

Meeting Minutes
Tuesday, August 7, 2018

HB1186 Groundwater Human Consumption Work Group (HB1186 WG)
DEQ Central Office, Suite 1400
1111 E. Main Street, Richmond, VA
14th Floor Conference Rooms

Members Present: Brett Vassey, Doug Powell, Frank Harksen, John Aulbach, Kristen Lentz, Louis Martinez, Martha Moore, Mike Kearns, Nina Butler, Peggy Sanner, Dwayne Roadcap (for Allen Knapp), Zachary Sheldon (for Nikki Rovner), Shannon Varner (for Andrea Wortzel), Dan Holloway (for Ted Henifin), and David Jurgens (for James Baker).

Members Absent: Allen Knapp, Andrea Wortzel, Andrew Clark, Bill Gill, Keith Martin, Charro Gaulden, David Creason, Ted Henifin, James Baker, Kendall Tyree, Morgan Quicke, and Sandi McNinch.

Other Participants: Jutta Schneider, Scott Kudlas, Brandon Bull, Gary Graham, Jason Early, Chuck Duvall, Bob Edelman, Matt Wells, Richard Gossman, Scott Johnson, and Curt Thomas.

Meeting convened: 1:02 p.m.

Meeting adjourned: 3:28 p.m.

Minutes:

1. Welcome and Introductions [Jutta Schneider, DEQ]. Jutta Schneider welcomed the Work Group members and public attendees to the meeting, had attendees introduce themselves, and summarized the work group's work to date and next steps. A draft agenda for the meeting (Attachment 1); final minutes for the last meeting on July 19, 2018; comments on the last meeting minutes (Attachment 2); and a revised HB1186 WG Member List (Attachment 3) had been emailed to members and copies were available in the meeting room for public attendees. The [draft agenda](#) for this meeting and the [minutes](#) for the July 19th meeting were also available to the public on the [Virginia Regulatory Town Hall](#) prior to this meeting.
2. Current Aquifer Status [Scott Kudlas, DEQ]. The current status of the Potomac Aquifer was presented and reviewed with the Work Group (Attachment 4).

- a. Based upon computer simulations of permitted groundwater withdrawals in 2015 and 2018, there is marked improvement predicted by the model in areas where the water level is below the top of the aquifer (in red) and in areas where the water levels are below the level required to be maintained by the regulations.
 - i. This is modeling, not demonstrated improvements.
 - ii. Areas with water levels slightly above the regulatory minimum not shown.
 - iii. The model uses only permitted withdrawals at the permit limit, and an estimate of unpermitted withdrawals.
- b. The model shows progress toward aquifer sustainability; indicates that the permit review process in place is up to the task of creating sustainability in problem areas; and provides time for alternative sources of water to be developed, time for discussion of potential tweaks to the permitting authority and the permitting review and groundwater allocation process, and time for the Sustainable Water Initiative for Tomorrow (SWIFT) project to contribute to aquifer sustainability.
- c. The model also shows that the condition of the Potomac Aquifer is not yet sustainable. Until it is, there is no additional capacity for new community growth or economic growth in the critical areas without either reductions in the currently permitted local groundwater withdrawals or the success of projects like SWIFT that can increase aquifer pressure.

Member questions and observations:

- When will we know if SWIFT works? There should be some benefits created within 7 to 10 years, but sustainability may be a decade or more as the capital construction and start up schedule for SWIFT extends out to 2030.
 - What is the cost of acting now to legislate sustainability or acting 5 years in the future or later? If SWIFT benefits start to be available in the near term and progress continues to be made under the existing permitting program and authority, we don't need immediate legislative action. We have time to work on other options.
3. Perspectives on SWIFT [Dan Holloway, Hampton Roads Sanitation District]. A summary of progress of the SWIFT project (Attachment 5) was emailed to members before the meeting and copies were available for meeting attendees at the meeting. Started in 2012, the purpose of the SWIFT project is to research the potential for recharging the Potomac Aquifer. Injection water pretreatment studies were successfully concluded in 2016. Designs for a pilot injection plant were completed and construction contracts awarded that same year and injection began this past May. No fatal flaws were revealed as a result of those operations and the aquifer and groundwater responded as predicted. Design has begun on the first full-scale facility. Modeling indicates that a recovery of the aquifer is possible sooner than the modeling simulation period, but more data is needed from operation of the full-scale facility. Disruption of the economic

viability of the area through legislative intervention may not be necessary to achieve aquifer sustainability. Proposed legislative changes should be delayed until at least 2025 while data from the proposed full scale facility is gathered and evaluated.

Member questions and observations:

- What are the near-term benefits (7 – 10 years) as opposed to the 50 year simulation benefits? Because the simulation uses permitted withdrawals instead of actual withdrawals and those are significantly below permitted levels, there should be near-term benefits, but they will depend on the success of the full scale facility and future withdrawals. It will be possible to track progress as the injection rates grow.

4. Calls for Additional Options [Scott Kudlas, DEQ].

Regulating that portion of permitted and unpermitted withdrawals that represent non-agricultural irrigation may be large enough to ease water conflicts in critical areas.

Member comments and observations:

- A previous attempt to do this in the Virginia General Assembly failed to pass the Senate in 2017 (SB 520).
- A consultant hired by a local public water authority indicated that as much as 27% of usage in the summer is non-agricultural irrigation.
- It would help if the public couldn't get a Virginia Department of Health (VDH) permit to drill a well for non-agricultural irrigation if the public water system limited such usage.
- VDH has no authority to regulate non-agricultural drilling beyond how the well is constructed.
- It might be possible to require sub-metering for irrigation as a permit condition. This will increase the cost, but provide useful data.
- Because of the growth of unpermitted use it might be necessary to regulate unpermitted drilling/withdrawals. Reductions in industry use can only achieve so much.

5. Pros and Cons of Additional Options [Scott Kudlas, DEQ]. Concerning the option of regulating non-agricultural irrigation:

- a. PRO. Better data that includes non-agricultural irrigation will improve modeling.
- b. PRO. Regulating this lower priority use will conserve resources for higher priority uses.
- c. PRO. This option also addresses the growth in unregulated withdrawals.
- d. PRO. It might be possible to limit non-agricultural irrigation to the surficial aquifer reducing the impact on the deeper aquifers.
- e. CON. It is hard to come up with data to support this option.

- f. CON. There are fiscal impacts to regulating this use and sub-metering the usage. Meters cost money to install and read. There will be a need for funding new employee positions to support this option.
- g. CON. There are political impacts to consider when shifting costs to, or otherwise limiting public use of groundwater.

Member comments and observations:

- A better definition of non-agricultural use is necessary. Does it include golf courses and nurseries? Or does it just refer to lawns?
- The previous attempt (SB 520) to do this included a definition of non-agricultural use in the negative, i.e. all irrigation uses that are NOT agricultural. Agricultural uses were better defined to include “irrigation that is used to support any operation devoted to the bona fide production of crops, animals, or fowl, including the production of fruits and vegetables of any kind; meat, dairy, and poultry products; nuts, tobacco, nursery, and floral products; and the production and harvest of products from silvicultural activity.”

6. Pros and Cons of HB 1186 [Brandon Bull, DEQ].

HB 1186 was discussed in detail at the first work group meeting. HB 1186 was not a DEQ legislative proposal. DEQ does not take a position on legislation unless and until the Governor takes a position on the bill; with respect to HB 1186 DEQ did not have and does not have a position on the bill itself.

Member comments and observations:

- Is it normal for legislation to include a purpose and findings? It is rare, but examples do exist.
- a. PRO. The bill confirms the priority of human consumption while other statutes conflict concerning the priority of existing use and new uses that include growth in human consumption use.
 - b. PRO. The bill gives DEQ more authority to prioritize human consumption in the permitting process.
 - c. PRO. The bill started a conversation about prioritizing human consumption and moved the conversation forward with concrete actions to actualizing that priority where conflicts exist and new growth is expected.
 - d. PRO. The bill pulled economic development into the conversation.
 - e. CON. The addition of the purpose and findings goes well beyond the scope of the rest of the bill.
 - f. CON. The bill goes outside the existing groundwater management and permit review structure that people rely on, and creates a simplistic winner/loser resolution to water use conflicts.

- g. CON. The bill undermines confidence in the stability of the groundwater management process and the permit review processes based upon science and creates an entirely new allocation framework.
 - h. CON. The bill proposes a reduction for the top 5% users without any basis for that number.
 - i. CON. The bill assumes and fixes a snapshot-in-time situation, not on a continuing basis.
 - j. CON. The bill disrupts industry expectations for stability and threatens future water supplies, putting a target on Virginia's back by limiting future expansion and investment.
 - k. CON. The bill lacks clarity and oversimplifies the problem.
 - l. CON. The bill doesn't take the SWIFT initiative into account.
 - m. CON. The bill doesn't take into account DEQ's full array of tools to fix conflicts (e.g. permit reopening authority).
 - n. CON. The bill creates a reporting nightmare for water suppliers.
 - o. CON. The situation has changed and continues to change since the JLARC report.
7. Pros and Cons of the Status Quo (the current statutory and regulatory framework). [Scott Kudlas, DEQ].
- a. PRO. The current management system avoids the Cons of the HB1186 proposal.
 - b. PRO. The current system provides continuity, stability, and certainty to those with permits and those applying for permits and protects the potential for future investment by industry.
 - c. PRO. The current system has tools for managing conflicts that have not yet been fully utilized. DEQ has the tools to do that. Why make major changes if those tools work?
 - d. PRO. There is a problem with using unsupported findings to make a major change in direction. There is no data to support that there is a problem that the current system cannot resolve.
 - e. PRO. Input from this group should be used to update and inform general knowledge about the status of the aquifers.
 - f. PRO. The current system allows compromise within the structure for resolving conflicts.
 - g. PRO. The current system allows the ability to incorporate the results of the SWIFT initiative into the predicted supply. The bill does not take into account the progress already in motion. Information on the potential for improvement in the current situation will be more evident in the next 5 – 7 years.
 - h. PRO. The current process takes into account the planning horizon for industry, which will avoid the potential for stranded investment.
 - i. PRO. The current permitting structure is an ongoing process with permits coming due for review in incremental stages. This avoids the need to review permits on the bill's fixed schedule.

- j. CON. The current system does not have enough information to guarantee that human consumption needs will be met.
 - k. CON. The current system doesn't have the necessary authority to address current and future unregulated users.
 - l. CON. The current management structure doesn't inform and update the regulated community regularly.
 - m. CON. There is no ready action if SWIFT is not enough and the situation is shown to be worse than predicted as better information becomes available.
8. Public Comment: There was no public comment.
9. Action Items:
- a. The next meeting will be in the DEQ Central Office 14th floor conference rooms at 1111 E. Main Street, Richmond, Virginia on Thursday, August 23, 2018 beginning at 9:00 a.m. The group will be notified of any changes (which also will be published on the Virginia Regulatory Town Hall). DEQ anticipates that this will be the last meeting of the work group.
 - b. DEQ will try to have minutes available to the members for review by August 10th. If members have comments on the minutes for this meeting, please send them to Gary Graham at gary.graham@deq.virginia.gov prior to August 15th.
 - c. If members have other thoughts on the pros and cons of the non-agricultural irrigation proposal, HB1186 or the status quo, or the topic of prioritizing human consumption in the groundwater withdrawal permitting process, please pass those to Gary by August 15th. Materials submitted by August 15th will be included in the next meeting of the work group.
 - d. Any additional considerations for inclusion in the final report on the discussions and positions of the work group members should be submitted to Gary Graham at gary.graham@deq.virginia.gov prior to August 31st.

Attachments:

1. Draft Meeting Agenda.
2. Comments on the minutes of the July 19, 2018 meeting.
3. Revised HB1186 Groundwater Human Consumption Work Group Member List.
4. Slides for the Current Aquifer Status Presentation (for Minute 2).
5. Summary of Progress of the SWIFT Project (for Minute 3).

HB1186 GROUNDWATER HUMAN CONSUMPTION WORK GROUP

Meeting 2 Agenda

August 7, 2018, 1 pm – 4 pm

DEQ, 1111 East Main Street, Richmond VA

14th floor

The Department of Environmental Quality (DEQ) has established this work group to evaluate issues raised by House Bill 1186 during the 2018 General Assembly Session; specifically to consider developing options for prioritizing human consumptive water use through the groundwater withdrawal permit process.

1. Welcome and Introductions

2. Current Aquifer Status

3. Perspectives on SWIFT

4. Call for Additional Options

Break

5. Pros and Cons – Status Quo

6. Pros and Cons – HB 1186

7. Pros and Cons – Additional Options

8. Public Comment

9. Review of Action Items

10. Wrap up

Comments on the Minutes of the July 19, 2018 Meeting.

Newport News Waterworks Department letter dated July 30, 2018

Virginia Chamber of Commerce letter dated July 30, 2018

Troutman Sanders email text dated August 1, 2018

WATERWORKS DEPARTMENT

CITY OF NEWPORT NEWS

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July 30, 2018

Mr. Gary Graham
Office of Regulatory Affairs
Virginia Department of Environmental Quality
P.O. Box 1105
Richmond, Virginia 23218

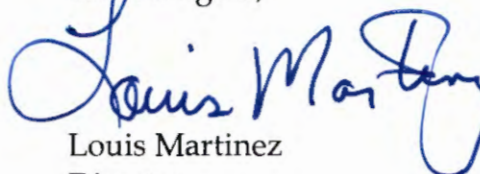
Dear Mr. Graham:

We appreciate the opportunity to serve on the referenced work group and fully support the need for clarification of how the priority for human consumptive uses is implemented by DEQ in their water resources decisions. As a regional utility charged with providing a continuous drinking water supply and simultaneous fire protection for over 400,000 customers, we respect our legislature's concern and appreciate their efforts to make this a priority.

We also concur that the basis for much of the anxiety over water levels in the coastal plain aquifer system has changed considerably over the past several years. We recognized this during a planning and analysis activity conducted by HRPDC that highlighted the widespread abatement of regional water level declines (and modest recovery in some locations).

I believe the draft minutes reflect the complexity of this issue and the views of those who participated and presented during our initial meeting.

Thanks again,



Louis Martinez
Director

LM/sjth



THE VOICE of BUSINESS

July 30, 2018

Jutta Schneider, Division Director
Office of Water Supply
Virginia Department of Environmental Quality
P.O. Box 1105
Richmond, VA 23218

RE: HB 1186 Groundwater Human Consumption

Dear Ms. Schneider:

The Virginia Chamber of Commerce is the largest business advocacy organization in the Commonwealth with more than 26,000 members. The Virginia Chamber recently released *Blueprint Virginia 2025*, a comprehensive business plan for the Commonwealth which outlines the business community's priorities and recommendations for making Virginia the best state for business. During our Blueprint stakeholder engagement process, which included over 6,000 members of the business community, we heard from business leaders on the importance of protecting Virginia's water resources.

Access to clean, reliable water supply is important to the Commonwealth for economic development, workforce development, tourism, recreation and our overall quality of life. Businesses value our water resources and have embraced various corporate sustainability practices to protect it. Businesses recently partnered with the state to ensure healthy and sustainable coastal aquifers by reducing withdrawals, developing alternative water supplies, and making efficiency improvements.

While we appreciate the intent of HB 1186, we are concerned that this legislative proposal will cause uncertainty in the business community and create unnecessary conflict among permittees who rely on an important water source to meet their operational and/or customer needs. The Department of Environmental Quality's (DEQ) current processes preserves groundwater supply for all uses. In addition, DEQ has the tools to ensure that adequate and safe water supplies are available for human consumption.

For these reasons, the Virginia Chamber is not supportive of HB 1186. Thank you for your consideration of our comments.

Sincerely,

A handwritten signature in blue ink, appearing to read "Barry E. DuVal".

Barry E. DuVal
President and CEO

From: Wortzel, Andrea W.
To: Graham, Gary

Aug 1, 2018
HB 1186 Work Group - Comments

Dear Gary,

Thank you for the opportunity to provide these comments on the draft minutes and on DEQ's draft white paper. I apologize that I was not able to get them to you by the requested date of July 30.

Minutes

The discussion at the June 19 meeting was lengthy and detailed. While the minutes capture many of the points made, it might be helpful to consolidate and organize the themes of that discussion as follows:

- Groundwater withdrawal permits were reissued for the largest withdrawers in 2017. Those permits were negotiated based on a technical analysis of each individual discharge and alternative water sources available to them.
- With the reissuance of these permits, current groundwater needs are being met in Eastern Virginia.
- Groundwater withdrawal permits include reopener provisions that enable DEQ to require further reductions as necessary should conditions require. They also include conservation measures and mitigation plans to address any adverse impacts from a given withdrawal.
- DEQ and stakeholders have committed to an annual forum that will enable all parties to receive updates on the status of the aquifer and continue a dialogue on changes needed to protect and preserve the aquifer.
- The SWIFT project is coming on line over the next several years. Information from that project and the benefits it may have on the aquifer will further inform groundwater permitting decisions in the future.
- Based on the above, the drastic action proposed in HB 1186 is premature. Should action be needed in the future, DEQ has tools available to it to implement such action.

I would also note that in the minutes, under item 4.a, Observations by HB1186 WG members, the phrase "more information is needed" should be stricken. I do not recall work group members suggesting that more information is needed; I think the comment was that more information will be forthcoming through the annual forum, the implementation of SWIFT, etc., but that the general sense is that existing groundwater needs are currently being met, without any caveat or need for additional information.

White Paper

The white paper is a thorough, detailed treatise on Virginia's water resource management programs. For purposes of sharing it with Delegate Marshall, Mission H2O suggests that DEQ develop a short executive summary. The paragraphs at the top of page 17 for groundwater and the bottom page 17 for surface water appear to represent a summary of the paper, and could be converted to an executive summary.

Additionally, while the paper is already quite detailed, it may be worth noting that implementation of the human consumption priority has been discussed periodically as the regulations relating to groundwater and surface water withdrawal permitting are reviewed (most recently in 2014 and 2016, respectively), with the stakeholder advisory groups for those regulations concluding that the current permitting system effectively manages groundwater and surface water withdrawals.

Thank you again for the opportunity to provide these comments.

Andrea

Andrea W. Wortzel

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HB1186 Groundwater Human Consumption Work Group Members

NAME	AFFILIATION
Allen Knapp	Virginia Department of Health
Andrea Wortzel	Troutman Sanders
Andrew Clark	VA Homebuilders Association
Bill Gill	Smithfield Foods
Brett Vassey	Virginia Manufacturers Association
Charro Gaulden	International Paper
David Creason	VA Water Well Association
Doug Powell	James City County
Frank Harksen	Hanover County
James Baker	City of Chesapeake
John Aulbach	Aqua Virginia
Keith Martin	VA Chamber of Commerce
Kendall Tyree	VA Soil and Water Conservation District
Kristen Lentz	Norfolk Department of Utilities
Louis Martinez	Newport News Waterworks
Martha Moore	Virginia Farm Bureau Federation
Mike Kearns	Sussex County Service Authority
Morgan Quicke	Richmond County
Nikki Rovner	The Nature Conservancy
Nina Butler	WestRock
Peggy Sanner	Chesapeake Bay Foundation
Sandi McNinch	Virginia Economic Development Partnership (VEDP)
Ted Henifin	Hampton Roads Sanitation District

Alternates

Christy Morton	for Sandi McNinch, VEDP
David Jurgens	for James Baker, City of Chesapeake
Ben Rowe	for Martha Moore, VA Farm Bureau Federation
Dwayne Roadcap	for Allen Knapp, Virginia Department of Health
Ron Harris	for Louis Martinez, Newport News Waterworks
Jeff Gregson	for David Creason, VA Water Well Association
Matthew Wells	For Nina Butler, WestRock

Current Aquifer Status Presentation Slides

Slide 1

A side-by-side comparison of computer simulations of Potomac Aquifer water levels in 2015 (left) and after the 2017 (right) permit modifications affecting the 14 top withdrawals, showing shrinkage over time of the areas in which the simulated water levels are below the Critical Surface (yellow) and below the top of the aquifer (red).

Slide 2

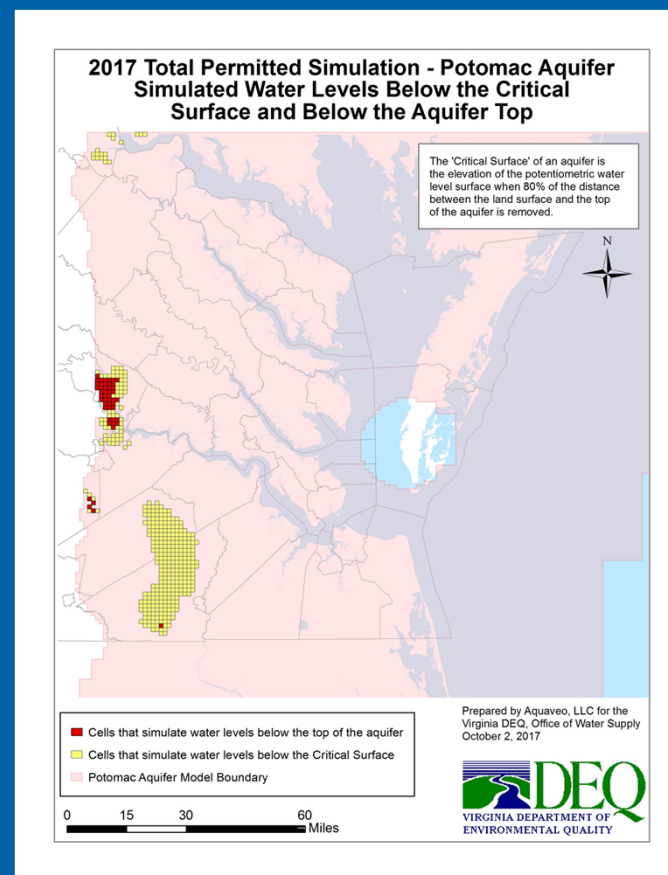
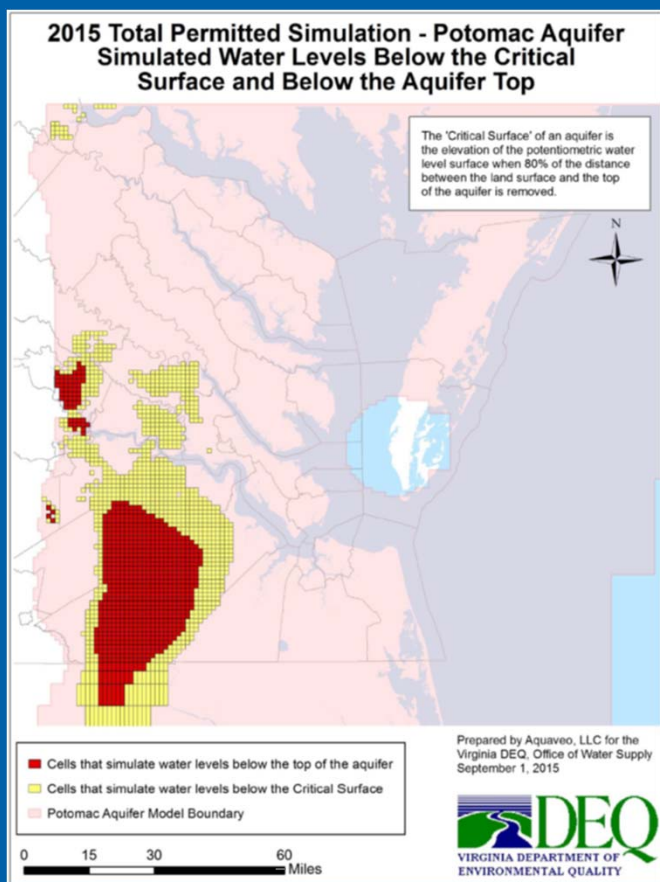
A list of significant incremental progress points made through the groundwater withdrawal permit reductions.

Slide 3

A list of adverse impacts of the presence of critical surface cells in the slide 1 simulations.



Before and After





Significant Incremental Progress

- Permit reductions - a first step toward long term sustainability
 - Water level declines should stabilize or improve by 2030 (without major new withdrawals)
 - Provides time for alternative sources to be developed and come online
 - Provides time for key management policy discussions to happen
 - What to do about the growth of unmanaged withdrawals?
 - Will SWIFT work as expected and what will that mean for future management and allocation of the resource?



Aquifer Condition Better But Not in Compliance

- Presence of Critical Cells means
 - Permitted allocation rates and simulated aquifer response is not sustainable without further reductions or increases in head
 - Does not provide any additional capacity for new growth
 - Don't expect to see sustained benefit from SWIFT for 7-10 years

Summary of Progress of the SWIFT Project

The Hampton Roads Sanitation District's Sustainable Water Initiative for Tomorrow (SWIFT) remains on schedule to be recharging the Potomac Aquifer with over 100 million gallons of SWIFT Water daily by 2030. Successful treatment pilot studies were accomplished in 2016, proving HRSD can reliably produce water that meets drinking water standards from wastewater effluent using a carbon based advanced water treatment process. The pilot study results were used to inform the design of the treatment processes used in the SWIFT Research Center, a one million gallon per day advanced water treatment facility with an aquifer recharge well. The \$25 million design-build contract for the SWIFT Research Center was awarded in November 2016 and the facility began recharge operations in May 2018. As of July 31st the Potomac Aquifer has been recharged with over 40 million gallons of SWIFT Water. Data gathered from the SWIFT Research Center will be used to further calibrate groundwater models and validate and confirm predicted response of the aquifer geology and groundwater when recharged with SWIFT Water. Preliminary review of the early data has not identified any unexpected results with the aquifer and groundwater largely responding as predicted. As a result, preliminary design has begun for the first full-scale SWIFT facility at the Williamsburg Treatment Plant with a goal of applying for the required permits in early 2019 to allow construction to begin in 2020. The SWIFT full-scale implementation schedule continues designing and constructing additional SWIFT facilities at other HRSD facilities through 2030.

Groundwater modeling indicates SWIFT will have a significant positive impact on the groundwater supply in the aquifer after a 50 year recharge simulation. The modeling scenario assumed full withdrawals at 2014 permitted quantities throughout the 50 year simulation. Current withdrawals are significantly below the modeled quantities which should result in recovery much sooner than the 50 year simulation period. Several scenarios with reduced withdrawals were simulated using the groundwater model and indicate SWIFT recharge pressures could increase significantly in the future if groundwater withdrawals are reduced to levels significantly below those currently permitted. More data from the SWIFT Research Center and full-scale SWIFT facilities is needed to better understand the ability of the Potomac Aquifer to support the water needs of Eastern Virginia.

The potential impact of SWIFT on groundwater supply in the Potomac Aquifer is transformational. To maximize the benefits of SWIFT on the future vitality of Eastern Virginia, the Commonwealth should delay statutory, regulatory and policy changes regarding the Potomac Aquifer until full-scale SWIFT data can be gathered and analyzed in the 2025 timeframe.

(Provided by HRSD, August 2018)