal information from its inspectors (who themselves are health care practitioners such as RNs).</p>

Impact on Local Partners

Table 2: Impact on Local Partners

(1) Direct & Indirect Costs & Benefits (Monetized)	VDH is not aware of any monetized direct costs, indirect costs, direct benefits, or indirect benefits for local partners currently.	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits

	(a) \$0	(b) \$0
(3) Other Costs & Benefits (Non-Monetized)	VDH is not aware of any non-monetized costs or benefits for local partners currently.	
(4) Assistance	None.	
(5) Information Sources	<p>VDH has numerous challenges and constraints that limit a cost benefit analysis, including limited data availability and insufficient analytical models.</p> <p>To the extent costs and benefits could be calculated, VDH used information from the U.S. Bureau of Labor Statistics, VDH historical records, the current number of HCOs licensee, and anecdotal information from its inspectors (who themselves are health care practitioners such as RNs).</p>	

Impacts on Families

Table 3: Impact on Families

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>Direct Costs: VDH is not aware of any monetized direct costs to families currently.</p> <p>Indirect Costs: VDH is not aware of any monetized indirect costs to families currently.</p> <p>Direct Benefits: VDH is not aware of any monetized direct benefits to families currently.</p> <p>Indirect Benefits: VDH is not aware of any monetized indirect benefits to families currently.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0	(b) \$0
(3) Other Costs & Benefits (Non-Monetized)	<p>Other Costs: VDH is not aware of any non-monetized costs to families currently.</p> <p>Other Benefits: VDH is not aware of any non-monetized benefits to families currently.</p>	

(4) Information Sources	<p>VDH has numerous challenges and constraints that limit a cost benefit analysis, including limited data availability and insufficient analytical models.</p> <p>To the extent costs and benefits could be calculated, VDH used information from the U.S. Bureau of Labor Statistics, VDH historical records, the current number of HCOs licensee, and anecdotal information from its inspectors (who themselves are health care practitioners such as RNs).</p>

Impacts on Small Businesses

Table 4: Impact on Small Businesses

(1) Direct & Indirect Costs & Benefits (Monetized)	<ul style="list-style-type: none"> • Minimum documentation requirements for each visit in the client record or patient record <ul style="list-style-type: none"> ○ Direct Costs (monetized): As home care organizations (HCOs) are already required to document the services delivered, specifying that documenting must include the date of services, who delivered services, and the type of services delivered is anticipated to cost an additional \$0 per HCO, as this can be absorbed within an HCO’s existing resources. ○ Direct Benefits (monetized): VDH is not aware of any monetized direct benefits currently. ○ Indirect Costs (monetized): VDH is not aware of any monetized indirect costs currently. ○ Indirect Benefits (monetized): VDH is not aware of any monetized indirect benefits currently. • Review of the plan of care between the home care attendant and their supervisor must be documented in writing <ul style="list-style-type: none"> ○ Direct Costs: As HCOs are already required to review the plan of care with home care attendants prior to delivering services, requiring that review to be documented is anticipated to cost an additional \$0 per HCO, as this can be absorbed within an HCO’s existing resources. ○ Direct Benefits (monetized): VDH is not aware of any monetized direct benefits currently. ○ Indirect Costs (monetized): VDH is not aware of any monetized indirect costs currently. ○ Indirect Benefits (monetized): VDH is not aware of any monetized indirect benefits currently. • HCOs must tell clients and patients of the right to refuse or withdraw consent for remote interactive audio and video supervision
--	--

	<ul style="list-style-type: none"> ○ Direct Costs (monetized): As HCOs are already required to make several disclosures to clients and patients, including a single additional disclosure is anticipated to cost an additional \$0 per HCO, as this can be absorbed within an HCO’s existing resources. ○ Direct Benefits (monetized): VDH is not aware of any monetized direct benefits currently. ○ Indirect Costs (monetized): VDH is not aware of any monetized indirect costs currently. ○ Indirect Benefits (monetized): VDH is not aware of any monetized indirect benefits currently. <p>Other Direct Costs (monetized): VDH is not aware of any other monetized direct costs currently.</p> <p>Other Direct Benefits (monetized): VDH is not aware of any other monetized direct benefits currently.</p> <p>Other Indirect Costs (monetized): VDH is not aware of any other monetized indirect costs currently.</p> <p>Other Indirect Benefits (monetized): VDH is not aware of any other monetized indirect benefits currently.</p>
--	---

(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0	(b) \$0

(3) Other Costs & Benefits (Non-Monetized)	<ul style="list-style-type: none"> ● Minimum documentation requirements for each visit in the client record or patient record <ul style="list-style-type: none"> ○ Other Costs (non-monetized): VDH is not aware of any non-monetized costs. ○ Other Benefits (monetized): Documentation of service provided reduces likelihood of fraud and increases likelihood that an HCO is adhering to a client of patient’s plan of care. It also helps HCOs demonstrate compliance during biennial inspections and complaint inspections. ● Review of the plan of care between the home care attendant and their supervisor must be documented in writing <ul style="list-style-type: none"> ○ Other Costs (non-monetized): VDH is not aware of any non-monetized costs. ○ Other Benefits (monetized): Documenting review of the plan of care with the home care attendant increases the likelihood that
---	--

	<p>the home care attendant will provide the services call for in the plan and be held accountable if they do not. It also helps HCOs demonstrate compliance during biennial inspections and complaint inspections.</p> <ul style="list-style-type: none"> • HCOs must tell clients and patients of the right to refuse or withdraw consent for remote interactive audio and video supervision <ul style="list-style-type: none"> ○ Other Costs (non-monetized): VDH is not aware of any non-monetized costs. ○ Other Benefits (monetized): Clients and patients will be fully informed of their rights as a client or patient of an HCO. • Registered nurses (RNs) must include frequency of supervision and whether remote supervision is an acceptable alternate to in-person on-site supervision <ul style="list-style-type: none"> ○ Other Costs (non-monetized): VDH is not aware of any non-monetized costs. ○ Other Benefits (monetized): RNs, who would be most familiar with a client's or patient's needs via their assessments and reassessments, are more able to make decision whether remote supervision is appropriate given the services needed. • RNs should reassess a client or patient every 60 days <ul style="list-style-type: none"> ○ Other Costs (non-monetized): RNs already to have to assess patients and clients every 90 days; this proposed change would reduce the interval to 60 days, consistent with federal requirements for home health agencies. VDH does not have sufficient data to estimate the total volume of HCO clients and patients, the average or median length of the client or patient relationship with HCOs, or the average distance an RN must drive to reach a client or patient; therefore, VDH cannot estimate the direct cost. However, using the wage information from the May 2021 BLS for RNs (Code 29-1141) in home health care services, we estimate that the hourly rate of an RN is \$51.99 per hour, including fringe benefits based on September 2022 BLS for the South Atlantic area. Assuming a patient or client was with an HCO for an entire year, that would currently be 1 assessment plus 3 reassessments. Moving to a 60-day interval would be 1 assessment plus 5 reassessments (i.e., 2 additional reassessments). Assuming that reassessment would take 45 minutes per client or patient, this would be an additional cost of \$39 per client or patient per fourth reassessment or any subsequent reassessment thereafter. ○ Other Benefits (non-monetized): The change would bring HCOs into alignment with federal requirements for home health agencies. Aligning reassessment frequency with federal
--	---

requirements will make it easier for HCOs to acquire federal certification as a home health agency or to become accredited—either option then allowing them to apply for an exemption from licensure.

- Licensed practical nurses (LPNs) may supervise home care attendants
 - Other Costs (non-monetized): As HCOs would be given the option to use either RNs or LPNs, VDH cannot quantify the cost of this change as it does not have sufficient data to estimate how many HCOs will choose to use LPNs for supervision; HCOs using LPNs for supervision would likely have reduced personnel costs since the wage information from the May 2021 BLS for LPNs (Code 29-2061) in home health care services is \$35.02 per hour (including fringe benefits), compared to \$51.99 per hour for RNs (Code 29-1141) in home health services. Fringe benefits are based on September 2022 BLS for the South Atlantic area.
 - Other Benefits (non-monetized): VDH is not aware of any non-monetized benefit currently.
- The client or patient may refuse or withdraw consent for remote interactive audio and video supervision
 - Other Costs (non-monetized): As remote supervision is new, VDH cannot quantify the cost of this change as it does not have sufficient data to estimate how many clients or patients will choose to refuse or withdraw consent for remote supervision. Additionally, VDH does not have data about how much cost savings, if any, there will be for HCOs; while they may save on travel with remote supervision, they may also have to expend capital on remote supervision technologies and ongoing costs in support of those technologies.
 - Other Benefits (non-monetized): Clients or patients can prioritize privacy in their own home.
- HCOs cannot decrease frequency of supervision because a client or patient has refused or withdrawn consent for remote interactive audio and video supervision
 - Other Costs (non-monetized): As remote supervision is new, VDH cannot quantify the cost of this change as it does not have sufficient data to estimate how many clients' or patients' care will be assessed as appropriate for remote supervision or how many clients or patients will choose to refuse or withdraw consent for remote supervision, which would result in having to conduct supervision in-person. Additionally, VDH does not have data about how much cost savings, if any, there will be for HCOs; while they may save on travel with remote supervision,

	<p>they may also have to expend capital on remote supervision technologies and ongoing costs in support of those technologies.</p> <ul style="list-style-type: none">○ Other Benefits (non-monetized): Clients or patients will not be penalized for prioritizing privacy in their own home. <ul style="list-style-type: none">● Set the interval at which remote interactive audio (15 days) and video (30 days) supervision must take place<ul style="list-style-type: none">○ Other Costs (non-monetized): As remote supervision is new, VDH cannot quantify the cost of this change as it does not have sufficient data to estimate how many clients' or patients' care will be assessed as appropriate for remote supervision. Additionally, VDH does not have data about how much cost savings, if any, there will be for HCOs; while they may save on travel with remote supervision, they may also have to expend capital on remote supervision technologies and ongoing costs in support of those technologies.○ Other Benefits (non-monetized): Specifying more frequent supervision if conducted through audio or visual means ensures that the lack of in-person visitation does not compromise client or patient health and safety.● Minimum documentation information about supervision must be documented in the client record or patient record<ul style="list-style-type: none">○ Other Costs (non-monetized): Because HCOs would have the option to use either LPNs or RNs for supervision, VDH cannot quantify the cost of this change as it does not have sufficient data to estimate which type of supervisor an HCO will choose, how many home care attendants need to be supervised, what supervisor-to-home-care-attendant ratio an HCO may use, or how many clients or patients an HCO has. Documenting the time, date, duration, and type of supervision should take no more than 10 minutes per service visit, which would be a cost of \$8.67 per client or patient per service visit if an RN was used or \$5.84 per client or patient per service visit if an LPN was used. This information was calculated using the wage information from the May 2021 BLS for LPNs (Code 29-2061) in home health care services and RNs (Code 29-1141) in home health services. Fringe benefits are based on September 2022 BLS for the South Atlantic area.○ Other Benefits (non-monetized): Documentation of supervision provided reduces likelihood of fraud and increases likelihood that an HCO is adhering to regulatory requirements. It also helps HCOs demonstrate compliance during biennial inspections and complaint inspections.
--	--

(4) Alternatives	<p>In developing the proposed regulations, the Board considered that the affected industry consists primarily—or even exclusively—of small businesses. Providing a small business exemption would result in the overwhelming number of HCOs being exempt from the requirements, just as establishing performance standards or less stringent requirements specific to small business would have the effect of lowered standards and requirements in nearly every case. Consequently, there are no other alternative regulatory methods to minimizing the adverse impact on small businesses that the Board could utilize without being inconsistent with health, safety, environmental, and economic welfare while accomplishing the objectives of the General Assembly mandates.</p>
(5) Information Sources	<p>VDH has numerous challenges and constraints that limit a cost benefit analysis, including limited data availability and insufficient analytical models.</p> <p>To the extent costs and benefits could be calculated, VDH used information from the U.S. Bureau of Labor Statistics, VDH historical records, the current number of HCOs licensee, and anecdotal information from its inspectors (who themselves are health care practitioners such as RNs).</p>

Changes to Number of Regulatory Requirements

Table 5: Total Number of Requirements

	Number of Requirements			
Chapter number	Initial Count	Additions	Subtractions	Net Change
381	258	7	6	1
TOTAL	258	7	6	1

1 **Project 6792 - NOIRA**

2 **Department of Health**

3 **Amend the Regulation after Enactment of Chapter 470 (2021 Acts of Assembly, Special**
4 **Session I)**

5 **12VAC5-381-10. Definitions.**

6 The following words and terms when used in this chapter shall have the following meanings
7 unless the context clearly indicates otherwise:

8 "Activities of daily living" or "ADLs" means bathing, dressing, toileting, transferring, bowel
9 control, bladder control and eating/feeding. A person's degree of independence in performing
10 these activities is part of determining the appropriate level of care and services. A need for
11 assistance exists when the client is unable to complete an activity due to cognitive impairment,
12 functional disability, physical health problems, or safety. The client's functional level is based on
13 the client's need for assistance most or all of the time to perform personal care tasks in order to
14 live independently.

15 "Administer" means the direct application of a controlled substance, whether by injection,
16 inhalation, ingestion or any other means, to the body of a client by (i) a practitioner or by his
17 authorized agent and under his direction or (ii) the client at the direction and in the presence of
18 the practitioner as defined in § 54.1-3401 of the Code of Virginia.

19 "Administrator" means a person designated in writing by the governing body as having the
20 necessary authority for the day-to-day management of the organization. The administrator must
21 be an employee of the organization. The administrator, the director of nursing, or other clinical
22 director may be the same individual if that individual is dually qualified.

23 "Available at all times during operating hours" means an individual is readily available on the
24 premises or by telecommunications.

25 "Barrier crimes" means certain offenses, specified in § 32.1-162.9:1 of the Code of Virginia,
26 that automatically bar an individual convicted of those offenses from employment with a home
27 care organization.

28 "Blanket fidelity bond" means a bond that provides coverage that protects an organization's
29 losses as a result of employee theft or fraud.

30 "Branch office" means a geographically separate office of the home care organization that
31 performs all or part of the primary functions of the home care organization on a smaller scale.

32 "Chore services" means assistance with nonroutine, heavy home maintenance for persons
33 unable to perform such tasks. Chore services include minor repair work on furniture and
34 appliances; carrying coal, wood and water; chopping wood; removing snow; yard maintenance;
35 and painting.

36 "Client record" or "patient record" means the centralized location for documenting information
37 about the client or patient and the care and services provided to the client or patient by the
38 organization. A client record or patient record is a continuous and accurate account of care or
39 services, whether hard copy or electronic, provided to a client or patient, including information
40 that has been dated and signed by the individuals who prescribed or delivered the care or service.

41 "Client's residence" means the place where the individual or client makes his home such as
42 his own apartment or house, a relative's home or an assisted living facility, but does not include
43 a hospital, nursing facility or other extended care facility.

44 "Commissioner" means the State Health Commissioner.

45 "Companion services" means assisting persons unable to care for themselves without
46 assistance. Companion services include transportation, meal preparation, shopping, light
47 housekeeping, companionship, and household management.

48 "Contract services" means services provided through agreement with another agency,
49 organization, or individual on behalf of the organization. The agreement specifies the services or
50 personnel to be provided on behalf of the organization and the fees to provide these services or
51 personnel.

52 "Criminal record report" means the statement issued by the Central Criminal Record
53 Exchange, Virginia Department of State Police.

54 "Department" means the Virginia Department of Health.

55 "Discharge or termination summary" means a final written summary filed in a closed client
56 record of the service delivered, goals achieved and final disposition at the time of client's
57 discharge or termination from service.

58 "Dispense" means to deliver a drug to an ultimate user by or pursuant to the lawful order of a
59 practitioner, including the prescribing and administering, packaging, labeling or compounding
60 necessary to prepare the substance for that delivery.

61 "Drop site" means a location that HCO staff use in the performance of daily tasks such as
62 obtaining supplies, using fax and copy machines, charting notes on care or services provided,
63 and storing client records. These locations may also be called charting stations, workstations, or
64 convenience sites.

65 "Employee" means an individual who has the status of an employee as defined by the U.S.
66 Internal Revenue Service.

67 "Functional limitations" means the level of a client's need for assistance based on an
68 assessment conducted by the ~~supervising~~ registered nurse. There are three criteria to assessing
69 functional status: (i) the client's impairment level and need for personal assistance, (ii) the client's
70 lack of capacity, and (iii) how the client usually performed the activity over a period of time. If a
71 person is mentally and physically free of impairment, there is not a safety risk to the individual, or
72 the person chooses not to complete an activity due to personal preference or choice, then that
73 person does not need assistance.

74 "Governing body" means the individual, group or governmental agency that has legal
75 responsibility and authority over the operation of the home care organization.

76 "Home attendant" means a nonlicensed individual performing skilled, pharmaceutical and
77 personal care services, under the supervision of the appropriate health professional, to a client in
78 the client's residence. Home attendants are also known as certified nurse aides or CNAs, home
79 care aides, home health aides, or personal care aides.

80 "Home care organization" or "HCO" means a public or private entity providing an organized
81 program of home health, pharmaceutical or personal care services, according to § 32.1-162.1 of
82 the Code of Virginia in the residence of a client or individual to maintain the client's health and
83 safety in his home. A home care organization does not include any family members, relatives or
84 friends providing caregiving services to persons who need assistance to remain independent and
85 in their own homes.

86 "Home health agency" means a public or private agency or organization, or part of an agency
87 or organization, that meets the requirements for participation in Medicare under 42 CFR 440.70
88 (d), by providing skilled nursing services and at least one other therapeutic service, for example,
89 physical, speech, or occupational therapy; medical social services; or home health aide services,
90 and also meets the capitalization requirements under 42 CFR 489.28.

91 "Homemaker services" means assistance to persons with the inability to perform one or more
92 instrumental activities of daily living. Homemaker services may also include assistance with

93 bathing areas the client cannot reach, fastening client's clothing, combing hair, brushing dentures,
94 shaving with an electric razor, and providing stabilization to a client while walking. Homemaker
95 services do not include feeding, bed baths, transferring, lifting, putting on braces or other
96 supports, cutting nails or shaving with a blade.

97 "Infusion therapy" means the procedures or processes that involve the administration of
98 injectable medications to clients via the intravenous, subcutaneous, epidural, or intrathecal routes.
99 Infusion therapy does not include oral, enteral, or topical medications.

100 "Instrumental activities of daily living" means meal preparation, housekeeping/light
101 housework, shopping for personal items, laundry, or using the telephone. A client's degree of
102 independence in performing these activities is part of determining the appropriate level of care
103 and services.

104 "Licensed practical nurse" means a person who holds a current license issued by the Virginia
105 Board of Nursing or a current multistate licensure privilege to practice nursing in Virginia as a
106 licensed practical nurse.

107 "Licensee" means a licensed home care provider.

108 "Medical plan of care" means a written plan of services, and items needed to treat a client's
109 medical condition, that is prescribed, signed and periodically reviewed by the client's primary care
110 physician.

111 "Nursing services" means client care services, including, but not limited to, the curative,
112 restorative, or preventive aspects of nursing that are performed or supervised by a registered
113 nurse according to a medical plan of care.

114 "OLC" means the Office of Licensure and Certification of the Virginia Department of Health.

115 "Operator" means any individual, partnership, association, trust, corporation, municipality,
116 county, local government agency or any other legal or commercial entity that is responsible for
117 the day-to-day administrative management and operation of the organization.

118 "Organization" means a home care organization.

119 "Person" means any individual, partnership, association, trust, corporation, municipality,
120 county, local government agency or any other legal or commercial entity that operates a home
121 care organization.

122 "Personal care services" means the provision of nonskilled services, including assistance in
123 the activities of daily living, and may include instrumental activities of daily living, related to the
124 needs of the client, who has or is at risk of an illness, injury or disabling condition. A need for
125 assistance exists when the client is unable to complete an activity due to cognitive impairment,
126 functional disability, physical health problems, or safety. The client's functional level is based on
127 the client's need for assistance most or all of the time to perform the tasks of daily living in order
128 to live independently.

129 "Primary care physician" means a physician licensed in Virginia, according to Chapter 29 (§
130 54.1-2900 et seq.) of Title 54.1 of the Code of Virginia, or licensed in an adjacent state and
131 identified by the client as having the primary responsibility in determining the delivery of the client's
132 medical care. The responsibility of physicians contained in this chapter may be implemented by
133 nurse practitioners or physician assistants as assigned by the supervising physician and within
134 the parameters of professional licensing.

135 "Qualified" means meeting current legal requirements of licensure, registration or certification
136 in Virginia or having appropriate training, including competency testing, and experience
137 commensurate with assigned responsibilities.

138 "Quality improvement" means ongoing activities designed to objectively and systematically
139 evaluate the quality of client care and services, pursue opportunities to improve client care and

140 services, and resolve identified problems. Quality improvement is an approach to the ongoing
141 study and improvement of the processes of providing health care services to meet the needs of
142 clients and others.

143 "Registered nurse" means a person who holds a current license issued by the Virginia Board
144 of Nursing or a current multistate licensure privilege to practice nursing in Virginia as a registered
145 nurse.

146 "Service area" means a clearly delineated geographic area in which the organization arranges
147 for the provision of home care services, personal care services, or pharmaceutical services to be
148 available and readily accessible to persons.

149 "Skilled services" means the provision of the home health services listed in 12VAC5-381-300.

150 "Supervision" means the ongoing process of monitoring the skills, competencies and
151 performance of the individual supervised and providing regular, documented, face-to-face
152 guidance and instruction.

153 "Sworn disclosure statement" means a document disclosing an applicant's criminal
154 convictions and pending criminal charges occurring in Virginia or any other state.

155 "Third-party crime insurance" means insurance coverage that protects an organization's
156 losses as a result of employee theft or fraud.

157 **12VAC5-381-360. Personal care services.**

158 A. For the purposes of this section:

159 1. "Client" means an individual who receives personal care services from an HCO.

160 2. "Patient" means an individual who receives skilled services from an HCO and may
161 receive personal care services as a client from an HCO.

162 3. "Plan of care" means a written plan of personal care services to provide direction on the
163 type of care to be provided that address the client's or patient's care needs and that is
164 developed, signed, and periodically reviewed by a registered nurse employed or
165 contracted by an HCO.

166 ~~A. An organization~~ B. The HCO may provide personal care services in support of the client's
167 ~~or patient's health and safety in his home residence. The organization shall designate a registered~~
168 ~~nurse responsible for the supervision of personal care services. and shall employ or contract with:~~

169 1. A registered nurse responsible for performing assessments of clients, patients, or both,
170 as prescribed by subsection G of this section; and

171 2. A registered nurse or licensed practical nurse responsible for the supervision of
172 personal care services as prescribed by subsection I of this section.

173 ~~B. The~~ C. In providing personal care services, the HCO shall include:

174 ~~1. Assistance with the activities of daily living ADLs . A need for assistance exists when if~~
175 ~~the client or patient is unable to complete an activity ADL due to cognitive impairment,~~
176 ~~functional disability, physical health problems, or safety. The client's or patient's functional~~
177 ~~level is based on the client's his need for assistance most or all of the time to perform the~~
178 ~~tasks of daily living ADLs in order to live independently;~~

179 ~~2. Administration of normally self-administered drugs as allowed in § 54.1-3408 of the~~
180 ~~Virginia Drug Control Act (Chapter 34 (§ 54.1-3400 et seq.) of Title 54.1 of the Code of~~
181 ~~Virginia);~~

182 ~~3. Taking and recording vital signs, if specified in the plan of service care;~~

183 ~~4. Recording and reporting to the supervisor any changes regarding the client's or patient's~~
184 ~~condition, behavior, or appearance; and~~

185 ~~5. Documenting in the client record or patient record;~~

- 186 a. The date on which personal care services were delivered;
187 b. By whom the personal care services were delivered; and
188 c. The specific type of personal care services provided in the client's record.

189 D. The HCO's Personal personal care services may also include the instrumental activities of
190 daily living related to the needs of the client or the patient.

191 ~~C. Such services shall be delivered~~ E. The HCO shall deliver personal care services based
192 on a written plan of services care developed;

193 1. by By a the registered nurse with whom the HCO has employed or contracted pursuant
194 to subdivision A 1 of this section;

195 2. in In collaboration with the client or patient and client's his family; and

196 3. Prior to the delivery of personal care services by a home care attendant.

197 F. The HCO shall ensure that the registered nurse with whom the HCO has employed or
198 contracted pursuant to subdivision A 1 of this section includes in each plan of care shall include
199 at least the following:

200 1. Assessment of the client's or patient's needs;

201 2. Functional limitations of the client or patient;

202 3. Activities permitted;

203 4. Special dietary needs;

204 5. Specific personal care services to be performed; and

205 6. Frequency of personal care services;

206 7. Frequency of supervision; and

207 8. Whether supervision should be in-person on-site at the client's or patient's residence.

208 ~~D.~~ G. The HCO shall:

209 1. Retain The the plan of care shall be retained in the client's client record or patient
210 record;

211 2. Provide a copy Copies of the plan of care shall be provided to the client or patient
212 receiving personal care services; and

213 3. Ensure and document in writing that the plan of care has been reviewed with by the
214 assigned home care attendant with their supervisor prior to delivering services.

215 ~~E. Supervision of services shall be provided as often as necessary as determined by the~~
216 ~~client's needs, the assessment of the registered nurse, and the organization's written policies not~~
217 ~~to exceed 90 days.~~

218 H. The registered nurse with whom the HCO has employed or contracted pursuant to
219 subdivision A 1 of this section shall perform an in-person on-site client or patient assessment:

220 1. Prior to the initiation of personal care services by the HCO;

221 2. As often as necessary to reassess the client's or patient's needs, not to exceed 60
222 calendar days from the last assessment or reassessment, unless:

223 a. The client or patient experiences a significant change in condition;

224 b. The client or patient has been discharged and returns to the same HCO during the
225 60-day calendar period; or

226 c. The client or patient has transferred to a different HCO during the 60-day calendar
227 period;

228 3. Within 48 hours of the client's or patient's return to the residence from a hospital stay of
229 24 hours or more for any reason other than diagnostic tests, or on the health care
230 practitioner-ordered resumption date; and

231 4. At discharge from the HCO.

232 F. I. If the plan of care does not require in-person on-site supervision of the client's or patient's
233 residence, the HCO may not provide remote interactive audio and video supervision of personal
234 care services without the client's or patient's signed consent.

235 1. The HCO shall disclose in writing to the client or patient that:

236 a. He may refuse to consent to remote interactive audio and video supervision of
237 personal care services;

238 b. He may withdraw previously given consent to remote interactive audio and video
239 supervision of personal care services at any time; and

240 c. The HCO may not terminate the client's or patient's care for refusing or withdrawing
241 consent to remote interactive audio and video supervision of personal care services.

242 2. The HCO may not terminate the client's or patient's care for refusing or withdrawing
243 consent to remote interactive audio and video supervision of personal care services.

244 3. The HCO and any employee or contractor of the HCO may not decrease the frequency
245 of supervision in the plan of care if the client or patient refuses withdraws to consent to
246 remote interactive audio and video supervision of personal care services.

247 J. A The registered nurse or licensed practical nurse with whom the HCO has employed or
248 contracted with pursuant to subdivision A 2 of this section shall:

249 1. Supervise home care attendants as often as necessary as determined by the
250 assessment of the registered nurse and the HCO's written policies, provided that:

251 a. Remote interactive audio supervision of personal care services occurs at least
252 once every 15 calendar days;

253 b. Remote interactive audio and video supervision of personal care services occurs
254 at least once every 30 calendar days;

255 c. In-person on-site supervision of personal care services occurs at least once every
256 60 calendar days, which may be in conjunction with the periodic assessment of the
257 client or patient pursuant to subsection H of this section; and

258 d. The time, date, duration, and type of supervision is documented in writing in the
259 client record or patient record by the registered nurse or licensed practical nurse who
260 performs the supervision; and

261 2. ~~be~~ Be available during all hours that personal care services are being provided.

262 G. K. The HCO shall ensure that ~~Home~~ home attendants providing personal care services
263 shall receive at least 12 hours annually of inservice training and education-, which ~~inservice~~
264 training may be in conjunction with in-person on-site supervision.



COMMONWEALTH of VIRGINIA

Department of Health
P O BOX 2448
RICHMOND, VA 23218

TTY 7-1-1 OR
1-800-828-1120

MEMORANDUM

DATE: January 26, 2023

TO: Virginia State Board of Health

FROM: Angela Tillery, Assistant Deputy Commissioner, Office of Community Health Services

SUBJECT: Fast Track Action to Amend 12VAC5-200

Enclosed for your review and approval is a Fast Track to amend the *Regulations Governing Eligibility Standards and Charges for Medical Care Services to Individuals (12VAC5-200)*.

The purpose of the amendments is to make style revisions, remove redundancies, eliminate language that restates the Code of Virginia, clarify existing language, and address inconsistencies. Information in some sections should be moved to different sections for continuity of content. Some sections are unnecessary and should be removed. In addition, a specific, existing Code of Virginia reference needs to be inserted in one section, and a correction is needed to a section number reference to the Omnibus Budget Reconciliation Act of 1981 that addresses the update to poverty guidelines. Finally, an update is needed to add WIC recipients to the Automatic Eligibility section for dental varnish services for children ages 6 months to 3 years.

The amendments are intended to clarify existing language, correct, or add references, remove redundant information, and update style. There are no significant changes that would result from the approval by the Board.

The State Board of Health is requested to approve the Fast Track Action. Should the State Board of Health approve the Fast Track Action, the amendments will be submitted to the Office of the Attorney General to begin the Executive Branch review process, as specified by the Administrative Process Act. Following Executive Branch review and approval, the proposed regulatory text will be published in the Virginia Register of Regulations and on the Virginia

Regulatory Town Hall website. A 30-day public comment period will begin. Fifteen days after the close of the public comment period, the regulation will become effective.



townhall.virginia.gov

Fast-Track Regulation Agency Background Document

Agency name	Department of Health
Virginia Administrative Code (VAC) Chapter citation(s)	12VAC5-200
VAC Chapter title(s)	Regulations Governing Eligibility Standards and Charges for Medical Care Services to Individuals
Action title	Amend regulation as a result of a periodic review
Date this document prepared	February 17, 2023

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Order 19 (2022) (EO 19), any instructions or procedures issued by the Office of Regulatory Management (ORM) or the Department of Planning and Budget (DPB) pursuant to EO 19, the Regulations for Filing and Publishing Agency Regulations (1 VAC 7-10), and the *Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code*.

Brief Summary

Provide a brief summary (preferably no more than 2 or 3 paragraphs) of this regulatory change (i.e., new regulation, amendments to an existing regulation, or repeal of an existing regulation). Alert the reader to all substantive matters. If applicable, generally describe the existing regulation.

This existing regulation establishes a means to identify an individual as medically indigent for the purpose of receiving no-cost medical services by the Department of Health. It also establishes a framework of charges and an incremental charge scale based on a person's ability to pay, which will be consistently applied throughout the Department and its local offices. In addition, it allows services to reduce vaccine-preventable and other communicable diseases to be provided at low or no cost to individuals with limited ability to pay for them.

Amendments are needed to this regulation to make format and style changes, add or update references to the Code of Virginia, remove duplicative language, and add clarifying language. Duplicative language will be removed, and information in some sections will be relocated to other sections for continuity. There are no substantive changes included in these amendments.

Acronyms and Definitions

Define all acronyms used in this form, and any technical terms that are not also defined in the "Definitions" section of the regulation.

There are no acronyms or technical terms used in this form.

Statement of Final Agency Action

Provide a statement of the final action taken by the agency including: 1) the date the action was taken; 2) the name of the agency taking the action; and 3) the title of the regulation.

Enter statement here

Mandate and Impetus

Identify the mandate for this regulatory change and any other impetus that specifically prompted its initiation (e.g., new or modified mandate, petition for rulemaking, periodic review, or board decision). For purposes of executive branch review, "mandate" has the same meaning as defined in the ORM procedures, "a directive from the General Assembly, the federal government, or a court that requires that a regulation be promulgated, amended, or repealed in whole or part."

Consistent with Virginia Code § 2.2-4012.1, also explain why this rulemaking is expected to be noncontroversial and therefore appropriate for the fast-track rulemaking process.

Some of the text did not meet the definition of a regulation pursuant to Virginia Code § 2.2-4001, and style changes were needed to comply with the Form, Style and Procedure Manual for Publication of Virginia Regulations. Additional opportunities for amendment were identified as part of a periodic review. These amendments are updates to style, format, to add missing references, remove redundancies, and clarify information. There are no changes that will alter the intent, meaning or function of the regulation, therefore, it is appropriate for the fast-track process.

Legal Basis

Identify (1) the promulgating agency, and (2) the state and/or federal legal authority for the regulatory change, including the most relevant citations to the Code of Virginia and Acts of Assembly chapter number(s), if applicable. Your citation must include a specific provision, if any, authorizing the promulgating agency to regulate this specific subject or program, as well as a reference to the agency's overall regulatory authority.

Section 32.1-11 of the Code of Virginia establishes the authority of the State Board of Health to formulate a program of environmental health services, laboratory services and preventive, curative and restorative medical care services, including home and clinic health services described in Titles V, XVIII, and XIX of the United States Social Security Act and amendments thereto, to be provided by the Department of Health on a regional, district, or local basis. It also establishes the authority of the Board to define the

income limitations for medically indigent persons; prescribe the charges to be paid for medical care services of the Department; prescribe a scale of charges based on the ability to pay; and authorize the Department to charge an amount equal to the allowable charge of an insurer for persons who have private health insurance.

Section 32.1-12 establishes the authority of the Board to make, adopt, promulgate and enforce such regulations and provide for reasonable variances and exemptions that may be necessary to carry out these provisions and other laws of the Commonwealth administered by the Board, the Commissioner of Health, or the Department of Health.

Purpose

Explain the need for the regulatory change, including a description of: (1) the rationale or justification, (2) the specific reasons the regulatory change is essential to protect the health, safety or welfare of citizens, and (3) the goals of the regulatory change and the problems it is intended to solve.

The amendments are needed to update style, remove redundancies, add missing citations and clarify information. The regulation is essential in providing the local health department offices with clear information about determining whether a person is medically indigent and their eligibility to receive low- or no-cost medical services, therefore protecting the health, safety, and welfare of the citizens of the Commonwealth. The goal of these changes is to produce a more up-to-date regulation with no redundant language.

Substance

Briefly identify and explain the new substantive provisions, the substantive changes to existing sections, or both. A more detailed discussion is provided in the "Detail of Changes" section below.

There are no new substantive provisions or substantive changes to existing sections.

Issues

Identify the issues associated with the regulatory change, including: 1) the primary advantages and disadvantages to the public, such as individual private citizens or businesses, of implementing the new or amended provisions; 2) the primary advantages and disadvantages to the agency or the Commonwealth; and 3) other pertinent matters of interest to the regulated community, government officials, and the public. If there are no disadvantages to the public or the Commonwealth, include a specific statement to that effect.

There are no disadvantages to the public or the Commonwealth because of these changes.

Requirements More Restrictive than Federal

Identify and describe any requirement of the regulatory change which is more restrictive than applicable federal requirements. Include a specific citation for each applicable federal requirement, and a rationale for the need for the more restrictive requirements. If there are no applicable federal requirements, or no requirements that exceed applicable federal requirements, include a specific statement to that effect.

There are no applicable federal requirements, or no requirements that exceed applicable federal requirements.

Agencies, Localities, and Other Entities Particularly Affected

Consistent with § 2.2-4007.04 of the Code of Virginia, identify any other state agencies, localities, or other entities particularly affected by the regulatory change. Other entities could include local partners such as tribal governments, school boards, community services boards, and similar regional organizations. “Particularly affected” are those that are likely to bear any identified disproportionate material impact which would not be experienced by other agencies, localities, or entities. “Locality” can refer to either local governments or the locations in the Commonwealth where the activities relevant to the regulation or regulatory change are most likely to occur. If no agency, locality, or entity is particularly affected, include a specific statement to that effect.

Other State Agencies Particularly Affected

There are no other state agencies particularly affected by the changes.

Localities Particularly Affected

There are no localities particularly affected by the changes.

Other Entities Particularly Affected

There are no entities particularly affected by the changes.

Economic Impact

Consistent with § 2.2-4007.04 of the Code of Virginia, identify all specific economic impacts (costs and/or benefits), anticipated to result from the regulatory change. When describing a particular economic impact, specify which new requirement or change in requirement creates the anticipated economic impact. Keep in mind that this is the proposed change versus the status quo.

Impact on State Agencies

<p><i>For your agency:</i> projected costs, savings, fees or revenues resulting from the regulatory change, including: a) fund source / fund detail; b) delineation of one-time versus on-going expenditures; and c) whether any costs or revenue loss can be absorbed within existing resources</p>	<p>There are no projected costs, savings, fees, or revenues resulting from the regulatory change.</p>
<p><i>For other state agencies:</i> projected costs, savings, fees or revenues resulting from the regulatory change, including a delineation of one-time versus on-going expenditures.</p>	<p>There are no projected costs, savings, fees, or revenues to other state agencies resulting from the regulatory change.</p>
<p><i>For all agencies:</i> Benefits the regulatory change is designed to produce.</p>	<p>The changes will make the regulation clear and more concise.</p>

Impact on Localities

If this analysis has been reported on the ORM Economic Impact form, indicate the tables (1a or 2) on which it was reported. Information provided on that form need not be repeated here.

Projected costs, savings, fees or revenues resulting from the regulatory change.	There are no projected costs, savings, fees, or revenues to localities resulting from the regulatory change.
Benefits the regulatory change is designed to produce.	The changes will make the regulation clear and more concise.

Impact on Other Entities

If this analysis has been reported on the ORM Economic Impact form, indicate the tables (1a, 3, or 4) on which it was reported. Information provided on that form need not be repeated here.

Description of the individuals, businesses, or other entities likely to be affected by the regulatory change. If no other entities will be affected, include a specific statement to that effect.	There is no impact to other entities.
Agency’s best estimate of the number of such entities that will be affected. Include an estimate of the number of small businesses affected. Small business means a business entity, including its affiliates, that: a) is independently owned and operated and; b) employs fewer than 500 full-time employees or has gross annual sales of less than \$6 million.	Not applicable
All projected costs for affected individuals, businesses, or other entities resulting from the regulatory change. Be specific and include all costs including, but not limited to: a) projected reporting, recordkeeping, and other administrative costs required for compliance by small businesses; b) specify any costs related to the development of real estate for commercial or residential purposes that are a consequence of the regulatory change; c) fees; d) purchases of equipment or services; and e) time required to comply with the requirements.	Not applicable
Benefits the regulatory change is designed to produce.	The changes will make the regulation clear and more concise.

Alternatives to Regulation

Describe any viable alternatives to the regulatory change that were considered, and the rationale used by the agency to select the least burdensome or intrusive alternative that meets the essential purpose of the regulatory change. Also, include discussion of less intrusive or less costly alternatives for small businesses, as defined in § 2.2-4007.1 of the Code of Virginia, of achieving the purpose of the regulatory change.

No alternatives were considered. This regulation addresses the provisions of 32.1-11 and 32.1-12 with no undue burdens.

If this analysis has been reported on the ORM Economic Impact form, indicate the tables on which it was reported. Information provided on that form need not be repeated here.

Regulatory Flexibility Analysis

Consistent with § 2.2-4007.1 B of the Code of Virginia, describe the agency's analysis of alternative regulatory methods, consistent with health, safety, environmental, and economic welfare, that will accomplish the objectives of applicable law while minimizing the adverse impact on small business. Alternative regulatory methods include, at a minimum: 1) establishing less stringent compliance or reporting requirements; 2) establishing less stringent schedules or deadlines for compliance or reporting requirements; 3) consolidation or simplification of compliance or reporting requirements; 4) establishing performance standards for small businesses to replace design or operational standards required in the proposed regulation; and 5) the exemption of small businesses from all or any part of the requirements contained in the regulatory change.

No analysis of alternative regulatory methods was considered. This regulation does not include schedules, compliance reporting deadlines, or any language that impacts small businesses.

If this analysis has been reported on the ORM Economic Impact form, indicate the tables on which it was reported. Information provided on that form need not be repeated here.

Public Participation

Indicate how the public should contact the agency to submit comments on this regulation, and whether a public hearing will be held, by completing the text below.

Consistent with § 2.2-4011 of the Code of Virginia, if an objection to the use of the fast-track process is received within the 30-day public comment period from 10 or more persons, any member of the applicable standing committee of either house of the General Assembly or of the Joint Commission on Administrative Rules, the agency shall: 1) file notice of the objections with the Registrar of Regulations for publication in the Virginia Register and 2) proceed with the normal promulgation process with the initial publication of the fast-track regulation serving as the Notice of Intended Regulatory Action.

If you are objecting to the use of the fast-track process as the means of promulgating this regulation, please clearly indicate your objection in your comment. Please also indicate the nature of, and reason for, your objection to using this process.

The Department of Health is providing an opportunity for comments on this regulatory proposal, including but not limited to (i) the costs and benefits of the regulatory proposal and any alternative approaches, (ii) the potential impacts of the regulation, and (iii) the agency's regulatory flexibility analysis stated in this background document.

Anyone wishing to submit written comments for the public comment file may do so through the Public Comment Forums feature of the Virginia Regulatory Town Hall web site at: <https://townhall.virginia.gov>. Comments may also be submitted by mail, email or fax to Lisa Park, 109 Governor St, Richmond, VA 23219, ph-804-864-7018, fax-804-864-7022, lisa.park@vdh.virginia.gov. In order to be considered, comments must be received by 11:59 pm on the last day of the public comment period.

Detail of Changes

List all regulatory changes and the consequences of the changes. Explain the new requirements and what they mean rather than merely quoting the text of the regulation. For example, describe the intent of the language and the expected impact. Describe the difference between existing requirement(s) and/or agency practice(s) and what is being proposed in this regulatory change. Use all tables that apply, but delete inapplicable tables.

If an existing VAC Chapter(s) is being amended or repealed, use Table 1 to describe the changes between existing VAC Chapter(s) and the proposed regulation. If existing VAC Chapter(s) or sections are being repealed and replaced, ensure Table 1 clearly shows both the current number and the new number for each repealed section and the replacement section.

Table 1: Changes to Existing VAC Chapter(s)

Current chapter-section number	New chapter-section number, if applicable	Current requirements in VAC	Change, intent, rationale, and likely impact of new requirements
200-10		Definitions for words used in this chapter	<p>Change: Updated language and removed specific income level information. This income level information was added to section 110 where other income level information appears. Removed the proof-of-pregnancy information as it relates to family size and changed “A husband and Wife” to “Spouse” in the “Family” or “Family Unit” definition. Removed incorrect Code references from the “Income Scales” definition.</p> <p>Intent: It will make information easier to find.</p> <p>Rationale: This will align with WIC and Medicaid which no longer asks for proof of pregnancy, reducing the burden on the patient seeking medical services.</p> <p>Likely Impact: Increased clarity of the Regulations among the regulants.</p>
200-20		Authority for regulations	<p>Change: Repeal section.</p> <p>Intent: It will reduce redundancies in the regulations.</p> <p>Rationale: This section merely re-stated section 32.1.11 of the Code of Virginia and was not needed.</p> <p>Impact: Increased clarity of the Regulations among the regulants.</p>
200-30		Purpose of chapter	<p>Change: Repeal section.</p>

			<p>Intent: It will reduce discrepancies in the regulations.</p> <p>Rationale: This section is non-regulatory.</p> <p>Impact: Increased clarity of the Regulations among the regulants.</p>
200-40		Administration of chapter explains how fee schedule is established.	<p>Change: Repealed section</p> <p>Intent: It will reduce inconsistencies in the regulations.</p> <p>Rationale: This section contained language that was repeated in section 90. Since section 90 is about charges for services, language from this section was moved to section 90 and duplicative language removed. Section 40 is repealed so that language about charges is now all in one section (90).</p> <p>Likely Impact: Increased clarity of the Regulations among the regulants.</p>
200-50		States who this chapter applies to	<p>Change: Changed a word from plural to singular as per Form, Style and Procedure Manual for Publication of Virginia Regulations.</p> <p>Intent: To conform the section to the <i>Form and Style Manual</i>.</p> <p>Rationale: Conforming will increase the clarity of the Regulations.</p> <p>Likely Impact: Increased clarity of the Regulations among the regulants.</p>
200-60		Application of the Administrative Process Act	<p>Change: Repealed section.</p> <p>Intent: To conform the section to the <i>Form and Style Manual</i>.</p> <p>Rationale: It contained a single, unnecessary sentence about the governing of the Administrative Process Act.</p> <p>Likely Impact: Increased clarity of the Regulations among the regulants.</p>
200-80		Defines application process and information required to assess income level	<p>Change: Updated wording to address merging information from another section to include the termination of services, made style changes and removed redundant language.</p>

			<p>Intent: To update the language to include moved language and to conform the section to the <i>Form and Style Manual</i>.</p> <p>Rationale: Increases the clarity of the Regulations.</p> <p>Likely Impact: These changes will make the section clearer.</p>
200-90		Defines process to establish fees for medical care services	<p>Changes: Added updated language from 32.1.11 related to charging private health insurance and moved language from sections 40 and 100 to keep similar subjects together regarding the charges for services. The language from section 40 includes how the fee schedule is established, service charges, and Medicaid charges. The language from section 100 is the establishment of a mechanism for flat rate charges.</p> <p>Intent: To increase the clarity of the Regulation.</p> <p>Rationale: The chapter is now more complete.</p> <p>Likely Impact: Increased clarity of the Regulations among the regulants.</p>
200-100		Established a mechanism for flat rate charges	<p>Changes: Repealed-combined with section 90 to put similar information together making it more complete.</p> <p>Intent: To increase the clarity of the Regulation.</p> <p>Rationale: The provisions of this section were moved in order to make the Regulations clearer.</p> <p>Likely Impact: Increased clarity of the Regulations among the regulants.</p>
200-105		Establishes the method used to charge for services provided to external agencies	<p>Changes: Made a single word strike per the Form, Style and Procedure Manual for Publication of Virginia Regulations.</p> <p>Intent: To update the language to conform the section to the <i>Form and Style Manual</i>.</p> <p>Rationale: Increases the clarity of the Regulations.</p> <p>Likely Impact: These changes will make the section clearer.</p>

200-110		Defines income levels for assessing charges for medical care services	<p>Changes: Information was moved from Definitions section 10 to this section that already included some information about income levels and the charges that those incomes levels will incur for services. Removed a single redundant sentence.</p> <p>Intent: To remove redundancies in the section and group similar regulatory requirements together.</p> <p>Rationale: These changes will make the information easier to follow because it is all in the same chapter now.</p> <p>Likely Impact: Increased clarity of the Regulations among the regulants.</p>
200-120		Lists programs that don't require income verification for specific services	<p>Changes: Added children 6mos-3yrs with WIC for the dental varnish program. The program was initiated a few years ago and just formalizing the process here. Removed information related to Medicaid application and assessing of charges.</p> <p>Intent: To increase the clarity of the section.</p> <p>Rationale: The increase in clarity will help reduce perceived barriers to the services of this section.</p> <p>Likely Impact: Reduced a perceived barrier to services included in this section.</p>
200-130		Explanation of charges	<p>Change: This section includes a single sentence, which was updated with style changes only.</p> <p>Intent: To update the language to conform the section to the <i>Form and Style Manual</i>.</p> <p>Rationale: Increases the clarity of the Regulations.</p> <p>Likely Impact: These changes will make the section clearer.</p>
200-140		Redetermination of eligibility	<p>Change: This section includes a single sentence, which was updated with style changes only.</p> <p>Intent: To update the language to conform the section to the <i>Form and Style Manual</i>.</p>

			<p>Rationale: Increases the clarity of the Regulations.</p> <p>Likely Impact: These changes will make the section clearer.</p>
200-150		Provides a list of services provided at no charge	<p>Changes: Added the single sentence from section 170 related to other medical services provided at no charge to capture related information in the same chapter. Added a clarification to immunizations for persons up to age 22 that ties eligibility for free vaccines to school enrollment as referenced in § 32.1-46 of the Code of Virginia.</p> <p>Intent: To update the language to include language from repealed sections.</p> <p>Rationale: This will provide clarity for those individuals past age 20 who are enrolled in a public or private secondary school.</p> <p>Likely Impact: The Regulations will be clearer.</p>
200-170		The department may provide “other” health care services at no charge	<p>Changes: Repeal this section-The one sentence included in this section will be moved to section 150.</p> <p>Intent: To increase the clarity of the Regulations.</p> <p>Rationale: Repealing and moving language will help increase the clarity of the Regulations.</p> <p>Likely Impact: These changes will make the chapter clearer.</p>
200-180		Exceptions for service eligibility to patients	<p>Changes: Repeal this section-The one sentence included in this section allows for exceptions to assessing charges for medical care services.</p> <p>Intent: This change will remove redundant language.</p> <p>Rationale: Exceptions are already addressed in other sections and a stand-alone section is unnecessary.</p> <p>Likely Impact: These changes will make the chapter clearer.</p>
200-220		Section entitled “General” includes information about wavier of charges	<p>Changes: Repeal this section and move appropriate information to Waivers section 230.</p>

			<p>Intent: This change will clarify the information about waivers and keep it in one section.</p> <p>Rationale: This section included redundancies and confusing wording that conflicted with Waivers section 230.</p> <p>Likely Impact: These changes will make the chapter clearer.</p>
200-230		Provides a mechanism to request a waiver of charges	<p>Changes: Made style changes and added information previously in section 220.</p> <p>Intent: To include language from repealed section 220 and update the language to conform the section to the <i>Form and Style Manual</i>.</p> <p>Rationale: Increases the clarity of the Regulations.</p> <p>Likely Impact: These changes will make the section clearer.</p>
200-270		Provides for appeal rights to patients	<p>Changes: Made style changes, removed redundant language, and added provisions for the notification of appeal decisions.</p> <p>Intent: To include provisions for the notification of appeal decisions and update the language to conform the section to the <i>Form and Style Manual</i>.</p> <p>Rational: Changes will make this section clearer.</p> <p>Likely Impact: These changes will make the section clearer.</p>
200-280		Representing information	<p>Changes: Only changes to style were made to this section.</p> <p>Intent: To update the language to conform the section to the <i>Form and Style Manual</i>.</p> <p>Rationale: Increases the clarity of the Regulations.</p> <p>Likely Impact: These changes will make the section clearer.</p>
200-290		Provides the requirement to establish procedures for maintenance and revision of charges	<p>Changes: Removed unnecessary language and added the requirement for income schedules used to determine</p>

			<p>sliding scale discounts to be available for public inspection.</p> <p>Intent: To remove unnecessary language and increase the clarity of the Regulations.</p> <p>Rationale: Increases the clarity of the Regulations.</p> <p>Likely Impact: These changes will make the section clearer.</p>
--	--	--	--

Office of Regulatory Management
Economic Review Form

Agency name	Virginia Department of Health
Virginia Administrative Code (VAC) Chapter citation(s)	12VAC 5-200
VAC Chapter title(s)	Regulations Governing Eligibility Standards and Charges for Medical Care Services to Individuals
Action title	Amend Regulations Following 2022 Periodic Review
Date this document prepared	February 17, 2023
Regulatory Stage (including Issuance of Guidance Documents)	Fast Track

Cost Benefit Analysis

Complete Tables 1a and 1b for all regulatory actions. You do not need to complete Table 1c if the regulatory action is required by state statute or federal statute or regulation and leaves no discretion in its implementation.

Table 1a should provide analysis for the regulatory approach you are taking. Table 1b should provide analysis for the approach of leaving the current regulations intact (i.e., no further change is implemented). Table 1c should provide analysis for at least one alternative approach. You should not limit yourself to one alternative, however, and can add additional charts as needed.

Report both direct and indirect costs and benefits that can be monetized in Boxes 1 and 2. Report direct and indirect costs and benefits that cannot be monetized in Box 4. See the ORM Regulatory Economic Analysis Manual for additional guidance.

Table 1a: Costs and Benefits of the Proposed Changes (Primary Option)

<p>(1) Direct & Indirect Costs & Benefits (Monetized)</p>	<p>Direct Costs: Describe the direct costs of this proposed change here. There are no monetized direct costs associated with the proposed changes.</p> <p>Indirect Costs: Describe the indirect costs of the proposed change. There are no monetized indirect costs associated with the proposed changes.</p> <p>Direct Benefits: Describe the direct benefits of this proposed change here. There are no monetized direct benefits associated with the proposed changes.</p> <p>Indirect Benefits: Describe the indirect benefits of the proposed change. There are no monetized indirect benefits associated with the proposed changes.</p>	
<p>(2) Present Monetized Values</p>	<p>Direct & Indirect Costs</p>	<p>Direct & Indirect Benefits</p>
	<p>(a) \$0</p>	<p>(b) \$0</p>
<p>(3) Net Monetized Benefit</p>	<p>There is no net monetized benefit.</p>	
<p>(4) Other Costs & Benefits (Non-Monetized)</p>	<ul style="list-style-type: none"> ● The regulatory action will amend <u>Definitions</u> (12VAC5-220-10). Minimal updates clarify language used in the regulations and move some information to another section to keep topics together. <p>Direct Costs: There are no direct costs associated with this change.</p> <p>Direct Benefits: Individuals will benefit inasmuch as the regulatory language will be more clear and easier to understand.</p> <ul style="list-style-type: none"> ● The regulatory action will repeal 12VAC5 – 200-20, 12VAC5 – 200-30, 12VAC5-200-40, 12VAC5 – 200-60, 12VAC5 – 200-100, 12VAC-200-170, 12VAC5-200-180, and 12VAC5-200-220 which are not regulatory in nature or have redundant language that should be moved to a different section. <p>Direct Costs: There are no direct costs associated with this change.</p> <p>Direct Benefits: The benefit of this change is to reduce the length of the regulation by removing unnecessary language.</p>	

- **The regulatory action will amend 12VAC5-200-50, 12VAC5-200-105, 12VAC5-200-130, 12VAC5-200-140, and 12VAC5-200-280 with a number of style and form changes to conform the language to the *Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code*. If these changes were promulgated in their own action, they would be exempt from the requirements of Article 2 of the Administrative Process Act, pursuant to § 2.2-4006 (A)(3).**

Direct Costs: There are no direct costs associated with this change.

Direct Benefits: The language will conform to the *Form and Style Requirements* and be clearer and more readable.

- **The regulatory action will amend 12VAC5-200-80, 12VAC5-200-110, 12VAC5-200-230, and 12VAC5-200-290 to remove redundant language and rearrange information among the chapters. If these changes were promulgated in their own action, they would be exempt from the requirements of Article 2 of the Administrative Process Act, pursuant to § 2.2-4006 (A)(3).**

Direct Costs: There are no direct costs associated with this change.

Direct Benefits: The language will be easier to read and understand and similar topics will be in the same sections.

- **The regulatory action will amend Charges for Services (12VAC5-200-90), to add language moved from sections 40 and 100 and add a reference to § 32.1.11 of the Code of Virginia related to charges for medical care services to private insurers.**

Direct Costs: There are no direct costs associated with this change.

Direct Benefits: The language will be clearer and more complete.

- **The regulatory action will amend Automatic Eligibility (12VAC5-200-120), to add children with Special Supplemental Nutrition Program for Women, Infants and Children (WIC) that are 6 months-3 years of age receiving dental varnish services to the list of programs that don't require income verification.**

Direct Costs: There are no direct costs associated with this change.

Direct Benefits: Parents of children with WIC seeking these services will not have to provide income verification, removing a step from the process.

- **The regulatory action will amend Services Provided at No Charge to the Patient (12VAC5-200-150), to add language moved from section 170 and to clarify that older students up to age 22 enrolled in a public or private primary or secondary school are included in this section.**

Direct Costs: There are no direct costs associated with this change.

Direct Benefits: Related information will be in the same section making it easier to find, and it will be clearer that public or private primary or secondary school enrollment for those older students is what makes them eligible for the provisions of this section.

- **The regulatory action will amend Rights (12VAC5-200-270), to remove redundant language, make style changes, and to add provisions for the notification of appeal decisions.**

Direct Costs: There are no direct costs associated with this change.

Direct Benefits: Individuals participating in an appeal will have a clearer understanding of the notification process.

(5) Information Sources	Not applicable to the amendments being proposed.

Table 1b: Costs and Benefits under the Status Quo (No change to the regulation)

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>Direct Costs: Describe the direct costs of this proposed change here. There are no monetized direct costs if the regulations are not changed.</p> <p>Indirect Costs: Describe the indirect costs of the proposed change. There are no monetized indirect costs if the regulations are not changed.</p> <p>Direct Benefits: Describe the direct benefits of this proposed change here. There are no monetized direct benefits if the regulations are not changed.</p> <p>Indirect Benefits: Describe the indirect benefits of the proposed change. There are no monetized indirect benefits if the regulations are not changed.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0	(b) \$0
(3) Net Monetized Benefit	\$0 net monetized benefit	
(4) Other Costs & Benefits (Non-Monetized)	<p>The repeal of sections 20, 30, 40, 60, 100, 170, 180, and 220 is intended to conform the chapter to the definition of a “regulation” in § 2.2-4001 and reflect the intent of 1VAC7-10-40(C), which indicate that the provisions are non-regulatory in nature and should be omitted from the regulation.</p> <ul style="list-style-type: none"> The “status quo” option would be to leave the sections in the regulation. There are no direct cost or benefits associated with this option. <p>The style and form changes are to conform with the <i>Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code</i> and could be considered non-discretionary.</p> <ul style="list-style-type: none"> The “status quo” option would be to leave the language in its current style and form. There are no direct costs or benefits associated with this option. 	

	<p>The amendments of sections 40, 90, 120, 150, 270 and 290 are to remove redundant language, move similar topics to the same section, add missing references, and clarify information</p> <ul style="list-style-type: none"> The “status quo” option would retain sections that were not required and have sections that had duplicative or missing information.
(5) Information Sources	There are no information sources related to these changes.

Table 1c: Costs and Benefits under Alternative Approach(es)

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>Direct Costs: Describe the direct costs of this proposed change here. There are no monetized direct costs.</p> <p>Indirect Costs: Describe the indirect costs of the proposed change. There are no monetized indirect costs.</p> <p>Direct Benefits: Describe the direct benefits of this proposed change here. There are no monetized direct benefits.</p> <p>Indirect Benefits: Describe the indirect benefits of the proposed change. There are no monetized indirect benefits.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0	(b) \$0
(3) Net Monetized Benefit	\$0 net benefit	
(4) Other Costs & Benefits (Non-Monetized)	<p>The repeal of sections 20, 30, 40, 60, 100, 170, 180 and 220, along with the style and form changes, clarifications, and section reorganization make no substantive changes to regulatory requirements associated with the chapter, are non-regulatory, and do not affect the rights or powers of any person or agency. As such, there are no viable alternative approaches to be considered.</p>	
(5) Information Sources	Not applicable.	

Impact on Local Partners

Use this chart to describe impacts on local partners. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 2: Impact on Local Partners

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>Direct Costs: Describe the direct costs of this proposed change here. There are no monetized direct costs to local partners as a result of the proposed change.</p> <p>Indirect Costs: Describe the indirect costs of the proposed change. There are no monetized indirect costs to local partners as a result of the proposed change.</p> <p>Direct Benefits: Describe the direct benefits of this proposed change here. There are no monetized direct benefits to local partners as a result of this proposed change.</p> <p>Indirect Benefits: Describe the indirect benefits of the proposed change. There are no monetized indirect benefits to local partners as a result of this proposed change.</p>	
(2) Present Monetized Values	Direct & Indirect Costs (a) \$0	Direct & Indirect Benefits (b) \$0
(3) Other Costs & Benefits (Non-Monetized)	There are no other costs and benefits to local partners as a result of the proposed change.	
(4) Assistance	Not applicable	
(5) Information Sources	Not applicable	

Impacts on Families

Use this chart to describe impacts on families. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 3: Impact on Families

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>Direct Costs: Describe the direct costs of this proposed change here. There are no monetized direct costs to families from this proposed change.</p> <p>Indirect Costs: Describe the indirect costs to families of the proposed change. There are no monetized indirect costs to families from the proposed change.</p> <p>Direct Benefits: Describe the direct benefits of this proposed change.</p>	
--	--	--

	<p>here. There are no monetized direct benefits to families from this proposed change.</p> <p>Indirect Benefits: Describe the indirect benefits of the proposed change. There are no monetized indirect benefits to families from this proposed change.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0	(b) \$0
(3) Other Costs & Benefits (Non-Monetized)	There are no costs or benefits to families from this proposed change.	
(4) Information Sources	Not applicable.	

Impacts on Small Businesses

Use this chart to describe impacts on small businesses. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 4: Impact on Small Businesses

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>Direct Costs: Describe the direct costs of this proposed change here. There are no monetized direct costs to small businesses as a result of the proposed change.</p> <p>Indirect Costs: Describe the indirect costs of the proposed change. There are no monetized indirect costs to small businesses as a result of the proposed change.</p> <p>Direct Benefits: Describe the direct benefits of this proposed change here. There are no monetized direct benefits to small businesses as a result of this proposed change.</p> <p>Indirect Benefits: Describe the indirect benefits of the proposed change. There are no monetized indirect benefits to small businesses as a result of this proposed change.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0	(b) \$0
(3) Other Costs & Benefits (Non-Monetized)	There are no other costs and benefits to small businesses as a result of this proposed change.	

(4) Alternatives	Not applicable
(5) Information Sources	Not applicable

Changes to Number of Regulatory Requirements

For each individual VAC Chapter amended, repealed, or promulgated by this regulatory action, list (a) the initial requirement count, (b) the count of requirements that this regulatory package is adding, (c) the count of requirements that this regulatory package is reducing, (d) the net change in the number of requirements. This count should be based upon the text as written when this stage was presented for executive branch review. Five rows have been provided, add or delete rows as needed. In the last row, indicate the total number for each column.

Table 5: Total Number of Requirements

	Number of Requirements			
Chapter number	Initial Count	Additions	Subtractions	Net Change
200	51	0	8	-8
TOTAL				

1 **Project 7424 - None**

2 **Department of Health**

3 **Chapter 200 Amendments Resulting from Periodic Review 2022**

4 **12VAC5-200-10. Definitions.**

5 The following words and terms when used in this chapter shall have the following meanings
6 unless the context clearly indicates otherwise:

7 "Applicant" means the person requesting medical care services for himself or on whose behalf
8 a request is made.

9 "Board" means the State Board of Health.

10 "Child" means a person under 18 years of age and includes any a biological or adopted child,
11 and ~~any~~ a child placed for adoption or foster care unless otherwise treated as a separate unit for
12 the purposes of determining eligibility and charges under these regulations.

13 "Commissioner" means the Commissioner of Health.

14 "Department" means the state Department of Health and includes the central office, regional
15 offices, health districts, and local health departments.

16 "Eligibility determination" means the process of obtaining required information regarding
17 family size, income, and other related data in order to establish charges to the applicant.

18 "Extraordinary financial hardship" includes hardship due to ~~such events as~~ natural disasters,
19 damage to or the loss of uninsured real or personal property, unpaid legal liabilities, and obligatory
20 and unavoidable expenditures for close relatives outside the family unit.

21 "Family" or "family unit" means the applicant and other ~~such~~ household members who
22 together constitute one economic unit. An economic unit is one or more individuals who generally
23 reside together and share income. The economic unit shall count in its income any contributions
24 to the unit from persons not necessarily living with the unit.

25 A parent may be a biological, adoptive, or stepparent.

26 A woman who is pregnant may be counted as a multiple beneficiary. ~~when the pregnancy has
27 been verified by a physician or a nurse practitioner working under the supervision of a physician.~~

28 ~~A husband and wife~~ Spouses who are separated and are not living together shall be
29 considered to be separate family units.

30 "Flat rate charges" means charges for specified goods or services that are to be charged to
31 all clients regardless of income and with no eligibility determination.

32 "Gross income" means total cash receipts before taxes from all sources. These include money
33 wages and salaries before any deductions, but do not include food or rent in lieu of wages. These
34 receipts include net receipts from nonfarm or farm self-employment (e.g., receipts from an
35 applicant's own business or farm expenses) income, plus any depreciation shown on income tax
36 forms. They include regular payments from social security or railroad retirement, unemployment
37 and workers' compensation, strike benefits from union funds, veterans' benefits, training stipends,
38 alimony, child support, and military family allotments or other regular support from an absent
39 family member or someone not living in the household; private pensions, government employee
40 pensions (including military retirement pay), and regular insurance or annuity payments; and
41 income from dividends, interest, net rental income, net royalties, or periodic receipts from estates
42 or trusts, lump sum settlements, and net gambling or lottery winnings.

43 "Gross income" does not include the value of food stamps, Special Supplemental Nutrition
44 Program for Women, Infants, and Children (WIC) checks, fuel assistance payments, housing

45 assistance, money borrowed, tax refunds, gifts, withdrawal of bank deposits from earned income,
46 earnings of minor children, money received from the sale of property, general relief from the
47 Department of Social Services, or college or university scholarships, grants, fellowships, and
48 assistantships when provided to pay for, or in the form of, tuition, fees, other direct educational
49 expenses, housing, or meals.

50 "Income scales" means scales based on individual or family gross income. They shall be
51 based on the official federal poverty guidelines updated annually by the U.S. Department of Health
52 and Human Services in accordance with ~~§§ 652 and 6763(2)~~ § 673(2) of the Omnibus
53 Reconciliation Act of 1981 (Public Law 97-35). There shall be two income scales: one for Northern
54 Virginia and one for the remainder of the Commonwealth. ~~as follows:~~

55 ~~Income Level A—those clients with incomes up to and including 100% of the federal poverty~~
56 ~~income guidelines will qualify as Income Level A clients, except for Northern Virginia where the~~
57 ~~Income Level A will be up to and including 110% of the federal poverty income guidelines.~~

58 ~~Income Level B—those clients with incomes above 100% and no more than 110% of the~~
59 ~~federal poverty guidelines will qualify as Income Level B clients, except for Northern Virginia~~
60 ~~where the Income Level B will be above 110% and no more than 133.3% of the federal poverty~~
61 ~~income guidelines.~~

62 ~~Income Level C—those clients with incomes above 110% and no more than 133.3% of the~~
63 ~~federal poverty income guidelines will qualify as Income Level C clients, except for Northern~~
64 ~~Virginia where the Income Level C will be above 133.3% and no more than 166.6% of the federal~~
65 ~~poverty income guidelines.~~

66 ~~Income Level D—those clients with incomes above 133.3% and no more than 166.6% of the~~
67 ~~federal poverty income guidelines will qualify as Income Level D clients, except for Northern~~
68 ~~Virginia where the Income Level D will be above 166.6% and no more than 200% of the federal~~
69 ~~poverty income guidelines.~~

70 ~~Income Level E—those clients with incomes above 166.6% and less than 200% of the federal~~
71 ~~poverty income guidelines will qualify as Income Level E clients, except for Northern Virginia~~
72 ~~where the Income Level E will be above 200% and less than 233.3% of the federal poverty income~~
73 ~~guidelines.~~

74 ~~Income Level F—those clients with incomes equal to or above 200% and less than 250% of~~
75 ~~the federal poverty income guidelines will qualify as Income Level F clients, except for Northern~~
76 ~~Virginia where the Income Level F will be equal to or above 233.3% and less than 283.3% of the~~
77 ~~federal poverty income guidelines.~~

78 ~~Income Level G—those clients with incomes equal to or above 250% of the federal poverty~~
79 ~~level guidelines will qualify as Income Level G clients, except for Northern Virginia where income~~
80 ~~level G will be equal to or above 283.3% of the federal poverty income guidelines.~~

81 "Medical care services" means clinical medical, dental, and nursing services provided to
82 patients by physicians, dentists, nurses, and other health care providers employed by health
83 districts or contracted by health districts to provide these services. It does not include laboratory
84 tests, pharmaceutical and biological products, radiological or other imaging studies, other goods
85 or products, or other medical services that a health district does not directly provide.

86 "Medically indigent" means applicants whose individual or family gross income is defined as
87 Income Level A.

88 "Minor" means a person less than 18 years of age whose parents are responsible for his care.
89 A minor will be considered a separate family unit when married or not living with any relative or
90 deemed an adult.

91 A minor shall be deemed an adult for the purposes of consenting to:

92 1. Medical or health services needed to determine the presence of or to treat venereal
93 disease or any infectious or contagious disease which the State Board of Health requires
94 to be reported.

95 2. Medical and health services required for birth control, pregnancy, or family planning
96 except for the purposes of sexual sterilization.

97 "Nonchargeable services" means the medical care and related goods and services that the
98 department has determined will be provided without charge and without an eligibility determination
99 to all citizens individuals regardless of income.

100 "Northern Virginia" means the area which includes the cities of Alexandria, Fairfax, Falls
101 Church, Manassas, Manassas Park, and the counties of Arlington, Fairfax, Loudoun, and Prince
102 William.

103 "Venereal disease" is synonymous with "sexually transmitted infection."

104 **12VAC5-200-20. Authority for regulations. (Repealed.)**

105 ~~Section 32.1-11 of the Code of Virginia establishes the responsibility of the board as follows:~~
106 ~~"The board may formulate a program of environmental health services, laboratory services and~~
107 ~~preventive, curative and restorative medical care services, including home and clinic health~~
108 ~~services described in Titles V, XVIII and XIX of the United States Social Security Act and~~
109 ~~amendments thereto, to be provided by the department on a district or local basis. The board shall~~
110 ~~define the income limitations within which a person shall be deemed to be medically indigent.~~
111 ~~Persons so deemed to be medically indigent shall receive the medical care services of the~~
112 ~~department without charge. The board may also prescribe the charges to be paid for the medical~~
113 ~~care services of the department by persons who are not deemed to be medically indigent and~~
114 ~~may, in its discretion and within the limitations of available funds, prescribe a scale of such~~
115 ~~charges based upon ability to pay. Funds received in payment of such charges are hereby~~
116 ~~appropriated to the board for the purpose of carrying out the provisions of this title. The board~~
117 ~~shall review periodically the program and charges adopted pursuant to this section."~~

118 **12VAC5-200-30. Purpose of chapter. (Repealed.)**

119 ~~The board has promulgated this chapter to: (i) establish financial eligibility criteria to determine~~
120 ~~if a person is medically indigent and therefore qualified to receive medical care services from the~~
121 ~~department without charge; (ii) establish income scales and a mechanism for determining charges~~
122 ~~for medical care provided by the department to individuals who are not medically indigent, based~~
123 ~~upon their ability to pay; (iii) establish a mechanism for handling appeals and waivers; and (iv)~~
124 ~~establish continuity of eligibility among state agencies. The regulations are constructed to assure~~
125 ~~that eligibility criteria remain appropriate for changing economic conditions.~~

126 **12VAC5-200-40. Administration of chapter. (Repealed.)**

127 ~~This chapter is administered by the commissioner.~~

128 ~~The commissioner shall assure uniformity and consistency by interpreting and implementing~~
129 ~~the rules of the department for the provision of medical care and related goods and services. The~~
130 ~~commissioner may issue a guidance document that interprets these regulations and provides~~
131 ~~guidance for their implementation. Such a document shall be reviewed and revised whenever the~~
132 ~~regulations of this chapter are reviewed, and may also be amended or revised as needed to meet~~
133 ~~changing circumstances.~~

134 ~~Whenever possible, charges for services shall use the most appropriate current Medicaid~~
135 ~~charges (and matching Medicaid codes). If there is no Medicaid code for a particular service, the~~
136 ~~most appropriate current Medicare charge (and matching code) shall be used. If both Medicaid~~
137 ~~and Medicare charges (and codes) exist for the same service, the Medicaid charge (and code)~~
138 ~~will be used. If neither a Medicaid nor a Medicare code exists for a particular service, the~~
139 ~~commissioner, or a designee, shall determine an appropriate charge and develop a matching~~

140 code. A guidance document shall include procedures for determining the costs and establishing
141 the charges for medical care and related goods and services when any of these are not otherwise
142 addressed in these regulations or the Code of Virginia.

143 ~~The commissioner shall publish specific income levels expressed in dollar amounts for~~
144 ~~determining eligibility for medical care services of the department in accordance with the income~~
145 ~~scales defined in 12VAC5-200-10.~~

146 **12VAC5-200-50. Recipients of services.**

147 This chapter shall apply to all persons a person seeking medical care services provided by
148 the department, except where other eligibility criteria are required for programs administered
149 under federal statute.

150 **12VAC5-200-60. Application of the Administrative Process Act. (Repealed.)**

151 ~~The provisions of the Virginia Administrative Process Act govern the adoption of these~~
152 ~~regulations and any subsequent amendments.~~

153 **12VAC5-200-80. Application process and termination of services.**

154 A. Upon an applicant's request for medical care services (excepting those except the services
155 described in 12VAC5-200-150, and 12VAC5-200-160, and 12VAC5-200-170), the department will
156 require applicant or the applicant's authorized representative shall provide to the department
157 accurate information as to regarding the applicant's family size, financial status and other related
158 data as described on the application for medical care needed to register the applicant as a patient
159 and classify the applicant into the appropriate income level. The applicant must be informed
160 during the interviewing process of the provisions as described in this section of the regulations.

161 ~~An application date is established when the applicant completes and signs the application for~~
162 ~~medical care services. B. The department shall record the applicant's eligibility date as the date~~
163 ~~on which the applicant signs the Patient Application and Consent for Health Care.~~

164 ~~When C. If an applicant is in need of needs emergency medical services, the district director,~~
165 ~~or his designee, shall waive this application process for that individual until such time as the~~
166 ~~individual is able to participate in the interviewing process.~~

167 ~~It is the applicant's responsibility to furnish the department with proof of the applicant's~~
168 ~~financial data in order to be appropriately classified according to income level and family size so~~
169 ~~that eligibility for discounts for medical care services can be determined.~~

170 ~~Any individual who is acting on behalf of an applicant will be responsible for the accuracy of~~
171 ~~all financial data provided to the department.~~

172 ~~Individuals who have failed D. The district director may terminate medical care services to a~~
173 ~~patient if the patient fails to make any a payment for medical care services or other goods or~~
174 ~~services received from the department within the past 90 days for medical care services or other~~
175 ~~after receiving the goods or services they have received may have their medical care services~~
176 ~~terminated. The district director may not terminate services only following without (i) giving notice~~
177 ~~to the individual patient or patient's authorized representative that such services will be terminated~~
178 ~~of the intent to terminate, (ii) and only after determining that terminating services would not be~~
179 ~~detrimental to the individual's patient's health. Medical care services cannot be terminated and~~
180 ~~(iii) for individuals receiving ongoing care without, making a good faith effort to secure alternative~~
181 ~~care.~~

182 **12VAC5-200-90. Charges for services.**

183 Charges for services means the reasonable charges established by the board for medical
184 care services. No charge shall be established outside the provisions of these regulations. The
185 department may prescribe a scale of discounts for certain medical care services. The
186 commissioner shall publish specific income levels expressed in dollar amounts for determining

187 eligibility for medical care services of the department in accordance with the income scales
188 defined in 12VAC5-200-110.

189 A. The commissioner shall use the most appropriate current Medicaid charges to establish
190 the fee schedule for services provided by the department pursuant to this chapter. If there is no
191 Medicaid charge for a particular service, the commissioner shall use the most appropriate current
192 Medicare charge. If neither a Medicaid nor a Medicare charge exists for a particular service, the
193 commissioner shall determine an appropriate charge based on the cost of providing the medical
194 care service. Charges will be based on current published Medicaid reimbursement levels. In those
195 instances where Medicaid does not reimburse for a service provided by the department, charges
196 shall be based on the appropriate current Medicare reimbursement levels. Where neither
197 Medicaid nor Medicare reimburse for a service, the commissioner shall establish charges based
198 on the costs of providing the medical care services. Charges for goods and services not directly
199 provided by the agency may be based on the agency's cost. Directors of health districts may
200 request permission from the commissioner, or commissioner's designee, to round charges to a
201 convenient value.

202 B. If the department provides a medical care service to a patient with private health insurance
203 that covers the service provided, the department shall charge to the private health insurance
204 carrier an amount equal to the allowable charge of the patient's private health insurance coverage.
205 If the health insurance carrier denies a claim for the medical care service, the department may
206 not charge the patient an amount greater than the amount the patient would have paid if the
207 patient did not have private health insurance.

208 C. On selected occasions it may be desirable to provide certain medical services, e.g.,
209 influenza immunization, to large numbers of people quickly and conveniently and thereby promote
210 their use by the public. In order to accomplish this, districts may charge a flat rate charge for these
211 services under these circumstances. This provision includes services that are otherwise available
212 at a discounted charge. No eligibility determination will be done, and all service recipients will be
213 charged the same flat rate charge. However, the district must also provide convenient alternative
214 times and venues where applicants can request an eligibility determination and obtain these
215 services at a discounted rate if eligible. The commissioner or commissioner's designee must
216 approve such flat rate charge arrangements in advance, including approval of the specific flat rate
217 charge.

218 D. Except as otherwise set out in this chapter, charges for certain goods and medical care
219 services may be set at a flat rate charge not subject to discounting. Flat rate charges must be
220 expressly approved by the commissioner or commissioner's designee prior to their
221 implementation.

222 **12VAC5-200-100. Flat rate charges. (Repealed.)**

223 ~~Except as otherwise set out in this chapter, charges for certain goods and medical care~~
224 ~~services may be set at a flat rate charge not subject to discounting. All flat rate charges must be~~
225 ~~expressly approved by the commissioner or commissioner's designee prior to their~~
226 ~~implementation.~~

227 **12VAC5-200-105. Charges for services and goods provided by contract.**

228 The department, health districts, and local health departments may enter into contracts with
229 agencies external to the department whereby the department, health district, or local health
230 department provides medical services and goods. Charges for such services and goods will be
231 determined by the contract. If a patient copayment is required in the contract, the patient shall pay
232 the full copayment to the department, district, or local health department regardless of the patient's
233 income status. The patient shall not be required to pay if state or federal law precludes a
234 copayment.

235 **12VAC5-200-110. Income levels for charges.**

236 A. The department shall annually publish specific income levels expressed in dollar amounts
237 for determining eligibility for discounts to the charges for medical care services. The income levels
238 established by the department shall be as follows:

239 1. Income Level A – those clients with individual or family incomes up to and including 100%
240 of the federal poverty income guidelines will qualify as Income Level A clients, except for Northern
241 Virginia where the Income Level A will be up to and including 110% of the federal poverty income
242 guidelines. These clients will be considered medically indigent.

243 2. Income Level B – those clients with individual or family incomes above 100% and no more
244 than 110% of the federal poverty guidelines will qualify as Income Level B clients, except for
245 Northern Virginia where the Income Level B will be above 110% and no more than 133.3% of the
246 federal poverty income guidelines.

247 3. Income Level C – those clients with individual or family incomes above 110% and no more
248 than 133.3% of the federal poverty income guidelines will qualify as Income Level C clients, except
249 for Northern Virginia where the Income Level C will be above 133.3% and no more than 166.6%
250 of the federal poverty income guidelines.

251 4. Income Level D – those clients with individual or family incomes above 133.3% and no
252 more than 166.6% of the federal poverty income guidelines will qualify as Income Level D clients,
253 except for Northern Virginia where the Income Level D will be above 166.6% and no more than
254 200% of the federal poverty income guidelines.

255 5. Income Level E – those clients with individual or family incomes above 166.6% and less
256 than 200% of the federal poverty income guidelines will qualify as Income Level E clients, except
257 for Northern Virginia where the Income Level E will be above 200% and less than 233.3% of the
258 federal poverty income guidelines.

259 6. Income Level F – those clients with individual or family incomes equal to or above 200%
260 and less than 250% of the federal poverty income guidelines will qualify as Income Level F clients,
261 except for Northern Virginia where the Income Level F will be equal to or above 233.3% and less
262 than 283.3% of the federal poverty income guidelines.

263 7. Income Level G – those clients with individual or family incomes equal to or above 250%
264 of the federal poverty level guidelines will qualify as Income Level G clients, except for Northern
265 Virginia where income level G will be equal to or above 283.3% of the federal poverty income
266 guidelines.

267 ~~The charges made to the applicant shall be subject to 100% discounting for those who are~~
268 ~~found to be medically indigent as defined in Part I.~~

269 B. Applicants for medical care services, including those in Northern Virginia as defined in Part
270 I, whose family income exceeds Income Level A shall be assessed a charge as follows:

- 271 1. Income Level A – 100% discount of the established charge for the service.
- 272 2. Income Level B – 90% discount of the established charge for the service.
- 273 3. Income Level C – 75% discount of the established charge for the service.
- 274 4. Income Level D – 50% discount of the established charge for the service.
- 275 5. Income Level E – 25% discount of the established charge for the service.
- 276 6. Income Level F – 5.0% discount of the established charge for the service.
- 277 7. Income Level G – No discount will be given.

278 **12VAC5-200-120. Automatic eligibility.**

279 ~~Applicants receiving~~ The department shall provide services to an applicant receiving
280 ~~assistance from~~ the following public assistance program will receive services programs as Income
281 Level A patients without additional income verification:

282 1. General Relief

283 2. Title XIX-Medicaid

284 3. National School Lunch Program for children receiving school meals at no cost. Only
285 used for applicable to child dental services.

286 4. Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). Only
287 applicable to dental varnish services under the Dental Varnish Program for children from
288 six months to three years of age.

289 ~~Applicants who are eligible for services under this section, and are not participating in~~
290 ~~Medicaid or any other children's medical insurance program sponsored by the state, should apply~~
291 ~~for these programs. Applicants who do not apply for Medicaid or a children's medical insurance~~
292 ~~program within 60 days of receiving services may be assessed the undiscounted charge for the~~
293 ~~medical care and related goods and services provided.~~

294 **12VAC5-200-130. Explanation of charges.**

295 ~~Prior to services being rendered, an~~ The department shall provide an explanation of the
296 estimated charges, applicable discounts, and expected payment ~~shall be provided~~ to the applicant
297 before rendering services.

298 **12VAC5-200-140. Redetermination of eligibility.**

299 ~~Eligibility~~ Unless otherwise required by law or regulation, the department shall redetermine
300 eligibility to receive discounts from on established charges must be redetermined at least every
301 12 months, or and when income or family status changes, unless otherwise required by law or
302 regulation.

303 **12VAC5-200-150. Services provided at no charge to the patient.**

304 A. The department shall provide the following services are provided at no charge to the
305 patient:

306 1. Those immunizations for children as required by § 32.1-46 of the Code of Virginia, and
307 of persons up to the age of 24 22 who are enrolled in a public or private primary or
308 secondary school when the person lacks evidence of complete and appropriate
309 immunizations for the diseases covered by that section of the Code of Virginia.

310 2. Examination and testing of persons suspected of having or known to have tuberculosis
311 as required by § 32.1-50 of the Code of Virginia.

312 3. Examination, testing and treatment of persons for sexually transmitted diseases as
313 required by § 32.1-57 of the Code of Virginia.

314 4. Anonymous or confidential testing for human immunodeficiency virus as required by §
315 32.1-55.1 of the Code of Virginia.

316 B. The department may provide other medical services at no charge to appropriate citizens of
317 the Commonwealth if directed by the board, the commissioner, or a district health director.

318 **12VAC5-200-170. Other health care services. (Repealed.)**

319 ~~The department may elect to provide other medical services at no charge to appropriate~~
320 ~~citizens of the Commonwealth when directed by the board, the commissioner or a district health~~
321 ~~director.~~

322 **12VAC5-200-180. Exceptions. (Repealed.)**

323 ~~A continuing exception to the above regulations for assessing charges for medical care~~
324 ~~services will exist for patients determined to be eligible for services provided under those~~
325 ~~programs of the department specified in the Code of Virginia or published in separate state plans.~~

326 **12VAC5-200-220. General. (Repealed.)**

327 ~~In instances when patients have financial hardships and there are no other avenues of care,~~
328 ~~the patient, guardian or other authorized person may request a waiver of charges for up to 180~~
329 ~~calendar days. A waiver shall be requested in writing to the district director. If a waiver is granted,~~
330 ~~it shall be for the duration of the financial hardship or 180 days, whichever is shorter.~~

331 ~~If the waiver request is approved, the patient will receive a full discount for all charges while~~
332 ~~covered by the waiver. If the waiver request is denied, the charges will continue as before.~~

333 **12VAC5-200-230. Waivers.**

334 A. The commissioner is authorized, and may delegate the authority to a local health director,
335 to grant or deny requested waivers and may delegate this authority to the district directors. A a
336 waiver to all or a portion of a charge may be granted for reasons of unusually serious health
337 problems or extraordinary financial hardship if a patient or the patient's guardian or legal
338 representative applies for a waiver in writing. A resulting waived or partially waived charge shall
339 be determined by the commissioner or designee and reviewed and revised as needed. The
340 commissioner or designee shall also identify those expenses that are considered to be ~~medical~~
341 bills for medical care services and shall review and revise this determination as needed.

342 B. In the event of an adverse decision, the patient, guardian or other authorized person will
343 be advised of their rights to appeal under Part VII of this chapter.

344 C. ~~Waivers will not be continued past 180 days. Additional waivers may be granted, but the~~
345 ~~applicant must reapply at least every 180 days. An approved waiver shall only be effective for the~~
346 ~~duration of the health or financial hardship or 180 days, whichever is shorter. The commissioner~~
347 ~~or his designee may grant an additional waiver related to the health or financial hardship if the~~
348 ~~patient or the patient's guardian or legal representative reapplies for the waiver.~~

349 D. No person believed to be eligible for Medicaid or any state-sponsored children's medical
350 insurance program and who has failed to complete an application for these programs will be
351 eligible for a waiver.

352 **12VAC5-200-270. Rights.**

353 A. If an applicant for or recipient of medical care services ~~as defined in these regulations~~ is
354 ~~denied such services, has services terminated, wishes to contest the determined income level, or~~
355 ~~is denied a waiver as defined in Part VI of these regulations~~ this chapter, the ~~applicant/recipient~~
356 applicant or recipient is entitled to appeal that action as set forth under this part. ~~There are no~~
357 ~~further rights of appeal except as set forth in this part.~~

358 B. ~~The applicant/recipient has the right to be informed~~ The district director shall notify the
359 applicant or recipient in writing of the appeal process, including time limits, and the right to receive
360 a written statement of the reasons for denial. If a person already receiving services is denied
361 those services, a written notice of termination shall be given 30 days in advance of discontinuing
362 services. ~~The person~~ The applicant or recipient has the right to confront any witnesses who may
363 have testified against him.

364 C. An individual or his representative may make a written or oral appeal to the district or
365 program director within 30 days of the denial of service.

366 D. Upon receipt of the appeal, the district director shall review and make written
367 recommendations to the commissioner, or commissioner's designee, within 15 days. Within 45

368 days following the date on which an appeal is filed, the commissioner, or commissioner's
369 designee, shall make a final decision and notify the district director of the decision in writing.

370 E. The district director or the program director shall notify the individual or his representative
371 in writing of the final decision.

372 ~~E. Services to applicants/recipients shall continue~~ F. The department shall continue to provide
373 medical care services to the applicant or recipient during the appeal process.

374 **12VAC5-200-280. Fraud.**

375 ~~If the district director identifies a patient~~ If an applicant for or recipient of medical care services
376 is willfully misrepresenting himself, or withholding or falsifying information in an attempt to obtain
377 medical services free or at a reduced rate, the district director may discontinue services to the
378 affected person 30 days after notifying the person that services will be discontinued. Such
379 recipient The affected person is entitled to the appeal process set forth in Part VII of this chapter.

380 **12VAC5-200-290. Charges and payment requirements.**

381 ~~This part shall be administered by the commissioner.~~ A. The commissioner shall establish a
382 procedure for the ongoing development; maintenance, revision, and updating; and promulgation
383 of these of the charges and payments schedules pursuant to this chapter. There shall be two sets
384 of schedules, one for Northern Virginia as defined in 12VAC5-200-10 and one for the remainder
385 of the Commonwealth.

386 ~~By the provisions of the "Regulations Governing Eligibility Standards and Charges for Medical~~
387 Care Services to Individuals" (12VAC5-200) promulgated by the Board of Health in accordance
388 with §§ 32.1-11 and 32.1-12 of the Code of Virginia, the B. The department shall make the charges
389 for medical care services, stating the minimum required payments to be made by patients or
390 other responsible persons toward their charges, according to income levels and the income
391 schedules used to determine sliding scale discounts are available to the public for inspection and
392 copying at the headquarters, district, and local health department offices of the department.



townhall.virginia.gov

Periodic Review and Small Business Impact Review Report of Findings

Agency name	State Board of Health
Virginia Administrative Code (VAC) Chapter citation(s)	12VAC 5-150
VAC Chapter title(s)	Regulations for the Sanitary Control of Storing, Processing, Packing or Repacking of Oysters, Clams and Other Shellfish
Date this document prepared	December 22, 2022

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Order 19 (2022) (EO 19), any instructions or procedures issued by the Office of Regulatory Management (ORM) or the Department of Planning and Budget (DPB) pursuant to EO 19, the Regulations for Filing and Publishing Agency Regulations (1 VAC 7-10), and the *Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code*.

Acronyms and Definitions

Define all acronyms used in this Report, and any technical terms that are not also defined in the "Definitions" section of the regulation.

"Board" means the State Board of Health.

"Regulations" means the Regulations for the Sanitary Control of Storing, Processing, Packing or Repacking of Oysters, Clams and Other Shellfish.

Legal Basis

Identify (1) the promulgating agency, and (2) the state and/or federal legal authority for the regulatory change, including the most relevant citations to the Code of Virginia or Acts of Assembly chapter number(s), if applicable. Your citation must include a specific provision, if any, authorizing the promulgating agency to regulate this specific subject or program, as well as a reference to the agency's overall regulatory authority.

The agency is the State Board of Health (Board). Chapter 8 of Title 28.2 of the Code of Virginia grants legal authority to the Board to promulgate regulations related to the sanitary control of shellfish and crustacea and mandates the State Health Commissioner enforce the provisions of Chapter 8.

Section 28.2-801 of the Code of Virginia states, in part,

“A. The State Health Commissioner and the Commissioner of Marine Resources shall enforce the provisions of this chapter and regulations promulgated thereunder.

B. The State Board of Health and the Marine Resources Commission may promulgate regulations necessary to carry out the provisions of this chapter.”

In addition, Section 28.2-806 of the Code of Virginia states,

“The State Health Commissioner may establish and change standards, examinations, analyses, and inspections which control the taking and marketing from a health standpoint, of crustacea, finfish or shellfish. He shall be the sole judge of whether or not such crustacea, finfish or shellfish are sanitary and fit for market.”

Alternatives to Regulation

Describe any viable alternatives for achieving the purpose of the regulation that were considered as part of the periodic review. Include an explanation of why such alternatives were rejected and why this regulation is the least burdensome alternative available for achieving its purpose.

There are no viable alternatives for achieving the purpose of the Regulations. The Regulations enable the Board to fulfill its statutory mandates in Chapter 8 of Title 28.2 of the Code of Virginia. Further, the Regulations are necessary to ensure that statutory requirements of the Board are executed in the least burdensome and most efficient and cost effective manner possible while protecting the health, safety, and welfare of all people in Virginia.

Public Comment

Summarize all comments received during the public comment period following the publication of the Notice of Periodic Review, and provide the agency’s response. Be sure to include all comments submitted: including those received on Town Hall, in a public hearing, or submitted directly to the agency. Indicate if an informal advisory group was formed for purposes of assisting in the periodic review.

No comments were received during the public comment period following the publication of the Notice of Periodic Review

Effectiveness

Pursuant to § 2.2-4017 of the Code of Virginia, indicate whether the regulation meets the criteria set out in the ORM procedures, including why the regulation is (a) necessary for the protection of public health, safety, and welfare, and (b) is clearly written and easily understandable.

Upon a review of the Regulations, the Board determined they are essential to protecting public health by requiring that molluscan shellfish establishments obtain approval from the State Health Commissioner before beginning operations or renovations. They further require such establishments to maintain sanitary conditions, thus protecting all people in Virginia. The Regulations meet the criteria set forth in

Executive Order 19 (2022). The Regulations are necessary to interpret and apply the requirements of the Code of Virginia and are clearly written and understandable.

Decision

Explain the basis for the promulgating agency's decision (retain the regulation as is without making changes, amend the regulation, or repeal the regulation).

If the result of the periodic review is to retain the regulation as is, complete the ORM Economic Impact form.

The Board has determined that the Regulations should be amended to ensure that they reflect the most updated science and best practices, including feedback from relevant industry experts and other stakeholders.

The Regulations have not undergone a comprehensive review since their initial administrative codification approximately 50 years ago. In addition, at the conclusion of a periodic review conducted in 2017, the Office of the Attorney General (OAG) advised VDH that sections of the Regulations were inconsistent with the Code of Virginia and require amendment.

Small Business Impact

As required by § 2.2-4007.1 E and F of the Code of Virginia, discuss the agency's consideration of: (1) the continued need for the regulation; (2) the nature of complaints or comments received concerning the regulation; (3) the complexity of the regulation; (4) the extent to which the regulation overlaps, duplicates, or conflicts with federal or state law or regulation; and (5) the length of time since the regulation has been evaluated or the degree to which technology, economic conditions, or other factors have changed in the area affected by the regulation. Also, discuss why the agency's decision, consistent with applicable law, will minimize the economic impact of regulations on small businesses.

Chapter 8 of Title 28.2 of the Code of Virginia authorizes the Board to promulgate regulations necessary to protect public health and safety as it pertains to crustacea and shellfish. The continued need for the Regulations is established in statute. No comments were received during the public comment period from 10/10/2022 to 10/31/2022. The last periodic review of this chapter was completed in 2017.

The Regulations are clearly written and easily understandable; however, they overlap, duplicate, or conflict with state laws and regulation, specifically Code of Virginia § 28.2-823 and 12VAC 5-160. An evaluation is necessary to determine how or if technology, economic conditions, or other factors could have an impact on the regulated industry and the general public.

VDH staff will engage with stakeholders and the regulated community regarding any proposed amendments to minimize the economic impact of regulations on small businesses while maintaining appropriate regulatory standards to ensure the safety, health, and welfare of the public.

Office of Regulatory Management
Economic Review Form

Agency name	Virginia Department of Health
Virginia Administrative Code (VAC) Chapter citation(s)	12 VAC 5-150
VAC Chapter title(s)	Regulations for the Sanitary Control of Storing, Process, Packing or Repacking of Oysters, Clams and Other Shellfish
Action title	Periodic Review
Date this document prepared	2/3/23
Regulatory Stage (including Issuance of Guidance Documents)	Periodic Review

Impact on Local Partners

Use this chart to describe impacts on local partners. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 2: Impact on Local Partners

<p>(1) Direct & Indirect Costs & Benefits (Monetized)</p>	<p>Direct Costs: There are no direct monetary costs to local partners identified with this periodic review.</p> <p>Indirect Costs: There are no indirect monetary costs to local partners identified with this periodic review.</p> <p>Direct Benefits: There are no direct monetary benefits to local partners identified with this periodic review.</p> <p>Indirect Benefits: There are no indirect monetary benefits to local partners identified with this periodic review.</p> <p>Additional focus on direct monetized costs and benefits to local partners will take place during the proposed stage of the regulatory action with stakeholder input.</p>	
<p>(2) Present Monetized Values</p>	<p>Direct & Indirect Costs</p>	<p>Direct & Indirect Benefits</p>

	(a) \$0	(b) \$0
(3) Other Costs & Benefits (Non-Monetized)	<p>Other Costs: There are no non-monetized costs to local partners identified with this periodic review.</p> <p>Other Benefits: Local partners or authorities such as the Shellfish Grower’s Association of Virginia, Virginia Waterman’s Association, and Virginia Seafood Council may benefit from notification of the agency’s intent to amend the regulations as their engagement will be sought at a later time to help with the regulation’s development. These groups represent the regulant population. Local and tribal governments, school divisions or other local government authorities are likely not affected by this action.</p> <p>Additional focus on non-monetized costs and benefits to local partners will take place during the proposed stage of the regulatory action with stakeholder input.</p>	
(4) Assistance	None	
(5) Information Sources	N/A	

Impacts on Families

Use this chart to describe impacts on families. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 3: Impact on Families

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>Direct Costs: There are no direct monetary costs to families identified with this periodic review.</p> <p>Indirect Costs: There are no indirect monetary costs to families identified with this periodic review.</p> <p>Direct Benefits: There are no direct monetary benefits to families identified with this periodic review.</p> <p>Indirect Benefits: There are no indirect monetary benefits to families identified with this periodic review.</p>	
--	---	--

	Additional focus on direct monetized costs and benefits to families will take place during the proposed stage of the regulatory action with stakeholder input.	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0	(b) \$0
(3) Other Costs & Benefits (Non-Monetized)	<p>Other Costs: There are no non-monetary costs to families identified with this periodic review.</p> <p>Other Benefits: Updating the regulations to ensure adequate public health protection impacts families consuming Virginia’s shellfish.</p> <p>Additional focus on non-monetized costs and benefits to families will take place during the proposed stage of the regulatory action with stakeholder input.</p>	
(4) Information Sources	None	

Impacts on Small Businesses

Use this chart to describe impacts on small businesses. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 4: Impact on Small Businesses

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>Direct Costs: There are no direct monetary costs to small businesses identified with this periodic review.</p> <p>Indirect Costs: There are no indirect monetary costs to small businesses identified with this periodic review.</p> <p>Direct Benefits: A potential monetary benefit to small businesses is the inclusion of emerging technologies, new science and knowledge, and innovative practices in shellfish safety thus reducing costs for small businesses.</p> <p>Indirect Benefits: There are no indirect monetary benefits to small businesses identified with this periodic review.</p> <p>Additional focus on monetized costs and benefits to small businesses will take place during the proposed stage of the regulatory action with stakeholder input.</p>
--	--

(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0	(b) \$0
(3) Other Costs & Benefits (Non-Monetized)	<p>Other Costs: There are no non-monetary costs to small businesses identified with this periodic review.</p> <p>Other Benefits: There are no non-monetary benefits to small businesses identified with this periodic review.</p> <p>Additional focus on non-monetized costs and benefits to small businesses will take place during the proposed stage of the regulatory action with stakeholder input.</p>	
(4) Alternatives	Staff will consider the alternatives under 2.2-4007.1 of the Code of Virginia throughout the development of regulatory text.	
(5) Information Sources	None	

Changes to Number of Regulatory Requirements

For each individual VAC Chapter amended, repealed, or promulgated by this regulatory action, list (a) the initial requirement count, (b) the count of requirements that this regulatory package is adding, (c) the count of requirements that this regulatory package is reducing, (d) the net change in the number of requirements. This count should be based upon the text as written when this stage was presented for executive branch review. Five rows have been provided, add or delete rows as needed. In the last row, indicate the total number for each column.

Table 5: Total Number of Requirements

Chapter number	Number of Requirements			
	Initial Count	Additions	Subtractions	Net Change
12 VAC 5-150	6	0	1	1

TOTAL	6	0	1	1
--------------	---	---	---	---



townhall.virginia.gov

Periodic Review and Small Business Impact Review Report of Findings

Agency name	State Board of Health
Virginia Administrative Code (VAC) Chapter citation(s)	12VAC 5-160
VAC Chapter title(s)	Regulations for the Sanitary Control of the Picking, Packing and Marketing of Crab Meat for Human Consumption
Date this document prepared	December 22, 2022

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Order 19 (2022) (EO 19), any instructions or procedures issued by the Office of Regulatory Management (ORM) or the Department of Planning and Budget (DPB) pursuant to EO 19, the Regulations for Filing and Publishing Agency Regulations (1 VAC 7-10), and the *Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code*.

Acronyms and Definitions

Define all acronyms used in this Report, and any technical terms that are not also defined in the "Definitions" section of the regulation.

"Board" means the State Board of Health.

"Regulations" means the Regulations for the Sanitary Control of the Picking, Packing and Marketing of Crab Meat for Human Consumption.

Legal Basis

Identify (1) the promulgating agency, and (2) the state and/or federal legal authority for the regulatory change, including the most relevant citations to the Code of Virginia or Acts of Assembly chapter number(s), if applicable. Your citation must include a specific provision, if any, authorizing the promulgating agency to regulate this specific subject or program, as well as a reference to the agency's overall regulatory authority.

The agency is the State Board of Health (Board). Chapter 8 of Title 28.2 of the Code of Virginia grants legal authority to the Board to promulgate regulations related to the sanitary control of shellfish and crustacea and mandates the State Health Commissioner to enforce the provisions of Chapter 8.

Section 28.2-801 of the Code of Virginia states, in part,

“A. The State Health Commissioner and the Commissioner of Marine Resources shall enforce the provisions of this chapter and regulations promulgated thereunder.

B. The State Board of Health and the Marine Resources Commission may promulgate regulations necessary to carry out the provisions of this chapter.”

In addition, Section 28.2-806 of the Code of Virginia states,

“The State Health Commissioner may establish and change standards, examinations, analyses, and inspections which control the taking and marketing from a health standpoint, of crustacea, finfish or shellfish. He shall be the sole judge of whether or not such crustacea, finfish or shellfish are sanitary and fit for market.”

Alternatives to Regulation

Describe any viable alternatives for achieving the purpose of the regulation that were considered as part of the periodic review. Include an explanation of why such alternatives were rejected and why this regulation is the least burdensome alternative available for achieving its purpose.

The Board has determined that the Regulations be repealed because they overlap and duplicate the intent of 12VAC 5-150. Language from 12VAC 5-160 can be incorporated into 12VAC 5-150 while maintaining a high level of public health protection and lessening burden on the regulated industry.

Public Comment

Summarize all comments received during the public comment period following the publication of the Notice of Periodic Review, and provide the agency’s response. Be sure to include all comments submitted: including those received on Town Hall, in a public hearing, or submitted directly to the agency. Indicate if an informal advisory group was formed for purposes of assisting in the periodic review.

No comments were received during the public comment period following the publication of the Notice of Periodic Review.

Effectiveness

Pursuant to § 2.2-4017 of the Code of Virginia, indicate whether the regulation meets the criteria set out in the ORM procedures, including why the regulation is (a) necessary for the protection of public health, safety, and welfare, and (b) is clearly written and easily understandable.

Upon a review of the Regulations, the Board determined they are essential to protecting public health by requiring crustacea establishments obtain approval from the State Health Commissioner before beginning operations or renovations. They further require such establishments to maintain sanitary conditions, thus protecting all people in Virginia. The Regulations meet the criteria set forth in Executive Order 19 (2022). The Regulations are necessary to interpret and apply the requirements of the Code of Virginia and are

clearly written and understandable. However, the intent of the Regulations can be incorporated into 12VAC 5-150, reducing the burden on the regulated industry.

Decision

Explain the basis for the promulgating agency's decision (retain the regulation as is without making changes, amend the regulation, or repeal the regulation).

If the result of the periodic review is to retain the regulation as is, complete the ORM Economic Impact form.

The Board has determined that the Regulations be repealed. Language from 12VAC 5-160 can be incorporated into 12VAC 5-150 to maintain public health protection, safety, and welfare.

Small Business Impact

As required by § 2.2-4007.1 E and F of the Code of Virginia, discuss the agency's consideration of: (1) the continued need for the regulation; (2) the nature of complaints or comments received concerning the regulation; (3) the complexity of the regulation; (4) the extent to which the regulation overlaps, duplicates, or conflicts with federal or state law or regulation; and (5) the length of time since the regulation has been evaluated or the degree to which technology, economic conditions, or other factors have changed in the area affected by the regulation. Also, discuss why the agency's decision, consistent with applicable law, will minimize the economic impact of regulations on small businesses.

Chapter 8 of Title 28.2 of the Code of Virginia authorizes the Board to promulgate regulations necessary to protect public health and safety as it pertains to crustacea and shellfish. The continued need for the Regulations is established in statute. No comments were received during the public comment period from 10/24/2022 to 11/14/2022. The last periodic review of this chapter was completed in 2017.

The Regulations are clearly written and easily understandable but overlap with state law and regulation. As a result, VDH recommends this chapter be repealed. This action will reduce burden on the regulated industry.

Office of Regulatory Management
Economic Review Form

Agency name	Virginia Department of Health
Virginia Administrative Code (VAC) Chapter citation(s)	12 VAC 5-160
VAC Chapter title(s)	Regulations for the Sanitary Control of the Picking, Packing and Marketing of Crab Meat for Human Consumption
Action title	Periodic Review
Date this document prepared	2/3/23
Regulatory Stage (including Issuance of Guidance Documents)	Periodic Review

Impact on Local Partners

Use this chart to describe impacts on local partners. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 2: Impact on Local Partners

<p>(1) Direct & Indirect Costs & Benefits (Monetized)</p>	<ul style="list-style-type: none"> In an effort to reduce unnecessary and duplicative regulatory oversight, the Virginia Department of Health (VDH) proposed to repeal Chapter 160 and incorporate its provisions, in part, into 12VAC5-150 (Chapter 150). <p>Direct Costs: There are no direct monetary costs to local partners identified with this periodic review.</p> <p>Indirect Costs: There are no indirect monetary costs to local partners identified with this periodic review.</p> <p>Direct Benefits: There are no direct monetary benefits to local partners identified with this periodic review.</p> <p>Indirect Benefits: There are no indirect monetary benefits to local partners identified with this periodic review.</p>	
<p>(2) Present Monetized Values</p>	<p>Direct & Indirect Costs</p>	<p>Direct & Indirect Benefits</p>

	(a) \$0	(b) \$0
(3) Other Costs & Benefits (Non-Monetized)	<p>Other Costs: There are no non-monetized costs to local partners identified with this periodic review.</p> <p>Other Benefits: Local partners or authorities such as the Virginia Waterman’s Association, and Virginia Seafood Council may benefit from the proposed repeal of Chapter 160. As Chapter 150 is undergoing a regulatory amendment, provisions of Chapter 160 may be incorporated in part.</p>	
(4) Assistance	None	
(5) Information Sources	N/A	

Impacts on Families

Use this chart to describe impacts on families. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 3: Impact on Families

(1) Direct & Indirect Costs & Benefits (Monetized)	<ul style="list-style-type: none"> In an effort to reduce unnecessary and duplicative regulatory oversight, the VDH proposed to repeal Chapter 160 and incorporate its provisions, in part, into 12VAC5-150. <p>Direct Costs: There are no direct monetary costs to families identified with this periodic review.</p> <p>Indirect Costs: There are no indirect monetary costs to families identified with this periodic review.</p> <p>Direct Benefits: There are no direct monetary benefits to families identified with this periodic review.</p> <p>Indirect Benefits: There are no indirect monetary benefits to families identified with this periodic review.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits

	(a) \$0	(b) \$0
(3) Other Costs & Benefits (Non-Monetized)	<p>Other Costs: There are no non-monetary costs to families identified with this periodic review.</p> <p>Other Benefits: There are no non-monetary benefits to families identified with this periodic review.</p> <p>Additional focus on non-monetized costs and benefits to families will take place during the proposed stage of the regulatory action with stakeholder input.</p>	
(4) Information Sources	None	

Impacts on Small Businesses

Use this chart to describe impacts on small businesses. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 4: Impact on Small Businesses

(1) Direct & Indirect Costs & Benefits (Monetized)	<ul style="list-style-type: none"> In an effort to reduce unnecessary and duplicative regulatory oversight, the VDH proposed to repeal Chapter 160 and incorporate its provisions, in part, into 12VAC5-150. <p>Direct Costs: There are no direct monetary costs to small businesses identified with this periodic review.</p> <p>Indirect Costs: There are no indirect monetary costs to small businesses identified with this periodic review.</p> <p>Direct Benefits: A potential monetary benefit to small businesses is the inclusion of emerging technologies, new science and knowledge, and innovative practices in shellfish safety thus reducing costs for small businesses. Staff proposed to repeal this chapter and only incorporate those provisions that are necessary to carry out the agency’s statutorily mandated responsibilities.</p> <p>Indirect Benefits: There are no indirect monetary benefits to small businesses identified with this periodic review.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$0	(b) \$0

(3) Other Costs & Benefits (Non-Monetized)	Other Costs: There are no non-monetary costs to small businesses identified with this periodic review. Other Benefits: There are no non-monetary benefits to small businesses identified with this periodic review.
(4) Alternatives	None
(5) Information Sources	None

Changes to Number of Regulatory Requirements

For each individual VAC Chapter amended, repealed, or promulgated by this regulatory action, list (a) the initial requirement count, (b) the count of requirements that this regulatory package is adding, (c) the count of requirements that this regulatory package is reducing, (d) the net change in the number of requirements. This count should be based upon the text as written when this stage was presented for executive branch review. Five rows have been provided, add or delete rows as needed. In the last row, indicate the total number for each column.

Table 5: Total Number of Requirements

Chapter number	Number of Requirements			
	Initial Count	Additions	Subtractions	Net Change
12 VAC 5-160	5	0	5	0
TOTAL	5	0	5	0



townhall.virginia.gov

Periodic Review and Small Business Impact Review Report of Findings

Agency name	State Board of Health
Virginia Administrative Code (VAC) Chapter citation(s)	12VAC5-610
VAC Chapter title(s)	Sewage Handling and Disposal Regulations
Date this document prepared	January 24, 2023

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Order 19 (2022) (EO 19), any instructions or procedures issued by the Office of Regulatory Management (ORM) or the Department of Planning and Budget (DPB) pursuant to EO 19, the Regulations for Filing and Publishing Agency Regulations (1 VAC 7-10), and the *Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code*.

Acronyms and Definitions

Define all acronyms used in this Report, and any technical terms that are not also defined in the "Definitions" section of the regulation.

"Board" means the State Board of Health.

"Regulations" means the Sewage Handling and Disposal Regulations.

Legal Basis

Identify (1) the promulgating agency, and (2) the state and/or federal legal authority for the regulatory change, including the most relevant citations to the Code of Virginia or Acts of Assembly chapter number(s), if applicable. Your citation must include a specific provision, if any, authorizing the promulgating agency to regulate this specific subject or program, as well as a reference to the agency's overall regulatory authority.

The promulgating agency is the State Board of Health. Section 32.1-12 of the Code of Virginia authorizes the Board to "promulgate and enforce such regulations and provide for reasonable

variances and exemptions therefrom as may be necessary to carry out the provisions of this title and other laws of the Commonwealth administered by it, the Commissioner or the Department.” Section 32.1-164 provides that the Board has supervision and control over, and shall promulgate regulations regarding the safe and sanitary collection, conveyance, transportation, treatment, and disposal of sewage by onsite sewage systems and alternative discharging sewage systems and treatment works to protect the public health and welfare.

Alternatives to Regulation

Describe any viable alternatives for achieving the purpose of the regulation that were considered as part of the periodic review. Include an explanation of why such alternatives were rejected and why this regulation is the least burdensome alternative available for achieving its purpose.

There are no viable alternatives for achieving the purpose of the Regulations. The Regulations enable the Board to fulfill the statutory mandates in § 32.1-164 of the Code of Virginia. Further, the Regulations are necessary to ensure the Board’s statutory requirements are executed in the least burdensome and most efficient and cost-effective manner while protecting the health, safety, and welfare of the residents of Virginia.

Public Comment

Summarize all comments received during the public comment period following the publication of the Notice of Periodic Review and provide the agency’s response. Be sure to include all comments submitted: including those received on Town Hall, in a public hearing, or submitted directly to the agency. Indicate if an informal advisory group was formed for purposes of assisting in the periodic review.

No public comments were received during the public comment period following the publication of the Notice of Periodic Review.

Effectiveness

Pursuant to § 2.2-4017 of the Code of Virginia, indicate whether the regulation meets the criteria set out in the ORM procedures, including why the regulation is (a) necessary for the protection of public health, safety, and welfare, and (b) is clearly written and easily understandable.

The General Assembly has charged the Board with the responsibility to adopt, promulgate, and enforce regulations necessary to protect health and safety as it relates to onsite sewage systems. The Regulations were reviewed, and it was determined they are essential to protecting public health.

The Regulations fulfill the statutory mandate from the General Assembly by ensuring the safe and sanitary treatment and disposal of sewage by onsite sewage systems.

The Regulations meet the criteria set forth in Executive Order 19 (2022). The Regulations are necessary to interpret and apply the requirements of the Code of Virginia and are clearly written and understandable. Lastly, the Regulations are designed to achieve its objective in the most efficient and cost-effective manner. However, the Regulations have not undergone a comprehensive revision since 2000. Therefore, a detailed review is necessary to ensure the Regulations reflect changes in the industry and best practices.

Decision

Explain the basis for the promulgating agency’s decision (retain the regulation as is without making changes, amend the regulation, or repeal the regulation).

If the result of the periodic review is to retain the regulation as is, complete the ORM Economic Impact form.

The Board has determined that the Regulations should be amended to ensure that they reflect the most updated science and best practices, including feedback from relevant industry experts and other stakeholders.

The Regulations have not undergone a comprehensive revision since 2000. The Regulations, in their current form, do not reflect all changes in the industry and best practices over the last 20 years.

Small Business Impact

As required by § 2.2-4007.1 E and F of the Code of Virginia, discuss the agency’s consideration of: (1) the continued need for the regulation; (2) the nature of complaints or comments received concerning the regulation; (3) the complexity of the regulation; (4) the extent to which the regulation overlaps, duplicates, or conflicts with federal or state law or regulation; and (5) the length of time since the regulation has been evaluated or the degree to which technology, economic conditions, or other factors have changed in the area affected by the regulation. Also, discuss why the agency’s decision, consistent with applicable law, will minimize the economic impact of regulations on small businesses.

Chapter 6 of Title 32.1 of the Code of Virginia mandate the Board’s supervision and control over the safe and sanitary collection, conveyance, transportation, treatment, and disposal of sewage by onsite sewage systems. The continued need for the Regulations is established in Code and is not discretionary.

The Regulations are clearly written and easily understandable; however, several sections may not reflect current industry standards and best practices. The Regulations have not undergone a comprehensive revision since 2000.

While the agency did not receive any comments during the Periodic Review, agency staff held public meetings with stakeholders and the regulated community in 2022 to address changes in the onsite sewage system industry and best practices. As a result of these meetings, the agency understands that in their current state, the Regulations contain outdated soil science terminology and ambiguous wording regarding certain installation requirements. The Regulations also lack any operation and maintenance specifications for aging onsite sewage systems. Agency staff will continue to engage with stakeholders and the regulated community regarding any necessary amendments to minimize the economic impact of the Regulations on small businesses while maintaining appropriate regulatory standards to ensure the safety, health, and welfare of the public.

Office of Regulatory Management
Economic Review Form

Agency name	Virginia Department of Health
Virginia Administrative Code (VAC) Chapter citation(s)	12 VAC 5-610
VAC Chapter title(s)	Sewage Handling and Disposal Regulations
Action title	Periodic Review of the Sewage Handling and Disposal Regulations
Date this document prepared	January 30, 2023
Regulatory Stage (including Issuance of Guidance Documents)	Periodic Review

Cost Benefit Analysis

Complete Tables 1a and 1b for all regulatory actions. You do not need to complete Table 1c if the regulatory action is required by state statute or federal statute or regulation and leaves no discretion in its implementation.

Table 1a should provide analysis for the regulatory approach you are taking. Table 1b should provide analysis for the approach of leaving the current regulations intact (i.e., no further change is implemented). Table 1c should provide analysis for at least one alternative approach. You should not limit yourself to one alternative, however, and can add additional charts as needed.

Report both direct and indirect costs and benefits that can be monetized in Boxes 1 and 2. Report direct and indirect costs and benefits that cannot be monetized in Box 4. See the ORM Regulatory Economic Analysis Manual for additional guidance.

Impact on Local Partners

Use this chart to describe impacts on local partners. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 2: Impact on Local Partners

(1) Direct & Indirect Costs & Benefits (Monetized)	There are no direct or indirect costs or benefits to local partners anticipated with this regulatory action.
--	--

(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) N/A	(b) N/A
(3) Other Costs & Benefits (Non-Monetized)	The Sewage Handling and Disposal Regulations (“Regulations”) are implemented throughout all 95 counties and 38 independent cities of Virginia. The local health departments of the Virginia Department of Health (VDH) operate in each of these counties and cities to provide environmental health services throughout Virginia. Through the Regulations, local health departments ensure sewage is handled and disposed of in a safe and sanitary manner with appropriate design and permitting. Updating the Regulations for consistency with current industry standards and other regulations, such as the Uniform Statewide Building Code administered by local government, provides non-monetized benefits to local partners.	
(4) Assistance	Local partners are represented on the Sewage Handling and Disposal Advisory Committee (SHADAC) by the Virginia Association of Counties and the Virginia Municipal League. The representatives on the SHADAC are responsible for making recommendations to the Commissioner regarding sewage handling and disposal policies, procedures, and programs. This representation provides local partners an avenue to share their thoughts and ideas on any proposed amendments to the Regulations.	
(5) Information Sources	Section 12VAC5-610-50 of the Regulations; appointments to the SHADAC.	

Impacts on Families

Use this chart to describe impacts on families. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 3: Impact on Families

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>The cost of compliance with the Regulations on families and the benefits received by public health and environment are specific to each individual onsite sewage system. Approximately 1.1 million onsite sewage systems are currently in use in Virginia.</p> <p>The median installation cost (from a sample of 50 conventional onsite systems installed through funding from the Virginia Department of Health’s Septic and Well Assistance Program, “SWAP”) was \$19,188 per system. For the 18 alternative onsite sewage systems, the median per-system installation costs were \$35,726. If fully maintained, alternative onsite sewage systems tend to have an annual upkeep cost of about \$500</p>
--	---

	Conventional onsite sewage systems should be pumped out every 3-5 years, with costs for that service ranging from around \$350-500.	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) NA	(b) NA
(3) Other Costs & Benefits (Non-Monetized)	The families impacted by the Regulations are those property owners using onsite sewage systems. These onsite sewage systems are designed, permitted, and installed in accordance with the Regulations. Updating the Regulations for consistency with current industry standards and other regulations provides non-monetized benefits to families. Inclusion of updated industry standards can reduce confusion in permitting and ensure that all tested and proven technologies are available for use in Virginia. Updating the Regulations to ensure proper public health and environmental protection also impacts families recreating and working in Virginia's waters and consuming Virginia's shellfish.	
(4) Information Sources	Estimates for the number of onsite sewage systems in Virginia are based on 1990 U.S. Census data on the use of onsite systems, and data from the Virginia Department of Health's Environmental Health Database. Data for median costs of onsite sewage systems from Virginia Department of Health's Septic and Well Assistance Program projects.	

Impacts on Small Businesses

Use this chart to describe impacts on small businesses. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 4: Impact on Small Businesses

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>The cost of compliance with the Regulations on small businesses and the benefits received by public health and environment are specific to each individual onsite sewage system. Approximately 1.1 million onsite sewage systems are currently in use in Virginia.</p> <p>The median installation cost (from a sample of 50 conventional onsite systems installed through funding from the Virginia Department of Health's Septic and Well Assistance Program, "SWAP") was \$19,188 per system. For the 18 alternative onsite sewage systems, the median per-system installation costs were \$35,726. If fully maintained, alternative onsite sewage systems tend to have an annual upkeep cost of about \$500. Conventional onsite sewage systems should be pumped out every 3-5 years, with costs for that service ranging from around \$350-500.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits

	(a) NA	(b) NA
(3) Other Costs & Benefits (Non-Monetized)	<p>The small businesses impacted by the Regulations are comprised of Licensed Onsite Soil Evaluators, Installers, and Operators, as well as Professional Engineers. These licensed professionals are respectively hired by property owners to evaluate site and soil conditions and design, install, and operate onsite sewage systems. There are approximately 1,500 licensed onsite sewage professionals in Virginia. The Regulations are used by onsite sewage system professionals to design systems that ensure the safe and sanitary handling and disposal of sewage in all stages of system development.</p> <p>Updating the Regulations for consistency with current industry standards and other regulations provides non-monetized benefits to small businesses. Inclusion of updated industry standards can reduce confusion in permitting, making it easier for licensed professionals to design, install, and operate onsite sewage systems. The Regulations also impact any small business that is served by an onsite sewage system or that is involved with the development of land served by onsite sewage systems. These businesses will receive similar benefits to updating the Regulations.</p>	
(4) Alternatives	<p>Agency staff will engage with representatives of small businesses during the development of the amendments to the Regulations to allow for a thorough evaluation of alternative approaches.</p>	
(5) Information Sources	<p>Department of Professional and Occupational Regulation, Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals data on licensed professionals. Data for median costs of onsite sewage systems from Virginia Department of Health’s Septic and Well Assistance Program projects.</p>	

Changes to Number of Regulatory Requirements

For each individual VAC Chapter amended, repealed, or promulgated by this regulatory action, list (a) the initial requirement count, (b) the count of requirements that this regulatory package is adding, (c) the count of requirements that this regulatory package is reducing, (d) the net change in the number of requirements. This count should be based upon the text as written when this stage was presented for executive branch review. Five rows have been provided, add or delete rows as needed. In the last row, indicate the total number for each column.

Table 5: Total Number of Requirements

Not applicable in periodic review phase.