

Minutes of the TAC Meeting for the Reclamation and Reuse Regulations
February 27, 2006

The TAC meeting began at approximately 9:30 a.m. and members of the TAC reintroduced themselves. Administrative items were discussed regarding changes to the agenda, future meeting minutes, tables in the regulations, changes to the name of the regulation and guest speaker. The name of the proposed regulation can be changed at the time it is presented to the State Water Control Board for approval to publish for public comment. The TAC will have a guest speaker, Dr. David York with Florida DEP, for the 3/30/06 meeting. Dr. York oversees Florida's water reuse regulatory program. TAC members were requested to submit issues or topics to Valerie Rourke that they would like to have the guest speaker address during his presentation.

The TAC was presented a copy of the draft regulation outline containing items discussed at the last TAC meeting and included in the minutes. DEQ staff informed the TAC that the agency intends to have this regulation cover the reclamation of industrial, as well as municipal, wastewater for water reuses. This must be considered when developing the regulation standards of treatment. Another state, North Carolina, has developed regulations specifically to address reclamation of industrial wastewater for reuse. Other states have not done this.

The TAC was asked to provide any items that should be added to the draft regulation outline. Suggestions were made to allow submission of a reuse feasibility plan in lieu of a preliminary engineering report under "General Requirements" and, to include the federal Underground Injection Control Program, state surface and ground water quality standards, and Safe Drinking Water Act standards (particularly related to aquifer storage and recovery) under "Relationship to Other Regulations".

Treatment standards for reuses were discussed. The TAC referred to the standards of treatment that were developed in the previously proposed Wastewater Reclamation and Reuse Regulation (2003) and the EPA 2004 Guidelines for Water Reuse (EPA Guidelines). The TAC was asked to consider how many levels of treatment should be contained in the treatment standards for the currently proposed technical regulation. The previously proposed regulation contained two levels of treatment comparable to what is contained in the EPA guidelines. Other states, such as Arizona, California and Washington, have four to five levels of treatment in their standards. Differing levels of disinfection is the primary factor used to distinguish differing levels of treatment. Information regarding the standards of treatment for other states was presented to the TAC. It was noted that the very few of the standards in other states deviate significantly from what is contained in the EPA Guidelines. For non-potable reuses, the EPA Guidelines recommend two treatment levels for disinfection, high and moderate. Some very limited uses may require no disinfection (i.e., flushing sewer lines) resulting in potentially a third level of treatment. Disinfection should not be required for reclamation of industrial wastewater unless it is co-mingled with sewage. North Carolina water reuse regulations apply disinfection standards to co-mingled industrial wastewater and sewage.

The TAC looked at treatment standards in the previously proposed regulation consisting of tertiary treatment – high level disinfection and secondary treatment – basic disinfection and compared them with suggested treatment standards in the EPA Guidelines. Numerous comments were made during this discussion, which are provided in bulleted form as follows:

- EPA Guidelines suggest that a third level of treatment is feasible requiring no disinfection.

- Secondary treatment with no disinfection was initially considered as a level of treatment. However, it would have very limited use (i.e., sewer line flushing and possibly other reuses) and was withdrawn.
- Continuous turbidity monitoring should be required for highly disinfected reclaimed water.
- There are differences between the previously proposed regulation and EPA Guidelines for instantaneous maximum limit of fecal coliform (1,000 vs. 800 per 100 ml, respectively) under secondary treatment with standard disinfection. The higher fecal coliform standard is typically used in VPDES permits establishing a significant precedence and a need to maintain consistency. EPA may have used the more conservative fecal coliform limit of 800/100 ml based on what is being required in other states.
- For this discussion, treatment standards for environmental reuses, groundwater recharge and indirect potable reuse were not addressed. Much more stringent standards will be required for groundwater recharge (i.e., SWD Act standards and Virginia Ground Water Standards).
- Many facilities do not use chlorine for disinfection. Therefore, is it appropriate to have a TRC standard? The previously proposed regulations did include the clause “if chlorine is used” to acknowledge that many facilities are not using chlorine for disinfection.
- For facilities that use chlorine for disinfection, it is possible to achieve the disinfection goals with less residual TRC and shorter contact times. For example, facilities that are completely nitrifying will have more effective disinfection with chlorine than facilities that are not nitrifying due to the formation of chloroamines. Chloroamines have a lower disinfection capability than free chlorine.
- A minimum contact time of 30 minutes for chlorine disinfection is consistent with both the SCAT Regulations and the EPA Guidelines.
- When using UV for disinfection, what on-line monitoring parameter in lieu of TRC should be used? Most UV systems have an intensimeter that detects the intensity of the UV light. This is used to monitor disinfection efficacy by measuring the intensity of UV light transmitted from the bulbs. California regulations should be reviewed to provide some example language on this.
- Virginia is moving away from use of fecal coliform as a surrogate organism for determining adequate disinfection. Therefore, reclamation and reuse standards should consider other surrogate organisms to replace or use as alternates to fecal coliform.
- For ease of reference in future discussions, levels of treatment were assigned a number, 1 for high level disinfection, secondary treatment with filtration and 2 for standard disinfection, secondary treatment. The levels of treatment established by the TAC (1 and 2) should be comparable to what is contained in the EPA Guidelines table.
- For the TRC standard, a footnote should be added to the DEQ table indicating that this standard is applicable only when chlorine is used for disinfection.
- Tertiary vs. advanced secondary for treatment level 1 – because the currently proposed standards are not yet addressing nutrients, it was felt that tertiary treatment was not appropriate to use in the definition of the level 1 treatment standard.
- Should there be different levels of nutrients in the standards according to the reuse? For unrestricted reuse in urban areas which are likely to discharge indirectly to surface water or groundwater, lower nutrients may be required in the reclaimed water, while for agricultural and golf course irrigation, higher nutrient levels could be allowed but may require a nutrient management plan.
- A treatment level with low to very low nutrients, and consequently unrestricted reuse, should be considered to minimize or eliminate the need for permits. Highly treated reclaimed water with low

nutrients will also allow greater flexibility and be allowed for a broader range of reuses, thereby encouraging reuse.

- Nutrient removal will add to the cost of reclaimed water. However, depending on where a facility is located in Virginia, the cost of nutrient removal may be small relative to the cost of other investments, such as land value, etc.
- Treatment requirements to remove nutrients for other non-irrigation uses with no potential for discharge to surface or ground water would be a disincentive to reclaiming and reusing the water.
- Nutrient limits might be considered for reuses (i.e., fire protection, street washing, etc.) other than irrigation where there is potential for discharge to surface waters and it may be more difficult to accurately account for and enforce nutrient loadings.
- Potential discharges from street washing and construction reuses of reclaimed water might be so incidental that nutrients in the reclaimed water would not be a concern.
- Currently, golf courses are drawing irrigation water from surface waters and groundwater. In the future, golf courses that use reclaimed water will need to have holding facilities to store what they receive from the treatment facility for subsequent reuse or obtain the reclaimed water directly from a pump station. This water will be used exclusively for irrigation of the golf course.
- Through the new General VPDES Watershed Permit, wastewater treatment facilities currently discharging to the Chesapeake Bay watershed in Virginia can obtain nutrient credits for nutrients that they do not discharge. However, these facilities must account for the fate of nutrients that are not discharged directly to surface waters to insure that they will not create a nutrient problem in groundwater or indirectly to surface waters.
- Nutrients are being controlled in other permit programs (i.e., VPA and VPDES). Consequently, this regulation does not need to address treatment requirements for nutrients, but should require generators to account for the nutrients in the reclaimed water. Nutrient load for each reuse will need to be determined. DEQ does not want to impose additional requirements to control nutrients that are already addressed through existing or proposed water permits. However, tracking of nutrients will be necessary.
- The currently proposed General VPDES Watershed Permit regulation only applies to that part of Virginia within the Chesapeake Bay watershed. The nutrient caps do not apply and there are no nutrient credits and nutrient accounting requirements proposed outside the Chesapeake Bay watershed in Virginia. Future consideration may be given to expanding the scope of the regulation to cover reservoirs and free flowing streams.
- Will the General VPDES Watershed Permit regulation be adopted before the Water Reclamation and Reuse regulation to insure that the nutrient accounting mechanism is in place for the nutrient credits program? The General VPDES Watershed Permit regulation has been drafted and is to go to public notice soon. The Water Reclamation and Reuse regulation is under development. Therefore, it is anticipated that the General VPDES Watershed Permit regulation will be adopted prior to the Water Reclamation and Reuse regulation.
- At this point, the majority of the TAC felt that the treatment standards should not have nutrients.
- North Carolina water reuse regulations do not require disinfection of reclaimed industrial wastewater unless the industrial wastewater contains some portion of domestic wastewater. It does not specify a minimum quantity of domestic wastewater combined with the industrial wastewater, below which disinfection might not be required. While not specifically noted in the NC regulations, industrial waste excludes anything related to the production of livestock (i.e., poultry, pork, etc.).

- Other treatment standards for reclaimed industrial wastewater need to be determined on a case-by-case basis. The regulations also need to differentiate reclaimed water coming from an industrial facility vs. going to an industrial facility.
- For industrial uses of reclaimed water, should disinfection be required? Non-disinfected reclaimed water would require a distribution system separate from that of disinfected reclaimed water, the cost of which would be greater than the money saved by not disinfecting the reclaimed water for industrial uses. Disinfection, specifically with chlorine, has the advantage of keeping the distribution system clean and addresses worker contact and safety concerns at the industry that receives the reclaimed water.
- According to the Gray Water Guidelines of the VDH, gray water is defined as wastewater collected from bath tubs, showers, lavatory fixtures, closed washing machines and laundry tubs. In addition, rain water may be collected to supplement gray water. Gray water does not include industrial waste or wastewater passing from toilets, urinals, kitchen sinks, dish washers, or laundry water exposed to soiled diapers.
- According to VDH and by definition, a wastewater which contains human waste from toilets is considered sewage. Per VDH guidelines, if an industrial wastewater contains more than 5 to 10 percent domestic wastewater, it is considered sewage; if it contains less than 5 percent it is considered an industrial waste.
- Should there be a third treatment level in the standards? Wouldn't the treatment standards in levels 1 and 2 also apply to most wastewaters except where no disinfection is required? Secondary treatment implies sewage or domestic wastewater capable of being treated to 30/30 mg/l BOD/TSS. There are numerous industries with wastewater containing heavy organic loads that utilize biological treatment and do not have the 30/30 mg/l BOD/TSS treatment limit. Consequently, they would not fall under classical secondary treatment.
- If the definition of levels 1 and 2 were modified to exclude treatment processes, it would not matter if the source of wastewater was sewage (or municipal) or industrial, provided the reclaimed water could meet the numerical limits specified in the treatment levels. However, eliminating treatment processes in the definition may then require monitoring for parameters that would otherwise be considered absent or present at very low levels based on a specific type of treatment. For example, eliminating filtration, which removes most viruses, might then require monitoring for viruses.
- It was decided that for industrial wastewater, a third treatment standard or level would not be added. Instead, the regulation would state that treatment requirements for reclamation of industrial wastewaters would be determined on a case-by-case basis. This could be addressed in the PER or reuse feasibility plan.
- For water reclamation and reuse, there was some question as to why it was necessary to have a bacterial standard other than fecal coliform since most reclaimed water will not be discharged directly to surface waters otherwise regulated by a VPDES Permit. From an operational standpoint, monitoring for potentially two sets of standards (i.e., fecal coliform for reclamation and potentially E. coli or enterococci for an effluent discharge) would be impractical. It was suggested that in a situation where the utility had E. coli or enterococci effluent limits for a discharge, but was also reclaiming water, the bacterial treatment standard for the reclaimed water should match that contained in the VPDES permit.
- In an irrigation situation, Fecal coliform may still be the best standard to apply since most groundwater statewide is fresh water. The addition of organisms or contaminants would need to be viewed in light of antidegradation standards contained in the Virginia Groundwater Quality Standards. The antidegradation standard is a limited degradation standard, which essentially states that "If

something is not there, you can't put it there; and if something is there, you can't put more of it there unless you have a permit to do so."

- There is no groundwater standard specifically for fecal coliform. However, the presence of fecal coliform in groundwater will negatively impact its use as an untreated source of drinking water. The VDH looks at the presence or absence of fecal coliform when approving a private domestic water supply. Because fecal coliform is in the Safe Drinking Water Act standards, VDH will continue to use it as the bacterial indicator for drinking water in Virginia.

- For now, the TAC agreed that there should be more than one bacterial standard in the regulation and that different numbers for these organisms must be determined for the treatment levels 1 and 2. There are formulas or translators available to make the conversions between different bacterial standards.

- According to State Water Quality Standards for surface waters (except shellfish waters) and for primary contact recreation uses, the standards for E. coli are a geometric mean of 126/100 ml and a single sample maximum of 235/100 ml; for enterococci, a geometric mean of 35/100 ml and single sample maximum of 104/100 ml, and for fecal coliform, a geometric mean of 200/100 ml and a single sample maximum of 400/ml. Consequently, why would reclaimed water treated to meet at least level 2, not have a fecal coliform standard of 400/100 ml instantaneous maximum rather than 1000/100 ml, contained in the previously proposed regulation?

- The TAC agreed that for treatment level 2, the State Water Quality Standards for fecal coliform, enterococci and E. coli should be made the treatment standard. A translator will be needed to develop more stringent bacterial standards for treatment level 1.

- A treatment level that eliminates the need for permitting end users should be considered. Such a treatment level would need to establish standards for nutrients in addition to the other parameters noted. Reuses of reclaimed water achieving nutrients levels below the established standard would require no or minimal monitoring, thereby eliminating the need for users to be permitted. This, in turn would make the reclaimed water more attractive to prospective users. For generators, however, removing nutrients to such levels would represent a high operating cost. A significant incentive for wastewater treatment facilities to go to reclamation and reuse is to avoid the cost of nutrient removal technology to meet effluent nutrient caps for N and P. Countering this point, a generator of reclaimed water must have users and will not be able to divert 100% of the discharge to reclamation without a base of users established. Therefore, the generator will still need to address nutrient removal in the short term. It is anticipated, based on the experience of water reuse in Florida, that the demand for reclaimed water will completely eliminate a discharge for many wastewater treatment facilities in Virginia.

- It may be that nutrients will be driven by the end use and not by the regulation itself

- Some concern was expressed regarding the occurrence of nitrate nitrogen in ground water. There is scientific data and evidence indicating that 15 to 20 ppm nitrate nitrogen in water has no health effects. There are bacteria in the groundwater that convert nitrate to nitrite. It is nitrite that causes methemoglobinemia and is a human health concern.

In summary, the TAC developed the following standards for two levels of treatment:

1. High level disinfection, secondary treatment with filtration
pH 6.0-9.0 standard units, BOD₅ ≤ 10 mg/l, 30-day avg.
Turbidity ≤ 2 NTU, never > 5 NTU
Median fecal coliform not detectable, never >14/100 ml

(other treatment standards for E. coli and enterococci will be developed for Level 1 reclaimed water treatment)

TRC \geq 1 mg/l after a min. contact time of 30 min.*

2. Standard disinfection, secondary treatment
pH 6.0-9.0 standard units
BOD₅ & TSS \leq 30 mg/l, 30-day avg.
Fecal coliform \leq 200/100 ml, never > 400/100ml
E. coli \leq 126/100 ml, never > 235/100 ml
enterococci \leq 35/100 ml, never > 104/100 ml
TRC \geq 1 mg/l after a min. contact time of 30 min.*

* Applies if chlorine is used for disinfection.

A footnote will be added to table indicating that treatment standards for reclamation of industrial wastewater will be case-specific.

The TAC members were presented a table containing reclaimed water reuses suggested at the 1/27/06 TAC meeting, and the two levels of treatment established earlier in the meeting. The TAC was then requested to complete the matrix of the table indicating whether a specific reuse should be allowed or prohibited for each level of treatment. A member of the TAC, felt that comparable information was already contained the table of "Suggested Guidelines for Water Reuse" in the EPA Guidelines and suggested that the TAC go through this table instead to determine what items would be appropriate for the currently proposed regulation. It was suggested that the table DEQ staff had prepared for the TAC contain the performance standards within it. It was agreed that the TAC would go through the table in the EPA Guidelines and identify anything that would not be appropriate for the currently proposed regulation.

The TAC proceeded to review the EPA Guidelines table up to but not including environmental reuses, groundwater recharge and indirect potable reuses. The two levels of treatment found in the EPA Guidelines table for the reuses discussed, were essentially the equivalent of treatment Levels 1 and 2 developed by the TAC, with the exception of standards for E. coli and enterococci that will need to be included in treatment Levels 1 and 2. For Urban Reuse, the EPA Guidelines recommended the highest level of treatment equivalent to Level 1 in the proposed standards for toilet flushing, vehicle washing and fire protection. This was a higher level of treatment than what the majority of the TAC felt was necessary as indicated in their prior meeting. A member of the TAC noted that it would not be practical or feasible to have a distribution system for both levels of treatment needed for various urban reuses, in addition to a distribution system for potable water. By treating the reclaimed water to the highest level, it would be suitable for all urban reuses and would then require only one distribution system. Another member of the TAC suggested that the DEQ table be modified to make construction related activities a separate category from urban reuses (similar to how it is categorized in the EPA Guidelines table), move street washing from urban reuse to construction related activities, and remove indoor humidifiers. Most urban reuses are outdoors and piping for reclaimed water seldom goes inside urban dwellings.

The TAC was asked to look at the way EPA had grouped reuses into categories and the treatment recommend for each category to determine if this would be appropriate for the proposed regulation. The TAC discussed the inclusion of toilet flushing under urban reuse. It appeared that the majority of the TAC agreed that reclaimed water used for flushing indoor toilets should receive Level 1 treatment.

However, when taking reclaimed water into domestic dwellings, there will be issues of cross-connection control between the potable and reclaimed water systems. Most states with rare exception, do not allow a residential toilet to be connected to a reclaimed water system. Toilet flushing under urban reuse should be limited to commercial establishments, high rise office buildings, football stadiums, or essentially any building that is non-residential. This will be noted in the DEQ table. Also, it may be that plumbing or building codes will prohibit reclaimed water distribution systems in private homes. There is some reference to this in the VDH Gray Water Guidelines. There was general consensus that indoor reuses of reclaimed water for domestic dwellings or private homes should not be allowed.

Continuing the review of the EPA Guidelines, the TAC was in agreement with the suggested guidelines for Restricted Access Area Irrigation. For Agricultural Reuse on Food Crops Not Commercially Processed, clarification was made that this reuse category could include root crops (i.e., peanuts, potatoes, beets, etc.) grown and harvested for human consumption if they are not commercially processed via cooking and canning before consumption. The TAC agreed that the highest level of treatment (Level 1) should be required for unprocessed food crops for human consumption. For Agricultural Reuse on Food Crops Commercially Processed and Agricultural Reuse on Non-food Crops there were no comments for secondary treatment with standard disinfection recommended by the EPA Guidelines.

For Recreational Impoundments, the EPA Guidelines recommend the highest level of treatment (Level 1). It was pointed out that this treatment level appears excessive when it is permissible to discharge effluent of secondary treatment that by definition is considered swimmable and fishable. For man made recreational impoundments that are not state waters and where there will be no dilution of the effluent, it may be more appropriate to use reclaimed water of the highest quality. It was pointed out that DEQ already covers discharges to recreational impoundments through VPDES permits with limits of 10/10/3 (cBOD₅, TSS, TKN). The question was then raised as to whether recreational impoundments should be considered a reuse category if it could potentially conflict with VPDES permits. A facility might receive less stringent treatment standards if reclaiming wastewater and reusing it to fill or augment a recreational impoundment, compared to the limits it might receive if discharging effluent to the same impoundment under a VPDES permit. This issue will be revisited when discussing the relationship of this regulation to other existing regulations. It might be appropriate to better define what recreational impoundments will be considered a reuse vs. a discharge to be covered under a VPDES permit.

For Landscape Impoundments, the EPA Guidelines recommend a lower level of treatment (Level 2) and specify that public contact with the reclaimed water is not allowed, yet these impoundments occur in public places. Assuming that such impoundments will be completely reclaimed water with no dilution from other water sources, some TAC members were not comfortable with the Level 2 treatment recommended in the EPA Guidelines. For the DEQ table, it was suggested that this category be subdivide into two subcategories. The first subcategory could be landscape impoundments where public contact or access is likely and Level 1 treatment would be required, and the second subcategory could be landscape impoundments where no public contact or access would be allowed and Level 2 treatment would be required.

For Construction Use, the EPA Guidelines recommend the lower level of treatment (Level 2) but include a comment that a higher level of disinfection should be provided when frequent worker contact with reclaimed water is likely.

For Industrial Reuses, there are subcategories for once-through cooling and recirculating cooling towers in the EPA Guidelines. These guidelines appear to address large industrial/commercial situations, but there are also small shops and schools where reclaimed water is used for chiller make-up.

DEQ staff will try to develop a table of reuses and treatment levels that includes portions of the EPA Guidelines table and distribute this back to the TAC for their comments.

DEQ staff will also research disinfection standards for E. coli and enterococci for the proposed treatment Level 1.

A subcommittee will be organized to develop alternative performance standards and demonstration requirements for disinfection by methods other than chlorination and an option to reduce chlorine contact times and residual requirements if demonstrated to meet the disinfection standards. There is a joint method used by VDH and DEQ on reducing the chlorine disinfection requirements previously contained in VPDES permits.

Another subcommittee will be organized to examine and develop recommendations on: (1) how nutrients will be regulated differently for irrigation and indirect groundwater reuses compared to land treatment of wastewater, (2) reuses that may need nutrient management plans, and (3) appropriate irrigation rates based on maximum plant nutrient uptake vs. field capacity. This subcommittee will also look at the feasibility of developing a treatment standard comparable to treatment level 1 (developed by the TAC) with nutrient limitations, that if achieved will exempt any reuse of that reclaimed water from permitting requirements. DEQ will prepare information for this subcommittee on other regulations, particularly related to nutrients, so that they can avoid creating redundancy or situations where the proposed regulation might conflict with another regulation. The guest speaker from the Florida DEP will be asked to address nutrients in his presentation, thereby providing additional information for subcommittee members.

A draft preliminary outline of the proposed regulation was provided to the TAC for comparison with the formerly proposed regulation. The TAC was asked to go through language of the former regulation and determine what portions were useful and could be transferred to the outline for inclusion of the currently proposed regulation. It was noted that the section of "Definitions" must be placed at the beginning of the regulation. In the "Purpose" of the previously proposed regulation, it specifically states that the regulation is to promote and encourage the reclamation and reuse of "wastewater". This language is exactly that contained in State Water Control Law. However, it also contrary to what the TAC would like to include in the name the regulation, which is "water" rather "wastewater", to improve the perception of reclaimed water. It may be possible to include "(water)" after the term "wastewater" in the Purpose of the regulation. DEQ staff will check options to adjust this difference.

For the definitions, the term "owner" was included in the previous regulation but was not defined. A definition for owner comparable to what is contained in other water regulations can be included. Terms like "generators", "users" and "third parties" are important terms that should be added to the regulation. Treatment definitions don't match what was discussed for treatment levels discussed earlier in the meeting. This needs to be addressed. Some definitions should also likely be eliminated. It was suggested that "gray water" be eliminated from the definitions. However, it was also noted that while the State Water Control Law excludes gray water, it does not define this term. Therefore, it was thought that gray water should be defined in the regulation in order to determine what constitutes an

exclusion for gray water. VDH gray water guidelines define gray water, but Board of Health law and VDH regulations do not.

The entire section of “Applicability and permitting requirements” needs to be rewritten.

The Section on “Exclusions and prohibitions” will change, particularly related to nutrient issues or requirements. The list of accepted reuses developed by the TAC will need to be compared to what was contained in the former regulation for exclusions and prohibitions.

“Relationship to other regulations” will be a key section where it should be explained how several regulations related to water reclamation and reuse will interact and how the new regulation will not create a new permit program. The same information to be prepared by DEQ staff for the nutrient subcommittee can also apply to changes needed for this section of the regulation. It was suggested that this section include information regarding the type of permit required for each reuse.

No comments were made on “Delegation of Authority”. This language will be transferred without change to the proposed regulation.

After “Delegation of Authority”, DEQ staff suggested that a section on “General Requirements” follow as shown in the preliminary outline of the proposed regulation. This differs from the previously proposed regulation in which “Standards for Irrigation with Reclaimed Water” followed “Delegation of Authority”, and contained numerous sections that were common to other reuses. The TAC had no objections to the “General Requirements” section in the preliminary outline.

The preliminary outline of the proposed regulation, particularly for “General Requirements, is more comprehensive than the previously proposed regulation. Subsections for “General Requirements” were found in water reuse regulations of other states and were thought to be applicable to the proposed regulation. These new sections will require the TAC to write new language not found in the previously proposed regulation. For the next meeting, the TAC was asked to review the previous regulation and identify language that could be transferred to the currently proposed regulation.

One TAC member noted that in the previous regulation under “Irrigation Rates and Nutrient Management Plan” (9 VAC 25-740-120) there was greater flexibility regarding the hydraulic loading rate for a site compared with the SCAT Regulations which are have more restrictive loading rates for effluent. The SCAT regulations are design and construction standards, not a permit regulation. Other states have similar hydraulic loading restrictions which came from ten states’ standards (1977) used as disposal regulations. Although the SCAT Regulations provide recommendations for design, they are also being used to establish permit limits.

Recent changes to the DCR Nutrient Management Training and Certification Regulation and the Virginia Nutrient Management Standards and Criteria also may also directly affect irrigation reuse.

For the guest speaker at the TAC meeting on 3/30/06, the TAC was asked to provide topics for discussion by the speaker as soon as possible.

The meeting was adjourned.