

**WATER RECLAMATION AND REUSE REGULATION (9VAC25-740)
REGULATORY ADVISORY PANEL (RAP)**

**MEETING NOTES - FINAL
RAP MEETING – THURSDAY, JULY 7, 2011
DEQ PIEDMONT REGIONAL OFFICE TRAINING ROOM**

Meeting Attendees

<i>RAP MEMBERS</i>	<i>INTERESTED PUBLIC</i>	<i>TECHNICAL SUPPORT</i>
Robert (Bob) W. Angelotti – Upper Occoquan Service Authority	Bob Hicks - VDH	Marcia Degen – VDH
Bill Keeling – DCR – Alternate for Tim Sexton	Dan Horne – VDH – Alternate for Wes Kleene	William (Bill) Norris - DEQ
Leita Bennett - ATKINS	Whitney Katchmark - HRPDC	Jeff Reynolds - DEQ
Gregory (Greg) K. Evanylo – Virginia Tech (Technical Expert)	Vernon Land – City of Suffolk	Valerie Rourke - DEQ
Eldon James – Rappahannock River Basin Commission	Kevin M. Parker – Hampton Roads Sanitation District – Alternate for Jim Pletl	Neil Zahradka - DEQ
Wes Kleene - VDH	Thornton Newlan - VCA	
Peter McDonough – Golf Course Superintendents Association	Jim Sizemore – Alexandria Sanitation Authority	
Karen Pallansch – Alexandria Sanitation Authority & VAMWA	Mark Weinstein – Virginia Conservation Network	
Jim Pletl – Hampton Roads Sanitation District		
Gregory (Greg) J. Prelewicz – Fairfax Water		
Eric Tucker – Hampton Roads Planning District Commission – City of Norfolk		
Cabell Vest – Virginia Association of Municipal Wastewater Agencies, Inc. – Alternate for Robert C. Steidel		
Andrea Wortzel – Mission H2O		

NOTE: The following REUSE RAP Members were absent from the meeting: Lawrence (Larry) A. Dame – New Kent County; Thomas (Tom) J. Grizzard, Jr. – Virginia Tech and Upper Occoquan Laboratory; Jeff Hancock – Williamsburg Environmental Group, Inc.; T. Britt McMillian – Malcolm Pirnie; Brooks Smith – Virginia Manufacturers Association; Robert C. Steidel – Virginia Association of Municipal Wastewater Agencies, Inc.; & Wilmer N. Stoneman – Virginia Farm Bureau

1. Welcome & Introductions (Bill Norris):

Bill Norris, Regulation Writer with the DEQ Office of Regulatory Affairs welcomed all of the meeting participants and asked for brief introductions from those attending today’s meeting.

2. Notes – June 2, 2011 RAP Meeting (Bill Norris):

Bill Norris noted that one RAP member had submitted suggested changes to the draft meeting notes that have already been incorporated. These changes included the following revision to the Groundwater Recharge Discussion Point #1:

- It was noted that ~~the statement in~~ the discussion paper states that “a VPA permit may be used to authorize any type of groundwater recharge”. Staff noted that this is correct but that there are other permit programs (i.e., groundwater withdrawal permit”. If Groundwater Withdrawal Permit Program) that can authorize groundwater recharge with reclaimed water. For example, where a project recharges will recharge groundwater with reclaimed water and withdraws withdraw the water within a groundwater management area , they would the project could be issued one permit, a groundwater withdrawal permit instead of a VPA permit. They would also have to Projects that propose groundwater recharge with reclaimed water must first obtain a UIC permit before obtaining a DEQ permit.
- Of the most common methods to recharge groundwater with reclaimed water, direct injection is the only method that is excluded from the requirements of the Water Reclamation and Reuse Regulation per 9VAC25-740-50.A.9. Despite this, DEQ can still permit direct injection with reclaimed water where other DEQ regulations may apply to the activity.

He asked for any additional comments or recommendations for edits to the notes from the June 2nd meeting of the Water Reuse RAP that had been previously distributed to the RAP. No additional changes were suggested by the RAP members.

ACTION ITEM: The Draft meeting notes as revised will be identified as “Meeting Notes – Final” and will be posted to Town Hall.

3. DEQ Amendments to Address Groundwater Recharge with Reclaimed Water (Valerie Rourke & Jeff Reynolds):

Valerie Rourke and Jeff Reynolds noted the following:

- In working on the proposed DEQ amendments to address groundwater recharge it was determined that Groundwater recharge is a good tool. However, discussions with VDH and with DEQ staff came up against some issues (i.e., anti-degradation standards and 9VAC25-390-30). There have been limited discussions about water quality and the anti-degradation policy. This policy would need to be changed. There is value to making groundwater recharge a viable option in the future, but not through this regulatory action.
- The comments that have been provided by the Reuse RAP members on groundwater recharge have been captured and will be used in future discussions on recharge. These previous discussions will be the basis for future discussions.
- Even though the timing of these future discussions is unknown, the urgency and interest expressed by RAP members has been expressed to the Director and will affect the priority of working on this concept.
- Future changes to address groundwater recharge will likely involve a separate regulatory action.
- What exists now in the Reuse Regulations does not preclude recharge. DEQ is however not

- prepared to move off in that direction at this time.
- Recharge should be handled in a holistic approach. Opening the Water Quality Standards would be part of the process and that is a significant part of the work to be done. It would probably be more effective to address all applicable regulations and policies at the same time.
- There is no timeline to address any identified roadblocks to this process, but stakeholder interest is welcomed to keep the development process moving.

RAP discussions included the following:

- DEQ normally addresses technical issues in guidance. Changes should be made in the regulation to promote groundwater recharge and then have the guidance developed to implement it. Concerns were raised that with no changes in the current regulation that recharge possibilities will flounder and the issue will be pushed aside.
- Need to address the issue in the Reuse Regulation so that we wouldn't have to come back to it. The RAP is assembled and they could address some things now. Perhaps we should recognize recharge as an option and beneficial reuse now.
- The City of Chesapeake operates an ASR project now that is injecting potable water. It is covered by VDH; DEQ and EPA permits. It is in a wellfield that is also used for potable water extraction from the same aquifer. This is also the project where manganese is showing up in the extracted groundwater. Treatment was required to be installed to remove Mn from the extracted water.

4. Discussion of Specific Amendments Made in Response to Prior RAP Comments – Facilitated Discussions (Valerie Rourke; Bill Norris and RAP Members) – Indirect non-potable reuse (9VAC25-740-10; 9VAC25-740-50 A 7; 9VAC25-740-90 B)

9VAC25-740-10, found on Page 3 of the proposed amendments, contains the following language:

“Indirect non-potable reuse” means the discharge of reclaimed water to a receiving surface water with reclaimed water for the purpose of intentionally augmenting a water source, followed by withdrawal from the water source with or without mixing and transport to the withdrawal location for reuse or distribution to reuses other than indirect potable.

9VAC25-740-50 A 7, found on Page 9 of the proposed amendments, contains the following language:

9VAC25-740-50. Exclusions and prohibitions.

A. Exclusions. Exclusion from the requirements of this chapter does not relieve any owner of the operations identified below of the responsibility to comply with any other applicable federal, state or local statutes, regulations or ordinances. The following are excluded from the requirements of this chapter:

7. Indirect reuse with the exception of indirect potable reuse projects proposed after October 1, 2008 and indirect non-potable reuse projects proposed after [effective date of amended regulation].

9VAC25-740-90 B, found on Page 20 of the proposed amendments, contains the following language:

9VAC25-740-90. Minimum standard requirements for reuses of reclaimed water.

B. For any type of reuse not ~~addressed in this chapter~~ listed in subsection A of this section, including, but not limited to, indirect potable reuse and below-ground drip irrigation reuse, that is newly proposed after October 1, 2008, indirect non-potable reuse that is newly proposed after [effective date of amended regulation]; or any reuse of reclaimed industrial water, including reuses listed in subsection A of this section, the board may prescribe specific reclaimed water standards and monitoring requirements needed to protect public health and the environment. When establishing these requirements for the proposed reuse, the board shall consider the following factors:

Valerie Rourke provided an overview of the proposed amendments. She noted the following:

- *The definition has been changed.*
- *Other states were contacted to see how indirect non-potable reuse is addressed. A summary of other states' responses was provided to the RAP. In at least one state, indirect non-potable reuse is regulated as surface water augmentation and included in the NPDES permit.*

RAP discussions of these proposed amendments included the following:

- The definition clarifies that it would be intentionally augmenting a water source.
- Confusing to have different sections referencing this.
- Suggestion was made to change name of “indirect reuse” to "unintentional reuse" instead of having a third term under definitions that starts with “indirect.
- A question was raised over who becomes the judge of intent? *Staff responded that DEQ will be in the place of make the subjective determination.*
- On page 3 the phrase "with reclaimed water" should not be in the definition of indirect non-potable reuse. *Staff noted that the change had been made but didn't make it into this version.*

ACTION ITEM: Staff will revise the definition of "indirect non-potable reuse" to delete the phrase "with reclaimed water" and will change the term “indirect reuse” to “unintentional reuse”.

5. **Discussion of Specific Amendments Made in Response to Prior RAP Comments – Facilitated Discussions (Valerie Rourke; Bill Norris and RAP Members) – Monitoring and POCs for Specific Storage Facilities and Reclaimed Water Distribution Systems (9VAC25-740-70 B 2; 9VAC25-740-80 D; 9VAC25-740-100 C 1 h)**

9VAC25-740-70 B 2, found on Page 14 of the proposed amendments, contains the following language:

B. Point of compliance (POC).

1. Excluding the turbidity standard for Level 1 treatment, reclaimed Reclaimed water produced by reclamation systems and SRSs for reuse shall meet all other applicable standards in accordance with this chapter, excluding the turbidity standard for Level 1 treatment, at the point of compliance POC. The point of compliance POC for Level 1 and Level 2 treatment shall be after all reclaimed water treatment and prior to discharge to a reclaimed water distribution system. Where chlorination is used for disinfection of the reclaimed water, the POC for the TRC standard shall be the monitoring location specified in 9VAC25-740-80 A 2. The point of compliance POC for the turbidity standard of Level 1 treatment shall be just upstream of disinfection.

2. Where the board determines that reclaimed water monitoring is required for a system storage facility or a reclaimed water distribution system, the number and location of POCs for these facilities shall be determined on a case-by-case basis and shall be described in the following documents for approval by the board:

a. For system storage facilities other than those considered part of reclaimed water distribution systems, in the operations and maintenance manual of the reclamation system or SRS where the storage facility is located;

b. For reclaimed water distribution systems, including system storage facilities considered part of these systems, in the Reclaimed Water Management plan pursuant to 9VAC25-740-100 C 1 h; or

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.

9VAC25-740-80 D, found on Page 17 of the proposed amendments, contains the following language:

D. Monitoring of reclaimed water held in system storage for a period greater than 24 hours at a reclamation system or SRS may be required by the board where the system storage facility discharges to a reclaimed water distribution system, a non-system storage facility, or directly to a reuse; and conditions exist at the facility to degrade the reclaimed water to a quality failing to comply with applicable minimum reclaimed water standards for the intended reuses of that water. When monitoring of reclaimed water in or from system storage is required, monitoring parameters and frequencies shall be determined by the board on a case-by-case basis.

9VAC25-740-100 C 1 h, found on Page 23 of the proposed amendments, contains the following language:

C. Reclaimed water management (RWM) plan.

1. A RWM plan shall be submitted in support of a permit applications application for a new or expanded reclamation systems, system, satellite reclamation systems SRS or reclaimed water distribution systems that provide system acting as a reclaimed water agent by directly distributing reclaimed water to an end user or end users, including an end user that is also the

applicant or permittee. A RWM plan shall not be required for a reclamation system that distributes reclaimed water exclusively for indirect potable reuse. The RWM plan shall contain the following:

h. A description of how the quality of reclaimed water in the reclaimed water distribution system shall be maintained to meet and, if determined necessary by the board, monitored to verify compliance with the standards—minimum standard requirements specified in 9VAC25-740-90 for the intended reuse or reuses of the reclaimed water in accordance with 9VAC25-740-90., excluding CAT standards. Where monitoring of reclaimed water in the distribution system is required, monitoring parameters and frequencies shall be determined by the board on a case-by-case basis.

Valerie Rourke provided an overview of the proposed amendments. Her overview included the following:

- *Staff contacted other states via email about their rules or guidelines addressing monitoring in these facilities. Their responses were summarized in the document that was sent to the RAP.*
- *Monitoring generally determined on a case-by-case basis and described in an O&M manual.*

RAP discussions of these proposed amendments included the following:

- *Concerns were mentioned regarding "degrades within the system", "may include monitoring" because it makes it difficult to predict what will be required. The end-user will be restricting quality of water at the end. Staff noted that we were trying to make this flexible, and not require monitoring in all cases. "May" is typically used when requirements are required on a case-by-case basis. Site visits or inspections at the time of permit application may identify the need for additional monitoring. DEQ needs some way of ensuring in some cases that water will meet the standards of the regulation and not degrade during storage or distribution.*
- *These changes are not encouraging reuse but tightening restrictions and adding additional paperwork and requirements. It would seem to be better to include what conditions would require additional monitoring and POCs rather than just say "may". We are discouraging not encouraging reuse. We should deal specifically with open or closed storage if that is an issue. Staff noted that the permittee has options to deal with the issue.*
- *There is inconsistency in permit writers and what is finally required. The use of "may" increases possibility that the requirement will be included in the permit. Staff noted that there is always a balance being struck between promoting and encouraging versus protection of human health and the environment.*
- *It was suggested that an overwhelming majority of RAP members expressed the desire that additional requirements should come out of the regulation. Additional comment on this issue should be expected from stakeholders. It was suggested that this is beyond what is necessary to protect the environment and public health.*
- *A question was raised as to whether it was possible for DEQ to specify those instances where covered and non-covered storage would require monitoring in the regulation or must DEQ consider other issues. Staff noted that comments were received suggesting that the original*

proposed language was too specific, so the proposal in front of you was an effort to address those concerns and to make it more general. If DEQ does not observe degradation, monitoring will not be required.

- It was suggested that the original language already in the regulation addresses the issue adequately. (Page 17, E is an example: "~~D.~~ E. Monitoring other than or in addition to that described under 9VAC25-740-80 A may be required for treatment of reclaimed water that is provided pursuant to 9VAC25-740-70 D and 9VAC25-740-70 E.")
- From a reuser's standpoint, the use of the word "may" is a problem when customers are trying to discern what expenses will be incurred.
- Other states have really promoted reuse (e.g., CA, AR, FL). What types of additional monitoring is a "maybe" in those states? *Staff noted that in WA multiple POCs are included in permits on a case-by-case basis.*
- What does CA do? *Staff noted that they do not specify an additional POC.*
- What does FL do? *Staff noted that they did not respond.* FL uses an "end of treatment" standard.
- How do you respond to citizen concerns when they want to know if water used to irrigate their lawns is safe? Monitoring is distinctive from POCs and monitoring will be done.
- Compliance is required at various points in a potable distribution system, depending on the contaminant. Depending on the degree of public contact, POCs may need to be considered. Regarding concern, a newspaper is surveying customers to see what their level of understanding and concern is regarding the safety of reclaimed water. (This is being done in Florida but is an online survey, so anyone can access it to vote.)
- The RAP noted that the media desire to sell newspapers is not a reliable measure of public concern.
- These are not public relations regulations. A utility is responsible for dissemination public education information. Reuse is a proper approach and option. Refining the system is going to improve public knowledge and proper use.
- There are issues between customers and the water supplier. These should be worked out between them, not included in detailed descriptions and requirements in regulations.
- Records of compliance can be used as a method of ensuring the public of the safety of the system.
- Quality issues are the responsibility of the water purveyor and they know the system better than the regulator and are in a better position to determine where additional monitoring is required.
- It appears that no one is objecting to doing monitoring, it is more of an issue of requiring it and requiring new locations that will be POCs.
- There is no objection to providing DEQ, at the time of permitting, the monitoring plan as to how they will meet the standard. *Staff noted that the regulation requires reclaimed water meet standards in the distribution system (page 31). (9. All reclaimed water distribution systems shall 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, excluding CAT standards, required for the intended reuse or reuses in accordance with 9VAC25-740-90.)*
- Does the original regulation include requirements to meet the standards? *Staff responded that yes, what is being added is a potential requirement for monitoring at a POC to ensure that*

reclaimed water continues to meet the appropriate standards. DEQ will be looking to permittee or the applicant to describe where the water should be meeting the standards.

- NC calls for the POC to be "following treatment". Why can't we follow that model? Creating an unknown cost will not encourage reuse because they won't bother. Fixing problems will be the responsibility of the water supplier to ensure customers remain satisfied. If we have a bad actor that does not fix the problem, it is likely that legislature will have to address the issue.
- 6. Discussion of Specific Amendments Made in Response to Prior RAP Comments – Facilitated Discussions (Valerie Rourke; Bill Norris and RAP Members) – Information to be Submitted for Conversion of Potable Water Distribution Systems, Sewer and Wastewater Collection Systems and Irrigation Distribution Systems to Reclaimed Water Distribution Systems (9VAC25-740-110 B 6)**

9VAC25-740-110 B 6, found on Page 29 of the proposed amendments, contains the following language:

B. Reclaimed water distribution system.

6. Existing potable water distribution systems, sewer and wastewater pipelines-collection systems, and irrigation distribution systems may be converted for use as reclaimed water distribution-pipelines systems. The Not less than 90 days prior to such conversions, excluding the conversion of irrigation distribution systems that are not under common ownership or management with reclamation systems, SRSs or reclaimed water distribution systems providing reclaimed water to the irrigation distribution systems, the following information shall be submitted to the board for approval of the conversion:

a. A system conversion plan that contains:

a. (1) The Information on the location and identification of the facilities to be converted;

b. (2) The Information on the location of all connections to the facilities to be converted;

c. A description of measures to be taken to ensure that existing connections will be eliminated;

d. (3) Description A description of procedures to be used to ensure that all connections and cross-connections shall be eliminated. This may include physical inspections, dye testing, or other testing procedures;

e. Description of marking, signing, labeling, or color coding to be used to identify the converted facility as a reclaimed water transmission facility;

(4) A description of the physical and operational modifications necessary to convert the existing system to a reclaimed water distribution system that shall comply with applicable design criteria in subsections B and C of this section, and the operations and maintenance requirements of 9VAC25-740-140 D 2;

f. (5) Description A description of cleaning and disinfection procedures to be followed before the converted facilities will be placed into operation for reclaimed water distribution. For the conversion of existing sewer and wastewater collection systems, cleaning and disinfection of the system shall be conducted in accordance with AWWA standards (ANSI/AWWA C651-05, effective June 1, 2005). Procedures to dispose of flush water from cleaning or disinfection shall be those described in the operations and

maintenance manual of the system for the disposal of flush water from maintenance activities;

g.-(6) Assessment An assessment of the physical condition and integrity of facilities to be converted; and

h.-(7) Reasonable assurance that cross-connections will not result, public health will be protected, and the integrity of potable water, wastewater, and reclaimed water systems will be maintained when the conversion is made.

b. An operations and maintenance manual for the system converted to a reclaimed water distribution system in accordance with 9VAC25-740-140 B, containing, at a minimum, the items specified in 9VAC25-740-140 D.

Valerie Rourke provided an overview of the proposed amendments. Her overview included the following:

- Submission of an O&M manual is required for conversion, plus a system conversion plan as a separate document.
- Procedures for disposal of flush water from a converted system will be similar to those required for maintenance of a reclaimed water distribution system.

RAP discussions of these proposed amendments included the following:

- What is the "assessment of the physical condition" requirement identified in B 6 a (6)? *Staff noted that there is no definition of this assessment included in the regulation, it would include questions such as are pipes cracked, sealed, etc.; is there significant I&I?*
- New language was added in 140 B 2? How does that relate to this section? *Staff noted that some of the language in 140 B 2 was taken out of proposed 110 B 2, which has since been deleted.*
- Previous language in 140 B 2 dealt with waste or wastewater, the new language deals with reclaimed water. It seems to be an unreasonable expectation to be asked to find a way to deal with reclaimed water during flushing, and dealing with it as a waste.
- There was a concern where a large volume of flush water might be discharges to a stream. Reclaimed water might be collected for use, rather than expecting it would be disposed.
- Current examples are prohibition against flushing hydrants into storm drains or receiving waters.
- Where does the water being flushed from a hydrant go?
- Discharge may be covered under a VPDES permit or not directed to surface waters.
- Could ultimate disposal of flush water be addressed in VPDES permit or is it a prohibition against any discharge? Could we modify language so that it says "within reclaimed water management plan, identify method of disposition of flush water? *Staff noted that DEQ will be reviewing the O&M and approving them so that options other than disposal are available for flush water.*
- Can we modify language to offer option to discharge to storm drains? Or make it a requirement of the O&M manual that it includes "methods to handle and dispose of wastes or flush water

generated by maintenance of system in a manner protective of the environment? *Staff noted that they would look over this language and these suggestions.*

- On page 29, under 6.e signing and labeling – there was language taken out. Do we need top reference that language as part of conversion plan? *Staff noted that the language was consolidated under language in 110 B 8. The conversion plan would include the requirements identified in B 8.*
- All of these requirements for marking lines for conversion – are these taken from building code standards, or what is the origin of the language? *Staff noted that the language was adapted from another states' reuse regulation.*
- Regarding multiple POCs, some of this would be redundant. If you are determining compliance out in the distribution system, it is like a safety chain on a trailer. Ultimately the water purveyor is responsible and it is an unnecessary layer of regulation. If you are not going to add multiple POCs, it would make sense to put this level of detail in the regulation. Otherwise it could be addressed in guidance. If we go with multiple POCs, this level of detail is not necessary. This in reference to requirements on page 29. It is good guidance to give purveyors, but is not necessary if POCs are required.
- Identification of reclaimed water lines is a cross-connection prevention measure.
- A responsible purveyor would not allow or would correct any issue related to cross-connection.
- This is clean water and is not readily identifiable as wastewater. Therefore, cross-connection requirements are necessary and marking is a good idea.
- There is a mixed bag of state regulatory requirements on multiple POCs, but all states require marking of lines.
- There seems to be overkill in the regulations regarding managing the service area, rather than end of treatment compliance requirements. There is a paradigm difference between what we do with NPDES and what we do with reuse. DEQ may want to say in regulatory documents that concern over direct exposure to wastewater is the reason for additional requirements in regulation (marking of lines, multiple POCs, etc.)
- The AWWA standard for disinfection of sewer lines converted to drinking water lines has been added to 110 B 6 a (5). Is this standard applicable applicable to sewer lines converted to reclaimed water lines?
- Highly chlorinated potable water is required to disinfect an existing sewer line that will be put into service as a potable waterline. There is no standard for disinfection of a sewer line converted to reclaimed water line. *Staff noted that due to lack of a standard, the drinking water standard for disinfection was used. If conditions exist where using reclaimed water to disinfect the line would be appropriate, a variance could be requested if it would be impractical to get potable water to the converted line.*

7. Discussion of Specific Amendments Made in Response to Prior RAP Comments – Facilitated Discussions (Valerie Rourke; Bill Norris and RAP Members) – Identification and Notification Requirements for Reclaimed Water Distribution Systems (9VAC25-740-110 B 8)

9VAC25-740-110 B 8, found on Page 29 - 31 of the proposed amendments, contains the following language:

B. Reclaimed water distribution system.

8. Reclaimed water distribution systems shall have the following identification, notification and signage:

a. ~~All reclaimed~~ Reclaimed water piping with an outer diameter greater than or equal to one inch, installed in-ground after [effective date of amended regulation] or above-ground shall have display the words "CAUTION: RECLAIMED WATER - DO NOT DRINK" ~~embossed, integrally stamped, or otherwise affixed to the piping, and shall be identified by one or more of the following methods:~~

~~(1) Painting the piping purple (Pantone 522) and stamping the piping with the required caution statement on opposite sides of the pipe, repeated at intervals of three feet or less.~~

~~(2) (1) Using stenciled pipe~~ Stenciling or stamping the piping with two- to three-inch letters on opposite sides of the pipe piping, placed at intervals of three to four feet. For pipes piping less than two inches in and greater than or equal to one inch outer diameter, lettering shall be at least 5/8 inch, placed on opposite sides of the pipe piping, and repeated at intervals of one foot.

~~(3) (2) Wrapping the piping with purple (Pantone 522) polyethylene vinyl wrap or adhesive tape, placed longitudinally at three-foot intervals. The width of the wrap or tape shall be at least three inches, and shall display the required caution statement in either white or black lettering.~~

~~(4) (3) Permanently affixing purple (Pantone 522) vinyl adhesive tape on top of the piping, parallel to the axis of the pipe piping, fastened at least every 10 feet to each pipe section, and continuously for the entire length of the piping. The width of the tape shall be at least three inches, and shall display the required caution statement in either white or black lettering.~~

~~(4) Using an alternate method that assures the caution statement will be displayed to provide an equivalent degree of public notification and protection if approved by the board.~~

b. Additional methods, if provided, to identify reclaimed water piping with an outer diameter greater than or equal to one inch (e.g., permanently color coding the piping Pantone 522 purple), shall not obscure any portion of the caution statement required pursuant to subdivision B 8 a of this subsection.

c. Reclaimed water piping with an outer diameter less than one inch shall require the following:

(1) Where installed in-ground after [effective date of amended regulation] or above ground, the piping shall be permanently color coded purple (Pantone 522). Longitudinal purple striping of the piping may be allowed provided the cumulative width of the stripes is greater than or equal to 25 percent of the outer pipe diameter.

(2) Where installed within a building or structure, the piping shall have in addition to color coding required per subdivision B 8 c(1) of this subsection, the words "CAUTION: RECLAIMED WATER - DO NOT DRINK" embossed, stenciled, stamped or affixed with adhesive tape on the piping, placed on opposite sides of the piping and repeated at intervals of one foot. Lettering of the caution statement shall be of a size easily read by a person with normal vision at a distance of two feet.

~~b.-d.~~ All visible, other above-ground portions of the reclaimed water distribution system, including reclaimed water piping, valves, outlets (including fire hydrants) and other appurtenances shall be colored-coded, taped, labeled, tagged or otherwise marked to notify the public and employees that the source of the water is reclaimed water, not intended for drinking or food preparation. For reclaimed water treated to Level 2, such notification shall also inform employees to practice good personal hygiene for incidental contact with reclaimed water and the public to avoid contact with the reclaimed water.

~~c.-e.~~ Each mechanical appurtenance of a reclaimed water distribution system shall be colored purple and legibly marked "RECLAIMED WATER" to identify it as a part of the reclaimed water distribution system and to distinguish it from mechanical appurtenances of a potable water distribution system or a wastewater collection system.

~~d.~~ Existing underground distribution or collection pipelines and appurtenances retrofitted for the purpose of distributing reclaimed water shall be colored-coded, taped, labeled, tagged or otherwise identified as described in subdivisions 8 a, b and c of this subsection. This identification need not extend the entire length of the retrofitted reclaimed water distribution system but is required within 10 feet of locations where the distribution system crosses a potable water supply line or sanitary sewer line. **[Moved to B.8.g below and modified.]**

~~e.-f.~~ Valve boxes for reclaimed water distribution systems shall be painted purple. Valve covers for reclaimed water distribution lines shall not be interchangeable with potable water supply valve covers.

g. Existing potable water distribution systems, sewer or wastewater collection systems, or irrigation distribution systems that are converted to reclaimed water distribution systems in accordance with subdivision B 6 of this subsection after [effective date of amended regulation], shall be retrofitted to meet identification, notification and signage requirements of subdivision B 8 of this subsection with the following exceptions:

(1) For converted systems requiring the submission of a conversion plan and an operations and maintenance manual in accordance with subdivision B 6 of this subsection, existing in-ground converted piping shall be retrofitted to a distance not less than 10 feet from locations where the piping crosses or is crossed by a potable water supply line or sanitary sewer line.

(2) For all other converted systems, identification, notification and signage requirements specified in subdivision B 8 of this subsection for in-ground piping shall not apply.

Valerie Rourke provided an overview of the proposed amendments. Her overview included the following:

- Much of the changes made to the requirements to reclaimed water piping (pages 29-31) were based on actual experience of DEQ staff in implementing the regulation and observing issues encountered during construction.
- Two broad categories of requirements were established in the regulation, one for small pipes and another for larger pipes. In the May 2nd RAP meeting some members expressed concern over requirements for irrigation systems, and the revised language is intended to address those concerns.

The RAP did not raise any concerns about the proposed amendments to this section of the regulations.

8. Discussion of Specific Amendments Made in Response to Prior RAP Comments – Facilitated Discussions (Valerie Rourke; Bill Norris and RAP Members) – Emergency Authorization for the Production, Distribution or Reuse of Reclaimed Water (9VAC25-740-45; 9VAC25-740-105)

9VAC25-740-45, found on Page 8 of the proposed amendments, contains the following language:

9VAC25-740-45. Emergency authorization for the production, distribution or reuse of reclaimed water.

A. The board may issue an emergency authorization for the production, distribution or reuse of reclaimed water when it finds that due to drought there is insufficient public water supply that may result in a substantial threat to public safety. The emergency authorization may be issued only after:

1. Conservation measures mandated by local or state authorities have failed to protect public safety, and
2. The Virginia Department of Health has been notified of the application to issue an emergency authorization and has been provided not less than 14 days to submit comments or recommendations to the board on the application.

B. An emergency authorization may be issued in addition to an Emergency Virginia Water Protection Permit (9VAC25-210) for a new or increased public water supply withdrawal.

C. An emergency authorization may be issued to only existing VPDES or VPA permitted municipal treatment works that:

1. Are not currently authorized to produce, distribute or reuse reclaimed water in accordance with 9VAC25-740-40;
2. Are currently capable of producing reclaimed water meeting minimum standard requirements of 9VAC25-740-90 for proposed reuses listed in the application for an emergency authorization; and
3. Do not have significant industrial users (SIUs), or do have SIUs and a pretreatment program developed, approved and maintained in accordance with Part VII of the VPDES Permit Regulation (9VAC25-31-730 through 9VAC25-31-900).

D. An emergency authorization may be issued for only reuses of reclaimed water deemed necessary by the board. In no case shall an emergency authorization be issued in lieu of a VPDES permit action for a reuse that involves a discharge of reclaimed water to surface waters.

E. An application for an emergency authorization issued pursuant to this section shall provide the information specified in 9VAC25-740-105. No later than 180 days after the issuance of an emergency authorization, the holder of the authorization shall apply for coverage under a VPDES or VPA permit in accordance with 9VAC25-740-40. Thereafter, the emergency authorization shall remain in effect until the board acts upon the application for the VPDES or VPA permit in accordance with 9VAC25-740-30

B.

F. There shall be no public comment period for the issuance of an emergency authorization.

9VAC25-740-105, found on Pages 26-27 of the proposed amendments, contains the following language:

9VAC25-740-105. Application for an emergency authorization.

A. An application for an emergency authorization as described in 9VAC25-740-45 shall include information addressing the following:

1. Contact information of the applicant or permittee including name, mailing address, telephone number, and if applicable, fax number and electronic mail address;
2. Name of the city or county where the emergency production, distribution and reuse of reclaimed water shall occur;
3. Recent and current water use including monthly water use in the previous calendar year and weekly water use in the previous six months prior to the application. The application shall identify the sources of such water and also identify any water purchased from other water suppliers;
4. A description of the severity of the public water supply emergency, including for reservoirs, an estimate of days of remaining supply at the current rates of use and replenishment; for wells, current production; for intakes, current streamflow;
5. A description of mandatory water conservation measures taken or imposed by the applicant or permittee and the dates when the measures were implemented. For the purposes of obtaining an emergency authorization, mandatory water conservation measures shall include, but are not limited to, the prohibition of lawn and landscape watering, non-commercial vehicle washing, the watering of recreation fields, refilling of swimming pools, and the washing of paved surfaces;
6. An estimate of water savings realized by implementing mandatory water conservation measures;
7. Documentation that the applicant or permittee has exhausted all public water supply management actions that would minimize the threat to public welfare, safety and health, and would avoid the need to obtain an emergency authorization. This may include among other actions, the acquisition of an Emergency Virginia Water Protection Permit (9VAC25-210) for a new or increased withdrawal;
8. Any other information demonstrating that public water supply conditions are a substantial threat to public health or safety;
9. Name, address and permit number of the municipal treatment works that proposes to produce, distribute or reuse reclaimed water under the emergency authorization;
10. A statement confirming that the municipal treatment works:
 - a. Does not have SIUs, or
 - b. Has SIUs and a pretreatment program developed, approved and maintained in accordance with Part VII of the VPDES Permit Regulation (9VAC25-31-730 through 9VAC25-31-900);
11. Information regarding the design and operation of the treatment works, demonstrating that the facility is currently capable of producing reclaimed water meeting minimum standard requirements of 9VAC25-740-90 for reuses listed in the application pursuant to subdivision A 12 of this subsection;
12. Information specified in 9VAC25-740-100 B 3 d regarding the diversion of source water from the treatment works to reclamation and reuse;

13. A list of proposed reuses for reclaimed water produced by the municipal treatment works and an explanation of how these reuses will protect public health and safety under the current public water supply conditions;

14. A description of the system that will be used to distribute reclaimed water from the municipal treatment works to the intended reuses; and

15. A signed and dated certification statement in accordance with signatory requirements of the VPDES Permit Regulation (9VAC25-31) or the VPA Permit Regulation (9VAC25-32), whichever applies to the permit issued to the municipal treatment works.

B. The application for a permit described in 9VAC25-740-100 may be used as an application to issue an emergency authorization where the permit application contains the information required in subsection A of this section.

Valerie Rourke provided an overview of the proposed amendments. Her overview included the following:

- At the June 2nd RAP meeting, concerns were noted that it seems overly restrictive to limit emergency authorization to Level 1 water; and also that downstream users be notified.
- The regulation was revised to include Level 1 and Level 2.
- Cumulative impact analysis of consumptive use would be conducted in the evaluation of the emergency authorization.
- Any discharges would be required to be covered under a VPDES permit. Emergency authorizations cannot be used to authorize discharges to surface waters.

RAP discussions of these proposed amendments included the following:

- It is not clear who is applying for these permits.
- 9. Discussion of Specific Amendments Made in Response to Prior RAP Comments – Facilitated Discussions (Valerie Rourke; Bill Norris and RAP Members) – Management of Pollutants from Significant Industrial Users (9VAC25-740-90 C 5; 9VAC25-740-150)**

9VAC25-740-90 C 5, found on Page 21 of the proposed amendments, contains the following language:

9VAC25-740-90. Minimum standard requirements for reuses of reclaimed water.

C. For any indirect potable reuse (IPR) project that is newly proposed after [effective date of amended regulation], the following are required:

5. VPDES permitted treatment works that have SIUs and provide source water for reclamation and subsequent IPR shall, if required, have a pretreatment program or a program equivalent to a pretreatment program in accordance with 9VAC25-740-150 E.

9VAC25-740-150, found on Pages 36-37 of the proposed amendments, contains the following language:

9VAC25-740-150. Management of pollutants from significant industrial users.

A. A reclamation system that receives effluent from a wastewater treatment works having significant industrial users (SIUs) as defined by the VPDES Permit Regulation (9VAC25-31-10), SIUs shall not be permitted to produce reclaimed water treated to meeting Level 1 or for reuse in areas accessible to the public or where human contact with the reclaimed water is likely standards, unless the wastewater treatment works providing effluent to the reclamation system is:

1. The wastewater treatment works providing effluent to the reclamation system is a publicly owned treatment works (POTW) as defined in the VPDES Permit Regulation (9VAC25-31-10), that has a pretreatment program developed, approved and maintained in accordance with Part VII of the VPDES Permit Regulation (9VAC25-31-730 through 9VAC25-31-900); or

2. Any other POTW or privately owned treatment works as defined in the VPDES Permit Regulation (9VAC25-31-10), with either a VPA or VPDES permit that has developed a program to manage pollutants of concern discharged by SIUs, equivalent to a pretreatment program required in the VPDES Permit Regulation for qualifying POTWs. The reclamation system has evaluated effluent from the treatment works for pollutants of concern discharged by SIUs to the treatment works, and has confirmed that such pollutants shall not interfere with the ability of the wastewater treatment works to produce source water suitable for the production of reclaimed water meeting Level 1 standards. All such evaluations by the reclamation system shall be submitted to the board for review and approval, and shall be repeated for each new SIU that proposes to discharge to the treatment works prior to commencing such discharge. The reclamation system shall maintain a current inventory of SIUs discharging to the treatment works.

B. The permittee of a reclamation system authorized to produce reclaimed water treated to Level 1 or for reuse in areas accessible to the public or where human contact is likely, shall establish a contractual agreement with all wastewater treatment works providing effluent or source water to the reclamation system unless the reclamation system and the treatment works are authorized by the same permit. The purpose of the contractual agreement shall be to ensure that reclaimed water discharged from the reclamation system is safe for use in areas accessible to the public or where human contact is likely. The contractual agreement shall, at a minimum, require the treatment works to notify the reclamation system of all SIUs that discharge to the treatment works. Prior to Upon execution of the contractual agreement, a draft copy of the contract agreement shall be provided to the board for review and approval. A contractual agreement will not be required where the permittee of the reclamation system is also the permittee of the wastewater treatment system that provides effluent or source water to the reclamation system.

C. A satellite reclamation system (SRS) that receives municipal wastewater or sewage from a sewage collection system pipeline with contributions from SIU discharges, excluding any SIUs whose discharge has no potential to reach the SRS intake, shall not be permitted to produce reclaimed water meeting Level 1 standards, unless the SRS has evaluated pollutants of concern discharged by the SIUs and has confirmed that such pollutants shall not interfere with the ability of the SRS to produce reclaimed water meeting Level 1 standards. All such evaluations by the SRS shall be submitted to the board for review and approval, and shall be repeated for each new SIU as described above that proposes to discharge to the sewage collection system prior to commencing such discharge. The SRS shall maintain a current inventory of all SIUs that discharge pollutants of concern to the sewage collection system capable of reaching the intake of the SRS.

D. The permittee of a SRS authorized to produce reclaimed water treated to Level 1, shall establish a contractual agreement with the sewage collection system providing sewage to the SRS. The contractual agreement shall, at a minimum, require the sewage collection system to notify the SRS of all SIUs that discharge to the sewage collection system. Upon execution of the contractual agreement, a copy of the agreement shall be provided to the board.

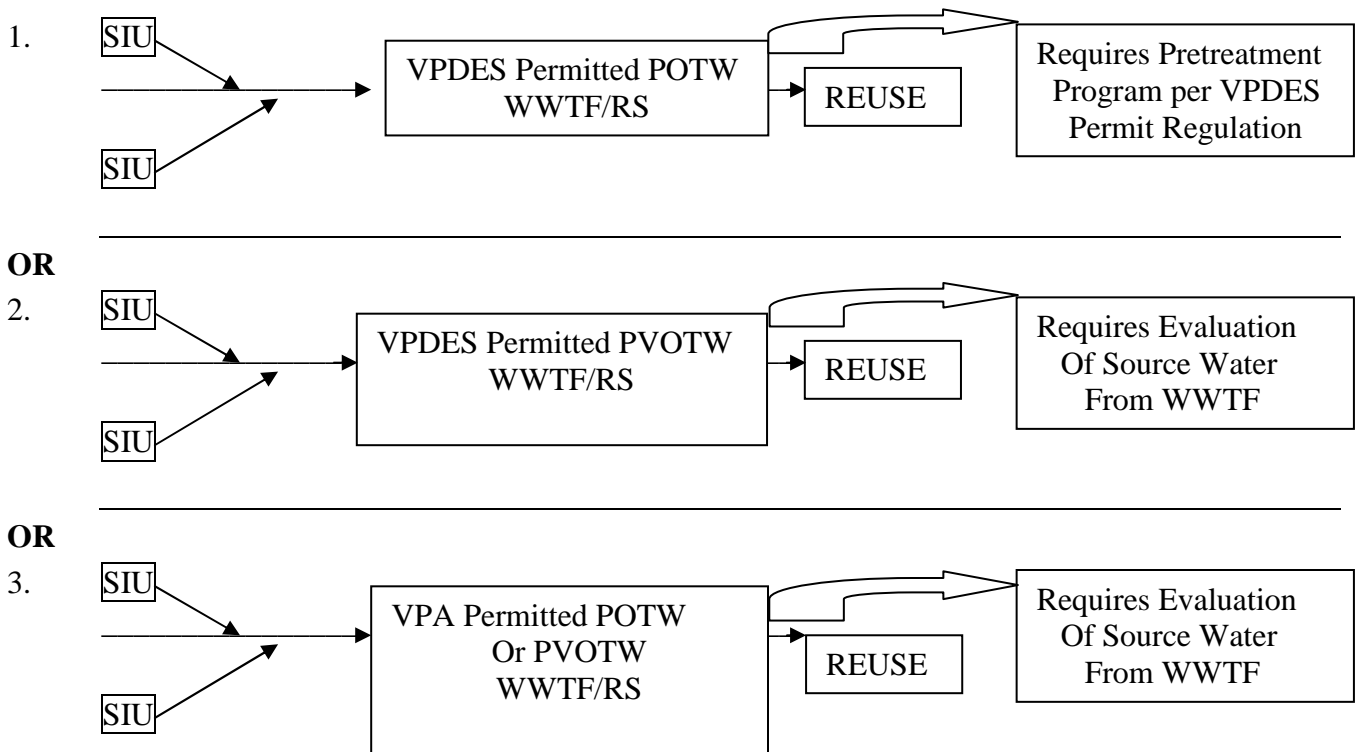
E. Any VPDES permitted treatment works with SIUs that provides source water for reclamation and subsequent indirect potable reuse shall have the following:

1. For publicly owned treatment works, a pretreatment program where required by the VPDES Permit Regulation or otherwise deemed necessary by the board, in accordance with procedures described in Part VII of the VPDES Permit Regulation (9VAC25-31-730 through 9VAC25-31-900).

2. For all other treatment works, a program equivalent to a pretreatment program as described in Part VII of the VPDES Permit Regulation (9VAC25-31-730 through 9VAC25-31-900), if deemed necessary by the board.

Valerie Rourke provided an overview of the proposed amendments. Her overview included the following:

- The changes relate to requirements for a pretreatment program in response to RAP member concerns.
- The following diagram of what DEQ is proposing to require for conjunctive systems (combined wastewater treatment works and reclamation systems) was presented:



- VPDES publicly owned treatment works (POTW) do not require evaluation of source water – pretreatment program prevails.
- VPDES permitted privately owned treatment works (PVOTW) or VPA permitted treatment works would require evaluation of source water by the reclamation system.

RAP discussions of these proposed amendments included the following:

- Does this language reflect what was sent to DEQ? *Staff response: What was proposed by VAMWA deletes language at the bottom of page 36 to 37. We don't want to dismiss options available to ensure input from SIUs is addressed.*
- The intent of the VAMWA comment was to not regulate what was over and beyond what concern is for downstream users. The modification proposed still allowed for assessment of contaminants in source water, but doesn't make is a requirement for a pretreatment program. *Staff response: The proposed language does not require a pretreatment program, but offers an option for producing Level 1 reclaimed water that involves an evaluation where the treatment works does not have a pretreatment program.*
- It appears that DEQ has captured the intent of the comment , which is to get credit for a pretreatment program but not requiring it.
- There may be some contaminants not addressed in Level 1 limits that could be of concern coming from SIUs (organics, etc.). The evaluation should be clear that it is not limited to whether or not the water meets Level 1 standards. It should be the equivalent of a pretreatment program.
- An example would be a military facility that collects a high amount of metals. This facility might have a VPDES that does not have a pretreatment program, but may want to produce Level 1 water.
- If a facility is a discharger, someone is watching the metals in the discharge.
- Regulatory requirement for developing the equivalent of a pretreatment program is only for indirect potable reuse. *Staff response: DEQ always has the option of requiring additional standards for the reclamation system. Language could be expanded to include "level 1 standards or other standards."*
- If you are evaluating an industrial component, wouldn't you also evaluate impact on intended reuse? It seems that a small tweak in language would clarify need to evaluate impact on intended reuse.
- What would you relate the level to if there is no standard?
- This could be similar to the way contaminants in biosolids are addresses. Some contaminants are not regulated (e.g. dioxin) because they are unlikely to be found. Where such a contaminant is expected to be found, however, it would be analyzed and an acceptable limit determined on a case-by-case basis. There are usually standards available for these rare contaminants.
- If there is no standard, what criteria would be used? Arbitrary standards would not be appropriate.

- It could be a simple as modifying the first sentence on page 37. Add standard for "and intended reuses." *Staff response: It may be more appropriate to add "and any other applicable standards applied in accordance with 9VAC2740-70 D."*
- There seemed to be some confusion among RAP members as to whether pretreatment concern was only to address Level 1 standard or anything that would cause interference with intended reuse.

10. Discussion of Specific Amendments Made in Response to Prior RAP Comments – Facilitated Discussions (Valerie Rourke; Bill Norris and RAP Members) – Notification Upon Receipt of a Water Reclamation and Reuse Application to Owners of Downstream Water Withdrawals (9VAC25-740-50 B 7; 9VAC25-740-100 B 3 d; 9VAC25-740-105 A 12)

9VAC25-740-50 B 7, found on Page 10 of the proposed amendments, contains the following language:

9VAC25-740-50. Exclusions and prohibitions.

B. Prohibitions. The following are prohibited under this chapter:

7. The flow of source water diverted from a VPDES permitted treatment works for reclamation and reuse shall not reduce the discharge of the treatment works such that the physical, chemical or biological properties of the receiving state waters are impaired to levels that would cause a significant adverse impact to other beneficial uses.

9VAC25-740-100 B 3 d, found on Page 21 of the proposed amendments, contains the following language:

9VAC25-740-100. Application for permit.

B. General information. For projects that involve water reclamation and the distribution of reclaimed water, the following information shall be submitted with an application for a permit. Information required for this subsection may be provided by referencing specific information previously submitted to the board unless changes have occurred that require the submission of new or more current information. For projects that involve exclusively the distribution of reclaimed water, information for only subdivisions B 1, 2, and 5 of this subsection shall be submitted with an application for a permit.

3. Information regarding each wastewater treatment works that diverts or will divert effluent or source water to the reclamation system to be permitted, including:

d. The following for only VPDES permitted wastewater treatment works that propose a new diversion or an increase in their existing diversion of source water to reclamation and reuse:

(1) The latitude and longitude of the treatment works discharge location to surface water;

(2) The mean monthly discharge of the treatment works for each month during the most recent 60 or more consecutive months at the time of application, or where this information is not available, estimated values for the mean monthly discharge of the treatment works for each month during a period of 12 consecutive months;

(3) The maximum monthly diversion of source water from the treatment works to reclamation and reuse for each month during a period of 12 consecutive months; and

(4) The information specified in subdivisions B 3 d (1), (2) and (3) of this subsection for each increase in source water diverted by the treatment works to reclamation and reuse among multiple increases to occur in planned phases, and the anticipated dates of the phased increases.

9VAC25-740-105 A 12, found on Page 27 of the proposed amendments, contains the following language:

9VAC25-740-105. Application for an emergency authorization.

A. An application for an emergency authorization as described in 9VAC25-740-45 shall include information addressing the following:

12. Information specified in 9VAC25-740-100 B 3 d regarding the diversion of source water from the treatment works to reclamation and reuse;

Valerie Rourke provided an overview of the proposed amendments. Her overview included the following:

- Some concerns have been brought to DEQ that downstream users would not be notified of applications to add a reuse that was administratively approved.
- The proposed language at 9VAC25-740-50 B 7 (page 10) related to impact on other beneficial uses. This language is very similar to language already contained in State Water Control Law, although this language has been tailored to reuse.

RAP discussions of these proposed amendments included the following:

- How would "significant" be determined? *Staff response: The DEQ Water Supply Planning group would conduct evaluation cumulative impact analysis according to agency guidance to make this determination.*
- Is there consideration made to the value of the downstream use versus the proposed reuse? *Staff response: This would be addressed within the Water Supply Planning cumulative impact analysis.*
- There appears to be good intent to the language added by DEQ. The downstream user may not want to prohibit the upstream reuse as long as there was some agreement with the upstream and downstream parties to mitigate downstream impact. *Staff response: There may be a special provision in the reuse permit to address reuse during drought conditions. Reclaimed water must*

still be conserved so that the reduced discharge does not negatively impact downstream water supply.

- There should be enough flexibility in the permit development to allow reclaimed water users and withdrawers to work together to establish workable agreements. Placing it in the "prohibitions" section may not be the appropriate place for it. Public notice would allow for more dialogue to occur between users to establish workable solutions and collaboration.
- Was the insertion of this prohibition DEQ's response to the RAP's concern about the need for public notice and comment. *Staff response: This language was inserted as part of the response to the noted concern. The cumulative impact analysis would serve as the platform for the development of a sustainable reuse program without adverse downstream impacts.*
- The word "impaired" may not be the right word in this context of language in 9VAC25-740-50 B 7.
- Downstream consumptive uses are not the only impact. This could include recreational uses as well. The impact analysis would include all of the impacts related to any proposal for a withdrawal.
- There is a balance that must be met between promoting reuse and utilization of the water. Staff response: The same information would also be required for an emergency authorization (see page 21).
- "Source water" is not defined. *Staff response: The intent is to refer to effluent from the WWTP that is to be treated as reclaimed water. There has been sentiment from the RAP that the use of the term "effluent" be avoided, and that it be clear that the water is being routed for beneficial use.*
- It seems that subsections A and B of section 100 should be specified to refer to wastewater.

11. Discussion of Any Issues Raised by the RAP on Proposed Amendments – 9VAC25-740-60 G - Facilitated Discussion (Valerie Rourke; Bill Norris and RAP Members)

Discussions on this issue included the following:

- Question about 9VAC25-740-60 G. Water withdrawal reporting regulation – reporting location and source of water withdrawals – Do VPDES facilities report withdrawals or VWP? Why is it limited to industrial permittees?

ACTION ITEM: Valerie Rourke will consult with Scott Kudlas to determine the answer to this question.

- Is the language about diminution of water withdrawal new language? Staff response: This is language that has been in the proposals that were distributed to the RAP earlier in the process.
- The RAP members had questions about the water withdrawal reporting requirements.

12. Discussion of Any Issues Raised by the RAP on Proposed Amendments – VAMWA Comments – Submitted by Cabell Vest – AquaLaw - Facilitated Discussion (Valerie Rourke; Bill Norris and RAP Members)

VAMWA provided the following comments for consideration:

9VAC25-740-100. Application for permit.

- A. [No changes]
- B. General information. [No changes]
- C. Reclaimed water management plan. [No changes]
- D. Indirect potable reuse (IPR). For an application to permit an IPR project, the following additional information shall be submitted by the applicant or permittee to the board:
 - 1. [No changes]
 - 2. [No changes]
 - 3. A description of multiple barrier to be implemented by the reclamation system, waterworks or both to produce water of a quality suitable for IPR. Multiple barrier shall include, at a minimum:
 - a. Source control and protection. This involves the control of contaminants with potential to adversely impact public health by preventing or minimizing the entry of these contaminants into the wastewater collection system prior to reclamation or the PWS prior to withdrawal by the waterworks. Source control and protection shall, at a minimum, address pretreatment requirements for SIUs in accordance with 9VAC25-740-150 E.
 - b. Effective and reliable treatment. [No changes]
 - c. Environmental buffers and natural attenuation. This involves the uses of an environmental buffer, such as surface or ground water used as a PWS source, to provide further removal or degradation of certain contaminants when exposed to naturally occurring physical, chemical and biological processes in the environment over time.
 - d. Monitoring programs. [No changes]
 - e. Responses to adverse conditions.
 - 1. [No changes]
 - 2. Delete subsection.
 - 3. [No changes]
 - 4. [No changes]
 - 5. [No changes]
 - 6. [No changes]
 - 7. [No changes]
 - 8. Unless the reclamation system and waterworks are under common ownership or management, an outline identifying the responsibilities of the reclamation system and the waterworks of the IPR project in implementing multiple barriers described in accordance with subdivision D 3 of this subsection.

9VAC25-740-170. Use area requirements.

- A. Education and notification program. [No changes]
 - 1. Education. [No changes]
 - 2. Notification. [No changes]
 - a. Notifications required for discharge of substandard reclaimed water to reuse. [No changes]
 - 1. For reuses other than IPR. [No changes]
 - 2. For IPR. Where treatment of the reclaimed water fails at any time to comply with standards specified in 9VAC25-740-90 C or developed in accordance with 9VAC25-740-90 B, and is discharged to the PWS, the permittee shall, within twenty-four (24) hours of becoming aware of a non-compliant discharge, notify the owner or management of the waterworks that withdraws water from the affected PWS of the time, duration, volume and pollutant characteristics of the non-compliant reclaimed water that is discharged. [Deletes subsections a., b. and c., and combines into single subsection 2.]
 - b. Notifications required for loss of service. [No changes]
 - 1. For reuses other than IPR. [No changes]

2. For IPR. For planned interruptions of the discharge from the reclamation system to the PWS, such as scheduled maintenance or repairs, the permittee shall provide advance notice of the anticipated date, duration and cause of the discharge interruption(s) to the owner or management of the waterworks that withdraws water from the PWS. Where the discharge of the reclamation system to the PWS is a majority of the potable water supply, and such discharge experiences an unplanned interruption, such as an upset at the reclamation system, the permittee shall notify the waterworks' owner or management of the discharge interruption if the discharge cannot or will not be restored within twenty-four (24) hours of the unplanned interruption of the discharge.

c. [No changes]

9VAC25-740-70. Treatment and standards for reclaimed water.

A. [No changes]

B. Point of compliance (POC). Reclaimed water for reuse shall meet applicable standards in accordance with this chapter, excluding the turbidity standard for Level 1 treatment, at the POC. The POC for Level 1 and Level 2 treatment shall be after all reclaimed water treatment and prior to discharge to a reclaimed water distribution system. Where chlorination is used for disinfection of the reclaimed water, the POC for the TRC standard shall be the monitoring location specified in 9VAC25-740-80 A 2. The POC for the turbidity standard of Level 1 treatment shall be just upstream of disinfection. [Delete two newly proposed, additional POCs.]

9VAC25-740-150. Management of pollutants from significant industrial users.

A. A reclamation system that receives effluent from a wastewater treatment works having SIUs shall not be permitted to produce reclaimed water meeting Level 1 standards, unless the reclamation system has evaluated effluent from the treatment works for contaminants discharged by the SIUs, and has confirmed that such contaminants shall not interfere with the ability of the reclamation system to produce reclaimed water meeting Level 1 standards. All such evaluations by the reclamation system shall be submitted to the board, and shall be repeated for each new SIU that proposes to discharge to the treatment works prior to commencing such discharge. The reclamation system shall maintain a current inventory of SIUs discharging to the treatment works.

B. The treatment works shall maintain a current inventory of SIUs that discharge to the treatment works and, upon request, shall provide such inventory to the permittee of the reclamation system, unless the reclamation system and the treatment works are authorized by the same permit.

C. A satellite reclamation system (SRS) that receives municipal wastewater or sewage from a sewage collection system pipeline with contributions from SIU discharges, excluding any SIUs whose discharge has no potential to reach the SRS intake, shall not be permitted to produce reclaimed water meeting Level 1 standards, unless the reclamation system has evaluated the flow for contaminants discharged by the SIUs, and has confirmed that such contaminants shall not interfere with the ability of the reclamation system to produce reclaimed water meeting Level 1 standards. All such evaluations by the SRS shall be submitted to the board, and shall be repeated for each new SIU as described above that proposes to discharge to the sewage collection system prior to commencing such discharge. The SRS shall maintain a current inventory of SIUs discharging to the sewage system capable of reaching the intake of the SRS.

D. The permittee of an SRS authorized to produce reclaimed water treated to Level 1 shall coordinate with the sewage collection system providing sewage to the SRS to provide for the annual notification by the sewage collection system to the SRS of all SIUs that discharge to the sewage collection system.

E. Any VPDES permitted, publicly or privately owned treatment works with SIUs that provides source water for reclamation and subsequent indirect potable reuse shall, if deemed necessary by the board, develop and maintain a pretreatment program or, in the case of privately owned treatment works, a program equivalent to a pretreatment program in accordance with procedures described in Part VII of the VPDES Permit Regulation (9VAC25-31-730 through 9VAC25-31-900), and approved by the board.

RAP discussions included the following:

- *Staff comment: Comments from VAMWA omit subdivision A 1 on page 36. DEQ's intent is to use pretreatment program as adequate, if it exists. "Pollutants of concern" was replaced with "contaminants". Is there a specific reason for this?*

- There are varying terms used to describe this group of chemicals. The term chosen is not of paramount concern.
- Pollutants are not limited to industrial sources.
- Staff comment: VAMWA comment removed requirement for submission for review and approval by the board.
- The term "effluent" is used in section 150 where "source water" was used in another section.

ACTION ITEM: Staff will look at the use of the terms "effluent" vs. "source water" for consistency throughout the regulation.

- Additional discussion regarding requirement for pretreatment program or requirement for review and approval of an evaluation clarified that review and approval is not necessary if approved pretreatment program is in place.
- Does use of pretreatment program terms go beyond DEQ desire to control interference? *Staff response: Reuse regulation has carved out the portion that would address interference, and does not go beyond intent for purposes of reuse.*

13. Discussion of Any Issues Raised by the RAP on Proposed Amendments – Comment from Fairfax Water – Submitted by Greg Prelewicz - Facilitated Discussion (Valerie Rourke; Bill Norris and RAP Members)

Fairfax Water provided the following comment for consideration:

We would like to propose an additional change to the regulation to further improve upon the water reclamation and reuse program. As has been discussed during the RAP meetings, projects that involve a large volume of wastewater effluent could significantly impact instream flow. Although there may be benefits associated with the elimination of the wastewater discharge, there also may be important downsides, particularly with respect to instream flow and impacts to downstream water users. Accordingly, it seems inappropriate to allow significant reuse projects to take place through an administrative authorization, without an opportunity for notice and public comment.

For this reason, we would propose the following regulatory amendment to 9 VAC 25-740-30.B.2.

2. Standards, monitoring requirements and special conditions for water reclamation and reuse projects involving the reuse of greater than 0.5 mgd may be incorporated into a VPDES permit through the major modification process as specified in 9 VAC 25-31-290 and 9 VAC 25-31-370. Standards, monitoring requirements and special conditions for water reclamation and reuse projects involving the reuse of 0.5 mgd or less may be administratively authorized for a VPDES permit without a permit modification unless they effectively alter other conditions of the permit specifically related to the effluent discharge for which the permit was originally issued. 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.

RAP discussions included the following:

- Proposal for notification changes submitted by Greg Prelewicz – proposes that projects proposing reuse of greater than 0.5 mgd be considered a major modification so that there would be notification of downstream users.
- *Staff comment: Currently we are looking at a reuse modification to an existing VPDES permit as a minor modification. Unless it changes other conditions of the existing discharges, i.e., limitations, etc., then it would be considered a major modification and would include notification. Currently, the addition of reuse to an existing permit is considered a minor modification for a VPA permit or an administrative authorization associated with an existing VPDES permit.*
- The proposal for 0.5 mgd is consistent with other WWTP policy related to the Potomac River, but it is somewhat arbitrary.
- *Staff comment: It may be problematic to do this since the VPDES regulation currently specifies what is considered a major modification. There is a specific list of items that classify as major and minor modifications.*
- Flow is a significant parameter in VPDES permit.
- *Staff comment: The use of a cumulative impact analysis would address any changes in flow resulting from a proposed reuse project.*
- Diversion to reclaimed water to reuse should not affect the flow limit of WWTP VPDES permit. Original TAC discussions on reuse regulation focused on ensuring that adding reuse would not be considered a major modification. Perhaps a notification process outside of being a major modification could be considered (i.e., through the application process).
- *Staff comment: DEQ would like to address the crux of potential problem, which is to avoid detrimental impact to downstream uses. Is there is another problem that DEQ needs to address?.*
- WWTP would want to know what upstream uses are present above their plant.
- Stakeholders should have an opportunity to comment on change in flow and impact to downstream use, prior to project being completed, at the time of permit application.
- *Staff comment: An alternative notification process would have to be fairly robust, similar to major modification process that is already being used. Any alternative process would have to be thought through carefully.*
- An alternative or less burdensome approach would be to incorporate reclamation and reuse project additions at the time of permit renewal (every 5 years).
- A 0.5 mgd limit would make almost all reclamation and reuse projects a major modification.
- The concept of using the renewal process to account for the addition of a reuse component was discussed.

14. Meeting Wrap-Up (Bill Norris)

Bill Norris provided the following information to the RAP:

- Any additional comments on the proposed regulation are still welcome from RAP members and should be submitted to his attention via email as soon as possible. Any comments should include specific recommendations for language changes.
- The time schedule for the remainder of this regulatory process is as follows:
 - Agenda review is 07/08/2011.
 - Package mailed to the Board the week of 07/11/2011.
 - The proposed regulation will go before the Board on August 4, 2011 for approval to go to public comment.
 - Executive Branch review and approval will follow and must occur before being advertized for public comment.

15. Nominations and Discussion Points for the Committee to Incentivize Water Reclamation and Reuse (Valerie Rourke; Bill Norris; Jeff Reynolds; RAP members)

Bill Norris provided copies of Chapter 189 of the 2011 Acts of Assembly, the letter from Delegate Harvey Morgan and a copy of draft discussion points for the committee to study incentivizing Reclamation and Reuse, and a list of persons who had expressed an interest in serving on the advisory committee.

The Draft Discussion Points for the Committee to Study Incentivizing Water Reclamation and Reuse included the following:

Background

- Efforts to incentivize water reclamation and reuse
 - Letter from Delegate Harvey Morgan to VDH and DEQ
 - SB 1427 (Development of Water Reuse Project Criteria for WQIF)
- Letter from Delegate Harvey Morgan to VDH and DEQ dated 2/24/11, requests:
 - Establishment of committee of stakeholders to:
 - Explore and identify opportunities to expand the reuse of wastewater with the goal of:
 - Resource conservation
 - Reduction of nutrient pollution of the surface waters of the Commonwealth
 - Examine practices in other states (e.g., FL, GA, etc.) that have developed policies and programs to reduce surface water discharges through beneficial reuse of wastewater
 - Preparation of a report identifying statutory and regulatory changes, including potential incentives, to reduce discharges to surface waters through water reclamation and reuse
- SB 1427 – requires the Secretary of Natural Resources to develop written guidelines that ... “define criteria and financial incentives for water reuse” related to Water Quality Improvement Funds.

Draft Discussion points

- Should Virginia consider land treatment and disposal of wastewater in addition to water reuse as a means to reduce surface water discharges? If so, irrigation with reclaimed water may need to be distinguished from land treatment and disposal of wastewater.

- What policies and programs do Florida and Georgia have in place to reduce surface water discharges through beneficial reuse of wastewater?
- What existing regulations, policies and programs does Virginia have in place to incentivize, or that could be used to incentivize, non-discharging alternatives to surface water discharges?
- - Sewage Collection and Treatment Regulations (9VAC25-790) - contain design, construction and operation requirements for sewage land treatment systems, including slow-rate irrigation, over land flow, and infiltration basins.
 - The Water Reclamation and Reuse Regulation (9VAC25-740) - was developed in accordance with § 62.1-44.15(15) of the Code of Virginia to promote and encourage the reclamation and reuse of wastewater “as an alternative to directly discharging pollutants into waters of the state”.
 - The Local and Regional Water Supply Planning Regulation (9VAC25-780) - requires every county, city, and town to develop a water plan in accordance with established planning criteria. Where appropriate, the plan may consider nontraditional means of increasing supplies such as interconnection, desalination, recycling and reuse.
 - Sections 62.1-44.19:12 through 62.1-44.19:19 of the Code of Virginia - established the Regulation for Nutrient Enriched Waters and Discharges within the Chesapeake Bay Watershed (9VAC25-40); allows for credit to be given for reductions in total nitrogen and total phosphorus discharged loads through recycle or reuse of wastewater when determining technology requirements associated with new or expanded discharges.
- What are limitations to incentivizing non-discharging, land-based alternatives to a surface water discharge?
- Should the implementation of non-discharging, land-based alternatives be made mandatory or continue to be driven by market demand relative to other methods to conserve water and to reduce nutrient loads to surface waters?

Discussion Points Suggested by the RAP for the Committee as of 6/2/11

1. Discuss incentivizing water reclamation and reuse in the existing guidance for the current handling of water reclamation and reuse projects.
2. Consider the use of “service agreement” instead of a “contract” between reclaimed water agents and end users as a way to incentivize water reuse.

Valerie Rourke asked RAP members that do not want to be on the tentative list of committee members to notify Bill Norris or her as soon as possible.

Valerie Rourke reviewed the background information regarding formation of the committee and the content of the Draft Discussion Points.

Discussions included the following:

- Penn State's "Living Filter" program might be a good example of types of projects that could be considered. Under this program State College land applies wastewater 365 days a year to recycle all their wastewater, with extensive groundwater monitoring program. Chip Elliott from Penn State would be a good resource to give a presentation of the benefits to 100% land application.
- Charlie Reddener with Resource International in Ashland would be a good resource to discuss land application, especially warm season grass use.

- *Staff comment: There is a difference between lower rates of irrigation with reclaimed water versus much higher rates of irrigation allowed by land treatment of wastewater.*
- Are we also considering on-site systems? Push to avoid discharges has many facilities looking to VDH programs to address discharge issues by converting to on-site systems.
- We have an obligation to discuss feasibility of land application and reuse for urban areas where land is not available for no-discharge options.
- On the more suburban and agricultural side, there is concern over limitations on economic growth due to limited effluent discharges, and land application is one of the options.
- Competition from reuse of stormwater and gray water to reach TMDL goals should be considered as expanding reuse of wastewater is considered.
- The role of the Nutrient Credit Exchange Program should be considered in the discussions.
- Lewis Lawrence, the Acting Director of the Middle Peninsula Planning District Commission, could be a good resource. He should be included as a member of the committee
- *Staff Comment: Water reuse is one means to meet the goal of reducing discharges to surface waters, but there are other tools that can accomplish the same goal as reuse.*
- *Staff Comment: The elimination of discharges can have effects on downstream uses, and should be included in what the committee considers.*
- We should be creating an environment where innovation is encouraged, and focus on living under an effluent cap.
- *Staff Comment: Reduction of flow could have consequences of increasing pollutant concentrations.*
- Does the letter from Harvey Morgan look at the stormwater component of this? *Staff response: The letter points to DEQ and VDH, but the committee will include DCR representation.*
- Evaluation of a program such as Penn State would shed light on how and what obstacles were overcome. Year round land application has its problems and there are DEQ regulations in place prohibiting this. The concept of using an on-site system in the winter and land application during the growing season could be an option. *Staff response: There are examples of permitted facilities using an on-site system combined with water reuse.*
- What is DEQ's position regarding land based treatment? *Staff response: DEQ does not dictate what a facility must do. It is a decision to be made by the facility based on what is most practical for what a facility will do. Other states (FL and GA) require that if land treatment or irrigation reuse is not used, the facility must demonstrate why not.*
- *Staff comment: DEQ wants to make this a feasible option and create an opportunity.*
- Mass drainfields contribute water to groundwater, so we should incentivize reuse as an alternative. *Staff response: The committee could recommend that the groundwater recharge option be investigated further to encourage recharge through reclamation and reuse rather than through mass drainfields.*
- The "triple bottom line" should be considered: Environmental; Economic; and Societal benefit.
- There was discussion about the contribution of on-site systems to groundwater and nutrient contributions of drainfields to the Bay.

Bill Norris asked for any additional comments and recommendations for the advisory committee to be submitted as soon as possible. He noted that the final makeup of the committee and the date and location of the committee meeting will be announced in the future and distributed via email.

16. Public Input – (Bill Norris):

Staff asked the RAP members and members of the public for any additional thoughts or ideas for the good of the RAP discussions. No additional comments from RAP members or members of the public were received.

17. Meeting Adjournment:

DEQ staff thanked the RAP members for their participation and contributions to the process. The meeting was adjourned at 3:20 PM.