

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

**MEETING NOTES - FINAL  
RAP MEETING – THURSDAY, JUNE 2, 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	Biff Corning – Malcolm Pirnie/ARCADIS	Marcia Degen – VDH (Technical Support)
Bill Keeling – DCR – Alternate for Tim Sexton	James Grandstaff – Henrico County	Connor Kain – DEQ Intern
Leita Bennett - ATKINS	Dan Horne – VDH – Alternate for Wes Kleene	Scott Kudlas - DEQ
Lawrence (Larry) A. Dame – New Kent County	Vernon Land – City of Suffolk	Angela Neilan - DEQ
Gregory (Greg) K. Evanylo – Virginia Tech (Technical Expert)	Gordon M. Larsen – McGuireWoods Consulting LLC	William (Bill) Norris - DEQ
Thomas (Tom) J. Grizzard, Jr. – Virginia Tech and Upper Occoquan Laboratory	Kevin M. Parker – Hampton Roads Sanitation District – Alternate for Jim Pletl	Jeff Reynolds - DEQ
Jeff Hancock – Williamsburg Environmental Group, Inc.	Jim Sizemore – Alexandria Sanitation Authority	Valerie Rourke - DEQ
Eldon James – Rappahannock River Basin Commission		Neil Zahradka - DEQ
Wes Kleene - VDH		
Peter McDonough – Golf Course Superintendents Association		
Karen Pallansch – Alexandria Sanitation Authority & VAMWA		
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: 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 – May 2, 2011 RAP Meeting (Bill Norris):

Bill Norris asked for comments or recommendations for edits to the notes from the May 2nd meeting of the Water Reuse RAP that had been previously distributed to the RAP. It was noted that Wes Kleene should be listed in attendance at the meeting. The RAP members approved the meeting notes as revised.

ACTION ITEM: The Draft meeting notes will be revised to correct the attendee list and reflect approval by the RAP, identified as “Meeting Notes – Final”, and posted to Town Hall.

## 3. Language of Minor and All Significant (Tier I, Tier II, & Tier III) Amendments to the Water Reclamation and Reuse Regulation (Valerie Rourke):

Valerie Rourke noted that during the last RAP meeting, the group had discussed the “minor amendments” and the Tier I Significant Amendments to the Water Reuse Regulation. Today’s discussions will focus on the Tier II and Tier III Significant Amendments. She noted that she will provide an overview of each of the Tier II and Tier III amendments to the Water Reuse Regulation and Angela Neilan will facilitate the discussions of the RAP for each of the amendments.

## 4. Tier II Significant Amendments –Facilitated Discussions (Valerie Rourke; Angela Neilan 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 regulation 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 five 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, at a minimum, Level I standards described in 9VAC25-740-70 A; 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 for indirect potable reuse or for a reuse that involves a discharge of reclaimed water to surface waters requiring a VPDES Permit.

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.

**Valerie Rourke provided an overview of the proposed amendments. RAP discussions of these proposed amendments included the following:**

- Is drought defined anywhere? Is “emergency drought” defined? There are droughts that affect groundwater wells and some that don’t. The regulation should note what triggers an “emergency drought”. Is the severity of the drought defined? It was noted that these are defined by the Governor’s Drought Response Plan. It was suggested that this should be defined or referenced in the regulations. It was noted that the triggers for this section provided in subdivision A 1 and 2 of this section.
- Why in just emergency conditions would you allow this activity? It was noted that this is for existing facilities. New facilities would have to go through the permit process.
- This does not replace proper water supply planning.
- What types of reuses are being considered? This will be addressed during the next sections.
- It was suggested that the clearer it could be in a regulation the better.
- The requirements of the Governor’s Drought Response Plan were discussed.
- The regulation spells out that the board has the responsibility for the issuance of an emergency authorization.
- The proposed amendments are designed to provide some flexibility to allow for emergency use of water meeting Level 1 reclaimed water standards.
- There should be some mechanism provided for an impact analysis of downstream users. There needs to be a way to evaluate downstream impacts.
- Shouldn’t we be promoting indirect potable reuses any way we can?
- What are the expectations of VDH? This emergency authorization is modeled after the emergency VWP permit mechanism. It was noted that this is based on a consultative relationship with DEQ. Also need to clarify who at the health department needs to be contacted. Is this a local health district issue or a central office issue?
- Won’t it be easier to have a “reopener” clause that says that in the case of an emergency that you can be authorized to reuse of reclaimed water. It was noted that the VPDES Permit Regulation currently has a reopener provision for specific items but these do not include water reclamation and reuse. The VPDES Permit Regulation would need to be revised to allow a reopener for water reclamation and reuse.

- Emergencies come in all shapes and sizes. What do you need the second sentence in section D? What value is gained by including this? It was noted that the amendment does say that the Board “may” issue an emergency authorization.
- This looks like it is setting up a 6 month window. Then you have to go through the permit process. Does the applicant need to do all of the monitoring and other normal requirements? Should limit to Level 2 types of reuse and not allow Level 1 types of reuses until the permit is in place. There should be a whole lot more control. These are complicated projects. Intention is to not to go to indirect potable reuse. The intent is to allow for proper water supply planning and to provide a mechanism for emergency use. The monitoring requirements though not included in the regulations would be addressed in guidance.
- A question was raised as to why the proposed regulations allows only Level 1 reclaimed water for the emergency authorization? This would eliminate Level 2 type plants from getting the authorization. It was noted that in looking at what reuses might be considered essential for public safety, all appeared to require a minimum of Level 1 reclaimed water.
- It was noted that there could be special conditions associated with the issuance of an emergency authorization.
- The proposed amendments are intended to preserve potable water.
- What about the Water Supply Planning Regulation? There should be some explicit language to refer back to the water supply planning process. It was noted that there would be coordination with the WSP office that will be outlined in guidance. There will be a step added at the time of application to determine impacts to downstream uses.
- The localities need to know that they will need to update their Water Supply Plan to include “reuse” requirements for an “emergency stage”. There needs to be some framework for localities to adapt their water supply plans.
- It was suggested that it looks like the only reuse that is allowed in Table 90-A on pages 17 and 18 is “fire fighting and fire suppression”. It doesn’t appear that any other use is allowed. It was noted that although this is the most obvious use that comes to mind that others are allowed provided they are necessary for public health protection and safety.
- The idea of using Level 2 reclaimed water for cooling water at a power plant was raised.
- Why can’t we use Level 2 to protect potable water supplies? It was suggested that there should be a time limit under which or during which the “emergency use” could be allowed. It was noted that the Board has the ability to limit and control the uses for these emergency situations/uses.

**9VAC25-740-105 found on Pages 26 & 27 of the proposed regulations includes 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, which demonstrates that the facility is currently capable of producing reclaimed water meeting, at a minimum, Level 1 standards described in 9VAC25-740-70 A;

12. 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;

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

14. 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 specified in subsection A of this section.

**Valerie Rourke provided an overview of the proposed amendments. RAP discussions of these proposed amendments included the following:**

- It was suggested that the applicant should be required to identify the impacts to downstream users/water intakes. It was suggested that a requirement could be added under subsection 12 that requires that the “applicant needs to address downstream impacts – impacts to communities downstream”.
- The issue of “instream flow” was raised. It was noted that the “water balance” will need to be

considered. In some of the watersheds 50% or more of the water in that system is from discharge water and in times of drought can be larger. These amendments are not a way to use more of the water that downstream users are waiting to use. It is not a way to allow the use of more potable water for uses that would otherwise be restricted.

- Is there a way to limit the volume that could be used? Maybe 10% of the average daily flow can be diverted to emergency use. It was noted that it would depend where you are in the system. There would need to be a case-by-case evaluation of each request for emergency authorization.
- Who is going to do the balance for all of these uses? Who is going to make the mass-balance evaluation all the way downstream and making the decision as to who gets the emergency authorization and who doesn't? In the case of a Regional drought, you will have more than one person asking for an emergency authorization. The Board would have to make the determination as to who would get the authorizations. The Board meets quarterly, but could be brought together fairly quickly if needed. In normal circumstances the WSP staff would do the evaluations. It would just be a matter of establishing a procedure to handle these requests.
- Currently if someone is applying for a reuse, do the downstream uses get evaluated? Staff noted that currently they do not get evaluated. If you had a process that identified the downstream uses then that could be considered in the process. It was suggested that it was odd to require this type of evaluation for the short term emergency projects when current projects are not required to do this type of evaluation. Staff noted that the impacts are much more significant during a drought condition.
- In order to address the requests for emergency authorizations there is a need for a technical analysis by the applicant. DEQ needs as much information upfront as possible.
- It was suggested that the process needs to be made as simple as possible, especially for smaller localities that have limited staff. The process needs to be simple but there needs to be a balance to provide the needed protection of the resource, especially downstream.
- DEQ needs flexibility to make determinations in the case of downstream impacts.
- Could there be a requirement that the applicant make contact with downstream users?
- There needs to be some technical information for the Board to make a determination. Why are we putting limitations on dealing with water crisis problems? DEQ doesn't want to create a general permit program or process, or circumvent the Water Supply Planning Process through the emergency authorization. DEQ may need to reconsider certain uses (i.e., the use of Level 2 reclaimed water for cooling).
- The process needs to be as simple as possible. There needs to be maximum flexibility. There needs to be case-by-case evaluations. In emergency situations, we can't dream up all of the possible scenarios or possible solutions for every situation. There needs to be enough protection to provide the ability to protect the public. There needs to be the ability to use common sense.
- Do we know how many plants make less than Level 2 reclaimed water? Why can't these uses be included as part of an existing permit process or application? There has to be a simpler way to address this need. It was noted that permit could be modified to accommodate this activity. It is not a simple process to reopen and modify a permit.
- Could an abbreviated reclaimed water permit be required? Want to know that the applicant can actually meet the requirements for the water that they need to produce.
- There needs to be planning done ahead of time prior to this becoming a crisis. Is there a mechanism to put an emergency plan in place ahead of time so that it could be reviewed ahead of time? It is possible to integrate this into the Water Supply Plan.
- What the requirements of a Water Supply Plan and what impact would it have on this process?

It was noted that one of the components of the Water Supply Plan is the development of a Drought Response and Contingency Plan.

- There are no requirements from the Waste Water facilities to sign off on the Water Supply Plan requirements.

**5. Tier II Significant Amendments –Facilitated Discussions (Valerie Rourke; Angela Neilan and RAP Members) – Management of pollutants from significant industrial users (9VAC25-740-150)**

**9VAC25-740-150 found on Page 36 of the proposed regulations includes 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: 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.~~

~~1. 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.~~

~~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, 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.

**Valerie Rourke provided an overview of the proposed amendments to 150.A. RAP discussions of these proposed amendments included the following:**

- This seems to say that a SIU's discharge is good enough for discharge to a water body but not good enough for reuse. The intent is for the reclamation system to do an evaluation of the SIUs discharge. A pretreatment program is one of the options.
- When discharging to a stream, there is dilution, which are considered when establishing effluent limits. There is no dilution or mixing with reuse water. Therefore, DEQ needs to make sure that reclaimed water for reuse is protective of human health and the environment. By law, DEQ must encourage the use of reclaimed water in a manner that it is protective of human health and the environment. This amendment is actually less restrictive.
- This is just looking at the interference piece of the pretreatment process. It does not address the "pass through" and "contamination of product" components of the pretreatment process.
- It was noted that the statement is unclear, because it can be read as more restrictive.

**ACTION ITEM: Karen Pallansch and other RAP members will look over the wording of this section and provide recommendations for revisions for consideration by DEQ and the RAP.**

**Valerie Rourke provided an overview of the proposed amendments to 150.B. RAP discussions of these proposed amendments included the following:**

- This section provides for a contractual arrangement between treatment works and the reclamation system.
- A significant industrial user (SIU) would be sending water through a treatment works to the reclamation system for reuse.
- It was suggested that this was redundant since service agreements are addressed back on page 22 of the regulation. The language on page 22 under 9VAC25-740-100.C applies to service agreements or contracts between providers of reclaimed water and end users. The language in 9VAC25-740-150.B pertains to contractual agreements between reclamation systems and wastewater treatment works providing source water to the reclamation systems.
- This proposed language is trying to look at the possibilities and potential for management of pollutants from SIUs.
- A question was raised as to the rational for striking the language "or for reuse in areas accessible to the public and where human contact is likely". It was noted that this language is



specifically addressing reuse of industrial wastewater. Discharges from SIU's affect the reclamation of municipal waste water for which there are existing reclaimed water standards.

**Valerie Rourke provided an overview of the proposed amendments to 150.C & D. RAP discussions of these proposed amendments included the following:**

- It was noted that this section is very similar to the requirements identified in 150.A & B. It was suggested that the language that is proposed by the RAP for revision of 150 A & B should be incorporated into 150 C & D.

**Valerie Rourke provided an overview of the proposed amendments to 150.E. RAP discussions of these proposed amendments included the following:**

- This section will be addressed during the discussions of Indirect Potable Reuse.
- 6. Tier III Significant Amendments –Facilitated Discussions (Valerie Rourke; Angela Neilan and RAP Members) – Indirect potable reuse (9VAC25-740-90.C; 9VAC25-740-100.C.1 and D, 9VAC24-740-120.A, 9VAC25-740-130.C, 9VAC25-740-150.E, 9VAC25-740-160.F, 9VAC25-740-170 [A, A.1.b, A.2 a (2), A.2 b (2)])**

**9VAC25-740-90 found on Page 20 of the proposed regulation 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:

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.

2. All reclaimed water generated by a reclamation system for IPR shall meet, at a minimum, Level 1 reclaimed water standards, applicable Water Quality Standards (9VAC25-260) and any other standards developed pursuant to subsection B of this section. Where there is more than one standard for the same pollutant, the more stringent standard shall apply.

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 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.

4. All reclamation systems identified as a component of an IPR project in accordance with 9VAC25-740-100 D 1, including pump stations that are part of the reclamation systems, shall meet reliability requirements specified in 9VAC25-740-130 C.

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

**Valerie Rourke provided an overview of the proposed amendments. RAP discussions of these proposed amendments included the following:**

- A concern was raised regarding the “multiple barrier approach” identified in C1. Since it refers

- to 9VAC25-740-100 D which has not been discussed yet, will hold concerns until then.
- In regard to item #5, can't we just refer back to the other sections instead of repeating it here? C5 should refer back to 9VAC25-740-150, Page 36. Concerned about stating it twice. It was suggested that the wording in this subsection is actually what everyone really wants to see. It was noted that any changes suggested by the RAP that are incorporated into the previous section will be incorporated into this section.
- A question was raised about the definition of "Indirect potable reuse" or "IPR". It looks like it addresses only discharges to surface water for the augmentation of surface water supply source. When does this come into place? Is it a matter of distance from the intake or dilution? When would this apply? It was noted that there are two different terms to consider: "indirect potable reuse" and "indirect reuse" with the difference being one is intentional and one is unintentional (it is unplanned).
- It was noted that there is a provision in the Code of Virginia that allows a jurisdiction to oppose a discharge within 5 miles of its boundaries. This applies to a drinking water intake. It was noted that the regulation is looking more at surface water supplies that are impoundments rather than streams.
- Under the Code section that deals with the Powers of Cities and Counties it spells out that a jurisdiction may oppose a proposed discharge within 5 miles of either their water intake of their city or county boundary. § 15.2-2109 is permissive since it uses the word "may". How is it handled in process? It is a power of the city and the county, and not a requirement of the Health Department. Under the VPDES permit process, the Health Department will note to the local government that the discharge for IPR is within the 5 mile limit.
- It was suggested that administratively subsection 90 C 2 should also reference "any other special water quality standards that may apply".

**ACTION ITEM: Jeff Reynolds will confer with the Health Department and review their regulations to make identify any potential conflicts with the proposed regulation.**

- It was noted that the Occoquan Reservoir is an IPR project.
- It was noted that there are three major components of an IPR project that include the reclamation system, the public water supply, and the public waterworks. All three components must be present in order for the proposal to be considered IPR. IPR is an intentional reuse that is planned.
- There must be agreement between the public waterworks and the reclamation system for a project to proceed.
- It was noted that any other required standards would be included in the permit. Per 9VAC25-740-90 B, DEQ must coordinate with VDH to determine specific standards for an IPR project. DEQ would look to VDH to recommend parameters and monitoring requirements for the protection of public health. These would be considered on a case-by-case basis and would be project specific. It was noted that DEQ coordination with the Health Department would include offices in addition to the VDH Office of Drinking Water (i.e., regional offices, etc.).

**ACTION ITEM: VDH Representatives will determine other things that need to be considered and provide those recommendations to Bill Norris for consideration by the RAP.**

**9VAC25-740-100.C found on Page 22 of the proposed regulation contains the following language:**

**9VAC25-740-100. Application for permit.**

*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:*

**Valerie Rourke provided an overview of the proposed amendments. RAP discussions of these proposed amendments included the following:**

- No issues were identified.

**9VAC25-740-100.D found on Pages 24-26 of the proposed regulation contains the following language:**

**9VAC25-740-100. Application for permit.**

*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. Identification of the following components of an IPR project:*

*a. The reclamation system that will produce reclaimed water discharged to the public water supply (PWS);*

*b. The surface water PWS to which the reclamation system identified in subdivision D 1 a of this subsection will discharge reclaimed water.*

*c. The waterworks that will withdraw water from the PWS identified in subdivision D 1 b of this subsection to produce potable water.*

*2. Identification of all uses in addition to IPR of the PWS identified in subdivision D 1 of this subsection. Such uses shall be those deemed acceptable by the Virginia Department of Health or the Waterworks Regulation (12VAC5-590).*

*3. A description of multiple barriers to be implemented by the reclamation system, waterworks or both to produce water of a quality suitable for IPR. Multiple barriers 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 surface water 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 and education requirements in accordance with 9VAC25-740-170 A 1, and shall describe other means to reduce the introduction of contaminants from domestic sources through community collection programs (e.g., for hazardous wastes and unused pharmaceuticals).*

*b. Effective and reliable treatment. This involves the use of treatment processes at both the reclamation system and the waterworks that, in combination with natural attenuation in the environmental buffer to be described per subdivision D 3 c of this subsection, shall reliably achieve the water quality necessary for IPR. A description of reclamation system treatment processes for IPR may be satisfied by referencing application information submitted in accordance with subsection B of this section.*

*c. Environmental buffers and natural attenuation. This involves the use of an environmental buffer, such as a surface 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. This involves monitoring at progressive stages of treatment or barriers of the project to verify that they are working effectively and reliably to achieve the necessary water quality for IPR.

e. Responses to adverse conditions. To address those circumstances where the reclamation system of the IPR project experiences a catastrophic treatment failure that cannot be corrected by subsequent treatment or barriers, or fails to produce reclaimed water meeting the standards or limits at the point of discharge to the surface water PWS, the application for the IPR project shall contain:

(1) A contingency plan that describes all alternatives to be implemented in lieu of discharging the substandard reclaimed water to the PWS.

(2) For the discharge of non-compliant reclaimed water to the PWS, a public health surveillance system to document and provide early warning of any adverse health events associated with the ingestion of reclaimed water directly from the PWS or following treatment and distribution by the waterworks. The surveillance system shall be jointly planned and implemented by the reclamation system and waterworks of the IPR project, and shall be complementary of public notice requirements contained in the Waterworks Regulations (12VAC5-590).

(3) A notification program for the reclamation system of the IPR project and as described in 9VAC25-740-170 A 2.

4. An evaluation of the combined effectiveness of all the barriers described in subdivision D 3 of this subsection to achieve the water quality necessary for IPR.

5. Any information deemed necessary by the board to establish reclaimed water standards and monitoring requirements for the IPR project in accordance with 9VAC25-740-90 B. This shall include, but is not limited to, residence or transport times, mixing ratios and other applicable modeling of the reclamation system discharge or contaminants introduced by the discharge to the surface water PWS.

6. A water balance for the reclamation system that accounts for the volumes of reclaimed water to be generated, stored, and discharged through a VPDES permitted outfall for IPR.

7. Any change by the reclamation system to provide reclaimed water for other reuses or end users in addition to IPR shall require submission of a RWM plan in accordance with subdivision C 1 of this subsection. The water balance for the RWM plan shall include the water balance required per subdivision D 6 of this subsection for the IPR project.

8. A copy of the contractual agreement established between the reclamation system and the waterworks of the IPR project, identifying the responsibilities of each party to implement multiple barriers described in accordance with subdivision D 3 of this subsection, unless the reclamation system and waterworks are under common ownership or management.

**Valerie Rourke provided an overview of the proposed amendments. RAP discussions of these proposed amendments included the following:**

- Could a surface water body be considered a chlorine reservoir? It was noted that it could be, but a surface water reservoir is considered a water of the state. It usually receives some kind of input other than rain from the watershed.
- What is considered a “public health surveillance system mentioned in 9VAC25-740-100.D.3.e(2)? It was noted that these are handled by VDH and are dependent on the types of diseases that are of concern. These are usually handled through the Local Health District. These systems are not normally coordinated through a waterworks. Most of the systems are passive rather than active. These systems are often temporal in nature and would be very difficult to coordinate in relation to a reservoir. It is not a very realistic expectation to require this in the regulation. This requirement would have a lot of utilities scratching their heads as to how to create this. Maybe this is more of a coordination issue to notify any “off spec” reuse water.

- This requirement puts the requirement on the Health Department. A recommendation was made to delete this subdivision should be deleted.

**CONSENSUS: The RAP members agreed (with 2 abstentions) that item 9VAC25-740-100.D.3.e (2) should be deleted.**

**ACTION ITEM: Staff will delete item (2) from this section of the regulations.**

- Is there going to be any more definition of the “multiple barrier approach”? EPA has a very specific expectation for a “multiple barrier approach” with regard to Drinking Water Standards. Will there be a credit for waterworks for “natural attenuation”? Other states are looking at “time of travel” and “natural attenuation” issues. How is DEQ going to address these issues? It was noted that information regarding the multiple barrier approach for IPR was obtained from “Water Reuse: Issues, Technologies and Application” written by Takashi Asano, et al. (McGraw Hill, 2007). The multiple barrier approach described in this reference is used in the regulation. DEQ expects the applicant to identify the contaminants that are in the wastewater, to identify how natural attenuation is being addressed, and to determine what is going to be removed by the waterworks. DEQ will coordinate with VDH for the appropriate public health standards for reclaimed water to include in the permit.
- These standards are defined in the Safe Drinking Water Act for the most part.
- 9VAC25-740-100.D.3.a refers to “community collection programs” for hazardous waste and used pharmaceuticals. It was noted that there is no “take-back” program for drugs. It is not legal in Virginia. DEA has held specifically authorized programs to take-back drugs. The concept of hazardous waste take back or collection may be appropriate in some locations. It was suggested that the word “collection” should be removed and just reference the “hazardous waste” program. It was also suggested that the phrase “if applicable in your community” could be added. If it is not going to be a requirement why have the paragraph. It was noted that this was to serve as an example not as a requirement. It was noted that there is a benefit for the first part of the paragraph for a source water system.

**ACTION ITEM: Staff will review the language of this subsection and consider revisions based on the RAP’s discussions.**

**9VAC25-740-120 found on Page 33 of the proposed regulation contains the following language:**

**9VAC25-740-120. Construction requirements.**

*A. Preliminary engineering report and pilot study.*

*1. A preliminary engineering report shall be submitted for new water reclamation projects and for modification or expansion of existing reclamation systems, ~~satellite reclamation systems~~ SRS and reclaimed water distributions systems. At the request of the applicant or permittee, the board may waive the need for a preliminary engineering report or portions of a preliminary engineering report for modification or expansion of an existing reclamation system, ~~satellite reclamation system~~ SRS or reclaimed water distributions system based on the scope of the proposed project.*

*2. A pilot study will be required where advanced treatment is proposed for a reclamation system of an IPR project.*

*a. The pilot study shall demonstrate the ability of selected advanced treatment processes to:*

(1) Meet, at a minimum, the reclaimed water standards prescribed for the IPR project in accordance with 9VAC25-740-90 B and C, and

(2) Generate a consistent and reliable supply of reclaimed water for the IPR project.

b. The pilot study shall quantify and characterize the quality of source water provided for reclamation and reclaimed water generated by the advanced 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.

c. At the request of the applicant or permittee, the board may waive the need for a pilot study where the same or similar treatment technology has been demonstrated to consistently and reliably meet treatment levels equivalent to or more stringent than reclaimed water standards prescribed for the IPR project, and to generate the supply of reclaimed water needed for the IPR project.

d. Where the board does not waive the need for a pilot study in accordance with subdivision A 2 c of this subsection, the board may, at the request of the applicant or permittee, reduce the pilot study duration specified in subdivision A 2 b of this subsection or the pilot study scope where the following are met:

(1) The applicant or permittee provides a detailed plan of study for the board's review and approval before initiating the pilot study, and

(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.

**Valerie Rourke provided an overview of the proposed amendments. RAP discussions of these proposed amendments included the following:**

- The new language added to this section addresses the requirements for a pilot study.
- Do we need a definition of “advanced treatment”? There are different requirements for “advanced treatment”. It would be difficult to define “advanced treatment”.
- It was suggested that the term “advanced” should be deleted from this subsection.

**ACTION ITEM: Staff will revise this section based on the RAP’s recommendation to delete the term “advanced” from this subsection.**

- A question was raised regarding how the preliminary engineering report would get submitted, reviewed, evaluated and by whom? DEQ still does review WQIF projects. Also require PE certifications. Why have a report prepared if no one is going to review it? VDH would like to be involved in the discussions specifically for drinking water supplies. VDH should be included in the review of the pilot study for an IPR.

**9VAC25-740-130 found on Page 35 of the proposed regulation contains the following language:**

**9VAC25-740-130. Operator requirements and system reliability.**

C. Reliability Class I, as defined in 9VAC25-740-10, is required for a reclamation system identified as a component of an IPR project in accordance with 9VAC25-740-100 D 1, including pump stations that are part of the reclamation system. No exception or variance shall be granted for this requirement.

**Valerie Rourke provided an overview of the proposed amendments. RAP discussions of these proposed amendments included the following:**

- Items discussed during this section referred back to requirements identified in Section 90 C.

**9VAC25-740-150 found on Page 37 of the proposed regulation contains the following language:**

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

*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.*

**Valerie Rourke provided an overview of the proposed amendments. RAP discussions of these proposed amendments included the following:**

- The use of the phrase “if deemed necessary by the board” was questioned. It was noted that this indicates that it may be necessary especially for “privately owned treatment works”. They are not required to have a pretreatment program under the VPDES program. There seems to be some inconsistency and conflict with other sections of the regulations (90 C 5). It was suggested that the phrase “if deemed necessary by the board” should be deleted.

**ACTION ITEM: Staff will delete the phrase “if deemed necessary by the board” as recommended by the RAP.**

**ACTION ITEM: Leita Bennett and other RAP members will look over the wording of the various sections (90 C 5 and 150 E) for consistency and provide revised language for consideration by the RAP.**

**9VAC25-740-160 found on Page 37 of the proposed regulation contains the following language:**

***9VAC25-740-160. Access control and advisory signs.***

*F. For a surface water PWS that is part of an IPR project and provides opportunities for recreational use, advisory and information signs shall be posted at all points of public access to the PWS. The signs shall, at a minimum, display the information specified in 9VAC25-740-170 A 1 for IPR projects.*

**Valerie Rourke provided an overview of the proposed amendments. RAP discussions of these proposed amendments included the following:**

- It seems drastic to require the placement of signs on reservoirs for this purpose.
- It was suggested that this has nothing to do with reuse.
- The RAP indicated that it did not like the requirement for signage for these purposes for water supply impoundments.
- It was recommended by the RAP that this subsection should be deleted.

**ACTION ITEM: Staff will delete this section based on RAP recommendations.**

**9VAC25-740-170 found on Page 38 & 39 of the proposed regulation contains the following language:**

**9VAC25-740-170. Use area requirements.**

A. Education and notification program. An education and notification program (program) shall be developed and submitted with the RWM Plan in accordance with 9VAC25-740-100 C 1 for reuses that require Level 1 reclaimed water, will be in areas accessible to the public, or are likely to have human contact. For indirect potable reuse (IPR) projects that do not require a RWM plan, the program shall be submitted with the application to permit the project in accordance with 9VAC25-740-100 D. The program shall be the responsibility of the permittee to implement.

1. Education. ~~The purpose of the education component of the program is to ensure that shall:~~

a. For end users and the public likely to have contact with reclaimed water, provide information:

~~(1) To ensure that they are informed of the origin, nature, and characteristics of the reclaimed water; the manner in which the reclaimed water can be used safely; and uses for which the reclaimed water is prohibited or limited. The program shall describe all modes of communication to be used to educate and inform, including, but not limited to, meetings, distribution of written information, the news media (i.e., news papers, radio, television or the internet), and advisory signs as described in 9VAC25-740-160. Program education for;~~

~~(2) To individual end users shall be at the time of their initial connection to the reclaimed water distribution system and, which may be provided in the service agreement or contract with the permittee established in accordance with 9VAC25-740-100 C 1 d., and~~

~~(3) For nonbulk irrigation reuse of reclaimed water not treated to achieve BNR, education of individual end users shall be, at a minimum, annually. To individual end users annually or more often after the reclaimed water distribution system is placed into operation. for non-bulk irrigation reuse of reclaimed water not treated to achieve BNR.~~

b. For IPR projects, provide information to:

(1) Generators of source water for reclamation and IPR that are other than SIUs. This information shall describe methods and practices to avoid or reduce the introduction of contaminants from domestic and commercial sources into the wastewater collection system prior to reclamation, and shall be provided to individual generators annually or more often after the reclamation system is placed into operation.

(2) Recreational or other uses of a surface water PWS identified in 9VAC25-740-100 D 2, on measures to avoid or reduce the introduction of contaminants from such users into the PWS. This information shall be made available to recreational users at all points of public access to the PWS when open, and to all other users annually or more often after the reclamation system is placed into operation.

c. Describe all modes of communication to be used to educate and inform, including, but not limited to, meetings, distribution of written information, the news media (i.e., news papers, radio, television or the internet), and advisory signs as described in 9VAC25-740-160.

2. Notification. ~~The notification component of the program shall contain procedures to notify end users and the affected public of treatment failures at the reclamation system discharges of substandard reclaimed water to reuse that can adversely impact human health, or result in the loss of reclaimed water service due to planned or unplanned causes.~~

a. Notifications required for discharge of substandard reclaimed water to reuse.

(1) For reuses other than IPR. Where treatment of the reclaimed water fails more than once during a seven-day period to comply with Level 1 disinfection or other standards developed in accordance with 9VAC25-740-70 D or 9VAC25-740-70 E for the protection of human health, and the non-



*compliant reclaimed water has been discharged to ~~the~~ a reclaimed water distribution system or directly to a reuse, the permittee shall notify the end user of the treatment failures and advise the end user of precautions to be taken to protect public human health when using the reclaimed water in areas accessible to the public or where human contact with the reclaimed water is likely. These precautions shall be implemented for a period of seven days or greater depending on the frequency and magnitude of the treatment failure.*

*(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 for the protection of human health, and is discharged to the surface water PWS, the permittee shall within eight hours of the non-compliant discharge notify:*

*(a) 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; and*

*(b) Recreational or other uses of a surface water (and groundwater) PWS identified in 9VAC25-740-100 D 2, on precautions to be taken by such users, particularly where their activities are likely to involve human contact with or incidental ingestion of water in the PWS.*

*(c) Notifications required per subdivisions A 2 a (2) (a) or A 2 a (2) (b) of this subsection shall be implemented for a period of seven days or greater depending on the frequency and magnitude of the non-compliant reclaimed water discharge and the ability of subsequent multiple barriers as described in the permit application of the IPR project, to mitigate the impact of the discharge on the PWS.*

*b. Notifications required for loss of service.*

*(1) For reuses other than IPR. Where reclaimed water service to end users will be interrupted due to planned causes, such as scheduled maintenance or repairs, the permittee shall provide advance notice to end users of the anticipated date and duration of the interrupted service. Where reclaimed water service to end users is disrupted by unplanned causes, such as an upset at the reclamation system, the permittee shall notify end users and the affected public of the disrupted service if it can not or will not be restored within eight hours of discovery.*

*(2) For IPR. Where the discharge of the reclamation system to the surface water PWS will be interrupted due to planned causes, such as scheduled maintenance or repairs, the permittee shall provide advance notice to the owner or management of the waterworks that withdraws water from the PWS of the anticipated date, duration and cause for the interrupted discharge. Where the discharge of the reclamation system is interrupted by unplanned causes, such as an upset at the reclamation system, the permittee shall notify the waterworks owner or management of the interrupted discharge if the discharge can not or will not be restored within eight hours of initial occurrence.*

*c. The notification component of the program shall describe all modes of communication that may be used to provide the notifications specified in subdivisions A 2 a and A 2 b of this subsection. Modes of communication may include, but are not limited to, those described in subdivision A 1 c of this subsection for the education component of the education and notification program.*

**Valerie Rourke provided an overview of the proposed amendments. RAP discussions of these proposed amendments included the following:**

- Based on discussions from the previous section, the RAP recommended the deletion of subsection A 1 b (2).
- The use of the phrase “for the protection of human health” in A 2 a (2) was questioned. What does this mean? Can we just reference the Code section and leave it at that?

**ACTION ITEM: Staff will revise this subsection according to revisions suggested by the RAP.**

- The time limit of “eight hours” specified in A 2 a (2) was questioned. It was suggested that “as soon as practicable” might be better in this section. The concept of the use of travel times as they relate to the notification timeline was discussed.
- The concept of the evaluation of “risk” should be part of the discussions and revision of this section.

**ACTION ITEM: Wes Kleene will review the language of this section related to the timing of notification of non-compliant discharge and provide them to Bill Norris for distribution and consideration by the RAP.**

**7. Tier III Significant Amendments –Facilitated Discussions (Valerie Rourke; Angela Neilan and RAP Members) – Groundwater recharge (aquifer storage and recovery) (9VAC25-740-10, 9VAC25-740-30.A and B, 9VAC25-740.C, 9VAC25-740-60.H)**

**9VAC25-740-10 found on Pages 2 & 3 of the proposed regulation contains the following language:**

**9VAC25-740-10. Definitions.**

“Direct injection” means the discharge of reclaimed water directly into groundwater.

“Groundwater Withdrawal Permit” means a document issued by the board, pursuant to the Groundwater Withdrawal Regulation (9VAC25-610), authorizing the withdrawal of groundwater within a Groundwater Management Area.

**Valerie Rourke provided an overview of the proposed amendments. RAP discussions of these proposed amendments included the following:**

- Most of the amendments currently proposed emphasize that DEQ can already, under existing regulations, permit groundwater recharge, excluding direct injection.
- A question was raised regarding localities/areas that might be adjacent to a Groundwater Management Area. It was agreed that this was an area that needed to be considered. Under the water supply management plan, this is not referred to as groundwater recharge but is referred to as aquifer storage recovery.

**9VAC25-740-30 found on Pages 6 & 7 of the proposed regulation contains the following language:**

**9VAC25-740-30. Applicability and transition.**

*A. The requirements of this chapter shall apply to water reclamation systems, reclaimed water distribution systems, and water reuse unless specifically excluded under 9VAC25-740-50 A. The requirements shall apply to all new water reclamation systems, reclaimed water distribution systems and, as applicable, water reuses for which an application for a Virginia Pollution Abatement (VPA) permit or a Virginia Pollutant Discharge Elimination System (VPDES) permit-applications are is received after October 1, 2008, or an application for a Groundwater Withdrawal permit is received after [effective date of amended regulation]. The requirements may also be applied to all existing permitted facilities producing, distributing or using reclaimed water through a permit modification or reissuance procedure and shall be applied when such facilities are to be modified or expanded unless specifically excluded under 9VAC25-740-50 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 or Groundwater Withdrawal permit shall submit a complete VPA or VPDES or Groundwater Withdrawal permit application or other necessary information as prescribed under 9VAC25-740-40 within 180 days of being requested by the board.

B. For the purposes of this chapter:

1. The incorporation of standards, monitoring requirements and special conditions for water reclamation and reuse into a VPA or Groundwater Withdrawal permit shall be considered a minor modification unless they alter other conditions of the permit specifically related to the pollutant management activity for which the permit was originally issued.

2. Standards, monitoring requirements and special conditions for water reclamation and reuse 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.

3. ~~Minor modification~~ Modification of a VPA, VPDES or Groundwater Withdrawal permit or an administrative authorization associated with a VPDES permit described in subdivisions ~~1 and 2~~ B 1 and B 2 of this subsection shall require an application for a water reclamation and reuse project in accordance with 9VAC25-740-100 of this chapter.

**Valerie Rourke provided an overview of the proposed amendments. RAP discussions of these proposed amendments included the following:**

- This section has been revised to include reference to groundwater withdrawal permits as an applicable practice. This doesn't change anything that is currently being done.
- A question was raised as to how this plays into the UIC permit requirements? A current project that has a UIC permit as well as a VDH waterworks permit, a VPA permit, and a groundwater permit. Most wells for groundwater recharge are usually classified as a Class V well under the UIC permit process. Staff noted that for this type project and well, the UIC process is simply a registration statement. Staff noted that the issue of UIC is addressed in the DEQ Whitepaper and will be discussed later.

**9VAC25-740-40 found on Page 7 of the proposed regulation contains the following language:**

**9VAC25-740-40. Permitting requirements.**

C. The owner of a reclamation system or reclaimed water distribution system, or a reclaimed water agent that recharges groundwater with reclaimed water and subsequently withdraws the combined reclaimed water and ambient groundwater for a reuse approved in accordance with this chapter, shall obtain a Groundwater Withdrawal permit where such withdrawal occurs within a Groundwater Management Area (GMA) established pursuant to 9VAC25-610. If excluded from the requirements of this chapter per 9VAC25-740-50 A 9, direct injection of reclaimed water to recharge groundwater may require a VPA permit or a Groundwater Withdrawal permit where there is also an associated withdrawal within a GMA.

**Valerie Rourke provided an overview of the proposed amendments. RAP discussions of these proposed amendments included the following:**

- Some confusion was noted regarding the whole approach to IPR that addresses surface water, and then there is language like this that seems to say that direct injection is okay. It was noted that the discussion topics might better address this concern.
- A question was raised as to what happens if they don't have a withdrawal? There has to be a reuse, which may or may not involve a subsequent withdrawal of reclaimed water.
- How do you handle a situation where there groundwater recharge with reclaimed water and someone else or a number of water users would withdraw that water? Staff noted that parties withdrawing the water for sale and distribution would be reclaimed water agents. Staff also noted that in an aquifer, the water used to recharge the aquifer doesn't travel a long distance just by the nature of the aquifer.
- Concerns were raised about the possible impacts on existing VDH regulations and the UIC permit process related to groundwater influence. There could be a cascading impact on the groundwater withdrawal permitting process. It was suggested that this should be part of the discussions that Jeff Reynolds has with VDH to identify any potential conflicts between the regulations.
- There has to be a demonstrated reuse in the case of IPR. This is not disposal.
- It was noted that technically you don't recover 100% of the water that is used to recharge groundwater.
- A withdrawer might need to amend an existing permit to address the reuse process.
- Is reclaimed water considered as "surface water"?
- There is potential to have a direct influence on the groundwater. Don't know if the Safe Drinking Water Act would say that is okay. A concern over the potential impact on private wells was raised. There is a potential for groundwater chemistry effects that could put a system out of use.

**9VAC25-740-60 found on Page 11 of the proposed regulation contains the following language:**

***9VAC25-740-60. Relationship to other board regulations.***

*H. Groundwater Withdrawal Regulations (9VAC25-610) The Groundwater Withdrawal Regulations delineate the procedures and requirements to be followed when establishing Groundwater Management Areas and in connection with Groundwater Withdrawal permits issued by the board pursuant to the Groundwater Management Act of 1992. Any intentional recharge of groundwater with reclaimed water that involves a subsequent withdrawal within a Groundwater Management Area shall obtain a Groundwater Withdrawal permit. Design, operation and maintenance standards for water reclamation and reuse shall be incorporated into the Groundwater Withdrawal permit application and the Groundwater Withdrawal permit when applicable. Water reclamation and reuse requirements contained in a Groundwater Withdrawal permit shall be enforced through existing enforcement mechanisms of the permit.*

**Valerie Rourke provided an overview of the proposed amendments. RAP discussions of these proposed amendments included the following:**

- This adds the Groundwater Withdrawal Regulations to the list of other board regulations.

## **8. Public Comment Period**

No public comments were offered during the Public Comment Period.

## **9. Reuse of Reclaimed Water for Groundwater Recharge: Discussion Topics for the Regulatory Advisory Panel**

### **DEQ Regulations Affecting Groundwater Recharge –**

**Discussion Point #1: What is the most appropriate regulatory mechanism to permit groundwater recharge, and to protect the affected groundwater?**

**RAP discussion of this point included the following:**

- It was noted that a UIC permit is still required prior to the issuance of a groundwater recharge permit from DEQ. EPA has the authority to issue UIC permits. There is no delegation. The DEQ's authority is in conjunction with the UIC permit process.
- Staff noted that for Class V wells, this is essentially a registration statement. RAP members indicated that this was much more required than just a registration statement.
- It was suggested that this group should really be limiting their discussions to the reuse water regulations instead of trying to incorporate these other aspects of groundwater recharge.
- It was suggested that there should be a list of authorized beneficial uses of reuse. Staff noted that these types of projects would fall under 9VAC25-740-90.B and would be addressed on a case-by-case basis.
- It was noted that 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 Program) that can authorize groundwater recharge with reclaimed water. For example, where a project will recharge groundwater with reclaimed water and withdraw the water within a groundwater management area the project could be issued a groundwater withdrawal permit instead of a VPA permit. 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.

**Discussion Point #2: Should additional groundwater standards be established? If so, should they be as stringent as the SDWA MCLs for the protection of groundwater used for potable supply? Of should the SDWA MCLs be incorporated into the Groundwater Standards by reference?**

**RAP discussion of this point included the following:**

- The idea of the use of water at Safe Drinking Water Standards was discussed.
- The idea of the use of a "reclaimed water component" was raised as a way to get dilution with the natural groundwater.

- Staff is not pursuing this as a disposal method, but wants to talk about it as a means of maintaining the head; salt water intrusion barriers; and maintaining existing water withdrawals. Staff noted that under the current groundwater standards that you would need potable water to use for these purposes.
- There are unknown issues associated in some cases of injecting water into the groundwater. Once injected the water withdrawn exhibited issues and contaminants.
- At a minimum you have to meet the Groundwater Standards (9VAC25-280).
- Per the Groundwater Standards, you must maintain the natural integrity of the water.
- Treatment requirements would have to be decided on a case-by-case basis.
- It was noted that there might also be some things the VDH might want to see monitored for which there are currently no standards.
- A major concern is the unintended consequences that may result.
- The VDH requirements will be placed on the drinking water providers if there are issues that arise from the use of water from a recharge site.
- The terms need to be clarified (injection wells; rapid infiltration; etc.).
- There is no one standard that fits all situations.

**Discussion Point #3: How should nutrient loads be addressed as part of groundwater recharge?**

**RAP discussion of this point included the following:**

- There is a potential for groundwater to provide base flow for surface waters. How should this be addressed?
- Other states provide that the TMDLs are not violated.
- Phosphorus is looked at from a “limit of technology” perspective.
- It was noted that the bay TMDL contains a load for septic.
- It was noted that this is not a small amount of water that we are talking about.
- It was noted that some states also look at nitrogen control, i.e., California.
- Staff noted that based on the RAP discussions that this is something that needs to be addressed in the regulations.
- It was suggested that at least in the Chesapeake Bay Watershed that the TMDLs should be supported.
- It was suggested that a “reopener clause” could be included to address any violation of Water Quality Standards or the Surface Water Standards or the TMDLs.

**The following discussion points were not addressed during the course of the meeting but a request for additional input was made of the RAP:**

**Discussion Point #4: Should DEQ eliminate the exemption at 9VAC25-740-50.A for groundwater recharge authorized by the EPA UIC Program or other laws and regulations?**

**Discussion Point #5: Should DEQ change the definition of IPR to include groundwater recharge with reclaimed water as a means of intentionally augmenting a water supply source?**

**Discussion Point #6: How should groundwater modeling requirements be addressed for**

**groundwater recharge projects?**

**10. Input from the RAP – (RAP Members and Angela Neilan):**

Staff asked the RAP members for any additional thoughts or ideas for the good of the RAP discussions. Specifically any suggestions or ideas related to any of the discussion topics should be sent directly to Bill Norris for consideration by the staff and the RAP.

Jeff Reynolds stressed to the RAP that we really do need your comments. It is really important to hear from each of you from a policy and regulatory perspective. He noted that the point of contact for all of your comments to Bill Norris at [william.norris@deq.virginia.gov](mailto:william.norris@deq.virginia.gov).

**11. Next RAP Meeting:**

The next meeting of the RAP is scheduled for Thursday, July 7, 2011 at the DEQ Piedmont Regional Office and is scheduled to begin at 9:30 AM.

**12. Meeting Adjournment:**

The meeting was adjourned at 3:37 PM.