TENTATIVE AGENDA
STATE WATER CONTROL BOARD MEETING
THURSDAY, DECEMBER 4, 2008
AND
FRIDAY, DECEMBER 5, 2008 (if necessary)

House Room C
General Assembly Building
9th & Broad Streets
Richmond, Virginia

Convene – 9:30 a.m. (Both Days)

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I.	**Minutes (**October 16-17, 2008)		A
II.	**Permits**		
	Louisa Co. Water Authority Zion Crossroads WWTP	Thomas	B
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	Water Quality Management Plan Waste Load Allocation Amendments for Merck WWTP and Frederick-Winchester Service Authority Opequon WRF	Pollock/ Kennedy	C
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	Non-Metallic Mineral Mining VPDES General Permit Reissuance	Cosby	D
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VI.	**Consent Special Orders (VPDES Permit Program)**	O'Connell	E
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X. Public Forum

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ADJOURN

NOTE: The Board reserves the right to revise this agenda without notice unless prohibited by law. Revisions to the agenda include, but are not limited to, scheduling changes, additions or deletions. Questions arising as to the latest status of the agenda should be directed to Cindy M. Berndt at (804) 698-4378.

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

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

For CASE DECISIONS (issuance and amendment of permits and consent special orders), the Board adopts public participation procedures in the individual regulations which establish the permit programs. As a general rule, public comment is accepted on a draft permit for a period of 30 days. If a public hearing is held, there is a 45-day comment period and one public hearing. If a public hearing is held, a summary of the public comments received is provided to the Board for their consideration when making the final case decision. Public comment is accepted on consent special orders for 30 days.

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

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

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

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

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

PUBLIC FORUM: The Board schedules a public forum at each regular meeting to provide an opportunity for citizens to address the Board on matters other than pending regulatory actions or pending case decisions. Anyone wishing to speak to the Board during this time should indicate their desire on the sign-in cards/sheet and limit their presentation to not exceed 3 minutes.

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

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

REISSUANCE OF VPDES PERMIT NO. VA0090743, ZION CROSSROADS WWTP LOUISA COUNTY: On November 2, 2006 the Louisa County Water Authority submitted a VPDES Permit application for the reissuance of Permit VA0090743, for the discharge from the Zion Crossroads Wastewater Treatment Plant (WWTP). This facility is an existing 0.1 million gallon per day (mgd) sewage treatment plant; the current permit authorizes expansion to a 0.7 mgd sewage treatment plant. On April 15, 2008, the Louisa County Water Authority submitted an amendment in the form of a letter to the VPDES Permit application for the Zion Crossroads WWTP requesting a middle design flow tier of 0.311 mgd be added.

The Zion Crossroads wastewater treatment plant is located at 9746 James Madison Highway in Gordonsville, Virginia. It currently serves single-family homes in the Spring Creek Subdivision and

several commercial connections. Effluent from the Zion Crossroads WWTP discharges to an impoundment of Camp Creek. From there it flows to Camp Creek, Wheeler Creek, Hudson Creek, and subsequently, the South Anna River. Downstream from the impoundment, Camp Creek flows through the Green Springs National Historic Landmark District.

Public Notice and Public Hearing

Notice of the proposed permit reissuance was published in the *Central Virginian* newspaper on June 26, 2008, and July 3, 2008. The public notice comment period ended on July 28, 2008. Notification was made to the Louisa County Administrator, the Louisa County Board of Supervisors and the Thomas Jefferson Planning District Commission by letter dated June 24, 2008. Additionally, the Advisory Council on Historic Preservation, the National Park Service, the Virginia Department of Historic Resources and Historic Green Springs, Inc. were electronically notified of the proposed permit action and comment period on June 26, 2008.

DEQ received 16 comments during the permit reissuance comment period. The NRO Regional Director authorized the convening of a public hearing for the proposed permit reissuance on August 27, 2008.

Notice of the public hearing and second comment period was published in the *Central Virginian* newspaper on September 18, 2008, and September 25, 2008. The second public comment period ended on November 6, 2008. All respondents to the original public notice were sent written notification of the public hearing. The hearing was held at 7:15 p.m. on October 2, 2008, in the Forum of the Louisa County Middle School in Mineral, Virginia. Mr. John Thompson served as hearing officer. A question and answer preceded the hearing.

Including the applicant, six individuals provided verbal comments at the public hearing. DEQ received 18 comments during the second comment period, including the verbal comments.

Staff received many comments on the draft permit and combined some of them where it is possible without losing specifics. A detailed summary of the comments received with staff responses is included as part of the minibook. The comments are organized and presented by issue; there is an accompanying table identifying each person/organization that provided comments and their comments. Please contact appropriate staff for a full copy of the comments received.

There were several dominant comments challenging the adequacy of the permit, and they are summarized below.

1. *Impacts to the Green Springs National Historic Landmark District.* Responses were received concerning impacts to the Green Springs National Historic Landmark District. The issues raised included: (a) the permit review process does not consider the cumulative impacts associated with the long range growth and water resources plans for Louisa County; (b) increased nutrient loadings and flows will degrade the downstream resources of the National Landmark District; (c) conservation easements restrict land use in the National Landmark District to preserve, protect and maintain the resource values; increased nutrient loadings will affect the viability of the agricultural use of the land as increases in point source loadings will require additional reductions in nutrients from nonpoint (i.e. agricultural) sources.

   <u>Staff Response</u>
   The proposed permit was drafted based on the application received from the Louisa County Water Authority (LCWA) and contains effluent limits and conditions developed to meet the Virginia Water Quality Standards and protect the beneficial uses of the receiving water. These are the same standards that are used to characterize and protect all waters of the Commonwealth,

including the waters of national and state parks and historic areas. Protection of the water quality standards ensures the beneficial uses of the receiving waters are maintained and no loss of use is incurred downstream from the discharge. The water supply, land use and development plans of Louisa County are not within the scope of the Virginia Pollutant Discharge Elimination System (VPDES) program.

The proposed permit does not authorize expanding the discharge of nutrients from this facility. The nutrient loadings for the Zion Crossroads WWTP are maintained at the levels established at the current design flow of 0.1 MGD. Any annual total nitrogen and total phosphorus loadings above and beyond those permitted prior to July 1, 2005 are required to be offset.

2. *EPA Should Take Over the Permitting Action*. As a federal agency, EPA did not properly consider and review the permitting action in light of the requirements of the National Historic Preservation Act. This permitting action should be deferred or denied until issues are adequately addressed and resolved. Alternatively, EPA should take over this permitting action and more thoroughly evaluate the impacts to the National Historic District.

   Staff Response
   The draft permit was prepared in full accordance with the VPDES permit regulation and the Virginia Water Quality Standards. EPA Region 3 did review the permit and concurred with the draft permit. With regard to review of the proposed permitting action by historic resource agencies, DEQ notified the Advisory Council on Historic Preservation, the National Park Service, the Virginia Department of Historic Resources (DHR) and Historic Green Springs, Inc. of both public comment periods for the proposed permitting action. Additionally, DEQ staff has spoken with staff from the DHR on several occasions and held conferences with the National Park Service on June 19, 2008 and October 31, 2008.

3. *Reuse of Treated Wastewater*. Reclamation and reuse of the treated effluent should be required.

   Staff Response
   The Virginia State Water Control Law does not require the reuse of wastewater. Section 62.1-44.2 of the State Water Control Law states in part "It is the policy of the Commonwealth of Virginia and the purpose of this law to…promote and encourage the reclamation and reuse of wastewater in a manner protective of the environment and public health." The State Water Control Law does not give the Commonwealth of Virginia authority to mandate reclamation and reuse of wastewater.

   However, the LCWA has requested that the permit authorize the reuse of the effluent and the draft permit does allow the treated wastewater to be reused for irrigation. The draft permit requires the permittee to submit for approval a detailed Reclaimed Water Management (RWM) Plan and a Soil-Moisture Monitoring Plan 90 days prior to commencing reuse and/or when the monthly average flow of the Zion Crossroads WWTP reaches 90% of 311,000 gpd (279,000 gpd). The permit does not prevent reuse of wastewater prior to reaching the 311,000 gpd flow, but does require reuse once flows reach this level. This condition is in accordance with the Preliminary Engineering Report, Revised Addendum No. 1, which indicates seasonal effluent reuse will be incorporated to offset nutrient loadings.

4. *Minimal Flow in Camp Creek and Increased Discharge Volume***.** Responses were received indicating that there is minimal flow to Camp Creek in the summer and that expanding flow at the Zion Crossroads WWTP will turn Camp Creek into a conduit for sewage. The wells serving the Spring Creek subdivision pull water from the National Landmark District and return sewage to Camp Creek.

Staff Response
Virginia Water Protection (VWP) individual permit No. 02-0753 was issued on July 1, 2003, to authorize the surface water impacts associated with the construction of Spring Creek multi-use golf community and water withdrawal from the impoundment of Camp Creek. These withdrawals are not within the scope of this proposed VPDES permit action. However, comments indicating that flows in Camp Creek have been very low, even dry, in recent years have been noted and are being considered by DEQ staff in light of the VWP permit requirements. Regarding the discharge to the impoundment of Camp Creek and the flow through National Landmark District, the proposed permit establishes effluent limits and conditions to meet the Virginia Water Quality Standards and protect the beneficial uses of the receiving water.

5. *Compliance History of the Facility*. Concerns were raised about the compliance history of the facility and its ability to meet even more stringent effluent limits contained in the proposed permit.

   Staff Response
   The final, approved design specifications for the Zion Crossroads WWTP have demonstrated the ability to comply with the current permit effluent limits and conditions. However, there have been administrative and/or plant operational challenges throughout the operating history of the facility resulting in exceedances of some permit effluent limits.

   Staff monitors the facility's compliance in accordance with standard agency practices. The compliance problems have been addressed through informal enforcement actions. Continued compliance assessment will be made by evaluating the required monthly self monitoring reports and with DEQ staff inspections. The inspection frequency of the plant will be dependent upon the permittee's monthly self monitoring results and the ability of the WWTP to comply with permit limits and conditions.

   Additionally, to ensure that the facility's total suspended solids (TSS) and *E. coli* effluent are in compliance with the permit limitations, staff is recommending the monitoring frequency for these two parameters be increased to five days per week and two days per week, respectively. This increased monitoring frequency will be continued for future flow tiers.

Staff Comments

The draft permit was updated during the public hearing comment period to increase the monitoring frequency for TSS and *E. coli* as discussed above. This increased monitoring frequency was noted in the staff presentation at the public hearing.

We have reviewed all comments and we believe the draft permit has been prepared in accordance with all applicable regulations and agency practices. Further, we believe that the effluent limits and conditions in the permit will protect the water quality standards of the receiving stream and the Green Springs National Historic Landmark District.

Comment Summary
VA0090743 – Zion Crossroads Wastewater Treatment Plant

1. **Lack of Consideration of the Green Springs National Historic Landmark District**. Responses were received that the discharge flows through the Green Springs National Historic Landmark district and DEQ did not consider the nature, magnitude or cumulative impacts on historic and agricultural resources, including lands under conservation easement limiting uses to agriculture. This lack of

consideration equates to a determination that the Green Springs National Historic Landmark District had no significance in the issuance of this permit.
Staff Response:
The permit was prepared to protect the Virginia Water Quality Standards at 9 VAC 25-260 applicable to the receiving stream, Camp Creek. These are the same standards that are used to characterize and protect all waters of the Commonwealth, including the waters of national and state parks and historic areas. Staff believes that the permit as drafted will meet the applicable regulatory standards that have been established to protect the water quality of Camp Creek and its beneficial uses. There was no determination of significance concerning the downstream district as the proposed effluent limits protect the beneficial uses of the receiving waters, regardless of the downstream land uses, special designations, or agricultural and historic resources.

Additionally, it is worth noting that the initial permit issuance for the Zion Crossroads WWTP could not have proceeded had the locality determined that the proposed location and operation of the facility was not consistent with all local ordinances. Finally, the Virginia Department of Historic Resources provided a response dated July 9, 2008, indicating their opinion that the proposed permit reissuance would have no adverse impact to historic properties.

2. **Long Range Growth and Development in Louisa County, to include Alternatives to the Discharge, Should be Considered**. Responses were received that the permit evaluation does not take into account the larger, long-range water resource plan to bring millions of gallons of water from the James River to support ongoing development at Zions Crossroads. This increase in water supply is destined to go to the Zion Crossroads WWTP and into Camp Creek. Alternatives to the discharge from the Zion Crossroads WWTP should be considered.
Staff Response:
The proposed permit was drafted based on the application received from the Louisa County Water Authority (LCWA) and contains effluent limits and conditions developed to meet the Virginia Water Quality Standards and protect the beneficial uses of the receiving water. In the future, should LCWA request to expand the WWTP beyond the design flow capacities included in this proposed permit, DEQ will evaluate the request at such time considering the water quality impacts associated with expansion and the water quality standards and regulations in effect at that time. The water supply, land use and development plans of Louisa County, as well as an alternatives analysis of the discharge, are not within the scope of the Virginia Pollutant Discharge Elimination System (VPDES) program.

3. **EPA Should Take Control of the Permitting Process.** Responses were received suggesting that if DEQ is unwilling or unable to fully evaluate all the implications of the sewage discharge through the Green Springs National Historic Landmark District, EPA should take control of the permitting process and conduct a proper assessment of the impacts the sewage will have on the Green Springs National Historic Landmark District.
Staff Response:
The draft permit was prepared in full accordance with the VPDES permit regulation and the Virginia Water Quality Standards. EPA Region 3 did review the permit and concurred with the draft permit.

4. **Taking of Property Due to Inability of Residents to Use Agricultural Easements.** One response was received indicating that the reissuance of the VPDES permit for the Zion Crossroads WWTP may equate to a taking within the meaning of the Fifth Amendment to the U.S. Constitution because residents of the Green Springs National Historic Landmark District will not be able to fully use their agricultural easements due to the implementation of the nutrient TMDLs in Camp Creek.
Staff Response:
The proposed permit does not authorize expanding the discharge of nutrients from this facility. Additionally, the Chesapeake Bay nutrient allocations are not implemented at the sub-watershed level of Camp Creek. Rather, the nutrient allocations for the Chesapeake Bay Program are established at a

river basin level (e.g. the York River Basin, James River Basin, etc.). Therefore, nutrient allocation issues are not directly accounted for and offset within the same sub-watershed the size of Camp Creek. Agricultural operations in the Green Springs National Historic Landmark District should not be affected by the proposed permitting action.

5. **National Historic Preservation Act Mandate to Federal Agencies.** One response was received citing federal legislative history and a House Report (No 96-1457) on the National Historic Preservation Act (NHPA) asserting "a higher standard of care to be exercised by federal agencies when considering undertakings that may directly and adversely affect National Historic Landmarks. Agencies are directed to undertake, to the maximum extent possible, such planning and actions as may be necessary to minimize harm to such a landmark, and to provide the Advisory Council on Historic Preservation a reasonable opportunity to comment on such proposed actions…" EPA's limited review reflects no consideration of immediate adverse impacts to be anticipated from the increasing volumes of discharge and pollutants. It also reflects no consideration of reasonable alternatives.
   Staff Response:
   The draft permit was prepared to protect the Virginia Water Quality Standards applicable to the receiving stream, Camp Creek. These are the same standards that are used to characterize and protect all waters of the Commonwealth including the waters of national and state parks and historic areas. Protection of the water quality standards ensures the beneficial uses of the receiving waters are maintained and no loss of use is incurred downstream from the discharge. The Advisory Council on Historic Preservation was notified of the public notice and comment periods on June 26, 2008 and September 17, 2008. Additionally, discussions between DEQ and the National Park Service regarding the permitting action were held on June 19, 2008 and October 31, 2008.

6. **NPDES Program Delegation.** One response was received noting that the National Historic Landmark was designated prior to delegation of the NPDES program to Virginia. Since the national interests were identified prior to program delegation, and there is no apparent recognition of the heightened national interests in the National Landmark District, the validity of the original delegation decision as well as subsequent programmatic reviews is in question.
   Staff Response:
   The draft permit was prepared in accordance with applicable law and regulations and protects the Virginia Water Quality Standards. These standards protect all waters of the Commonwealth, including the waters of national and state parks and historic areas. There are many local, state, and federal land holdings and/or interests located downstream from discharges in the Commonwealth of Virginia. Protection of the water quality standards ensures the beneficial uses of the receiving waters are maintained and no loss of use is incurred downstream from the discharge.

7. **DEQ Consultation with the National Park Service.** Responses were received stating that Section 106 of the National Historic Preservation Act requires that consultation (meeting, conferring, and consulting) with the National Park Service is required with this permitting action.
   Staff Response:
   Sections 106 and 110 of the National Historic Preservation Act (NHPA) establish requirements for federal agencies to preserve historic resources under their control and/or ownership for federal, or federally assisted, undertakings. DEQ staff has not made an attempt to interpret the applicability of the NHPA to this proposed permitting action. Rather, consistent with the intent of the NHPA and the requirements of the VPDES regulations, DEQ staff notified historic resource agencies and/or organizations of the proposed permitting action. Specifically, DEQ notified the Advisory Council on Historic Preservation, the National Park Service, the Virginia Department of Historic Resources (DHR) and Historic Green Springs, Inc. of both public notice periods for the proposed permitting action. Additionally, DEQ staff has spoken with staff from the DHR on several occasions. Finally,

conferences between DEQ and the National Park Service regarding the permitting action were held on June 19, 2008 and October 31, 2008.

8. **No Adverse Effect to Historic Properties**. One response was received indicating there would be no adverse effect to historic properties from the reissuance of the permit.
   Staff Response:
   There are no issues for staff to address in this comment.

9. **Water Taken from the James River Should be Returned to the James River.** Responses were received suggesting that Louisa County should return any water withdrawn from the James River back to the basin of origin.
   Staff Response:
   There is no regulatory requirement to mandate the location of a discharge or the prohibition against interbasin transfers. Additionally, there is no statutory or regulatory authority in the VPDES program to require the discharge be located in the river basin which provides the water supply.

10. **Inadequate Notice of the Green Springs National Historic Landmark.** One response was received that the fact sheet should state that sewage discharge flows through the Green Springs National Historic Landmark District and the Virginia Rural Historic District.
    Staff Response:
    The draft fact sheet states that the sewage effluent flows to an impoundment of Camp Creek and tracks the flow of the waters to the South Anna River. While this provides sufficient information regarding the location of the discharge, the fact sheet will be amended to identify the downstream National Landmark District.

11. **Inadequate Notice of the Proposed Permitting Action**. One response was received in the comment period for the draft permit that DEQ did not properly notify government agencies or authorities with interests and investments in protecting the Green Springs National Historic Landmark District. Similarly, DEQ did not notify the National Park Service in a timely manner of the proposed permitting action. Additionally, DEQ did not include adequate information in the public notice.
    Staff Response:
    The following summarizes the notice provided for the initial comment period (June 27, 2008 through July 28, 2008) of the proposed permit.
    - In accordance with the VPDES Permit Regulation 9 VAC 25-31-290, the public notice of this draft permit was accomplished by the following:
      i. Publication in the *Central Virginian* on June 26, 2008 and July 3, 2008 to provide notice of the public comment period extending from June 27, 2008 through July 28, 2008;
      ii. The Louisa County Administrator, the Louisa County Board of Supervisors and the Thomas Jefferson Planning District Commission were mailed a letter dated June 24, 2008, of the pending permit action.
      iii. The Advisory Council on Historic Preservation, the National Park Service, the Virginia Department of Historic Resources and Historic Green Springs, Inc. were electronically notified of the proposed permit action and comment period on June 26, 2008. The transmittal email to these organizations did reference the location of the Green Springs National Historic Landmark District downstream from the discharge and included the draft permit, fact sheet and public notice.
    - The format and content of the public notice was prepared in accordance with DEQ guidance and the VPDES Permit Regulation at 9 VAC 25-31-290.
    - In addition to DEQ standard public notice procedures, a public informational meeting was held on the evening of June 16, 2008 at the Louisa County Jefferson-Madison Regional Library in Mineral, Virginia. The purpose of the meeting was to discuss and answer

questions on the draft permit for the Zion Crossroads WWTP. A June 2, 2008 email notice of the meeting was sent to individuals that attended an earlier meeting held by DEQ on March 7, 2008 at the same location concerning a regulatory action considering amending the Water Quality Management Planning Regulation (9VAC25-720) to add nutrient waste load allocation for the Zion Crossroads WWTP. Additionally, on June 5, 2008, DEQ-NRO sent an electronic version of the draft permit to these same individuals. The National Park Service was informed of this public information meeting via telephone during the week of June 9, 2008.

12. **Inadequate Notification of Riparian Landowners**. One response was received that DEQ did not notify downstream riparian property owners and provide adequate information in the public notice.
Staff Response:
The VPDES Permit Regulation (9 VAC 25-31-290.F) states that DEQ shall make a good faith effort to notify riparian property owners to a distance of one half mile downstream on non-tidal waters upon receipt of an application for the issuance of a new or modified permit. Riparian landowners were notified with the initial issuance of the VPDES permit for the Zion Crossroads WWTP. In 1997, the Virginia General Assembly revised §62.1-44.15:4D of the State Water Control Law to require riparian property owners notification only when application is received for issuance of a new permit, or when an existing permit is modified. Applications for reissuance of existing permits are not included. The proposed permitting action for the Zion Crossroads WWTP is a reissuance, it is not a permit issuance or modification.

13. **Omission of Stream Impairment Information**. One response was received that the benthic impairment of Wheeler Creek at the confluence with Camp Creek was omitted from the permit documents.
Staff Response :
The fact sheet includes the following: "The receiving stream is not monitored and is not listed in the current 2006 Virginia Water Quality Assessment 305(b)/303(d) Integrated Report (IR). However, the 2006 Virginia Water Quality Assessment 305(b)/303(d) Integrated Report (IR) states that there are numerous downstream assessment unit segments (located on Wheeler Creek and the South Anna River) that are impaired for a bacteria parameter (fecal coliform and/or *E. coli*)."
An aquatic life use impairment of Wheeler Creek is not yet included on the §303(d) list of impaired waters. Biological monitoring of Wheeler Creek has been conducted by DEQ since development of the 2006 IR, and the results of this monitoring do indicate an aquatic life use impairment due to a poor benthic community. The results of the biological monitoring have been identified in the Draft 2008 IR and it is anticipated that this impairment will be included in the final 2008 IR. However, the 2008 IR has not yet been finalized. It is not DEQ policy to include draft assessment information in formal permit documentation. This information is readily available to the public and was discussed at the public information meeting and will be included in future permit documentation once the 2008 IR is approved by EPA.

14. **TMDL Assessment and Allocation Has Not Been Completed for the Watershed**. Responses were received that the discharge from the Zion Crossroads WWTP is to a watershed that has not completed a full TMDL assessment and allocation.
Staff Response:
Wheeler Creek was first identified with a recreational use impairment in the 2006 305(b)/303(d) Water Quality Assessment Integrated Report (IR) due to elevated levels of fecal coliform bacteria. A bacteria TMDL was completed for the Pamunkey River Subbasin of the York River Basin in 2006. EPA approved the TMDL on August 2, 2006. The TMDL was developed and submitted to EPA for approval before the bacteria impairment on Wheeler Creek was identified in 2006 Assessment. Thus, although the Pamunkey River Basin TMDL included several previously listed bacteria impairments throughout the watershed, including several segments of the South Anna River, a specific TMDL

equation was not developed for Wheeler Creek. However, it should be noted that all upstream point source dischargers (including VA0090743) were included in the waste load allocation of the TMDL. An aquatic life use impairment due to poor health in the benthic macroinvertebrate community at DEQ biological station 8-WLR000.26 (Route 640) was first identified for Wheeler Creek in the Draft 2008 IR. This report is expected to be approved by EPA later in 2008. The draft permit was prepared to protect the Virginia Water Quality Standards at 9 VAC 25-260 applicable to the receiving stream, Camp Creek. These are the same standards that are used to characterize and protect all waters of the Commonwealth and serve as the basis for TMDL development. At this time, staff has no reason to believe that the WWTP is the cause of the benthic impairment.

15. **Golf Course Water Withdrawal Should Be Referenced**. One response was received that the permit documentation should be amended to include the information that the golf course is withdrawing water from the impoundment for irrigation, thereby making Camp Creek even more vulnerable to low flow conditions.
    Staff Response:
    Section 12 of the Fact Sheet identifies discharges, intakes, monitoring stations, and other items in the vicinity of the discharge. Virginia Water Protection (VWP) individual permit No. 02-0753 was issued on July 1, 2003, to authorize the surface water impacts associated with the construction of Spring Creek multi-use golf community and water withdrawal from the impoundment of Camp Creek. The Fact Sheet has been updated to provide documentation for the reissuance of VPDES permit for the Zion Crossroads WWTP.

16. **Minimal Flow in Camp Creek and Increased Discharge Volume.** Responses were received indicating that there is minimal flow to Camp Creek in the summer and that expanding flow at the Zion Crossroads WWTP will turn Camp Creek into a conduit for sewage. The wells serving the Spring Creek subdivision pull water from the National Landmark District and return sewage to Camp Creek.
    Staff Response:
    As noted above, Virginia Water Protection (VWP) individual permit No. 02-0753 was issued on July 1, 2003, to authorize the surface water impacts associated with the construction of Spring Creek multi-use golf community and water withdrawal from the impoundment of Camp Creek. These withdrawals are not within the scope of this proposed VPDES permit action. However, comments indicating that flows in Camp Creek have been very low, even dry, in recent years have been noted and are being considered by DEQ staff in light of the VWP permit requirements. Regarding the discharge to the impoundment of Camp Creek and the flow through National Landmark District, the proposed permit establishes effluent limits and conditions to meet the Virginia Water Quality Standards and protect the beneficial uses of the receiving water.

17. **Camp Creek Flow Characteristics and Stream Scour**. Responses were received that the potential for increased stream scour due to the increased volume of wastewater discharge should be considered.
    Staff Response:
    It is unlikely that the flows from the WWTP contribute to bank scouring and erosion as the flows from the facility are small compared to the volume of water generated during storm events. Additionally, the impoundment, designed as a floodwater retarding dam, would have a dampening effect on the high flow conditions observed downstream of the dam release. It is staff's best professional judgment that the scouring event flows observed in Camp Creek can be attributed more to the storm water than the WWTP discharge.

18. **Camp Creek Nutrient Enrichment**. Response were received that there has been unnatural algal growth observed recently in Camp Creek indicating nutrient enrichment.
    Staff Response:

Algal growth and potential nutrient enrichment may be caused by a number of factors, including point source discharges, nonpoint source runoff from construction and agriculture and potential leaching from septic systems. Staff does not believe the observation can be attributed to the WWTP. The permit contains a total phosphorus (TP) limit of 2.0 mg/L. Most sewage treatment plants of this size have no TP limits and no algal blooms are observed downstream of the effluent discharge.

19. **Wastewater Reuse Should Be Required**. Responses were received that this permit reissuance should require reuse and recycling of wastewater for the Zion Crossroads WWTP. Section 62.1-44.2 of the State Water Control Law provides the State Water Control Board the power to control recycling of effluent. The current Reclamation and Reuse Regulations are just technical.
Staff Response:
The Virginia State Water Control Law does not require the reuse of wastewater. Section 62.1-44.2 of the State Water Control Law states in part "It is the policy of the Commonwealth of Virginia and the purpose of this law to…promote and encourage the reclamation and reuse of wastewater in a manner protective of the environment and public health." The State Water Control Law does not give the Commonwealth of Virginia authority to mandate reclamation and reuse of wastewater.
However, the LCWA has requested that the permit authorize the reuse of the effluent and the draft permit does allow the treated wastewater to be reused for irrigation. The draft permit requires the permittee to submit for approval a detailed Reclaimed Water Management (RWM) Plan and a Soil-Moisture Monitoring Plan 90 days prior to commencing reuse and/or when the monthly average flow of the Zion Crossroads WWTP reaches 90% of 311,000 gpd (279,000 gpd). The permit does not prevent reuse of wastewater prior to reaching the 311,000 gpd flow, but does require reuse once flows reach this level. This condition is in accordance with the Preliminary Engineering Report, Revised Addendum No. 1, which indicates seasonal effluent reuse will be incorporated to offset nutrient loadings.

20. **Direct Connection Between the Golf Course and WWTP**. One response was received that there should be a direct connection from the wastewater treatment plant to the golf course.
Staff Response:
The Spring Creek Golf Course is a private entity. DEQ has not received a formal request to reuse reclaimed water to irrigate the golf course. It is not within the scope of DEQs authority to require a direct connection from the wastewater treatment plant to the golf course.

21. **Compliance Schedule for Metals is Too Long**. Responses were received that the length of the metals compliance schedule should be decreased.
Staff Response:
A four-year schedule of compliance for metals is included in the permit to allow the facility time to conduct sampling during different seasons, identify upstream sources to reduce and/or eliminate loadings to the treatment works, and design and install modifications to the wastewater treatment plant that mitigate the concentration of metals discharged. Sewage treatment plants are not designed to treat metals and a four year schedule is necessary to study possible sources and treatment alternatives.

22. **Monitoring Frequency for Metals Insufficient**. One response was received that the frequency of monitoring is inadequate and should be changed from quarterly to monthly.
Staff Response:
The monitoring frequency for zinc and copper included in the draft permit are in accordance with current staff guidance. Quarterly monitoring for copper and zinc will provide sufficient effluent quality information to include as part of progress updates for meeting and achieving the final effluent limits for copper and zinc.

23. **Hardness Monitoring Should Be Required**. One response was received that since metals are toxic, even at low concentrations, the permittee should also be required to monitor and report hardness in the water supply, and the influent and effluent wastewater on at least a weekly basis.
Staff Response:
DEQ will include a requirement for effluent total hardness sampling in conjunction with the quarterly zinc and copper testing in the permit.

24. **Synergistic Effects of Copper and Zinc**. One response was received that the facility discharges both copper and zinc and these pollutants have a synergistic effect where, in combination, the toxicity is greater than either one of them individually.
Staff Response:
The water quality criteria for copper and zinc established in the Virginia Water Quality Standards and the methods for calculating effluent limits are very conservative and protective of the receiving waters for these pollutants. In addition, the Virginia Water Quality Standards at 9 VAC 25-260-30 provide all state surface waters one of three levels of anitdegradation protection. During the initial permit issuance, staff designated the receiving stream, Camp Creek, as a Tier 2 water body. With this designation, there is an additional level of protection provided to maintain the beneficial uses of this water body.

25. **Hardness Value used to Calculate Metals Limits**. One response was received that the high hardness used to calculate metals limits is not reflective of the wells at the facility. The hardness of the receiving waters in Camp Creek is one third less than the effluent hardness. Therefore, the effluent limits for metals are three times higher than they should be.
Staff Response:
The effluent limits for copper and zinc are established assuming worst-case, critical conditions where there is no dilution available from the receiving water and the facility discharges at full hydraulic design flow. The facility is required to meet water quality standards at the end-of-pipe. These limits are established using the hardness of the effluent and do not reflect the hardness of the receiving stream. Staff has confirmed that the end-of-pipe limits reflect worst-case, critical conditions. Any level of dilution introduced from the receiving stream, even with a lower hardness, results in a higher computed final effluent limit than those proposed in this permitting action.
The average effluent hardness value used by staff to calculate effluent limits for those metals which have hardness-based criteria was 190 mg/L. This information was provided by the applicant from sampling conducted in 2007 and 2008. These data reflect the hardness of the six water supply wells providing drinking water to the service area as well as the characteristics of the wastewater entering the plant.

26. **Effluent Hardness Limit at the Zion Crossroads WWTP.** One response was received that a minimum effluent hardness should be placed in the permit.
Staff Response:
The process of nitrification in a sewage treatment plant consumes carbonate and bicarbonate, thereby reducing alkalinity. The nitrification process also produces a significant amount of acid that must be neutralized if the process pH is to remain in an acceptable range. A supplemental alkalinity source such as soda ash or hydrated lime may be added to replace the alkalinity lost during treatment. Depending on the additive, it may also have the secondary effect of increasing the hardness of the effluent. Water quality criteria for certain metals are a function of hardness. It is a direct correlation; as the hardness increases, so does the computed water quality criteria.
Staff does not generally support establishing hardness effluent limits. Alkalinity adjustments to support wastewater treatment process controls are best prescribed in the operations and maintenance manual for the facility. Staff does not support the idea of chemical addition after treatment to adjust the hardness before discharge. This may have several undesirable consequences. Increasing the hardness beyond what is needed for the wastewater treatment process may have the effect of raising

the metals limits unnecessarily. It may even remove the reasonable potential for metals to exceed water quality criteria and eliminate the basis for a final effluent limit. This simply masks the toxicity potential. Additionally, it is generally against common practice to add chemicals into a final discharge. This unnecessarily alters the characteristics of the discharge to the receiving water body. The average hardness value used in the permit process for the effluent at Zion Crossroads wastewater treatment plant was 190 mg/L. Staff does not believe there is a need or basis for establishing a minimum hardness effluent limit in the proposed permit.

27. **Potential Effect on Ammonia Limit Due to pH Changes Associated with Hardness Level in the Effluent** One response was received requesting DEQ staff to re-evaluate whether any change in pH accompanied the change in hardness from the initial permit issuance and hence, the ammonia toxicity of the effluent.
Staff Response:
As noted above, the process of nitrification in a sewage treatment plant consumes carbonate and bicarbonate, thereby reducing alkalinity. The removal of carbonate and bicarbonate also produces a significant amount of acid that must be neutralized if the process pH is to remain in an acceptable range. Hardness and alkalinity are not the same. While they are both commonly measured and reported as calcium carbonate, alkalinity refers to the buffering capacity, or ability of a solution to neutralize acids, while hardness reflects the mineral content, primarily reflecting calcium and magnesium ions. Changes in the hardness of the wastewater do not necessarily translate into a change in the buffering capacity or the pH of the solution.
The 90th percentile pH value for the period of January through August 2008 was found to be 7.4 S.U. and the maximum pH value was found to be 7.8 S.U. These values support the initial assumptions that a TKN effluent limit of 3.0 mg/L would be protective of ammonia toxicity in the receiving stream, and these values are within pH range established in the Virginia Water Quality Standards. The average operational TKN value for the period of November 2007 through October 2008 was found to be 2.2 mg/L. Staff believes the draft permit protects the Water Quality Standards and beneficial uses for the receiving stream.

28. **Exceedances of Permit Effluent Limits Equate to Violations of Water Quality Standards** . Responses were received that permit limit exceedances equate to violations of the water quality standard violations and that making the permit limits more stringent will only increase the likelihood that the discharge will continue to violate water quality standards.
Staff Response:
The effluent limits are established assuming worst-case, critical conditions where there is no dilution available in the receiving water and the facility discharges at full hydraulic design flow. However, per the USDA-NRCS, the impoundment is 20.9 acres at permanent pool and therefore the effluent will be diluted under normal, non-drought conditions. Given that the worst-case, critical conditions underlying development of permit limits rarely occurs, an exceedance of a permit effluent limit does not necessarily translate into an exceedance of the water quality standards.
The proposed permit reissuance establishes increasingly stringent effluent limits as the facility expands beyond the existing 0.1 MGD design flow. These effluent limits and permit conditions are designed to ensure that the beneficial uses of the local receiving waters of Camp Creek, as well as the downstream waters of the York River Basin and Chesapeake Bay, are protected. Compliance with the permit limits and conditions will be achieved through upgrades to the existing wastewater treatment technology as well as reclamation and reuse of the wastewater.

29. **DEQ Should Not Have Delayed the Nutrient Waste Load Allocation Rule Making**. One response was received that DEQ should have instituted the next step in the rule making process considering to amend the Water Quality Management Planning Regulation, the formation of a Technical Advisory Committee, but elected to allow the permitting process to go forward.
Staff Response:

The rule-making petition from Louisa County to amend the Water Quality Management Planning Regulation, 9 VAC 25-720, to assign waste load allocations of 12,795 pounds per year for total nitrogen and 1,492 pounds per year for total phosphorus for the Zion Crossroads WWTP has been delayed for the reissuance of this individual permit. Because of concerns raised about local receiving water impacts from increased nutrient loads and other pollutants regulated by the individual permit, the DEQ has decided to wait for the individual VPDES permit reissuuance process to be completed until considering future rule-making.

30. **The Permit Should Not Allow Increases in Nutrient Loadings**. Responses were received that the permit evaluation should consider that increasing the discharge of nitrogen and phosphorus from the WWTP will create a need to offset those increase with decreases from non-point sources, impacting the agricultural community.
Staff Response:
The proposed permit does not authorize expanding the discharge of nutrients from this facility. The nutrient loadings for the Zion Crossroads WWTP are maintained at the levels established at the current design flow of 0.1 MGD. Any annual total nitrogen and total phosphorus loadings above and beyond those permitted prior to July 1, 2005 are required to be offset. The permittee will offset the nutrient loadings associated with plant expansion through the combination of installing technology to treat and remove nutrients and water reclamation and reuse.

31. **South Anna River Contains Elevated Nutrient Levels.** One response was received that the headwaters of the South Anna River immediately above the reach that receives the discharge from the Zion Crossroads WWTP has been shown to exceed recommended phosphorus and nitrogen levels.
Staff Response:
The portion of the South Anna River located upstream from where Wheeler Creek flows into the South Anna River has shown multiple values for total phosphorus (TP) that are above the screening value threshold that DEQ has used in the past to evaluate nutrient levels in freshwater streams. Note that these are only screening level values and not actual water quality criteria. The exceedances of the former TP screening values occurred well upstream of the confluence of Wheeler Creek with the South Anna River. Monitoring data on Wheeler Creek, at DEQ station 8-WLR000.29, and the South Anna River downstream from the confluence with Wheeler Creek, at station 8-SAR070.96, do not show any exceedances of this former TP screening value.

32. **Stream Monitoring Should Be Required**. One response was received that the permittee should develop, submit for approval, and implement a water quality monitoring plan for Camp Creek to include monitoring of the impoundment and Camp Creek. DEQ should continue to require the permittee to monitor the water quality in Camp Creek.
Staff Response:
The current permit requires instream monitoring for pH, temperature, dissolved oxygen, and hardness during the summer months June through August. Staff believes that the instream monitoring data collected verifies that the discharges limits in the permit are appropriate. Therefore, instream monitoring by the Louisa County Service Authority will not be required. DEQ will be performing water quality monitoring, including water chemistry and biological monitoring of benthic macro-invertebrates, in the Wheeler Creek watershed to support development of the future Total Maximum Daily Load (TMDL) to address the anticipated benthic impairment of Wheeler Creek.

33. **Is the Discharge Pulsed or Non-Pulsed.** One response was received inquiring whether the discharge is pulsed or non-pulsed.
Staff Response:
The discharge from the current 0.1 mgd treatment plant is a batch discharge. When the plant is expanded to a 0.311 mgd design flow, the treatment process will be changed from a sequencing batch reactor to an oxidation ditch. At that point, the discharge will be continuous.

34. **Compliance with and Enforcement of the Existing Permit Has Been Inadequate.** Responses were received concerning the compliance history of the facility and its ability to meet even more stringent effluent limits contained in the proposed permit. Additionally, it was asserted that the facility is not sufficiently designed to meet the current effluent limits as evidenced by numerous permit violations since initial issuance, and that there have been minimal enforcement efforts by DEQ.
Staff Response:
The final, approved design specifications for the Zion Crossroads WWTP have demonstrated the ability to comply with the current permit effluent limits and conditions. However, there have been administrative and/or plant operational challenges throughout the operating history of the facility resulting in exceedances of some permit effluent limits.
Staff monitors the facility's compliance in accordance with standard agency practices. The compliance problems have been addressed through informal enforcement actions. Continued compliance assessment will be made by evaluating the required monthly self monitoring reports and DEQ staff inspections. The inspection frequency of the plant will be dependent upon the permittee's monthly self monitoring results and the ability of the WWTP to comply with permit limits and conditions.
Additionally, to ensure that the facility's TSS and *E. coli* effluent are in compliance with the permit limitations, staff is recommending the monitoring frequency for these two parameters be increased to five days per week and two days per week, respectively. This increased monitoring frequency will be continued for future flow tiers.

35. **Return Camp Creek to its Natural State**. Responses were received stating that Camp Creek should be returned to its natural state before a sewage treatment plant was built at Zion Crossroads.
Staff Response:
The proposed permit was drafted based on the application received from the Louisa County Water Authority (LCWA) and contains effluent limits and conditions developed to meet the Virginia Water Quality Standards and protect the beneficial uses of the receiving water. Changes in land-use from development, such as increased impervious surfaces and loss of open land, can change the hydrology of a watershed. The development of the Zion Crossroads area is a Louisa County land-use and planning decision that is not within the scope of the VPDES permit program.

36. **Comment on the Endangered Species Act.** One response was received recommending a survey of the small whorled pogonia (Isotria medeoloides), a federally listed threatened plant, be conducted in the event of a facility expansion. This plant may occur in the vicinity of the facility.
Staff Response:
In accordance with the January 27, 2005 fact sheet published by the USFWS, Ecological Services Virginia Field Office entitled "The Application of the Endangered Species Act with Respect to Plants in Virginia", it is prohibited to remove and reduce federally listed threatened plants from federal lands. Staff does not believe the Zion Crossroads WWTP facility is located on federal lands. However, the recommendation has been provided to the Louisa County Water Authority.

37. **Comment on the Fish and Wildlife Coordination Act.** One response was received recommending DEQ contact the U.S. Environmental Protection Agency's Region 3 (Philadelphia) Division of Aquatic Biology for a review of the aquatic life uses in the receiving stream and compliance of the discharge with the Clean Water Act.
Staff Response:
DEQ staff forwarded the comment received to the EPA Region 3 National Pollutant Discharge Elimination System (NPDES) point of contact for Virginia.

PROPOSED RULEMAKING TO AMEND NUTRIENT WASTE LOAD ALLOCATIONS FOR MERCK AND FWSA-OPEQUON STP IN 9 VAC 25-720-50.C. (WATER QUALITY MANAGEMENT PLANNING REGULATION, SHENANDOAH-POTOMAC RIVER BASIN).:
Before making the staff presentation on the requested amendments for Merck and FWSA-Opequon, the Board will be briefed on the general status of waste load allocation revisions.

General Status of Waste Load Allocation (WLA) Revisions:
In late 2005, when the Board adopted nutrient WLAs for 125 significant dischargers in the Chesapeake Bay river basins, the DEQ Director was also authorized to: (1) receive any petition requesting amendment of the adopted nitrogen or phosphorus allocations on the Board's behalf, and (2) upon completion of the public comment period on the petition, proceed to initiate a rulemaking on any petition received. To date, requests for WLA amendments have been processed as follows:

- DEQ-Initiated Technical Corrections = 1; approved (Tyson Foods-Temperenceville)
- Legal Appeals Submitted = 2; both pending (Fauquier Co. W&SA-Vint Hill, Omega Protein)
- Discharger Petitions for Amendments = 9:
    - Approved = 4 (Tyson Foods-Glen Allen, Fredericksburg, Bear Island Paper; New Kent Co. [approved for "fast-track" processing at 10/17/08 SWCB meeting])
    - Denied = 2 (Craigsville, Boston Water & Sewer)
    - Pending = 3 (FWSA-Opequon, Merck, Louisa Co.-Zion Crossroads.)
- "Other" = 2. One is pending, involving ownership transfer and change in the nature of the site's industrial use (Pilgrims Pride-Alma). The other, which has subsequently been withdrawn, involved Culpeper Co. informally asking for consideration to extend the deadline for CTO issuance on their Mountain Run STP.

At this time, staff does not anticipate any additional petitions requesting higher allocations that would be approvable under the criteria used during the 2005 rulemaking process that established the nutrient allocations.

Subject Proposal:
The proposed amendments to 9 VAC 25-720 (Water Quality Management Planning Regulation), to increase the WLAs for both Merck and the FWSA-Opequon facilities, were published 5/26/08 in the Virginia Register and the public comment period closed 7/25/08; a Public Hearing was held 6/26/08. Based on comments received and further staff deliberations, staff intends to recommend the following for the Board's consideration:

Merck**:** Approve the proposed amendments to increase the nutrient WLAs, due to the technical infeasibility to meet the current WLAs. Based on public comment the associated "footnote" has been reworded to clarify that any potential further amendments would only result in a decrease to the WLAs and also clarify the scope and duration of the full-scale pilot project for nutrient reduction technology at the plant.

FWSA-Opequon**:** Disapprove the requested amendments to increase nutrient WLAs since the FWSA did not pursue the increased WLAs due to a plant expansion under the original rulemaking adopted by the Board in 2005 and the Shenandoah-Potomac is already estimated to be "over-allocated" for nitrogen. Further increases should be avoided when possible to aid in meeting and maintaining water quality standards. Further, the Authority has the capability to meet its "bubbled" allocation for the combined, expanded design flow of their facilities using the Nutrient Credit Exchange Program and available technology.

Background: Two significant dischargers in the Shenandoah-Potomac River basin, the Frederick-Winchester Service Authority (FWSA)-Opequon Water Reclamation Facility and the Merck facility in Rockingham County, petitioned for increased nutrient WLAs. While both facilities seek increased allocations, the basis for the requests is different. FWSA's petition requested that a larger design capacity be used as the basis for calculating their facility's allocation. Merck's petition requested that higher nitrogen and phosphorus concentrations, ones feasible to attain by the treatment facility, be used to set its allocations.

A complicating factor with these requests for higher nitrogen allocations is that the total delivered nitrogen load (from point and nonpoint sources) under the Shenandoah-Potomac's Tributary Strategy is already estimated to exceed the State's allocation commitment by about 212,000 pounds per year, and any further increase to individual facility allocations will add to this surplus unless an offset is identified.

Previous actions taken by the Board in this matter are:

- 3/8/07 meeting – in response to petitions, approved a recommendation to move forward with the rulemaking to consider what the appropriate allocations should be and to utilize the full public participation process to aid in formation of the proposal.

- 12/4/07 meeting – staff recommendation approved to proceed to public hearing and comment on amendments to the Water Quality Management Planning Regulation, 9 VAC 25-720-50.C, as proposed (strike-though = deletion; underline = addition):
  1. For Frederick-Winchester S.A. Opequon:

VA Water Body ID	VPDES	Total Nitrogen WLA (lbs/yr)	Total Phosphorus WLA (lbs/yr)
B08R	VA0065552	~~102,331~~ *115,122*	~~7,675~~ *11,506*

Notes: (10) Opequon WRF – waste load allocations (WLAs) based on a design flow of 12.6 MGD. If plant is not certified to operate at 12.6 MGD design flow by 12/31/10, the WLAs will decrease to TN = 102,331 lbs/yr; TP = 7,675 lbs/yr, based on a design flow of 8.4 MGD.

  2. For Merck:

VA Water Body ID	VPDES	Total Nitrogen WLA (lbs/yr)	Total Phosphorus WLA (lbs/yr)
B37R	VA0002178	~~14,619~~ *43,835*	~~1,096~~ *4,384*

Notes: (11) Merck-Stonewall – waste load allocations will be reviewed and possibly modified based on "full-scale" results showing the treatment capability of the 4-stage Bardenpho technology at this facility.

If approved as requested, the total **discharged** nitrogen allocation for the Shenandoah-Potomac basin would be increased by 42,007 lbs/yr, and the total **discharged** phosphorus allocation by 7,119 lbs/yr. The estimated increases in the loads **delivered** to tidal waters are:

- FWSA-Opequon: - TN delivered load increase = 9,465 lbs/yr (0.74 delivery factor)
  - TP delivered load increase = 2,950 lbs/yr (0.77 delivery factor)

- Merck: - TN delivered load increase = 12,855 lbs/yr (0.44 delivery factor)
  - TP delivered load increase = 2,532 lbs/yr (0.77 delivery factor)

CURRENT STATUS

- Proposed Regulatory Amendments published in the Virginia Register on 5/26/08.
- Public Hearing held 6/26/08.
- Public Comment Period closed 7/25/08; see summary of comments and staff response following.
- On 9/30/08, Attorney General's Office certified the Board's authority to take the proposed action.

SUMMARY OF COMMENTS AND STAFF RESPONSE

- Frederick Winchester Service Authority supports the proposed amendments for the Opequon plant.
- Comments opposing the proposal**:**
  - Chesapeake Bay Foundation:
    - Violates Clean Water Act and State Water Control Law requiring inclusion of water-quality based effluent limits necessary to meet water quality standards in all VPDES permits.
    - Jeopardizes Bay cleanup; approval would set precedent for all future requests.

- Exceeds point source cap, contravening the express directives of General Assembly and jeopardizes Virginia's Bay-cleanup commitment.
- Nullifies the market-based underpinnings of the credit exchange program.
- Places further demands on already aggressive nonpoint controls.
- Proposed delay to address water quality standards concerns under the TMDL is unacceptable.
- Socio-economic benefits of cap-maintenance and value of resources outweigh the biased and unsubstantiated findings in Dept. of Planning & Budget's Economic Impact Analysis. *[NOTE: The EIA stated the benefits likely exceed the costs for all proposed changes, especially regarding the action on the Merck allocations. The EIA went on to state that if the company is forced to be non-compliant, it is possible that Merck will choose to set up a plant elsewhere. A plant closing could cost Virginians jobs and negatively affect economic activity in the region.]*
- State Water Control Law sets forth other feasible/economical options to meet WLAs, including credit exchange.
- Also received 431 emails from CBF members and other citizens, opposing amendments for many of the above reasons.

- Shenandoah Riverkeeper – concerned with inconsistency with applicable regulations, delayed restoration of local water quality and the Bay, and frustrating the basic mechanism of the credit exchange program. Concerned with lost opportunity to improve local conditions in impaired waters affected by fish kills
- Trout Unlimited - exceeds pollution cap for the Shenandoah-Potomac; we should avoid delay and honor commitments for permanent nutrient pollution caps and fully restore water quality in the Bay and its rivers; we should require Merck and FWSA to find offsets or nutrient credits.
- VA Watermen's Association – noted extent of impaired waters; that watermen and processors are impacted by an unhealthy Bay and their plight is worsened by new crabbing restrictions.

- **DEQ Response to Significant Comments:**
  - Use credit exchange, require offsets – The approach for setting initial WLAs was that each individual discharger could comply with an NRT retrofit at their own facility, using available technology at full design flow, without reliance on credit exchange. Setting Merck's WLAs based on concentrations their "treatability" study has shown aren't achievable is inconsistent with this approach. "Offsets" do not apply to Merck as it is neither a new nor expanding facility. However, FWSA does have the capability to meet its "bubbled" allocation for the combined, expanded design flow of their two facilities using credit exchange and available technology.

  - Basin loading cap for nitrogen already exceeded – Under the proposal recommended for approval, the exceedence above the total basin allocation for nitrogen would increase from about 212,000 pounds to 225,000 pounds (in delivered load). Because of the exceedence, consideration will be given to shifting allocations among nutrient sources in the Shenandoah-Potomac basin, and perhaps even among basins that have the same relative impact on Bay water quality, as we move forward with the Bay TMDL. The importance and magnitude of establishing basin allocations, and assigning sub-allocations to point and non-point sources, cannot be overstated. We are in the relatively early stages of a process that will be completed with EPA's adoption of the Bay TMDL. It should not be surprising to see relatively minor shifts in allocations – some up and some down – as the process unfolds toward establishing a firm "cap" under the TMDL.

  - Amendments will cause loads to increase – The proposed increase is 0.1% of the basin nitrogen allocation. The higher allocations for Merck will still result in significant reductions over the prior loads discharged. Merck's 2007 discharged nitrogen load was about 110,700 pounds; the requested allocation would be almost 66,900 pounds per year lower than the current discharge.

  - Merck's technology options not fully explored – Most Shenandoah area dischargers are installing tertiary filtration to meet nutrient limits, especially for phosphorus control. Merck did not

immediately plan to test filtration in their full-scale pilot project, since they have an additional clarifier available for the treatment train. Merck wants to evaluate the concentration levels and form of phosphorus that result with this additional unit on-line before looking into tertiary filtration. Other valley region dischargers don't have surplus clarifiers and that's why they're installing effluent filtration now.

CHANGES MADE TO PROPOSAL

1. **Merck**: The associated "footnote" for Merck's nitrogen and phosphorus WLAs has been revised to clarify the potential for any further amendments as well as the scope and duration of a full-scale pilot project for nutrient reduction technology at the plant, as follows:

   "Merck-Stonewall – waste load allocations will be reviewed and possibly ~~modified~~ reduced based on "full-scale" results showing the optimal treatment capability of the 4-stage Bardenpho technology at this facility, consistent with the level of effort by other dischargers in the region. The "full scale" evaluation will be completed by December 31, 2011 and the results submitted to DEQ."

2. **FWSA-Opequon**: The requested WLA amendments for the FWSA-Opequon facility are not recommended for approval, and these have been removed from the proposal. This change is based primarily on the fact that FWSA did not pursue the increased WLAs under the original rulemaking adopted by the Board in 2005. Plants actively involved in expanding at that time, with a "reasonable assurance" that a Certificate to Operate would be secured by 12/31/10, were given conditional allocations for the higher design flow. This included the Authority's other facility, Parkins Mill STP, which was assigned WLAs based on an expanded design flow of 5.0 MGD. Instead, FWSA contended that Opequon's design flow for allocation purposes should account for the larger sizing (12.6 MGD) of just the biological treatment basins, or be the highest flow tier in their discharge permit (winter, wet-weather tier of 16 MGD), both of which were disallowed by the agency. Subsequent to Board adoption of the nutrient WLAs in 9 VAC 25-720, FWSA petitioned for increased allocations based on their plans to undertake the expansion needed to get the full plant rating up to 12.6 MGD by December 31, 2010.

   There is the additional concern about approving increased WLAs based on a plant expansion since the Shenandoah-Potomac basin is already estimated to be "over-allocated" for nitrogen, and further WLA increases should be avoided when possible to aid in meeting and maintaining water quality standards. Further, the Authority has the capability to meet its "bubbled" allocation for the combined, expanded design flow of their facilities using the Nutrient Credit Exchange Program and available technology.

STAFF RECOMMENDATIONS

Staff recommends the Board:

1. Approve amendments to the Water Quality Management Planning Regulation, 9 VAC 25-720-50.C, as proposed for Merck:

VA Water Body ID	VPDES	Total Nitrogen WLA (lbs/yr)	Total Phosphorus WLA (lbs/yr)
B37R	VA0002178	~~14,619~~ *43,835*	~~1,096~~ *4,384*

Notes: (11) Merck-Stonewall – waste load allocations will be reviewed and possibly reduced based on "full-scale" results showing the optimal treatment capability of the 4-stage Bardenpho technology at this facility, consistent with the level of effort by other dischargers in the region. The "full scale" evaluation will be completed by December 31, 2011 and the results submitted to DEQ.

2. Disapprove the requested amendments to nutrient WLAs for the FWSA-Opequon facility in the Water Quality Management Planning Regulation, 9 VAC 25-720-50.C.
3. Direct the staff to ensure that the combined nutrient allocations for point sources and nonpoint

sources in the Shenandoah-Potomac basin do not exceed the basin loading caps established under the Federal-interstate Total Maximum Daily Load Program that are necessary to achieve water quality standards.

GENERAL VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM (VPDES) PERMIT FOR NON-METALLIC MINERAL MINING (9 VAC 25-190): The staff intends to bring to the Board, at the December 4-5 meeting, a request to adopt the draft general permit regulation for non-metallic mineral mining. On March 21, 1994 the Board adopted the General VPDES Permit Regulation for Non-Metallic Mineral Mining operations which allowed the issuance of the general permit effective June 30, 1994. The general permit was amended on March 11, 1999 and March 23, 2004 and became effective on June 30, 1999 and July 1, 2004 respectively. This general permit will expire June 30, 2009. In order to provide continued coverage for permittees, another general regulation must be in effect by July 1, 2009. The Notice of Intended Regulatory Action (NOIRA) was published in the Virginia Register on November 26, 2007 and the comment period expired on January 7, 2008. A Technical Advisory Committee (TAC), composed of relevant stakeholders, was formed to assist the staff in the development of the draft general permit regulation.

At the December meeting, the staff will be asking the Board to authorize notice and public hearings on the draft general permit regulation that will reissue this general permit for another five-year term. This is a reissuance of an existing regulation, and the only changes to the regulation are designed to clarify the intent of the regulation. The major changes to the draft permit regulation being proposed are listed below:

9 VAC 25-190-10. Definition. “Vehicle/equipment washing” means the washing with detergents or steam cleaning of engines and other drive components in which the purpose is to clean and degrease the equipment for maintenance and other purposes. The application of water without detergent to a vehicle exterior for the purpose of removing sediment is excluded.

9 VAC 25-190-50. Authorization to discharge. 5. The owner shall not be authorized by this general permit to discharge to waters for which a "total maximum daily load" (TMDL) allocation has been established by the board and approved by EPA prior to the term of this permit, unless the owner develops, implements, and maintains a storm water pollution prevention plan (SWPPP) that is consistent with the assumptions and requirements of the TMDL. This only applies where the facility is an identified source of the TMDL pollutant of concern. The SWPPP shall specifically address any conditions or requirements included in the TMDL that are applicable to discharges from the facility. If the TMDL establishes a specific numeric wasteload allocation that applies to discharges from the facility, the owner shall incorporate that allocation into the facility’s SWPPP and implement measures necessary to meet that allocation.

9 VAC 25-190-60. Registration statement. E. Discharge information including: 6. Indicate which stormwater outfalls will be representative outfalls that require a single Discharge Monitoring Report (DMR). For stormwater outfalls which are to be represented by other outfall discharges, provide a description of the activities associated with those outfalls and explain why they are substantially the same as the representative outfall to be sampled.

9 VAC 25-190-70. General Permit. B. Special conditions.

9. Process water may be used on site for the purpose of dust suppression. Dust suppression shall be carried out as a best management practice but not as a wastewater disposal method provided that ponding or direct runoff from the site does not occur during or immediately following its application.
10. Process water from mine dewatering may be provided to local property owners for beneficial agricultural use.
11. Vehicle/ equipment washing shall include washing with detergents or steam cleaning of engines and other drive components in which the purpose is to clean and decrease the equipment for maintenance

and other purposes. The application of water without detergent to a vehicle exterior for the purpose of removing is excluded.

12. The permittee shall report at least two significant digits for a given parameter. Regardless of the rounding convention used (i.e. 5 always rounding up or to the nearest even number) by the permittee; the permittee shall use the convention consistently and shall ensure that consulting laboratories employed by the permittee use the same convention.
13. Storm Water Monitoring Total Suspended Solids (TSS) Evaluation. Permittees that monitor storm water associated with industrial activity which does not combine with other wastewaters prior to discharge shall review the results of the TSS monitoring required by Part I A 3 to determine if changes to the Storm Water Pollution Prevention Plan (SWPPP) may be necessary. If the TSS monitoring results are greater than the evaluation value of 100 mg/l, then the permittee shall perform the inspection and maintain documentation as described in Part II H.3.d. for that outfall. Any deficiencies noted during the inspection shall be corrected in a timely manner.
14. Discharges to waters subject to TMDL waste load allocations. Facilities that are an identified source of the specified pollutant of concern to waters for which a "total maximum daily load" (TMDL) waste load allocation has been established by the board and approved by EPA prior to the term of this permit shall incorporate measures and controls into the SWPPP required by Part III that are consistent with the assumptions and requirements of the TMDL. The department will provide written notification to the owner that a facility is subject to the TMDL requirements. The facility's SWPPP shall specifically address any conditions or requirements included in the TMDL that are applicable to discharges from the facility. If the TMDL establishes a specific numeric wasteload allocation that applies to discharges from the facility, the owner shall incorporate that allocation into the facility's SWPPP; perform any required monitoring in accordance with Part I A 1 c (3), and implement measures necessary to meet that allocation.

9 VAC 25-190-70. General permit. Part II. STORM WATER MANAGEMENT. B. Representative discharge. When a facility has two or more exclusively storm water outfalls that the permittee reasonably believes discharge substantially identical effluents, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfalls, then the permittee may submit information with the registration statement substantiating the request for only one DMR to be issued for the outfall to be sampled which represents one or more substantially identical outfalls. Also the permittee may list on the discharge monitoring report of the outfall to be sampled all outfall locations which are represented by the discharge.

9 VAC 25-190-70. General permit. Part II. STORM WATER MANAGEMENT. D. Storm water pollution prevention plans. If a plan incorporated by reference does not contain all of the required elements of the storm water pollution prevention plan of Part II H, the permittee must develop the missing plan elements and include them in the required storm water pollution prevention plan.

The above revisions are based upon the technical advisory committee and the EPA 2008 Multi-sector General Permit (MSGP).

At the December meeting the staff will ask the Board for authority to hold public hearings on the draft permit regulation.

REPORT ON SIGNIFICANT NONCOMPLIANCE: No permittees were reported to EPA on the Quarterly Noncompliance Report (QNCR) as being in significant noncompliance (SNC) for the quarter April 1 through June 30, 2008.

MOTION CONTROL INDUSTRIES, INC., MECKLENBURG COUNTY - CONSENT SPECIAL ORDER WITH A CIVIL CHARGE: The responsible party was cited for repeat violations of the Va. Code and VPDES Permit requirements as the result of a compliance inspection conducted at the site in

South Hill, Virginia in January of 2008. Motion Control was the subject of two previous enforcement actions executed in 2005, which addressed both air and water noncompliance. Motion Control operates a manufacturing facility in South Hill, Virginia that is registered under, and is subject to the requirements of, the VPDES Industrial Stormwater Program. A compliance inspection conducted at the facility on January 8, 2008, revealed that Motion Control had failed to conduct and properly document quarterly visual observations, as well as the Annual Comprehensive Site Compliance Evaluation for 2007. Motion Control had also failed to address good housekeeping and Best Management Practices (BMPs) by failing to keep petroleum products out of the facility's stormwater conveyances. Civil charge: $26,140.

TOWN OF LOVETTSVILLE, LOUDOUN COUNTY - CONSENT SPECIAL ORDER WITH A CIVIL CHARGE: Lovettsville STP ("The Plant") is owned by the Town of Lovettsville and operated by Loudoun County Sanitation Authority. The Plant was referred to enforcement on March 12, 2008, for exceedances of Permit limits for Ammonia-N, Total Suspended Solids (TSS), E. coli and an unpermitted discharge. The plant experienced E. coli exceedances during the August 2007, October 2007, and November 2007 monitoring periods. During these periods, the Town was conducting an I&I (Infiltration & Inflow) study. The study required flushing of the system resulting in significant amounts of grease being sent to the plant. The grease load inhibited disinfection and caused the E. coli problems. The excess of grease in the treatment process was removed by hauling out loads of grease and all three Ultra Violet (U.V.) bulbs at the plant were changed. During the November 2007, December 2007, January 2008, and the March 2008 monitoring periods, the plant had a variety of treatments issues, including Ammonia-N and TSS exceedances. These exceedances were due to operational problems at the plant caused by a failure of the Dissolved Oxygen (D.O.) meter controlling the aeration basin blowers, a blockage of the pipes connecting the two clarifiers, and the need to operate the plant in high-flow mode during heavy rains. These issues inhibited proper and complete treatment of the effluent, including the nitrification process which treats for Ammonia-N. The problems of the D.O. meter and the pipe blockage have been resolved and the high-flow issues are being addressed through the Town's I&I work and plant expansion. DEQ issued an NOV on May 16, 2008, citing a violation of the plant's permit for an unpermitted discharge of waste into state waters. On May 2, 2008, the Plant experienced a solids loss due to a mechanical failure at the plant caused by a clogged return activated sludge (RAS) line. This clog was due to rags and leaves caught in the line and caused the clarifier to overflow. An estimated 9,000 gallons of partially treated effluent and an estimated 260 pounds of solids discharged into Dutchman's Creek. The loss of solids was stopped immediately and a septage hauler was called to clean the area. Lime was spread around the outfall and the U.V. cells were cleaned, as were the lines and the post aeration chamber. After the solids were vacuumed from the stream, there was no remaining visual evidence of solids in the receiving stream. Representatives for the Town of Lovettsville, the Operators, Loudoun County Sanitation Authority, and the Town's engineering consultants met with DEQ staff several times to tour the plant and discuss the NOV and potential solutions to ensure future compliance with permitted limits. At the time of the tour, the plant was operating correctly. The Town has addressed the blocked clarifier problems by clearing out the lines and removing overhanging trees. The Town will address the high flow issue in two ways. First, a third equally sized Schreiber unit will be installed at the plant to address future development of the Town. Second, the Town will build on the I&I work done since 2000. In 2004, a study was done evaluating the extent of the I&I problem, and the Town will implement rehabilitation and repair projects to solve the high-flow issues that the plant has experienced. These I&I measures have been incorporated into Appendix A of this order. The Order requires Lovettsville to: create and implement a Final Plan and Schedule detailing the I&I rehabilitation and repair program addressing the current I&I problems; submit a construction schedule for a plant upgrade including the installation of clarifier, filter units and UV disinfection units; and create and implement an annually funded I&I program to repair and maintain the Town's sanitary sewer collection system to proactively pursue and significantly reduce I&I sources in the sanitary collection system. The Order also requires that reporting requirements of the I&I program be incorporated into the Town's VPDES Permit during the next reissuance. The costs associated with the items included in Appendix A of the Order include an estimated $2.5 million to conduct the I&I program which addresses the Town's current I&I problems. With DEQ's assistance, the

Town has submitted an application to the Virginia Revolving Loan Program to cover the cost of the work. In addition, the plant upgrade detailed in Appendix A will cost the Town $3.4 million. These funds had been secured prior to the initiation of the current enforcement action. Civil charge: $10,000.

CHESAPEAKE MARINE RAILWAYS, LLC, DELTAVILLE - CONSENT SPECIAL ORDER WITH A CIVIL CHARGE: Chesapeake Marine Railway, LLC (Chesapeake Marine) owns and operates a boatyard (the Facility), which repairs and maintains marine vessels and their diesel engines. A Notice of Violation (NOV) was issued to Chesapeake Marine on May 8, 2008. The following deficiencies were cited in the NOV: (1) failure to submit DMRs for the semi-annual sampling of the discharged process wastewater from the Facility's pressure washing wash rack through Outfall 001; (2) failure to submit a DMR for annual sampling of the discharged stormwater runoff from the Facility's pressure washing facility through Outfall 901; (3) failure to submit a DMR for annual sampling of the discharged stormwater runoff from the drainage area through Outfall 002; (4) failure to submit DMRs for semi-annual sampling of the discharged process water associated with operational railways through Outfalls 008 & 009; (5) failure to submit DMRs for the annual sampling of the discharged stormwater associated with the operational railways through Outfalls 908 & 909; (6) failure to submit monthly reports with the DMRs certifying compliance or noncompliance with all conditions of the Best Management Practices (BMPs) as specified; (7) failure to submit an Operations and Maintenance (O&M) Manual for approval which was due January 29, 2007; and (8) failure to submit quarterly acute toxicity testing reports of the process wastewater discharge through Outfalls 001, 008, & 009. Chesapeake Marine has submitted an O&M manual and the current scheduled test results. Chesapeake Marine entered into a Consent Special Order with the Department to address the above described violations. The Order requires that Chesapeake Marine conduct the required 10 quarterly toxicity tests as scheduled in the Order; collect and test their outfalls for annual and semi-annual parameters as required; conduct and submit the monthly BMP reports; and submit an O&M Manual. The Order also requires the payment of a civil charge to be paid in four quarterly installments. The final payment is due on October 10, 2009. DEQ staff estimated the cost of injunctive relief to be approximately $12,800. Civil charge: $12,550.

CONCRETE PRECAST SYSTEMS, INC./COASTAL PRECAST SYSTEMS, LLC, CHESAPEAKE - CONSENT SPECIAL ORDER WITH A CIVIL CHARGE: Concrete Precast Systems, Inc./Coastal Precast Systems, LLC, (collectively "CPS") manufactures precast/prestressed concrete noise walls and other concrete structural and architectural products. CPS is subject to Virginia Pollutant Discharge Elimination System ("VPDES") Permit #VA0089818 ("Permit"), which was first issued to CPS under its original name Concrete Placement Systems, Inc. on August 3, 1998. The Permit was renewed under the name Concrete Precast Systems, Inc. on August 4, 2003 and modified on March 19, 2007 to reflect the change in the name of the facility to its current name Coastal Precast Systems, LLC. The Permit was again renewed on August 4, 2008 and expires August 3, 2013. The Permit authorized CPS to discharge storm water and treated industrial waste water from its one permitted internal outfall (Outfall 101) and three external outfalls (Outfalls 001, 002 and 003) under conditions outlined in the Permit. Among other things, the Permit required CPS to monitor the discharges from Outfalls 101, 001 and 002 (discharges from Outfall 003 were not monitored) and report the results to DEQ on Discharge Monitoring Reports ("DMRs") monthly (Outfall 101), quarterly (Outfall 001) and semiannually (Outfall 002) by the tenth day of the month following the respective reporting period. The Permit as renewed on August 4, 2008 no longer authorizes discharges from Outfall 101; all other relevant provisions of the Permit are unchanged. CPS submitted a "no discharge" DMR for Outfall 001 for the 4th Quarter 2006. During a routine facility inspection by DEQ compliance staff on November 15, 2006, however, a discharge from Outfall 001 had been observed. The DMR for Outfall 001 for the 2nd Quarter 2006 reported a total suspended solids ("TSS") concentration of 61 mg/l; the permitted maximum is 60 mg/l. No letter of explanation for the exceedance was provided. CPS was advised of the above permit non-compliance issues in Notice of Violation ("NOV") #W2007-02-T-0004 dated March 5, 2007. CPS responded to the letter on September 26, 2007. On November 2, 2007, DEQ compliance staff conducted an inspection of the facility that revealed the following: overall poor housekeeping and waste-

management practices; failure to conduct comprehensive site compliance evaluations ("CSCE") for 2005 and 2006, quarterly visual examinations of storm water quality since 2005, and a routine quarterly facility inspection in 2007; failure to properly document actions taken to correct deficiencies noted during routine quarterly facility inspections; failure to record storm-event data and submit them with DMRs; failure to properly maintain Outfall 001; and not updating the Permit-required facility storm water pollution prevention plan ("SWP3") and Operation and Maintenance ("O&M") Manual. A subsequent review of DEQ records revealed the following: a "no discharge" DMR for Outfall 001 for the 4th Quarter 2007 though a discharge was noted during the November 2, 2007 DEQ compliance inspection; "no discharge" DMRs for Outfall 101 for the period October 2006 through May 2007 though facility logs indicated that discharges had occurred; three DMRs due October 10, 2007 submitted 25 days late; and the DMR for Outfall 002 for July-December 2007 reporting a pH level of 11 Standard Units ("SU"), the permitted maximum being 9 SU. On February 6, 2008, DEQ issued NOV #W2007-12-T-0001 advising CPS of the deficiencies revealed during the facility inspection conducted on November 2, 2007 and the subsequent record review. CPS responded to the NOV by letter dated February 18, 2008. In the documentation supporting its application to renew the Permit, CPS submitted an updated O&M Manual and SWP3 and stated that it would no longer be discharging from Outfall 101. As noted above, the renewed Permit prohibits discharges from Outfall 101. DEQ compliance and enforcement staff ("staff") conducted a site visit on June 23, 2008 and noted substantial improvement in overall cleanliness and housekeeping practices. CPS representatives stated that process waste water formerly discharged from Outfall 101 was now being returned to the concrete-production process for reuse. A sprinkler system has been installed at the facility that uses well water (rather than process waste water) for dust suppression. CPS was issued NOV #W2008-04-T-0004 on May 5, 2008 for failing to submit to DEQ the Permit-required quarterly project summary report ("QPSR") for the 4th Quarter 2007. CPS responded by letter dated May 12, 2008 that enclosed a copy of the 4th Quarter 2007 QPSR, which CPS asserted it had submitted to DEQ on January 9, 2008 with its DMRs. The original QPSR is not present in DEQ's files. The DMR for Outfall 001 for the 2nd Quarter 2008 reported a TSS concentration of 150 mg/l; the permitted maximum is 60 mg/l. The DMR for Outfall 002 for the period January – June 2008 reported a pH level of 9.9 SU; the permitted maximum is 9 SU. No letter of explanation for either exceedance was provided. Additionally, the DMR for Outfall 002, due July 10, 2008, was submitted late on August 25, 2008. CPS was advised of the above Permit non-compliance issues in NOV #W2008-08-T-0002 dated August 25, 2008. The Order requires CPS to pay a civil charge within 30 days of the effective date of the Order. CPS has addressed all Permit deficiencies, except for a few housekeeping deficiencies. To ensure continued compliance with the Permit the Order also requires CPS to: within 30 days of the Order's effective date, certify that all housekeeping and materials-management deficiencies noted during the November 2, 2007 compliance inspection have been remedied and submit copies of all facility inspections conducted since that date; for one year following the effective date, provide copies of all facility inspections along with a report of actions taken to correct deficiencies noted therein; within 90 days, submit a corrective action plan and schedule to improve overall management of storm water at the facility; and, within 60 days of completion of the corrective action resulting from that plan, submit a revised SWP3 incorporating the completed corrective action. The Order was executed on September 2, 2008. Civil charge: $23,835.

HOUFF'S FEED AND FERTILIZER COMPANY, INC., ROCKINGHAM COUNTY - CONSENT SPECIAL ORDER WITH A CIVIL CHARGE: Houff's Feed and Fertilizer Company, Inc.'s ("Houff's") VPA Permit authorizes the management of sludge from various industrial and municipal facilities on a number of fields in Augusta, Rockingham and Rockbridge counties, Virginia. The Permit was issued on June 23, 1999, with an expiration date of June 23, 2009. Included in the number of permitted fields under Houff's Permit are five fields that Houff's owns in the general area of the field where the unauthorized land application took place ("Site") located near Weyers Cave in Augusta County. On June 25, 2008, Houff's land applied seven wet tons of food processing sludge to a 1.2-acre, unpermitted field at the Site. Part I.B.6. of the Permit requires that sludge shall be applied only at sites either identified in the approved O&M Manual or subsequently approved by both DEQ and VDH in accordance with Part I.C.9. of the Permit. DEQ issued a NOV on July 7, 2008, to Houff's for application

of material without a permit in violation of VA Code § 62.1-44.5 and § 62.1-44.16. On August 19, 2008, DEQ met with representatives of Houff's to discuss the NOV and the events that led up to the violation. Houff's explained to DEQ staff that it was evaluating the food processing sludge in order to develop a potential contract to land apply that sludge. In order to develop a contract, Houff's asserted it needed to experiment with the land application of the sludge to ensure there were no significant odor problems or effects on a field's grass/hay. Houff's considered these issues important in the development of a contract, but difficult to evaluate without first-hand experience via actual land application experiments. Houff's had previously sampled and analyzed food processing sludge to characterize its chemical constituents and its strength. Houff's asserted that the sludge characteristics met regulatory requirements and that the sludge was applied to 1.2 acres at proper agronomic rates. Civil charge: $3,640.

HHHUNT CORPORATION, HANOVER COUNTY - CONSENT SPECIAL ORDER WITH A CIVIL CHARGE: DEQ issued HHHunt Corporation VWP Permit number 05-1612, authorizing wetland and stream impacts associated with the Rutland residential development. As part of the compensatory mitigation for these impacts, the Permit required restoration of 3,355 linear feet of stream channel downstream of the site. On January 22, 2008, DEQ staff conducted an inspection of Rutland and a subsequent file review, which revealed that 0.125 acre of wetlands and 80 linear feet of stream were impacted without authorization, that a water quality monitoring of the Opossum Creek watershed had not been conducted, that the final mitigation plan was not approved and construction of the stream restoration area had not commenced although most impacts were complete, that documentation of the purchase of wetland credits from a mitigation bank had not been submitted, quarterly construction monitoring reports were not submitted, and that a hydrologic connection between upstream and downstream wetlands and streams was not maintained during construction of the stormwater management pond. The Department issued a Notice of Violation (NOV) to HHHunt on May 28, 2008 for these violations of its VWP Permit. On August 18, 2008, DEQ staff conducted a second inspection of Rutland and found that additional permitted impacts had occurred although stream restoration had not commenced, which was prohibited by the VWP Permit. On August 19, 2008, DEQ issued a second NOV to HHHunt for this violation of its Permit. The Consent Order prohibits HHHunt from construction activities in the last remaining section of Rutland and from taking additional impacts until HHHunt provides financial assurance for the stream restoration project and demonstrates that it has obtained all necessary easements for the restoration project or submits an alternative mitigation plan. The Order sets a schedule for completion of the restoration project and requires that all restoration work be complete no later than February 1, 2010. HHHunt has submitted all of its outstanding construction monitoring reports, water quality monitoring reports, and documentation of the purchase of the wetland mitigation credits. HHHunt has submitted and DEQ has approved its final compensatory mitigation plan. HHHunt has also restored those wetland and stream areas that were not authorized for impact by the Permit. The cost of the injunctive relief required by the Order (including the cost of the actual stream restoration) is approximately $420,000. Civil charge: $55,000.

FRY'S SPRING BEACH CLUB, INCORPORATED, ALBEMARLE COUNTY - CONSENT SPECIAL ORDER WITH A CIVIL CHARGE: Fry's Spring Beach Club, Incorporated ("FSBC") owns the swimming pool, treatment units, clubhouse and other property which is located at 2512 Jefferson Park Avenue in Charlottesville, Albemarle County, Virginia. On May 14, 2008, FSBC experienced an unpermitted discharge of highly chlorinated swimming pool water into an unnamed tributary to Moores Creek. On May 15, 2008, FSBC notified DEQ of the release of chlorinated pool water. On May 16, 2008, DEQ staff conducted an investigation of the spill which revealed that chlorine shock treated pool water was reaching State waters from an outlet pipe for the pool's french drain system. DEQ staff observed a significant kill of aquatic macro invertebrates in an unnamed tributary to Moores Creek through a reach of about 600 meters downstream of the outlet pipe. The kill extended downstream to a point about 50 meters upstream of the confluence of the unnamed tributary with Moores Creek. Live midges, scuds, worms and stoneflies were observed upstream of the outlet pipe discharge. No dead organisms were observed in Moores Creek itself. DEQ sampling documented an in-stream chlorine

residual of 0.5 ppm below the outlet pipe discharge and no chlorine residual above the pipe. DEQ issued a NOV to FSBC on June 11, 2008, for an unpermitted discharge which resulted in an adverse impact on the receiving stream, without a permit, in violation of VA Code 62.1-44:5 which prohibits such actions without a permit. On June 20, 2008, DEQ met with representatives of FSBC in an informal conference to discuss the NOV and the circumstances that led up to the discharge. According to FSBC, on the evening of May 14, 2008, FSBC shock chlorinated its swimming pool with about 100 pounds of chlorine granules. Later that evening, a downstream neighbor informed FSBC of a strong chlorine smell in the unnamed tributary to Moores Creek, and later of a chlorine residual in the tributary below the outlet pipe that was draining the french drain system under the pool. As described by FSBC, its swimming pool is underlain by a french drain system which conveys underlying spring waters to the unnamed tributary. FSBC indicated that during this event, apparently, the swimming pool's pumped return system leaked, allowing the highly chlorinated swimming pool waters to enter the french drain system and discharge to State waters. During the meeting, DEQ requested a plan and schedule of corrective actions to address the unpermitted discharge. FSBC asserts that the unpermitted discharge was a one-time event attributed to a broken pipe and was out of FSBC's control. By letters dated July 7, 2008 and July 15, 2008, FSBC submitted to DEQ for review and approval a corrective action plan to make necessary repairs to the pool's pump and drain system to ensure that no further unauthorized discharges occur. Civil charge: $3,500.

ROCKBRIDGE FARMERS COOPERATIVE, INCORPORATED, LEXINGTON - CONSENT SPECIAL ORDER WITH A CIVIL CHARGE: Rockbridge Farmers Cooperative, Incorporated ("RFC") is a privately-held farm supply merchant company located in Lexington, Rockbridge County, Virginia. RFC supplies and applies fertilizers and herbicides in Rockbridge County. On May 23, 2008, DEQ received a pollution complaint regarding a spill to an unnamed tributary to the Maury River. On May 23, 2008, DEQ staff conducted an investigation of the pollution complaint, during which DEQ learned that the emergency brake of an RFC truck carrying 400 gallons of herbicide failed, allowing the truck to run down an incline, roll over and spill its load of herbicides into an unnamed tributary to the Maury River. DEQ's investigation of the incident revealed that the release of these chemicals resulted in an unpermitted discharge to State waters. It appears that the failure of the emergency brake was an unforeseen event and not due to improper maintenance or driving procedures on the part of RFC or its employees. Staff observed a kill of hundreds of tadpoles and some salamanders and worms below the point where the truck rolled over into the tributary and spilled the herbicides and continuing downstream about 400 meters. The majority of the kill occurred in a 10-meter ponded segment of the tributary. No dead organisms were found upstream of where the spill occurred. Staff also observed that RFC and its spill contractors had taken prompt action and installed a number of containment booms and check/containment dams in the impacted reach of the tributary to help prevent the spill from moving downstream. DEQ issued a NOV on July 7, 2008, to RFC for the unpermitted discharge of herbicides on May 23, 2008 in violation of Virginia Code § 62.1-44.5 and the VPDES Permit Regulation 9 VAC 25-31-50 A. On August 12, 2008, DEQ met with representatives of RFC to discuss the violations cited in the NOV and the circumstances that led up to the unpermitted discharge. During the August 12 meeting, RFC confirmed that the emergency brake failure was an anomaly and not related to poor maintenance or operational procedures on its part. RFC confirmed that it acted expeditiously to address the spill by immediately taking actions to contain the spill and to contact regulatory agencies, including DEQ, for advice and assistance in taking corrective actions necessary to address the spill. There are no further corrective actions necessary to resolve the violations cited in this Order. Civil charge: $9,100.

JIM, INC., AMELIA - CONSENT SPECIAL ORDER WITH A CIVIL CHARGES: JIM, Inc. owns the Winnerham Market, a convenience store and gasoline service station in Amelia, Virginia. A Notice of Violation (NOV) was issued to JIM, Inc. for the Winnerham Market on November 14, 2007. The following deficiencies that had been unresolved since the formal inspection conducted by DEQ staff on October 18, 2006 were cited in the NOV: (1) failure to submit documentation demonstrating current ownership of the underground storage tanks (USTs) at the facility; (2) failure to provide records and perform required testing demonstrating compliance with release detection requirements for the USTs and

piping; and (3) failure to provide documentation demonstrating financial responsibility (FR) for the USTs. JIM, Inc. has submitted a 7530 Notification Form demonstrating ownership of the USTs; provided documents demonstrating compliance with financial responsibility; and is submitting monthly records verifying release detection testing for the USTs and piping. JIM, Inc. entered into a Consent Special Order with the Department to address the above described unresolved violations. The Order requires that copies of the monthly tank release detection testing be submitted to DEQ beginning with September 2008 and ending with the October 2009 records. The Order also requires the payment of a civil charge to be paid in four quarterly installments. The final payment is due on October 10, 2009. DEQ staff estimated the cost of injunctive relief to be approximately $945. Civil charge: $2,865.

MR. JESSE ALLEN WRIGHT, HENRICO COUNTY - CONSENT SPECIAL ORDER WITH A CIVIL CHARGE: Mr. Wright was an underground storage tank (UST) owner and/or operator 3622 Nine Mile Road, Richmond, Virginia (Property). On June 27, 2006, DEQ staff conducted a compliance inspection of the five USTs located at the Property. Subsequently, the Department conducted a review of the Property's file and registration documents. The following violations were noted as a result: failure to submit an amended UST notification form of UST change of ownership, tank status, tank/piping systems or substance stored; failure to submit an amended UST notification form of UST being permanently closed; and failure to perform closure requirements. In order to resolve the above-described violations, Mr. Wright entered into a Letter of Agreement (LOA) with DEQ on August 25, 2006, under which Mr. Wright agreed to meet the tank closure requirements and submit the closure report to DEQ by January 15, 2007. The established deadline of January 15, 2007 LOA was extended to April 17, 2007 at the request of Mr. Wright. Mr. Wright did not comply with the LOA. The Department issued a Notice of Violation (NOV) to Mr. Wright on November 15, 2007 for these apparent violations. The Department received notification from Mr. Wright that all of the tanks have been removed from the Property, and on April 4, 2008, the Department received the Underground Storage Tank (UST) Closure Report. The Department has reviewed the report and found that all of the tank closure requirements have been met. Since all of the compliance issues have been resolved, the Consent Order does not require any corrective actions. The cost of the corrective actions that Mr. Wright performed was approximately $5,000. Civil charge: $6,673.