TENTATIVE AGENDA AND MINIBOOK
**STATE WATER CONTROL BOARD MEETING**
THURSDAY, MARCH 14, 2013

House Room C
General Assembly Building
9th and Broad Streets
Richmond, VA 23219

CONVENE – 9:30 A.M.

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ADJOURN

NOTE: The Board reserves the right to revise this agenda without notice unless prohibited by law. Revisions to the agenda include, but are not limited to, scheduling changes, additions or deletions. Questions arising as to the latest status of the agenda should be directed to the staff contact listed below.

PUBLIC COMMENTS AT STATE WATER CONTROL BOARD MEETINGS: The Board encourages public participation in the performance of its duties and responsibilities. To this end, the Board has adopted public participation procedures for regulatory action and for case decisions. These procedures establish the times for the public to provide appropriate comment to the Board for its consideration.

For REGULATORY ACTIONS (adoption, amendment or repeal of regulations), public participation is governed by the Administrative Process Act and the Board's Public Participation Guidelines. Public comment is accepted during the Notice of Intended Regulatory Action phase (minimum 30-day comment period) and during the Notice of Public Comment Period on Proposed Regulatory Action (minimum 60-day comment period). Notice of these comment periods is announced in the Virginia Register, by posting to the Department of Environmental Quality and Virginia Regulatory Town Hall web sites and by mail to those on the Regulatory Development Mailing List. The comments received during the announced public comment periods are summarized for the Board and considered by the Board when making a decision on the regulatory action.

For CASE DECISIONS (issuance and amendment of permits), the Board adopts public participation procedures in the individual regulations which establish the permit programs. As a general rule, public comment is accepted on a draft

permit for a period of 30 days. If a public hearing is held, there is an additional comment period, usually 45 days, during which the public hearing is held.

In light of these established procedures, the Board accepts public comment on regulatory actions and case decisions, as well as general comments, at Board meetings in accordance with the following:

REGULATORY ACTIONS: Comments on regulatory actions are allowed only when the staff initially presents a regulatory action to the Board for final adoption. At that time, those persons who commented during the public comment period on the proposal are allowed up to 3 minutes to respond to the summary of the comments presented to the Board. Adoption of an emergency regulation is a final adoption for the purposes of this policy. Persons are allowed up to 3 minutes to address the Board on the emergency regulation under consideration.

CASE DECISIONS: Comments on pending case decisions at Board meetings are accepted only when the staff initially presents the pending case decision to the Board for final action. At that time the Board will allow up to 5 minutes for the applicant/owner to make his complete presentation on the pending decision, unless the applicant/owner objects to specific conditions of the decision. In that case, the applicant/owner will be allowed up to 15 minutes to make his complete presentation. The Board will then allow others who commented during the public comment period (i.e., those who commented at the public hearing or during the public comment period) up to 3 minutes to respond to the summary of the prior public comment period presented to the Board. No public comment is allowed on case decisions when a FORMAL HEARING is being held.

POOLING MINUTES: Those persons who commented during the public hearing or public comment period and attend the Board meeting may pool their minutes to allow for a single presentation to the Board that does not exceed the time limitation of 3 minutes times the number of persons pooling minutes, or 15 minutes, whichever is less.

NEW INFORMATION will not be accepted at the meeting. The Board expects comments and information on a regulatory action or pending case decision to be submitted during the established public comment periods. However, the Board recognizes that in rare instances, new information may become available after the close of the public comment period. To provide for consideration of and ensure the appropriate review of this new information, persons who commented during the prior public comment period shall submit the new information to the Department of Environmental Quality (Department) staff contact listed below at least 10 days prior to the Board meeting. The Board's decision will be based on the Department-developed official file and discussions at the Board meeting. In the case of a regulatory action, should the Board or Department decide that the new information was not reasonably available during the prior public comment period, is significant to the Board's decision and should be included in the official file, the Department may announce an additional public comment period in order for all interested persons to have an opportunity to participate.

PUBLIC FORUM: The Board schedules a public forum at each regular meeting to provide an opportunity for citizens to address the Board on matters other than those on the agenda, pending regulatory actions or pending case decisions. Those wishing to address the Board during this time should indicate their desire on the sign-in cards/sheet and limit their presentations to 3 minutes or less.

The Board reserves the right to alter the time limitations set forth in this policy without notice and to ensure comments presented at the meeting conform to this policy.

Department of Environmental Quality Staff Contact: Cindy M. Berndt, Director, Regulatory Affairs, Department of Environmental Quality, 629 East Main Street, P.O. Box 1105, Richmond, Virginia 23218, phone (804) 698-4378; fax (804) 698-4346; e-mail: cindy.berndt@deq.virginia.gov.

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**Request to Adopt Final Amendments to the Water Reclamation and Reuse Regulation (9VAC25-740 et seq.):** The staff will bring to the Board at the March 14, 2013 meeting, a request to accept as final, proposed amendments of regulations pertaining to water reclamation and reuse (9VAC25-740 et seq.). These amendments address issues that will improve the Board's ability to effectively promote and encourage the reclamation and reuse of wastewater in a manner that is protective of the environment and public health. Among other changes, amendments will allow (i) design or

operational deviations for facilities still capable of producing or distributing reclaimed water in a manner protective of the environment and public health, and (ii) temporary authorization of water reclamation and reuse without a permit during periods of significant drought.

The Water Reclamation and Reuse Regulation (9VAC25-740 et seq.) became effective on October 1, 2008. Since its implementation, both the Department of Environmental Quality (DEQ) and the public have identified needed changes to the regulation that will improve the DEQ's ability to implement a more effective water reclamation and reuse regulatory program. Amendments to the Water Reclamation and Reuse Regulation (9 VAC 25-740-10 et seq.) are needed primarily to address issues that will improve the Board's ability to effectively promote and encourage the reclamation and reuse of wastewater in a manner protective of the environment and public health. Two amendments that will allow (i) design or operational deviations for facilities still capable of producing or distributing reclaimed water in a manner protective of the environment and public health, and (ii) temporary authorization of water reclamation and reuse without a permit during periods of significant drought, are needed to improve implementation of the regulation and to further promote and encourage water reclamation and reuse. These amendments meet the purpose of State Water Control Law and are within the authority of the Board to establish pursuant to §§ 62.1-44.2 and 62.1-44.15(15) of the Code of Virginia.

A Notice of Intended Regulatory Action (NOIRA) was published in the Virginia Register of Regulations on January 3, 2011.

Proposed amendments to the Water Reclamation and Reuse Regulation were developed through a public participation process that involved a 17 member Regulatory Advisory Panel (RAP) of stakeholders which met a total of 4 times in 2011 (April 21st; May 2nd; June 2nd; and July 7th). Staff worked with the members of the RAP, as well as technical support staff from DCR and VDH to develop the proposed amendments.

Based on the input of the Regulatory Advisory Panel, the DEQ prepared proposed amendments to the regulation. On August 4, 2011, the Board voted to proceed to public comment and hearing on these proposals. Following Board approval, the Attorney General's Office completed its review on August 8, 2011. The Department of Planning and Budget completed an economic impact review on September 23, 2011. The Secretary of Natural Resources granted approval of the proposed regulatory amendments on December 7, 2011, and the Governor approved the amendments on September 18, 2012. DEQ published the proposed amendments in the Virginia Register on October 22, 2012. The public comment period for the proposed amendments was scheduled from October 22, 2012 to January 11, 2013.

Pursuant to Section 2.2-4007.03 of the Code of Virginia and 9VAC25-11 (Public Participation Guidelines), DEQ held a public hearing on December 13, 2012 at the DEQ Piedmont Regional Office. Three members of the interested public attended the public hearing.

DEQ received a total of 36 comments on the proposed amendments from six different organizations and one individual. A summary of the comments received and Agency Responses begins on page 23.

This regulatory action amends the Water Reclamation and Reuse Regulation (9 VAC 25-740-10 et seq.) in response to issues identified by DEQ and the public. Several amendments will directly improve the ability of the Board and DEQ to effectively promote and encourage wastewater reuse.

The following is a summary of significant amendments to the regulation:

- Adds a variance procedure from design, construction, operation and maintenance requirements for projects still capable of producing or distributing reclaimed water in a manner protective of the environment and public health
- Adds a mechanism for temporary emergency authorization for production, distribution or reuse of reclaimed water
- Revises the prohibition of reclaimed water reuse inside domestic dwellings
- Revises the discharge restrictions for non-system reclaimed water storage
- Revises identification, labeling and signage requirements for reclaimed water distribution systems
- Adds permit application, design, construction, and operation requirements for Indirect Potable Reuse (IPR)
- Adds design and operational requirements for ultraviolet (UV) disinfection
- Adds auxiliary or backup plan requirements to manage wastewater
- Adds Reliability Class I for pump stations of Level I reclamation systems
- Adds authority for reclaimed water agent to inspect end users' reuses and storage facilities
- Revises requirements to manage pollutants of concern from significant industrial users (SIUs)
- Adds requirements to prevent unauthorized discharges from maintenance of reclaimed water distribution systems
- Adds monitoring and establishment of points of compliance for certain reclaimed water system storage facilities and distribution systems

- Adds a prohibition against significant adverse impacts to beneficial uses of a receiving water for a discharge due to water reclamation and reuse
- Adds a requirement for submission of application information needed to assess the impacts to beneficial uses of a receiving water where a discharge to that water will be diverted to water reclamation and reuse

One change was made in response to public comments on the proposed regulation. This change clarifies that a VPDES permit modification will be required where diversion of source water from the VPDES permitted discharge to water reclamation and reuse has the potential to cause a significant adverse impact to other beneficial uses of the receiving state water for the discharge.

Additionally, other minor revisions:

(1) Clarify or make more specific the language of the regulation,
(2) Eliminate redundancy,
(3) Relate separate sections or subdivisions of the regulation, and
(4) Correct grammatical and typographical errors.

DEQ made some additional revisions to the regulation between publication of the proposed regulation to the final regulation. These revisions do not significantly alter the substance of amendments to the regulation but further refine them by:

- Improving clarity and reducing confusing language,
- Using more concise terms and language,
- Providing consistency with Virginia Register style guidelines for regulations,
- Reducing redundancy, and
- Correcting typographical errors, omissions and incorrect subsection and subdivision references.

A listing of changes since publication of the proposal begins on page 39.

**Virginia Pollutant Discharge Elimination System (VPDES) General Permit Regulation for Concrete Products Facilities, VAG11 Amendments to 9VAC25-193 and Reissuance of General Permit:** The current VPDES Concrete Products General Permit will expire on September 30, 2013, and the regulation establishing this general permit is amended to reissue another five-year permit. The staff is bringing this final regulation before the Board to adopt the permit regulation. The draft regulation takes into consideration the recommendations of a technical advisory committee formed for this regulatory action. The technical advisory committee consisted of industry representatives and DEQ staff. The Board's authorization of the proposal was received at the September 27, 2012 meeting. A Notice of Public Comment Period was published November 5, 2012 through January 11, 2013 with a public hearing on December 5, 2012 in Glen Allen with three representatives of the industry attending the hearing. Written comment letters were received from Titan America and Blue Stone Block Supermarket, Inc.

COMMENT: Titan America (Clifford Bocchicchio, Environmental Manager)
The proposal represents the hard work and cooperative efforts of all those that volunteered and participated on the Technical Advisory Committee.
AGENCY RESPONSE: Noted.
COMMENT: Blue Stone Block Supermarket, Inc. (William A. Corbitt, Jr., Chairman)
The permittee had concerns that their permit could be denied because of storm water that does not originate on their property from higher elevations, that quarterly monitoring will be required and that total petroleum hydrocarbon monitoring would be required.
AGENCY RESPONSE: Their permit could only be denied if their permit requirements did not meet antidegradation, total maximum daily load (TMDL) requirements or the discharge was prohibited to their receiving waters due to other regulations. This is not the case for this permittee who does not discharge process water and adheres to proper storm water management. Quarterly monitoring is only required for process water and this permittee only discharges storm water. Total petroleum hydrocarbon monitoring is not required for storm water.

Since publication of the proposal, clarification changes were made in several sections including 15, 50 C, 60 C 9 b and Part I B 8 d and 70 Part III Y. All changes made to the regulation since the proposed are minor. Section 15 was confusing as proposed and was simplified. Enforcement staff recommended that section 50 C be revised to say that compliance with the general permit constitutes compliance with the Clean Water Act and

State Water Control Law and should not include 'and applicable regulations under either' since staff have not verified that every regulation has met this requirement. In 60 C 9 b and Part I B 8 d, 'Material Safety Data Sheet (MSDS)' was changed to 'Safety Data Sheet (SDS)' because of the global adoption of a new hazard communication system developed by the United Nations. Since general permits may automatically transfer ownership when certain conditions are met, section70 Part III Y removed the 'modification or revoke and reissue' process for ownership transfers. Also, for ownership transfers, staff decided to keep the original 30 days advance notice (instead of 30 days of transfer as proposed) for automatic transfers but added 'unless permission for a later data has been granted by the board.'

SUMMARY OF 9VAC25-193 PROPOSED REVISIONS FOR 2013 REISSUANCE CONCRETE PRODUCTS FACILITIES GENERAL PERMIT

February 7, 2013

Section 10 – Definitions. Added a definition for department, best management practices, municipal separate storm sewer system (MS4), runoff coefficient, significant spills, total maximum daily load (TMDL) and vehicle or equipment degreasing since this terminology is used in the regulation and needed explanation.

Section 15 - Applicability of incorporated references based on the dates that they became effective. Allows for dates of EPA references to be as described in this new section without being updated at each 40 CFR reference throughout the regulation. All dates refer to the most recent Federal Register publication. In this case it is July 2012. Language is being inserted in all DEQ regulations as they are amended. Language provided by DEQ Policy staff.

Section 20 – Purpose. Clarified that the general permit regulation also covers non-contact cooling water in addition to process waste water and storm water associated with industrial activity from concrete products facilities. Non-contact cooling water has always had an effluent limits page in this permit.

Section 40 – Effective and expiration dates changed for reissuance throughout regulation.

Section 50 A, B– Authorization. – Reformatted to match structure of other general permits being issued at this time. Added two additional reasons authorization to discharge cannot be granted per EPA comments on other general permits issued recently. Therefore, an owner will be denied authorization when the discharge would violate the antidegradation policy, or if additional requirements are needed to meet a TMDL.

Section 50 C – Added the statement *"Compliance with this general permit constitutes compliance with the Clean Water Act, the State Water Control Law, with the exceptions stated in 9VAC25-31-60 of the VPDES Permit Regulation."* This was added in response to Attorney General Office comments (with minor enforcement staff editions) on other general permits recently to recognize there are some exceptions to compliance with the CWA as stated in the permit regulation.

Section 50 D– Added language to allow for administrative continuances of coverage under the old expired general permit until the new permit is issued and coverage is granted or coverage is denied; if the permittee has submitted a timely registration and is in compliance. This language is being added to all recently reissued general permits so permittees can discharge legally and safely if the permit reissuance process is delayed.

Section 60 A – Registration – Reformatted to match structure of other recent general permits. The deadline for existing facilities currently holding an individual VPDES permit is revised to say they must notify us 210 days prior to their expiration date rather than 180 days. This gives DEQ 30 days to determine whether coverage can be granted and the individual permit holder then still has the required 180 days to submit an individual permit application if their request for coverage under the general permit is denied. Revised the requirement for existing facilities covered under the permit to submit a new registration to "prior to July 1, 2013" (which is 90 days prior to expiration).

Section 60 B – Added statement *"Late registration statements will be accepted, but authorization to discharge will not be retroactive."* for clarification. Also, that existing permittees may get administrative continuance of their existing permit if a complete registration statement is submitted before the October 1, 2013 (the expiration date).

Section 60 C – Several minor editions were made for clarification. Combined 2 questions about non contact cooling water into one question. Added questions about representative outfalls and information needed to

determine if representative outfalls are appropriate. This moves the review and approval of representative outfalls to the registration process rather than requiring the information with each discharge monitoring report. Added the question *"Whether the facility will discharge to a Municipal Separate Storm Sewer System (MS4). If so, provide the name of the MS4 owner. The owner of the facility shall notify the MS4 owner in writing of the existence of the discharge within 30 days of coverage under the general permit, and shall copy the DEQ regional office with the notification. The notification shall include the following information: the name of the facility, a contact person and phone number, the location of the discharge, the nature of the discharge, and the facility's VPDES general permit number"* This notification is a permit requirement and the TAC thought it should be repeated as a reminder in the registration process.
Added the requirement that "*…portable concrete products operations submit a closure plan and include the requirements specified by the operation and maintenance manual…"* The TAC felt that because of their temporary nature, that closure plans for portable plants should be submitted up front during the registration process.
Added email address, and allowance for computer generated maps to be submitted with the registration statement and a few other minor clarifications.
Section 70 Part I A 1 and 2 – General Permit limits pages for process water and non-contact cooling water. Monitoring requirements are reduced from monthly to quarterly based on public and staff comment. The agency agrees with the public comment received that no discharge situations should be awarded a chance at reduced monitoring. The agency also determined that monitoring data associated with the existing general permit showed that monthly reporting from any facility is not necessary. Therefore, all facilities are afforded the previous permit 'reduced monitoring' allowance of 1/3 months (quarterly). Also, footnote #2 states that total petroleum hydrocarbon (TPH) monitoring is only necessary when vehicle degreasing occurs on site. Vehicle degreasing or equipment degreasing has been clearly defined to mean the washing or steam cleaning of engines or other drive components of a vehicle or equipment in which the purpose is to degrease and clean petroleum products. It does not mean washing sediment or concrete off trucks. This has always been unclear to the staff. Also the TPH methods in this footnote have been updated.
Section 70 Part I A 3 – General Permit limits pages for storm water. Benchmark monitoring concentrations for storm water has been added. If benchmark monitoring for total suspended solids (TSS) exceeds 100 mg/l maximum or the pH falls outside of the range of 6.0-9.0 standard units, then the permittee is required to evaluate the effectiveness of the storm water pollution prevention plan in controlling the discharge of pollutants to receiving waters. Previously monitoring was required for these parameters but no further action was required. Total iron and total petroleum hydrocarbon analysis has been eliminated from storm water monitoring with TAC consensus. TPHs are not suggested for monitoring in this type of industrial storm water by the EPA. Also, levels consistently have remained undetectable or very low over the years. Iron was eliminated in storm water primarily because iron is naturally high in soils in Virginia and expected to be high in storm water. Also, there is no feasible alternative to remove iron in storm water when it is naturally occurring (except to the amount the existing technology removes solids and solids are limited under the permit). Also, the storm water sampling instruction present in the footnotes have been moved to the storm water management section, Part II A.
Section 70 Part I B 1– Special Conditions – Added *"or oil sheen from petroleum products"* to special condition #1 (no discharge of solids or foam narrative special condition). This was in response to staff concerns that petroleum products are on the site but and should not appear in the stream. The industry indicated that any accidental spills of petroleum products are cleaned up immediately so as not to enter surface waters. If vehicle degreasing is occurring on the site then those discharges have TPH limits. This addition is just an added measure of protection and something the inspector can look for to ensure proper BMPs, clean up measures or treatment is occurring.
Section 70 Part I B 6 – Added *"Wastewater should be reused or recycled whenever feasible."*
This general requirement appears in other general permits.
Section 70 Part I B 9 – Clarified several of the requirements of the operations and maintenance manual. Most significant change was to itemize what should be included in a temporary or long-term facility closure

plan. These items were drafted with TAC consensus. Also, all review and modification dates were eliminated and replaced with one annual requirement.
Section 70 Part I B 14 – *§ 62.1-44.15:5.2.*of the Code of Virginia states that settling basins for ready-mix concrete operations constructed after February 2, 1998 must be lined and that settling basins build before February 2, 1998 may be lined. The existing special conditions states that settling basins constructed on or after February 2, 1998 shall be lined with concrete or other impermeable materials. The TAC thought that regardless of the date of construction that all settling basins that are expanded or dewatered for major structural repairs must be lined. So this requirement was added to the existing special condition.
Section 70 Part I B 15 – Wastewater that is used for dust suppression or for preparing the stockpiles for manufacturing of the concrete should either be adsorbed, evaporated or treated but not directly discharged to surface water. This special condition was not clear and the TAC rewrote it to their specifications.
Section 70 Part I B 16 – Quantification levels for TSS and TPH were added.
Section 70 Part I B 17 – Added a new special condition that *"Owners of facilities that are a source of the specified pollutant of concern to waters where an approved TMDL has been established shall implement measures and controls that are consistent with the assumptions and requirements of the TMDL."* This is a special condition added to all general permits. It reinforces the way general permits are currently handled in TMDLs. The assumption of the TMDL is that general permits are insignificant to the total load until such time that the TMDL program determines that the load is significant and the TMDL needs to be modified to include the load.
Section 70 Part I B 18 – Added a new special condition that allows for adding or deleting outfalls. The permittee must update the Operation & Maintenance (O&M) manual and the Storm Water Pollution Prevention Plan (SWPPP). This happens occasionally and the industrial storm water general permit has similar language.
Section 70 Part I B 19 – Added a new special condition that describes how terminations of a general permit will be implemented. This is being added to all general permits as they are reissued.
Section 70 Part I B 20 – Added a new special condition that describes how temporary facility closures at inactive and unstaffed sites will be implemented. This was done with the consensus of the TAC.
Section 70 Part I B 21 Added *"The discharges authorized by this permit shall be controlled as necessary to meet applicable water quality standards."* This is a general requirement to meet water quality standards and matches similar language going into other recent general permits.
Section 70 Part I B 22 Added *"Approval for coverage under this general permit does not relieve any owner of the responsibility to comply with any other federal, state or local statute, ordinance or regulation."* This requirement is part of the regulation at section 50 C and staff thought it should be repeated in the permit to remind the permittee of the responsibility.
Section 70 Part II – Storm Water Management – This entire section was revised to match (for the most part) language in the 2009 Industrial Storm Water General Permit. Some differences can be found but these were done with TAC consensus. However, the requirements for storm water management have not changed significantly.
Part III A– Added *"Samples taken as required by this permit shall be analyzed in accordance with 1VAC30-45: Certification for Noncommercial Environmental Laboratories, or 1VAC30-46: Accreditation for Commercial Environmental Laboratories."* This is a new regulatory requirement effective January 1, 2012.
Section 70 Part III Y – Transfer of permits – This subsection discussed transfer of permit requirements through modifications or revocation and reissuances. However, general permits are not modified or revoked and reissued and this allowance is deleted. General permits may only be automatically transferred; however, the 30 days in advance notice of the transfer of ownership was often not feasible. Language was added so that the board can change the deadline depending on the situation.

**Petroleum Underground Storage Tank Financial Responsibility Requirements, 9VAC25-590 Amendment to add Certificate of Deposit**: This regulatory amendment is presented to the Board for your consideration as final regulation under the fast-track regulatory process. This regulatory action will amend 9VAC25-590 by adding a certificate of deposit (CD) as an acceptable mechanism to demonstrate financial responsibility for

owners/operators of underground storage tanks (USTs). The rationale for the addition of the CD to 9VAC25-590 is to provide more flexibility to the owners and operators of USTs when meeting their financial responsibility requirements under the regulation. Currently, many owners and operators who use a letter of credit (LOC) are required by the bank to collateralize the LOC with a CD. Additionally, banks charge a fee to establish the LOC and an annual maintenance fee to carry it. This can be burdensome to individuals and businesses having funds tied up as collateral and not available for business needs. The CD will also increase in value over time.

**Aboveground Storage Tank and Pipeline Facility Financial Responsibility Requirements, 9VAC25-640 Amendment to add Certificate of Deposit**: This regulatory amendment is presented to the Board for your consideration as final regulation under the fast-track regulatory process. This regulatory action will amend 9VAC25-640 by adding a certificate of deposit (CD) as an acceptable mechanism to demonstrate financial responsibility for operators of aboveground storage tanks (ASTs) and pipelines. The rationale for the addition of the CD to 9VAC25-640 is to provide more flexibility to the operators of ASTs and pipelines when meeting their financial responsibility requirements under these regulations. Currently, many owners and operators who use a letter of credit (LOC) are required by the bank to collateralize the LOC with a CD. Additionally, banks charge a fee to establish the LOC and an annual maintenance fee to carry it. This can be burdensome to individuals and businesses having funds tied up as collateral and not available for business needs. The CD will also increase in value over time.

**Virginia Pollutant Discharge Elimination System (VPDES) General Permit for Discharges Resulting from the Application of Pesticides to Surface Waters (9VAC25-800):** This general permit regulation is being reissued to allow pesticide operators to continue permit coverage for application of chemical pesticides that leave a residue in water and all biological pesticide applications that are made to surface waters. This regulatory action is also needed to incorporate appropriate changes from the federal National Pollutant Discharge Elimination System Pesticide General Permit. The staff will ask the board to approve for public comment and hearing the regulation establishing the General VPDES Permit for Discharges Resulting from the Application of Pesticides to Surface Waters. On November 27, 2006, EPA issued a final regulation to codify its interpretation of the Clean Water Act as not requiring NPDES permits for application of pesticides to or over, including near, waters of the United States, if the applications were consistent with relevant Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) requirements. After the rule was published, petitions for review were filed in 11 Circuit Courts. On January 7, 2009, the Sixth Circuit Court of Appeals ruled in *National Cotton Council, et al. v. EPA* to vacate EPA's 2006 interpretation of the Clean Water Act. On June 8, 2009, the Court granted the Department of Justice's request for a stay of the decision to provide EPA and the States time to develop and issue NPDES permits. The State Water Control Board's VPDES permit was effective October 31, 2011 and expires December 30, 2013. The current Virginia pesticide permit was adopted as a two-year permit rather than a five year permit because at the time of adoption, EPA's pesticide permit had not finalized yet. The two-year permit allowed DEQ to evaluate EPA's final permit to include the parts of EPAs permit that could be useful to Virginia.

A 30-day NOIRA public comment period ended May 23, 2012. Two public comments were received. Using a participatory approach to develop these regulations, a 27-person Technical Advisory Committee (TAC) was formed to assist the department in the amendment of this permit regulation. The TAC's met twice last summer to review the regulation and compare it with the final federal December 31, 2011 EPA pesticide general permit. The amendments in the reissued are those the TAC thought were appropriate and helpful to Virginia's general permit.

Summary of Changes

The significant amendments are as follows:

9VAC25-800-10. Definitions. Definitions were updated or deleted to match EPA's where appropriate.

9VAC25-800-30. Authorization to discharge. Expanded the forest pest control category to include aerial utility transmission and distribution line pest control. Made the annual treatment area acreage calculations consistent

for all four pesticide use categories (under the current regulation there are two different ways to calculate acreages depending on pesticide use category).
9VAC25-800-60. General Permit. The permit will be reissued for a five year period effective January 1, 2014 and expiring December 31, 2018.
9VAC25-800-60 Part I A 1 a, and b - Clarified requirements of operator/decision maker vs. operator/applicator. For example, made the operator/applicator responsible for meeting the requirements to 'minimize pesticide discharges to surface waters' by using the lowest effective amount of pesticide and maintaining the equipment. These requirements are basically the same as VDACS regulations at 9VAC5-670-170 A and B (application and equipment) and following the FIFRA label requirements. Another requirement to 'minimize pesticide discharges to surface waters' is the use of integrated pest management (IPM). IPM is done by the operator with control over the financing for, or the decision to perform pesticide applications that result in discharges to surface waters. Also larger operators (either decision maker or applicator) who must prepare a Pesticide Discharge Management Plan (PDMP) must document IPM in their PDMP.
9VAC25-800-60 Part I B - Simplified the monitoring requirements for all operators to be just visual monitoring, and when feasible.
9VAC25-800-60 Part I C - Pesticide discharge management plan requirements have been clarified and amended to more closely align with EPA's pesticide general permit requirements.

**Request to Proceed to Notice of Public Comment and Hearing on Proposed Amendments related to Animal Feeding Operations: Virginia Pollution Abatement General Permit Regulation for Animal Feeding Operations (9VAC25-192-10 et seq.), Virginia Pollution Abatement Permit Regulation (9VAC25-32 et seq.)**: At the March 14 meeting, staff will bring to the Board a request to proceed to notice of public comment and hearing on proposed amendments to the Virginia Pollution Abatement (VPA) General Permit Regulation for Animal Feeding Operations (AFOs) (9VAC25-192-10 et seq.) and the VPA Permit Regulation (9VAC25-32-10 et seq.) related to AFOs. The primary purpose of this regulatory action is to propose changes in order to reissue the VPA general permit for AFOs. The current VPA General Permit Regulation for AFOs will expire on November 15, 2014. The VPA Permit Regulation, or "parent" regulation for general permit regulations, contains obsolete definitions. Changes are being proposed to facilitate consistency with other state and federal regulations which govern the pollutant management activities at AFOs, and to clarify permitting procedures for AFOs.

**Background**

VPA General Permit Regulation for AFOs (9VAC25-192-10 et seq.)

The VPA General Permit Regulation for AFOs (9VAC25-192-10 et seq.) first became effective on November 16, 1994. The second ten year term of the general permit will expire on November 15, 2014. There are approximately 140 animal feeding operations in the Commonwealth covered under the general permit regulation.

The current VPA General Permit Regulation for AFOs (9VAC25-192-10 et seq.) requires that waste (manure) which is generated at the AFO is applied in accordance with a Department of Conservation and Recreation (DCR) approved nutrient management plan on lands owned by or under the operational control of the permitted owner of the AFO. Where the land application of waste is limited by reasons such as elevated phosphorus soil test levels, the further treatment and transfer of waste off the farm is becoming necessary. Emerging manure handling and treatment technology is making the transfer and possible marketing of manure based products off the farm more common as well as prompting the consideration of importing other wastes to supplement treatment processes. The current VPA AFO general permit regulation does not address waste (manure) transfer, the construction and operation of alternative manure treatment and storage facilities, or the management of off-site generated waste materials to be used to feed an on-farm digester or other manure treatment technology.

DEQ developed a mechanism to regulate manure transferred from permitted poultry farms to end-users in 2009. The State Water Control Board approved this mechanism as a final regulatory amendment to the VPA General Permit for Poultry Waste Management, and it became effective on January 1, 2010. Under this mechanism, an end-user of poultry waste must follow technical requirements in the regulation when managing

waste they receive, but are not required to obtain general permit coverage. However, if an end-user demonstrates continued non-compliance with the technical requirements, DEQ may require the end-user to obtain general or individual VPA permit coverage.

Amendments are being proposed to address alternative waste treatment and storage, management of off-site generated materials, and end-users of waste which is transferred off farms covered by the VPA General Permit for AFOs. The proposed end-user requirements are modeled after the requirements for transfer of poultry waste.

VPA Permit Regulation (9VAC25-32-10 et seq.)

The VPA Permit Regulation (9VAC25-32-10 et seq.) governs the pollutant management activities of animal wastes at AFOs, and is the regulation under which an individual permit would be issued to an AFO if the facility did not meet the requirements for general permit coverage. Currently, the VPA Permit Regulation contains obsolete definitions, and amendments are being proposed to address these inconsistencies and clarify certain permitting procedures for AFOs. The proposed amendments also address requirements for end-users of waste transferred from permitted AFOs.

**Notice of Intended Regulatory Action (NOIRA) and Technical Advisory Committee (TAC)**

VPA General Permit Regulation for AFOs (9VAC25-192-10 et seq.)

A NOIRA was published in the Virginia Register of Regulations on July 16, 2012. A 30-day public comment period followed which ended on August 15, 2012. The only public comments received were requests to participate on the TAC.

VPA Permit Regulation (9VAC25-32-10 et seq.)

A NOIRA was published in the Virginia Register of Regulations on August 13, 2012. A 30-day public comment period followed which ended on September 12, 2012. No public comments were received.

The Department utilized the participatory approach by forming an ad hoc TAC for both regulatory actions to ensure consistency among the regulations which govern AFOs. The Department held three (3) public noticed TAC meetings occurring on October 25, November 26, and December 20, 2012.

The members of the TAC discussed and reached general consensus regarding amendments necessary to reissue the VPA General Permit for AFOs and address inconsistencies in the VPA Permit Regulation.

The members of the TAC also discussed establishing requirements related to:

a) the transfer of waste (manure) from permitted AFOs;
b) the construction and operation of alternative manure treatment technologies; and
c) the management of off-site generated waste materials to be used to feed an on-farm digester or other manure treatment technology.

General consensus was reached to amend the VPA General Permit Regulation (9VAC25-192-10 et seq.) in order to provide flexibility by establishing appropriate requirements to allow for alternative waste technologies and management on the farm, including the ability to transfer waste off the farm without compromising compliance with the regulations or water quality protection.

**Proposed Amendments**

VPA General Permit Regulation for AFOs (9VAC25-192-10 et seq.)

A. Definitions, Terms and Reissuance

The proposed changes include amending definitions and terms in order to make them consistent with the other regulations which govern AFOs as well as allowing for the reissuance of the VPA General Permit for AFOs for another ten year term.

B. Requirements for the Transfer of Waste

The proposed changes allow for the off-site transfer of waste generated at an AFO covered under the General Permit.

*Regulatory Mechanism*

The proposal utilizes the VPA Regulation and General Permit for Poultry Waste Management (9VAC25-630-10 et seq.) as the model for establishing the regulatory mechanism to regulate end-use of transferred waste to bring consistency among the existing regulations which govern AFOs. Technical requirements are being proposed to regulate the utilization, storage and recordkeeping of waste which is transferred off-site. The end-user will be required to follow the requirements included in the technical regulation which are equally as enforceable as those required by permit coverage. The end-user would not be required to obtain a permit unless non-

compliance with the technical regulations is identified. In these cases, coverage under the general permit would place additional requirements on the end-user including soils and waste monitoring, nutrient management plans, animal waste transfer recordkeeping, DEQ compliance inspections and training.

*Land Application Timing and Buffer Zones*

The members of the TAC were in general agreement that the requirements currently included in the VPA General Permit for AFOs for application timing and buffer zone distances from streams, wells, etc. are appropriate best management practices for all animal waste applications. Thus, the proposal includes requirements for end-users that are identical to those required in the general permit.

*Land Application Rate*

The members of the TAC were in general agreement with using the technical requirements for poultry waste end-users as a model for establishing an appropriate land application rate. The proposed amendments give the end-user flexibility in how the rate is determined, depending on certain site and management conditions. These include:

1) Phosphorous (P) crop removal rates established by the Department of Conservation and Recreation (DCR) (if the soil test P levels are below 35% saturation);
2) P rates of no greater than 80 pounds per acre every 3 years when no other organic sources of P are applied;
3) Rates based on soil test recommendations provided by a laboratory whose procedures and recommendations are in accordance with the regulations promulgated by the Department of Conservation and Recreation for Nutrient Management;
4) Rates established in nutrient management plan written by a DCR certified nutrient management planner.

*Threshold to Trigger Requirements*

The members of the TAC discussed the most appropriate threshold which would trigger the utilization and recordkeeping requirements when transferring waste off-site. The proposal contains a threshold which triggers additional recordkeeping requirements for the owner of an AFO covered under the VPA General Permit, as well as utilization and recordkeeping requirements for the end-user through the technical requirements. Any amount of waste transferred must be stored in accordance with the proposed technical requirements.

Some TAC members expressed concern that establishing a low threshold may discourage the transfer of animal waste and negate the purpose of establishing a transfer mechanism. Those members suggested establishing a threshold based on the number of acres that the waste would cover in order to provide the nutrient needs of the crop. Staff has concerns that this method could complicate both compliance and enforceability, requiring calculations to be made by the end-user and the AFO owner prior to determining if they must comply with the additional requirements.

Staff has thus proposed that utilization and recordkeeping requirements would be triggered if an end-user receives (in any 365 day period) more than:

a) 10 tons of solid or semi-solid animal waste (less than 85 percent moisture), or

b) 6,000 gallons of liquid animal waste (85 percent or more moisture).

The proposed threshold will facilitate compliance with the technical requirements and provide more surety in enforcement.

C. Requirements for Proper Construction and Operation of Alternative Manure Treatment Technologies

The proposed requirements allow for new manure treatment and/or storage facilities to be constructed and operated at the AFO. The proposal establishes that the treatment and/ or storage facilities be constructed in accordance with the appropriate practice standard adopted by the United States Department of Agriculture (USDA) - Natural Resource Conservation Service (NRCS). In addition, the Department would approve the construction of the new facilities.

D. Requirements for the Receipt Off-Site Generated Waste (Materials)

The proposed requirements allow the owner of an AFO covered under the VPA General Permit to manage waste materials which are imported to the farm for the purpose of feeding an on-farm digester or other manure treatment technology. The proposal establishes that the Department will approve the treatment process and that

wastes treated through this process shall be managed in accordance with the conditions of the VPA General Permit. Recordkeeping requirements are also included in this proposal.

VPA Permit Regulation (9VAC25-32-10 et seq.)

A. Definitions and Terms

The proposed changes include amending definitions and terms in order to make them consistent with the other regulations which govern AFOs.

B. Requirements for the Transfer of Waste

Amendments are being proposed to add language which stipulates the establishment of technical requirements for end-users of animal waste and poultry waste including specific items which must be addressed in any technical requirements established in either the VPA General Permit Regulations or in Individual VPA Permits.

Additional Best Management Practices

One member of the TAC recommended that the VPA General Permit for AFOs be amended to mandate the implementation of Best Management Practices (BMPs) such as livestock stream exclusion, conservation planning, and vegetated buffers. The member explained that such BMPs are listed in the Chesapeake Bay Watershed Implementation Plan (WIP). An additional member supported this recommendation. However, the majority of the members of the TAC were not supportive of the additions of these BMPs. Some TAC members expressed concerns that mandating such BMPs would bring undue burden to owners of AFOs since much of the land they operate to manage their livestock and raise their crops is rented or leased. By not owning the properties, the owners of the AFOs are unable to guarantee such implementation. Some TAC members also noted that the WIP stresses voluntary implementation. The members of the TAC did not reach consensus on this item.

The proposed regulation does not include the addition of additional BMPs from the Chesapeake Bay WIP for the following reasons:

a) The Virginia Code §62.1-44.17:1 is explicit in the requirements that are to be included in the general permit regulation and therefore does not allow for adding the additional BMPs to the general permit conditions.
b) The VPA General Permit Regulation for AFOs covers operations across the state, not just those located in the Chesapeake Bay Watershed.
c) The Chesapeake Bay WIP specifies that the first order mechanism to increase application of these additional agricultural BMPs will be voluntary implementation. Specifically, the Resource Management Plan regulations were promulgated by the Soil and Water Conservation Board in order to promote additional voluntary implementation prior to additional mandatory regulatory requirements.

Staff does feel that it is appropriate to incorporate into the required permittee training program a component to educate permittees on the benefits of the implementation of BMPs such as those recommended.

**Approval of three TMDL reports and amendment of the Water Quality Management Planning Regulation to incorporate the corresponding TMDL wasteload allocations**: Staff will ask the Board to approve portions of three TMDL Reports and adopt amendments to two sections of the Water Quality Management Planning (WQMP) regulation: 9 VAC 25-720-130.A (New River Basin) and 9 VAC 25-720-110.A (Chesapeake Bay-Small Coastal-Eastern Shore Basin). The amendments consist of adding three new WLAs. All TMDL reports containing these WLAs have been approved by EPA.

The Clean Water Act ("CWA") and the U.S. EPA Water Quality Management and Planning Regulation (40 CFR §130) require states to identify waters that are in violation of water quality standards and to place these waters on the state's 303(d) List of Impaired Waters. Also, the CWA and EPA's enabling regulation require that a TMDL be developed for those waters identified as impaired. In addition, the Code of Virginia, §62.1-44.19:7.C requires the State Water Control Board ("the Board") to develop TMDLs for impaired waters. A TMDL is a determination of the amount of a specific pollutant that a water body is capable of receiving and still meets water quality standards for that pollutant. TMDLs are required to identify all sources of the pollutant and calculate the pollutant reductions from each source that are necessary for the attainment of water quality standards. Every TMDL consists of three basic components. They are the point source component called the

wasteload allocation ("WLA"), the nonpoint source component called the load allocation ("LA"), and the margin of safety component ("MOS"). The TMDL is equal to the sum of these three components.

Staff will propose Board approval of three EPA-approved TMDL reports containing the following three TMDL WLAs:

1. The Little River Watershed Sediment TMDL, located in Floyd, Franklin, Montgomery, Patrick and Pulaski counties, provides sediment reductions for the watershed. It provides one wasteload allocation for sediment in the entire watershed and the wasteload allocation is 116.49 tons/year of sediment.
2. The Folly Creek Total Nitrogen TMDL, located in Accomack County, proposes Total Nitrogen reductions for portions of the watershed and provides a Total Nitrogen wasteload allocation of 2.6 lbs/day
3. The Gargathy Creek (Upper, Lower, and Riverine Portions) Total Nitrogen TMDL, located in Accomack County, proposes Total Nitrogen reductions for portions of the watershed and provides a Total Nitrogen wasteload allocation of 1.9 lbs/day.

The specific portions of the TMDL reports to be approved include the TMDL itself and all the TMDL allocation components, the pollutant reduction scenarios, implementation strategies, and reasonable assurance that the TMDL can be implemented and a summary of the public participation process.

Staff will also propose that the Board, in accordance with §2.2-4006A.4.c and §2.24006B of the Code of Virginia, adopt the amendments to the WQMP Regulation (9 VAC 25-720).

The TMDLs were published in the Virginia Register on February 11, 2013, with a public comment period ending on March 12, 2013. Staff received no comments.

**County of Culpeper/ Greens Corner Wastewater Treatment Plant - Consent Special Order**: The County of Culpeper (Culpeper) owns and operates the Greens Corner Wastewater Treatment Plant (Facility), a 0.1 MGD Membrane Bioreactor package plant, located at 16540 Greens Corner Road, Culpeper, Virginia. The Facility treats and discharges treated sewage and other municipal wastes, for the students and staff of the Eastern View High School. Culpeper is authorized to discharge treated effluent from the Facility, to an unnamed tributary of Mountain Run, in strict compliance with the terms and conditions of VPDES Permit VA0092002 (Permit). The Permit was issued on April 4, 2007, modified on February 27, 2008, and expired on April 3, 2012. A new permit was issued on April 24, 2012. In the permit application for the 2012 Permit, Culpeper indicated that it was planning on decommissioning the Facility in 2013 because of a Comprehensive Water and Sewer Agreement (Agreement) with the Town of Culpeper. This Agreement entered into in March 2012, included the plan to connect the area of the County served by the Facility to the Town's collection system. In January and February 2012, Culpeper submitted its Discharge Monitoring Reports (DMRs), demonstrating exceedances of the Permit limits for Ammonia as N and TKN, during the months of December 2011 and January 2012. In letters attached to the DMRs, dated January 10, 2012, and February 8, 2012, Culpeper described the events leading to the permit limit exceedances. Between October 25, 2011 and December 4, 2011, Culpeper took the Facility off-line to repair a process unit. During this time Culpeper pumped and hauled the sewage off-site. The filter had become "blinded" and was not effective in filtering the influent processed by the Facility. In December 2011, Culpeper brought the Facility back on-line including attempting to re-establish nitrification. In response to the reported exceedances, DEQ issued a Warning Letter (WL), dated February 28, 2012, and a Notice of Violation (NOV), dated March 21, 2012. On March 16, 2012, Culpeper responded to the WL, and on April 25, 2012, Culpeper responded to the NOV. The response letters restated that Culpeper believed that the exceedances were related to the difficultly of re-establishing nitrification during the cold weather months after the Facility had been off-line for repairs. The unscheduled repairs were needed to correct the issues with the filters due to rags and debris in the membrane zones caused by the low flows at the Facility. The letter also stated that due to low flow the Facility had only discharged a combined total of twenty-six days during the December 2011 and January 2012 monitoring periods. On May 1, 2012, DEQ met with representatives of Culpeper to discuss the violations, including Culpeper's plans to hook up to the Town of Culpeper's sanitary sewer collection system. Subsequently, Culpeper submitted a copy of the Agreement and the Town of Culpeper's response to Culpeper's request to construct the sewer connection. The planned connection would complement the existing water connection serviced by the Town of Culpeper. In the

June 2012 DMR, Culpeper reported an exceedance of the Permit limit for the weekly concentration maximum for carbonaceous biochemical oxygen demand (CBOD5) (June –November). In a letter attached to the DMR, dated July 9, 2012, Culpeper described the events leading to the permit limit exceedance. The letter stated that the reported exceedance was due to one sample taken on June 13, 2012, resulting in an anomaly. The remaining CBOD samples collected in June 2012 were below the permit limit. In response to the reported exceedance, DEQ issued a NOV, dated August 22, 2012. Culpeper sent a NOV response to DEQ, dated August 28, 2012. The Consent Order requires Culpeper to submit for review and approval, a plan and schedule to maintain compliance with the permit limits.

**Brunswick County Industrial Development Authority (Brunswick IDA) - Consent Special Order**: On April 24, 2012, Brunswick IDA submitted an application to the Department for a CTC for a Pump Station to send wastewater from the Meherrin Regional Jail to the Town's wastewater treatment plant. On May 29, 2012, Department staff observed a discrepancy between the Pump Station design flow in the CTC application and the flow agreed to in the legal contract between the Brunswick IDA and the Town. On June 4, 2012, Department staff telephoned the Town to inquire about the discrepancy and the Town informed the Department that the Pump Station was already built and operating. On June 14, 2012, Department staff conducted a site visit and confirmed that the Pump Station was constructed and operating. On July 24, 2012, the Department issued an NOV (No. 2012-07-P-201) to the Brunswick IDA for the failure to obtain a CTC and CTO for the Pump Station. On September 21, 2012, a meeting was held between the Department and the Brunswick IDA to discuss the NOV and the Pump Station compliance issues. Attending the meeting was Brunswick IDA's consultant who admitted that the company failed to obtain the necessary certificates on behalf of Brunswick IDA for the Pump Station construction. The consultant stated that an oversight occurred because there were two separate projects, one for the conveyance system, and one for the Pump Station. A CTC and CTO were issued for the conveyance system but not the Pump Station. Civil charge: $3,500.

**Greensville County Water & Sewer Authority (GCWSA) Three Creek WWTF - Consent Special Order**: GCWSA owns and operates the Three Creek Sewage Treatment Facility (Facility) in Greensville County, Virginia. The Permit allows GCWSA to discharge treated sewage and other municipal wastes from the Facility, to Three Creek, in strict compliance with the terms and conditions of the Permit. The Permit contained a four year schedule to comply with Copper and Zinc effluent limits by September 30, 2011. GCWSA has been working since 2008 on resolving compliance issues with copper and zinc limitations. On November 8, 2011, DEQ received a status report from GCWSA outlining a three phase approach to complying with metals limitations in the Permit. The phases are 1) management of dissolved oxygen (DO) at the Facility, 2) Solids Retention Time (SRT) management, and 3) chemical precipitation. GCWSA submitted DMRs to DEQ indicating that the Facility exceeded Permit discharge limitations for total copper and total zinc subsequent to the September 30, 2011 compliance date. GCWSA stated that the exceedances were related to the need for completion of additional metal removal treatment processes at the Facility which were underway. On March 6, 2012, DEQ issued Notice of Violation (NOV) number W2012-03-P-0002 to GCWSA for exceeding total copper and total zinc Permit discharge limitations for the October 1, 2011, through January 31, 2012, monitoring periods. In a letter dated March 22, 2012, GCWSA updated DEQ staff on its progress with resolving the copper and zinc issues. A pilot study was initiated using magnesium hydroxide to precipitate metals, and a centrifuge building for sludge handling is currently under construction. GCWSA submitted DMRs for the February 1, 2012, through April 30, 2012, monitoring periods, which indicated that it continued to exceed Permit discharge limitations for total copper and total zinc in February, March, and April of 2012, and for total suspended solids (TSS) in April 2012. GCWSA indicated, and DEQ agreed, that the TSS violation stemmed from the fact that magnesium hydroxide generates a higher volume of sludge than the Facility's vacuum assisted drying beds could handle. The new sludge centrifuge will resolve the TSS issue in addition to assisting in metals compliance. On June 5, 2012, DEQ issued a second NOV number W2012-05-P-0003 to GCWSA for exceeding total copper, total zinc and TSS Permit discharge limitations for the February 1, 2012, through April 30, 2012, monitoring periods. On September 30, 2012, the Department issued a new tiered Permit to GCWSA to allow for expansion of the Facility to 2.0 MGD. Zinc limitations in the Permit became more

restrictive and GCWSA was allowed a 4 year compliance schedule to meet the new zinc limit. On October 16, 2012, DEQ staff met with GCWSA at the Facility to conduct a meeting and site inspection. Department staff observed that the sludge centrifuge construction was well underway and the magnesium hydroxide pilot study was in place and showing positive results. The Consent Order requires GCWSA to complete all upgrades, repairs and modifications to the Facility's solids handling units, chemical addition operations and dissolved oxygen blowers necessary to ensure consistent compliance with the Permit and the Certificate to Operate. The Order also contains interim limits for copper and zinc until the upgrade is complete. Civil charge: $4,200.

**City of Portsmouth Lake Kilby Water Treatment Facility - Consent Special Order with a civil charge**: The City of Portsmouth ("City") owns and operates the Lake Kilby Water Treatment Facility ("Facility") in Suffolk, Virginia, where it treats raw water for the production of potable water for consumption by City residents and commercial users. Raw water is pumped to the Facility directly from Lakes Kilby and Meade and from a third pump station (on Pitchkettle Road), also on Lake Meade about a mile from the Facility. The Facility is subject to Virginia Pollutant Discharge Elimination System ("VPDES") Permit No. VA0006301 ("Permit"), which, among other things, authorizes the City to discharge process wastewater from a settling lagoon into Lake Meade through Outfall 001 within limits for pH and total suspended solids. The Permit also prohibits the discharge of pollutants into State waters except in compliance with the Permit. On June 26, 2012, a Facility operator reported telephonically to DEQ an anticipated major upset at the Facility that might result in the discharge of partially treated water to Lake Meade. In its "five-day" letter the City confirmed that an unknown quantity of improperly treated water had discharged to Lake Meade as the result of an upset at the Facility when the partially treated water was diverted from the filtration units. The response stated, in effect, that the quantity of water was such (approximately 600,000 gallons discharging at 4,400 gallons per minute) that it overwhelmed the emergency overflow weir in the settling pond and the junction vault intended to contain routine overflows. The upset continued for three hours and 45 minutes. During a subsequent Facility inspection by DEQ compliance staff the Facility manager stated that the upset had occurred when the source of raw water for the Facility was being switched from the Pitchkettle Road pump station to the primary intake point on Lake Meade. The distinctive pink color of an excess amount of one of the chemicals used in the treatment process, sodium permanganate, was present in the Facility's clarifier units. Sodium permanganate is a chemical oxidizer used in the water-treatment process to disinfect and to remove certain contaminants from the raw water. Facility operators had tried to divert the partially treated water from the filtration units to old, unused clarifiers, but were unsuccessful as the valves had failed, apparently from disuse. The partially treated water was then diverted to the settling pond, which was unable to contain the amount of water being diverted from the filtration units. The Facility manager stated that the source of the excess sodium permanganate was unknown, but assumed that it had pooled in one of the three wet wells where raw water enters the Facility. That wet well reportedly had not been in use during the period when raw water was being pumped from the Pitchkettle Road pump station. The Facility manager subsequently provided photographs of the upset as it progressed through the Facility including photographs of a large volume of pink water pouring out of the junction vault directly into Lake Meade. The City was advised of its VPDES non-compliance issue in a Notice of Violation ("NOV") dated September 6, 2012. In an effort to resolve the NOV, DEQ staff visited the Facility to review the operation of the Facility and the events of June 26, 2012, with the Facility manager and chief operator and a representative of the City. Staff were advised that diverting the partially treated water away from the filtration units had not exacerbated the unauthorized discharge, but had been done to prevent damage to the filter material from excess oxidation. The partially treated water had been diverted before it entered the drinking-water distribution system. A chronology provided by the City reflected that the red coloration (indicative of the possible overfeed of sodium permanganate) had appeared in the first stage of the treatment system within fifteen minutes of the sodium permanganate feed pump having been activated, which is consistent with the Facility manager's earlier assertion that a large volume of sodium permanganate may already have been present in one of the wet wells when the raw water entered the Facility. The City's written response stated that, among other things, Facility operators have received additional training in the operation of the sodium permanganate feed pumps. In a subsequent meeting and written response, a representative of the City and the Facility manager reported that the root cause of the unauthorized discharge was determined to have

been the overfeeding of liquid sodium permanganate into the raw water entering the Facility by operators who were not yet fully proficient in the operation of a newly installed liquid-feed system after recent conversion from a dry-feed system. As a consequence, raw water oversaturated with sodium permanganate had accumulated in a wet well while the pump station associated with that well had been off-line for maintenance. When the pump station was restarted, the raw water entering the wet well flushed the oversaturated water that had accumulated in the wet well into the treatment system. Protocols have been implemented to prevent liquid sodium permanganate from accumulating in an unused wet well and to prevent major upsets from being diverted to State waters. Specifically, the off-line clarifier (only two of the three clarifier units are used at a time with the third on standby) will be used to maintain the proper flow through the Facility rather than diverting the excess flow to the settling lagoon. If additional storage capacity is needed, the excess flow will be diverted to the abandoned clarifier basins. Routine Facility maintenance will now include ensuring that the settling lagoon drain valves are working properly. All Facility personnel are being trained on the new procedures. The Consent Special Order ("Order") would require the City to pay a civil charge within 30 days of the effective date of the Order. Civil charge: $6,825.

**Gauge Works, LLC, Loudoun County - Consent Special Order w/Civil Charges**: Gauge Works is a metal fabrication facility that provides engineering design and manufacturing services. These manufacturing services include, but are not limited to metal finishing and thermoforming. DEQ received notification on March 31, 2012, from the Loudoun County Fire Department that a discharge of oil, in the form of Blasocut had occurred at the Gauge Works facility. Blasocut is a water miscible metalworking fluid comprised of 40-70% severely hydrotreated mineral oil. The Fire Department estimated that approximately 40 gallons of the oil had been discharged from the rear service bay door at the facility across an asphalt lot and into a stormwater drop inlet and into a stormwater management pond creating a sheen on the surface of the water. DEQ staff confirmed that a discharge had occurred while the Fire Department was onsite. DEQ staff also observed that approximately ½ to ¼ of the stormwater management pond onsite was discolored with a milky-white appearance. Fire Department personnel indicated to DEQ that they had observed Gauge Works employees dumping liquid from buckets from the bay door area, and that it believed that this practice had been ongoing for approximately four years as a pattern of chronic behavior. Gauge Works later informed DEQ that what was poured out from the rear service bay door at the facility was dirty water that was used to clean off equipment that had come into contact with the Blasocut. While still onsite, the Loudoun County Fire Marshall issued a containment and cleanup order to Gauge Works. An environmental contractor was hired for containment and cleanup of the discharge. The area was remediated and samples were taken from the outfall of the stormwater conveyance pipe and stormwater management pond and showed that no discharge of toxic metals had occurred. In addition, there were no visual observations of adverse impact and no resulting fish kill. Gauge Works has subsequently informed DEQ that it has changed its business practice, and does not intend to wash its equipment, or dispose of the Blasocut in a similar manner. The Consent Order requires Gauge Works to provide documentation to DEQ showing that the Blasocut is being properly disposed of. Gauge Works has spent approximately $7,500 on remediating the area and on samples from the stormwater pond area to test for contamination. Civil charge: $1,148.

**Nutri-Blend, Inc., Richmond - Consent Special Order with Civil Charges**: Nutri-Blend owns a biosolids management company which regularly transports and contracts for the transport of sewage sludge and biosolids from regional WWTPs to application sites. A dump trailer contracted by Nutri-Blend transported and released Henrico County WWTP biosolids onto State Route ("SR") 711 in Powhatan County, Virginia. DEQ was notified, and conducted an investigation at the spill site. DEQ staff determined that the tailgate had failed on the dump trailer hauling the biosolids, which released the biosolids onto SR 711. DEQ staff observed that the biosolids had been released on the pavement of the westbound lane of SR-711 for approximately 400 feet. The failure of the tailgate and the resulting spill were inconsistent with Nutri-Blend's company objective that tailgates be leak-proof. This objective, found in Nutri-Blend's 2008 O&M manual and in its 2010 amended O&M manual, is applied on a day-to-day basis through company policy to hauling activities regulated under its BUR permits. DEQ staff were informed during the investigation that two drivers lost control of their vehicles

and drove off the road due to the biosolids spill. The biosolids did not reach state waters. The biosolids spill was fully cleaned up from the road by Nutri-Blend. DEQ issued a NOV to Nutri-Blend for violations of State Water Control Law and regulations, specifically, failing to sufficiently seal a transport vehicle to prevent leakage and spillage of sludge, 9 VAC 25-32-540 (A), and for failing to submit a written report within five days regarding response to the spill, 9 VAC 25-32-540 (E). Nutri-Blend submitted a written response to the NOV which confirmed a written report had not been submitted to DEQ, provided additional information about the spill, including the tailgate failure, and explained why a written report had not been sent to DEQ within five working days of the spill. DEQ staff met with representatives of Nutri-Blend to discuss the violations, including Nutri-Blend's written response. Nutri-Blend stated that it would adhere to its O&M manual. Nutri-Blend agreed to the Consent Special Order with DEQ to address the above described violations. The Order requires the payment of a civil charge. Civil charge: $10,260.

**Town of Craigsville ("Craigsville"), Augusta Co. - Consent Special Order - Amendment**: Craigsville owns and operates the Facility which is the subject of VPA Permit No. VPA01542. The Permit was reissued on December 17, 2002, with an expiration date of December 16, 2012. The Facility serves Craigsville and the nearby Virginia Department of Corrections ("VDOC") unit Augusta Correctional Center ("ACCF"). The Facility provides primary wastewater treatment in two separate sets of Imhoff tanks with one set serving the Town and one set serving the ACCF. Wastewater from the Imhoff tanks then flows to a series of three lagoons and is ultimately land applied onto a 53.5 acre site. The design flow of the Facility was initially rated and approved as 0.25 MGD. Presently, Craigsville is subject to the Order that became effective July 29, 2008, which provided a schedule of compliance to construct a new sewage treatment plant which would replace the Facility and cease land application operations. The 2008 Order required Craigsville to cease all spray irrigation by 90 days following completion of a new sewage treatment plant, or December 31, 2010, whichever occurred first. Pursuant thereto, Craigsville applied for a VPDES permit to discharge wastewater from a new plant, to be constructed at the site of the existing Facility. The VPDES discharge Permit No. VA0091821 was issued to Craigsville on September 1, 2008 and expires on August 31, 2013. A treatment plant design was completed by the Town. Craigsville could not proceed with awarding a contract for the construction of the new plant because of the inability to come to terms with the VDOC on a sewer user agreement (the "Service Agreement") sufficient to secure certain state and federal program funding necessary for construction of the new sewage treatment plant. These extended negotiations continued over a period of two years and significantly delayed moving forward with the construction of a new plant. Agreement was ultimately facilitated by a special appropriation from the Virginia General Assembly, as well as the Town's decision to turn over both ownership and operations of the new plant to VDOC. On October 5, 2009, VRO issued a NOV to Craigsville for failure to award a contract for the construction of a new Facility in accordance with the Order in violation of VA Code § 62.1-44.31. Subsequent to the issuance of the NOV, VRO issued three Warning Letters to Craigsville on April 9, 2010, June 9, 2011 and March 9, 2012, citing failure to maintain the minimum storage pond freeboard of 2 feet during the months of January, February and March 2010, and for failure to submit the Quarterly Progress Reports due April 10, 2011 and January 2012 respectively. The Service Agreement between Craigsville and VDOC was signed on July 3, 2012. By email message dated August 7, 2012, VDOC submitted to DEQ a plan and schedule for the construction of the new sewage treatment plant to replace the Facility. In order for Craigsville to return to compliance, DEQ staff and representatives of Craigsville have agreed to the Schedule of Compliance, which is incorporated as Appendix A of the proposed Order Amendment. The proposed Amendment contains a schedule of compliance to take the land application facility offline following the completion of construction of the VDOC facility.

**Acacia Credit Fund 10-A, LLC, Stafford Co. - Consent Special Order w/Civil Charges**: Acacia Credit Fund 10-A, LLC owns the Oakley Farm development which consists of a proposed residential community with the associated infrastructure on an approximately 449 acre parcel. Impacts to surface waters associated with the development of the Oakley Farm were authorized through a VWP Permit. The Permit authorized the permanent impact to 0.912 acre of surface waters consisting of 0.863 acre of palustrine forested wetland, 0.045 acre (290 linear feet) of perennial stream channel, and 0.004 acre (93 linear feet) of intermittent stream channel associated

with the Long Branch Watershed. Following an inspection of the Oakley Farm by DEQ and United State Army Corps of Engineers staff, and a review of the file conducted by DEQ staff, DEQ determined that approximately 0.270 acre of palustrine forested wetland and 898 linear feet of stream channel had been impacted without a permit from DEQ. In addition, DEQ noted encroachments into approximately 1.7 acres of riparian buffer and wetland preservation, pre-construction and construction monitoring reports had not been received, surface waters to remain undisturbed had not been flagged, DEQ had not received documentation that payment to the Virginia Aquatic Resources Fund had been submitted to demonstrate compensatory mitigation for the discharge of fill material to permitted areas, and DEQ had not received documentation that the non-impact surface waters had been surveyed or platted and recorded within 120 days of DEQ approval. The United States Army Corps of Engineers issued a Cease and Desist Order to Acacia on the project in May 2006. This Cease and Desist Order prompted Acacia to record the protective mechanism and fulfill a portion of the compensation required by the Permit. However, following the recordation, Acacia took additional impacts over those authorized by the Permit (approximately 300 percent gain) and took impacts in recorded preservation areas. The Consent Order requires Acacia to immediately cease any activities that impact surface waters and that require authorization from the VWP Permit program unless authorization from DEQ is granted, provide proof of compensation for unauthorized impacts to 0.270 acre of palustrine forested wetland, and submit a Compensation Plan approvable by DEQ for the compensation of 1,041 linear feet of stream that have been impacted. This accounts for both authorized and unauthorized impacts. Civil charge and supplemental environmental project: $163,592 with $63,756 offset by a SEP.

**Howard Hughes Medical Institute, Loudoun Co. - Consent Special Order w/ Civil Charges**: Howard Hughes Medical Institute (Howard Hughes) is a non-profit medical research organization based in Chevy Chase, Maryland. The Janelia Farm Research Campus (JFRC), a division of Howard Hughes, is a biomedical research center located in Ashburn, Virginia. The JFRC is located on 689 acres along the Potomac River. Impacts to surface waters associated with the construction of the JFRC were authorized through two VWP Permits. These permitted impacts were partially mitigated by creating a minimum of 1.3 acres of forested wetlands onsite. Both permits have expired. Following an inspection of the site, on November 19, 2009, DEQ released Howard Hughes from further monitoring and reporting, affirming that the compensatory forested wetland creation site was meeting the success criteria from a DEQ approved compensation plan. On March 9, 2012, DEQ was notified of activities that resulted in the removal of trees from compensatory mitigation site and an associated upland buffer by apparent mowing. This compensatory mitigation site has a deed restriction that prohibits mowing. DEQ staff conducted a site inspection on March 28, 2012, and confirmed that the site had been mowed. The Consent Order requires Howard Hughes to implement a Mitigation Site Restoration Plan (Plan) and Area Monitoring Proposal approved by DEQ in accordance with the schedule contained therein. Should the compensatory site fail to meet performance criteria specified in the Plan, Howard Hughes will be required to submit a proposal to DEQ to use mitigation bank credits to address any remaining corrective action. Howard Hughes has changed management of the site, has further trained staff, and has posted no mowing signs in the area to prevent similar violations of the deed restriction. Howard Hughes has planted approximately 1700 plants to restore the area, and is currently monitoring its success. The estimated cost of re-planting and monitoring the compensatory site is approximately $51,300.00. Civil charge: $20,800.

**Clyde W. Hudgins, Jr. and Mary Alice Hudgins, Mathews Co. - Consent Special Order**: Clyde W. Hudgins, Jr. and Mary Alice Hudgins ("Hudgins") own the Site in Mathews County, Virginia. On April 1, 2010, DEQ staff received notification of potential unauthorized dredging and filling of forested wetlands at the Site. DEQ staff inspected the Site and observed that Mr. Hudgins had constructed a driveway on the Site ranging from 16 to 30 feet wide and 920 feet long from Khyber Pass Trail to a 3.07 acre lot identified on Mathews County Tax Maps as parcel 29-A-216J. DEQ staff observed that the driveway was constructed through forested wetlands as evidenced by the presence of hydric soils. DEQ staff also observed hydrophytic vegetation and wetland hydrology. DEQ staff determined that 0.49 acres of fill had been placed into non-tidal forested wetlands for the construction of the driveway without a USACE or DEQ permit. DEQ staff also observed that Mr. Hudgins had constructed a building pad and private drive on parcel 29-A-216J, totaling 0.24

acres, using fill placed into non-tidal forested wetlands. Hudgins did not have a permit for these activities. DEQ issued a NOV to Hudgins for violation of Virginia Code and regulations. Department staff met with Mr. Hudgins to discuss the violations contained in the NOV. Mr. Hudgins stated he would narrow the driveway on the Site in order to reduce the impact to the non-tidal forested wetlands. DEQ staff met again at the Site with Mr. Hudgins. Mr. Hudgins had narrowed the width of the driveway from 0.49 acres of dirt and fill, to 0.237 acres of fill and gravel to reduce the impacts to the non-tidal forested wetlands. DEQ staff recommended how to restore the wetland areas along the sides of the driveway. Hudgins has restored the wetland areas along the driveway and has deed restricted 5.16 acres of wetlands adjacent to the Site. Hudgins agreed to the Consent Special Order with DEQ to address the above described violations. The Order requires the deed restriction of the above mentioned 5.16 acres as well as the deed restriction on another 4.0 acres of wetlands adjacent to the Site. Hudgins shall file the deed restriction on the additional 4.0 acres of wetlands by February 15, 2013.

**Rogers-Chenault, Inc., Henrico Co. - Consent Special Order w/ Civil Charges**: On July 26, 2005, DEQ issued general permit WP1-05-1311 (Permit) to Eagle Construction of Virginia, Inc. The Permit expired on July 25, 2008. The Permit authorized impacts to 0.27 acres of palustrine forested wetlands associated with the construction of the residential subdivision, Hunton Station. Approximately 3 ½ months after issuance of the Permit, Rogers-Chenault, Inc. notified DEQ on December 7, 2005 of the purchase of the property from Eagle Construction requesting transfer of the Permit. On September 1, 2011, DEQ staff viewed the permitted project through online aerial photography and observed that the authorized wetland impacts to Hunton Station were complete. A file review of the project by DEQ staff found that the 10-day notice of start of construction activities, monitoring reports, and documentation of the purchase of wetland mitigation bank credits had not been provided as required by the Permit. On January 27, 2012, a Notice of Violation (NOV) was issued to Rogers-Chenault, Inc. The NOV was issued for failure to purchase the wetland mitigation bank credits, failure to provide the 10-day notification prior to start of construction activities, and failure to provide construction monitoring reports. In response to the NOV, Mr. Rogers, of Rogers-Chenault, Inc., met with DEQ on February 15, 2012, to discuss resolution of the NOV. Mr. Rogers agreed to purchase the wetland mitigation bank credits and provide DEQ with photos and reports pertaining to the development of Hunton Station. On February 21, 2012, Mr. Rogers submitted some photos and information pertaining to the construction of the subdivision, and on April 26, 2012, provided documentation of the purchase of the required wetland credits. Rogers-Chenault, Inc. agreed to the Consent Special Order with DEQ to address the above described violations. Since all of the corrective actions (i.e. purchase of wetland mitigation credits) have been completed, the Order requires the payment of a civil charge. DEQ staff estimated the cost of injunctive relief to be $22,500 for the purchase of the wetland mitigation bank credits. Civil charge: $8,000.

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Inc. agreed to the Consent Special Order with DEQ to address the above described violations. Since all of the corrective actions (i.e. purchase of wetland mitigation credits) have been completed, the Order requires the payment of a civil charge. DEQ staff estimated the cost of injunctive relief to be $22,500 for the purchase of the wetland mitigation bank credits. Civil charge: $8,000.

**Gauge Works, LLC, Loudoun Co. - Consent Special Order w/Civil Charges**: Gauge Works is a metal fabrication facility that provides engineering design and manufacturing services. These manufacturing services include, but are not limited to metal finishing and thermoforming. DEQ received notification on March 31, 2012, from the Loudoun County Fire Department that a discharge of oil, in the form of Blasocut had occurred at the Gauge Works facility. Blasocut is a water miscible metalworking fluid comprised of 40-70% severely hydrotreated mineral oil. The Fire Department estimated that approximately 40 gallons of the oil had been discharged from the rear service bay door at the facility across an asphalt lot and into a stormwater drop inlet and into a stormwater management pond creating a sheen on the surface of the water. DEQ staff confirmed that a discharge had occurred while the Fire Department was onsite. DEQ staff also observed that approximately ½ to ¼ of the stormwater management pond onsite was discolored with a milky-white appearance. Fire Department personnel indicated to DEQ that they had observed Gauge Works employees dumping liquid from buckets from the bay door area, and that it believed that this practice had been ongoing for approximately four years as a pattern of chronic behavior. Gauge Works later informed DEQ that what was poured out from the rear service bay door at the facility was dirty water that was used to clean off equipment that had come into contact with the Blasocut. While still onsite, the Loudoun County Fire Marshall issued a containment and cleanup order to Gauge Works. An environmental contractor was hired for containment and cleanup of the discharge. The area was remediated and samples were taken from the outfall of the stormwater conveyance pipe and stormwater management pond and showed that no discharge of toxic metals had occurred. In addition, there were no visual observations of adverse impact and no resulting fish kill. Gauge Works has subsequently informed DEQ that it has changed its business practice, and does not intend to wash its equipment, or dispose of the Blasocut in a similar manner. The Consent Order requires Gauge Works to provide documentation to DEQ showing that the Blasocut is being properly disposed of. Gauge Works has spent approximately $7,500 on remediating the area and on samples from the stormwater pond area to test for contamination. Civil charge: $1,148.

**MRK, L.L.C., Portsmouth - Consent Special Order w/Civil Charges**: MRK, L.L.C. ("MRK") owns and operates the Vickie's Convenience Store and Citgo Gas Station ("Facility"). As part of the Facility, MRK operates one 10,000-gallon Underground Storage Tank ("UST") containing diesel fuel, one 8,000-gallon and one 12,000-gallon UST containing gasoline. On November 11, 2011, in response to a complaint from the City of Portsmouth of the presence of gasoline in the storm water system adjacent to the Facility, DEQ Tank Compliance staff conducted an inspection at the Facility and observed the following:

- The UST system was not registered with DEQ
- Records to demonstrate compliance with release detection, cathodic protection, annual automatic line leak detector, and financial responsibility were not available.

On November 28, 2011, DEQ issued MRK a Notice of Violation ("NOV") for the observations listed above. The Order requires MRK to pay a civil charge and to submit to DEQ monthly release detection records, cathodic protection system test results and demonstrate financial responsibility within 30 days of the effective date of the Order. Civil charge: $13,425.

Water Reclamation and Reuse Regulation- Public Comment and Response:

During the public comment period a total of 36 comments were received from six different organizations and one individual. The comments received are summarized below with agency responses.

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| **1.** | **Subject:** Exclusion for industrial water reuse<br>**Commenter:** Andrea Wortzel on behalf of the Virginia Manufacturers Association (VMA)<br>**Text:** VMA supports the retention of the exclusions found in 9VAC25-740-50.A. This section supports industrial reuse by exempting from permitting requirements the recycling of industrial effluent when used on the same property as the industrial facility. This exemption is important to VMA members and provides needed flexibility to enable industrial facilities' water management practices to evolve as opportunities for reuse arise.<br>**Agency Response:** There are no proposed amendments to the regulation that will affect the existing exclusion for industrial water reuse provided under 9VAC25-740-50.A.5. There are no additional changes to the amended regulation in response to this comment. |
| **2.** | **Subject:** Market-based approach to investment decisions regarding effluent reuse infrastructure<br>**Commenter:** Robert C. Steidel, President, Virginia Association of Municipal Wastewater Agencies (VAMWA)<br>**Text:** VAMWA believes that Virginia's existing market-based approach to investment decisions in effluent reuse infrastructure, in accordance with applicable state regulations, is the best approach. Under this approach, Virginia localities and authorities determine whether reuse is an appropriated means to meet local needs. This approach allows those closest to consumers to gauge consumer demand, design infrastructure and safeguard costs (treatment and distribution) passed on to those consumers.<br>**Agency Response:** According to the findings of a report on "Expanding Water Reclamation and Reuse in Virginia" (November 2011) prepared by DEQ and VDH for the Governor and General Assembly, "A variety of factors, including environmental, economic and societal, should be considered when determining the most appropriate alternative(s) to implement for water conservation and the reduction of nutrient pollution in surface waters of the Commonwealth. Based on these factors, water reclamation and reuse may or may not be the best alternative." Consistent with these findings, localities have the choice to implement water reclamation and reuse voluntarily in Virginia. There are no proposed amendments to the regulation that change the voluntary nature of water reclamation and reuse in the Commonwealth. |
| **3.** | **Subject:** Specific VAMWA comments regarding amendment no. 1 in the Notice of Proposed Regulation<br>**Commenter:** Robert C. Steidel, President, Virginia Association of Municipal Wastewater Agencies (VAMWA)<br>**Text:** 1. DEQ's Proposal: Add provisions to allow design or operational deviations for facilities still capable of producing or distributing reclaimed water in a manner protective of the environment and public health.<br><br>VAMWA supports the flexibility of the proposed amendments to the Regulation found at 9VAC25-740-55, which add a new variance from design, construction, operation and maintenance requirements for projects still capable of producing or distributing reclaimed water in a manner protective of the environment and public health. VAMWA agrees with DEQ that the variance process should make the Regulation less prescriptive and more adaptive; provided, however, that it is implemented and enforced by DEQ consistent with the spirit in which the amendment appears to have been advanced (*i.e.*, to provide flexibility).<br><br>VAMWA recommends that 9VAC25-740-55 D. be revised as follows in order to clearly set forth the policy of promotion and encouragement of water reuse as a factor to be considered by the Board when reviewing a request for a variance:<br><br>*D. The board shall act on any application for a variance submitted pursuant to this section within 60 days of application receipt. The board shall, in considering whether to grant or deny a variance for a project to produce, distribute, or reuse reclaimed water, <u>balance the protection of public health and the environment and the promotion of cost-effective water reuse or reclamation alternatives,</u> taking into consideration, at a minimum, the following:*<br>**Agency Response:** As stated in a report entitled "Expanding Water Reclamation and Reuse in Virginia" (November 2011) prepared by DEQ and VDH for the Governor and General Assembly, "Regulations must be balanced between protecting public health and the environment, and providing options to implement cost effective alternatives." DEQ believes that the regulation and proposed amendments provide this balance. When applying a market-based approach at the project level, however, it is the responsibility of |

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| | the applicant or permittee to determine what water reclamation and reuse alternative will be the most cost effective for their particular situation, while still capable of protecting public health and the environment. There are no additional changes to the amended regulation in response to this comment. |
| **4.** | **Subject:** Majority of amendments will not promote and encourage reclamation and reuse of wastewater<br>**Commenter:** James J. Pletl, Director of Water Quality, Hampton Roads Sanitation District<br>**Text:** The proposed amendments will encourage and promote water reclamation in a few specific areas. Emergency use without a permit is necessary, a wider variety of disinfection options with UV is needed, and clarification to the regulations concerning various reuse systems is helpful. The DEQ introduces these amendments for public comment with the following sentence: *"amendments to the Water Reclamation and Reuse Regulation (9 VAC 25-740-10 et seq.) are needed primarily to address issues that would improve the Board's ability to effectively promote and encourage the reclamation and reuse of wastewater in a manner protective of the environment and public health."* Although the proposed changes will make implementation of the regulations easier for DEQ, the majority of these amendments only add more requirements that the public must meet and therefore will not promote and encourage reclamation and reuse of wastewater.<br>**Agency Response:** Proposed amendments to the regulation will not in all cases make the water reclamation and reuse program easier for DEQ to implement and may, in some ways, increase the resources needed by the agency for the program. Proposed amendments to the regulation will provide greater benefits to applicants, permittees, the public and the environment by: 1) making the regulation more flexible and, in some cases, less restrictive, for applicants and permittees, 2) making the application process more certain and predictable for more complex water reclamation and reuse projects, 3) formalizing existing procedures already in practice, 4) making the regulation more protective of public health, the environment and beneficial uses of surface waters, and 5) clarifying and/or simplifying language in the regulation to make it more understandable and implementable by applicants and permittees. Therefore, DEQ maintains that the proposed amendments to the regulation will do more to promote and encourage the reclamation and reuse of wastewater in a manner protective of the environment and public health.<br>There are no additional changes to the amended regulation in response to this comment. |
| **5.** | **Subject:** Proposed amendments will not promote water reuse projects<br>**Commenter:** Robert C. Steidel, President, Virginia Association of Municipal Wastewater Agencies (VAMWA)<br>**Text:** With direct ground water recharge off the table, issues related to regulatory oversight received the most priority points overall from the Stakeholder Committee. See the Reuse Report at 2. DEQ also noted that the purpose of the amendments to the Regulation is to make sure they are "balanced between protecting health and the environment, and providing options to implement cost effective [reuse/reclamation] alternatives." See Reuse Report at 3. VAMWA believes that the amendments to the Regulation do not achieve the intended balance, primarily because the amendments either add additional requirements or revise existing requirements in a manner that may make a reuse project appear unduly onerous to the regulated community, thereby discouraging pursuit of a reuse project.<br><br>A possible reason the amendments to the Regulation to not provide more incentives for reuse is that some of the options require statutory, rather than regulatory, changes. The following require legislative action:<br><br>• Providing tax incentives and tax credits for end users in order to create reuse water demand;<br>• Providing subsidies for agricultural irrigation reuse of reclaimed water;<br>• Establishing priority areas to encourage water reuse pending completion of the State Water Resources Plan;<br>• Subsidizing operation and maintenance costs of water reclamation and reuse projects; and<br>• Ensuring continued availability of grant funds for the Water Quality Improvement Fund.<br><br>See Reuse Report at 3.<br><br>VAMWA believes that the degree to which the proposed amendments to the Regulation will promote and encourage reuse is overstated. Instead, VAMWA believes that it is more accurate to state that most, if not all, of the twenty-five (25) additions or revisions to the Regulation (key items discussed in turn below) contribute more the regulator's ability to administer the Regulation, and less to the promotion and encouragement of reuse projects by the facility owners that consider whether to undertake a reuse project. Admittedly, this result is consistent with the purpose of the amendments to the Regulation set forth in the NOIRA; however, it does not account for the expanded charge to DEQ and VDH in convening |

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| | the Stakeholder Committee. VAMWA has consistently expressed this concern. See the VAMWA Stakeholder Committee Response Letters.<br>**Agency Response:** The DEQ and VDH report on "Expanding Water Reclamation and Reuse in Virginia" (November 2011) referenced in the above comments, states that "Regulations must be balanced between protecting public health and the environment, and providing options to implement cost effective alternatives. The current regulatory process to amend the Water Reclamation and Reuse Regulation is aimed at achieving this goal ..." The primary purpose of amending the regulation as stated in the Proposed Regulation - Agency Background Document (Form TH-03, 7/14/11), is "to address issues that would improve the Board's ability to effectively promote and encourage the reclamation and reuse of wastewater in a manner protective of the environment and public health." This purpose encompasses but is not limited to the goal of balancing the protection of public health and the environment with options to implement cost effective alternatives. Amendments to the regulation provide options to implement cost effective alternatives, as well as other means to promote and encourage water reclamation and reuse in manner protective of the environment and public health. One amendment to the regulation that will provide more options to implement cost effective alternatives is the addition of a variance provision that will allow exceptions to design, construction, operation and maintenance requirements under specific conditions. Other amendments, such as requirements to monitor reclaimed water in certain system storage facilities and reclaimed water distribution systems, will encourage water reuse by ensuring the safety of reclaimed water, thereby increasing consumer confidence in and improving public perception of water reclamation and reuse.<br>Items requiring statutory changes to further incentivize water reclamation and reuse were included in the report on "Expanding Water Reclamation and Reuse in Virginia" presented to the Governor and the General Assembly in November 2011. These statutory changes are beyond the scope and authority of the process to amend the regulation.<br>DEQ acknowledges that many of the proposed amendments to the regulation will improve the ability of the agency to implement the regulation and administer the Water Reclamation and Reuse Program. However, the proposed amendments will additionally provide greater benefits to applicants, permittees, the public and the environment by: 1) making the regulation more flexible and, in some cases, less restrictive, for applicants and permittees, 2) making the application process more certain and predictable for more complex water reclamation and reuse projects, 3) formalizing existing procedures already in practice, 4) making the regulation more protective of public health, the environment and beneficial uses of surface waters, and 5) clarifying and/or simplifying language in the regulation to make it more understandable and implementable by applicants and permittees. Therefore, DEQ maintains that the proposed amendments to the regulation will do more to promote and encourage the reclamation and reuse of wastewater in a manner protective of the environment and public health.<br>There are no additional changes to the amended regulation in response to this comment. |
| **6.** | **Subject:** Comparison with Florida Water Reuse Rules<br>**Commenter:** Mr. Peter Mansfield<br>**Text:** Please simply send the 28 amendments back to DEQ and ask for a duplication of the Florida regulation.<br>**Agency Response:** The Florida Water Reuse Rule (Rule) (Chapter 62-610 Reuse of Reclaimed Water and Land Application) was among several states' rules or regulations that DEQ examined when initially developing Virginia's Water Reclamation and Reuse Regulation (Regulation). Several requirements similar to those in Florida's Rule were included in Virginia's Regulation. However, not all technical requirements for water reuse in Florida's Rule were appropriate for the Commonwealth due to Florida's greater dependence on groundwater for public water supply. Also, many items covered by Florida's Rule apply to land treatment of sewage, which in Virginia is addressed in a separate set of regulations, specifically the Sewage Collection and Treatment Regulations (9VAC25-790). Therefore, requirements of the Water Reclamation and Reuse Regulation and the Sewage Collection and Treatment Regulations are comparable in many cases to requirements of the Florida Water Reuse Rule.<br>There are no additional changes to the amended regulation in response to this comment. |
| **7.** | **Subject:** Florida model and consideration of gray water use for industrial users<br>**Commenter:** Mr. Peter Mansfield<br>**Text:** Virginia might follow the Florida model or consider other uses such as gray water for industrial users.<br>**Agency Response:** See response to comment 6 regarding the suggestion that Virginia follow the Florida model. DEQ does not regulate the reclamation and reuse of gray water. The Virginia Department of Health provides guidelines for gray water reuse and the Department of Housing and Community Development is currently developing plumbing codes for non-potable water systems, including systems for gray water.<br>There are no additional changes to the amended regulation in response to these comments. |

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| **8.** | **Subject:** Barriers that reduce the effectiveness of irrigation reuse to meet TMDLs<br>**Commenter:** Mr. Peter Mansfield<br>**Text:** Two Virginia Codes assure that Virginia will never have a productive, cost effective reuse water program that could be our most effective tool to meet the federally mandated nutrient diet (TMDL). They are:<br>1. All irrigation with reclaimed water must be only "supplemental irrigation" per Virginia Code 9VAC25-740-100.C.2. Supplemental irrigation is defined as irrigation, which in combination with rainfall, meets but does not exceed the water necessary to maximize production or optimize growth of the irrigated vegetation.<br>2. Virginia Code 9VAC25-740-10 permits the distribution of irrigation reuse water at the above supplemental rates, only during the active growing season for the designated vegetation.<br>**Agency Response:** Other land-based, non-discharging alternatives in addition to water reclamation and reuse are available to reduce or eliminate point source discharges of treated wastewater to surface waters in Virginia. One such alternative is land treatment as described in the Sewage Collection and Treatment Regulations (9VAC25-790-880). Land treatment of partially treated wastewater differs from irrigation reuse of reclaimed water in that land treatment provides, by design, further treatment and disposal of wastewater, while irrigation reuse is not intended to provide any additional treatment of reclaimed water applied to a site and is a method of resource utilization rather than disposal. Consequently, land treatment will frequently allow the application of partially treated wastewater and nutrients at higher rates and within smaller areas than irrigation reuse of reclaimed water. Higher rates of wastewater application increase the potential for contaminants to move below the zone of land treatment and into groundwater. Therefore, groundwater monitoring will typically be required for land treatment sites.<br>These land-based, non-discharging alternatives provide utility's additional options to manage their wastewater based on their needs and available resources, and in a manner protective of the environment and public health.<br>There are no additional changes to the amended regulation in response to this comment. |
| **9.** | **Subject:** Application rates for irrigation reuse of reclaimed water<br>**Commenter:** Mr. Peter Mansfield<br>**Text:** Why is it important that DEQ determine the amount of irrigation water and when to apply it to specific vegetation? If too much water is applied it simply soaks into the ground and eventually helps to recharge the aquifer. DEQ's concern about nutrient entering the aquifers can be answered by studying the absorption graphs published by the Water Environment Research Foundation entitled Review of Quantitative Tools to Determine Wastewater Soil Treatment Unit Performance. Anyway, the 10 mg/l of N2 is acceptable to EPA and drops about 25% during the spray application. Nature does not have the same concern as DEQ regarding "active growing season". In nature, nutrients are broadcast on the ground in the form of decaying leaves etc. preliminarily during the non-growing season.<br>**Agency Response:** Whether diverting a surface water discharge of treated wastewater to irrigation reuse or land treatment, over application of the water, including nutrients that it contains, may exceed the need and ability of the irrigated vegetation to remove the nutrients (e.g., nitrate, phosphorus, etc.). This increases the probability of nutrient losses to ground water. Nitrates in ground water that may result from over application of treated wastewater or reclaimed water to sites, is a public health concern, particularly where the ground water will be used for potable water supply. In addition, ground water is often hydrologically connected to surface waters in Virginia. Through this connection, nutrients in ground water may be indirectly discharged to surface waters, thereby defeating the purpose of land-based, non-discharging alternatives.<br>There are no additional changes to the amended regulation in response to this comment. |
| **10.** | **Subject:** Tracking unintended reuse in surface waters<br>**Commenter:** Mr. Peter Mansfield<br>**Text:** [DEQ] indicates that wastewater is in some cases a necessary component of municipal's water sources and therefore not available for irrigation purposes, explaining, "Some localities depend on the dumping of treated wastewater up stream to provide water for their municipal water supplies." But [DEQ] does not know what cites or even what rivers and to what degree their water levels are affected.<br>**Agency Response:** Greater than 90 percent of Virginia's public water supply comes from surface waters (Status of Virginia's Water Resources: A Report on Virginia's Water Resources Management Activities, DEQ 2012). Consequently, there is a high probability that wastewater treatment facilities with discharges to surface waters are contributing unintentionally or in an unplanned manner to the supply for a large number of downstream surface water withdrawals. The degree to which this unintentional reuse occurs will vary from case to case based on a variety of factors that would need to be evaluated (e.g., seasonal fluctuations in flow, travel distance between the discharge and withdrawal, etc.). DEQ has not compiled the data on unintentional reuse for all wastewater treatment facilities with surface water discharges across the Commonwealth. |

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| | Proposed amendments to the regulation include provisions that would allow DEQ to perform an analysis of impacts to beneficial uses of receiving streams related to new or expanding water reclamation and reuse projects. This analysis will be performed for only discharging wastewater treatment facilities with an associated water reclamation and reuse project, and will capture unintentional reuse where it occurs as a beneficial use of the receiving stream. With the implementation of proposed amendments to the regulation, more data regarding unintentional reuse will become available with most new and expanding water reclamation and reuse projects.<br>There are no additional changes to the amended regulation in response to this comment. |
| **11.** | **Subject:** Cost savings estimates to divert a wastewater treatment plant discharge to land application<br>**Commenter:** Mr. Peter Mansfield<br>**Text:** The following detailed cost/savings estimates are considered possible if we simply converted **one** 11 million gallon per day waste treatment plant to produce reuse water. Also included is a snapshot of the most egregious impediments that DEQ has placed on Virginia's reuse program with their current and proposed regulations. - First the advantages:<br>1. Eliminate 500,000 pounds per year of nutrients from our Bay waters - a cost avoidance (savings) of $75,000,000 based on HRSD's estimate of $225,000,000 to remove 1,500,000 pounds per year by upgrading our existing waste treatment plants.<br>2. Generate 4 billion gallons per year of nutrient rich irrigation water equal to 750 tons of 30% nitrogen fertilizer for our agricultural community with an economic value ranging from $4 to $20 million. The 4 billion gallons is simply the product of 11,000,000 gallons per day (plant output) times 365 days. And the revenue generated from the sale of reuse water is the above 4 billion gal/yr times a revenue of $1.00 to $5.00 per 1000 gallons.<br>3. Return about 3 billion gallons of water per year to our aquifers. This number is simply a guess with the assumption that 25% will be lost to crop absorbent and evaporation. The writer does not know the value of replenishing our failing aquifers, but it is obviously huge and was the original reason the example Florida plant embarked on their reuse program, that is, they were NOT faced with a mandate to remove nutrients from their surface waters as we are - their problem was simply failing aquifers. With the proper application of reuse water forty nine percent of the nutrients in the James River could be eliminated and our aquifers replenished.<br>There are, two major costs to implement the system, the first is the conversion costs for the plant, which includes a final chlorination or ultraviolet treatment of the water before sending it to one of two new holding basins. But these two costs (the chlorination and holding basins) approximately equal the savings from a possible increase in plant throughput as the nitrogen content is allowed to rise from 5-7 milligrams per liter (mg/l) to 10 mg/l. (As an example - Manatee County, Florida, increased their throughput from 8 million gallons per day to 11.) Based on a current cost for new construction of a large waste treatment plant of about $20 per capacity gallon this savings could be as much as $60 million; certainly enough to pay for the above plant conversion to produce reuse water.<br>The distribution infrastructure cost is more nebulous and will vary greatly depending on the end use of the reuse water. Manatee County started by simply giving away all their wastewater to a nearby large farm. And then began to build the distribution network only as they deemed profitable. Now, several years later, they are selling all the reuse water they can produce at an average selling price of about $3.00 per 1000 gallons.<br>**Agency Response:** DEQ acknowledges that irrigation reuse of reclaimed water, as well as land treatment, can provide: 1) an alternative to nutrient reduction technology for wastewater treatment facilities, 2) nutrients for crop production, and 3) some groundwater recharge and replenishment. The economic value, amount of nutrients, and degree of groundwater recharge will vary widely depending on the nature of the wastewater and individual system characteristics.<br>There are no additional changes to the amended regulation in response to this comment. |
| **12.** | **Subject:** Specific VAMWA comments regarding amendment nos. 7 and 15 in the Notice of Proposed Regulation<br>**Commenter:** Robert C. Steidel, President, Virginia Association of Municipal Wastewater Agencies (VAMWA)<br>**Text:**<br>7. DEQ's Proposal: Modify language to clarify service agreement or contract requirements for end users of reclaimed water, and alternative permitting options for reclaimed water distribution systems.<br><br>VAMWA is concerned that the requirements regarding service agreements and contracts creates a potential barrier to the promotion and encouragement of reuse. VAMWA recommends that reuse end users complete an application that references and reaffirms required compliance with applicable state and federal law and any reuse purveyor requirements. VAMWA is also concerned that too much additional monitoring and inspection requirements imposed on end users will add costs and, therefore, discourage |

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| | them from becoming reuse customers. This concern is related to the discussion of points of compliance below.<br><br>15. DEQ's Proposal: Add a provision that allows reclaimed water agents to inspect end users' reuses and storage facilities as part of the service agreement or contract between the reclaimed water agent and an end user.<br><br>VAMWA is concerned that this provision may expose those permit holders to additional enforcement liability and responsibility. As DEQ states in the NOPR, "This change may also provide some administrative relief to DEQ as it may be able to direct some of its resources to other areas as needed." VAMWA understands this to mean that permittees will assume both quasi-regulatory responsibility (cost) and retain exposure to enforcement from DEQ (liability). Such an arrangement seems unworkable and overly burdensome to the permittees undertaking a reuse project for the public benefit.<br>**Agency Response:** Language in 9VAC25-740-40.C was revised to clarify and be consistent with current requirements for service agreements or contracts between reclaimed water agents and end users contained in 9VAC25-740-100.C.1.d. In those cases where the end user and reclaimed water agent will be one in the same, a service agreement or contract will not be required. The technical advisory committee that assisted DEQ with development of the Water Reclamation and Reuse Regulation recommended service agreements or contracts much like those between other public utilities and the customers that they service in lieu of DEQ issuing a permit to every end user of reclaimed water. The service agreement or contract reasonably transfers some requirements of the permit issued to the reclaimed water agent to end users where applicable to the reuse(s), and provides a means to terminate service to non-compliant end users. To date, requirements for service agreements or contracts have not been a barrier to promoting and encouraging water reclamation and reuse.<br>Proposed amendments to the regulation under 9VAC25-740-100.C.1d will provide reclaimed water agents (or providers of reclaimed water) the right to perform routine or periodic inspections of their end users' reclaimed water reuses and storage facilities as a provision of the service agreement or contract between the reclaimed water agent and end user. The proposed amendments do not mandate inspections, nor do they specify the frequency and other details regarding such inspections. Therefore, the cost of inspections will vary according to whatever frequency and level of scrutiny the reclaimed water agent chooses to exercise. End users will not have monitoring or inspection requirements unless they are also a reclaimed water agent permitted by DEQ to provide reclaimed water to end users other than themselves. DEQ issues a permit to reclaimed water agents for the distribution of reclaimed water, but does not issue permits to end users except in rare cases. Therefore, the reclaimed water agent is ultimately responsible for the proper reuse of reclaimed water by end users within their service area. Service agreements or contracts between reclaimed water agents and end users clarify and affirm the responsibilities of the two parties to properly manage and reuse reclaimed water. Through the terms of the service agreement or contract, a reclaimed water agent maintains the right to terminate service to a non-compliant end user. In essence, the reclaimed water agent is operating like many other utilities that provide services to customers. Inspections performed by the reclaimed water agent would provide a valuable tool to verify that end users are complying with service agreements or contracts in order to avoid violations of the permit issued to the reclaimed water agent. Proposed amendments that will provide reclaimed water agents the right to perform inspections of their end users' reclaimed water reuses and storage facilities will not add any new liabilities for reclaimed water agents, but will give them an option to perform inspections as they deem necessary to reduce the incidence of permit violations. Inspections by reclaimed water agents may also have direct and indirect economic benefits where, for example, an inspection identifies a leak and significant loss of a reclaimed water that an end user is paying for, or where public knowledge of inspections by the reclaimed water agent increase consumer confidence and promote water reclamation and reuse.<br>There are no additional changes to the amended regulation in response to these comments. |
| **13.** | **Subject:** Specific VAMWA comments regarding amendment no. 10 in the Notice of Proposed Regulation<br>**Commenter:** Robert C. Steidel, President, Virginia Association of Municipal Wastewater Agencies (VAMWA)<br>**Text:** 10. DEQ's Proposal: Modify the point of compliance (POC) for reclaimed water standards to include POCs for certain system storage facilities and reclaimed water distribution systems, in addition to POCs required for reclamation systems and satellite reclamation systems.<br><br>Even though POCs are proposed to be evaluated by the Board on a case-by-case basis (rather than mandated in all cases), VAMWA is concerned that the addition of POCs will add to the monitoring costs and enforcement liability exposure of reuse purveyors. VAMWA recommends that factors be included to guide the Board's case-by-case evaluations, rather than leaving the determination entirely to the Board's |

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| | discretion.<br><br>VAMWA also believes that the Industrial Pretreatment Program may provide a useful counterpoint for consideration in this context, as well as a model for a reuse program. Under the Industrial Pretreatment Program, protection of public health and the environment is achieved by regulating the non-domestic/industrial users of a publicly owned treatment works (POTW), rather than establishing multiple POCs at which the POTWs' compliance is measured. Industrial users must comply with the prohibitive, general, applicable categorical standards, and local limits developed by the POTW. The relationship between a POTW and reuse water users is analogous to the relationship between a POTW and its industrial users. As with an industrial pretreatment program, a POTW (or locality) could adopt an appropriate reuse ordinance and program, allocating compliance responsibility to end reuse water users, rather than establishing POCs throughout a reuse transmission and distribution system. This would also be similar to the requirements for drinking water purveyors.<br>**Agency Response:** DEQ's authorities and activities are regulated by statute and DEQ does not, in most cases, regulate itself within the regulations that it develops. Therefore, guidelines for DEQ's case-by-case evaluation of either reclaimed water system storage or distribution systems for conditions warranting additional points of compliance (POCs) and monitoring, will be provided in agency guidance.<br>Under 9VAC25-740-110.B.9 of the existing regulation, all reclaimed water distribution systems must be maintained to minimize losses and to ensure safe and reliable conveyance of reclaimed water such that the reclaimed water will not be degraded below the standards required for the intended reuse(s) in accordance with 9VAC25-740-90. Proposed amendments to the regulation that may require additional POCs and monitoring for certain systems storage facilities and reclaimed water distribution systems, will not add any additional liability for reclamation systems or reclaimed water agents already contained in the existing regulation. These POCs and associated monitoring would be limited to storage facilities and distribution systems under the direct control of the reclamation system or reclaimed water agent.<br>Reclaimed water nonsystem storage and distribution systems that are under the direct control of an end user may be monitored by the reclaimed water agent through the terms of the service agreement or contract between the agent and end user per existing requirements of the regulation. Such monitoring may include POCs if determined necessary by the reclaimed water agent to verify that the reclaimed water quality is maintained for the intended reuse(s).<br>Monitoring at additional POCs and associated costs for certain systems storage facilities and reclaimed water distribution systems may be reduced or avoided where conditions that degrade the quality of the reclaimed water below the standards required for the intended reuses of that water are eliminated, monitoring results indicate that the reclaimed water meets the required standards, or both.<br>Due to a wide range of varying factors that can affect the quality of reclaimed water conveyed by reclaimed water distribution systems, flexibility when determining appropriate monitoring requirements for these systems is necessary in lieu of additional, prescriptive specifications. Therefore, guidelines for DEQ's case-by-case evaluation of either reclaimed water system storage or distribution systems for conditions warranting additional points of compliance (POCs) and monitoring will be provided in agency guidance.<br>DEQ understands and appreciates the value of the Industrial Pretreatment Program to reduce or eliminate the discharge of contaminants from Industrial facilities to POTWs that may disrupt or pass through the treatment processes of the facility, resulting in non-compliant discharges from the POTW to surface waters. However, reclaimed water end users are not analogous to industrial users of a POTW in that end users are customers and are **not** responsible for the treatment and quality control or assurance of reclaimed water to ensure that it complies with applicable reclaimed water standards prior to their receipt of that water. Per the regulation, this is the responsibility of the water reclamation system (generator of reclaimed water) or reclaimed water agent. This is similar to the Waterworks Regulations, which confer all responsibility for drinking water quality onto the waterworks (the generator and provider of the drinking water).<br>There are no additional changes to the amended regulation in response to these comments. |
| **14.** | **Subject:** Specific VAMWA comments regarding amendment no. 11 in the Notice of Proposed Regulation<br>**Commenter:** Robert C. Steidel, President, Virginia Association of Municipal Wastewater Agencies (VAMWA)<br>**Text:** 11. DEQ's Proposal: Add reclaimed water monitoring requirements for certain system storage facilities and reclaimed water distribution systems where determined necessary by the board.<br><br>VAMWA does not object to the addition of these requirements, subject to the same general comment expressed above.<br>**Agency Response:** See response to comment 13. There are no additional changes to the amended regulation in response to this comment. |

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| **15.** | **Subject:** Emergency authorization for the production, distribution or reuse of reclaimed water<br>**Commenter:** Andrea Wortzel on behalf of Mission $H_2O$<br>**Text:** The proposed regulations include provisions relating to emergency reuse. *See* proposed 9VAC25-740-45. This section requires that coverage under a VPDES or VPA permit must be sought for such emergency authorizations within 180 days. This time period is excessive. The emergency provisions in the Virginia Water Protection regulations require that a permit application be filed within 14 days of the emergency authorization. 9VAC25-210-80.D.2. The time period for applying for permit coverage for emergency reuse projects should be consistent with that for emergency withdrawals.<br>**Agency Response:** § 62.1-44.15.22.C of the Code of Virginia requires that a permit application for a Virginia Water Protection Permit be filed within 14 days of the issuance of an Emergency Water Protection Permit, and provides the basis for the same requirement under 9VAC25-210-80.D.2 of the Virginia Water Protection Permit Regulation. A similar requirement does not exist in the Code of Virginia related to an emergency authorization for the production, distribution and reuse of reclaimed water. However, submission of an application for permanent coverage of a water reclamation and reuse project under either an existing VPDES or VPA permit within 180 days of the emergency authorization issuance is consistent with another application submission requirement of the Water Reclamation and Reuse Regulation. Per 9VAC25-740-430.A, "The owners of existing water reclamation systems, reclaimed water distribution systems and, as applicable, water reuses that do not have a VPA or VPDES permit shall submit a complete VPA or VPDES permit application or other necessary information as prescribed under 9VAC25-740-40 within 180 days of being requested by the board." In a broader effort to promote and encourage water reclamation and reuse, DEQ also believes that an application submittal period of 180 days will provide the time necessary for applicants to develop more diversified, comprehensive and viable water reclamation and reuse projects beyond the very limited scope of activities that can be covered by an emergency authorization.<br>There are no additional changes to the amended regulation in response to this comment. |
| **16.** | **Subject:** Consumptive use impacts<br>**Commenter:** Charles M. Murray, General Manager, Fairfax County Water Authority<br>**Text:** Consumptive reuse projects authorized under Virginia's Water Reclamation and Reuse Regulation have the potential to adversely impact Fairfax Water and our utility partners' water supply resources unless mitigation is required. If consumptive reuse is widely implemented without appropriate mitigation, downstream beneficial uses will not be protected from resulting reductions in stream flow.<br>**Agency Response:** Proposed amendments to the regulation under 9VAC25-740-50 and 9VAC25-740-100 are intended to avoid significant adverse impacts to beneficial uses of a receiving state water that may result from the diversion of VPDES permitted discharge to water reclamation and reuse. This will involve an analysis of impacts on the hydrologic regime by DEQ, similar to that required for a surface water withdrawal authorized by a VWP permit (9VAC25-210). Where DEQ's analysis of impacts for a new or expanding water reclamation and reuse project identifies significant adverse impacts to beneficial uses of the receiving water, the project may be denied authorization or limited by special conditions of the permit or administrative authorization to avoid such impacts.<br>There are no additional changes to the amended regulation in response to this comment. |
| **17.** | **Subject:** Consumptive use impacts<br>**Commenter:** Andrea Wortzel on behalf of Mission $H_2O$<br>**Text:** [The] proposed amendments to the Water Reuse and Reclamation Regulation prohibit the reduction of a discharge from a treatment works for reuse that has a significant adverse impact to beneficial uses. *See* Proposed Amendments to 9VAC25-740-50 (Exclusions and Prohibitions). The term "significant" has not been defined, nor do the proposed amendments identify how a determination of adverse impact will be made. Mission $H_2O$ expects that DEQ will issue guidance on this subject, and looks forward to working with DEQ as this concept is more fully developed.<br>**Agency Response:** DEQ will develop guidance regarding the analysis of impacts to beneficial uses of a receiving water resulting from a new or increased diversion of a discharge from a treatment works related to a proposed water reclamation and reuse project. That guidance will address the technical basis for determining significance of impacts.<br>There are no additional changes to the amended regulation in response to this comment. |
| **18.** | **Subject:** Consumptive use impacts<br>**Commenter:** Charles M. Murray, General Manager, Fairfax County Water Authority<br>**Text:**<br>A. The proposed amendments to 9VAC25-740-50 (Exclusions and Prohibitions) to include the prohibition of the reduction of discharge from a treatment works for reuse that may cause a significant adverse impact to beneficial uses provides a mechanism by which DEQ can begin to address proposed consumptive use. It is critical that "significant" be clearly defined.<br>B. The downstream impact must be comprehensively evaluated and performed in consultation with |

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| | downstream water suppliers. Fairfax Water has developed the enclosed booklet, *Evaluating Water Reclamation and Reuse Projects*, which includes a decision matrix that can be used to support such evaluation. We request that DEQ strongly consider using Figure 1, *Considerations When Evaluating the Impact of Proposed Water Reuse Projects*, in evaluating the Prohibition issue.<br>C. To further minimize the impact of this issue on downstream water supplies, DEQ needs to include the following in 9VAC25-740-40 (Permitting Requirements): *The owner of the reclaimed water distribution system shall require that each end user's service agreement or contract require the elimination or reduction of consumptive use to less than 0.5 MGD during drought periods.*<br>**Agency Response:** DEQ will develop guidance regarding the analysis of impacts to beneficial uses of a receiving water resulting from a new or increased diversion of a discharge from a treatment works to a proposed water reclamation and reuse project. That guidance will address the technical basis for determining significance of impacts. DEQ will consider the information contained in the comments as guidance is developed.<br>There are no additional changes to the amended regulation in response to this comment. |
| **19.** | **Subject:** Downstream notification<br>**Commenter:** Charles M. Murray, General Manager, Fairfax County Water Authority<br>**Text:** The proposed amendments need to include a requirement that notice be provided of any application for water reclamation and reuse provided to any water supplier that withdraws water downstream from the point of the proposed water reclamation and reuse project. We respectfully request that DEQ add the following subsection (E.) to 9VAC25-740-100 (Application for a Permit):<br>*E. The applicant must provide notification in a newspaper of general circulation for 14 days and provide notice to downstream VWP permit holders and downstream local or regional entities conducting water supply planning pursuant to 9VAC25-780 et seq.*<br>**Agency Response:**<br>In response to this comment, language in 9VAC25-740-30.B.2 has been enhanced to clarify that a VPDES permit modification will be required where diversion of source water from the VPDES permitted discharge to water reclamation and reuse has the potential to cause a significant adverse impact to other beneficial uses of the receiving state water for the discharge. Conditions to avoid significant adverse impacts will be included in the draft VPDES permit modification that must be advertised for public comment. DEQ will also work informally with applicants to consider changes to the application that may reduce potentially significant adverse impacts of a water reclamation and reuse project, thereby eliminating the need for a VPDES permit modification.<br>Although the statute directs DEQ to provide public notice of permit applications for a limited number of regulated activities, this does not apply to permit applications for water reclamation and reuse. However, DEQ will develop guidance that will allow early public involvement for proposed water reclamation and reuse projects; particularly where a project has the potential to cause significant adverse impacts to beneficial uses of the receiving state water. |
| **20.** | **Subject:** Emergency authorization<br>**Commenter:** Charles M. Murray, General Manager, Fairfax County Water Authority<br>**Text:** We are very concerned that the proposed amendment [Emergency authorization (9VAC25-740-45)] allows for emergency authorization for the production, distribution or reuse of reclaimed water during a period of drought. Emergency use of reclaimed water is not an appropriate substitute for adequate water supply planning. We urge DEQ to remove 9VAC25-740-45 in its entirety from this amendment. This section of the proposed amendment will increase the number of unpermitted water users during periods of drought. During these periods, the unpermitted diversion of water has the potential to significantly decrease both the water availability for downstream water supplies and the reliability of flow and stream monitoring gages.<br>**Agency Response:** This amendment further qualifies circumstances under which the emergency authorization may be issued as those where "due to drought, there is insufficient public water supply that may result in a substantial threat to public safety." This considerably limits the circumstances under which an emergency authorization for the production, distribution or reuse of reclaimed water would be issued by DEQ.<br>Also, proposed procedures to approve an emergency authorization for the production, distribution or reuse of reclaimed water in the amended regulation are similar to those required to issue an Emergency VWP permit for new or increased public water supply withdrawals.<br>Lastly, an analysis of impacts to the hydrologic regime will be required to assess significant adverse impacts to beneficial uses of a receiving state water due to the emergency authorization where such an authorization will divert any portion of an existing discharge to water reclamation and reuse. Should the analysis of impacts indicate that activities proposed for emergency authorization may result in significant adverse impacts, the activities may be denied authorization or limited by special conditions of the |

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| | emergency authorization to avoid such impacts. Proposed amendments to the regulation require that a new application for a permit or administrative authorization related to water reclamation and reuse be submitted within 180 days of the emergency authorization issuance. Therefore, an initial analysis of impacts will be conducted for the emergency authorization, followed by a more comprehensive analysis for the permit or administrative authorization. This proposed procedure for the analysis of impacts is similar to what is done for water withdrawals authorized by Emergency VWP Permits.<br>There are no additional changes to the amended regulation in response to these comments. |
| **21.** | **Subject:** Water Supply Plan Advisory Committee report and recommendations regarding water reuse<br>**Commenter:** Andrea Wortzel on behalf of Mission $H_2O$<br>**Text:**<br>A. Mission $H_2O$ also participated on the Water Supply Plan Advisory Committee that recently completed its work. In that Committee's final report, recommendations were made about options for mitigating for consumptive use (and consumptive reuse) projects. Mission $H_2O$ encourages DEQ to continue to identify criteria and options for such mitigation to take place.<br>B. The [Water Supply Plan Advisory] Committee's report also suggests that stormwater reuse and/or rainwater harvesting may provide even greater reuse opportunities. Mission $H_2O$ would welcome the opportunity to partner with DEQ to explore such options. Similarly, Mission $H_2O$ encourages both DEQ and the Health Department to move forward in considering gray water reuse in buildings, and the necessary amendments to the Building and Plumbing Code to enable reuse to occur for nonpotable purposes.<br>**Agency Response:**<br>A. DEQ has not yet determined how it will address the recommendation of the Water Supply Plan Advisory Committee. Such a recommendation is of a policy magnitude that would require legislative action. Legislative actions in the Executive Branch are determined by the Governor.<br>B. DEQ is involved with the development of guidelines and regulations by other state agencies with lead authority for the reclamation and reuse of non-potable waters other than municipal or industrial wastewaters. DEQ actively participated on the advisory committee that assisted the Virginia Department of Health with development of the "Virginia Rainwater Harvesting & Use Guidelines" completed on March 31, 2011. More recently, DEQ has participated on a work group organized by the Department of Housing and Community Development to develop proposed amendments to the Plumbing Chapters of the Virginia Statewide Building Code for non-potable water systems. These amendments will apply to systems of harvested rainwater, gray water, and reclaimed water. Per § 10.1-603.4 of the Code of Virginia, the Department of Conservation and Recreation has the authority to develop regulations for the reclamation and reuse of stormwater, a process that would include DEQ's participation.<br>There are no additional changes to the amended regulation in response to these comments. |
| **22.** | **Subject:** Specific VAMWA comments regarding amendment no. 20 in the Notice of Proposed Regulation<br>**Commenter:** Robert C. Steidel, President, Virginia Association of Municipal Wastewater Agencies (VAMWA)<br>**Text:** 20. DEQ's Proposal: Revise an existing prohibition that will allow the reuse of reclaimed water inside residential buildings and structures that are other than one or two family dwellings.<br><br>VAMWA notes that, although revising a prohibition may remove a barrier to reuse, it does not automatically expand or encourage reuse, especially without corresponding changes to other regulations, particularly those related to the use of gray water. In the absence of an affirmative statement regarding reuse in residences and other structures, whether in statute, regulation or guidance, combined with meaningful examination and revisions to other related laws, including the Virginia Uniform Statewide Building Code, reuse will continue to languish. The approaches of other states would be instructive in this area, and VAMWA has advocated (and continues to support) a more expansive review of other states' reuse practices. See the VAMWA Stakeholder Committee Response Letters.<br>**Agency Response:** Although DEQ does not regulate the reclamation and reuse of gray water, storm water or harvested rainwater, DEQ has worked closely with other state agencies having statutory authority to develop either guidelines or regulations for the reclamation and reuse of these water sources. Throughout 2012 to the present, DEQ has served on a work group organized by the Department of Housing and Community Development (DHCD) to develop a new chapter in the plumbing section of the Virginia Statewide Building Code (Code) on non-potable water systems, including systems for gray water, harvested rainwater, and reclaimed water, inside buildings and structures. DEQ is now working to revise and update a memorandum of agreement with DHCD to address issues of regulatory jurisdiction between the Code and the Sewage Collection and Treatment Regulations (9VAC25-790) and the Water Reclamation and Reuse Regulation (9VAC25-740) related to the new chapter on non-potable water systems. DEQ also assisted VDH with development of the Virginia Rainwater Harvesting & Use |

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| | Guidelines completed in March31, 2011.<br>As part of a larger effort to promote and encourage water reclamation and reuse, DEQ will continue to work with other state agencies to avoid regulatory conflicts and inconsistencies for the reclamation and reuse of all water sources, including municipal and industrial wastewater, harvested rainwater, gray water and storm water.<br>There are no additional changes to the amended regulation in response to this comment. |
| **23.** | **Subject:** Specific VAMWA comments regarding amendment no. 8 in the Notice of Proposed Regulation<br>**Commenter:** Robert C. Steidel, President, Virginia Association of Municipal Wastewater Agencies (VAMWA)<br>**Text:** 8. DEQ's Proposal: Modify activities excluded from the requirements of the regulation related to alternative onsite sewage systems permitted by the Virginia Department of Health, utilization of harvested rainwater and storm water, and indirect nonpotable reuse of reclaimed water.<br>VAMWA does not object to the proposed exclusions; however, a comprehensive, statewide water reuse policy should address these important sources of reuse water.<br>**Agency Response:** DEQ acknowledges that a comprehensive, statewide water reuse policy would help to address the reclamation and reuse of source waters in addition to municipal and industrial wastewater. However, the Code of Virginia gives the authority to develop guidelines and regulations for the reclamation and reuse (or recycle) of other water sources, such as gray water, harvested rainwater and storm water, to other state agencies. While these circumstances limit DEQ's ability to develop a comprehensive, statewide water reuse policy for all water sources that can be reclaimed for reuse where it does not have the authority to regulate such activities, DEQ will continue its current work with other state agencies to promote and encourage the reclamation of all source waters (e.g., municipal and industrial wastewater, gray water, harvested rainwater and storm water) for reuse in a manner protective of the environment and public health.<br>There are no additional changes to the amended regulation in response to this comment. |
| **24.** | **Subject:** Specific VAMWA comments regarding amendment no. 22 in the Notice of Proposed Regulation<br>**Commenter:** Robert C. Steidel, President, Virginia Association of Municipal Wastewater Agencies (VAMWA)<br>**Text:** 22. DEQ's Proposal: Add provisions to prevent unauthorized discharges and to recover flush water or reclaimed water for use or reuse from the maintenance of reclaimed water distribution systems.<br><br>VAMWA objects to the addition of new subsections to 9VAC25-740-140.D.2.d. VAMWA believes that the current language is adequate.<br>**Agency Response:** When developing new requirements under 9VAC25-740-140.D.2.d regarding the management of flush water from reclaimed water distribution system maintenance, DEQ considered the following: 1) flush water may not meet surface water quality standards (e.g., due to high solids, chlorine, etc.) and would not be appropriate to discharge indirectly to surface waters via storm drains or directly to surface waters without a discharge permit issued by DEQ; 2) some localities may prohibit the discharge of flush water to a sanitary sewer through local ordinances where such a discharge has the potential to hydraulically overload a WWTP; and 3) flush water can be reclaimed and reused as an alternative to disposal where reuse of the reclaimed flush water is approved by DEQ. Based on these considerations, DEQ believes that requirements under 9VAC25-740-140.D.2.d are necessary, at a minimum, to clarify appropriate options and procedures for the management of flush water.<br>There are no additional changes to the amended regulation in response to this comment. |
| **25.** | **Subject:** Ground water recharge with reuse water<br>**Commenter:** Robert C. Steidel, President, Virginia Association of Municipal Wastewater Agencies (VAMWA)<br>**Text:** Early in the regulatory process, VAMWA and others identified ground water recharge with reuse water as an issue of significant interest with the potential to greatly incentivize and encourage reuse, especially among wastewater treatment plant owners and operators. See the VAMWA Stakeholder Committee Response Letters. In fact, ground water recharge with reuse water was the single regulatory issue that garnered the most support overall from the Stakeholder Committee [on Expanding Water Reclamation and Reuse in Virginia] at its meeting. See Reuse Report at 3.<br>VAMWA acknowledges the complexity of addressing groundwater recharge with reuse water, including the number of regulations that ground water recharge implicates. However, in VAMWA's view, removal of ground water recharge from the purview of the instant regulatory process significantly diminished the ability of the Stakeholder Committee and the agencies to achieve their charge of examining and recommending opportunities to expand, promote and encourage the reuse of wastewater in the Commonwealth.<br>VAMWA and the members for the RAP [Regulatory Advisory Panel] agreed to table ground water recharged during the RAP, in deference to the regulatory process, to allow the amendments to the |

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| | Regulation to proceed. VAMWA remains keenly interested in the planned future regulatory process to examine the rules related to ground water recharge and looks forward to participating in that process.<br>**Agency Response:** Although ground water recharge with reclaimed water is essentially excluded from the requirements of the Water Reclamation and Reuse Regulation, ground water recharge with treated wastewater is not prohibited in Virginia and may be authorized by either the EPA Underground Injection Control Program or DEQ Water Division depending on the method of ground water recharge. See also response to comment 28 regarding groundwater or aquifer recharge with reclaimed water.<br>There are no additional changes to the amended regulation in response to these comments. |
| **26.** | **Subject:** Groundwater recharge with reclaimed water<br>**Commenter:** Curt Smith, Director of Planning, Accomack-Northampton Planning District Commission<br>**Text:** The Eastern Shore of Virginia Groundwater Committee supports the efforts to enhance the Water Reclamation and Reuse Regulations in order to promote and encourage the beneficial use in a safe and protective manner. Because the freshwater resource on the Eastern Shore of Virginia is restricted to groundwater, the EPA has designated Accomack County and Northampton County a Sole Source Aquifer area. As a consequence, we are very interested in measures that enhance sustainability of our resource including measures that 1) reduce use of the fresh groundwater resource; 2) promote recharge to the groundwater; and 3) prevent saltwater intrusion. To that end, there are a number of processes and technologies falling under water reclamation and reuse that, with proper implementation, can support these goals. These processes and technologies were the subject of the Groundwater Recharge Stakeholder Advisory Group facilitated by VDEQ last year, and include underground injection; on-site sewage systems; stormwater recharge; and aquifer storage and recovery. As discussed by the Advisory Group, many of these have a direct relation to water reclamation and reuse but are not addressed in regulations in a form that promotes or encourages their use. We hope VDEQ, following promulgation of this amendment, will continue to consider avenues to promote and encourage use of these processes in order to support a more sustainable groundwater resource.<br>**Agency Response:** DEQ acknowledges that, depending on the circumstances, water reclamation and reuse may be an alternative to reduce the use of fresh groundwater resources for non-potable uses, and that groundwater recharge may be a valuable option to restore, maintain, and in some cases, protect the water resources of a locality. The EPA Underground Injection Control (UIC) Program may issue a rule authorization or individual permit for recharge of an aquifer with fluids from various sources (e.g., reclaimed water, storm water, etc.) where it will occur through an injection well and will not pose a potential endangerment to an underground source of drinking water. DEQ has not sought delegation of the UIC program from EPA in Virginia. Consequently, direct aquifer recharge is excluded from the requirements of the Water Reclamation and Reuse Regulation.<br>Groundwater recharge with treated sewage or municipal wastewater through a rapid infiltration basin (RIB) may be authorized by the DEQ under a Virginia Pollution Abatement Permit where the RIB is designed in accordance with the Sewage Collection and Treatment Regulations (9VAC25-790). To avoid regulatory redundancy, this activity is excluded from requirements of the current and amended Water Reclamation and Reuse Regulation under 9VAC25-740-50.A.6.<br>There are no additional changes to the amended regulation in response to these comments. |
| **27.** | **Subject:** Groundwater recharge with reclaimed water by direct aquifer injection<br>**Commenter:** James J. Pletl, Director of Water Quality, Hampton Roads Sanitation District<br>**Text:** Additionally, one of the bullets in the amendment summary states that: "*The amendments will be adding specific details for indirect potable reuse (IPR) projects including permit application, design, construction, and operation requirements."* These amendments provide clarity on some aspects of indirect potable reuse such as the amendments in section B of (9VAC25-740-100 Application for Permit). However, the regulation does not directly address groundwater recharge other than in the development of the IPR definition. Further, the proposed regulations keep direct aquifer injection in the exclusions category of the Exclusions and Prohibitions section (9VAC25-740-50 Exclusions and Prohibitions). This approach to direct recharge in the regulations continues to reinforce the belief that it is not an option available in Virginia and, hence, that it will cause unacceptable impact to aquifers. Therefore the proposed regulations must take a more explicit and definitive approach to direct recharge which properly presents this option as available and viable given scientifically-defensible limiting restrictions.<br>**Agency Response:** The definition for IPR in the existing and proposed regulation does not address the recharge of underground sources of drinking water with reclaimed water. See also the response to comment 28 regarding groundwater or aquifer recharge with reclaimed water.<br>There are no additional changes to the amended regulation in response to these comments. |
| **28.** | **Subject:** Groundwater or aquifer recharge with reclaimed water<br>**Commenter:** James J. Pletl, Director of Water Quality, Hampton Roads Sanitation District<br>**Text:** The amendments discussing IPR must provide absolute clarity on groundwater recharge and support it as a reuse option. For example, the regulation needs to use the term "groundwater and/or |

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| | aquifer recharge" as an indirect potable reuse option. Many wastewater professionals in Virginia are confused regarding the legality and feasibility of groundwater recharge. It is not uncommon in wastewater circles to hear the incorrect statement "aquifer injection with reclaimed water is banned in Virginia". The term "aquifer recharge" is only mentioned in section 9VAC25-740-10 of the regulations which list a variety of common reuse definitions. As the demand for water increases across the Commonwealth and groundwater supplies are being stretched, replenishing groundwater basins with reuse water may be the best option for Virginia. These amendments must help clear known obstacles to encourage and promote all forms of beneficial reuse, including direct groundwater recharge.<br>**Agency Response:** DEQ acknowledges that direct groundwater/aquifer recharge with reclaimed water may be considered a beneficial reuse and an option among others to manage water resources. The EPA Underground Injection Control (UIC) Program may issue a rule authorization or individual permit for recharge of an aquifer with fluids, such as treated wastewater, where it will occur through an injection well and will not pose a potential endangerment to an underground source of drinking water. DEQ has not sought delegation of the UIC program from EPA in Virginia. Consequently, direct groundwater/aquifer recharge is not defined in and is excluded from the requirements of the Water Reclamation and Reuse Regulation.<br>Groundwater recharge with treated sewage or municipal wastewater by way of rapid infiltration basins (RIBs) may be authorized by the DEQ under a Virginia Pollution Abatement Permit where the RIBs are designed in accordance with the Sewage Collection and Treatment Regulations (9VAC25-790). To avoid regulatory redundancy, this activity is excluded from requirements of the current Water Reclamation and Reuse Regulation under 9VAC25-740-50.A.6.<br>There are no additional changes to the amended regulation in response to these comments. |
| **29.** | **Subject:** Groundwater recharge with reclaimed water<br>**Commenter:** James J. Pletl, Director of Water Quality, Hampton Roads Sanitation District<br>**Text:** When considering the new amendments and the specific language concerning design and construction of IPR, the Department of Environmental Quality and the State Water Control Board must address the EPA Guidelines for Water Reuse 2012, hereafter referred to as the "Guidelines". This document discusses the primary types of groundwater recharge as surface infiltration/spreading, vadose zone injection, and deep direct aquifer injection. The design and construction details of the proposed amendments must discuss these primary types of groundwater recharge thoroughly but separately because they each have advantages and disadvantages based on the location and needs of a specific project.<br>**Agency Response:** See response to comment 28 regarding groundwater or aquifer recharge with reclaimed water. Design requirements for surface infiltration/spreading (or rapid infiltration basins) regulated by DEQ are contained in the Sewage Collection and Treatment Regulations (9VAC25-790-880).<br>There are no additional changes to the amended regulation in response to this comment. |
| **30.** | **Subject:** Rapid infiltration basins for groundwater recharge<br>**Commenter:** James J. Pletl, Director of Water Quality, Hampton Roads Sanitation District<br>**Text:** Surface rapid infiltration basins are used in other regions of the U.S. such as Florida's Orlando Rapid Infiltration System and the Flushing Meadows Project in the Salt River bed west of Phoenix, AZ. Infiltration basins may be the most publically acceptable recharge option based on the fact that the water eventually becomes part of the groundwater supply only after natural physical and chemical treatment by the soil. Many coastal parts of Virginia could be well suited for this treatment due to loamy sand soil conditions similar to Florida (see VA soil types). Soils must be coarse enough to allow infiltration and fine enough to provide filtration. According to page 19 of Chapter 2 (Planning and Management Considerations) in the EPA 2012 Guidelines for Water Reuse, trace organic compounds have not been observed in soil aquifer treatment systems using spreading /infiltration basins where microbial activity in the subsurface is stimulated. If the amendments address this rapid infiltration recharge method and a subsequent design and construction guidance document is made available, this method of groundwater recharge could be widely accepted in the Commonwealth due to the general public's historical desire for extended natural treatment.<br>**Agency Response:** Design requirements for rapid infiltration basins (RIBs) as a method of wastewater land treatment and groundwater recharge already exist in the Sewage Collection and Treatment Regulations (9VAC25-790-880). RIBs may be authorized by the DEQ under a Virginia Pollution Abatement Permit. In Virginia, RIBs are not a commonly used method of sewage treatment and disposal, but may find greater application for groundwater recharge in the future.<br>To avoid regulatory redundancy with the Sewage Collection and Treatment Regulations, groundwater recharge with treated wastewater by way of RIBs is excluded from requirements of both the existing and amended Water Reclamation and Reuse Regulation under 9VAC25-740-50.A.6.<br>There are no additional changes to the amended regulation in response to these comments. |

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| **31.** | **Subject:** Groundwater recharge with reclaimed water<br>**Commenter:** James J. Pletl, Director of Water Quality, Hampton Roads Sanitation District<br>**Text:** The benefits of directly injecting reclaimed water into the groundwater aquifer are stated nicely in Table 2-2 of the EPA 2012 Guidelines for Water Reuse (Guidelines). The depletion of groundwater resources is a reality in many regions of Virginia, and direct injection could benefit groundwater levels immediately. There are additional advantages to direct groundwater recharge including the provision of a barrier to seawater intrusion into freshwater aquifers and prevention of aquifer damage due to loss of volume. According to the page 27 of Chapter 3 (Types of Reuse Applications) in the Guidelines, "the practice of discharging treated wastewater effluent to a natural environmental buffer, such as a groundwater aquifer, has historically been deemed as an appropriate practice for IPR."<br>**Agency Response:** See response to comment 28 regarding groundwater or aquifer recharge with reclaimed water.<br>There are no additional changes to the amended regulation in response to these comments. |
| **32.** | **Subject:** Direct potable reuse and groundwater recharge.<br>**Commenter:** James J. Pletl, Director of Water Quality, Hampton Roads Sanitation District<br>**Text:** We now have developed engineered treatment technologies such as ultra or micro filtration, reverse osmosis, and advanced oxidative processes (see article on advanced treatment) that can perform as well or better than natural environmental buffers. With the implementation of technologies producing such high quality effluents, it is not defensible to bring reclaimed water quality to a level higher than that of most drinking water sources simply to discharge this high quality water to an aquifer. Performance-based treatment technology could eliminate the need for a natural buffer and allow Direct Potable Reuse (DPR) to be considered. DPR characterizes the process where highly treated municipal wastewater is discharged directly into the drinking water treatment plant source water stream. It appears that DPR is still prohibited in the amended reuse regulation (9VAC25-740-50 Exclusions and Prohibitions) although the UOSA plant in Virginia discharges highly treated wastewater directly into a drinking water reservoir. Another factor to consider is that aquatic organisms are far more sensitive than humans to pollutants. Discharging effluent into natural buffers such as a small stream system with very little dilution may be more harmful to humans and the environment than discharging to an aquifer. In some cases groundwater recharge may be the most environmentally protective choice.<br>**Agency Response:** DEQ acknowledges that technology exists to treat various wastewater sources to a quality that meets or exceeds most drinking water sources.<br>Direct potable reuse remains prohibited by the regulation in Virginia. The discharge of highly treated wastewater from the Upper Occoquan Service Authority (UOSA) facility to a reservoir used for public water supply is indirect potable reuse or IPR based on the definition of this term in the existing and amended regulation. New IPR projects may be authorized by DEQ on a case-by-case basis with input from the Virginia Department of Health on appropriate standards for the protection of public health.<br>A discharge to surface waters, whether for disposal or IPR, must meet, among other things, Water Quality Standards (9VAC25-260) that address potential impacts to aquatic species. Surface waters used for public water supply receive additional treatment upon withdrawal by waterworks in accordance with the Waterworks Regulations (12VAC5-590). Discharging the same water to aquifers may be more harmful to humans that rely on groundwater for potable supply without any treatment following withdrawal as would be the case for most privately owned wells.<br>There are no additional changes to the amended regulation in response to these comments. |
| **33.** | **Subject:** Groundwater recharge with reclaimed water and withdrawal for reuse<br>**Commenter:** James J. Pletl, Director of Water Quality, Hampton Roads Sanitation District<br>**Text:** It is unclear whether the injected water will have to meet drinking water standards prior to injection or best professional judgment will be used on a case specific basis depending on the native quality of water in the aquifer being considered. Guidance defining the hydraulic residence time required of injected water will be required. The identification and testing of environmentally acceptable tracers to measure travel time still needs to be researched and determined according the EPA Guidance on Water Reuse 2012. It is well understood that the treatment of organics occurs with time especially in aerobic or anoxic conditions that encourage microbial activity. Therefore, the location of the direct injection well in relation to the extraction well is critical to determine mixing with existing groundwater, residence time in the aquifer, and other conditions that will define the level of treatment needed. Designing the appropriate system will be the key to successful projects. A pilot study described in the amendments is a great idea.<br>**Agency Response:** See response to comment 28 regarding groundwater or aquifer recharge with reclaimed water. The EPA UIC Program may consider the factors noted above when determining the potential for endangerment of underground sources of drinking water from direct injection wells. Pilot study requirements in proposed amendments to the regulation apply to only IPR involving surface waters (not groundwater aquifers) used for water supply.<br>There are no additional changes to the amended regulation in response to these comments. |

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| **34.** | **Subject:** Groundwater recharge with reclaimed water<br>**Commenter:** James J. Pletl, Director of Water Quality, Hampton Roads Sanitation District<br>**Text:** Public opinion will shape the success of reuse and groundwater recharge in our state. Virginia has a history of IPR success at the UOSA facility. Public dialogue and education about reuse and successful IPR around the country is critical. To promote and encourage water reclamation, all forms of groundwater recharge and other IPR options should be made available and provided an opportunity to succeed. These regulations and subsequent guidance should provide maximum clarity on the issue of groundwater recharge and lay out a viable pathway for using groundwater recharge in beneficial reuse projects.<br>**Agency Response:** See response to comment 28 regarding groundwater or aquifer recharge with reclaimed water. DEQ may develop more specific guidance in the future on the use of rapid infiltration basins for groundwater recharge.<br>There are no additional changes to the amended regulation in response to these comments. |
| **35.** | **Subject:** Groundwater recharge with reclaimed water and pilot study requirement<br>**Commenter:** James J. Pletl, Director of Water Quality, Hampton Roads Sanitation District<br>**Text:** The amendments add a provision requiring that a pilot study of treatment be provided to document the efficacy of the treatment process when it will be part of an indirect potable reuse project. One of the greatest benefits of a pilot for groundwater recharge is the ability to understand the flow direction, residence time, and the study of possible undesirable chemical reactions between the injected reclaimed water and the native groundwater. The new amendments regarding construction requirements for IPR pilots are listed below. Conducting a pilot study described in the proposed amendments to develop IPR projects including groundwater recharge is a great way to promote and encourage water reclamation in a manner protective of human health and the environment.<br>**9VAC25-740-120. Construction requirements**<br>2. A pilot study shall be required where treatment is proposed for a reclamation system of an IPR project.<br>a. The pilot study shall demonstrate the ability of selected treatment processes to:<br>(1) Meet, at a minimum, the reclaimed water standards prescribed for the IPR project in accordance with 9VAC25-740-90 C, and<br>(2) Generate a consistent and reliable supply of reclaimed water for the IPR project.<br>b. The pilot study shall quantify and characterize the quality of source water provided for reclamation and reclaimed water generated by the treatment processes of the reclamation system for a period of not less than 365 days unless reduced by the board in accordance with subdivision A 2 d of this subsection.<br>c. At the request of the applicant or permittee, the board may reduce the pilot study duration specified in subdivision A 2 b of this subsection or the pilot study scope where the following are met:<br>(1) The applicant or permittee provides a detailed plan of study for the board's review and approval before initiating the pilot study, and<br>(2) The detailed plan of study justifies to the satisfaction of the board that a pilot study of shorter duration or reduced scope will be sufficient to achieve the requirements of subdivision A 2 a of this subsection. For the purpose of reducing the duration or scope of a pilot study, results of previous pilot studies and operating experiences of similar water reclamation and IPR projects may be used as part of the demonstration required pursuant to subdivision A 2 a of this subsection.<br>d. Results of the pilot study shall be submitted to the board for review.<br>**Agency Response:** See response to comment 28 regarding groundwater or aquifer recharge with reclaimed water. Indirect potable reuse or IPR, as defined in the existing and amended regulation, does not include the recharge of underground sources of drinking water with reclaimed water. Therefore, proposed pilot study requirements for IPR under 9VAC25-740-120 do not apply to groundwater recharge for this purpose.<br>There are no additional changes to the amended regulation in response to this comment. |
| **36.** | **Subject:** Groundwater recharge with reclaimed water and standards for indirect potable reuse (IPR)<br>**Commenter:** James J. Pletl, Director of Water Quality, Hampton Roads Sanitation District<br>**Text:** In addition to design requirements, the amendments address IPR Permit requirements. It seems Section C of 9VAC25-740-90 (Minimum standard requirements for reuses of reclaimed water) could have the potential to discourage IPR even when unacceptable risk does not occur due to IPR (i.e., Drinking Water Standards).<br>**9VAC25-740-90. Minimum standard requirements for reuses of reclaimed water**<br>C. For any indirect potable reuse (IPR) project that is newly proposed after [effective date of amended regulation], the following are required:<br>1. A multiple barrier approach shall be used in the planning, design and operation of the project. Multiple barriers to be employed for the project shall be described in the application for a permit in accordance with 9VAC25-740-100 D.<br>2. All reclaimed water generated by a reclamation system for IPR shall meet, at a minimum, Level 1 |

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| | reclaimed water standards, reclaimed water standards developed pursuant to subsection B of this section and any other standards that may apply, including but not limited to, the Water Quality Standards (9VAC25-260) and Total Maximum Daily Loads (TMDLs). Where there is more than one standard for the same pollutant, the more stringent standard shall apply.<br>3. The public health risks of and the need to impose new or more stringent reclaimed water standards for an IPR project shall be re-evaluated with specific input from the Virginia Department of Health upon each renewal of the permit issued to the reclamation system that produces reclaimed water for the project. Factors to be considered in the re-evaluation shall include, at a minimum, applicable factors contained in subsection B of this section.<br>**Agency Response:** See response to comment 28 regarding groundwater or aquifer recharge with reclaimed water. Treatment requirements for wastewater that will be used to recharge an underground source of drinking water may be developed on a case-by-case basis by the EPA Underground Injection Control Program where recharge will occur through an injection well, or in accordance with the Sewage Collection and Treatment Regulation (9VAC25-790) where recharge will occur through a rapid infiltration basin. Requirements to regulate groundwater recharge with treated wastewater in the Water Reclamation and Reuse Regulation would be redundant of other existing federal and state regulations and programs. Therefore, groundwater recharge with reclaimed water, including the treatment standards for this use, is essentially excluded from the requirements of the Water Reclamation and Reuse Regulation.<br>There are no additional changes to the amended regulation in response to this comment. |

| Section number | Requirement at proposed stage | What has changed | Rationale for change |
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| 10 | Definition for beneficial reuse | Deleted “or” after “recreation,” in second sentence. | Change was made to make the definition of this term in the regulation consistent with the definition of the same term in § 62.1-44.3 of the Code of Virginia. |
| 10 | Definition for biological nutrient removal (BNR) | Deleted “an” after “achieves” and replaced “of” with “concentrations less than or equal to” after “annual average”. | Change was made to clarify the distinction between BNR and non-BNR reclaimed water currently used in guidance. This is significant with regard to bulk irrigation reuse of reclaimed water, which will not, in most cases, require a nutrient management plan (NMP) for irrigation with BNR reclaimed water, but would require a NMP for irrigation with non-BNR reclaimed water. |
| 10 | Definition for designated design flow | Replaced “wastewater or partially treated wastewater” with “source water” | Change was made to make the definition of “designated design flow” more concise and to consistently use terms already defined within regulation (e.g., “source water”) where appropriate. |
| 10 | Definition for reclaimed water distribution system | Deleted “one or more” after “reclamation systems to” and replaced “users” with “uses” after “end” | Change was made to clarify that reclaimed water distribution systems convey to end uses and not to end users. |
| 30 B 2 | Applicability and transition – authorization of standards, monitoring requirements and special conditions for water reclamation and reuse through VPDES permits | Delete the term "administratively" and insert the term " through" as follows: "2. Standards, monitoring requirements and special conditions for water reclamation and reuse may be ~~administratively~~ authorized for a VPDES permit through:" | Change was made to clarify authorization of water reclamation and reuse projects through VPDES permits. |
| 30 B 2 a | Applicability and transition – authorization of standards, monitoring requirements and special conditions for water reclamation and reuse through VPDES permits | Insert subdivision number and revise original text as follows: "a. A modification of the permit ~~modification unless they~~ where such standards, monitoring requirements and special conditions would effectively alter other conditions of the permit specifically related to the effluent discharge for which the permit was originally issued, or where the diversion of source water from the VPDES permitted discharge to water reclamation and reuse has the potential to cause a significant adverse impact to other beneficial uses of the receiving state water, or both; | Changes were made to clarify conditions under which water reclamation and reuse projects may be authorized by VPDES permit modification. |

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| 30 B 2 b | Applicability and transition – authorization of standards, monitoring requirements and special conditions for water reclamation and reuse through VPDES permits | Insert subdivision designation and revise original text to read: "b. An administrative authorization where such standards, monitoring requirements and special conditions would not alter other conditions of the permit specifically related to the effluent discharge for which the permit was originally issued, and where the diversion of source water from the VPDES permitted discharge to water reclamation and reuse does not have the potential to cause a significant adverse impact to other beneficial uses of the receiving state water. The administrative authorization shall have the full effect of the VPDES permit until such time that it is incorporated into the VPDES permit through reissuance or ~~major~~ modification. | Changes were made to clarify conditions under which water reclamation and reuse projects may be authorized by an administrative authorization associated with a VPDES permit. |
| 45 C 3 | Emergency authorizations | Replaced "through 9VAC25-31-900" with "et seq.". | Change was made to be consistence with formatting of references and clarify reference to Part VII of the VPDES Permit Regulation. |
| 50 A 6 | Exclusions for land treatment systems | Replaced “defined” with “described” following “Land treatment systems” in the first sentence of subdivision A 6. | Change was made to clarify that land treatment systems are described but are not specifically defined in the Sewage Collection and Treatment Regulations (9VAC25-790). |
| 50 A 7 | Exclusions for unintentional reuse | Part of subdivision A.7 was made into new subdivision A.8 with the following changes: “7. ~~Indirect~~ Unintentional reuse ~~with the exception of indirect potable reuse projects proposed after October 1, 2008~~. | Changes were made to better clarify the intent of the language. |
| 50 A 8 | Exclusions for existing indirect non-potable reuse | Part of subdivision A.7 was made into new subdivision A.8 with the following changes: 8. ~~and~~ Existing indirect non-potable reuse projects ~~proposed after~~ that upon [effective date of amended regulation] are authorized by a VPDES permit to discharge to surface waters of the state.” | Changes were made to better clarify the intent of the language. |
| 50 A 9 | Exclusions for existing indirect potable reuse | Change in designation from A 8 to A 9. | Designation changed to accommodate addition of new exclusion. |

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| 50 A 10 | Exclusions for direct injection of reclaimed water into an underground aquifer | Change in designation from A 9 to A 10. | Designation changed to accommodate addition of new exclusion. |
| 60 B | Description of relationship between 9VAC25-740 and the VPDES Permit Regulation (9VAC25-31) | In second sentence of subsection 60.B:<br>(1) Deleted "a" after "discharge to" where it first appears in the sentence, and<br>(2) Inserted "waters" following existing correction "and has a discharge to surface". | (1) Change was made to eliminate unnecessary text and to be consistent with similar language within the same sentence.<br>(2) Change was made to correct an unintentional omission. |
| 70 A | Table 70 A Treatment and Standards for Reclaimed Water | Revised table from a 3 column table with Level 1 and Level 2 treatment and standards for reclaimed water listed side-by-side, to a 2 column table with the first part of the table devoted to "Level 1" and the second half of the table devoted to "Level 2". The formatting of the table and the presentation of the material was changed. | Changes were made to make information in the table more clear and readable. |
| 70 A 1 f | Turbidity standards for Level 1 reclaimed water | Changed "2" to "2.0" and "5" to "5.0" related to standards for turbidity in reclaimed water. | Change was made to be consistent with the number of significant figures established by acceptable methods used to properly calibrate field monitoring equipment for turbidity. |
| 70 B 2 a | Point of compliance (POC) for system storage facilities and reclaimed water distribution systems | Related to the deletion of subdivision B 2 c, inserted "and" at end of sentence. | Grammatical correction to account for the deletion of previously proposed subdivision and to clarify requirements. |
| 70 B 2 b | Point of compliance (POC) for system storage facilities and reclaimed water distribution systems | Related to the deletion of subdivision B 2 c, replaced ";" with a period at the end of subdivision B 2 b. | Grammatical correction to account for the deletion of previously proposed subdivision. |
| 70 B 2 c | Point of compliance (POC) for system storage facilities and reclaimed water distribution systems | Deleted of all of subdivision B 2 c as follows:<br>"c. For both the system storage facility and reclaimed water distribution system when under common ownership or management and within the same service area, in either document described in subdivisions B 2 (a) or (b) of this subsection." | Changes were made to eliminate redundant and confusing requirements to describe POC locations for system storage facilities and reclaimed water distribution systems. |
| 70 E | Standards for the reclamation of industrial wastewater | In first sentence of subsection 70.E, replaced "will" with "shall". | Change was made to be consistent with Virginia Register style guidelines for regulations. |
| 80 D | Monitoring of reclaimed water held in system storage | In first sentence of subsection, moved "(i)" to follow first "where" and deleted 2nd "where" after "(ii)". | Changes were made to make the language more concise. |
| 100 B 6 | Determination of significant adverse impacts to other on and | Replaced: "proposes" with "will provide" after "… sewage collection system that", and | Changes were made to clarify that (i) neither the VPDES permitted WWTF or the sewage collection |

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| | off stream beneficial uses due to diversion of source water from a discharge to reclamation and reuse | replaced “including” with “and information, as applicable, regarding the SRS that includes” after “… the production of reclaimed water,”. | system “propose” the diversion of source water, rather they “provide” the source water by diversion; and (ii) where a SRS (satellite reclamation system) is involved, information will be required per 9VAC25-740-100.B.6.a and b. |
| 100 B 6 b | Determination of significant adverse impacts to other on and off stream beneficial uses due to diversion of source water from a discharge to reclamation and reuse | Inserted “return discharge of” before “the SRS” where it first appears in the paragraph. | Change was made to clarify that the discharge from the SRS was referring to the return discharge to the sewage collection system and not the discharge of reclaimed water from the SRS to reuse. |
| 100 B 6 e | Determination of significant adverse impacts to other on and off stream beneficial uses due to diversion of source water from a discharge to reclamation and reuse | Delete "subdivision 5" reference. Replace word "subsection" with "subdivision". | Change was made to clarify the requirements and for consistence with designation of references within a subdivision. |
| 105 A 11 | Application information for an emergency authorization | Replaced designation of subdivision "12" with "13". | Change made to correct subdivision reference. |
| 105 A 12 | Application information for an emergency authorization | Replaced subdivision reference “3 d” with “6”. | Change made to correct subdivision reference. |
| 110 C 1 e | Options to ensure reliable reclamation system flow | Inserted “source” between “received” and “water” | Change was made to clarify what type of water, “source water”, and to eliminate confusion with “reclaimed water” and “reject water” used in the same subsection. |
| 150 E 1 | Management of pollutants of concern from significant industrial users for indirect potable reuse projects | Inserted “, developed” before “in accordance with …” | Change was made to correct an unintentional omission and to be consistent with language in subdivision A 1 of the same section. |
| 170 H | Table 170-H1 Setback distances for irrigation reuse of Level 1 reclaimed water | Inserted row of headers to label columns in the table (i.e., “Feature Requiring Setback” and “Setback Distance”), and enumerated each feature and associated setback in sequence a through c. | Changes were made to clarify the arrangement and content of the table, and to allow improved referencing of information contained in the subsection and table. |
| 170 H | Table 170-H2 Setback distances for irrigation reuse of Level 2 reclaimed water | Inserted row of headers to label columns in the table (i.e., “Feature Requiring Setback” and “Setback Distance”), and enumerated each feature and associated setback in sequence a through f. | Changes were made to clarify the arrangement and content of the table, and to allow improved referencing of information contained in the subsection and table. |