Attachment D:

Fact Sheet and Permit Example

Fact Sheets

- North Carolina - Tar-Pamlico Nutrient Strategy Fact Sheet
- North Carolina - Tar-Pamlico Nutrient Sensitive Waters Implementation Strategy: Phase IV
- Ohio - Water Quality Trading Program Great Miami River
- Pennsylvania - Phase 2 Watershed Implementation Plan Nutrient Trading Supplement
- Virginia – Fact Sheet Reissuance of a General VPDES Permit to Discharge to State Waters and State Certification under the State Water Control Law
- Wisconsin – Water Quality Trading

Permit Example and Rules

- City of Boise, Idaho - NPDES Permit ID-002398-1. I.B.6. Dixie Drain Offset.
- North Carolina - Neuse River Compliance Association – NPDES Permit NCC000001
- North Carolina – 15A NCAC 02B.0234. Neuse River Basin Nutrient Sensitive Waters Management Strategy: Wastewater Discharge Requirements
- Pennsylvania – 25 PA. Code Ch. 96. Rules and Regulations Water Quality Standards Implementation
- Pennsylvania – 96.8 Use of offsets and tradable credits from pollution reduction activities in the Chesapeake Bay Watershed.
- Virginia – 9VAC25-820 VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia, including 9VAC25-820-70 General Permit.
- Virginia – Guidance Memo No. 07-2008, Amendment No. 2, Permitting Considerations for Facilities in the Chesapeake Bay Watershed
- Wisconsin – Effluent Standards and Limitations for Phosphorus. Chapter NR 217.13 (8)(c) Calculation of water quality based effluent limitations for phosphorus, NR 217.14 Expression of limitations, and NR 217.17(3)(f) Schedules of compliance.
- Wisconsin – Pollution Discharge Elimination. Chapter 283.84 Trading of water pollution credits.

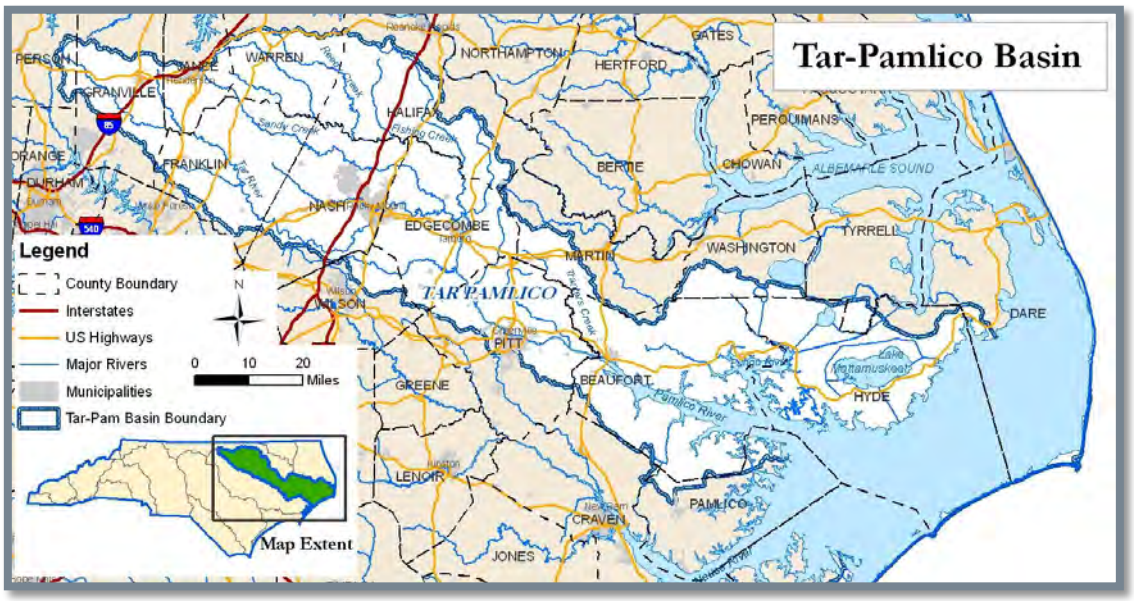
Tar-Pamlico Nutrient Strategy

Fact Sheet

Location: **River Basin:** **Cataloging Unit:**	Eastern North Carolina – areas draining to the Pamlico River estuary Tar-Pamlico 03020102
Counties:	Beaufort, Dare, Edgecombe, Franklin, Granville, Halifax, Hyde, Martin, Nash, Person, Pitt, Vance, Vance, Warren, Washington, Wilson
Basin Area **Stream Miles** **Major Tributaries:**	6,148 mi^2 Over 2,300 Tar, Pungo, and Pamlico rivers, Fishing, Sandy, Tranters, and Town creeks
Strategy Goal:	Nitrogen: Achieve and maintain a 30% reduction from 1991 levels Phosphorus: No increase from 1991 levels (Goal applies to both point and nonpoint pollution sources)
Land Use:	Developed (5%), Agriculture (22%), Forest (21%), Open Water (24%), Wetlands (18%), Other (10%) (Source: 2011 NLCD)
Strategy Website:	deq.nc.gov/Tar-PamlicoStrategy
DWR Contacts:	Jim Hawhee (jim.hawhee@ncdenr.gov, 919-807-6438) Rich Gannon (rich.gannon@ncdenr.gov, 919-807-6440)

Strategy Overview

Since the 1980s, symptoms of nutrient-related pollution have been present in the Tar-Pamlico Estuary. Excess nitrogen and phosphorus have caused persistent water quality issues including unsightly and potentially harmful algal blooms, low oxygen levels, and fish kills. In response, North Carolina designated these waters as "nutrient sensitive" and developed the Tar-Pamlico Nutrient Management Strategy.



Strategy Overview (continued)

In preparation for the strategy, a mathematical model of the estuary was developed to estimate the nutrient reductions required to restore the estuary. Based on its results, a Total Maximum Daily Load (TMDL) was developed. The TMDL established a 30% reduction goal for nitrogen loading from 1991 levels while holding phosphorus loading to 1991 levels.

The Tar-Pamlico Nutrient Strategy was adopted by the N.C. Environmental Management Commission (EMC) in 2001 and consists of rules designed to equitably regulate nutrient pollution sources including wastewater, stormwater and agriculture. The rules also establish riparian buffer protections and mandate training for professionals that apply fertilizer. Finally, the strategy includes elements that allow nutrient trading to reduce loads from point sources and new development.

Tar-Pamlico Nutrient Strategy Rules

Agriculture

- Specifies farm operators covered under the Rule.
- Local Advisory Committee develops a local strategy and reports nutrient reduction progress.
- Basin Oversight Committee reviews and tracks agricultural sector's progress toward its reduction goals.

Point Sources and Trading

- Point source agreements involving the Tar-Pamlico Basin Association and DWR govern 98% of permitted discharges.
- Currently in Phase 4 of the Agreement which runs through 2025.
- Details requirements for new and existing non-association dischargers operating in the basin.
- Allows nutrient trading from point to nonpoint sources.

Nutrient Management

- Applies to fertilizer applicators, people who own or manage fertilized lands, and consultants who provide nutrient management advice.
- Specifies that fertilizer applicators either take state-sponsored nutrient management training or have a nutrient management plan in place for the lands to which they apply fertilizer.
- Directs DWR to develop a homeowner education program in the basin to help prevent nutrient runoff.

Buffer Protection

- Protects and maintains existing 50-foot wide riparian buffers to help stabilize streambanks, prevent soil from eroding into the water, and act as a filter to remove pollutants.
- Applies to on all surface waters including intermittent and perennial streams, lakes, ponds, and reservoirs that are shown on a county soil map or USGS 1:24,000 topographic map.
- Details uses that apply to the undisturbed inner Zone 1 and outer Zone 2 of the riparian buffer.
- Specifies exemptions including the footprint of existing uses and agricultural uses.
- Details uses that are allowed, allowable with mitigation and prohibited within the buffer.

New Development Stormwater

- Specifies the local governments covered by the rule.
- Requires local governments to identify and remove illicit discharges, have an education program regarding how to reduce nutrient runoff, and make efforts to treat runoff from existing developed areas.
- A nutrient buy-down option is included as a tool to achieve the required 4 lbs/ac/yr nitrogen and 0.4 lbs/ac/yr phosphorus on stormwater runoff. Development, however, must first meet the following conditions:
    - Nitrogen export for residential development cannot be greater than 6.0 lbs/ac/yr.
    - Nitrogen export for a commercial, industrial, or institutional development cannot be greater than 10.0 lbs/ac/yr.
    - If nitrogen export exceeds 6.0 lbs/ac/yr or 10.0 lbs/ac/yr for residential or commercial development respectively, then the developer must use BMPs or take part in an approved stormwater strategy to lower the nitrogen export. The offset payment option can then be offered to address the remaining reductions needed to meet 4.0 lb N and 0.4 lb P/ac/yr.

For more information on the Tar-Pamlico Nutrient Strategy, please visit deq.nc.gov/Tar-PamlicoStrategy

Tar-Pamlico
Nutrient Sensitive Waters
Implementation Strategy: Phase IV

July 2015

I. Summary

This document establishes the fourth phase of a nutrient control Agreement for point source discharges in the Tar-Pamlico River Basin, reaffirms loading goals established in Phase II for all sources in the basin. The Agreement was initiated in 1990 in response to nutrient-driven water quality impairments in the Pamlico River estuary, and specifically to address a mandate from the NC Environmental Management Commission to the Division of Water Resources to develop a nutrient reduction strategy. At its inception, the Agreement provided a cost-effective alternative to uniform technology-based nutrient concentration limits. It later added elements of a nutrient TMDL for the basin, including estuary loading goals and point and nonpoint source allocations. Phase I spanned five years from January 1990 through December 1994, Phase II covered another ten years through December 2004, and Phase III spanned an additional ten years through December 2014.

This fourth phase continues the structure established in Phase II and continued throughout Stage III with a few key updates described in this document. This structure includes overall performance goals for the nutrient strategy of 30 percent reduction in nitrogen loading from a baseline year of 1991 and no increase in loading of phosphorus from that baseline. An association of point source dischargers, the Tar-Pamlico Basin Association (Association), receives collective annual end-of-pipe nitrogen and phosphorus loading caps. In the event that either cap is exceeded, the Association will fund agricultural practices at a predetermined cost-effectiveness rate to offset those exceedances through the NC Agriculture Cost Share Program.

Phase IV spans an additional ten years through May 31, 2025, with plans to update the Agreement within two years to address several improvements. The Phase IV incorporates modifications negotiated during Phase III including updates to the Association membership and related nutrient caps, inclusion of individual load limits in each member's NPDES permits, and proposed actions over the next two years that will improve the nitrogen offset rate and establish a phosphorus offset rate. Parties to the Agreement include the NC Environmental Management Commission (Commission), the Association, the Division of Water Resources (Division), and the NC Department of Agriculture & Consumer Services Division of Soil and Water Conservation (DSWC), which would administer offset payments.

Table of Contents

I.	**Summary**	**1**
II.	**Background**	**5**
	A. Phase I	
	B. Phase II	
	C. Phase III	
	D. Summary of Updates for Phase IV	
III.	**Association Members**	**8**
IV.	**Nutrient Reduction Targets**	**10**
	A. Nutrient Assimilative Capacity Exceeded in the Pamlico Estuary	
	B. Estuary Nutrient Reduction Goals for Nitrogen and Phosphorus	
	C. Annual Total Nitrogen and Total Phosphorus Loading Targets For Association Member Facilities	
	D. Addition of Creedmoor & Status of Former National Spinning Load Allocation	
	E. Individual Allocations / Limits	
	F. Individual and Group Permit Requirements	
	G. Loading Targets for Nonpoint Sources	
	H. Loading Targets for Non-Association Facilities	
V.	**Nutrient Offset Program**	**20**
	A. Offset Options	
	B. Offset Credits	
VI.	**Minimum Conditions to this Agreement**	**24**
	A. Monitoring	
	B. Evaluation of Progress	
VII.	**Local Water Quality Impacts**	**25**
VIII.	**Decision-Making Authority**	**25**
IX.	**Nonpoint Source Controls**	**25**
X.	**Termination of this Agreement**	**26**

Appendices

A.	Annual Nutrient Loads and Caps, Tar-Pamlico Basin Association	29
B.	Table of Point Source Dischargers to the Tar-Pamlico River Basin	31
C.	Association Nitrogen Offset Credit Register	33
D.	Value of Active Agriculture Cost Share BMPs funded by Association	35

Tables

1. Current Membership of the Tar-Pamlico Basin Association 8
2. End-of-Pipe Nutrient Loading Caps for Tar-Pamlico Basin Assoc. 15
3. Individual Allocations / Limits for Tar-Pamlico Basin Association Members 17

Figures

1. Map of Tar-Pamlico Basin with Association Members 9
2. Estuary Nutrient Model Segmentation below Washington, NC 11
3. Predicted Chlorophyll-*a* Exceedances for Three Nitrogen Loading Scenarios 12
4. Predicted Summer Bottom Layer D.O. for Three Nitrogen Loading Scenarios 12

II. Background

A. Phase I

On September 12, 1989, the Commission classified the Tar-Pamlico River Basin as Nutrient Sensitive Waters (NSW). Figure 1 is a map of the basin. On February 13, 1992, the Commission approved a revised NSW Implementation Strategy that established the framework for a nutrient reduction trading program between point and nonpoint sources of pollution. The Strategy also established certain conditions to be met by an association of dischargers in the basin known as the Tar-Pamlico Basin Association (the Association).

The February 13, 1992 NSW Strategy for the Tar-Pamlico River Basin represented the first phase of an attempt to establish and achieve a nutrient reduction goal to address eutrophic conditions in the estuary. Phase I covered the period 1990-1994. Parties to the Phase I agreement as approved by the Commission included the Division (then the Division of Environmental Management), the Tar Pamlico Basin Association, Environmental Defense (then the Environmental Defense Fund) and the Pamlico-Tar River Foundation (PTRF).

The Association agreed to meet specific conditions in order to avoid effluent limits for nutrients in their permits and to have the opportunity to reduce nutrient loading in the most cost-effective manner, including the option to fund agricultural best management practices (BMPs). These conditions included the development of an estuarine hydrodynamic computer model, engineering evaluations of wastewater treatment plants, annual monitoring reports on nutrient loading, and minimum payments for the administration and implementation of agricultural BMPs. The Association met all conditions established in Phase I.

The Phase I Agreement set collective, technology-based discharge loading limits for the Association in the form of an annually decreasing, combined nitrogen and phosphorus cap. During the 1990 to 1991 period, low cost operational changes were implemented at several facilities to reduce nitrogen loadings. The engineering evaluation of member facilities and implementation of the study's recommended nutrient removal improvements also yielded significant loading reductions. These changes, combined with installation of nutrient removal at several of the larger facilities, allowed the Association to reduce its nutrient loads and stay beneath its caps throughout Phase I.

B. Phase II

The Phase II Agreement spanned ten years from January 1995 through December 2004. Modeling of the Pamlico River estuary during Phase I provided a foundation for water quality-based loading goals for Phase II. Based on the estuary modeling, Phase II established overall performance goals for the nutrient strategy of 30 percent reduction in nitrogen loading from a baseline year of 1991 and no increase in loading of phosphorus from that baseline. Based on these goals, it also established nitrogen and phosphorus discharge loading caps for the Association. These caps also accounted for the load reductions achieved through operational changes implemented during the 1990/1991

period. The Association stayed beneath both caps throughout Phase II, steadily reducing its loading of both nutrients despite steady increases in flow. Overall, from 1990 through 2003, the Association decreased nitrogen loads to the river by approximately 45% and phosphorus loads by over 60%, while flows increased approximately 30%. Appendix A is a table of caps and loads for all years of the Agreement through 2003. The success of this collective cap approach may be attributed in part to the element of time it provided for individual facilities to implement nutrient removal as it became most cost-effective for them.

Phase II also established requirements for non-Association point source dischargers and called for rule-making to fully enact those requirements. That rulemaking became effective in April 1997. It required new and expanding dischargers over certain sizes to meet effluent concentration limits and to fully offset new or increased loads using the same offset approach developed for the Association. During Phase II, there were no new dischargers to the basin, and no existing dischargers became subject to the rule's requirements.

Phase II also established instream nutrient goals for nonpoint sources and called for a separate nonpoint source (NPS) strategy. That NPS strategy was put into effect in January 1996 as a voluntary effort that would work from existing programs, seeking additional funds and developing accounting tools. After two years of voluntary implementation, the EMC found progress insufficient and initiated nonpoint source rulemaking. Rules were fashioned after those recently adopted in the adjacent Neuse basin. They addressed riparian buffer protection, agriculture, urban stormwater, and fertilizer management. The rules became effective during 2000 and 2001, and continue to be fully implemented as of 2006.

C. Phase III

Phase III of this Agreement was approved by the EMC on April 15, 2005. It spanned an additional ten years through December 31, 2014. This third phase continued the structure established in Phase II including the overall performance goals for the nutrient strategy of 30 percent reduction in nitrogen loading from the baseline year of 1991 and no increase in loading of phosphorus from the baseline. The Phase III Agreement updated Association membership and related nutrient caps. It proposed action in the first two years to update the offset rate, resolve related temporal issues, and revisit alternative offset options. During this time parties to the Agreement met several times and came to agreement on issues related to banked credit and credit life that are reflected in Phase IV of the Agreement. Parties to the Agreement agreed to incorporate individual allocations and nutrient limits in individual NPDES permits, that would become applicable if the group load reductions were not achieved, and proposed actions to take in Phase IV of the Agreement to update the nitrogen offset rate and establish a phosphorus offset rate.

D. Summary of Updates for Phase IV

Since its inception, the Tar-Pamlico Agreement has been praised by the U.S. EPA and the Commission for its innovative and integrative approach to nutrient management. For many years, the EPA held it up as a model for others to use. Of course, nutrient control efforts have continued to evolve on a national scale. Considerable advances have been made and

experience gained in treatment technologies and strategic approaches to nutrient controls, and the EPA has established a considerable body of guidance materials to facilitate these efforts. Where appropriate, this agreement is being updated to reflect that knowledge.

Throughout Phase I, II, and III of this Agreement, nutrient discharges by the Tar-Pamlico point sources have been limited solely by the group caps found in the Agreement. By design, the Tar-Pamlico permits have not included facility specific nutrient limits, and the EPA Region 4 office had accepted that approach.

Based on guidance released by EPA's Office of Wastewater Management in 2007[1], EPA Region IV notified the Division during Phase III that Section 301(b)(1)(C) of the federal Clean Water Act and federal NPDES regulations (40 C.F.R. 122.44(d)(1)) require that NPDES permits include any limitations established in or based upon an approved TMDL. To comply with EPA's directive, the Division added the group caps for nitrogen and phosphorus in the members' permits as part of the 2009 renewals and agreed to add individual limits in the 2014 renewals. The Division has worked closely with the Association and the other parties to the Agreement to distribute the group's nitrogen and phosphorus allocations among the members in a fair and equitable manner.[2] The Division has also worked with the parties to develop a new NPDES group permit that effectively allows the Association to continue operating under the existing 'group caps' approach. The new permit will include both the group caps and the members' individual limits; but, so long as the Association meets the group caps, the members will not be subject to their individual limits. The individual limits for one nutrient or the other will only become effective if the Association exceeds the group cap for that nutrient. Similarly, the individual limits in the members' permits will only become effective if they leave the Association (see Section X). The Division expects to implement the group and individual limits in the 2014 permit cycle and has updated this Agreement accordingly. Individual limits are summarized in Table 3. Section IV (F) provides an overview of the group permit and explains how it relates to the members' individual permits.

In addition to incorporating individual limits into the permits, parties to the Agreement convened several times over the years during Phase III to address other modifications to be incorporated in Phase IV. During these negotiations, parties resolved or established action items for the following items which are discussed in more detail in the applicable sections of this document:

1. Added the City of Creedmoor to the Association membership and noted Creedmoor's request for allocation pending their application and DWR approval for an NPDES permit.

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[1] *Watershed-based National Pollutant Discharge Elimination System (NPDES)Permitting Technical Guidance.* U.S. Environmental Protection Agency, Office of Wastewater Management, Water Permits Division. EPA 833-B-07-004. August 2007. http://www.epa.gov/npdes/pubs/watershed_techguidance_entire.pdf

[2] Nutrient allocations are the maximum allowable contributions from a source or group of sources as established in the Tar-Pamlico TMDL. Allocations are an allowance and the basis for nutrient limits in the affected NPDES permits. Nutrient limits are the enforceable application of those allocations.

2. Resolved how banked credit accrued during Phases I, II, and III and how future banked credits will be handled under Phase IV of this Agreement.

3. Established a process for updating the N offset rate and establishing a P offset rate that will capture the actual costs of the nutrient reducing practices implemented.

4. Addressed various permit related issues including localized hotspots and appropriate enforcement actions for cap exceedances,

5. Made additional refinements including updates to the Annual loading tables, a new map, updated credit register, and table of load allocation / limits to be included in the group and individual permits.

III. Association Members

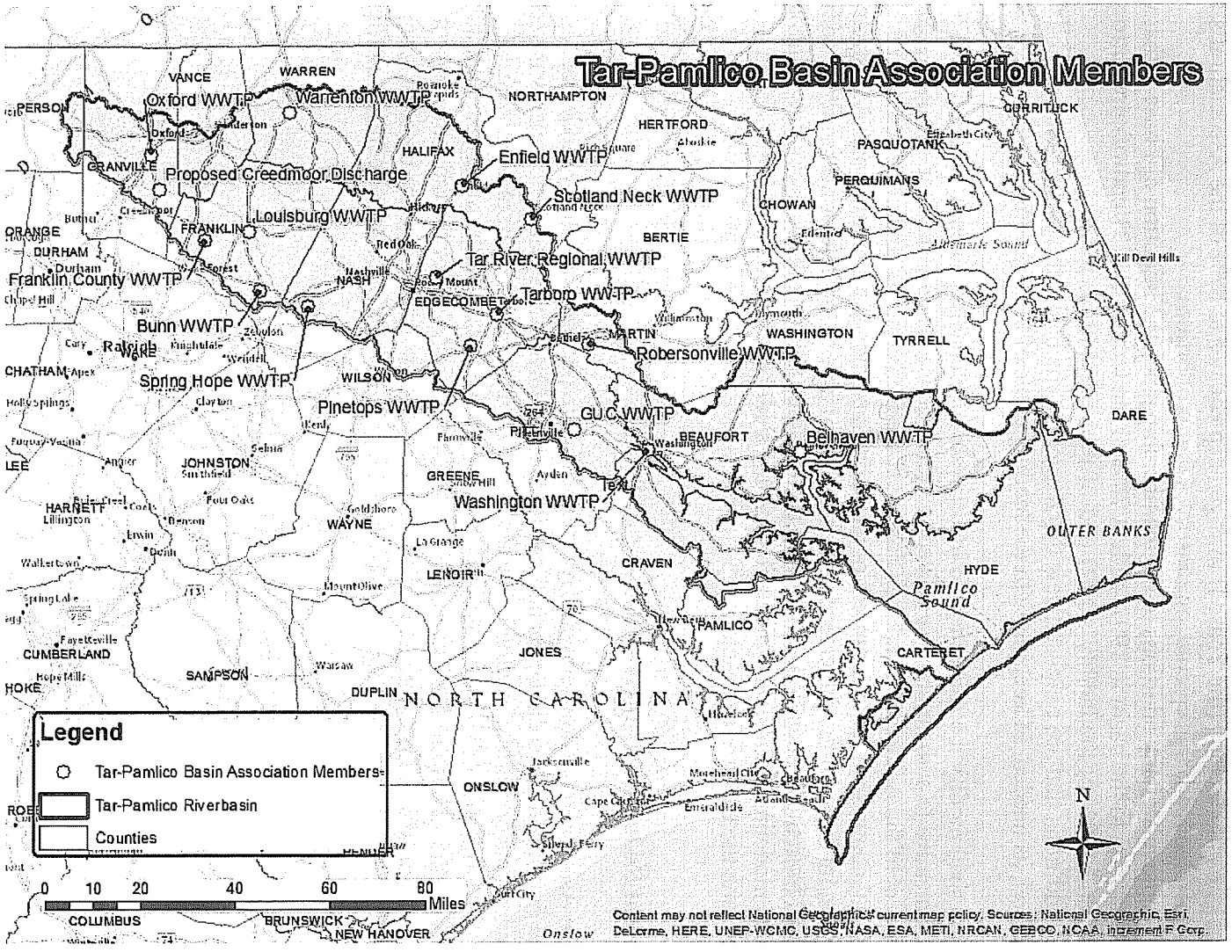
At the signing of this Agreement, the Tar-Pamlico Basin Association is comprised of the following members. Membership in Phase IV reflects one change from the final membership in Phase III with the addition of Creedmoor, which became a member of the Association in July 2012. Creedmoor was admitted to the Association upon a commitment to maintain specific nutrient concentration and mass limitations. However, as discussed with and agreed to by the parties to this Agreement, no additional load allocation will be added to the Association's Phase IV group caps until such time that the City of Creedmoor applies for and receives final DWR approval of on individual NPDES discharge permit.

Table 1. Current Membership of Tar-Pamlico Basin Association

1. Belhaven	8. Pinetops
2. Bunn	9. Robersonville
3. Enfield	10. Rocky Mount
4. Franklin Water & Sewer Authority	11. Scotland Neck
5. Greenville Utilities	12. Spring Hope
6. Louisburg	13. Tarboro
7. Oxford	14. Warrenton
	15. Washington
	16. Creedmoor

At a total permitted flow of 62.495 MGD, the Association now comprises 98.7% of permitted municipal and domestic flows in the Basin, as detailed in Appendix B.

Figure 1. Tar-Pamlico Basin Association Members



The Association may modify its membership at any time upon notification to the Division. At such time, the Division shall develop calculations to adjust the nitrogen and phosphorus caps using best available information on the nutrient loads produced by the facilities in question in 1991. The calculation method shall be the following:

(A) For additions that were discharging to the basin in 1991, add 70% of the facility's 1991 end-of-pipe nitrogen load and 100% of the facility's 1991 end-of-pipe phosphorus load.

(B) For removals of any of the 14 original members to the Phase II Agreement, deduct 87% of the facility's 1991 end-of-pipe nitrogen load and 100% of the facility's 1991 end-of-pipe phosphorus load (the Phase II nitrogen cap equates to 87% of the Association's 1991 end-of-pipe load; this calculation preserves that proportion).

(C) For removals of any additions to the membership since the initiation of Phase II that were discharging to the basin in 1991, deduct 70% of the facility's 1991 end-of-pipe nitrogen load and 100% of the facility's 1991 end-of-pipe phosphorus load.

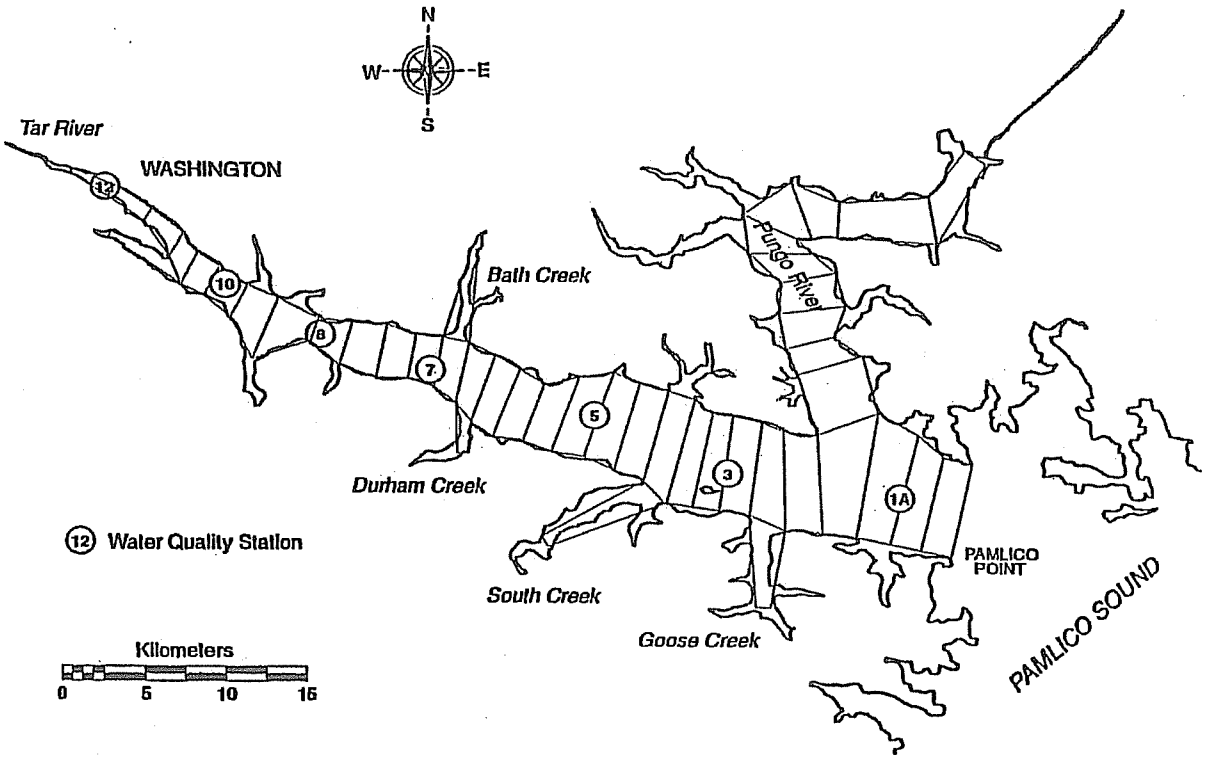
(D) For additions that are proposed new dischargers to the basin, the parties shall establish a method, as needed, in keeping with the loading goals of the Agreement.

The Division shall modify the Agreement to incorporate such changes. The Agreement shall be considered amended to address changes related to Subsections (A), (B), or (C) above upon signature of the President of the Association and the Director of the Division. Amendments related to Subsection (D) above shall require consent of all parties including the Commission. Adjusted caps shall apply beginning with the full calendar year nearest in time to the date of the facilities' addition to or removal from the Association. Should the parties agree to adjust the caps at some point based on additional modeling results, this calculation method shall be revisited accordingly and in accordance with the Clean Water Act.

IV. Nutrient Reduction Targets – History and Status

In 1992, the Association contracted with HydroQual, Inc. to perform the estuary modeling. HydroQual developed a two dimensional, laterally averaged hydrodynamic water quality model to predict the impacts of nutrient loading in the estuary. The model extends from Greenville to Pamlico Point a distance of approximately 60 miles. Figure 2 illustrates the model segmentation below Washington. The year 1991 was chosen as the calibration year for the model because it represented when typical impairment of the estuary was evident. It was also the baseline year established in the revised Phase I agreement for tracking nutrient reductions by requiring nutrient monitoring at the facilities.

Figure 2. HydroQual, Inc. Nutrient Model Segmentation below Washington, NC



A. Nutrient Assimilative Capacity Exceeded in the Pamlico Estuary

The Division applied the model under the 1991 calibration conditions as well as under various nutrient reduction scenarios and plotted the results for a site located near Washington in order to evaluate possible management strategies. The Washington site was chosen since modeling results indicated that this was where the greatest number of chlorophyll a and dissolved oxygen (DO) violations occurred, and the magnitude of the violations was the greatest. Thus, it is the critical portion of the river. Under the 1991 loading conditions, the model indicated that the chlorophyll a standard was violated approximately 18 percent of the time at Washington. These predictions are daily averages and are averaged across the river in each segment. Therefore, specific areas within a model segment or given times of day may indicate better or worse water quality than predicted.

Division staff reduced nutrient inputs by varying amounts during model applications to determine what loading reductions were needed to protect water quality standards. Model runs simulated a five-year period to allow improvements in the sediment concentrations to be reflected in water column quality. The results indicated that a 30 percent reduction in total nitrogen (TN) was predicted to significantly reduce the frequency and severity of algal blooms in the estuary. To prevent exceedances of the chlorophyll-a standard of 40 ug/l, the model predicted that a 45 percent reduction in total nitrogen may be needed (Figure 3). The model also predicted that nitrogen load reduction would significantly increase dissolved

oxygen in bottom water, prevent extended anoxic conditions and decrease the frequency of supersaturation conditions (Figure 4).

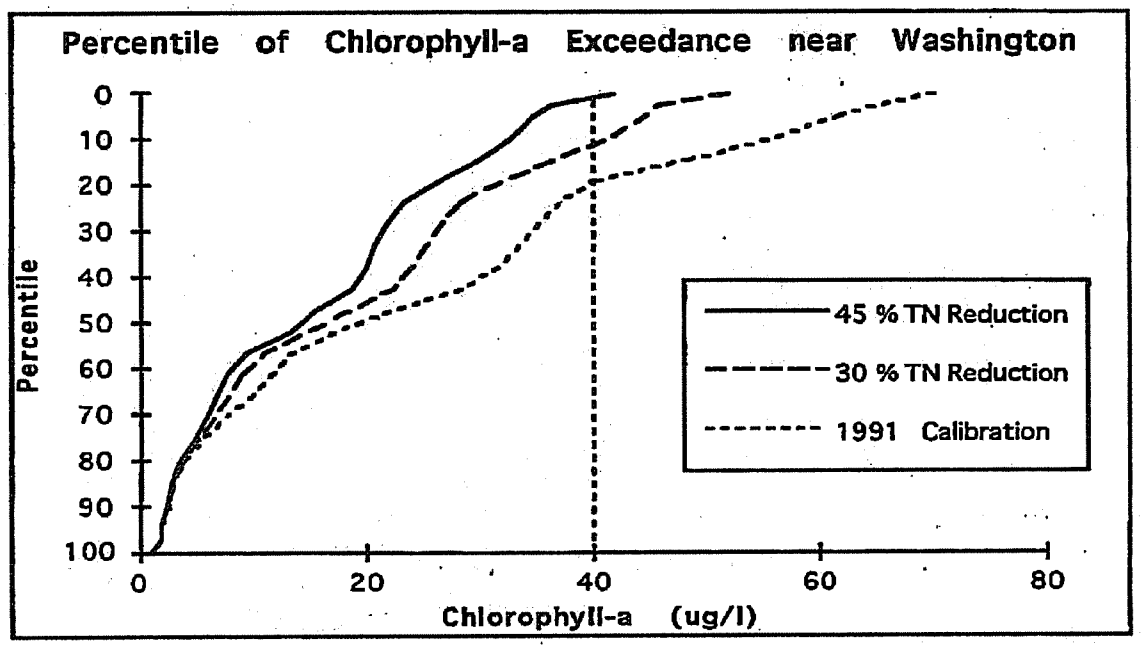
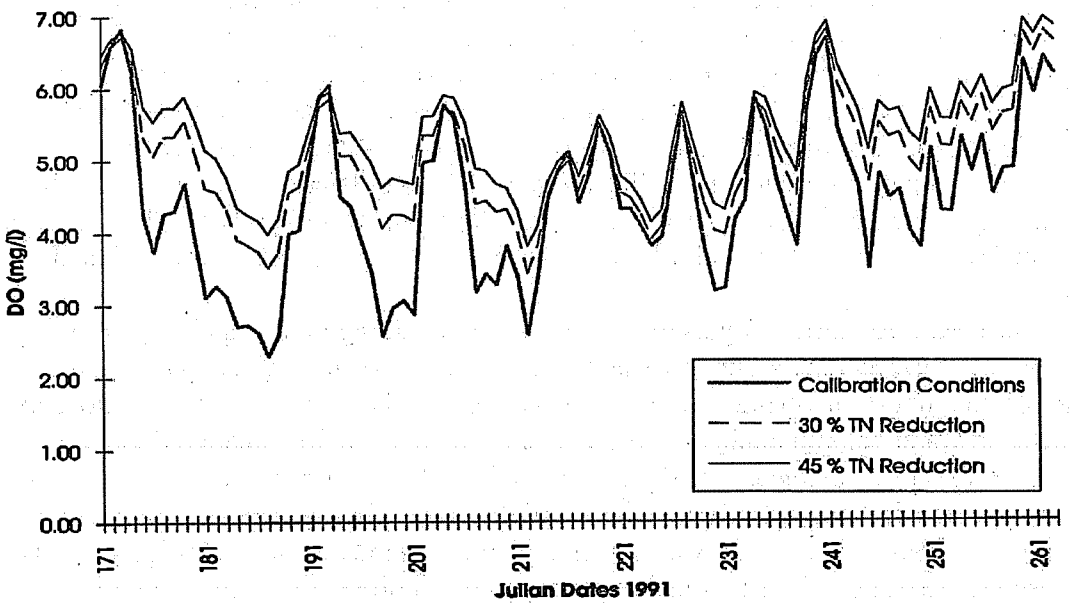


Figure 3. Predicted Percentiles of Chlorophyll-a Exceedances of the 40 ug/l Standard at Washington, NC, for Three Nitrogen Loading Scenarios Using HydroQual's Estuarine Model

Figure 4. Predicted Summer Bottom Layer Dissolved Oxygen at Station 3 for Three Nitrogen Loading Conditions



B. Estuary Nutrient Reduction Goals for Nitrogen and Phosphorus

The Phase II Agreement recognized the difficulty in projecting exactly what would be an acceptable level of water quality in the basin. Even if the basin were not developed, blooms would occur naturally at some frequency. In addition, a 45 percent reduction in nitrogen loading was considered potentially infeasible given the limitations of point and nonpoint source treatment technologies and BMP effectiveness. There was also some model error and uncertainty recognized in predictions, which could result in costly treatments that were not needed to meet water quality standards.

The model was calibrated under relatively high nutrient loading conditions in general. However, 1991 was a much dryer than average year; 1991 mean annual flow measured at the USGS Tarboro gauging station was 1,249 cfs, equating to 55% of the mean value for the entire period of record (1936 to present) and falling below the first quartile value. In wetter years, both nutrient loading and estuary response will differ from dry-year results. Therefore, the modeling results must be evaluated within the context of the model calibration.

Moreover, the further a given nutrient loading scenario applied to the model is from calibration conditions, the greater the uncertainty is for obtaining an accurate prediction of the water quality impacts of such loading. The interpretation of modeling results made by Division staff at the outset of Phase II was that algal and DO concentrations in the estuary would respond significantly to reductions in nitrogen loading and that a 45 percent TN reduction was needed to eliminate chlorophyll-a violations. However, the model could not be considered fully reliable for conditions so different from those existing at that time. To improve confidence in the modeling results, it was recommended that the model be recalibrated to reflect changing conditions as nutrient loading was reduced. Given the uncertainty inherent to a predictive model, an interim target was established , and the Phase II Agreement recommended that the model be recalibrated to lower nutrient loading conditions after reductions had been achieved in the basin.

The goal for TN reduction set in Phase II as an interim goal and maintained in Phase IV is 30 percent from 1991 conditions (relatively dry year). This level of TN reduction was selected because it resulted in most of the predicted change in chlorophyll-a and DO that was observed under TN reduction scenarios applied to the model. The Phase II Agreement forecast the need for further reductions beyond 30 percent, which it proposed to quantify by recalibrating the estuary model in the future under lowered nutrient loading conditions. It identified an ultimate goal of no water quality standard violations.

The estuary model supported that nitrogen was the most appropriate target nutrient to limit the potential for problematic algal blooms in the middle estuary. The model did not suggest significant improvements in chlorophyll-a levels would be seen in the middle estuary based on additional reductions in phosphorus. It is important, however, to consider the upper and lower bounds of the study area, where phosphorus is more likely to be limiting on a seasonal

basis. Phosphorus levels may become more important in the future after significant nitrogen reductions cause a commensurate shift in ratios of nitrogen to phosphorus. However, the proposed targets, if achieved, would result in TN:TP ratios within a desired range.

Another potential problem associated with elevated concentrations in either or both nutrients in this estuary is the loss of important submerged aquatic vegetation (SAV). While it is extremely difficult to model and predict recovery of SAV and their effect on nutrient dynamics, it would not be prudent to support additional increases in a phosphorus rich estuary. Therefore, Phase II recommended and this phase continues the goal of no increase in load of total phosphorus into the estuary from 1991 conditions.

Total Maximum Daily Load (TMDL) targets were set in Phase II for 2,777,821 lbs/yr of TN and 396,832 lbs/yr of TP at Greenville based on the relatively low flow year 1991. Recognizing that additional point and nonpoint source loadings occur below Greenville, the Phase II Agreement extrapolated loading estimates to Washington "based on yields using the average flow-to-drainage area ratio". This calculation estimated the 1991 TN load delivered to Washington as 4,285,781 lbs.. The associated 30% nitrogen reduction goal established in Phase II and continued here for all sources is 1,285,293 lbs/yr, making the loading goal for all sources at Washington 3,000,488 lbs/yr nitrogen and no increase in phosphorus loading relative to the 1991 baseline.

C. Annual Total Nitrogen and Total Phosphorus Loading Targets For Association Member Facilities

The Phase II Agreement established annual end-of-pipe nitrogen and phosphorus loading caps for the fourteen Association members. While the parties recognize that some assumptions and procedures involved in the nitrogen calculation could be refined, we agree that the net effect of such efforts relative to the strategy nitrogen goal renders these issues essentially moot. The Phase II nitrogen cap reasonably incorporates a 30% reduction for the Association, accounting for 1990 to 1991 load reduction efforts. A separate technical memorandum details the calculations that support this determination.

Subsequent to 1995, the initial Phase II nutrient caps were adjusted twice and the Agreement was modified accordingly. The caps were increased for the addition of Robersonville in 2001 and Scotland Neck in 2002 using the method described in Section III above.

For Phase IV, the parties agree to use the final Phase III end-of-pipe nitrogen cap of 889,403 lbs (404,274 kg) TN and the final phosphorus cap of 160,732 lbs (73,060 kg) TP. Should membership change during Phase IV the caps will be adjusted per the methods noted in Section III.

Table 2. End-of-Pipe Nutrient Loading Caps for Tar-Pamlico Basin Association

	Total Nitrogen (lbs/yr)	Total Phosphorus (lbs/yr)
Phase III Association Cap (15 members)	891,271 (404,274 kg/yr)	161,070 (73,060 kg/yr)
Phase IV Association Cap (16 members) [a]	891,271 (404,274 kg/yr)	161,070 (73,060 kg/yr)

[a]The City of Creedmoor has expressed interest in constructing a new treatment facility that would discharge up to 1.15 MGD of wastewater in the Tar-Pamlico basin. The City was accepted as a member in 2014 and is included here presuming it applies for and receives an NPDES discharge permit for the discharge. In March 2015 the City of Creedmoor entered into a service agreements with SGWASA that will result in their wastewater continuing to be treated by the facility. Should Creedmoor not apply for on NPDES permit no adjustment will be made to the cap. Final nutrient allocations/ limits will be determined in the course of any permitting process.

If loading exceeds either cap in any year of this Agreement, then the Association shall offset that exceedance by funding nonpoint source nutrient controls as described in Section V. Relaxation of these caps in future amendments to this Agreement would only be contemplated if monitoring and modeling results suggest all water quality standards and goals are being met and that assimilative capacity is available to the Association while maintaining a margin of safety, all consistent with the TMDL.

D. Addition of Creedmoor & Status of Former National Spinning Allocation

National Spinning was a member of the Tar-Pam Basin Association until the operation ceased discharging at the end of 2004. The Association membership was updated during Phase III and caps adjusted to reflect the removal of National Spinning. As a result 27,124 kg/yr (59,798 lb/yr) TN and 1,768 kg/yr (3,898 lb/yr) TP was removed from the caps per the calculation process described in the Section III.

Creedmoor's wastewaters are currently treated by the South Granville Water and Sewer Authority (SGWASA) which discharges in the Falls Lake Watershed. Creedmoor is exploring the possibility of building its own wastewater treatment facility in the future. In June 2010 the City of Creedmoor submitted a speculative discharge limit request to DWR for a possible 1.15 MGD BNR type wastewater treatment plant with a proposed discharge into the Tar-River. Creedmoor also applied to become a member of the Association and requested DWR reinstate a portion of the previously removed National Spinning Allocation to the Association's Cap. The Association has accepted Creedmoor as a member and the Division has indicated that a portion of the old National Spinning allocation would be made available should Creedmoor apply for and be approved for an individual NPDES permit. Final allocations / limits for the new discharge will be established once the City has satisfied any environmental review requirements for the project and submitted proper application for an NPDES permit for its discharge.

On March 28, 2015 the City of Creedmoor entered into a service agreement with SGWASA that will result in their wastewater continuing to be treated by that facility. Should

Creedmoor not apply for an NPDES permit no adjustments will be made to the cap in Table 2 of this Agreement and the National Spinning Allocation will remain retired.

E. Individual Allocations / Limits

Throughout Phase I, II, and III of this Agreement, nutrient discharges by the Tar-Pamlico point sources have been limited solely by the group caps found in the Agreement as referenced in the individual permits. By design, the Tar-Pamlico permits have not included facility specific nutrient limits, and the EPA Region 4 office had accepted that approach.

Based on guidance released by EPA's Office of Wastewater Management in 2007[3], EPA Region IV notified the Division that Section 301(b)(1)(C) of the federal Clean Water Act and federal NPDES regulations (40 C.F.R. 122.44(d)(1)) require that NPDES permits include any limitations established in or based upon an approved TMDL. The Division added the group caps for nitrogen and phosphorus in the members' permits as part of the 2009 renewals and agreed to add individual limits in 2014. The Division has worked closely with the Association and the other parties to the Agreement to determine appropriate nutrient allocations and limits for each member. The Division has also worked with the parties to develop a new NPDES group permit that effectively allows the Association to continue operating under the existing 'group caps' approach. The Division expects to implement the group and individual limits in the 2014 permit cycle and has updated this Agreement accordingly.

The group cap assigned to the Tar-Pamlico Basin Association is 891,271 lb/yr TN and 161,070 lb/yr TP as shown in Table 2. In order to apportion the group caps among individual member dischargers, the caps were divided in proportion to the maximum permitted flow in each member's permit as of 2014. Individual limits are summarized in Table 3 below provides an overview of the group permit and explains how it relates to the members' individual permits.

[3] *Watershed-based National Pollutant Discharge Elimination System (NPDES)Permitting Technical Guidance.* U.S. Environmental Protection Agency, Office of Wastewater Management, Water Permits Division. EPA 833-B-07-004. August 2007. http://www.epa.gov/npdes/pubs/watershed_techguidance_entire.pdf

F. Individual and Group Permit Requirements

As already noted, the Division added conditions to the members' NPDES permits in 2009 that established the TN and TP group caps as enforceable limits, subject to the terms and conditions of the Agreement. Beginning with the 2014 renewals, each member's permit will also include individual nutrient limits and related conditions. These changes in the permits are necessary to allow for appropriate enforcement in the event that group caps are exceeded.
The parties propose to use a supplemental NPDES permit to maintain the 'group compliance' approach that has been fundamental to previous Agreements. This permitting approach is designed to work as follows:

- Each member's individual NPDES permit will include its limits for TN and TP, as listed in Table 3, as well as monitoring requirements and other nutrient conditions. The group caps added to the member permits in 2009 will be moved to a group permit.

- A new group permit, issued to the Association and its members, will establish nutrient limits and associated reporting requirements. The permit will include both the group caps for the Association and the members' individual limits. The group caps are the sums of the members' individual limits and are subject to change, such as when members join or leave the Association.

- So long as a facility is a member of the Association, it will be deemed to be in compliance with the nutrient limits in its individual NPDES permit and subject to the nutrient requirements of the group permit. No other terms and conditions of its individual permit are affected by its coverage under the group permit.

- The Association members, as a group, are subject to the TN and TP caps established in the group NPDES permit. For each nutrient, so long as the Association complies with its group cap, all members are deemed to be in compliance with their individual limits in the group permit. If the Association exceeds the cap for one or both nutrients, the individual limits for the nutrients of concern become effective, and any members exceeding an individual limit are in violation of the group permit.

- The members' nutrient limits in the group permit are a reflection of the limits in their individual NPDES permits. Any change in a member's nutrient limits requires that the both the group and individual permits be modified and the change undergo public review. The group permit can then be modified to ensure that the limits in both permits agree.

All members will continue to monitor and report their nutrient discharges as specified in their individual permits, and the Association will continue to report its members' nutrient loadings.

Table 3. Individual Allocations / Limits for Tar-Pam Basin Association Members

Permit	Owner	Facility	TN Allocations (lbs/yr)[a]	TP Allocations (lbs/yr)[a]
Association Members				
NC0026492	Town of Belhaven	Belhaven WWTP	14,261	577
NC0042269	Town of Bunn	Bunn WWTP	4,278	773
NC0025402	Town of Enfield	Enfield WWTP	14,261	577
NC0069311	Franklin County	Franklin WWTP	42,754	7,732
NC0023931	Greenville Utilities Commission	GUC WWTP	249,576	45,103
NC0020231	Town of Louisburg	Louisburg WWTP	19,538	3,531
NC0025054	City of Oxford	Oxford WWTP	49,915	9,021
NC0020435	Town of Pinetops	Pinetops WWTP	4,278	773
NC0026042	Town of Robersonville	Robersonville WWTP	25,671	4,639
NC0030317	City of Rocky Mount	Tar River Regional WWTP	299,491	54,124
NC0023337	Town of Scotland Neck	Scotland Neck WWTP	9,626	1,740
NC0020061	Town of Spring Hope	Spring Hope WWTP	5,705	1,031
NC0020605	Town of Tarboro	Tarboro WWTP	71,307	12,887
NC0020834	Town of Warrenton	Warrenton WWTP	28,523	5,155
NC0020648	City of Washington	Washington WWTP	52,054	9,407
Total	**Allocation/ Limit (Group Cap)**	**lbs/yr**	**891,271**	**161,070**
Total	**Allocation/ Limit (Group Cap)**	**kg/yr**	**404,274**	**73,060**

[a] The total allocations / limits expressed as kg/yr are taken to be whole numbers. The total and individual expressed as lbs/yr are calculated values ; they are not whole numbers, but, for the purposes of this table, are shown to the nearest whole pound. The sum of the individual allocations may differ from the total value due to rounding.

G. Loading Targets for Nonpoint Sources

The stated goal of this Agreement is to reduce total nitrogen loading measured at Washington by 30 percent from 1991 loadings. As calculated in Phase II, this reduction from all sources amounts to 1,285,293 lbs/yr. Since the point source contributions in 1991 accounted for 8 percent of the total nitrogen loading, point source reductions also account for 8% of the reduction needed. Therefore, nonpoint source activities in the basin are assigned a reduction of approximately 1,182,470 lbs/yr at Washington (i.e., 1,285,293 X 92%) to achieve a 30 percent reduction from all sources. This goal was translated upstream to "the source" using the same 30 percent instream decay assumption used for point sources. The Phase II Agreement called for a nonpoint source strategy, which was approved by the Commission in December 1995 as a voluntary plan. It apportioned the nonpoint source reduction target among agriculture, urban, forestry, and wetlands categories based on export coefficient calculations. The Division subsequently reapportioned these allocations to the manageable nonpoint source categories of agriculture and urban.

In implementing nonpoint source management efforts during Phase II, the Division found that while instream nonpoint source loading goals were an important concept, functional application instead favored use of the N and P *percentage* reduction and maintenance targets in land-based accounting methods by nonpoint sources. Compliance with instream loading targets would have additionally required some combination of complex modeling with significant uncertainty of processes occurring between edge of management unit and the water column instream, and a significant amount of quantitative water quality monitoring to support that modeling. Given the scale of uncertainties that would be associated with such an effort and resource limitations, nonpoint source management has evolved using land-based accounting methods.

H. Loading Targets for Non-Association Facilities

The Phase II Agreement established recommendations for all non-Association dischargers: existing and expanding domestic and industrial wastewater dischargers and all new facilities to enter the basin.

Phase II Agreement recommendations for expanding and new non-Association dischargers were subsequently codified as rules 15A NCAC 2B .0229 and .0237, and became effective April 1, 1997. These rules are currently being readopted as part of legislatively mandated re-adoption of all rules. Division staff is evaluating the need to revise the requirements through that process. Currently under the rules, domestic and industrial dischargers expanding to 0.5 MGD or greater and all new dischargers are required by the rule to offset all new nutrient loads at 110 percent of the established offset rate. Payment for the life of the permit is required at issuance or renewal. The Division plans to revise the effluent limit concentrations provided in Rule 15A NCAC 2B .0229 through an ongoing rules re-adoption process which will be completed in 2016. Any new requirements adopted through the rules re-adoption process will be applied to non-Association facilities at that time.

The intent of these recommendations is to ensure that new or expanding non-Association dischargers in the basin do not result in increased nutrient loadings to the estuary. They also serve as an incentive for all facilities treating nutrient-bearing wastewaters to become Association members, in which case their impacts are regulated through this Agreement. When these requirements were first established (1995), the TN and TP concentration limits represented Best Available Technology for domestic systems reasonably well, and they were more stringent on average than the Association's limits. Since then, some Association facilities have expanded their treatment capacity and, with increased flows, the equivalent nutrient concentrations of the caps have been reduced. Members would need to treat to 4.7 mg/l TN and 0.84 mg/l TP on average, based on full permitted flow. In the same period, nitrogen treatment capabilities have improved considerably. The result is that not only are the 6&1 limits previously specified in the Agreement an out-of-date measure of BAT for domestic facilities but they are also considerably less stringent than the limits the Association members must meet under design flow conditions.

As part of the legislatively required re-adoption of all rules, in 2B .0229 the Division will propose to shift non-Association offsets from the ACSP to the Division of Mitigation Services (DMS), formerly the Ecosystem Enhancement Program, while leaving the Association cap exceedance offsets under the current ACSP model as discussion in Section V. Use of DMS for non-Association offsets is based on the in-perpetuity nature of non-Association loads increases and the conforming design of the DMS offset program, as opposed to the limited duration of reductions typically provided under the ACSP, which complement discrete cap exceedances that the Association may produce.

During Phase III, no expanding nor new dischargers were issued permits pursuant to these requirements. Appendix B provides tables of all dischargers sorted by permitted flow.

V. Nutrient Offset Program

The purpose of this agreement is to allow Association facilities to achieve the Division's nutrient reduction goals by funding other more cost-effective nutrient reduction measures than the cost of meeting effluent limits at the Association facilities. This alternative involves funding nonpoint source controls that achieve reductions in nutrient loading to the estuary at least equivalent to the magnitude of cap exceedances in a given year.

A. Offset Options

The Phase II Agreement established certain nonpoint source management options for Association funding to offset cap exceedances. The parties agree to continue providing the following options for Phase IV of the Agreement:

- Implementation of certain nutrient-reducing agricultural BMPs under the NC Agriculture Cost Share Program. Soil and Water shall administer offset funds for this purpose. Funds shall be allocated to operations within the Tar-Pamlico River Basin, and shall be targeted geographically and by practice for the most cost-effective nutrient reductions to the estuary practicable. Soil and Water shall track and report the

disposition of these funds to the Division annually. Soil and Water shall ensure and demonstrate that offset-funded BMPs are separate from and in addition to BMPs implemented to meet requirements of the Tar-Pamlico agriculture rule.

- Support for operation and maintenance of a continuous flow gauging station in the Tar River at Greenville or other mainstem location as close as practical to the estuary.

B. Offset Credits

1. **Flat Rate.** To date the Agreement has used a flat offset rate that was established for Phase II and will continue until updated in Phase IV at $13.15 of nitrogen in excess of the annual cap. This flat rate was based on a report by Research Triangle Institute entitled *Cost-Effectiveness of Agricultural BMPs for Nutrient Reduction in the Tar-Pamlico Basin* (January, 1995), which included a safety factor and an administrative cost factor. During Phase III parties to the Agreement discussed ways to update the nitrogen offset rate and establish a phosphorus offset rate in a manner that would utilize actual projected load reductions and costs, including uncertainty estimates and associated issues and cost factors as itemized below. During the first two years of Phase IV, the Division shall work in consultation with the parties to develop improvements to the offset rate that address the following issues:

    - Develop an offset rate for exceedances of the phosphorus cap.
    - Update cost-effectiveness data developed in the 1995 RTI report.
    - Add BMPs not addressed in the 1995 RTI report and quantifiable based on current research.
    - Factor uncertainty into cost-effectiveness estimates.
    - Project proportionate BMP implementation for the foreseeable future.
    - Explore the ability to establish single, weighted nitrogen and phosphorus cost-effectiveness values based on proportional use;
    - Seek to account for spatial distribution within the basin as well.
    - Revisit the administrative cost factor.

During Phase IV parties will develop an updated nitrogen offset rate and establish a phosphorus offset rate that captures the full actual costs of implementing agricultural BMPs under the NC Agriculture Cost Share Program. Parties to the Agreement will work together to develop costs for the following implementation elements to consider when updating offset rates, as applicable:

- Design, planning and engineering
- Recruitment and outreach by the soil & water conservation district staff
- Land costs
- Implementation and construction
- Operation and maintenance
- Inspection costs
- Regulatory costs for DWR and DSWC technical assistance and administration

Once established, the Phase IV nitrogen and phosphorus offset rates shall be revisited at least once every five years to consider new information and incorporate future updates. To replace the current offset rate with the results of this effort, the Division shall present any modifications to the Agreement to the Commission for approval by January 1, 2017 or as soon as practicable thereafter.

2. **Banked Credit Life.** Over the course of Phase I, II, and III the Association made payments towards various creditable measures and activities. A summary of these payments and credits is provided in Appendix C. These banked credits fall into two distinct categories. The first being credits earned for funding nutrient reducing BMPs. The second category is more administrative in nature in the form of credits earned for funding a flow gauge and coordinator position. During the course of Phase III, the Division worked with the parties to resolve questions related to the longevity of these banked credits and the rate at which banked credits can be redeemed. The parties have resolved these questions for existing banked credits and established guidance on the disposition of future payments for banked credit. Parties agree that in the future up to 10% of a load exceedance can be offset with the banked credit earned by funding the gauge and coordinator in a given calendar year while the banked credit balance from funding nutrient BMPs can be used in any amount as an offset. Furthermore, banked credit that was earned by funding Agriculture Cost Share BMPs shall expire at such time the BMP contract for the funded BMP expires under the Agriculture Cost Share Program. This is based on the premise that continued operation, maintenance and continued nutrient reduction performance can no longer be assured for the BMP once the contract expires.

3. **Banked Credit History & Status**

   The section below details the credits earned during each Phase of the Agreement. Details of payments and credits during each phase of the Agreement are provided in the credit register located in Appendix C.

   - **Phase I Credits:** During the first phase of this Agreement (1990-1994) the Association funded a series of agriculture BMPs through a combination of Association funds and federal grants. Phase I credit history is captured in the credit register in Appendix C. As of 2015 the remaining credit balance is 4,923 lbs of N.

   - **Phase II Credits:** The Association did not exceed its caps during Phase II, but did make payments to fund the flow gauge and partially fund the DSWC staff position. With these payments, the Association banked credit toward future cap exceedances at the $13.15/lb rate. As tabulated in Appendix C, the Association accumulated $399,193 in advance offset payments for 30,356 lbs N reduction credit.

- **Phase III Credits:** As in Phase II, the Association did not exceed its caps during Phase III, but continued to provide partial funding for the coordinator position until it was eliminated in 2006. The Association also continued to fund the flow gage at Greenville. With these payments the Association banked credit toward future cap exceedances at the $13.15/lb rate. As tabulated in Appendix C, the Association accumulated an additional $220,267 in advance offset payments for an additional 16,712 lb N reduction credit for a total of 47,857 lbs of N reduction credits (Phase II + Phase III).

- **Phase IV Credits:** The Association may continue to earn banked credit for funding the Greenville flow gauge, which will be handled similar to past credit earned in this manner in that these credits are eligible to be used towards offsetting up to 10% of a load exceedance in a given calendar year

4. **Payment Schedule.** Under this Agreement, the Association shall develop annual loading projections to predict anticipated loading cap exceedances. If the Association exceeds 85% of its TN or TP limitation in any calendar year, the Association shall, no later than July 1 of the following year, evaluate the effectiveness of its members' nutrient controls, identify improvements sufficient to ensure continued compliance with the nutrient limits, and submit to the Division a report of its findings, proposed treatment improvements and related actions, and a timeline for implementing the proposed measures. At such time as the Association determines it expects to exceed either nutrient cap in the upcoming calendar year, and no banked credits reamain, it shall make the appropriate offset payment in advance of the cap exceedance and no later than July 1 of the year prior to the predicted cap exceedance. Also by that date, the Association shall request modification of the group NPDES permit in order to increase the group limit accordingly prior to the predicted exceedance.

   Advance payment of the nutrient offset payment will allow time for the offset measure to be implemented and the allocations and limits in the group permit to be adjusted to reflect the onetime offset payment in anticipation of the exceedance. Any offset payments made in July will be re-evaluated when the annual report is submitted in March of the following year. Any excess offset payments will be credited as a banked nutrient offset credit and be available for future use.

5. **Funding Sources.** If the dischargers can secure additional funding from sources such as federal grants, exclusive of funds available to the states, these funds can be used to make nutrient reduction payments or to fulfill other conditions to this agreement described below. Any additional funds that the dischargers secure for nonpoint source controls must be in addition to that which would have occurred from federal, state, and local sources if not for the existence of this agreement.

VI. Minimum Conditions to this Agreement

The parties agree to meet the following minimum conditions:

A. Monitoring

Association facilities shall continue to monitor effluent TP and TN and the Association shall submit an annual report to the Division every March 1 detailing this monitoring data from the previous year. The annual report will be used to determine compliance with this strategy. The Division may authorize less frequent monitoring (i.e., other than weekly) where the discharger demonstrates that less frequent sampling is adequate to characterize facility loadings. All facilities shall abide by monitoring protocols defined or referenced in their NPDES permits.

Where a facility fails to report flow data, its flow for the unreported period shall be estimated based on the ratio of the facility's reported flow in the remainder of the year to the combined flow of the other Association POTW members during the same time period. Where a facility fails to report TP or TN concentrations, the facility's nutrient concentrations for the unreported period shall be estimated by the Division using the best available data.

Although not a requirement under this Agreement, during Phase III the Association took the additional step of forming a Monitoring Coalition in March 2007. The Association currently collects monthly samples at 37 stations throughout the basin. The water quality data collected by the Association is submitted to DWR within 90 days of the end of the month in which the sampling was performed. The Association annual report formally finalizes the water quality data.

The monitoring performed by the monitoring coalition under the Memorandum of Agreement (MOA) with DWR does not affect the effluent monitoring required here. Rather, under the MOA the TPBA members are exempted from instream monitoring as specified in their individual NPDES permits. The current monitoring MOA between the Association and DWR was effective March 1, 2012 and runs through February 28, 2017. Details of the monitoring plan can be found in the MOA document on DWR's website at http://portal.ncdenr.org/web/wq/ess/eco/coalition.

B. Evaluation of Progress

To evaluate progress towards the strategy reduction goal, the Division conducted estuary use support assessment and nutrient loading trend evaluation for the 2014 Tar-Pamlico Basinwide Plan. Results of this evaluation indicate the estuary nutrient reduction goals have not been met at this time. The Division will continue to conduct estuary use support assessment and loading trend analysis as part of future basin plans. A summary of the most recent use support assessment and trend analysis methods and results is provided in the 2014 Basinwide Plan. An electronic copy of the plan can be found on the Division website at http://portal.ncdenr.org/web/wq/ps/bpu.

The Division is currently conducting a rules re-adoption process where it will seek to strengthen elements of the existing nutrient management strategy rules. In addition, the 2014 basinwide plan includes other recommendations the Division intends to pursue that include addressing research needs and gaps in the current management strategy. This ongoing work will provide information that can be used towards improving the implementation of nutrient reduction activities beyond the current proposed rule revisions, which will assist in achieving the nutrient strategy reduction goals.

VII. Local Water Quality Impacts

This Agreement does not preclude the Division from requiring additional nutrient controls by individual point sources where a localized water quality problem exists. If the Division determines that a member's TN or TP discharge has reasonable potential to cause localized water quality impacts, it may determine and assign an individual water quality-based limit for TN, TP, or both, as appropriate, for the Member in accordance with applicable NPDES rules. The Division will then propose to incorporate the new limit(s) into the Member's individual NPDES permit and this group permit according to standard permitting procedures. Once an individual WQBEL becomes effective in the group permit, the Member is subject to that limit in lieu of the Association TN or TP Limit. The Division shall provide copies of any proposed WQBEL so that parties to the Agreement may provide timely comments on the proposed agency action.

VIII. Decision-Making Authority

The Division shall have final decision-making authority with regard to the adequacy of nutrient offsets and allocations. The Soil and Water Conservation Commission shall have final decision-making authority with regard to agricultural BMP implementation. All other designated nonpoint source management agencies shall retain their responsibilities within the basin. This provision does not affect any appeal rights of the signatory parties with regard to such decisions.

IX. Nonpoint Source Controls

The Phase II Agreement called for a nonpoint source strategy, which was approved by the Commission in December 1995 as a voluntary plan. The Commission then received two annual reports on the progress of implementation under this voluntary plan before it that progress was insufficient and initiated rulemaking for nonpoint sources. Modeled after rules implemented in the adjacent Neuse River Basin in 1998, a set of rules addressing four subject areas went into effect during 2000 and 2001:

1. Agriculture
2. Urban stormwater
3. Riparian buffer protection
4. Fertilizer management

The agricultural community was required to achieve a collective 30% reduction in nitrogen losses within 5 years, and to ensure no increase in phosphorus losses within four years of the development of a phosphorus accounting method. Under the stormwater rule, 5 counties and 6 municipalities

were required to regulate new development to achieve 30% reduction in nitrogen export and no increase in phosphorus export from basinwide average pre-development conditions. These local governments were also required to identify and eliminate illicit discharges to the stormwater system, conduct education programs, and identify retrofit sites on existing developed lands. The riparian buffer rule established protections for existing riparian areas 50 feet in width basinwide, and required establishment of such buffers where none exist upon change of land use. The nutrient management rule requires fertilizer applicators basinwide to either have certified plans in place for lands to which they apply fertilizer, or to take training within 5 years on developing such plans. Homeowners were not subject to this requirement; instead the Division was to develop and implement an education program targeting homeowners.

The nonpoint source rules have been fully implemented as of 2006. Agriculture exceeded its goal by 2004, with annual reports currently estimating nitrogen loss reductions exceeding 40%. Approximately 1,600 applicators were trained under the nutrient management strategy. Under the stormwater rule local governments have been implementing their new development permitting requirements through their locally adopted stormwater ordinances and programs since 2004. Additionally, the riparian buffer rule has been enforced by the Division since 2000.

In addition to the nutrient strategy's nonpoint source rules, other nonpoint source control initiatives in the Tar Pamlico River Basin continue beyond the terms of this Agreement. Several of the major initiatives include the following voluntary and regulatory programs:

- State and federal regulation of confined animal operations,
- Phase II of federal NPDES stormwater regulation, encompassing several urbanized areas in the Basin,
- State Coastal stormwater regulation applicable to Beaufort County,
- State-mandated local stormwater regulation in Water Supply Watersheds throughout the Basin,
- State regulations protecting High Quality Waters and waters supporting listed aquatic species,
- State and federal wetlands and stream protection and mitigation regulations,
- A host of state and federal agriculture cost share and incentive programs, and technical assistance and education for farmers,
- NC Nonpoint Source Management Program providing state-wide and coastal NPS goal-setting, coordination, and grant funding (CWA Section 319) for protection and restoration of water quality related to nonpoint sources of pollution,
- Other Clean Water Act water quality grant programs including Sections 104(b)(3) and 106, and
- Clean Water Management Trust Fund, a state grants program funding a range of water quality protection and improvement activities.

X. Termination of this Agreement

In the event that this Agreement is terminated for any reason, nutrient discharges by members of the Association shall be subject to the limits and other nutrient requirements of the group NPDES permit or, if no such permit has been issued and is effective, those in their individual permits. The Division may also evaluate the need for additional rulemaking to regulate point sources.

Annual Nutrient Loads And Caps, Tar-Pamlico Basin Association

Phase I

Combined N+P	1991[1]	1992[1]	1993[1]	1994[1]
Loading Cap [a] (lb/yr)	1,157,426	1,102,310	1,047,195	936,964
Actual Load (lb/yr)	1,017,198	961,497	919,805	818,355
Load as % of Cap	88	87	88	87
Average Flow (MGD)	24.88	26.86	28.46	26.65

Phase II

Separate N, P	1995[2]	1996[2]	1997[2]	1998[2]	1999[2]	2000[2]	2001[3]	2002[4]	2003[4]	2004[4]
Loading Cap [a] (lb/yr)	N: 893,435 P: 153,759	N: 893,435 P: 153,759	N: 893,435 P: 153,759	N: 893,435 P: 153,759	N: 893,435 P: 153,759	N: 893,435 P: 153,759	N: 930,288 P: 161,070	N: 930,288 P: 162,467	N: 930,288 P: 162,467	N: 930,288 P: 162,467
Actual Load (lb/yr)	N: 821,402 P: 82,365	N: 780,918 P: 95,385	N: 706,955 P: 80,539	N: 760,111 P: 81,271	N: 682,277 P: 70,662	N: 656,950 P: 66,749	N: 617,201 P: 72,157	N: 615,817 P: 75,125	N: 682,824 P: 68,026	N: 576,352 P: 74,911
Load as % of Cap	N: 92 P: 54	N: 87 P: 62	N: 79 P: 52	N: 85 P: 53	N: 76 P: 46	N: 74 P: 43	N: 66 P: 45	N: 65 P: 46	N: 72 P: 42	N: 61 P: 46
Average Flow (MGD)	31.03	33.57	29.84	33.31	33.39	32.74	30.21	30.54	36.86	29.65

ANNUAL NUTRIENT LOADS AND CAPS, TAR-PAMLICO BASIN ASSOCIATION

PHASE III

Separate N, P	2005[5]	2006[5]	2007[5]	2008[5]	2009[5]	2010[5]	2011[5]	2012[5]	2013[5]
Loading Cap [a] (lb/yr)	N: 891,271 P: 161,070	N: 891,271 P: 161,070	N: 891,271 P: 161,070	N: 891,271 P: 161,070	N: 891,271 P: 161,070	N: 891,271 P: 161,070	N: 891,271 P: 161,070	N: 891,271 P: 161,070	N: 891,271 P: 161,070
Actual Load (lb/yr)	N: 533,562 P: 86,569	N: 512,724 P: 103,606	N: 543,362 P: 110,401	N: 559,572 P: 96,609	N: 602,038 P: 89,781	N: 637,916 P: 82,369	N: 646,531 P: 99,966	N: 624,664 P: 101,805	N: 600,688 P: 99,190
Load as % of Cap	N: 60 P: 54	N: 58 P: 64	N: 61 P: 69	N: 63 P: 60	N: 67 P: 56	N: 72 P: 51	N: 73 P: 62	N: 70 P: 63	N: 67% P: 62%
Average Flow (MGD)	29.21	32.85	27.05	27.39	28.0	30.5	28.6	30.5	34.1

◆ Loads estimated by NC Division of Water Quality. Equal to the sum of calendar-year monthly load values for each facility, which are based on minimum biweekly nutrient concentrations and daily mass flows.

[a] Cap values and changes result from the following:

1. Phase I – Original 12-member Association.
2. Phase II through 2000 – 14-member Association.
3. 2001 – Robersonville added, 15-member Association.
4. 2002 – Scotland Neck added, 16-member Association.
5. 2005 – National Spinning removed, 15-member Association in Phase III

APPENDIX B

Table of Point Source Dischargers to the Tar-Pamlico River Basin

Permit	Owner	Facility	Permitted Flow (MGD)	Sub-basin	Receiving Stream
Association Members					
NC0030317	City of Rocky Mount	Tar River Regional WWTP	21.0	02	TAR RIVER
NC0023931	Greenville Utilities Commission	GUC WWTP	17.5	05	TAR RIVER
NC0020605	Town of Tarboro	Tarboro WWTP	5.0	03	TAR RIVER
NC0025054	City of Oxford	Oxford WWTP	3.5	01	Fishing Creek
NC0020648	City of Washington	Washington WWTP	3.65	07	TAR RIVER
TBD	City of Creedmoor	Creedmoor WWTP*	TBD	TBD	TBD
NC0069311	Franklin County	Franklin County WWTP	3.0	01	Cedar Creek
NC0020834	Town of Warrenton	Warrenton WWTP	2.0	04	Fishing Creek
NC0026042	Town of Robersonville	Robersonville WWTP	1.8	06	Flat Swamp
NC0020231	Town of Louisburg	Louisburg WWTP	1.37	01	TAR RIVER
NC0026492	Town of Belhaven	Belhaven WWTP	1.0	07	Battalina Creek
NC0025402	Town of Enfield	Enfield WWTP	1.0	04	Fishing Creek
NC0023337	Town of Scotland Neck	Scotland Neck WWTP	0.675	04	Canal Creek
NC0020061	Town of Spring Hope	Spring Hope WWTP	0.4	02	TAR RIVER
NC0020435	Town of Pinetops	Pinetops WWTP	0.3	03	Town Creek
NC0042269	Town of Bunn	Bunn WWTP	0.15	01	Crooked Creek
		Total Permitted Flow =	**62.35**		

* City of Creedmoor only a proposed discharge at this time. Permitted flow, Sub-basin, and stream are to be determined.

APPENDIX B (CONTINUED)

Permit	Owner	Facility	Permitted Flow (MGD)	Sub-basin	Receiving Stream
Non-Association Domestic Less than 0.05 MGD					
NC0036919	Town of Pantego	Pantego WWTP	0.006	07	Pantego Creek
NC0040584	Pantego Rest Home	Pantego Rest Home	0.004	07	Pantego Creek
NC0037231	Martin County Schools	Bear Grass El Sc WWTP	0.005	06	Turkey Swamp
NC0038580	Halifax County Schools	Eastman M School WWTP	0.0048	04	Little Fishing Creek
NC0038610	Halifax County Schools	Pittman El School WWTP	0.0096	04	Burnt Coat Swamp
NC0038644	Halifax County Schools	Dawson El School WWTP	0.0073	04	Deep Creek
NC0050415	Edgecombe County Schools	Phillips Middle School	0.010	02	Moccasin Creek
NC0050431	Edgecombe County Schools	North Edgecombe H Sl	0.02	02	Swift Creek
NC0037885	Nash/Rocky Mount Schools	Southern Nash Junior H S	0.015	02	TAR RIVER
NC0047279	C&J Bradshaw LLC	Heritage Meadows WWTP	0.010	01	North Fork Tar River
NC0029131	Kittrell Job Corps Center	Kittrell Job Corps Center	0.025	01	Long Creek
NC0048631	Interstate Property Mgmt Inc	Long Creek Court WWTP	0.007	01	Long Creek
Non-Association Domestic 0.05 to 0.5 MGD					
NC0069426	Dowry Creek Community Assc.	Dowry Creek	0.05	07	Pungo River
NC0021521	Town of Aurora	Aurora WWTP	0.12	07	South Creek
NC0025691	Town of Littleton	Littleton WWTP	0.28	04	Butterwood Creek
NC0050661	Town of Macclesfield	Macclesfield WWTP	0.175	03	Bynums Mill Creek
NC0042510	Total EnvSolutions Inc	Lake Royale WWTP	0.080	01	Cypress Creek
Non-Association Domestic 0.5 MGD or Greater					
None					
Non-Association Industrial Discharging Nutrients					
NC0003255	PCS Phosphate Company Inc	PCS Phosphate Co- Aurora	NL	07	PAMLICO RIVER
NL = No Limit					
		Total Permitted Flow =	**0.83**		

APPENDIX C

Association Nitrogen Offset Credit Register

Date of Funding Check	Purpose of Funds	Funds Origin	Payment	Cumulative Payment	Offset Rate ($/lb N)	N Credit (lb)	BMP N Credit Balance (lbs), 12/31/17 Expiration*	Gaug & Coordinator N Credit Balance (lbs)
Phase I								
9/30/1992	Agriculture BMPs	TPBA	$ 150,000	$ 150,000	$25.40	5,905	5,905	
9/30/1992	Chicod Creek BMPs	EPA 104(b)3	$ 250,000	$ 400,000	$25.40	9,842	15,748	
9/30/1992	Chicod Creek BMPs	EPA 104(b)3	$ 100,000	$ 500,000	$13.15	7,604	23,352	
9/30/1993	Daniel's/Nutrient BMPs	EPA 104(b)3	$ 350,000	$ 850,000	$13.15	26,615	49,967	
Remaining Phase I Credits							**4,923***	
Phase II								
5/31/1996	Coordinator position	TPBA	$ 30,000	$ 30,000	$13.15	2,281		2,281
6/30/1996	Coordinator position	TPBA	$ 22,860	$ 52,860	$13.15	1,738		4,019
7/26/1996	Greenville gauging station	TPBA	$ 33,600	$ 86,460	$13.15	2,555		6574
11/20/1997	Greenville gauging station	TPBA	$ 17,100	$ 103,560	$13.15	1,300		7874
7/7/1998	Coordinator position	TPBA	$ 30,000	$ 133,560	$13.15	2,281		10,155
6/4/1999	Coordinator position	TPBA	$ 30,000	$ 163,560	$13.15	2,281		12,436
12/5/1999	Greenville gauging station	TPBA	$ 17,800	$ 181,360	$13.15	1,353		13,789
12/29/2000	Greenville gauging station	TPBA	$ 18,700	$ 200,060	$13.15	1,422		15,211
7/9/2001	Coordinator position	TPBA	$ 30,000	$ 230,060	$13.15	2,281		17,492
12/5/2001	Greenville gauging station	TPBA	$ 17,700	$ 247,760	$13.15	1,346		18,838
4/4/2002	Coordinator position	TPBA	$ 30,000	$ 277,760	$13.15	2,281		21,119
2/26/2003	Greenville gauging station	TPBA	$ 18,100	$ 295,860	$13.15	1,376		22,495
5/6/2003	Coordinator position	TPBA	$ 30,000	$ 325,860	$13.15	2,281		24,776
1/7/2004	Greenville gauging station	TPBA	$ 18,100	$ 343,960	$13.15	1,376		26,152
6/16/2004	Coordinator Position	TPBA	$ 30,000	$ 373,960	$13.15	2,281		28,433
11/8/2004	Greenville gauging station	TPBA	$ 25,233	$ 399,193	$13.15	1,918		30,351

APPENDIX C (Continued)

Association Nitrogen Offset Credit Register

Date of Funding Check	Purpose of Funds	Funds Origin	Payment	Cumulative Payment	Offset Rate ($/lb N)	N Credit (lb)	BMP N Credit Balance (lbs), 12/31/17 Expiration*	Gauge & Position N Credit Balance (lbs)
Phase III								
4/21/2005	Coordinator Position	TPBA	$ 30,000	$ 429,193	$13.15	2,281		32,632
12/19/2005	Greenville gauging station	TPBA	$ 25,233	$ 444,427	$13.15	1,918		34,550
3/16/2006	Coordinator Position	TPBA	$ 30,000	$ 474,427	$13.15	2,281		36,831
1/30/2007	Greenville gauging station	TPBA	$ 20,233	$ 494,600	$13.15	1,538		38,369
5/12/2009	Greenville gauging station	TPBA	$ 22,200	$ 517,860	$13.15	1,688		40,057
5/12/2009	Greenville gauging station	TPBA	$ 21,600	$ 538,460	$13.15	1,642		41,699
1/19/2010	Greenville gauging station	TPBA	$ 4,725	$ 543,185	$13.15	359		42,058
4/8/2010	Greenville gauging station	TPBA	$ 4,725	$ 547,910	$13.15	359		42,417
7/12/2010	Greenville gauging station	TPBA	$ 4,725	$ 552,635	$13.15	359		42,776
9/16/2010	Greenville gauging station	TPBA	$ 4,725	$ 557,360	$13.15	359		43,135
7/27/2011	Greenville gauging station	TPBA	$ 14,100	$ 571,460	$13.15	1,072		44,207
9/21/2011	Greenville gauging station	TPBA	$ 4,800	$ 576,260	$13.15	365		44,572
1/13/2012	Greenville gauging station	TPBA	$ 4,800	$ 581,060	$13.15	365		44,937
4/12/2010	Greenville gauging station	TPBA	$ 4,800	$ 585,860	$13.15	365		45,302
6/5/2012	Greenville gauging station	TPBA	$ 4,800	$ 590,660	$13.15	365		45,667
9/17/2012	Greenville gauging station	TPBA	$ 4,800	$ 595,460	$13.15	365		46,032
2/26/2013	Greenville gauging station	TPBA	$ 4,800	$ 600,260	$13.15	365		46,397
4/23/2013	Greenville gauging station	TPBA	$ 4,800	$ 605,060	$13.15	365		46,762
7/8/2013	Greenville gauging station	TPBA	$ 4,800	$ 609,860	$13.15	365		47,127
9/11/2013	Greenville gauging station	TPBA	$ 4,800	$ 614,660	$13.15	365		47,492
1/14/2014	Greenville gauging station	TPBA	$ 4,800	$ 619,460	$13.15	365		47,857
Total Phase II + Phase III Credits								**47,857**

Note:
Phase I banked credits that were earned by funding Ag Cost Share BMPs shall expire when BMP contract for the funded BMP expires under the Ag Cost Share Program. The Table in Appendix D details the credit value of remaining active Ag BMP contracts funded in Phase I. These Phase I credits will expire by calendar year 2017. Credits earned for funding the gauge and coordinator position during Phase II, III, and IV will remain available as outlined in Section V.B.2 of this Agreement.

APPENDIX D

Value of Active Agriculture Cost Share BMP Contracts Funded by Association

Year	# of Contracts Remaining	Total Offset Value of Active Contracts	Offset Credit (lb)
2015	15	$64,740.00	4,923
2016	12	$54,557.00	4,148
2017	0	$0.00	0

Tar-Pamlico Nutrient Sensitive Waters Implementation Strategy: Phase IV

Agreed to on July 9, 2015 by:

S. Jay Zimmerman, P.G.
Director, Division of Water Resources

N. David Smith
Chief Deputy Commissioner, NC Department of Agriculture & Consumer Services

Adam Waters
Chairman, Tar-Pamlico Basin Association

Approved by:

Gerard P. Carroll
Chairman, NC Environmental Management Commission

Water Quality Credit Trading Program

A common sense approach to reducing nutrients

The Great Miami River Watershed, located in southwest Ohio, has experienced marked improvements in surface water quality over the last three decades. Despite these improvements, about 40 percent of the watershed's rivers and streams – primarily in the headwaters areas - still fail to meet water quality standards. Excess nutrients contribute to this failure locally and also to adverse impacts downstream including the Gulf of Mexico. The failure to fully attain water quality standards will trigger additional regulations focused on wastewater treatment plants.

Because more than 70% of the land in the Great Miami River Watershed is used for agriculture, the majority of nutrient-related water quality challenges relate to agricultural land uses. Agricultural producers in the Watershed have worked diligently for years to implement conservation farming practices. However, available federal, state and local incentives to implement these practices do not match the needs.

COLLABORATIVE SOLUTION

MCD collaborated with federal, state, and local partners to design and implement a market-based program that reduces nutrients in streams and rivers as an alternative to traditional regulatory strategies. The success of the program has drawn international attention. Water quality credit trading is an innovative approach to invest dollars in voluntary agricultural practices, which are more cost-effective and provide broader environmental benefits, than technology upgrades at wastewater treatment plants.

As of December 2015, 467 agricultural projects have been contracted generating more than 1.14 million credits over the life of the projects. More than 1.76 million dollars will be paid to agricultural producers for these credits. This translates to a 626 ton reduction in nutrient discharges to rivers and streams and other benefits including more sustainable farming operations and an array of ancillary environmental benefits.

ECONOMIC BENEFITS

An extensive economic and market analysis was completed prior to Trading Program design and concluded that water quality trading in the Watershed has the potential to provide significant cost savings with increased environmental benefit when compared to traditional regulatory approaches. The analysis estimated that wastewater treatment plant upgrades with biological nutrient removal technologies would cost $422.5 million. The cost for implementation of agricultural conservation practices to achieve a similar level of nutrient reduction was projected at $37.8 million, a potential $384.7 million savings compared to wastewater treatment plant upgrades. It was estimated that on average, point sources would pay $23.37 to reduce one pound of phosphorus with biological nutrient removal compared to $1.08 for agriculture with conservation practices. For nitrogen, point source unit costs were $4.72/pound compared to $0.45/pound for agriculture.

EVALUATIONS

- Texas A&M University conducted an evaluation of the economics of the pilot that was used to adjust aspects of the Trading Program. Economic performance will be measured by comparison of credit costs to treatment costs.
- Changes to water quality will be measured through a continuous water quality monitoring program at a subwatershed scale. To establish a data collection program, continuous monitoring is collected during the pilot. A water quality report, Nitrogen and Phosphorus Concentrations and Loads in the Great Miami River Watershed, Ohio 2005 – 2011, was published by the Miami Conservancy District in 2012.

- The effectiveness of agricultural practices is verified through field inspections by Soil and Water Conservation District staff.

PARTNERS

- Miami Conservancy District
- Cities of Dayton, Englewood, and Union
- Butler County Water and Sewer Department
- Tri-Cities North Regional Wastewater Authority
- Great Miami River Watershed Joint Board of county soil and water conservation districts
- Ohio Farm Bureau Federation, Inc.
- Ohio Environmental Protection Agency, Division of Surface Water
- Ohio Department of Natural Resources, Division of Soil and Water Conservation
- U.S. Department of Agriculture, Natural Resources Conservation Service
- U.S. Environmental Protection Agency

PILOT PROGRAM

The Great Miami River Watershed Water Quality Credit Trading Program (Trading Program) was started in 2004 as a pilot to evaluate the viability of water quality credit trading as an approach to reduce nutrients in the Watershed. The pilot establishes a new sustainable local source of revenue for agricultural producers to implement conservation practices in cooperation with wastewater treatment plants. The program continued in pilot much longer than expected because the anticipated nutrient regulations were delayed more than ten years after originally announced by Ohio EPA.

To fund the pilot, more than $3 Million in funding came from several sources including wastewater treatment plants, the Ohio Department of Natural Resources, the U.S. Department of Agriculture, and the U.S. Environmental Protection Agency.

Water Quality Credit Trading Program

A common sense approach to reducing nutrients

SUMMARY

- A majority of the Great Miami River mainstem does meet state water quality standards
- Widespread nutrient impairment exists in the Great Miami River Watershed:
  - Many headwater streams do not meet state water quality standards
  - Contributes to problems in Gulf of Mexico
- USEPA issued guidance for water quality credit trading in 2003
- Ohio Administrative Code establishes rules on a voluntary statewide water quality trading program:

  (1) Facilitates watershed-based approaches to improving water quality;

  (2) Improves water quality and minimizes the costs of achieving and maintaining water quality standards;

  (3) Provides economic incentives for voluntary pollutant reductions from point sources and nonpoint sources; and

  (4) Achieves additional environmental benefits beyond pollutant reductions.
- Ohio EPA draft nutrient criteria mentions Trading as "most cost-effective means to attain standards"
- Trading Program created 2004
  - Collaborative and inclusive partnership
- Potential WWTP upgrades = $422.5 million
- Trading = $46.5 million
  - Ag. practices = $37.8 million
  - Data collection & transaction costs = $8.7 million
- Citizens and businesses save $376 million
- Trading achieves better environmental results
  - Reduce nutrient impairment AND other pollutants
  - Improve upstream areas
  - Create habitat
  - Provide cooling effects
  - Enhance streambank stability
  - Decrease flow velocity
  - Create wetlands and protect floodplains
  - Increase assimilative capacity
- 467 projects installed that will prevent 626 tons of nutrients in streams and rivers
- $1.76 million paid to agriculture producers
- Cost per pound to prevent nutrients in streams and rivers using Trading = $1.48

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Phase 2 Watershed Implementation Plan Nutrient Trading Supplement

Revised, October 14, 2016

Section 9 of Pennsylvania's Phase 2 Chesapeake Bay Watershed Implementation Plan ("Phase 2 WIP") describes the use of Pennsylvania's Nutrient Trading Program to implement the Phase 2 WIP. This supplement to Section 9 ("Nutrient Trading Supplement") provides an update on policy and program enhancements to the Nutrient Trading Program.

I. Background

Since 2005, the Pennsylvania Department of Environmental Protection (DEP) has been leading the way nationally in developing its nutrient trading program. The program is one of the first programs in the country to have both agricultural operations (nonpoint sources) and wastewater treatment facilities (point sources) participating in a nutrient credit trading program. Pennsylvania built its program with significant input from stakeholders – and those very stakeholders are now participants in the program. Pennsylvania built its program to meet Pennsylvania's needs with regard to the Chesapeake Bay. The key to the program's success is that it is voluntary and follows these principles:

- A trade must involve comparable credits (for example, nitrogen may only be traded for nitrogen) that are expressed as mass per unit time (pounds per year);
- Credits generated by trading cannot be used to comply with existing technology- based effluent limits except as expressly authorized by regulation;
- Trading may only occur in a PA DEP defined watershed;
- Trading may take place between any combination of eligible point sources, non- point sources and third party aggregators; and,
- Each trading entity must meet applicable eligibility criteria established under the Nutrient Trading Program regulations, 25 Pa. Code Section 96.8.

The Phase 2 WIP identified the success of the existing program and a plan of action to move forward to address a number of recommendations the U.S. Environmental Protection Agency (EPA) made in 2012. These recommendations were divided into two tiers, with the first tier being those recommendations specific to Pennsylvania. As stated in the Phase 2 WIP, DEP has been working with stakeholders and EPA to define the details for the plan of action to address these recommendations since 2012.

In April 2014, EPA began objecting to the issuance of National Pollutant Discharge Elimination System (NPDES) permits prepared by DEP that contained Cap Loads and permit language that enabled the use of credits to achieve compliance with those Cap Loads. The objections were based on EPA's concerns with the nonpoint source agricultural baseline requirements in the nutrient trading regulations. EPA asserted that DEP had not made a quantitative demonstration that these requirements achieve the load allocations for agricultural sources in the Chesapeake Bay Total Maximum Daily Load (TMDL). Unlike point source discharges with NPDES permits, agricultural operations cannot quantitatively measure the potential nonpoint source loading of nutrients from their fields. To resolve EPA's objections and retain the ability to issue the NPDES permits in question, DEP has established additional eligibility and credit calculation requirements to ensure the effectiveness of the use of credits to meet legal requirements of the Chesapeake Bay TMDL as authorized by its regulations (25 Pa. Code §§ 96.8(d)(5) & (e)(3)(vi)).

This supplement describes those additional requirements. This plan of action is divided into the four key components of the program: Eligibility, Certification, Verification and Registration.

II. Definitions

Annual Net Mass Load (lbs): The Annual Total Mass Load, as defined below, adjusted for credits sold and applied and offsets applied. Annual Net Mass Loads are compared to Cap Loads to determine compliance.

Baseline: The compliance activities and performance standards that must be implemented to meet current environmental laws and regulations related to the pollutant for which credits or offsets are generated. The term includes allocations established under 25 Pa. Code Chapter 96 (relating to Water Quality Standards Implementation), in a TMDL, or in a similar allocation for the pollutant.

Cap Load (lbs): The mass load of a pollutant authorized by an NPDES permit. Cap Loads for Total Nitrogen (TN) and and Total Phosphorus (TP) are implemented in NPDES permits by the establishment of Annual Net Mass Load limits. The term "Net" is used to recognize that Credits and Offsets may be used to comply with the limits. The Annual Net Mass Load must be less than or equal to the Cap Load to achieve compliance.

Certification: Written approval by DEP of a proposed pollutant reduction activity to generate credits before the credits are verified and registered to be used to comply with NPDES permit effluent limitations.

Compliance Year: The year-long period starting October 1st and ending September 30th. The Compliance Year will be named for the year in which it ends. For example, the period of October 1, 2015 through September 30, 2016 is Compliance Year 2016.

Credit: The tradable unit of compliance that corresponds with a unit of reduction of a pollutant as recognized by DEP which, when certified, verified and registered, may be used to comply with NPDES permit effluent limitations.

Delivery Ratio: A ratio that compensates for the natural attenuation of a pollutant as it travels in water before it reaches a defined compliance point.

Offset: The pollutant load reduction measured in pounds (lbs) that is created by an action, activity or technology which when approved by DEP may be used to comply with NPDES permit effluent limitations, conditions and stipulations under 25 Pa. Code Chapter 92a (relating to NPDES permitting, monitoring and compliance.) The offset may only be used by the NPDES permittee that DEP determines is associated with the load reduction achieved by the action, activity or technology.

Registration: An accounting mechanism used by DEP to track certified and verified credits before they may be used to comply with NPDES permit effluent limitations.

Threshold: Activities and performance standards beyond baseline compliance which are required under 25 Pa. Code Chapter 96.8(d)(3) (relating to threshold requirement to generate credits) before credits may be certified.

Total Mass Load (lbs):

Monthly Total Mass Load = The sum of the actual daily discharge loads for TN and TP (lbs/day) divided by the number of samples per month, multiplied by the number of days in the month in which there was a discharge. The daily discharge load for TN and TP (lbs/day) equals the average daily flow (MGD) on the day of sampling, multiplied by that day's sample concentration for TN and TP (mg/l), multiplied by 8.34.

Annual Total Mass Load = The sum of the actual daily discharge loads for TN and TP (lbs/day) divided by the number of samples per year (beginning October 1st and ending September 30th), multiplied by the number of days in the year in which there was a discharge.

Total Nitrogen: For concentration and load, Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO_2+NO_3-N), where TKN and NO_2+NO_3-N are measured in the same sample.

Truing Period: The time provided following each Compliance Year for a permittee to comply with Cap Loads through the application of Credits and Offsets. The Truing Period will start on October 1st and end on November 28th of the same calendar year, unless DEP extends this period. During this period, compliance for the specified year may be achieved by using registered Credits that were generated during that Compliance Year. For example, Credits that are used to achieve compliance in Compliance Year 2016 must have been generated during Compliance Year 2016. Approved Offsets that have been generated may also be applied during the Truing Period.

Verification: Assurance that the verification plan contained in a certification, permit or other approval issued by DEP has been implemented. Verification is required prior to registration of the credits for use in an NPDES permit to comply with NPDES permit effluent limitations.

III. Eligibility/ Requirements for Certification

For a point source or nonpoint source to be eligible to generate and trade credits, it must meet baseline and threshold eligibility requirements as defined in 25 Pa. Code §96.8(d). In addition, to address concerns expressed by EPA, the eligibility requirements summarized below must be satisfied to generate credits to meet the legal requirements of the Chesapeake Bay TMDL.

A. Point Sources

Effective October 1, 2015, to be eligible to generate credits for sale, all Significant Sewage point sources with an assigned Cap Load (see Table 7-1 of the Phase 2 WIP Wastewater Supplement) must demonstrate treated yearly effluent concentrations below 6.0 mg/L TN and 0.8 mg/L TP (i.e., "baseline" concentrations) in accordance with the procedures described below. Guidance on how to apply for verification and the registration of credits from a point source can also be found on the nutrient trading website, www.dep.pa.gov/nutrient_trading.

DEP's procedures for point sources to generate and trade credits consist of the following:

- To generate credits, facilities must be able to demonstrate they are in compliance with their NPDES permit.
- The total amount of credits the facility is certified to generate cannot exceed its permitted Cap Load.
- DEP final approval of this point source certification was published in the Pennsylvania Bulletin on October 3, 2015 and will expire on September 30, 2017.
- Beginning October 1, 2015 (Compliance Year 2016), the calculation of credits will be made using new formulas. The formulas and an example are below.

Point Source Credit Calculations

The calculation of TN and TP credits will be made using the following formulas after the end of a Compliance Year:

TN Credits: **[(Q * (6.0 – TN_{Conc}) * 8.34) / n] * y * TN_{dr} x 0.9**
TP Credits: **[(Q * (0.8 – TP_{Conc}) * 8.34) / n] * y * TP_{dr} x 0.9**

Where:

- Q = Average Daily Flow on day of sampling (MGD)
- TN_{Conc} = TN Effluent Concentration in sample (mg/L)
- TP_{Conc} = TP Effluent Concentration in sample (mg/L)
- 6.0 = TN concentration baseline value for credit generation (mg/L)
- 0.8 = TP concentration baseline value for credit generation (mg/L)
- n = Number of samples taken during the year
- y = Days in the year (365 or 366)
- TN_{dr} = TN Chesapeake Bay delivery ratio
- TP_{dr} = TP Chesapeake Bay delivery ratio
- 0.9 = 10% Reserve ratio
- 8.34 = Gallons to pounds conversion factor

The average daily flow on the day of sampling in million gallons per day (MGD) is multiplied by the conversion factor of 8.34 and the difference between the actual TN and TP effluent concentrations in the sample collected and 6.0 mg/L and 0.8 mg/L, respectively. The sum of these values is divided by the number of samples taken during the Compliance Year, and then multiplied by the number of days in the Compliance Year, the TN/TP Delivery Ratio, and 0.9 (to account for a 10% reserve).

Example 1 Credit Calculation

This example assumes only one sample is collected per month for TP. The actual number of samples will generally be greater. Assume the TP delivery ratio is 0.436 and there is no local TP limit.

Effluent sampling at a sewage treatment facility produces the following TP data for a Compliance Year:

Sampling Date	Effluent TP (mg/L)	Average Daily Flow on Day of Sampling (MGD)
10/1/2015	0.7	2.2
11/1/2015	0.5	2.5
12/1/2015	0.4	2.0
1/1/2016	0.3	1.9
2/1/2016	0.6	2.0
3/1/2016	1.0	2.3
4/1/2016	0.4	2.6
5/1/2016	0.6	2.1
6/1/2016	0.5	2.0
7/1/2016	0.4	1.9
8/1/2016	0.3	1.8
9/1/2016	0.4	1.9

Step 1: Determine Total Daily Load Below Baseline

Subtract each Effluent TP concentration result from the nutrient trading baseline TP concentration (0.8 mg/L). (Note that for TN, the same step is performed using the nutrient trading TN baseline concentration of 6.0 mg/L). The difference is then multiplied by the Average Daily Flow on Day of Sampling and the conversion factor of 8.34. If the Effluent TP concentration exceeds 0.8 mg/L, the values will be negative. Sum the Daily Loads Below Baseline (i.e., find the sum of both positive and negative daily load values).

Calculations and rounding should be completed in accordance with DEP's guidance document, Discharge Monitoring Reports Overview and Summary (3800-BK-DEP3047). If there are non-detect values (e.g., < 1); ignore the less than symbol and use the reported value (laboratory quantitation limit) to calculate credits.

Sampling Date	Effluent TP (mg/L)	Baseline TP (mg/L)	Difference (mg/L)	Average Daily Flow on Day of Sampling (MGD)	Daily Load Below Baseline (lbs/day)
10/1/2015	0.7	0.8	0.1	2.2	1.83
11/1/2015	0.5	0.8	0.3	2.5	6.26
12/1/2015	0.4	0.8	0.4	2.0	6.67
1/1/2016	0.3	0.8	0.5	1.9	7.92
2/1/2016	0.6	0.8	0.2	2.0	3.34
3/1/2016	1.0	0.8	- 0.2	2.3	- 3.84
4/1/2016	0.4	0.8	0.4	2.6	8.67
5/1/2016	0.6	0.8	0.2	2.1	3.5
6/1/2016	0.5	0.8	0.3	2.0	5.0
7/1/2016	0.4	0.8	0.4	1.9	6.34
8/1/2016	0.3	0.8	0.5	1.8	7.51
9/1/2016	0.4	0.8	0.4	1.9	6.34
				TOTAL:	**59.55**

Step 2: Divide Total Daily Load Below Baseline by the number of samples collected during the Compliance Year:

59.55 / 12 = 4.96

Step 3: Multiply by the number of days in the Compliance Year, the TP Delivery Ratio and 0.9:

4.96 x 366 x 0.436 x 0.9 = **713 TP Credits**

NOTE – 713 TP Credits will be generated only IF the Annual Total Mass Load for TP is less than the Cap Load for TP. If the Cap Load is exceeded, no Credits will be generated.

Example 2 Credit Calculation

This example illustrates how a facility with a local nutrient limit that is above the baseline concentrations for trading can purchase credits to comply with a Cap Load. In this example, the Cap Load of 6,000 lbs/year TP is in effect with a TP delivery ratio of 0.436:

Sampling Date	Effluent TP (mg/L)	Average Daily Flow on Day of Sampling	Daily Load (lbs/day)
10/1/2015	2.1	2.2	38.5
11/1/2015	1.2	2.5	25.0
12/1/2015	1.6	2.0	26.7
1/1/2016	1.9	1.9	30.1
2/1/2016	2.0	2.0	33.4
3/1/2016	1.8	2.3	34.5
4/1/2016	1.4	2.6	30.4
5/1/2016	1.5	2.1	26.3
6/1/2016	1.2	2.0	20.0
7/1/2016	1.7	1.9	26.9
8/1/2016	2.0	1.8	30.0
9/1/2016	1.9	1.9	30.1
		TOTAL:	**352**

Annual Total Mass TP Load: (352 / 12) x 366 = 10,736 lbs TP/year

The facility is over its TP Cap Load by 4,736 lbs-TP (10,736 – 6,000). The facility may purchase credits to come into compliance. The amount of TP Credits the facility would need to purchase is calculated as follows:

(Annual Total Mass Load – Cap Load) * delivery ratio

(10,736 – 6,000) * 0.436 = 2,065 TP Credits

DEP's Annual Chesapeake Bay Spreadsheet provides automated calculations of nutrient credits generated on an annual basis using raw (daily) self-monitoring data. Use of this spreadsheet is required for wastewater facilities that wish to register credits with DEP.

NOTE – A mechanism that recognizes the generation of nutrient credits by Significant Industrial Waste facilities has not been developed by the Nutrient Trading Program at this time.

B. Nonpoint Sources (NPS)

As a result of EPA's concerns and objections to NPDES permits related to the baseline and threshold eligibility requirements for the generation of credits by agricultural operations, DEP has not approved any requests for credit certification for nonpoint sources since October 1, 2013. To address EPA's concern and ensure consistency with the Chesapeake Bay TMDL, DEP is implementing a 3:1 trading ratio as an interim step until DEP can develop a performance-based or other approved method-based tool to use to establish baseline eligibility for nonpoint sources. DEP plans to implement this approach as described below.

1. *Credit Certifications Using Practice Based Approach Through September 30, 2017*

For nonpoint sources, baseline eligibility requirements include compliance with the following regulations, as applicable:

- 25 Pa. Code Chapter 102, Erosion and Sedimentation Control Regulations – All plowing and tilling activities must implement and maintain BMPs to minimize the potential for accelerated erosion and sedimentation. Written erosion and sedimentation control plans are required for agricultural plowing or tilling or animal heavy use areas that disturb 5,000 square feet or more.

- 25 Pa. Code Section 91.36 – these regulations define pollution control and prevention requirements at agricultural operations, including requirements related to land application of animal manure.

- 25 Pa. Code Section 92a.29 – these regulations define the requirements for Concentrated Animal Feeding Operations (CAFOs) with NPDES permits.

- 25 Pa. Code Chapter 83, Subchapter D – these regulations promulgated by the State Conservation Commission define and regulate Concentrated Animal Operations (CAOs) through the development and implementation of Nutrient Management Plans.

The additional threshold eligibility requirements that must be met before an agricultural operation can generate credits include implementation of one of the following:

- Manure is not mechanically applied within 100 feet of a perennial or intermittent stream with a defined bed or bank, a lake or a pond, and commercial fertilizer is applied at or below appropriate agronomic rates.

- A minimum of 35 feet of permanent vegetation is established and maintained between the field and any perennial or intermittent stream with a defined bed or bank, a lake, or a pond. No mechanical application of manure may occur within the 35 foot vegetative buffer.

- A downward adjustment of at least 20% to the overall amount of pollution reduction generated by the pollution reduction activity.

An additional 3:1 trading ratio will be applied to the number of credits generated once the

defined baseline compliance and threshold is reached, as authorized by the regulations (25 Pa. Code § 96.8(e)(3)(vi)). The credit calculation tools that must be used to calculate the number of Credits to be certified are the TN and TP practice-based spreadsheets created by DEP and the World Resource Institute (WRI) for the Nutrient Trading Program in 2007.

These Credit certifications approved by DEP will expire September 30, 2017, regardless of when DEP receives the credit certification application.

In addition to the regulatory and threshold requirements identified above, in order to be able to generate credits from the hauling of poultry manure, the poultry manure must be applied to a site outside of the Chesapeake Bay watershed that is nutrient deficient in accordance with a nutrient management plan or nutrient balance sheet completed by a certified nutrient planner. The application of commercial fertilizer to the site where the poultry manure is being removed must be tracked and documented. The additional 3:1 trading ratio will be applied to the final number of credits generated.

The eligibility of manure destruction and conversion technologies will be determined based upon a thorough review of the individual technology and, at a minimum, compliance with all local, state, and federal requirements. If the number of credits generated will be verified using a comprehensive sampling and monitoring protocol where actual reductions in nutrients can be measured and verified; no additional adjustment may be necessary. However, if it is determined during the technical review of the verification plan that the sampling and monitoring protocols are not sufficient to ensure consistency with the defined Chesapeake Bay Program (CBP) protocols[1], then an additional ratio of up to 3:1 may be applied to the generated credits. These approved certifications will expire September 30, 2017, regardless of when DEP receives the credit certification application.

2. *Approval of Credit Certifications After October 1, 2017, or when the approved WRI Multi-State Trading Tool or other approved tool is finalized and calibrated to Phase 6 of the Chesapeake Bay Watershed Model, whichever is earlier.*

DEP is in the process of refining the WRI Multi-State Trading Tool being developed in partnership with the Chesapeake Bay Foundation and the Chesapeake Bay Program to calculate credits from agricultural nonpoint sources using a performance based approach. When this tool is developed and calibrated to Phase 6 of the Chesapeake Bay Watershed Model, eligibility to generate credits will be determined by compliance with the previously mentioned regulations in Section 1 above as applicable, and use of this new performance-based tool to establishing the baseline nutrient loading.

DEP will approve credit certification requests that calculate credits using the performance-based trading tool approved by DEP where the pollution reduction activity exceeds the nutrient baseline loading rate[2] (lbs TN or TP/acre) as determined by the Chesapeake Bay Watershed TMDL model run. These credit certifications will be approved for five years.

In addition to the regulatory requirements identified above, in order to be able generate

[1] The Chesapeake Bay Program has formed an Expert Panel to determine pollution control performance measure estimates, specifically N, P, and sediment, for several BMPs that fall under a broad umbrella of practices termed "manure technologies." Approximate completion of these BMP protocols is the end of 2015.

[2] The scale of the definition of this loading rate requirement will be defined when the credit calculation tool is finalized and calibrated. The final loading rates that must be met will be posted on the DEP website at www.dep.pa.gov/nutrient_trading.

credits from the hauling of poultry manure, the poultry manure must be applied to a site outside of the Chesapeake Bay watershed that is nutrient deficient in accordance with a nutrient management plan or nutrient balance sheet completed by a certified nutrient planner. Demonstration of the baseline loading rate at the site from where the manure is hauled and the calculation of any adjustments due to the application of replacement fertilizer will be made using the performance-based trading tool. These credit certification applications will be approved for five years.

The eligibility for manure destruction and conversion technologies will be determined based upon a thorough review of the individual technology and, at a minimum, compliance with all local, state, and federal requirements. If the number of credits generated will be verified using a comprehensive sampling and monitoring protocol where actual reductions in nutrients can be measured and verified, no additional adjustment may be necessary. However, if it is determined during the technical review of the verification plan that the sampling and monitoring protocols are not sufficient to ensure consistency with defined CBP protocols, then an additional adjustment may be made using the performance-based modeling tool and/or other technology specific CBP approved modeling/calculation tools to calculate the final number of generated nutrient credits. These certification applications will be approved for five years.

Should this performance-based modeling tool not be available by September 30, 2017, DEP will continue to review requests for credit certification using the practice-based approach with the 3:1 trading ratio as described above until the performance-based modeling tool becomes available. Credit certification applications previously approved under the practice-based approach that expire on September 30, 2017, may be administratively extended for a total term of not more than five years until the performance-based modeling tool becomes available on an annual basis (25 Pa. Code § 96.8(e)(8)).

IV. Certification Review Process

Certification is a written approval by DEP of a proposed pollutant reduction activity to generate credits before the credits are verified and registered for compliance with a NPDES permitted facility.

Nonpoint Sources

A general overview of DEP's certification process for nonpoint sources follows:

- All credit certification applications must be submitted using DEP form, Certification of Nutrient Credits Nonpoint Source**, Document #3800-FM-BPNPSM0503**.
- All credit calculations must be made using the appropriate *Nitrogen* or *Phosphorus* spreadsheet found on the DEP Nutrient Trading website at http://www.dep.pa.gov/nutrient_trading.
- Within several weeks of receipt of the request for certification, an administrative completeness review will be performed.
- Administratively complete credit certification applications will be published in the PA Bulletin for public comment. The Bulletin Notice will allow 30 days for public comment.
- During the public comment period, DEP will complete the technical review of the credit certification application.
- After the 30 day time period given for public comments AND successful completion of a technical review, DEP may approve the request for certification.

- A Verification Plan is also required to be submitted as part of the Certification request. The template for this plan should be the Natural Resource Conservation Service (NRCS) Job Sheet(s) for the practice(s) to be verified; however, variations from this standard will be considered. This Verification Plan is reviewed and approved by DEP before certification is approved.
- The currently approved spreadsheets for both point and nonpoint source generators are located on DEP's Nutrient Trading Website at http://www.dep.pa.gov/nutrient_trading.

The generators of existing approved nonpoint source credits will need to re-apply for credit generation six months before expiration of their current certification where the adjustments described above to the credit calculation methodology will be made. Generators should check DEP's Nutrient Trading Website at http://www.dep.pa.gov/nutrient_trading for any changes in the application process relative to re-application.

Point Sources

As noted above, to be eligible to generate credits for sale, all Significant Sewage point source discharges with Annual Net Mass Load effluent limitations ("Cap Loads") in an NPDES permit (see the Point Source Generators Table, Table 7-1 of the Phase 2 WIP Wastewater Supplement) must demonstrate effluent concentrations below 6.0 mg/L TN and 0.8 mg/L TP, as well as general compliance with the permit. This point source certification expires on September 30, 2017, so point sources will not be required to submit requests for certification of credits to DEP prior to that time. However, requests for the verification and registration of credits for compliance purposes will still be required.

V. Verification Process

Verification is a written approval by DEP that the pollutant reduction activity(s) generated nutrient credits based upon the approved verification plan in the certification application. The following explains the verification process:

- Nonpoint source credit generators must follow their approved verification plan to generate and have DEP approval of credits before they can sell them.
- Point sources must submit their Discharge Monitoring Report (DMR) information using the Annual Chesapeake Bay Spreadsheet, available on DEP's website.
- Verified credits may only be used in the Compliance Year in which they were generated.
- Nonpoint source credit generators will use the Nitrogen Spreadsheet and Phosphorus Spreadsheet to calculate nutrient credits in addition to all other conditions set forth in their approved certification.
- Point source credit generators will use the Annual Chesapeake Bay Spreadsheet to calculate credits in addition to all other conditions set forth in their approved certification.
- The appropriate Chesapeake Bay Model Delivery ratio is applied to all verified pollution reduction activities. The delivery ratios for sewage treatment facilities are defined in Table 7.1 of the Phase 2 WIP Wastewater Supplement. The delivery ratios for nonpoint sources are summarized below by Chesapeake Bay Watershed Model Segment.
- A 10% reserve factor is applied to all verified pollution reduction activities.

VI. Registration Process

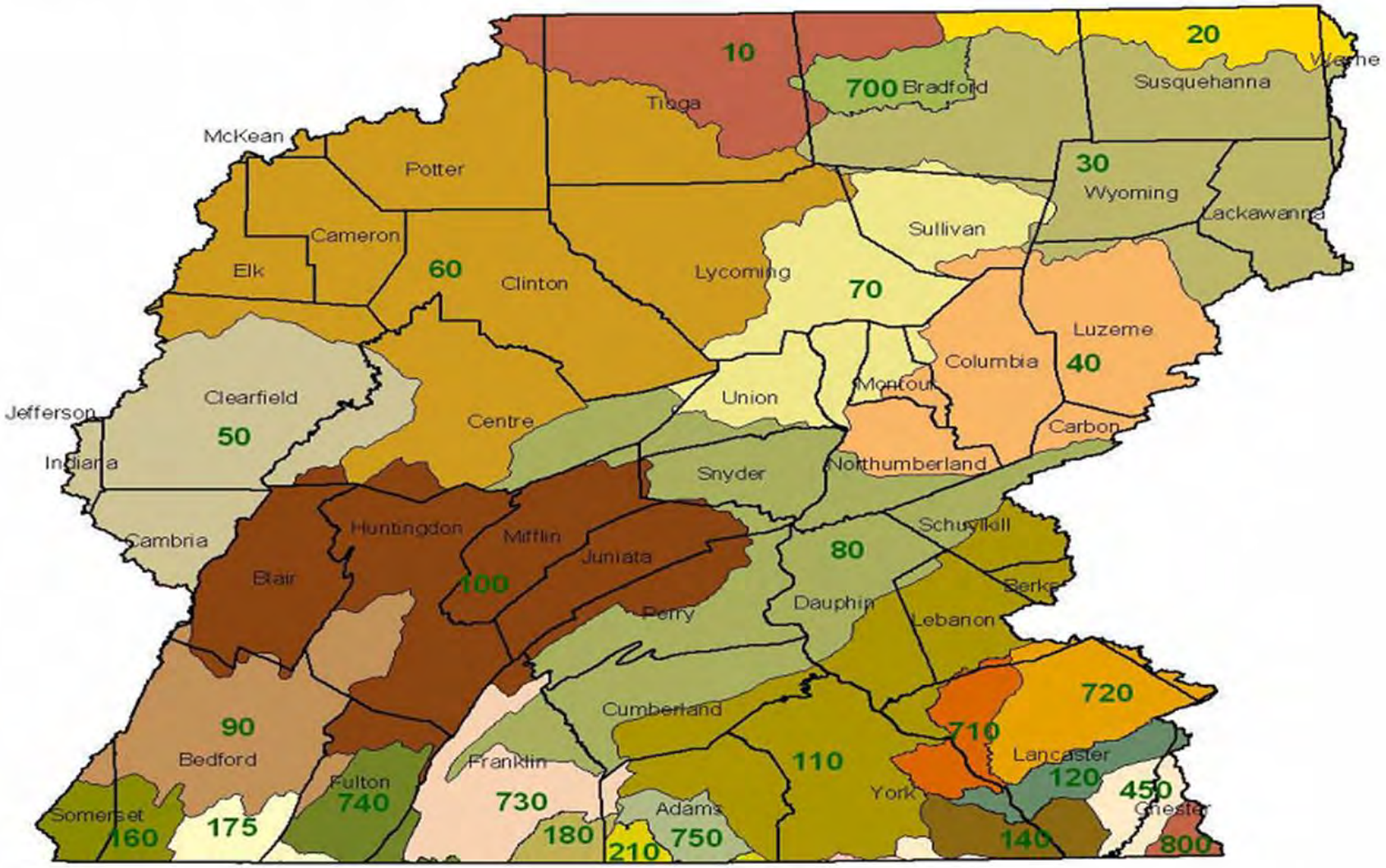
- Registration is the sale of credits and assignment of those credits to an NPDES permit.
- Buyers and Sellers must fill out the Registration Form, 3800-FM-BPNPSM0504, attach a valid contract, and send these documents to DEP to start the registration process.

- After review, DEP will issue a Registration letter to the seller and buyer listing the number of credits applied to the NPDES permit and a registry number.

Data on Certification, Verification, and Registration is tracked in the DEP Nutrient Trading Database and posted on the DEP website at http://www.dep.pa.gov/nutrient_trading.

Watershed Segment Map

This map is coded by colors and each color corresponds to a segment (the number in green). This segment number will then allow you to choose the appropriate nitrogen or phosphorous delivery ratio and appropriate nitrogen or phosphorous edge of segment ratio from the table listed on the second page. For example, if your property is in Bedford, you would be in segment 90 which would give a nitrogen delivery ratio of 0.897 and a nitrogen edge of segment ratio of 15 % to 45% depending on the tillage practice.



Delivery and EOS Ratios

Watershed Segment	Nitrogen Delivery Ratio	Nitrogen EOS Ratio (see Notes 1 & 2)				Watershed Segment	Phosphorus Delivery Ratio	Phosphorus EOS Ratio (see Notes 1 & 2)			
		Conventional Till	Conservation Till	Hay	Pasture			Conventional Till	Conservation Till	Hay	Pasture
10	0.474	36%	29%	89%	15%	10	0.436	10%	4%	4%	15%
20	0.495	38%	31%	34%	16%	20	0.436	13%	7%	5%	16%
30	0.733	43%	31%	78%	16%	30	0.436	11%	6%	7%	16%
40	0.871	42%	38%	60%	12%	40	0.436	12%	10%	7%	12%
50	0.836	50%	38%	97%	18%	50	0.436	15%	6%	14%	18%
60	0.93	55%	31%	78%	15%	60	0.436	11%	4%	16%	15%
70	0.941	45%	45%	86%	13%	70	0.436	27%	7%	12%	13%
80	0.951	32%	25%	75%	10%	80	0.436	12%	7%	7%	10%
90	0.897	45%	34%	49%	15%	90	0.436	11%	4%	12%	15%
100	0.88	35%	29%	32%	12%	100	0.436	8%	3%	5%	12%
110	0.961	31%	22%	27%	10%	110	0.436	9%	5%	5%	10%
120	0.98	29%	21%	20%	9%	120	0.436	8%	3%	4%	9%
140	0.99	30%	22%	22%	9%	140	0.436	25%	10%	7%	9%
160	0.583	33%	28%	59%	23%	160	0.67	32%	27%	7%	23%
175	0.7	33%	22%	29%	20%	175	0.67	5%	5%	6%	20%
180	0.819	34%	38%	58%	9%	180	0.67	9%	7%	4%	9%
210	0.72	46%	33%	40%	10%	210	0.669	11%	7%	7%	10%
450	1	30%	22%	16%	9%	450	1	5%	2%	2%	9%
470	1	25%	17%	23%	6%	470	1	22%	3%	3%	6%
700	0.7	40%	35%	37%	13%	700	0.436	7%	6%	5%	13%
710	0.97	28%	21%	15%	9%	710	0.436	6%	2%	2%	9%
720	0.891	27%	21%	16%	9%	720	0.436	6%	3%	3%	9%
730	0.683	23%	22%	43%	11%	730	0.67	15%	8%	6%	11%
740	0.749	21%	17%	50%	12%	740	0.67	12%	8%	8%	12%
750	0.627	47%	33%	38%	10%	750	0.67	13%	7%	5%	10%
800	1	48%	34%	34%	9%	800	1	15%	8%	11%	9%

Notes:
1. The portion of nutrient loads leaving a watershed were estimated by adding the manure, fertilizer, air deposition and mineral/residual nutrient inputs for each watershed and subtracting the estimated crop uptake from the total nutrient inputs. The remaining nutrient loads after crop uptake were then divided by the estimated loads leaving the watershed to calculate the edge of watershed percents.
2. All calculations based on watershed simulations completed by EPA's Chesapeake Bay Program Office.

COMMONWEALTH OF VIRGINIA
STATE WATER CONTROL BOARD

FACT SHEET

REISSUANCE OF A GENERAL VPDES PERMIT
TO DISCHARGE TO STATE WATERS AND STATE
CERTIFICATION UNDER THE STATE WATER CONTROL LAW

The State Water Control Board (Board) has under consideration the reissuance of a general VPDES watershed permit for total nitrogen and total phosphorus discharges and nutrient trading in the Chesapeake Bay watershed in Virginia.

Permit Number: VANxx

Name of Permittee: There are three categories of owners required to register for coverage under the general permit:

Every owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination System permit to discharge 100,000 gallons or more per day from a sewage treatment plant, or an equivalent industrial load, directly into tidal waters, or 500,000 gallons or more per day from a sewage treatment plant, or an equivalent industrial load, directly into nontidal waters, and

Any owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination System permit to discharge 40,000 gallons or more per day from a sewage treatment plant, or an equivalent industrial load, directly into tidal or nontidal waters, at the time he makes application with the Department for a new discharge or expansion that is subject to an offset or technology-based requirement, and

Any owner or operator of a facility treating domestic sewage authorized by a Virginia Pollutant Discharge Elimination System permit with a discharge greater than 1,000 gallons per day up to and including 39,999 gallons per day that did not commence the discharge of pollutants prior to January 1, 2011.

Facility Location: Commonwealth of Virginia (except for the Washington, DC - Blue Plains WWTP, which is eligible to exchange nutrient credits under this permit)

Receiving Waters: Surface waters within the Chesapeake Bay watershed.

On the basis of preliminary review and application of lawful standards and regulations, the board proposes to issue the general permit subject to certain conditions and has prepared a draft permit. The board has determined that this category of discharges is appropriately controlled under a general permit. The category of discharges to be included involves facilities with the same or similar need to control nutrient levels in their wastewater discharges. The draft general permit requires that all covered facilities meet standardized effluent limitations, conditions and monitoring requirements and allows the exchange of nitrogen and phosphorus credits between certain covered facilities.

An initial public comment period was held from December 14, 2015 through February 12, 2016. A public hearing was held on January 21, 2016 at the Department of Environmental Quality's Piedmont Regional Office in Glen Allen. No comments were received during the public hearing. Seven public comment letters were received in addition to an objection letter provided by the Environmental Protection Agency. I n response to the EPA's objection, DEQ developed revisions to the proposed regulation and a second public comment period was held from October 11, 2016 through November 10, 2016. 17 public comment letters were received during the second public comment period. Only those comments received within this period will be considered by the board.

All pertinent information is on file and may be inspected, and arrangements made for copying by contacting Matthew Richardson at:

Virginia Department of Environmental Quality
P.O. Box 1105
Richmond, Virginia 23218
(804) 698-4195
email: matthew.richardson@deq.virginia.gov

A public hearing on the proposed permit regulation was held at 2:00 p.m. on January 21, 2016, at DEQ's Piedmont Regional Office, 4949-A Cox Rd., Glen Allen, VA 23060. No comments were received during the public hearing. Following the public hearing comment period, the board will make its determinations regarding the proposed issuance.

Activities Covered by this Permit:

This general permit authorizes wastewater discharges of nitrogen and phosphorus from wastewater treatment facilities located in the Chesapeake Bay watershed that are already authorized by a Virginia Pollutant Discharge Elimination System permit. Although no additional action will be required of many facilities across the Commonwealth, three categories of facilities are required by law to register for coverage under this general permit:

- Sewage treatment works authorized to discharge 100,000 gallons or more per day (or an equivalent load from industrial processes), directly into tidal waters, or 500,000 gallons or more per day (or an equivalent load from industrial processes) directly into non-tidal waters. These facilities have already been identified during the development of the Chesapeake Bay Tributary Strategy; further, these facilities are listed in the Water Quality Management Plan (WQMP) regulation and have been assigned waste load allocations for nitrogen and phosphorus, to be regulated as annual mass loading limits in the general permit. These facilities are required by law to register for general permit coverage upon the effective date of the general permit.

- Sewage treatment works that, as a result of new construction or expansion, are proposed to discharge 40,000 gallons or more per day (or an equivalent load from industrial processes) directly into tidal or nontidal waters. These facilities are required to register for coverage under the general permit at the time of application with the Department for an individual VPDES permit, should that permit authorize new discharge or expansion that is subject to an offset or technology-based requirement. These facilities will not receive a waste load allocation for the increased (or new) discharges; expanding facilities will receive an annual load limit based on the facility design flow and nutrient removal technology that existed as of July 1, 2005.

- New sewage treatment works that are permitted to discharge greater than 1,000 gallons per day and less than 40,000 gallons per day that have not commenced the discharge of pollutants prior to January 1, 2011. These facilities are required to register for coverage under the general permit prior to commencing a discharge. These facilities will not receive a waste load allocation for the new discharges and will be required to offset and new Total Nitrogen and Total Phosphorus load.

The general permit establishes annual effluent loading limits for nitrogen and phosphorus, and establishes the conditions by which credits (the difference in pounds between the facility's limit and the mass actually discharged) may be exchanged. The permit also establishes how new or expanding facilities may acquire additional wasteload allocation to offset any increase in nutrient load from the discharge.

Effluent Limitations and Monitoring Requirements:

This permit supersedes the requirements of the registrants' individual VPDES permits pertaining to total nitrogen and total phosphorus load limits except where site specific conditions necessitate more restrictive limits.

The Department maintains a registration list of facilities covered by the general permit. This list contains the load limits for the facilities; these limits are enforceable under the general permit.

Basis for Limitations and Monitoring Requirements:

The Chesapeake Bay Tributary Strategy established goals for the reduction of point source discharges of nitrogen and phosphorus from "significant" dischargers (sewage treatment works discharging 100,000 gallons or more per day to tidal waters, or an equivalent industrial load, or sewage treatment works discharging 500,000 gallons or more per day to nontidal waters, or an equivalent industrial load). The Water Quality Management Plan Regulation (9 VAC 25-720) codified the point source goals in the Tributary Strategy as waste load allocations for the respective dischargers. More recently, the U.S. EPA established the Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus and Sediment (the TMDL) on December 29, 2010.

§62.1-44.19.12 et seq. of the Code of Virginia, requires that this general permit be developed and specifies the minimum contents of the general permit. The general permit incorporates the waste load allocations in the Water Quality Management Planning Regulation (9 VAC 25-270) and the Chesapeake Bay TMDL as effluent limitations (loading caps) for nitrogen and phosphorus. In the case of conflicts between the Water Quality Management Planning Regulation and the TMDL, the more limiting wasteload allocation is used. The TMDL also includes wasteload allocations for sediment. Sediment allocations are implemented in the form of Total Suspended Solids limitations in individual VPDES permits and are not included in the watershed general permit.

Implementation of the Phase 1 Watershed Implementation Plan for EPA's Chesapeake Bay Total maximum Daily Load for Nitrogen, Phosphorus and Sediment

During the first 5-year term of the watershed general permit (1/1/2007 - 12/31/2011), wasteload allocations were established by the Water Quality Management Planning (WQMP) Regulation (9VAC25-720). The allocations in the regulation were developed from the Commonwealth of Virginia Chesapeake Bay Nutrient and Sediment Reduction Tributary Strategy (January 2005). On December 29, 2010, the USEPA established the Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus and Sediment (the TMDL). The 2010 TMDL included nutrient wasteload allocations in the York and James River Basins that are more restrictive than those contained in the original 2005 Tributary Strategies. Virginia's phased implementation strategy for the TMDL is outlined in the Commonwealth of Virginia Chesapeake Bay TMDL Phase I Watershed Implementation Plan (WIP) dated November 29, 2010.

The second 5-year term of the watershed general permit (1/1/2011 – 12/31/2016) implemented additional nutrient reductions in accordance with the Phase I WIP. These reductions included a 43% reduction in Total Phosphorus wasteload allocations in the York River Basin as well as Total Nitrogen and Total Phosphorus reductions from the Hampton Roads Sanitation District facilities in the James River Basin.

This third 5-year term of the watershed general permit (1/1/2017 – 12/31/2021) includes additional Total Nitrogen reductions from the aggregate Hampton Roads Sanitation District wasteload allocation in the James River as well as reductions in the individual Total Phosphorus wasteload allocations for all but two of the significant James River dischargers. These reductions in James River wasteload allocations complete the reductions necessary to meet Dissolved Oxygen water quality criteria in the James River as outlined in the Phase I WIP. These reduced wasteload allocations are listed in Section 80 of the proposed regulation. Additional discussion of the phased implementation approach on the James River is provided below.

James River Basin:
The Chesapeake Bay TMDL includes significant changes to the control strategy previously included in Commonwealth of Virginia Tributary Strategies and the WQMP Regulation. The tidal James River is unique in that includes water quality criteria for Chlorophyll-a. The Chlorophyll-a criteria were adopted by the State Water Control Board in 2005 along with amendments to the WQMP Regulation consisting of Total Nitrogen and Total Phosphorus WLAs for 125 significant wastewater dischargers throughout the Bay watershed. Water quality modeling performed by EPA at that time indicated that the 125 significant WLAs along with needed non-point source reductions would achieve all of the new water quality standards.

More recent water quality modeling performed by EPA in developing the 2010 TMDL established that additional nutrient reductions are necessary in the James River Basin in order to meet current water quality criteria for both Dissolved Oxygen and Chlorophyll-a. The newly required reductions are significantly more stringent than those established during the 2005 development and adoption of the WQMP Regulation and the water quality criteria for Chlorophyll-a. In order to address the challenges created by this new goal, the Commonwealth is implementing a phased implementation strategy for the James River Basin. This strategy is outlined in Section 1.6 of the Commonwealth's Phase I WIP (see Attachment No. 1) and is recognized in Appendix X to the Chesapeake Bay TMDL (see Attachment No. 2).

Dissolved Oxygen
As outlined in the Phase I WIP and Appendix X to the TMDL, the following additional reductions beyond the WLAs included in the current WQMP Regulation are necessary to meet Dissolved Oxygen criteria in the James River Basin:

TMDL Dissolved Oxygen-based WLA Reductions

	Total Nitrogen		Total Phosphorus		
	Reduction (lbs/yr)	Facility	Reduction (lbs/yr)	Facility	Deadline
Phase I	1,600,000	HRSD James River Aggregate	200,000	HRSD James River Aggregate	12/31/2016
Phase 2	1,000,000	HRSD James River Aggregate	250,000	See 9VAC25-820-80	12/31/2021
Total Reductions	2,600,000		450,000		

The deadlines listed above are established in the Phase I WIP and Appendix X of the Chesapeake Bay TMDL. Actual schedules of compliance are established when the wasteload allocations are added to the watershed general permit and require compliance as soon as possible in accordance with 40 CFR 122.47 and §62.1-44.19.14.C.2 of the Code of Virginia. This permit cycle includes the Phase 2 goals listed above with Total Nitrogen reductions assigned to each of the seven Hampton Roads Sanitation District James River facilities on a flow weighted basis. A 5-year schedule of compliance is included for Total Nitrogen reductions consistent with the Phase I WIP deadline above. The Phase 2 Total Phosphorus reductions are assigned for the first time in 9VAC25-820-80. In order to achieve those reductions, the wasteload allocation for Mead Westvaco was reduced to reflect a seasonal TMDL on the Jackson River. The wasteload allocations of all but two James River dischargers were then reduced by an additional 18.9% to achieve the required total reduction. Wasteload allocations were not reduced for two facilities (Tyson Foods – Glen Allen and Chickahominy WWTP) already subject to stringent Phosphorus controls required of dischargers to the Chickahominy River. No schedule of compliance is included for the Total Phosphorus reductions as it was established that all of the facilities currently complying with the previous wasteload allocations without the acquisition of credits could also comply with the reduced wasteload allocations in Section 80. The four facilities currently relying on the acquisition of compliance credits may be required to acquire additional credits beginning in 2017.

At the time the reduced Total Phosphorus reductions identified in Section 80 were determined for purposes of this general permit reissuance, the Department's James River Study was still in progress. This study may provide information indicating that the specific assignment of the 250,000 lbs/yr TP reduction might be more appropriately assigned in another manner (e.g., different magnitudes in different parts of the watershed) and/or that the Total Phosphorus reduction should be changed (reduced) to align with water quality goals. Because the antibacksliding rule does not apply in such circumstances, the Department may re-allocate Total Phosphorus reductions otherwise phased-in under this permit, and adjust the corresponding permit limits, through a permit modification or reissuance including public participation.

Chlorophyll-a

Water quality modeling performed in developing the TMDL indicates that reductions of 3 million lbs/yr of Total Nitrogen and 0.3 million lbs/yr of Total Phosphorus beyond those identified above for Dissolved Oxygen are necessary to meet the current Chlorophyll-a criteria in the James River. These reductions will require treatment at many facilities to levels considered to be at or below the current "limit of technology". Individual allocations to meet these allocations have not been established. The TMDL includes a Chlorophyll-a based aggregate WLAs of 8,968,864 lbs/yr of Total Nitrogen and 545,558 lbs/yr of Total Phosphorus for the 39 significant James River dischargers with a compliance deadline of January 1, 2023.

As discussed in Appendix X to the TMDL, Virginia DEQ will be performing an engineering cost analysis to help establish individual Total Nitrogen and Total Phosphorus WLAs for the 39 significant James River dischargers. Annual compliance plan updates for the 39 James River facilities are expected to provide information for the engineering analysis. The individual WLAs are to be established in the Phase III WIP (currently scheduled for late 2017) and incorporated in the watershed general permit at that time.

In developing the current water quality criteria for Chlorophyll-a in 2005, DEQ evaluated attainability of the proposed criteria since the other lines of evidence did not clearly point to specific and defensible criteria levels. The new water quality modeling performed in developing the TMDL calls into question the conclusions of the previous attainability determination. In 2011, VA DEQ began a study to ensure the Commonwealth's Chlorophyll-a criteria are appropriately protective of the river's designated uses and are based on the best scientific information and data currently available. In the event the study demonstrates that amendments to the current criteria are appropriate, DEQ will present the State Water Control Board with a proposal in accordance with the Virginia Administrative Process Act to consider amending the Chlorophyll-a criteria. As part of the study, DEQ is also reviewing the modeling framework used to predict Chlorophyll response to changes in nutrient and sediment inputs in the James River. Any improvements to the model as well as any changes to the Chlorophyll-a criteria and the engineering cost analysis discussed above are expected to provide the basis for a local James River basin TMDL to be completed consistent with the schedule included in Appendix X of the Chesapeake Bay TMDL. Any EPA approved local TMDL would replace the current goals for the James River basin in the Chesapeake Bay TMDL and would be included in the Phase III WIP.

EPA's Chesapeake Bay Program has also established new permanent Total Nitrogen and Total Phosphorus delivery factors. These delivery factors are shown on the Registration List for each basin. Because the Virginia Nutrient Credit Exchange Association (the Exchange) has prepared a compliance plan that includes trade agreements through 2020, the new delivery factors will not be phased in until 2021. To phase in the new delivery factors any sooner would negate the Exchange compliance plan and require that trade agreements be redeveloped for their 105 member facilities.

Permitting of Nutrient Loads from Combined Sewer Overflow Communities

Waste load allocations (WLAs) were specified in the Chesapeake Bay TMDL for significant facilities as individual annual loads, with the exception of aggregate WLAs assigned to the wastewater dischargers in the James River. For each community with combined sewers, these loads included loads from dry weather flows (DWFs) and from combined sewer captured (CS-C) flows that are treated and discharged at the POTW. Separate WLAs were assigned to the combined sewer overflows (CSOs).

The Virginia Water Quality Management Plan (WQMP) Regulation does not address allocations for the direct CSOs or CS-C flows. The regulation does recognize the concept of CS-C flows for Richmond and Lynchburg by indicating that the WLAs are based upon the dry weather flow capacity at each facility and that technology based requirements apply during wet weather flow events. For Richmond and Lynchburg the CS-C loads are to be addressed in the individual VPDES permits for those facilities.. The loads associated with the DWFs will continue to be accounted for in the VA Watershed GP.
Because the WQMP Regulation does not recognize any wet weather flow provisions for the Alexandria Sanitation Authority, the watershed general permit will include the DWF WLA for Alexandria Sanitation Authority and the WLA will apply regardless of weather conditions. This is consistent with how the WLA was implemented in the first cycle of the watershed general permit. Upon modification of the WQMP to address wet weather flows at Alexandria, the watershed general permit registration list and the individual VPDES permit will be modified as appropriate.

Information used to develop the WLAs are used to establish effluent limitations and to develop permits consistent with the assumptions and requirements of the Chesapeake Bay TMDL WLAs [40 CFR 122.44(d)(1)(vii)(B)].

Basis for Part I. Special Conditions

These special conditions apply to every registrant under this general permit.

A. Authorized activities

Basis: §62.1-44.19.14.C.5 of the Code of Virginia authorizes the discharge of total nitrogen and total phosphorus for facilities already holding an individual VPDES permit and outlines the registration requirements for existing, new and expanded facilities. Facilities holding an individual VPDES permit that are not required to register for general permit coverage are authorized to discharge under this general permit, but are not subject to the general permit requirements until registration is required (most likely by expansion). This section includes provisions (A.3.) for the continuation of permit coverage that are consistent with the provisions applicable to individual VPDES permits under 9 VAC 25-31-70.

B. Waste load allocations

Basis: §62.1-44.19.14.C.1 of the Code of Virginia specifies that waste load allocations be assigned to each permitted facility (B.1.) and provides additional guidance for how those allocations may be aggregated for owners of multiple facilities (B.2.).

During development of the general permit, consolidation of multiple dischargers into one regional facility was considered to be functionally similar to the aggregation of waste load allocations, and conditions developed accordingly (B.3) to account for consolidation of facilities with, and without, waste load allocations.

Unless demonstrated by facilities on a case-by-case basis, the waste load allocations are considered total loads and not net loads (B.4.), and the entire allocation is considered to be bioavailable (B.5.).

C. Schedule of Compliance

Basis: 9 VAC 25-31-250 allows for schedules of compliance when appropriate requiring compliance with effluent limitations as soon as possible.

D. Annual update of tributary wide compliance plan

Basis: §62.1-44.19.14.C.3 of the Code of Virginia requires annual updates to the plan no later than February 1 of each year.

E. Monitoring and monthly reporting requirements

Basis: §62.1-44.19.14.C.4 of the Code of Virginia authorizes the Department to establish monitoring requirements as necessary to comply with the legislation. Permittees will submit monthly loading data on the same date as is required by their respective individual permits.

F. Annual submittal of discharge information and credits to be bought or sold by the permittee

Basis: §62.1-44.19.18.C of the Code of Virginia requires the submittal of the annual mass load of total nitrogen and total phosphorus loads discharged.

G. Requirement to register

Basis: §62.1-44.19.14.C.5 of the Code of Virginia outlines the registration requirements for existing, new and expanded facilities.

H. Registration statement

Basis: §62.1-44.19.14.C.6 of the Code of Virginia requires that the Department have a procedure for efficiently modifying the lists of facilities covered by the General Permit. This section includes a provision requiring that at the time of registration, new or expanding facilities provide wasteload allocations to offset any increase in nutrient loads for a period of 5 years.

I. Public Notice for registration statements proposing modifications or incorporations of new waste load allocations or delivery factors

Basis: §62.1-44.19.14.C.6 of the Code of Virginia requires that the Department have a procedure for efficiently incorporating new waste load allocations or delivery factors, including the opportunity for public notice and comment. This section includes a new provision (I.1.e) requiring public notice of an nonpoint to point source trading ratio less that 2:1 proposed under Part II.1.b.(1).

J.1. Definition of Compliance by permitted facility with individual waste load allocations

Basis: §62.1-44.19.18.A of the Code of Virginia defines compliance as not exceeding the waste load allocations, or acquiring sufficient point source nitrogen or phosphorus credits to offset any exceedance of the waste load allocations, or acquiring credits through payment to the Nutrient Offset Fund.

J.2. Credit acquisition from permitted facilities

Basis: §62.1-44.19.18.A.1 of the Code of Virginia outlines the conditions under which credits may be exchanged between point sources covered by the general permit. This section includes a new provision allowing for Eastern Shore facilities to acquire credits from facilities in the Potomac and Rappahannock tributaries in accordance with §62.1-44.19.18.A.1(ii).. Eastern Shore trading ratios have been established so that credits acquired from the Rappahannock or Potomac Basins provide a water quality benefit equivalent to the impact of the excess load from the Eastern Shore facility in need of the credits.

J.3. Detail of payment to Nutrient Offset Fund

Basis: §62.1-44.19.18.A.2. of the Code of Virginia outlines the procedures by which a permittee may purchase credits through payment to the Nutrient Offset Fund. Prices of credits purchased from the Fund have been updated to include the cost effectiveness of projects financed by the fund over the previous permit cycle.

J.4. Pretreatment program modifications by POTWs

Basis: §62.1-44.19.14.C.7. of the Code of Virginia authorizes DEQ to include “such other conditions as the Board deems necessary to carry out the provisions of this Chapter and Section 402 of the Clean Water Act”. During the development of the permit, several indirect dischargers requested the inclusion of this condition to allow the extension of market-based compliance flexibility to pretreatment programs, where the POTW imposed additional requirements as part of compliance with this general permit.

<u>Basis for Part II conditions</u>

These special conditions apply only to new and expanding facilities that are subject to this general permit.

A. Offset requirements for expanding and new facilities

Basis: §62.1-44.19.15 of the Code of Virginia requires expanding facilities to obtain offsets above and beyond their currently permitted allocation, and new facilities to obtain offsets for any total nitrogen and total phosphorus discharged. A.1. describes the types of facilities required to offset new and expanded discharges, and A.2. specifies the baselines from which the offset requirements are to be calculated.

B. Acquisition of waste load allocations to offset new or increased delivered Total Nitrogen and delivered Total Phosphorus loads

Basis: §62.1-44.19.15.B of the Code of Virginia prescribes the acquisition of nitrogen and phosphorus wasteload allocations to offset new or increased loads. Allocations may be provided in the form of wasteload allocations acquired from other point sources; point source nitrogen or phosphorus credits; nonpoint credits certified by the Board pursuant to §62.1-44.19:20; allocations acquired through payments to the Nutrient Offset Fund; or allocations acquired through other means as may be approved by the department on a case by case basis. This section includes new provisions allowing for nonpoint source to point source trading ratios of less than 2:1 when specific criteria are met. Allocations to offset new or increased nutrient loads must be provided for a period of five years with each registration under the general permit.

Part III

Basis: These conditions are applicable to all VPDES permits in accordance with 9 VAC 25-31-190. These conditions were modified to account for activities not applicable to this general permit (e.g., sludge management).

Administrative:

The general permit will have a fixed term of five (5) years. Every authorization to discharge under this general permit will expire at the same time and all authorizations to discharge will be renewed on the same date.

All persons required to be covered by this general permit must register with the department by filing a registration statement. For all new or expanded facilities that will begin activities after the effective date of this permit, the registration statement must be filed with the application for an individual VPDES permit.

Fact Sheet Attachments

Attachment No. 1	Commonwealth of Virginia Chesapeake Bay TMDL Phase I Watershed Implementation Plan Section 1.6 - James River Strategy Appendix 2 - James River Chlorophyll Study
Attachment No. 2	Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus and Sediment Appendix X - Staged Implementation Approach for Wastewater Treatment Facilities in the Virginia James River Basin

Attachment No. 1

Commonwealth of Virginia
Chesapeake Bay TMDL Phase I Watershed Implementation Plan

Section 1.6 - James River Strategy
and
Appendix 2 - James River Chlorophyll Study

COMMONWEALTH of VIRGINIA

Chesapeake Bay TMDL
Phase I Watershed Implementation Plan

Revision of the Chesapeake Bay Nutrient and Sediment Reduction Tributary Strategy

November 29, 2010

Urban Stormwater

Loads from stormwater will be expressed as both waste load allocations (for regulated activities) and load allocations (for unregulated stormwater). Allocations for newly developed land will be set at a level that results in no increase above allowable 2025 average nutrient loads per acre from previous land uses; unless offsets are obtained in the event on-site controls will not fully achieve allowable loads. Allocation for existing urban areas is based on high levels of implementation of management practices described below.

- Revise Virginia's Stormwater Management Regulations to prevent loads increases from new development (currently under revision).
- Additional BMPs on existing pervious and impervious lands through future permits and wider adoption of stormwater utility fees or other funding mechanisms.
- Restrictions for application of non-agricultural fertilizers and voluntary reporting from "for-hire" applicators.
- Municipal/county owned nonagricultural lands receiving nutrients to develop, implement and maintain nutrient management plans.
- Golf courses implement nutrient management plans.
- Controls on certain do-it-yourself non-agricultural lawn and turf fertilizers.
- Incorporate requirements within Virginia's Stormwater Management Regulations (under revision) that redevelopment meets reductions in nutrient and sediment loads.

1.6 James River Strategy

This plan proposes a different approach for the James River given its unique qualities and the chlorophyll standards that apply only to the James.

In 2005 the State Water Control Board adopted several regulations to address the nutrient and sediment impairments in Virginia's portion of the Chesapeake Bay and its tidal rivers, including the James River. In March 2005, the State Water Control Board adopted water quality standards to protect the Chesapeake Bay and tidal rivers; these standards included five new designated uses, numeric criteria for dissolved oxygen, submerged aquatic vegetation and water clarity, and a narrative chlorophyll criterion. Action on numeric chlorophyll criteria for the tidal James River was delayed to give further consideration to public comments and to develop nutrient loading and cost alternative analyses. The Board considered the James River chlorophyll criteria at their June 2005 meeting, and adopted criteria at their November 2005 meeting.

Concurrent with these actions, the Board also amended the Virginia Water Quality Management regulation to include nitrogen and phosphorus allocations for 125 significant wastewater dischargers throughout the Bay watershed that would, along with needed actions by non-point sources, achieve all of the new water quality standards.

Determining the appropriate numeric chlorophyll criteria for the tidal James River was particularly challenging and the rulemaking process included an additional step of using consideration of attainability to help determine the proper criteria since the other lines of evidence did not clearly point to specific and defensible criteria levels. EPA worked with Virginia on these regulations and approved them as meeting the requirements of the Clean Water Act. Virginia immediately began an aggressive program to implement nutrient reductions from point and nonpoint sources, including expenditures and commitments to add nutrient removal facilities at wastewater treatment plants, alone exceeding $1.5 billion. Of this amount, over $400 million has been directed to the James River basin. Localities and industries in the James River basin have developed their regulatory compliance plans and made long-term funding commitments based on the approved regulations.

Recent determinations by EPA during the Chesapeake Bay TMDL development process call into question the conclusions and agreements reached during Virginia's 2005 rulemaking process for the chlorophyll criteria. The draft nutrient allocations for the James River basin issued by EPA on July 1, 2010 are significantly more stringent than the levels that formed the basis for the state regulatory actions taken in 2005 for the chlorophyll criteria and the wastewater treatment plant allocations. Achieving these more stringent allocations would require estimated additional expenditures of between $0.5 to 1.0 billion to the restoration costs in the James basin. In addition, technological advancements since 2005 in field monitoring for the chlorophyll parameter provide a much greater understanding of the concentrations and variability of chlorophyll in the tidal James River. These advancements include "data-flow" monitoring which provides thousands of data points during a single monitoring cruise. Additional scientific research has since taken place, providing a greater understanding of the impact of algae blooms on aquatic life. Also, EPA has recently issued criteria to protect against Harmful Algal Blooms that should be evaluated for application in the tidal James River.

The Commonwealth views the draft nutrient allocations included in EPA's July 1, 2010 letter for the James River basin to be at the lower end of a range of nutrient loads allocations needed to protect the aquatic life uses in the tidal James River. The Commonwealth concludes that additional scientific study is needed to provide a more precise and scientifically defensible basis for setting the final nutrient allocations.

- New information must be evaluated to ensure the Commonwealth's chlorophyll criteria for the tidal James River are appropriately protective of the river's designated uses and are based on the best scientific information and data currently available. This new information includes: application of Harmful Algae Bloom criteria; analysis of data-flow monitoring information to better understand the size and duration of algal bloom events; scientific research; and other information supplied by citizens and stakeholders.
- In order to conduct a thorough review of available information, and to allow sufficient time for the collection of additional data-flow information in the tidal James River during various hydrologic seasons, a three-year time period is needed to complete this study.
- In response to creditable findings from the three-year study, DEQ will ask the State Water Control Board by 2015 to begin the rulemaking process under the Virginia Administrative Process Act to consider amending the chlorophyll criteria in the Water Quality Standards [9

VAC 25-260-310.bb.]. The time estimate for completing the Virginia rulemaking process is 18 to 24 months. Virginia may also consider developing a local James River chlorophyll-based TMDL.

- The schedule described above, not to exceed five years, allows for production of revised chlorophyll criteria well within the time period for Phase 1 implementation of the Bay TMDL.
- As part of the review of the chlorophyll criteria, we will review the modeling framework used in predicting chlorophyll response to changes in nutrient and sediment inputs to the James River. The usefulness of the model can be improved by providing information on algae bloom events, both temporally and spatially, instead of long-term average chlorophyll concentrations.
- Appendix 2 to this Strategy is a draft Study Plan for this review and update of the James River site-specific numeric chlorophyll water quality criteria. DEQ welcomes comments on this draft plan.

James River Implementation Stages:

Stage 1 - Virginia continues implementation of current nutrient regulations in the James River basin with an additional 2.60 mp/y Total Nitrogen ("TN") and 0.45 mp/y Total Phosphorus ("TP") reduction from significant wastewater discharges identified in the final computer model input deck submitted to EPA. The 2012 Watershed General Permit will include those point source allocations in the current permit (no compliance schedule/limits effective January 1, 2011), plus allocations for identified discharges to accomplish the following: i.) an additional reduction of 1.6 mp/y of TN and 0.2 mp/y of TP in the lower tidal James River with a compliance schedule to end December 31, 2016; and, ii.) a provision requiring an additional 1.0 mp/y TN reduction in the lower tidal James River and an additional 0.25 mp/y TP reduction throughout the James River basin with a compliance schedule ending December 31, 2021. These reductions, combined with actions proposed in the other source sectors, will be sufficient to achieve the nutrient allocations for the James River basin needed to meet the dissolved oxygen water quality criteria. Virginia will also achieve by 2017 60% of the total N and P allocations established by EPA on July 1, 2010 with the expected reductions from point sources combined with actions proposed in the other source sectors.

Stage 2 - The remaining 3.3 mp/y N and 0.35 mp/y P reductions called for in the July 1, 2010 allocations in the James River basin to achieve the chlorophyll water quality criteria are assigned as an aggregate waste load allocation (WLA) to all of the significant wastewater treatment facilities in the James River. The Commonwealth expects the TMDL will likewise assign this aggregate WLA in the same manner.

Achieving the chlorophyll-based nutrient reductions, as well as the additional 1.0 mp/y TN and 0.25 mp/y TP reductions described in Stage 1, will be accomplished through a schedule extending into the 2017 Watershed General Permit for the following reasons:

- The July 1 allocations issued by EPA were significantly more stringent than the current point source nutrient control program being implemented by the Commonwealth of Virginia and the dischargers.

- The new chlorophyll-based allocations call for POTWs, with few exceptions, to achieve state-of-the-art treatment [TN = 3mg/l and TP = 0.1 mg/l] throughout the entire James River basin, as well as reductions from industrial dischargers that may not be attainable.
- Achieving these additional significant nutrient reductions in the near term would be disruptive to the on-going nutrient reduction program being implemented through State regulations and permits, financing mechanisms including WQIF Grant Agreements, local debt and sewer rate increases, and related construction of treatment facilities.
- Neither Virginia nor any of the individual wastewater treatment facilities that would be affected has evaluated what engineering and technology changes would need to be made to the various point sources and their recent compliance plans and construction projects in order to adapt to these unanticipated allocation revisions or how long it would take to make those changes.
- In addition to the engineering and technology evaluations, issues of equity, cost-effectiveness, attainability, phasing in multiple projects and financial capabilities at the state and local levels will need to be explored to ensure the best interests of the citizens of the Commonwealth are served.

For the Watershed General Permit effective January 1, 2012, the Fact Sheet accompanying the permit will acknowledge and describe the staged implementation approach. The permit will also contain a schedule for completing the appropriate evaluations described above to ensure that needed additional upgrades to wastewater treatment facilities will proceed expeditiously once the Watershed General Permit is reissued effective January 1, 2017.

The Commonwealth expects to develop a local James River basin TMDL by 2016 following the planning and technical assessments by significant dischargers and a concurrent analysis of, and possible revision to, the chlorophyll standard as described above. This local James River basin TMDL will consider revisions to allocations among all source sectors as needed to achieve equitable and cost-effective nutrient reductions. Specific WLAs will be assigned to each significant wastewater treatment facility and revised allocations to other source sectors as appropriate to meet the TMDL basin allocations.

When the Watershed General Permit is reissued in 2017 it will contain allocations for individual facilities to fully comply with the WLAs of the updated TMDL. The permit will also contain interim milestones leading to compliance with these allocations.

1.7 An Expanded Role for the Nutrient Credit Exchange

In 2005 the Commonwealth took a major step in protecting the Chesapeake Bay by establishing the Chesapeake Bay Watershed Nutrient Credit Exchange Program (Code of Virginia at §62.1-44.19:12). The General Assembly determined that adoption and utilization of a watershed general permit and market-based point source nutrient credit trading program would assist in: (a) meeting pollution reductions and cap load allocations cost-effectively and as soon as possible in

APPENDIX 2 JAMES RIVER CHLOROPHYLL STUDY

DRAFT STUDY PLAN FOR REVIEW AND UPDATE OF JAMES RIVER SITE-SPECIFIC NUMERIC CHLOROPHYLL-*A* WATER QUALITY CRITERIA

SUMMARY

DEQ intends to undertake a comprehensive review of the existing James River Site-Specific Numeric Chlorophyll-*a* Criteria for the tidal James River and associated modeling framework. The following draft study plan illustrates how this review and update may be conducted.

Task #1. Identify stressors, stressor indicators, and the technical approach. Recent research indicates high potential to improve chlorophyll-*a* criteria based on linkages with harmful algal blooms (HABs). The first task is to establish the specific approach and focus areas for technical evaluation. Time-frame: 6 months

Task #2: Define relationships between HAB indicators designated use attainment. Perform literature reviews, data analysis, and laboratory testing to determine densities of HABs that impact designated uses such as fish and shellfish, and recreation, and the causes of the impacts. Time-frame: 2.5 years.

Task #3: Develop relationships between HAB cell density and water quality indicators. Complement existing high frequency monitoring with additional phytoplankton identification, cell density evaluations, and toxin monitoring. Use the data to derive water quality thresholds indicative of HAB cell density of concern. Time-frame: 2.5 years (concurrent with Task #2).

Task #4: Develop and apply dynamic model for indicators, nutrient inputs, and HABs. Improve the modeling of nutrient inputs, water quality indicators, and related HABs in the James River. Utilize contemporary high density chlorophyll-*a* data for model development and calibration. Refine the modeling of menhaden and oysters as top-down controls on algae. Explore the capability to either model HAB events or otherwise quantify HAB potential as a function of environmental conditions and management-related variables. Time-frame: 3 years (concurrent with tasks above).

Task #5: Adopt Criteria Update and Related WQMP Regulation/TMDL WIP Revisions. Using the results of Task #1- #4, determine and adopt appropriate revisions to the Site-Specific Numeric Chlorophyll-*a* Criteria and associated point and nonpoint source allocations for nutrients. Time frame: 2 years, partly concurrent with Tasks #4.

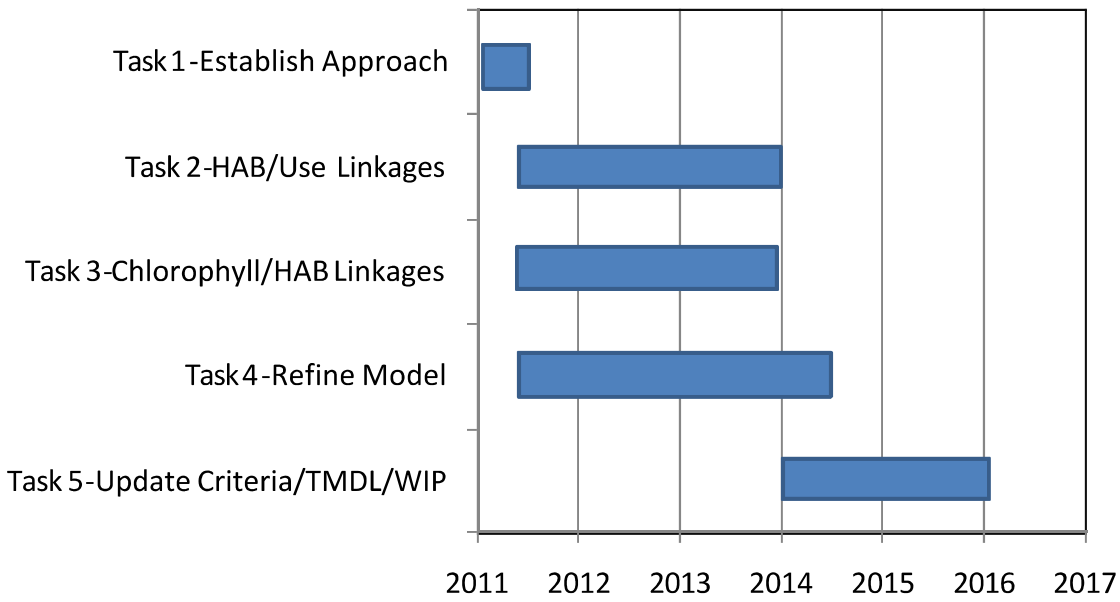


Figure 1—Recommended schedule for chlorophyll-*a* criteria reevaluation process.

Study Period

By many tasks running concurrently (Figure 1), the time period needed for a thorough review and update process is limited to an estimated five years, well within the seven year Stage 1 implementation period associated with the Chesapeake Bay TMDL. The time period for the lower salinity segments might be shorter due to more predictable water quality and algal dynamics.

DETAILED TASK DESCRIPTION

The six tasks identified above are described in greater detail below:

Task #1. Identify stressors, stressor indicators, and technical approach

The first task in the standards revision process would to attain a scientific consensus on the preferred technical basis of refined standards. Although this could take several forms, it is recommended that strong consideration be given to linkages with harmful algal blooms (HABs). Marshall and others (2005) compiled a listing of 30 potentially toxic phytoplankton species in the Chesapeake Bay and its tributaries in Virginia. Several of these taxa are known to occur in either the upper or lower James River estuary.

Of higher-salinity species, blooms of *Cochlodinium polykrikoides* appear to be increasing and have become an annual occurrence in the lower James River during the summer months. Dauer and others (2008) found increasing trends in dinoflagellates in the lower James River, noting blooms of *Cochlodinium polykrikoides* in 2007 accompanying the trend.

Recent laboratory studies have shown this species is toxic to multiple fish species and shellfish in North America (Gobler et al., 2008; Mulholland et al., 2009, Tang and Gobler, 2009). Proportional relationships between *C. polykrikoides* cell density, chlorophyll-*a*, and toxicity provides a potential basis to establish the standard to designated uses. However, additional technical discussion is needed to gain consensus on this overall approach. Additional HAB species beyond *C. polykrikoides* may need to be considered in the standards development. For example, *Heterocapsa triquetra* appears to be the dominant bloom former during the spring on the lower James River but the effects literature on this species appear more limited than for *C. polykrikoides*.

In the lower salinity segments, it would be recommended to consider potential stressors such as the cyanobacteria *Microcystis aeruginosa*, some strains of which have been shown to be harmful to humans or aquatic life (Lampert, 1981; Fulton and Paerl, 1987; Fulton and Paerl, 1988). This would build upon the foundation laid by the *2007 Chlorophyll Criteria Addendum* (USEPA, 2007). Other potential stressors for discussion are the total density or proportion of cyanobacteria, with specific consideration of how these indicators could be used to predict impacts on mesozooplankton, larval fish, or other trophic levels.

It appears most of the reported HABs in the James River are located either in the low or high salinity waters. Also will consider the use and applicability of the phytoplankton IBI (Index of Biological Integrity).

Time-frame: 6 months

Task #2: Define relationships between HAB indicators and designated use attainment.

After HAB indicators are identified, it would be necessary to quantify the relations between HAB indicators (e.g., cell density or toxin concentrations) and designated use attainment. This process would consider the existing literature, supplemented with James River-specific analysis and laboratory testing as necessary.

As previously mentioned for Task #1, literature data is presently available related to *C. polykrikoides* effects on fish and shellfish. However, additional studies may be necessary to confirm and refine those relationships for the Hampton Roads area. Tang and Gobler (2009) found that the toxicity level of *C. polykrikoides* can be affected by factors such as presence of other phytoplankton in the assemblage, growth stage of the organism tested, and whether the tests are performed on culture isolates or natural bloom water. These findings along with variability in reported effects suggest there are some important issues to address if the standard is to be based on cell density. In addition, this task should seek to evaluate the biological mechanisms responsible for toxicity (e.g. toxin generation, type of toxin, physical contact, etc.). With regard to other HAB species, Landsberg (2002) provides a synthesis of effects reported in the literature. Because those results appear limited, additional testing may be needed address them should multiple species need to be considered. Task #2 could also include experimental bioassays conducted by university or contractors experienced in phytoplankton and toxicity testing.

For the lower salinity segments, the *2007 Chlorophyll Criteria Addendum* (USEPA, 2007) summarizes literature findings and some Chesapeake Bay-specific data analysis on relations between *M. aeruginosa*, microcystin concentrations, and potential harmful impacts to humans. It would be recommended to use this information as a starting point, but review and update this information to reflect the most recent literature, and ensure that the risk-based calculations are consistent with Virginia regulations/guidance.

To our knowledge, there are no microcystin concentration data for the upper James River estuary. Not all strains of *M. aeruginosa* produce toxins, and so the presence/absence of this toxin is an important data gap that should be addressed. It would be recommended to include monitoring of microcystin along with other water quality and algal monitoring in the lower salinity segments.

Phytoplankton and zooplankton are routinely monitored only at one station (TF5.5) in the tidal freshwater James River, and one station (RET5.2) in the oligohaline portion. Although these stations provide very useful data, it would also be helpful to have a better spatial/temporal characterization of potential HAB species. For this reason, it is recommended to expand plankton

monitoring to up to 3-5 stations in the lower salinity segments, contingent upon available funding.

Need to also consider the link between HAB indicators and designated uses to include two approaches: 1) food-web and fisheries and 2) public health and socioeconomics. Recent literature shows that HABs can have profound negative impacts on the local economy and public health. A literature and data analysis should be accomplished within ½ year while laboratory testing could take the full 2.5 years planned.

To ensure efficient use of resources, further development of the appropriate laboratory testing for this study is needed.

Time-frame: 2.5 years.

Task #3: Develop relationships between HAB cell density and water quality indicators

Cell density or toxin concentrations would be a more direct measure of HAB-related impairments than chlorophyll-*a* concentration. However, chlorophyll-*a* or other water quality indicators could be more amenable to monitoring and modeling, and could be used as an indicator of HAB potential in conjunction with cell density and/or toxin data. To be used in this fashion, it would be necessary to demonstrate empirical relations between *the* water quality indicators and the HABs of interest.

Recent data indicates a regression relationship exists between *C. polykrikoides* cell density and chlorophyll-*a* (unpublished data). A refinement of this relationship (and for other species if necessary) would provide a connection between chlorophyll-*a* concentration and impairment of designated uses. Available data has been largely collected from peak algal blooms. Additional data may be needed to assess the relationships during pre- and post-bloom conditions when the algal assemblage is more diverse.

For lower-salinity segments, the *2007 Chlorophyll Criteria Addendum* (USEPA, 2007) provides an analysis of relations between *M. aeruginosa* cell density and chlorophyll-*a*, largely drawing on data from northern segments. Owing to its unique characteristics, the James River estuary has different cell density-chlorophyll-*a* relations than observed in other regions (unpublished data). It is recommended to develop these empirical relations using James River-specific data.

To address Task #3 segments, the existing HRSD Dataflow program and similar efforts in the upper estuary should be complemented with extensive phytoplankton identification and cell density results. Although the Dataflow program is very effective at determining chlorophyll concentrations at a high level of temporal and spatial resolution it does not provide data on species composition needed for this aspect of the standards development. Data collected in Task #3 is needed to develop chlorophyll thresholds indicative of HAB cell density of concern.

Potential testing under Task #2 may also address any "cause and effect" between HABs and fisheries. In order to assess the relationship during pre- and post-bloom conditions, a much more

comprehensive monitoring strategy may be needed. Since blooms are highly localized temporally and spatially, a scheduled monitoring program at pre-determined stations may not capture such events. Therefore, a special monitoring plan with rapid response capabilities may be needed.

Time-frame: 2.5 years (concurrent with Task #2).

Task #4: Develop and apply dynamic model for indicators, nutrient inputs, and HABs.

This task is associated with making substantial improvements to the modeling of water quality indicators and related HABs in the lower James River. The Chesapeake Bay Program's existing water quality model was designed to simulate seasonal averages in chlorophyll-*a* and estimate the effects of nutrient reduction on chlorophyll-*a* as step trends. Such a simplistic modeling approach cannot assess the effects of nutrient reduction on short-term bloom events. There is also reason to believe that the lower James River chlorophyll-*a* and algal dynamics may have changed relative to the present 1990-2000 calibration period given the apparent proliferation of *C. polykrikoides.* Because of these issues, there is a strong need to improve our predictive capabilities with respect to HABs. High density chlorophyll-*a* data that is now available for the area (2005-2010) would greatly assist in the development and calibration of models relative of contemporary conditions.

Improvements in modeling of chlorophyll-*a* in the lower James should also address menhaden and oysters as top down controls. Recent modeling work has shown that menhaden migration into the tributaries and associated consumption of algae has the potential to affect chlorophyll-*a.* Although present menhaden and oyster stocks do not appear to dramatically reduce chlorophyll-*a* (as long term averages) incremental effects due to increasing the size of the stock are considered comparable to some levels of nutrient reduction. Additional modeling enhancements should be made such that the menhaden migration and residence time varies according to a food gradient. A number of papers indicate that menhaden consumption of algae increases in areas with higher chlorophyll-*a*. Because the model does not presently capture these foraging effects the available reductions in chlorophyll-*a* due to menhaden (especially during bloom conditions) could be under-estimated.

Recent studies have shown that (a) initiation of *C. polykrikoides* blooms in the summer correlate with intense rains following droughts, (b) formation of blooms appears favored during conditions of vertical stratification, low winds, neap tides, and (c) certain blooms are initiated in the Lafayette and Elizabeth River and are transported to the James River (Mulholland et al., 2009; Morse et al., 2009; Morse et al., 2010). These processes represent factors that are important for the predictive framework to address. The modeling task may also require additional data collection to quantify pulsed storm water loads of nutrients (i.e., daily or weekly sampling of pulses).

It is recognized that attempts to develop and calibrate a James River model to capture short-term variations in chlorophyll-*a* and HABs would be a challenging task. To address this issue a workshop involving modeling experts and contractors is recommended to develop a path forward

and more detailed study plan than is provided here. One possible outcome of this process is that HAB events cannot be modeled or predicted with same degree of confidence normally expected of regulatory models. However, even in this case, it might be possible to better quantify the potential for HABs as a function of environmental conditions and management-related variables.

The time period after 2011 presents an opportunity to statistically evaluate the effectiveness of nutrient controls installed on the James River, particularly due to point source upgrades scheduled to be on-line after this time. This task consists of utilizing available high frequency and fixed site data to assess step trends. The results of trend analysis would be used to assist in validating model enhancements described in Task #5 relative to actual nutrient loading reductions. Dauer and others (2009) noted an apparent disconnect or substantial lag between improvements observed in NPS and PS loadings relative to observed responses in the tributaries and lower segments of the James River. Additional studies may be needed to assess storage of nutrients in sediments or other factors if continued lag-times in response are observed.

Time-frame: 3 years (concurrent with other tasks).

Task #5: Adopt Criteria Update and Related WQMP Regulation/TMDL WIP Revisions

This task is associated with translating the research results of Tasks #1-Task #4 into a water quality criteria framework. It is possible that the revised standard may be based on cell density of specific HABs and/or algal toxins, rather than only chlorophyll-*a* or another water quality indicator. This approach would be consistent with that recommended by USEPA (2007). This task should also consider establishing acceptable limits on the size and duration of HAB events, and natural factors that affect chlorophyll-*a* peaks and phytoplankton succession. The revised modeling framework would be used to determine TMDL allocations and assist the revision of the James River Watershed Implementation Plan.

Time-frame: 2 years, partly concurrent to Tasks #2-4.

Literature Cited

Dauer, D.M., Marshall, H.G., Donat, J.R. Lane, M.F., Doughten, S.C., and F. Hoffman. 2008. Current status and long term trends in water quality and living resources in the Virginia tributaries and Chesapeake Bay mainstem from 1985 through 2007. A report submitted to the Virginia DEQ Chesapeake Bay Program office, Richmond, VA.

Dauer, D.M., Marshall, H.G., Donat, J.R. Lane, M.F., Doughten, S.C., and F. Hoffman. 2009. Current status and long term trends in water quality and living resources in the Virginia tributaries and Chesapeake Bay mainstem from 1985 through 2008. A report submitted to the Virginia DEQ Chesapeake Bay Program office, Richmond, VA.

Fulton III, R. S. and H. W. Paerl. 1987. Toxic and inhibitory effects of the blue-green alga *Microcystis aeruginosa* on herbivorous zooplankton. *Journal of Plankton Research* 9 (5):837-855.

Fulton III, R. S. and H. W. Paerl. 1988. Effects of the blue-green alga *Microcystis aeruginosa* on zooplankton competitive relations. *Oecologia* 76:383-389. Lampert, W. 1981. Inhibitory and toxic effects of blue-green algae on *Daphnia*. *Int. Rev. Gesamten Hydrobiol*. 66:285-298.

Gobler, C.J. Berry, D.L., Anderson, O.R., Burson, A., Koch, F., Rodgers, B.S., Moore, L.K., Goleski, J.A., Allam, B., Bowser, P., Tang, Y., and R. Nuzzi. 2008. Characterization, dynamics, and ecological impacts of harmful *Cochlodinium polykrikoides* blooms on eastern Long Island, NY, USA. Harmful Algae 7: 293-307.

Lampert, W. 1981. Inhibitory and toxic effects of blue-green algae on *Daphnia*. *Internationale Review gesamten Hydrobiologie* 66:285-298.

Landsberg. J.H. 2002. The effects of harmful algal blooms on aquatic organisms. Rev. Fish. Sci. 10: 113-390.

Marshall, H.G. Egerton, T.A. Burchardt, L. Cerbin, S. and Kokocinski, M. 2005. Long term monitoring results of Harmful Algal Populations in Chesapeake Bay and its major tributaries in Virginia, U.S.A. Oceanological and Hydrobiological Studies: Vol. XXXIV Supplement 3: 35-41.

Morse, R.E., Shen, J., Blanco-Garcia, J.L., Hunley, W.S., Fentress, S., Wiggins, M., Mulholland, M.R. 2010. Estuaries and Coasts (submitted). Environmental and physical controls on the formation and transport of the dinoflagellate *Cochlodinium polykrikoides* Margalef in lower Chesapeake Bay and its tributaries.

Morse, R., Blanco, J., Hunley, W. and M. Mulholland. 2009. Physical controls on the formation, development, and transport of *Cochlodinium* blooms in lower Chesapeake Bay and its tributaries. Proceedings of the Ecosystem Based Management (EBM): the Chesapeake Basin & Other Systems. Baltimore Marriott Hotel & Conference Center March 22-25, 2009.

Mulholland, M.R. Morse, R.E., Boneillo, G.E., Bernhardt, P.W., Filippino, K.C. Procise, L.A. Garcia-Blanco, J.L. Marshall, H.G. Egerton, T.A., Hunley, W.S., Moore, K.A. Berry, D.L. and C.J. Gobler. 2009. Understanding the causes and impacts of the dinoflagellate, *Cochlodinium polykrikoides*, blooms in Chesapeake Bay. Estuaries and Coasts. Published online 15 May 2009.

Tang, Y.Z. and C.J. Gobler. 2009. Characterization of the Toxicity of *Cochlodinium polykrikoides* Isolates from Northeast US Estuaries to Finfish and Shellfish. Harmful Algae 8: 454-462.

USEPA Chesapeake Bay Program. 2007. Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and Its Tidal Tributaries: 2007 Chlorophyll Criteria Addendum. 90 p.

Attachment No. 2

Appendix X to the Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus and Sediment

Appendix X.
Staged Implementation Approach for Wastewater Treatment Facilities in the Virginia James River Basin

With the exception of one portion of the tidal Potomac River, the tidal James River is unique throughout the Chesapeake Bay watershed in that ten chlorophyll-*a* water quality criteria (5 segments*2 seasons) are applicable to protect local and tidal water quality conditions. In the July 1, 2010 allocation of nutrients, EPA determined that attainment of these numeric chlorophyll a criteria would require achievement of much lower levels of nutrients than previously expected.

Specifically, in the July 2010 letter, EPA determined allocations for the James River in the amounts of 23.48 million pounds per year of total nitrogen and 2.34 million pounds per year of total phosphorus. To achieve the dissolved oxygen and water clarity criteria, EPA had previously calculated that the levels of 26.8 million pounds per year of total nitrogen and 2.69 million pounds per year of total phosphorus would be sufficient. [See TMDL Appendix O - *Setting the Chlorophyll a Criteria-Based Nutrient Allocations for the James River Watershed*] Those higher levels (to achieve DO) are roughly equivalent to the 2003 James River cap load allocation of 26.4 million pounds per year of total nitrogen and 3.41 million pounds per year of total phosphorus. (Secretary Tayloe Murphy, 2003).

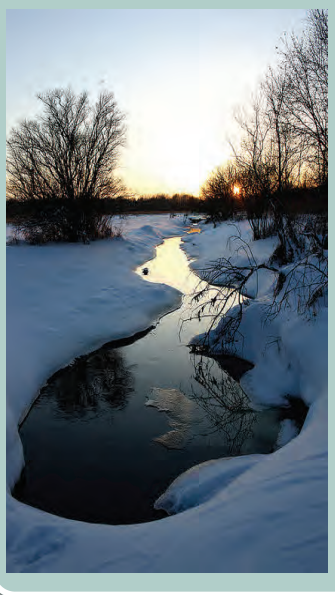
Up until the July 2010 allocation, Virginia had been working to implement past strategies to meet the previous, higher 2003 cap load allocations of total nitrogen and total phosphorus for the James. To achieve total nitrogen and total phosphorus allocations sufficient to comply with the current chlorophyll-*a* criteria, absent significant reductions from other pollution sectors, it is estimated that every significant municipal and industrial wastewater treatment facility in the river basin (39 facilities) would have to install nutrient removal technologies at or below limit of technology levels. In addition, due to the geographic location of the James River (southernmost river in the Bay watershed), Bay circulation patterns, and strong tidal flushing from the Atlantic Ocean, total nitrogen, total phosphorus and sediment loadings from the James River have a relatively small impact on water quality in the mainstem Bay. For these reasons, a staged implementation approach has been developed for implementing necessary nutrient reduction controls at wastewater facilities in the James River Basin to achieve the wasteload allocations of the Chesapeake Bay TMDL. As part of that staged implementation approach, EPA is establishing in this TMDL the wasteload allocations (WLA) for significant facilities in the James River as aggregate WLAs for total nitrogen and total phosphorus (Table 9-4 in Section 9 of the TMDL Report).

Total nitrogen and total phosphorus allocations from the tributary strategy for the James River sufficient to attain the dissolved oxygen criteria for the James River and Chesapeake Bay do not concurrently provide for the attainment of the James River Chlorophyll *a* criteria. Therefore, it is necessary in the TMDL to allocate more stringent total nitrogen and total phosphorus reductions in the James River than previously expected to attain the Chlorophyll *a* criteria (an additional 3 million pounds per year and 0.3 million pounds per year respectively). To facilitate that staged implementation approach, in this TMDL, EPA is establishing the more stringent wasteload allocations (WLA) for significant facilities in the James River as aggregate WLAs for total nitrogen and total phosphorus (Table 9-4 in Section 9 of the TMDL Report). The key components of the implementation strategy include:

- Near-term (2011-2017) interim effluent limits and controls under the Watershed General Permit for individual facilities implementing current and planned facility upgrades, including sixteen upgrade projects at POTWs, to achieve those portions of the wasteload allocations for total nitrogen and total phosphorus reductions that are based on the DO standards attainment, plus reductions of an additional 1.6 million pounds of total nitrogen and 200,000 pounds of total phosphorus.
- Achievement of 60% of the TMDLs overall total nitrogen and total phosphorus allocations by 2017 and 100% of the wastewater treatment plant component by no later than January 1, 2023.
- Near-term *aggregate* Chlorophyll-*a*-based effluent limits for total nitrogen and total phosphorus that apply under the Watershed General Permit to all 39 significant wastewater facilities to achieve the remaining 40% of the load reductions needed to meet the applicable aggregate wasteload allocations and the applicable Chlorophyll-*a* criteria with compliance as soon as possible pursuant to 40 CFR 122.47. Existing information suggests that compliance with this aggregate limit may not be possible until after 2017, but not later than January 1, 2023.
- Sufficient time for the Commonwealth of Virginia to perform an engineering/cost optimization study to establish which of the 39 facilities under the Watershed General Permit, and in what order, will need to upgrade treatment to meet the aggregate Chlorophyll-a-based limits.
- Establishment in 2017 of *facility-specific* effluent limits necessary to achieve reductions of an additional 1.0 million pounds per year of TN and 250,000 pounds per year of TP by January 1, 2022, and *facility-specific* TN and TP wasteload allocations, to inform the permit requirements of the 2018 Watershed General Permit reissuance, for each of the 39 significant WWTPs as stringent as necessary to achieve the remaining load reductions needed to meet the applicable Chlorophyll-*a* criteria. Also continue the enforceable aggregate Chlorophyll-*a*-based effluent limits for TN and TP that apply to all 39 facilities, with compliance required as soon as possible after 2017, based on present information, and not later than January 1, 2023.
- Establishment in 2018 of *facility-specific* effluent limits for TN and TP based on the facility WLAs established in 2017, as stringent as necessary to achieve the applicable Chlorophyll-*a* water quality criteria, and facility-specific compliance schedules requiring compliance with the effluent limitations for TN and TP limits as soon as possible, but not later than January 1, 2023
- EPA expects Virginia (and Virginia has committed) to reissue the Watershed General Permit and fact sheet in 2012, 2017 and 2018 to include all elements of the staged implementation approach, including any schedule of interim milestones pursuant to 40 CFR 122.47. To guide issuance of adequate permits in the James River, EPA is including the description of the projected schedule of the staged implementation approach in the Chesapeake Bay TMDL as assumptions and requirements of the applicable James River wasteload allocations. Federal law and regulation require that water quality-based effluent limits in permits must be derived from and comply with the applicable water quality standards and be consistent with the assumptions and requirements of TMDL wasteload allocations. 40 C.F.R. 122.44(d)(1)(vii)(A)&(B).

Water Quality Trading

What is Water Quality Trading (WQT)?



WATER QUALITY TRADING IS...

- A compliance option that provides point sources with the flexibility to acquire pollutant reductions from other sources in the watershed to offset their point source load to comply with a permit limit (WQBEL)
- A strategy built on partnerships between point source facilities and their trading affiliates including other point sources, landowners, municipalities, private or public entities
- A compliance approach that must result in an overall reduction in pollutant load

WATER QUALITY TRADING IS NOT...

- Adaptive management
- The appropriate solution for all point source facilities

POLLUTANTS THAT CAN BE TRADED:

- Phosphorus
- Total Suspended Solids (TSS)
- Temperature
- Nitrogen
- Other pollutants excluding toxic bioaccumulative chemicals of concern

ACRONYMS

AM: adaptive management

BMPs: best management practices

DNR: Wisconsin Department of Natural Resources

NPS: nonpoint source

WPDES: Wisconsin Pollutant Discharge Elimination System

WQBEL: water quality based effluent limit

WQT: water quality trading

Urban BMPs can be used to generate credits for WQT.

Feasibility in your watershed:

Although WQT may be an economically viable compliance option in some watersheds, it may not be a feasible option for everyone. To determine the trading feasibility in your watershed, DNR recommends that you:

1. Calculate the pollutant offset needed: The difference between the pollutant load from the point source and the permit discharge limit.
2. Identify a credit broker/exchange, if applicable: The goal of this step is to determine if a credit broker or exchange can be used to establish the trade and identify credit generators in the watershed. A credit broker or exchange does not need to be used, but they can improve the administrative feasibility of water quality trading. County Land Conservation Departments or other entities may be willing to serve as a broker or exchange in your watershed.
3. Identify potential credit generators: Any land use feature in your watershed that contributes the pollutant of concern may be a potential trading opportunity. This can include point sources or nonpoint sources. This step helps to verify that trading partners are available in your watershed.
4. Assess availability of credit: This step verifies that there is sufficient credit in your watershed to cover the offset needed.

Once you have determined that WQT is a feasible compliance option, and preferable to other options, the next step is to develop a WQT plan.

ROLES OF PARTNERS IN WQT:

There are several potential roles for WQT participants:

- **Credit User–** The point source using trading credits to comply with a permit limit
- **Credit Generator–** A permitted discharge or other entity that reduces their own pollutant load so that "credit" is generated.
- **Credit Broker/Exchange-** A third party that brings potential trading partners together. A broker performs the research necessary to match credit users and credit generators based on location, pollutant type, amount, and timing.

Water Quality Trading Plan

Seven trading elements must be adequately addressed in order to develop a successful water quality trading strategy. The purpose of the water quality trading plan is to verify that the regulatory requirements for WQT have been met, and submit the plan to WDNR for review and approval.

Upon approval. WDNR will reissue the WPDES permit with trading requirements built in.

A grass waterways is an example of a n agricultural BMP that can be used to generate credits for WQT.

THE SEVEN ELEMENTS OF WATER QUALITY TRADING:

	ELEMENTS OF TRADING	DESCRIPTION
1	Pollutant	The regulated contaminant being traded (ex. Phosphorus).
2	Participants	The persons or entities involved in the water quality trade which can include the credit user, credit generator, credit broker or exchange.
3	Credit	The standardized unit of a given pollutant that is available for trading. This amount is usually measured in pounds.
4	Credit Threshold	The amount of pollution reduction that needs to be achieved before credits are generated.
5	Trade Ratio	Trade ratios are used to ensure the amount of reduction resulting from the trade has the same effect as the reduction that would be required without the trade. Potential components of a trade ratio include delivery, uncertainty, equivalency, and retirement.
6	Location	The location of the credit user compared to the generator. The credit user and generator *must* discharge, either directly or indirectly, to the same water body.
7	Timing	Credits must be generated before they can be used to offset a permit limit. This means that trading practices must be established and effective before the limit takes effect.

Trade Ratios

Trade ratios are used to account for uncertainties associated with WQT resulting from location, delivery, equivalency, reserve, and practice uncertainty. A trade ratio can also be thought of as a multiplier. For example, a trade ratio of 2:1 means two pounds of pollutant reduction is equivalent to one pound of pollutant reduction credit.

Every trade will have a unique trade ratio given the site-specific concerns of the trade in question. There are several ways to reduce the trade ratio multiplier:

- Avoid trading with credit generators downstream of the discharge point.
- Use practices with a high margin of certainty, i.e., those practices with a high probability of success.
- Consider point to point source trades before trading with nonpoint sources.

To calculate a trade ratio you need to know the practice that will be used to generate the credits, and the location where the credits will be generated. See available guidance for specific details about calculating trade ratios.

WHAT IS INCLUDED IN A WPDES PERMIT?

Before a point source can use WQT to demonstrate compliance with a permit limit, the permit must be modified or reissued to allow for WQT. The following components of the WQT plan are included in the facility's WPDES permit, and are enforceable.

- Final permit limit (WQBEL)
- Summary of pollutant reduction credits
- Language referring to the trade agreements submitted with the WQT plan
- Annual reporting requirements
- A requirement that the permittee notify the WDNR when becoming aware that credits become unavailable or the s. 283.84 trade agreement must be modified or concluded
- Other permit conditions

If changes to the WQT plan occur during the term of the permit, the change may need to be public noticed or the permit may need to be modified to reflect the change.

FOR MORE INFORMATION

- Visit the DNR website: http://dnr.wi.gov/, search "trading"
- Review available guidance– *Water Quality Trading How-To Manual* and *Guidance for Implementing Water Quality Trading in WPDES Permits*
- Send questions to the email address: dnrphosphorus@wisconsin.gov
- View informational webinars

WISCONSIN DEPT. OF NATURAL RESOURCES

Fact sheet for information only
Prepared by:
Wisconsin Department of Natural Resources
Box 7921
Madison, WI 53707-7921

United States Environmental Protection Agency
Region 10
1200 Sixth Avenue Suite 900
Seattle, Washington 98101-3140

Authorization to Discharge Under the National Pollutant Discharge Elimination System

In compliance with the provisions of the Clean Water Act, 33 U.S.C. §1251 *et seq*., as amended by the Water Quality Act of 1987, P.L. 100-4, the "Act,"

West Boise Wastewater Treatment Facility, City of Boise

is authorized to discharge from the wastewater treatment facility located in Boise, Idaho at the following outfall locations:

Outfall	Receiving Water	Latitude	Longitude
001	Boise River	43° 30' 30"	116° 19' 53"
002	Dixie Slough	43° 38' 31"	116° 41' 15"

in accordance with discharge point(s), effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective May 1, 2012[1]

This permit and the authorization to discharge shall expire at midnight, April 30, 2017

The permittee shall reapply for a permit reissuance on or before November 1, 2016, 180 days before the expiration of this permit if the permittee intends to continue operations and discharges at the facility beyond the term of this permit.

Signed this 15th day of March, 2012

//Signed//
Michael A. Bussell, Director
Office of Water and Watersheds

This permit modification is effective on September 1, 2012

Signed this 30th day of August, 2012,

//Signed//
Michael A. Bussell, Director
Office of Water and Watersheds

This permit modification is effective on June 27, 2013.

Signed this 28th day May, 2013,

//Signed//
Daniel D. Opalski, Director
Office of Water and Watersheds

This permit modification is effective on April 30, 2016.

Signed this 29th day April, 2016

//Signed//
Daniel D. Opalski, Director
Office of Water and Watersheds

This permit modification is effective on September 1, 2016.

Signed this 24th day of August 2016.

/s/ Michael Lidgard for
Daniel D. Opalski, Director
Office of Water and Watersheds

1 This permit was issued to the City of Boise (City) on March 15, 2012, with a scheduled effective date of May 1, 2012. Due to an appeal of this permit to the Environmental Appeals Board on April 12, 2012, the effective date was stayed pursuant to 40 CFR 124.16(a). The EAB dismissed the appeal on June 8, 2012, and EPA Region 10 lifted the stay in a letter sent from EPA to the City of Boise, dated June 19, 2012. That letter set the new effective date of this permit to be August 1, 2012 and expiration date of July 31, 2017.

Schedule of Submissions

The following is a summary of some of the items the permittee must complete and/or submit to the EPA during the term of this permit:

Item	Due Date
1. Discharge Monitoring Reports (DMRs)	DMRs are due monthly and must be submitted on or before the 20th day of the following month.
2. Quality Assurance Plan (QAP)	The permittee must provide the EPA and the IDEQ with written notification that the QAP has been developed and implemented within 90 days after the effective date of this permit (see Part.I.M.).
3. NPDES Application Renewal	The application must be submitted at least 180 days before the expiration date of the permit (see Part V.B.).
4. Electronic Submission of Effluent and Surface Water Monitoring Data	All effluent and surface water sampling results and dates of sample collection must be submitted to the EPA electronically on an excel spreadsheet with the NPDES Application.
5. Methylmercury Fish Tissue Annual Report	Due March 31st of the year following the sampling event (see Part I.G)
6. Local Limits Evaluations	Within 60 days of the effective date of this permit, the permittee must submit to the EPA a draft local limits study plan. Within one year of the effective date of the permit the permitee must submit the results of the local limits study. Thereafter, the results of the local limit study must be submitted to the EPA within five years of submitting the previous local limits study results.
7. Annual Pretreatment Report	The Report must be submitted to the pretreatment coordinator no later than November 1st of each calendar year. (See Part II.A.9.)
8. Emergency Response and Public Notification Plan	The permittee must develop and implement an overflow emergency response and public notification plan. The permittee must submit written notice to the EPA and the IDEQ that the plan has been developed and implemented within 180 days of the effective date of this permit.
9. Compliance Evaluation Reports	See Part I.C.

Table of Contents

Schedule of Submissions **3**

Table of Contents **4**

I. Limitations and Monitoring Requirements **6**

A. Discharge Authorization 6
B. Effluent Limitations and Conditions 6
C. Schedules of Compliance and Interim Effluent Limitations 9
D. Outfall 001 Effluent Monitoring Requirements 13
E. Whole Effluent Toxicity Testing Requirements 16
F. Dixie Drain Facility Monitoring 21
G. Surface Water Monitoring Requirements 22
H. Methylmercury Requirements 24
I. Pretreatment Requirements 26
J. Sludge (Biosolids) 35
K. Removed Substances 35
L. Water Effects Ratio Study 35
M. Quality Assurance Plan (QAP) 36
N. Design Criteria Requirements 36
O. Operations and Maintenance Review 37
P. Emergency Response and Public Notification Plan 37
Q. Modification for Cause 38

II. Monitoring, Recording and Reporting Requirements **39**

A. Representative Sampling (Routine and Non-Routine Discharges) 39
B. Reporting of Monitoring Results 40
C. Monitoring Procedures 40
D. Additional Monitoring by Permittee 40
E. Records Contents 40
F. Retention of Records 41
G. Twenty-four Hour Notice of Noncompliance Reporting 41
H. Other Noncompliance Reporting 42
I. Public Notification 43
J. Notice of New Introduction of Toxic Pollutants 43
K. Compliance Schedules 43

III. Compliance Responsibilities **43**

A. Duty to Comply 43
B. Penalties for Violations of Permit Conditions 44
C. Need To Halt or Reduce Activity not a Defense 45
D. Duty to Mitigate 45
E. Proper Operation and Maintenance 45
F. Bypass of Treatment Facilities 46
G. Upset Conditions 46
H. Toxic Pollutants 47

I. Planned Changes....47
J. Anticipated Noncompliance....47
K. Reopener....48

IV. General Provisions....48

A. Permit Actions....48
B. Duty to Reapply....48
C. Duty to Provide Information....48
D. Other Information....48
E. Signatory Requirements....48
F. Availability of Reports....49
G. Inspection and Entry....50
H. Property Rights....50
I. Transfers....50
J. State Laws....50

V. Definitions....50

APPENDIX A – Minimum Levels and Interim Minimum Levels for Expanded Effluent Testing

I. Limitations and Monitoring Requirements

A. Discharge Authorization

During the effective period of this permit, the permittee is authorized to discharge pollutants from the outfalls specified herein to the Boise River within the limits and subject to the conditions set forth herein. This permit authorizes the discharge of only those pollutants resulting from facility processes, waste streams, and operations that have been clearly identified in the permit application process.

B. Effluent Limitations and Conditions

The permittee must limit and monitor discharges from outfall 001 as specified below. The permittee must comply with the effluent limits at all times unless otherwise indicated, regardless of the frequency of monitoring or reporting required by other provisions of this permit.

1. There must be no floating, suspended, or submerged matter of any kind in concentrations causing nuisance or objectionable conditions that may impair designated uses in the receiving water.
2. The pH of the effluent must be between 6.5 – 9.0 standard units.
3. Table 1 presents the effluent limitations for temperature. See Part I.C. for the compliance schedule for this parameter.

TABLE 1 –Effluent Limitations for Temperature

Date	MWMT	Average Daily Limit	Instantaneous Maximum Limit
November 1 – March 31	13.5°C	NA	NA
April	13.3 °C	NA	NA
May	13.5 °C	NA	NA
June 1 –July 15	NA	22.6 °C	26.1 °C
July 16 - September 30	NA	19.0 °C	22.0 °C
October	NA	20.3 °C	24.2 °C
Note: The MWMT is the mean of daily maximum temperatures measured over a consecutive 7 day period ending on the day of calculation.			

4. Table 2 presents the effluent limits for BOD_5, TSS, minimum percent removal rates for BOD_5 and TSS, Total Ammonia, Mercury, Total Phosphorus, and *Escherichia coli* (*E. coli*). See Part I.C. for the compliance schedule for Total Phosphorus.

TABLE 2 - Effluent Limitations

	Average Monthly Limit	**Average Weekly Limit**	**Maximum Daily Limit**	**Monthly Geometric Mean Limit**	**Instantaneous Maximum Limit**
BOD_5	20 mg/L 2000 lbs/day	30 mg/L 3000 lbs/day	---	---	---
TSS	30 mg/L 3000 lbs/day	45 mg/L 4500 lbs/day	---	---	---
Removal Rates for BOD_5 and TSS (see Note 1)	85% minimum	---	---	---	---
Total Ammonia as N **May 1 – Sept 30**	788 µg/L 157.7 lbs/day	---	2435 µg/L 487 lbs/day	---	---
Total Ammonia as N **Oct 1 - Apr 30**	398 µg/L 80 lbs/day	---	1493 µg/L 299 lbs/day	---	---
Mercury, Total Recoverable	0.009 µg/L 0.002 lbs/day	---	0.019 µg/L 0.004 lbs/day	---	---
Total Phosphorus[2] **May 1 – Sept 30**	70 µg/L 14 lbs/day	84 µg/L 16.8 lbs/day	—	—	—
E. coli bacteria	---	---	---	126 colonies per 100 ml	406 colonies per 100 ml

Note 1. The monthly average removal rates must be calculated from the arithmetic mean of the influent concentration values and the arithmetic mean of the effluent concentration values for that month.
Note 2. The permittee may meet the effluent limits for total phosphorus using the Dixie Drain offset. See Part I.B.6.

5. The permittee must report within 24 hours any violation of the maximum daily limits for the following pollutants: Total Ammonia and Mercury, and for any violation of the instantaneous maximum limit for *E. coli*. Violations of all other effluent limits are to be reported at the time the DMRs are submitted (See III.B. and III.G.).

6. Dixie Drain Offset. The permittee may meet the final effluent limits for total phosphorus through a combination of removal of total phosphorus at the West Boise Wastewater Treatment Facility and from the Dixie Drain at the Dixie Drain Treatment Facility. The offset is available when the final total phosphorus effluent limits are required (10 years from the effective date of the permit, see Part I.C. for the compliance schedule). Components of the Dixie Drain Offset include:

   - Effluent limits at the West Boise Treatment Facility to prevent localized impacts, i.e. concentrations immediately downstream from the West Boise Treatment Plant from exceeding 70 µg/L.
   - Offset removal requirements for the Dixie Drain Treatment Facility.
   - Interim removal requirements from the Dixie Drain Treatment Facility. The interim removal requirements begin when the facility begins operation. See

Part I.C.4 for the compliance schedule for the Dixie Drain Treatment Facility. These interim removal requirements may not be used to offset the interim total phosphorus effluent limits.

a) Table 2A presents the effluent limits for total phosphorus at the West Boise Treatment Facility required in combination with the Dixie Drain Offset to prevent localized impacts.

TABLE 2A – Total Phosphorus Effluent Limitations at West Boise Wastewater Treatment Facility May 1 through September 30 with the Dixie Drain Offset (in µg/L)[1]

Average Monthly Effluent Flow:		Average Monthly Flow in South Channel of Boise River[2]:				
		≥ 340 cfs	≥ 310 cfs, but < 340 cfs	≥ 280 cfs, but < 310 cfs	≥ 250 cfs, but < 280 cfs	< 250 cfs
≤ 26 mgd	AML	350	350	350	350	343
	AWL	702	702	702	702	689
> 26 mgd, but ≤ 28 mgd	AML	350	350	350	350	324
	AWL	702	702	702	702	650
> 28 mgd, but ≤ 30 mgd	AML	350	350	350	339	307
	AWL	702	702	702	681	616
> 30 mgd, but ≤ 32 mgd	AML	350	350	350	322	292
	AWL	702	702	702	647	586
> 32 mgd, but ≤ 34 mgd	AML	350	350	336	308	279
	AWL	702	702	674	617	560
> 34 mgd, but ≤ 36 mgd	AML	350	348	321	294	267
	AWL	702	699	645	591	537
> 36 mgd, but ≤ 38 mgd	AML	350	334	308	283	257
	AWL	702	669	618	567	516
> 38 mgd	AML	350	327	302	277	252
	AWL	702	656	606	556	506

AML = Average Monthly Limit
AWL = Average Weekly Limit

[1]This effluent limit table is based upon the total assimilative capacity of the south channel of the Boise River but does not reserve this total assimilative capacity to this facility. This table may be re-opened and modified upon either completion of an EPA approved total phosphorus TMDL of the lower Boise River or approval of NPDES permit(s) for other discharger(s) which impact the assimilative capacity of total phosphorus in the south channel of the Boise River.

[2] The average monthly flow must be calculated based on continuous flow monitoring in the south channel of the Boise River.

b) Offset Pounds. For each pound of total phosphorus the West Boise Treatment Facility discharges in excess of 70 µg/L, the Permittee must remove a minimum of 1.5 pounds of total phosphorus at the Dixie Drain

Facility. The pounds of total phosphorus the West Boise Treatment Facility discharges in excess of 70 µg/L are calculated as: (Average Monthly Effluent Concentration – 70) × Average Monthly Flow × 8,340 ÷ 1,000

The monthly offset ratio which is defined as the pounds of total phosphorus removed at the Dixie Drain Facility divided by the pounds of total phosphorus the West Boise Treatment Facility discharges in excess of 70 µg/L must be greater than 1.5.

$$\frac{Pounds\ Removed\ Dixie\ Drain\ Facilty}{Pounds\ Disharged\ \ at\ West\ Boise\ in\ Excess\ of\ 70\ \mu g/L} > 1.5$$

c) The permittee must construct the Dixie Drain Treatment Facility and achieve a minimum average monthly total phosphorus removal in accordance with the Dixie Drain Treatment Facility compliance schedule (see part I.C.4).

d) Operations and Maintenance Plan

(i) Prior to the startup of the Dixie Drain Treatment Facility the permittee must complete an operations and maintenance plan and ensure that it includes appropriate best management practices (BMPs). The plan must be reviewed annually thereafter. BMPs include measures which prevent or minimize the potential for the release of pollutants to the Dixie Slough. The plan must be retained on site and made available to the EPA and the IDEQ upon request.

(ii) The permittee must develop a description of pollution prevention measures and controls appropriate for the facility. The appropriateness and priorities of controls in the plan shall reflect identified potential sources of pollutants at the facility. The description of BMPs shall address, to the extent practicable, the following minimum components: spill prevention and control; optimization of chemical usage; preventive maintenance program.

C. Schedules of Compliance and Interim Effluent Limitations

1. **Total Phosphorus:** The permittee must comply with the following Compliance Schedule requirements for Total Phosphorus.

   a) The following interim and final limitations must be achieved by the dates cited.

TABLE 3 – Effluent Limits and Compliance Dates

Date	Effluent Limit
May 1, 2013 through September 30, 2013	Not to exceed 5.8 mg/L measured as a seasonal average[1].
May 1, 2014 through September 30, 2014	Not to exceed 5.8 mg/L measured as a seasonal average[1].

May 1, 2015 through September 30, 2015	Not to exceed 5.8 mg/L measured as a seasonal average[1].
May 1, 2016 through April 30, 2017 and every year thereafter until the final limit is achieved	Meet an annual average limit[2] of 2.8 mg/L.
10 years from the effective date of the permit	See Part I.B.3, Table 2 for final effluent limits

Note: [1] *Season is from May 1 through September 30*

[2] *Reported as an average of all total phosphorus effluent data from May 1 – April 30 of the reporting period and submitted with the April DMR.*

b) The permitee must complete the tasks and reports described below**.**

(i) No later than April 26, 2013, the permittee must complete construction of the Struvite Production Facility and submit written notice to the EPA and the Idaho Department of Environmental Quality (IDEQ) stating that the construction is complete.

(ii) No later than April 26, 2013, the permittee must complete improvements to the UV Disinfection, install and commence operation of an influent flow meter and submit written notice to the EPA and the IDEQ stating that the applicable improvements and installation are complete and operational.

(iii) No later than April 30, 2016, the permittee must complete construction and commence operation of the Enhanced Biological Nutrient Removal Modifications. The modifications must include the following:

- Modifications to chemical addition facility
- South plant primary clarifier mechanism replacements and modifications
- South plant secondary clarifier mechanisms and weirs
- New primary sludge fermentation tank
- New phosphate release tank
- Four new rotary drum thickeners
- Piping interconnects for return activated sludge, mixed liquor, primary influent, and primary effluent
- Modifications of the aeration basins in both the North and South plants to Enhanced Biological Phosphorus Removal process

The permittee must submit by April 30, 2016 written notice to the EPA and the IDEQ stating that the applicable modifications are constructed and operational.

(iv) Evaluate options available to achieve the final effluent limitation, including, but not limited to, treatment plant upgrades, seasonal re-use of effluent, effluent trading projects, and the decommissioning the Lander Street wastewater treatment facility and consolidating all operations at the West Boise wastewater treatment facility.

Starting in 2013 and continuing through 2017 the permittee must submit a Report of Progress to the EPA and the IDEQ detailing the evaluation of each available option. Reports must be submitted by December 31 of each year.

(v) No later than December 31, 2018 the permittee must decide on the final option that will be used to achieve the final effluent limits and submit written notice to the EPA and the IDEQ that includes a preliminary schedule of design upgrades and a preliminary construction schedule that will be used to achieve compliance with the final limits.

Thereafter, by December 31st of each year, the permittee must provide a Report of Progress to the EPA and the IDEQ which details the progress made toward achieving the final effluent limitation, and the series of actions that will be taken in the coming year.

(vi) No later than 10 years from the effective date of the permit, the permittee must be in compliance with the final effluent limits. The permittee must notify the EPA and the IDEQ in writing when the final effluent limits are achieved.

2. **Temperature:** The permittee must comply with the following Compliance Schedule requirements for Temperature.

a) The following interim and final limitations must be achieved by the dates cited. The interim limits are expressed as maximum daily limits.

- The following maximum daily average interim limits[1] will be effective on the effective date of the permit:

January – March:	17.2 ° C
April – June:	22.1 ° C
July – September:	24.1 ° C
October –December:	22.4 ° C

- The final effluent limits listed in Part I. B. must be achieved no later than 10 years from the effective date of the permit

[1] Interim Temperature limits were developed based on the last nine years of operational and climatic conditions and the assumption that conditions during the Schedule of Compliance would be consistent with observed conditions during the last decade. These limits are not applicable if the Boise Airport Temperature for the annual, seasonal, or monthly period observed and reported by NOAA (http://www.wrh.noaa.gov/boi/climo.php) establishes a new high temperature record.

b) The permittee must complete the tasks and reports described below

(i) No later than December 31, 2017 complete an alternatives evaluation of methods the permittee may use to achieve the final effluent limits. The evaluation should consider facility improvements, re-use of effluent, and possible trading mechanisms such as offsite mitigation, including wetland and habitat restoration. Starting in 2013 and continuing through 2017 the permittee must submit a Report of Progress to the EPA and the IDEQ detailing the evaluation of each available option. The Reports of Progress must be submitted by December 31 of each year.

(ii) No later than December 31, 2018 provide a preliminary schedule of design upgrades and a preliminary construction schedule that will be used to achieve compliance with the final limits. By December 31st of each year thereafter the permittee must provide a Report of Progress to the IDEQ and the EPA which details the progress made toward achieving the final effluent limitations, and the series of actions that will be taken in the coming year.

(iii) No later than 10 years from the effective date of the permit, the permittee must be in compliance with the final effluent limits for temperature. The permittee must notify the IDEQ and the EPA in writing when the final effluent limits are achieved.

3. **Biosolids:** Starting in 2012 and ending in 2016, the permittee may transfer up to 88,000 gallons per day (gpd) of solids from the Lander Street facility to the West Boise headworks during the period from February 1 through November 30. Solids may only be transferred when the Lander Street anaerobic digesters have reached capacity.

   The permittee must notify the EPA and the IDEQ, in writing, when the Lander Street digesters have reached capacity and when they will start transferring solids to the West Boise facility.

   No later than December 31st each year the permittee must submit a report to the EPA and the IDEQ which provides the amount of solids (in gpd) transferred to the West Boise headworks each day.

   All correspondence and reports must be signed in accordance with the signatory requirements in Part V.E. of this permit.

4. **Dixie Drain Facility:**

   a) The permittee must comply with the following Compliance Schedule. The Task/Activity must be achieved by the dates cited.

Dixie Drain Facility Compliance Dates

Task No.	Completion Date	Task/Activity
1	August 1, 2013	Initiate Project Design

		Deliverable: The permittee must provide the EPA and IDEQ a written Progress Report
2	August 1, 2014	Complete Preliminary Design Report Deliverable: The permittee must provide the EPA and IDEQ with written notice that the preliminary design report is completed.
3	October 1, 2014	Obtain necessary permits Deliverable: The permittee must provide the EPA and IDEQ with written notice all necessary permits are received.
4	December 1, 2014:	Initiate project construction Deliverable: The permittee must notify the EPA and IDEQ in writing on the beginning of construction.
5	December 1, 2015	Achieve substantial completion of construction. Deliverable: The permittee must notify the EPA and IDEQ in writing on achievement of substantial completion.
6	February 1, 2016	The permittee must submit the Operation and Maintenance Plan (O&M Plan) for the Dixie Drain Facility for IDEQ approval. Approval of the O&M Plan must occur prior to facility discharge. The Plan must be retained onsite and made available to the EPA and IDEQ upon request.
7	July 1, 2016	Begin Operation Deliverable: The permittee must notify the EPA and IDEQ in writing on beginning of operation and completion of the Operation and Maintenance Manual for the Dixie Drain Facility.
8	July 1, 2016	Interim Total Phosphorus Removal The Dixie Drain Facility must achieve a minimum average monthly TP removal of 25 lbs/day.

b) Temperature at the Dixie Drain Facility.

The permittee must collect continuous temperature monitoring data for the Dixie Slough for a minimum of one year prior to discharging.

Prior to discharge to Dixie Slough, the permittee shall develop and receive IDEQ approval of a Dixie Drain Temperature Monitoring Plan to determine whether this discharge will cause an increase in the temperature of the Dixie Slough and the Boise River.

At a minimum, the Temperature Monitoring Plan must:

(i) Describe how the permittee will determine whether the discharge causes an increase in temperature in the Dixie slough and the Boise River, and

(ii) Include a Continuous Temperature Monitoring Plan for treated effluent from the Dixie Drain facility, the Dixie Slough and the Boise River which details the Quality Assurance/Quality Control measures taken to ensure accuracy of the data.

(iii) Include a schedule of the implementation of the plan, including a schedule of the submittal of Temperature Analysis Report that

describes the results of the permittee's analysis of whether the Dixie Drain facility will cause an increase in temperature.

(iv) Describe the measures the permittee may implement to ensure that the discharge from the Dixie Drain Facility project is consistent with IDAPA 58.01.02.055.04.

Within 15 months of commencing operation of the Dixie Drain Facility, the permittee shall submit to IDEQ a Temperature Monitoring Report for the first year. If the analysis and/or temperature monitoring data confirm an increase in temperature for Dixie Slough or the Boise River and there is still no temperature TMDL developed for the relevant assessment unit, then the permittee must within three months of delivery of the Temperature Analysis Report of Temperature Monitoring Report (whichever provided sufficient information to determine whether there is or will be a temperature increase), submit and receive IDEQ approval of a Dixie Drain Temperature Remediation Plan which:

(i) Describes the measures the permittee will implement to ensure that the discharge from the Dixie Drain Facility project is consistent with IDAPA 58.01.02.055.04, including without limitation, any measures the City will implement to ensure no increase in temperature of the Dixie Slough or the Boise River or that the addition of heat load will be offset, and

(ii) Includes a schedule of implementation.

Once approved by IDEQ, the Dixie Drain Temperature Monitoring Plan and the Dixie Drain Remediation plan shall be implemented according to the schedule in the approved plans. In addition, the permittee must send the plans along with documentation of IDEQ's approval of the plans, and the Report regarding the results of the permittee's analysis of temperature impacts to the EPA.

D. Outfall 001 Effluent Monitoring Requirements

1. Effluent samples must be collected from the effluent stream after the last treatment unit prior to discharge into the receiving waters.
2. Influent and effluent samples must be taken over approximately the same time period.
3. The analytical test method for metals must, at a minimum, achieve a minimum level (ML) or interim minimum level (IML) as specified in Table 4.

Table 4: Minimum Levels and Interim Minimum Levels

Parameter	ML and IML, µg/l
Arsenic	1.3
Cadmium	0.1
Chromium	1.0
Copper	1.0
Cyanide	5.0
Lead	0.16
Mercury This ML applies until September 30, 2012	0.004
Mercury This ML applies starting October 1, 2012	0.001
Molybdenum	1.0
Nickel	2.5
Silver	0.3
Zinc	5.0

4. The permittee must conduct the sampling in Table 5. Effluent monitoring results must be reported on the appropriate Discharge Monitoring Report (DMR). Additionally, the permittee must submit, to the EPA, all monitoring results and sample collection dates electronically on an excel spreadsheet. The excel spreadsheet must be submitted with the NPDES Application which is due 180 days before the expiration date of the permit.

TABLE 5: Influent and Effluent Monitoring

Parameter	Sample Location	Sample Frequency	Sample Type
Flow, see note 4	Influent and Effluent	Continuous	Recording
E. coli bacteria	Effluent	5 days/week	Grab
pH, standard units	Effluent	5 days/week	Grab
Temperature, °C	Effluent	Continuous	Recording
Total ammonia as N, mg/L	Effluent	2 days/week	24-hour composite
BOD_5	Influent and Effluent	1/week	24-hour composite
TSS	Influent and Effluent	1/week	24-hour composite
Total Phosphorus, mg/L	Effluent	1/week	24-hour composite
Iron, µg/L, see note 1	Effluent	1/week	24-hour composite
Mercury, µg/L, see note 1	Effluent	1/week	24-hour composite
Zinc, µg/L, see note 1	Effluent	1/week	24-hour composite
Dissolved Oxygen, mg/L	Effluent	1/week	Grab
Cyanide, µg/L	Effluent	1/month	Grab
Nitrate-Nitrite, mg/L	Effluent	1/month	24-hour composite

Arsenic, µg/L, see note 1	Effluent	1/month	24-hour composite
Cadmium, µg/L, see note 1	Effluent	1/month	24-hour composite
Copper, µg/L, see note 1	Effluent	1/month	24-hour composite
Lead, µg/L , see note 1	Effluent	1/month	24-hour composite
Hardness as $CaCO_3$, mg/L	Effluent	1/month	24-hour composite
Total Organic Carbon, mg/L	Effluent	1/month	24-hour composite
Alkalinity as $CaCO_3$, mg/L	Effluent	1/month	24-hour composite
Aluminum, µg/L, see note 1 and 2	Effluent	1/quarter	24-hour composite
Chromium, µg/L, see note 1 and 2	Effluent	1/quarter	24-hour composite
Nickel, µg/L, see note 1 and 2	Effluent	1/quarter	24-hour composite
Selenium, µg/L, see note 1 and 2	Effluent	1/quarter	24-hour composite
Silver, µg/L, see note 1	Effluent	1/quarter	24-hour composite
Total Kjeldahl Nitrogen, mg/L, see note 2	Effluent	1/quarter	24-hour composite
Oil and Grease, mg/L, see note 2	Effluent	1/quarter	Grab
Turbidity, NTU, see note 2	Effluent	1/quarter	24-hour composite
Whole Effluent Toxicity, TU_c	Effluent	see Part I.E.	24-hour composite
Expanded Effluent Testing see note3	Effluent	See note 3	24-hour composite

1. These parameters shall be analyzed as total recoverable.
2. Samples must be collected once during each of the following periods: January – March (results must be submitted on the March DMR; April – June (results must be submitted on the June DMR); July – September (results must be submitted on the September DMR); and October – December (results must be submitted on the December DMR).
3. See NPDES Permit Application Form 2A, Part D for the list of pollutants to include in this testing. Testing must occur once in the 2nd, 3rd, and 4th year of the permit. Additionally, the expanded effluent testing must occur on the same day as a whole effluent toxicity test and must be submitted with the WET test results with the next DMR as well as with the next permit application. The analytical test methods must, at a minimum, meet the interim minimum level or minimum level specified in Appendix A.
4. Influent flow may be estimated until April 26, 2013. The influent flow meter must be installed and operational by April 26, 2013.

5. When calculating monthly averages for reporting on DMRs, zero may be assigned for sample results less than the analytical method detection level (MDL), and the numeric MDL value may be assigned to those sample results that are between the MDL and the minimum level (ML). If an ML has not been promulgated by the EPA, the interim minimum level will be calculated as 3.18 X MDL. If the calculated average value is less than the MDL, the permittee must report "less than {numeric value of the MDL}" on the DMR and if the average value is less than the ML, the permittee must report "less than {numeric value of the ML}." If a sample result is equal to or greater than the ML, the permittee must report and use the actual sample result value.

E. Whole Effluent Toxicity Testing Requirements

The permittee must conduct chronic toxicity tests on effluent samples from outfall 001. Testing must be conducted in accordance with subsections 1 through 7, below.

1. Toxicity testing must be conducted on 24-hour composite samples of effluent. In addition, a split of each sample collected must be analyzed for the chemical and physical parameters required in Part I.D., Table 5. When the timing of sample collection coincides with that of the sampling required in Part I.D, analysis of the split sample will fulfill the requirements of Part I.D.

2. Chronic Test Frequency, Species and Methods

   a) Each year, chronic tests must be conducted once during each of the following 4 time periods:

   January – April

   May– June

   July – September

   October - December

   b) The permittee must conduct the chronic toxicity tests using the species and protocols in Table 6 below, for the first three suites of tests. After this screening period, monitoring must be conducted using the most sensitive species.

Table 6: Toxicity Test Species and Protocols

Freshwater Acute Toxicity Tests	Species	Method
Fathead minnow 96-hour larval survival and growth test (method 1000.0)	*Pimephales promelas*	EPA-821-R-02-013
Daphnid 96-hour survival and reproduction test (method 1002.0)	*Ceriodaphnia dubia*	EPA-821-R-02-013

   c) The presence of chronic toxicity must be determined as specified in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, EPA/821-R-02-013, October 2002.

   d) Results must be reported in TU_c (chronic toxic units), which is defined below. Additionally, if acute toxicity is noted during the chronic test, the permittee must report the LC50

   (i) For survival endpoints, $TU_c = 100/NOEC$.

   (ii) For all other test endpoints, $TUc = 100/IC_{25}$

   (iii) IC_{25} means "25% inhibition concentration." The IC_{25} is a point estimate of the toxicant concentration, expressed in percent effluent, that causes a 25% reduction in a non-quantal biological measurement (e.g., reproduction or growth) calculated from a continuous model (e.g., Interpolation Method).

   (iv) NOEC means "no observed effect concentration." The NOEC is the highest concentration of toxicant, expressed in percent effluent, to which organisms are exposed in a chronic toxicity test [full life-cycle or partial life-cycle (short term) test], that causes no observable adverse effects on the test organisms (i.e., the highest concentration of

effluent in which the values for the observed responses are not statistically significantly different from the controls).

3. Toxicity Triggers

   a) Chronic Toxicity Trigger. If the results of the chronic toxicity test exceed 2.0 TU_c from May through September, or 1.5 TU_c from October through April, the permittee must conduct accelerated toxicity testing. See Part I.E.4, below.

4. Accelerated testing

   a) If chronic toxicity is detected above 2.0 TUc from May through September, or 1.5 TUc from October through April, the permittee must implement its *Initial Toxicity Reduction Evaluation Workplan* (City of Boise, January 3, 2011) within 48-hours of the permittee's receipt of the toxicity results demonstrating the exceedance.

   b) If implementation of the *Initial Toxicity Reduction Evaluation Work Plan* indicates the source of toxicity (for example, a temporary plant upset), then one additional toxicity test is required. If chronic toxicity does not exceed the chronic toxicity trigger in this sample then the permittee can resume its regular WET testing schedule. If chronic toxicity exceeds the chronic toxicity trigger in this sample then the permittee must conduct the monitoring in I.E.4.c. below.

   c) If chronic toxicity is detected above the toxicity triggers described above then the permittee must conduct six more bi-weekly (every two weeks) acute/chronic toxicity tests, over a twelve-week period. This accelerated testing shall be initiated within 10-calendar days of receipt of the test results indicating the initial exceedance.

      The EPA has the discretion to approve additional time for initiating the four accelerated acute/chronic toxicity tests required in this Part. Requests for additional time to initiate the accelerated testing shall include justification for why additional time is required (e.g., shipping/delivery problems from remote locations, problems contracting with a lab etc.). The EPA has sole discretion to approve or deny additional time to initiate the accelerated testing required in this Part, and may require supporting documentation to support the permittee's request.

   d) The permittee must notify the EPA of the exceedance in writing within 5 calendar days of receipt of the test results indicating the exceedance. The notification must include the following information:

      (i) A status report on any actions required by the permit, with a schedule for actions not yet completed.

      (ii) A description of any additional actions the permittee has taken or will take to investigate and correct the cause(s) of the toxicity.

(iii) Where no actions have been taken, a discussion of the reasons for not taking action.

(iv) If implementation of the initial investigation workplan clearly identifies the source of toxicity to the satisfaction of the EPA (e.g., a temporary plant upset), and none of the six accelerated chronic toxicity tests required under Part I.E.4.a. are above 2.0 TU_c from May through September, or 1.5 TU_c from October – April the permittee can return to the regular acute/chronic toxicity testing cycle specified in Part I.E.2.

e) If implementation of the *Initial Toxicity Reduction Evaluation Workplan* does not clearly identify the source of toxicity to the satisfaction of the EPA, or any of the six accelerated chronic toxicity tests indicate toxicity above 2.0 TU_c from May through September, or 2.5 TU_c from October through April, then the permittee shall begin implementation of the Toxicity Reduction Evaluation (TRE) requirements contain in Part I.E.5. Implementation of the TRE requirements shall begin within 10 days of receipt of the accelerated acute/chronic toxicity testing results demonstrating the exceedance.

The EPA has the discretion to approve additional time for initiating the TRE requirements contained in Part I.E.5. Requests for additional time to initiate the TRE/TIE requirements shall include justification for why additional time is required (e.g., shipping/delivery problems from remote locations, problems contracting with a lab etc.). The EPA has sole discretion to approve or deny additional time to initiate the accelerated testing required in this Part, and may require supporting documentation to support the permittees request.

5. Toxicity Reduction Evaluation (TRE)

a) In accordance with the permittee's *Initial Toxicity Reduction Evaluation Work Plan* and the EPA manual EPA 833-B-99-002 (*Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants*), the permittee must develop as expeditiously as possible a more detailed TRE work plan, which includes:

(i) Further actions to investigate and identify the cause of toxicity;

(ii) Actions the permitee will take to mitigate the impact of the discharge and to prevent the recurrence of toxicity; and

(iii) A schedule for these actions

b) The permittee may initiate a TIE as part of the overall TRE process described in the EPA acute and chronic TIE manuals EPA/600/6-91/005F (Phase I). EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III).

c) If a TIE is initiated prior to completion of the accelerated testing, the accelerated testing schedule may be terminated, or used as necessary in performing the TIE.

6. Quality Assurance

The toxicity testing on each organism must include a series of five test dilutions and a control. The dilution series must include the receiving water concentration (RWC), which is the dilution associated with the chronic toxicity trigger (i.e. 48% from May through September and 67% from October through April); two dilutions above the RWC, and two dilutions below the RWC.

a) All quality assurance criteria and statistical analyses used for chronic tests and reference toxicant tests must be in accordance with *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, EPA/821-R-02-013, October 2002, and individual test protocols.

b) In addition to those quality assurance measures specified in the methodology, the following quality assurance procedures must be followed:

(i) If organisms are not cultured in-house, concurrent testing with reference toxicants must be conducted. If organisms are cultured in-house, monthly reference toxicant testing is sufficient. Reference toxicant tests must be conducted using the same test conditions as the effluent toxicity tests.

(ii) If either the reference toxicant tests or the effluent tests do not meet all test acceptability criteria as specified in the test methods manual, the permittee must re-sample and re-test within 14 days after receipt of the test results.

Control and dilution water must be receiving water or lab water, as appropriate, as described in the manual. If the dilution water used is different from the culture water, a second control, using culture water must also be used. Receiving water may be used as control and dilution water upon notification of the EPA and the IDEQ. In no case may water that has not met test acceptability criteria be used for either dilution or control.

7. Reporting

a) Results of toxicity tests, including any accelerated testing conducted during the month must be reported on the next Discharge Monitoring Report (DMR) after receiving the results of the test and with the next permit application.

b) The permittee must attach to the DMR a report that includes: (1) the toxicity test results; (2) the dates of sample collection and initiation of each toxicity test; (3) the flow rate at the time of sample collection; and

(4) the results of the effluent analysis for chemical parameters including expanded effluent testing required for the outfall as defined in Part I.D.

c) The permittee must report test results for chronic tests in accordance with the guidance in the chapter on "Report Preparation and Test Review" found in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Surface Water Monitoring*.

F. Dixie Drain Facility Monitoring

1. The permittee must begin monitoring at the Dixie Drain Facility when the facility begins discharging except for temperature in the Dixie Slough which must begin at a minimum one year prior to discharge (see condition I.C.4.)
2. Monitoring stations must be established in the Dixie Slough and at the Dixie Drain Facility in the following locations.
   a) Dixie Slough.
      (i) Downstream. Between the outfall culvert and the Boise River**.**
   b) Dixie Drain Facility
      (i) Inflow Channel to the Dixie Drain Facility
      (ii) Outflow Channel from the Dixie Drain Facility
2. Samples from the Outflow Channel and Inflow Channel must be collected on the same day.
3. The permittee must seek approval of all monitoring stations from the IDEQ and the EPA.
4. A failure to obtain the IDEQ and the EPA approval of monitoring stations does not relieve the permittee of the monitoring requirements.
5. Samples must be analyzed for the parameters listed in Table 7A. Quality assurance/quality control procedures for all the monitoring must be documented in the Quality Assurance Plan required under Part I.M prior to compliance monitoring.
6. Dixie Drain Facility monitoring must be reported on the West Boise Treatment Facility DMR.

Table 7A Monitoring at Dixie Drain Facility

Parameter	Units	Sampling Frequency	Location	Sample Type
Flow	mgd	continuous	Inflow Channel Outflow Channel Dixie Slough Upstream	Recording
pH	standard units	continuous	Inflow Channel Outflow Channel Dixie Slough Downstream	Recording

Total Phosphorus	mg/L	1/week	Inflow Channel Outflow Channel Dixie Slough Downstream	Grab
Total Phosphorus Removal	lbs/day	average monthly	----	Calculation[1]
Total Recoverable Aluminum	µg/L	1/week	Inflow Channel Outflow Channel Dixie Slough Downstream	Grab
Temperature[2]	ºF	continuous	Inflow Channel Outflow Channel Dixie Slough Upstream Dixie Slough Downstream	Recording
Flocculent Usage	lbs/year	1/year	----	report
Cost of Treatment	$/year	1/year	----	report
1. Total Phosphorus Removed = (Average Monthly Influent Concentration – Average Monthly Effluent Concentration) × 8.34 × Average Monthly Flow ÷ 1,000 2. Temperature shall be measured using continuous measuring and recording devices such as probes or thermistors set at a one-half hour sampling intervals.				

G. Surface Water Monitoring Requirements

The permittee must conduct surface water monitoring. Surface water monitoring must start 60 days after the effective date of the permit except for dissolved oxygen and temperature. Sampling for dissolved oxygen and temperature must start no later than 180 days from the issuance date of the permit. The surface water monitoring program must meet the following requirements:

1. Monitoring Locations

   a) Monitoring stations must be established in the Boise River at locations approved by the IDEQ. The monitoring locations must be:

   (i) Above the influence of the facility's discharge, and

   (ii) Below the facility's discharge, at a point where the effluent and Boise River are completely mixed, but above the influence of any other point source discharge.

   b) Monitoring locations must be identified in the QAP (see Part I.M.). The permittee must seek approval from the IDEQ for any changes to the surface water monitoring locations. A failure to obtain the IDEQ approval of surface water monitoring stations does not relieve the permittee of the surface water monitoring requirements of this permit.

2. Sample Collection

   a) To the extent practicable, surface water sample collection must occur on the same day as effluent sample collection.

b) Ambient samples for mercury, bacteria, pH, and oil and grease must be a single grab sample. Temperature and dissolved oxygen must be continuous recording. All other ambient samples must be composite grab samples. Composite grab samples must consist of at least 3 grab samples, one from each side of the river and one from the middle of the river.

c) Quality assurance/quality control procedures for all the monitoring must be documented in the Quality Assurance Plan required under Part II.E., "Quality Assurance Plan".

d) Surface water monitoring results must be reported on the appropriate DMR. Additionally, the permittee must submit, to the EPA, all monitoring results and sample collection dates electronically on an excel spreadsheet. The excel spreadsheet must be submitted with the NPDES Application which is due 180 days before the expiration date of the permit.

e) The analytical test methods for metals must, at a minimum, achieve a minimum level (ML) or interim ML (IML) as specified in Table 9 on page **29** of this permit.

f) Samples must be analyzed for the parameters listed in Table 7.

Table 7: Surface Water Monitoring

Parameter	**Units**	**Upstream Sampling Frequency**	**Downstream Sampling Frequency**
E. coli bacteria	colonies/100 ml	1/month	
pH	standard units	1/week	
Temperature, see note 1	°C	Continuous	Continuous
Total Phosphorus	mg/L	1/week	1/week
Dissolved Oxygen	mg/L	Continuous	Continuous
Total ammonia as N, see note 2	mg/L	1/month	---
BOD_5	mg/L	1/month	---
TSS	mg/L	1/month	---
Mercury, see note 3	µg/L	1/month	1/month
Cyanide	mg/L	1/month	---
Arsenic, see note 3	µg/L	1/month	---
Cadmium, see note 4	µg/L	1/month	1/month
Copper, see note 4	µg/L	1/month	1/month
Iron, see note 3	µg/L	1/month	1/month
Lead, see note 4	µg/L	1/month	1/month
Silver, see note 4	µg/L	1/month	1/month
Zinc, see note 4	µg/L	1/month	1/month
Hardness as $CaCO_3$	mg/L	1/month	1/month
Total Organic Carbon	mg/L	1/month	1/month
Alkalinity as $CaCO_3$	mg/L	1/month	---
Aluminum, see note 4 and 5	µg/L	1/quarter	---
Chromium, see note 5 and 6	µg/L	1/quarter	---
Nickel, see note 5 and 6	µg/L	1/quarter	---

Parameter	Units	Upstream Sampling Frequency	Downstream Sampling Frequency
Selenium, see note 3 and 5	µg/L	1/quarter	---
Total Kjeldahl Nitrogen, see note 5	mg/L	1/quarter	---
Nitrate-Nitrite, see note 5	mg/L	1/quarter	---
Oil and Grease, see note 5	mg/L	1/quarter	---
Turbidity, see note 5	NTU	1/quarter	---

1. Temperature must be collected continuously at no less than hourly intervals.
2. The analytical test method for total ammonia must achieve a minimum level of 10 µg/L.
3. Mercury arsenic, iron and selenium must be measured as total recoverable.
4. Upstream monitoring for Cadmium, Copper, Lead, Silver, Zinc, and Aluminum must be dissolved and downstream monitoring shall be dissolved ***and*** total recoverable. These values are needed to determine a translator.
5. Samples must be collected once during each of the following periods: January – March (results must be submitted on the March DMR; April – June (results must be submitted on the June DMR); July – September (results must be submitted on the September DMR); and October – December (results must be submitted on the December DMR).
6. Chromium and nickel must be measured as dissolved.

H. Methylmercury Requirements

1. Fish Tissue Sampling

Objective: The objective of the Methylmercury Fish Tissue Monitoring program is to collect reliable methylmercury fish tissue data, within a specific geographic area, to determine if fish tissue concentrations of methylmercury are compliant with Idaho's methylmercury fish tissue criterion of 0.3 mg/kg. The monitoring program may also be used to advise the public on safe levels of fish consumption.

Applicability: The permittee may satisfy the requirements of the Methylmercury Fish Tissue Monitoring Program by arranging to participate in a cooperative effort with other entities which have NPDES permitted discharges to the Lower Boise River or tributaries to the Lower Boise River.

Requirements: The permittee must develop and submit a Methylmercury Fish Tissue Monitoring Plan to the Director of the Office of Water and Watersheds and the IDEQ for review and approval within one year of the effective date of the permit. At a minimum the plan must include the following elements:

- Identify all participants (e.g., City of Boise, other municipalities or industries) funding the monitoring program. The monitoring plan must be updated each time a municipality or industrial facility joins the cooperative monitoring program, and the City of Boise must provide notice to the EPA and the IDEQ each time a new entity becomes part of the cooperative monitoring program. Written notice must be provided to the EPA and the IDEQ within 30 days of a new participant joining the program.

- Monitoring stations where fish tissue samples will be collected. One monitoring station must be located in each of the following areas:
    - Upstream of River Mile 50 in the Lower Boise River
    - An area downstream of both of the City of Boise outfalls and near the middle of the Lower Boise River
    - Near the mouth of the Boise River
    - Snake River upstream of the confluence of the Boise and Snake Rivers
    - Snake River downstream of the confluence of the Boise and Snake Rivers
    - Within the Brownlee Reservoir
- Name, address of organization collecting and analyzing fish tissue samples. The organization must have experience in the collection and analysis of methylmercury fish tissue samples.

- Develop a sampling plan that specifies sample target species, sample number and size, timing of sample collection, and all essential fish collection, handling, and shipping information for field sampling teams collecting fish. The plan should include a project description, detailed standard operating procedures (SOPs) for fish collection, and instructions for completing field forms and labels and for shipping fish samples. Protocols should be consistent with Chapter 4 of *Implementation Guidance for the Idaho Mercury Water Quality Criteria* (Idaho Department of Environmental Quality, 2005).

- Identify all protocols related to sample preparation methods and analytical methods to be used on samples.

- Identify data quality goals for all sample collection and handling activities and describe the Quality Assurance/Quality Control (QA/QC) techniques employed by field teams to support those goals.

Sample Frequency: Initial sampling must occur within two years of the effective date of the permit. Following the initial sampling event monitoring must occur at least once every two years from five of six sample locations, and yearly at the sixth location. After three sampling cycles, five of the six sample locations should be sampled once every five years. Sample sites will be determined in consultation with IDEQ.

Additional Sampling: At each sample location where fish are collected a surface water sample must be collected and analyzed for total Mercury using an analytical method which achieves a Minimum Level of 0.0005 µg/L.

Reporting Requirements: The permittee must submit a report which lists the participants financing the monitoring program; the name, address and phone number of the entity collecting and analyzing samples; sample locations; target

species used; sample size; time samples were collected; analytical methods used; results, and any other information relevant to the monitoring program. The permittee must submit the report to the EPA, the IDEQ and the Idaho Fish Consumption Advisory Board by March 31st of the year following sampling.

Revision to the Methylmercury Monitoring Plan: Any revisions to the Methylmercury Monitoring Plan must be approved by the IDEQ and the Director of the Office of Water and Watersheds.

2. Mercury Minimization Plan

The permittee must develop and implement a mercury minimization plan that identifies potential sources of mercury and the measures to reduce or eliminate mercury loading. Written notice must be submitted to the EPA and the IDEQ that the plan has been developed and implemented within 90 days of the effective date of this permit. Any existing emergency response and public notification plan may be modified for compliance with this section. The mercury minimization plan should include the following:

a) A Program Plan which includes the permitee's commitments for:

(1) Identification of potential sources of mercury that contribute to discharge concentrations;

(2) Reasonable, cost-effective activities to reduce or eliminate mercury loadings from identified sources;

(3) Tracking mercury source reduction implementation and mercury source monitoring;

(4) Quarterly monitoring of POTW influent and effluent;

(5) Resources and staffing

b) Implementation of cost-effective control measures for direct and indirect contributors, and

c) An annual status report submitted to the US EPA, which includes:

(1) A list of potential mercury sources;

(2) A summary of actions taken to reduce or eliminate mercury discharges to progress toward meeting water quality standards;

(3) Mercury source reduction implementation, source monitoring results, influent and effluent, and results for the previous year;

(4) Proposed adjustments to the Program Plan based on findings from the previous year.

I. Pretreatment Requirements

1. Implementation

The permittee must implement its pretreatment program in accordance with the legal authorities, policies, procedures, staffing levels and financial provisions described in its original approved pretreatment program submission, any program

amendments submitted thereafter and approved by the EPA, and the general pretreatment regulations (40 CFR 403) and any amendments thereof. At a minimum, the permittee must carry out the following activities:

a) Enforce prohibitive discharge standards as set forth in 40 CFR 403.5(a) and (b), categorical pretreatment standards promulgated pursuant to Section 307(b) and (c) of the Act (where applicable), and local limitations and BMPs developed by the permittee in accordance with 40 CFR 403.5(c), whichever are more stringent and are applicable to non-domestic users discharging wastewater into the permittee's collection system. Locally derived limitations must be defined as pretreatment standards under Section 307(d) of the Act.

b) Implement and enforce the requirements of the most recent and the EPA-approved portions of local law and regulations (e.g. municipal code, sewer use ordinance) addressing the regulation of non-domestic users.

c) Update the inventory of non-domestic users at a frequency and diligence adequate to ensure proper identification of non-domestic users subject to pretreatment standards, but no less than once per year. The permittee must notify these users of applicable pretreatment standards in accordance with 40 CFR 403.8(f)(2)(iii).

d) Issue, reissue, and modify, in a timely manner, industrial wastewater discharge permits to, at a minimum, all Significant Industrial Users (SIUs) and categorical industrial users. These documents must contain, at a minimum, conditions identified in 40 CFR 403.8(f)(1)(iii), including Best Management Practices, if applicable. The permittee must follow the methods described in its implementation procedures for issuance of individual permits.

e) Develop and maintain a data management system designed to track the status of the permittee's non-domestic user inventory, non-domestic user discharge characteristics, and their compliance with applicable pretreatment standards and requirements. The permittee must retain all records relating to its pretreatment program activities for a minimum of three years, as required by 40 CFR 403.12(o), and must make such records available to the EPA upon request. The permittee must also provide public access to information considered effluent data under 40 CFR 2.

f) Establish, where necessary, legally binding agreements with contributing jurisdictions to ensure compliance with applicable pretreatment requirements in 40 CFR Part 403 by industrial users within these jurisdictions. These legally binding agreements must identify the agency responsible for the various pretreatment implementation and enforcement activities in the contributing jurisdiction and outline the specific roles, responsibilities and pretreatment activities of each jurisdiction.

g) Carry out inspections, surveillance, and monitoring of non-domestic users to determine compliance with applicable pretreatment standards and requirements. A complete inspection of all SIUs and sampling of all SIUs' effluent must be conducted at least annually.

h) Require SIUs to conduct wastewater sampling as specified in 40 CFR 403.12(e) or (h). Frequency of wastewater sampling by the SIUs must be appropriate for the character and volume of the wastewater but no less than twice per year. Sample collection and analysis must be performed in accordance with 40 CFR 403.12(b)(5)(ii) through (v) and 40 CFR 136. In cases where the Pretreatment Standard requires compliance with a Best Management Practice or pollution prevention alternative, the permittee must require the User to submit documentation to determine compliance with the Standard. If the permittee elects to conduct all non-domestic user monitoring for any SIU instead of requiring self-monitoring, the permittee must conduct sampling in accordance with the requirements of this paragraph, and the requirements of 40 CFR 403.12(g)(2).

i) Enforce and obtain remedies for any industrial user noncompliance with applicable pretreatment standards and requirements. This must include timely and appropriate reviews of industrial reports to identify all violations of the user's permit, the local ordinance, and federal pretreatment standards and requirements. Once violations have been uncovered, the permittee must take timely and appropriate action to address the noncompliance. The permittee's enforcement actions must follow its EPA-approved enforcement response procedures.

j) Publish, at least annually, in a newspaper or newspapers of general circulation that provides meaningful public notice within the jurisdiction(s) served by the POTW, a list of all non-domestic users which, at any time in the previous 12 months, were in significant noncompliance as defined in 40 CFR 403.8 (f)(2)(viii).

k) Maintain adequate staff, funds and equipment to implement its pretreatment program.

l) Conduct an analysis annually to determine whether influent pollutant loadings are approaching the maximum allowable headworks loadings calculated in the permittee's most recent local limits calculations. Any local limits found to be inadequate by this analysis must be revised. The permittee may be required to revise existing local limits or develop new limits if deemed necessary by the EPA.

2. Spill Prevention and Slug Discharges

The permittee must implement an accidental spill prevention program to reduce and prevent spills and slug discharges of pollutants from non-domestic users.

a) Control mechanisms for SIUs must contain requirements to control slug discharges if determined by the POTW to be necessary [40 CFR 403.8(f)(1)(iii)(B)(6)].

b) SIUs must be evaluated for the need for a plan or other action to control slug discharges within 1 year of being designated an SIU.

c) SIUs must notify the POTW immediately of any changes at their facilities affecting the potential for a slug discharge [40 CFR 403.8(f)(2(vi)].

3. Enforcement Requirement

Whenever the EPA finds, on the basis of any available information, that the owner or operator of any source is introducing a pollutant into the POTW in violation of national pretreatment standards, including prohibited discharges, local limits, or categorical standards, or has caused interference or pass through, the EPA may notify the owner or operator of the POTW of such violation. If, within 30 days after such notification has been sent by the EPA to the POTW, the POTW fails to commence appropriate enforcement action to correct the violation, the EPA may take appropriate enforcement action under the authority provided in section 309(f) of the Act.

4. Modification of the Pretreatment Program

If the permittee elects to modify any components of its pretreatment program, it must comply with the requirements of 40 CFR 403.18. No substantial program modification, as defined in 40 CFR 403.18(b), may be implemented prior to receiving written authorization from the EPA.

5. Local Limits Evaluations

Within one year of the effective date of this permit, the permittee must submit to the EPA for review and approval, the results of a local limits study. Thereafter, the permittee must submit the results of a local limit study to the EPA within 5 years of submitting the previous study.

The permittee must coordinate with the EPA to develop a mutually agreeable study plan prior to the initiation of the study. Within 60 days of the effective date of this permit, the permittee must submit a draft local limits study plan to the EPA (Attention: Pretreatment Coordinator), for review and approval. The permittee must use the 2004 EPA *Local Limits Development Guidance* to plan and conduct the local limits study.

The study shall take into account water quality in the receiving stream, inhibition levels for biological processes in the treatment plants, sludge quality goals, and health and safety of workers and the public. The study must address at least the following pollutants: arsenic, cadmium, chromium, copper, cyanide, lead, mercury, nickel, silver, zinc, molybdenum, selenium, 5-day BOD, TSS and ammonia. The study must also assess (including sampling) major industrial and commercial sources of these pollutants and characterize their discharges.

The study must calculate the maximum allowable headworks loadings (MAHLs) for the pollutants set forth above, as well as for any other pollutant that may interfere with or pass through the POTW. Whenever the POTW influent loadings meet any of the following conditions, the local limits are needed:

a) Toxics

(i) Average influent loading of a toxic pollutant exceeds 60 % percent of the MAHL.

(ii) Maximum daily influent loading of a toxic pollutant exceed 80% percent of the MAHL, any time in the 12-month period preceding the analysis.

b) BOD_5, TSS, and Ammonia

(i) Monthly average influent loading reaches 80% percent of average design capacity for BOD, TSS, and ammonia during any one month in the 12-month period preceding the analysis.

The study must also determine what local limits are required to ensure that the maximum allowable headworks loadings established by the City are not exceeded. Results of the study shall include proposed local limits if necessary or appropriate, maximum allowable headworks loadings, all supporting calculations, and all assumptions. If no local limits are proposed, the permittee must include with the study and documentation a discussion and justification (calculations, assumptions, the EPA approved scientific methodologies and practices) for not implementing local limits. If the permittee concludes that local limits are necessary, the City must promulgate local limits within 120 days after the EPA's approval of the local limits.

6. Control of Undesirable Pollutants

The permittee must not allow introduction of the following pollutants into the publicly owned treatment works (POTW):

a) Pollutants which will create a fire or explosion hazard in the POTW, including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 ºF or 60 ºC using the test methods specified in 40 CFR 261.21;

b) Pollutants which will cause corrosive structural damage to the POTW, but in no case, discharges with a pH lower than 5.0, unless the POTW is designed to accommodate such discharges;

c) Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW (including the collection system) resulting in interference;

d) Any pollutant, including oxygen demanding pollutants (BOD, etc.), released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW;

e) Heat in amounts which inhibit biological activity in the POTW resulting in interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 ºC (104 ºF) unless the Regional Administrator, upon request of the POTW, approves alternate temperature limits;

f) Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

g) Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and

h) Any trucked or hauled pollutants, except at discharge points designated by the POTW.

7. Requirements for Industrial users

The permittee must require any industrial user of its treatment works to comply with any applicable requirements in 40 CFR 403 through 471.

8. Sampling Requirements

a) Parameters: The permittee must sample influent and effluent from the POTW for arsenic, cadmium, chromium, copper, cyanide, lead, mercury, molybdenum, nickel, selenium, silver, and zinc. Metals must be analyzed and reported as total metals. If the POTW accepts ammonia from industrial sources, the permittee must also sample the POTW influent and effluent for ammonia. The permittee must sample sludge for arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, zinc, and percent solids.

b) Sampling Events: Sampling events must be conducted twice per year: once in April and once in October.

c) Sampling Locations, Sample Type, and Sample Frequency: The permittee must sample as described in Table 8. Influent samples must be taken prior to mixing with any internal wastestreams (including gravity belt thickener recirculation stream). To the extent that the timing of effluent sampling coincides with sampling required for whole effluent toxicity testing under paragraph I.E., these monitoring results will satisfy the requirements of that paragraph.

Table 8: Pretreatment Monitoring

Waste stream	Sample Type	Frequency
Influent	24-hour Composite[1]	3 days within a week (Mon - Fri)
Effluent	24-hour Composite[1]	3 days within a week (Mon - Fri)
Sludge	Grab	Once, during the same time period that influent and effluent samples are being taken
1. Influent and effluent samples for cyanide must be collected and analyzed as required in paragraph 8.h of this part.		

d) Analytical Methods: For influent and effluent pretreatment sampling, the permittee must use the EPA-approved analytical methods that, at a minimum, achieve the minimum level (ML) or interim ML (IML) listed in Table 9.

Table 9: Minimum Levels and Interim Minimum Levels

Parameter	ML and IML, µg/l
Arsenic	1.3
Cadmium	0.1
Chromium	1.0
Copper	1.0
Cyanide	5.0
Lead	0.16

Parameter	ML and IML, µg/l
Mercury This ML applies until September 30, 2012	0.004[1]
Mercury This ML applies starting October 1, 2012	0.0005[1]
Molybdenum	1.0
Nickel	2.5
Silver	0.3
Zinc	5.0
1. The permittee may use less sensitive EPA-approved methods for influent mercury monitoring provided that the method is sufficiently sensitive to detect and quantify the level of mercury in the influent sample. If mercury is not detected in the sample, the permittee must reanalyze the influent using a method that achieves the ML shown in Table 9.	

e) Sludge Sampling: Sludge samples must be taken as the sludge leaves the dewatering device or digesters.

f) Sludge Reporting: Metals concentrations in sludge must be reported in mg/kg, dry weight.

g) Reporting Results: Analytical results for each day's samples must be reported separately. Sample results must be submitted with the pretreatment annual report required in Part II.A.9., below.

h) Cyanide sampling: Influent and effluent sampling for cyanide must be conducted as follows. Eight discrete grab samples must be collected over a 24-hour day. Each grab sample must be at least 100 ml. Each sample must be checked for the presence of chlorine and/or sulfides prior to preserving and compositing (refer to Standard Methods, 4500-CN B). If chlorine and/or sulfides are detected, the sample must be treated to remove any trace of these parameters. After testing and treating for the interference compounds, the pH of each sample must be adjusted, using sodium hydroxide, to 12.0 standard units. Each sample can then be composited into a larger container which has been chilled to 4 degrees Celsius, to allow for one analysis for the day.

9. Pretreatment Report

a) The permittee must submit an annual report pursuant to 40 CFR 403.12(i) that describes the permittee's program activities over the period October 1 of the previous year to September 30 of the current year. This report must be submitted to the following address no later than November 1st of each year:

Pretreatment Coordinator
U.S. Environmental Protection Agency
Region 10, OWW-130
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

b) The pretreatment report must be compiled following the EPA Region 10 Annual Report Guidance. At a minimum, the report must include:

(i) An updated non-domestic user inventory, including those facilities that are no longer discharging (with explanation), and new dischargers, appropriately categorized and characterized. Categorical users should have the applicable category noted as well as cases where more stringent local limits apply instead of the categorical standard.

(ii) Results of wastewater and sludge sampling at the POTW as specified in Part II.A.8 (above).

(iii) Calculations of removal rates for each pollutant for each day of sampling.

(iv) An analysis and discussion of whether the existing local limitations in the permittee's sewer use ordinance continue to be appropriate to prevent treatment plant interference and pass through of pollutants that could affect water quality or sludge quality. This should include a comparison between influent loadings and the most recent relevant maximum allowable headworks loadings calculated for the treatment plant.

(v) Status of program implementation, including:

(a) Any planned modifications to the pretreatment program that have been approved by the EPA, including staffing and funding updates.

(b) A description of any interference, upset, or NPDES permit violations experienced at the POTW which were directly or indirectly attributable to non-domestic users, including:

(i) Date & time of the incident

(ii) Description of the effect on the POTW's operation

(iii) Effects on the POTW's effluent and biosolids quality

(iv) Identification of suspected or known sources of the discharge causing the upset

(v) Steps taken to remedy the situation and to prevent recurrence

(c) Listing of non-domestic users inspected and/or monitored during the report year with dates and an indication compliance status.

(d) Listing of non-domestic users planned for inspection and/or monitoring for the coming year along with associated frequencies.

(e) Listing of non-domestic users whose permits have been issued, reissued, or modified during the report year along with current permit expiration dates.

(f) Listing of non-domestic users notified of promulgated pretreatment standards and/or local standards during the report year as required in 40 CFR 403.8(f)(2)(iii).

(g) Listing of non-domestic users notified of promulgated pretreatment standards or applicable local standards that are on compliance schedules. The listing must include the final date of compliance for each facility.

(vi) Status of enforcement activities including:

(a) Listing of non-domestic users who failed to comply with applicable pretreatment standards and requirements, including:

(i) Summary of the violation(s).

(ii) Enforcement action taken or planned by the permittee.

(iii) Present compliance status as of the date of preparation of the pretreatment report.

(b) Listing of those users in significant noncompliance during the report year as defined in 40 CFR 403.8(f)(2)(viii) and a copy of the newspaper publication of those users' names.

(c) The EPA may require more frequent reporting on those users who are determined to be in significant noncompliance.

J. Sludge (Biosolids)

Pollutants contained in sludge from other treatment works, or in sludge generated, processed or handled at this facility or land applied by this facility shall not be discharged to surface waters either directly or indirectly. Sludge from other facilities may not be received at this facility mixed with sewage, and may not be mixed with sewage within the plant. Sludge from this facility may not be mixed with sewage or other wastewater prior to treatment and discharge, or mixed with effluent prior to discharge, or discharged directly to surface waters. See Part I.C.3 for compliance schedule requirements and interim limitations.

K. Removed Substances

Collected screenings, grit, solids, biosolids, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters must be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

L. Water Effects Ratio Study

No later than 4 years after the effective date of the permit the permittee must submit to the EPA and the IDEQ a report which evaluates whether the key characteristics of the effluent and receiving water remain in the range of conditions tested to establish the site specific water effect ratios (WER) for the acute and chronic aquatic life criteria for copper and lead found at IDAPA 58.01.02.278.04. The report must

evaluate, at a minimum the relative proportions of effluent flows to receiving water flows, total hardness, major ion chemistry (e.g., calcium, magnesium, calcium/magnesium ratios, sodium, and potassium), and organic carbon. Based upon review of the report, the IDEQ may, at its discretion, also require confirmatory toxicity testing.

M. Quality Assurance Plan (QAP)

The permittee must develop a quality assurance plan (QAP) for all monitoring required by this permit. The permittee must submit written notice to the EPA and the IDEQ that the QAP has been developed and implemented within 90 days of the effective date of this permit. Any existing QAPs may be modified for compliance with this section.

1. The QAP must be designed to assist in planning for the collection and analysis of effluent and receiving water samples in support of the permit and in explaining data anomalies when they occur.
2. Throughout all sample collection and analysis activities, the permittee must use the EPA-approved QA/QC and chain-of-custody procedures described in *Requirements for Quality Assurance Project Plans* (EPA/QA/R-5) and *Guidance for Quality Assurance Project Plans* (EPA/QA/G-5). The QAP must be prepared in the format that is specified in these documents.
3. At a minimum, the QAP must include the following:
    a) Details on the number of samples, type of sample containers, preservation of samples, holding times, analytical methods, analytical detection and quantitation limits for each target compound, type and number of quality assurance field samples, precision and accuracy requirements, sample preparation requirements, sample shipping methods, and laboratory data delivery requirements.
    b) Map(s) indicating the location of each sampling point.
    c) Qualification and training of personnel.
    d) Name(s), address(es) and telephone number(s) of the laboratories used by or proposed to be used by the permittee.
4. The permittee must amend the QAP whenever there is a modification in sample collection, sample analysis, or other procedure addressed by the QAP.
5. Copies of the QAP must be kept on site and made available to the EPA and/or the IDEQ upon request.

N. Design Criteria Requirements

Each month, the permittee shall compute an annual average value for flow, and BOD_5 and TSS loading entering the facility based on the previous twelve months data or all data available, whichever is less. If the facility performs plant upgrades that affects the design criteria listed in Table 8, only data collected after the upgrade should be used in determining the annual average value. When the average annual values

exceed 85% of the design criteria values listed in Table 10, the permittee shall develop a facility plan and schedule within one year from the date of first exceedance. The plan must include the permittee's strategy for continuing to maintain compliance with effluent limits, and will be made available to the Director or authorized representative upon request.

Table 10 – Design Criteria

Criteria	Value	Units
Average Flow	24	mgd
Influent BOD_5 Loading	41,600	lbs/day
Influent TSS Loading	48,800	lbs/day

O. Operations and Maintenance Review

1. Within 60 days of the effective date of the permit, the permittee must review its operations and maintenance plan and ensure that it includes appropriate best management practices (BMPs), the plan must be reviewed annually thereafter. BMPs include measures which prevent or minimize the potential for the release of pollutants to the Boise River. The plan must be retained on site and made available to the EPA and the IDEQ upon request.
2. The permittee must develop a description of pollution prevention measures and controls appropriate for the facility. The appropriateness and priorities of controls in the plan shall reflect identified potential sources of pollutants at the facility. The description of BMPs shall address, to the extent practicable, the following minimum components: spill prevention and control; optimization of chemical usage; preventive maintenance program; minimization of pollutant inputs from industrial users; research, development and implementation of a public information and education program to control the introduction of household hazardous material to the sewer system; and water conservation.

P. Emergency Response and Public Notification Plan

1. The permittee must develop and implement an overflow emergency response and public notification plan that identifies measures to protect public health from overflows that may endanger health and unanticipated bypasses or upsets that exceed any effluent limitation in the permit. At a minimum the plan must include mechanisms to:
    a) Ensure that the permittee is aware (to the greatest extent possible) of all overflows from portions of the collection system over which the permittee has ownership or operational control and unanticipated bypass or upset that exceed any effluent limitation in the permit;
    b) Ensure appropriate responses including assurance that reports of an overflow or of an unanticipated bypass or upset that exceed any effluent

limitation in the permit are immediately dispatched to appropriate personnel for investigation and response;

c) Ensure immediate notification to the public, health agencies, and other affected public entities (including public water systems). The overflow response plan must identify the public health and other officials who will receive immediate notification;

d) Ensure that appropriate personnel are aware of and follow the plan and are appropriately trained; and

e) Provide emergency operations.

2. The permittee must submit written notice to the EPA and the IDEQ that the plan has been developed and implemented within 180 days of the effective date of this permit. Any existing emergency response and public notification plan may be modified for compliance with this section.

Q. Modification for Cause

1. This permit may be modified, revoked and reissued, or terminated either at the request of any interested person (including the permittee) or upon the EPA's initiative. However, permits may only be modified, revoked and reissued, or terminated for the reasons specified in 40 CFR 122.62, 122.63 and 122.64. All requests must be in writing and must contain facts or reasons supporting the request. If a permit modification satisfies the criteria in 40 CFR 122.63 for "minor modifications" the permit may be modified without a draft permit or public review. Otherwise, a draft modified permit must be prepared and other procedures in 40 CFR 124 followed.

2. If the City does not consolidate the Lander Street POTW to an expanded plant at the West Boise Facility this permit may be modified

3. New information may be a cause for modification of this permit. The permit may be modified during its term for this cause only if the information was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and would have justified the application of different permit conditions at the time of issuance. New information may include but is not limited to the following:

a) Information supporting a phosphorous offset at the Dixie Drain, including information that would describe the offset, how it would be implemented, measured and monitored.

b) Effluent and/or receiving water quality and/or quantity data.

c) New water quality modeling analyses, including modeling that demonstrates new phosphorous effluent limits would not adversely affect waters between the City of Boise and the Dixie Drain.

d) All necessary information related to the application of the State's temperature criteria.

4. New water quality standards regulations may be a cause for modification of this permit. The permit may be modified during its term for this cause if the permit condition requested to be modified was based on an EPA approved water quality standard, and the EPA has approved a State action with regard to the water quality standard on which the permit condition was based.
5. Any modification of this permit must comply with all applicable requirements of the Act and implementing regulations, including but not limited to:
    a) The anti-backsliding provisions of the Act (Sections 402(o) and 303(d)(4))
    b) Technology-based treatment requirements (40 CFR 125.3 and 133, CWA Section 301(b)(1)(B))
    c) The applicable water quality requirements of all affected States (40 CFR 122.4(d), 122.44(d), CWA Sections 301(b)(1)(C) and 401(a)(2)).
    d) Any conditions included in the State of Idaho's CWA Section 401 certification of the modified permit which are necessary to assure compliance with the applicable provisions of CWA Sections 208(e), 301, 302, 303, 306, and 307 and with appropriate requirements of State law.
6. If, at least 18 months prior to the expiration date of the permit, the City submits a request for permit modification, or revocation and reissuance, for a phosphorus offset at Dixie Drain consistent with the provisions outlined above, or for the application of the State's temperature criteria consistent with the provisions outlined above, the Director of the Office of Water and Watersheds will grant or deny the request within 90 days of receiving the request. If the EPA grants the request, the EPA will submit a preliminary draft NPDES Permit containing the Dixie Drain offsets to the IDEQ for review and draft section 401 certification within 12 months of receiving the request for permit modification or revocation and reissuance.

II. Monitoring, Recording and Reporting Requirements

A. Representative Sampling (Routine and Non-Routine Discharges)

Samples and measurements must be representative of the volume and nature of the monitored discharge.

In order to ensure that the effluent limits set forth in this permit are not violated at times other than when routine samples are taken, the permittee must collect additional samples at the appropriate outfall whenever any discharge occurs that may reasonably be expected to cause or contribute to a violation that is unlikely to be detected by a routine sample. The permittee must analyze the additional samples for those parameters limited in Part I.B. of this permit that are likely to be affected by the discharge.

The permittee must collect such additional samples as soon as the spill, discharge, or bypassed effluent reaches the outfall. The samples must be analyzed in accordance with paragraph III.C ("Monitoring Procedures"). The permittee must report all

additional monitoring in accordance with paragraph III.D ("Additional Monitoring by Permittee").

B. Reporting of Monitoring Results

Each month the permittee must summarize monitoring results on the Discharge Monitoring Report (DMR). The permittee must submit reports monthly, postmarked by the 20th day of the following month. The permittee must sign and certify all DMRs, and all other reports, in accordance with the requirements of Part V.E. of this permit ("Signatory Requirements"). Reports must be submitted electronically using NetDMR (a web-based tool that allows permittees to electronically submit discharge monitoring reports (DMRs) and other required reports via a secure internet connection) Specific requirements regarding submittal using NetDMR are described below:

Submittal of Reports using Net DMR

NetDMR is accessed from: http://www.epa.gov/netdmr. Upon the effective date of this permit the permittee shall begin submitting DMRs and reports required under this permit electronically to EPA using NetDMR. All reports required under the permit shall be submitted to EPA as an electronic attachment to the DMR. The permittee must sign and certify all DMRs, and all other reports, in accordance with the requirements of Part V.E. of this permit ("Signatory Requirements"). Once a permittee begins submitting reports using NetDMR, it will no longer be required to submit hard copies of DMRs or other reports to EPA.

C. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR 136, unless other test procedures have been specified in this permit or approved by the EPA as an alternate test procedure under 40 CFR 136.5.

D. Additional Monitoring by Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the permittee must include the results of this monitoring in the calculation and reporting of the data submitted in the DMR.

Upon request by the EPA, the permittee must submit results of any other sampling, regardless of the test method used.

E. Records Contents

Records of monitoring information must include:

1. the date, exact place, and time of sampling or measurements;
2. the name(s) of the individual(s) who performed the sampling or measurements;
3. the date(s) analyses were performed;
4. the names of the individual(s) who performed the analyses;
5. the analytical techniques or methods used; and

6. the results of such analyses.

F. Retention of Records

The permittee must retain records of all monitoring information, including, all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, copies of DMRs, a copy of the NPDES permit, and records of all data used to complete the application for this permit, for a period of at least five years from the date of the sample, measurement, report or application. This period may be extended by request of the EPA or the IDEQ at any time.

G. Twenty-four Hour Notice of Noncompliance Reporting

1. The permittee must report the following occurrences of noncompliance by telephone within 24 hours from the time the permittee becomes aware of the circumstances:
    a) any noncompliance that may endanger health or the environment;
    b) any unanticipated bypass that exceeds any effluent limitation in the permit (See Part IV.F., "Bypass of Treatment Facilities");
    c) any upset that exceeds any effluent limitation in the permit (See Part IV.G., "Upset Conditions"); or
    d) any violation of a maximum daily discharge limitation for Mercury or Total Ammonia, and any violation of the instantaneous maximum limit for *E. coli*.
    e) any overflow prior to the treatment works over which the permittee has ownership or has operational control. An overflow is any spill, release or diversion of municipal sewage including:
    (i) an overflow that results in a discharge to waters of the United States; and
    (ii) an overflow of wastewater, including a wastewater backup into a building (other than a backup caused solely by a blockage or other malfunction in a privately owned sewer or building lateral) that does not reach waters of the United States.
2. The permittee must also provide a written submission within five days of the time that the permittee becomes aware of any event required to be reported under subpart 1 above. The written submission must contain:
    a) a description of the noncompliance and its cause;
    b) the period of noncompliance, including exact dates and times;
    c) the estimated time noncompliance is expected to continue if it has not been corrected; and
    d) steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

e) if the noncompliance involves an overflow, the written submission must contain:

(i) The location of the overflow;

(ii) The receiving water (if there is one);

(iii) An estimate of the volume of the overflow;

(iv) A description of the sewer system component from which the release occurred (e.g., manhole, constructed overflow pipe, crack in pipe);

(v) The estimated date and time when the overflow began and stopped or will be stopped;

(vi) The cause or suspected cause of the overflow;

(vii) Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;

(viii) An estimate of the number of persons who came into contact with wastewater from the overflow; and

(ix) Steps taken or planned to mitigate the impact(s) of the overflow and a schedule of major milestones for those steps.

3. The Director of the Office of Compliance and Enforcement may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the NPDES Compliance Hotline in Seattle, Washington, by telephone, (206) 553-1846.

4. Reports must be submitted to;

US EPA Region 10
Attn: ICIS Data Entry Team
200 Sixth Avenue, Suite 900
OCE-133
Seattle, Washington 98101-3140

Idaho Department of Environmental Quality
Boise Regional Office
1445 N. Orchard Street
Boise, Idaho 83706

H. Other Noncompliance Reporting

The permittee must report all instances of noncompliance, not required to be reported within 24 hours, at the time that monitoring reports for Part III.B ("Reporting of Monitoring Results") are submitted. The reports must contain the information listed in Part III.G.2 of this permit ("Twenty-four Hour Notice of Noncompliance Reporting").

I. Public Notification

The permittee must immediately notify the public, health agencies and other affected entities (e.g., public water systems) of any overflow which the permittee owns or has operational control; or any unanticipated bypass or upset that exceeds any effluent limitation in the permit in accordance with the notification procedures developed in accordance with Part II.G.

J. Notice of New Introduction of Toxic Pollutants

The permittee must notify the Director of the Office of Water and Watersheds and the IDEQ in writing of:

1. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to Sections 301 or 306 of the Act if it were directly discharging those pollutants; and
2. Any substantial change in the volume or character of pollutants being introduced into the POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
3. For the purposes of this section, adequate notice must include information on:
    a) The quality and quantity of effluent to be introduced into the POTW, and
    b) Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.
4. The permittee must notify the Director of the Office of Water and Watersheds at the following address:

    US EPA Region 10
    Attn: NPDES Permits Unit Manager
    1200 Sixth Avenue, Suite 900
    OWW-130
    Seattle, WA 98101-3140

K. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date.

III. Compliance Responsibilities

A. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

B. Penalties for Violations of Permit Conditions

1. Civil and Administrative Penalties. Pursuant to 40 CFR Part 19 and the Act, any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently $37,500 per day for each violation).

2. Administrative Penalties. Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Pursuant to 40 CFR 19 and the Act, administrative penalties for Class I violations are not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently $16,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $37,500). Pursuant to 40 CFR 19 and the Act, penalties for Class II violations are not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently $16,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $177,500).

3. Criminal Penalties:

    a) Negligent Violations. The Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than 2 years, or both.

    b) Knowing Violations. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both.

c) Knowing Endangerment. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

d) False Statements. The Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both. The Act further provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

C. Need To Halt or Reduce Activity not a Defense

It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this permit.

D. Duty to Mitigate

The permittee must take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

E. Proper Operation and Maintenance

The permittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of

back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

F. Bypass of Treatment Facilities

1. Bypass not exceeding limitations. The permittee may allow any bypass to occur that does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2 and 3 of this Part.
2. Notice.
    a) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it must submit prior written notice, if possible at least 10 days before the date of the bypass.
    b) Unanticipated bypass. The permittee must submit notice of an unanticipated bypass as required under Part III.G ("Twenty-four Hour Notice of Noncompliance Reporting").
3. Prohibition of bypass.
    a) Bypass is prohibited, and the Director of the Office of Compliance and Enforcement may take enforcement action against the permittee for a bypass, unless:
    (i) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
    (ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and
    (iii) The permittee submitted notices as required under paragraph 2 of this Part.
    b) The Director of the Office of Compliance and Enforcement may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 3.a. of this Part.

G. Upset Conditions

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the permittee meets the requirements of paragraph 2 of this Part. No determination made during administrative review of claims that

noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

2. Conditions necessary for a demonstration of upset. To establish the affirmative defense of upset, the permittee must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
    a) An upset occurred and that the permittee can identify the cause(s) of the upset;
    b) The permitted facility was at the time being properly operated;
    c) The permittee submitted notice of the upset as required under Part III.G, "Twenty-four Hour Notice of Noncompliance Reporting;" and
    d) The permittee complied with any remedial measures required under Part IV.D, "Duty to Mitigate."
3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

H. Toxic Pollutants

The permittee must comply with effluent standards or prohibitions established under Section 307(a) of the Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

I. Planned Changes

The permittee must give written notice to the Director of the Office of Water and Watersheds as specified in part III.J.4. and the IDEQ as soon as possible of any planned physical alterations or additions to the permitted facility whenever:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source as determined in 40 CFR 122.29(b); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this permit.
3. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application site.

J. Anticipated Noncompliance

The permittee must give written advance notice to the Director of the Office of Compliance and Enforcement and the IDEQ of any planned changes in the permitted facility or activity that may result in noncompliance with this permit.

K. Reopener

This permit may be reopened to include any applicable standard for sewage sludge use or disposal promulgated under section 405(d) of the Act. The Director may modify or revoke and reissue the permit if the standard for sewage sludge use or disposal is more stringent than any requirements for sludge use or disposal in the permit, or controls a pollutant or practice not limited in the permit.

IV. General Provisions

A. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause as specified in 40 CFR 122.62, 122.64, or 124.5. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

B. Duty to Reapply

If the permittee intends to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. In accordance with 40 CFR 122.21(d), and unless permission for the application to be submitted at a later date has been granted by the Regional Administrator, the permittee must submit a new application at least 180 days before the expiration date of this permit.

C. Duty to Provide Information

The permittee must furnish to the EPA and the IDEQ, within the time specified in the request, any information that the EPA or the IDEQ may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee must also furnish to the EPA or the IDEQ, upon request, copies of records required to be kept by this permit.

D. Other Information

When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or that it submitted incorrect information in a permit application or any report to the EPA or the IDEQ, it must promptly submit the omitted facts or corrected information in writing.

E. Signatory Requirements

All applications, reports or information submitted to the EPA and the IDEQ must be signed and certified as follows.

1. All permit applications must be signed as follows:
    a) For a corporation: by a responsible corporate officer.
    b) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.

c) For a municipality, state, federal, Indian tribe, or other public agency: by either a principal executive officer or ranking elected official.

2. All reports required by the permit and other information requested by the EPA or the IDEQ must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a) The authorization is made in writing by a person described above;

   b) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company; and

   c) The written authorization is submitted to the Director of the Office of Compliance and Enforcement and the IDEQ.

3. Changes to authorization. If an authorization under Part V.E.2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part V.E.2. must be submitted to the Director of the Office of Compliance and Enforcement and the IDEQ prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under this Part must make the following certification:

   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

F. Availability of Reports

In accordance with 40 CFR 2, information submitted to the EPA pursuant to this permit may be claimed as confidential by the permittee. In accordance with the Act, permit applications, permits and effluent data are not considered confidential. Any confidentiality claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, the EPA may make the information available to the public without further notice to the permittee. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR 2,

Subpart B (Public Information) and 41 Fed. Reg. 36902 through 36924 (September 1, 1976), as amended.

G. Inspection and Entry

The permittee must allow the Director of the Office of Compliance and Enforcement, EPA Region 10; the IDEQ or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

H. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, nor any infringement of federal, tribal, state or local laws or regulations.

I. Transfers

This permit is not transferable to any person except after written notice to the Director of the Office of Water and Watersheds as specified in Part III.J.4. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act. (See 40 CFR 122.61; in some cases, modification or revocation and reissuance is mandatory).

J. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Act.

V. Definitions

1. “Act” means the Clean Water Act.

2. "Acute Toxic Unit" ("TUa") is a measure of acute toxicity. TUa is the reciprocal of the effluent concentration that causes 50 percent of the organisms to die by the end on the acute exposure period (i.e., 100/"LC50").
3. "Administrator" means the Administrator of the EPA, or an authorized representative.
4. "Average annual discharge limitation" means the highest allowable average of "daily discharges" over a calendar year, calculated as the sum of all "daily discharges" measured during a calendar year divided by the number of "daily discharges" measured during that calendar year.
5. "Average monthly discharge limitation" means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.
6. "Average weekly discharge limitation" means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.
7. "Best Management Practices" (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage areas.
8. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
9. "Chronic toxic unit" ("TUc") is a measure of chronic toxicity. TUc is the reciprocal of the effluent concentration that causes no observable effect on the test organisms by the end of the chronic exposure period (i.e., 100/"NOEC").
10. "Composite" - see "24-hour composite".
11. "Daily discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.
12. "Director of the Office of Compliance and Enforcement" means the Director of the Office of Compliance and Enforcement, EPA Region 10, or an authorized representative.
13. "Director of the Office of Water and Watersheds" means the Director of the Office of Water and Watersheds, EPA Region 10, or an authorized representative.

14. "DMR" means discharge monitoring report.
15. "EPA" means the United States Environmental Protection Agency.
16. "Geometric Mean" means the n^{th} root of a product of n factors, or the antilogarithm of the arithmetic mean of the logarithms of the individual sample values.
17. "Grab" sample is an individual sample collected over a period of time not exceeding 15 minutes.
18. "IDEQ" means the Idaho Department of Environmental Quality.
19. "Inhibition concentration", IC, is a point estimate of the toxicant concentration that causes a given percent reduction (p) in a non-quantal biological measurement (e.g., reproduction or growth) calculated from a continuous model (e.g., Interpolation Method).
20. "Interference" is defined in 40 CFR 403.3.
21. "Interim Minimum Level (IML)" is used when a method-specific "Minimum Level (ML)" has not been published by the EPA. The IML is equal to 3.18 times the method-specified "Method Detection Limit (MDL)".
22. "LC50" means the concentration of toxicant (e.g., effluent) which is lethal to 50 percent of the test organisms exposed in the time period prescribed by the test.
23. "Maximum daily discharge limitation" means the highest allowable "daily discharge."
24. "Maximum Weekly Maximum Temperature" is the mean of daily maximum temperatures measured over a consecutive 7 day period ending on the day of calculation.
25. "Method Detection Limit (MDL)" means the minimum concentration of a substance (analyte) that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte.
26. "Minimum Level (ML)" means the concentration at which the entire analytical system must give a recognizable signal and an acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method-specified sample weights, volumes and processing steps have been followed.
27. "NOEC" means no observed effect concentration. The NOEC is the highest concentration of toxicant (e.g., effluent) to which organisms are exposed in a chronic toxicity test [full life-cycle or partial life-cycle (short term) test], that causes no observable adverse effects on the test organisms (i.e., the highest concentration of effluent in which the values for the observed responses are not statistically significantly different from the controls).

28. "NPDES" means National Pollutant Discharge Elimination System, the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits . . . under sections 307, 402, 318, and 405 of the CWA.
29. "Pass Through" means a Discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).
30. "QA/QC" means quality assurance/quality control.
31. "Regional Administrator" means the Regional Administrator of Region 10 of the EPA, or the authorized representative of the Regional Administrator.
32. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
33. "Significant Industrial User" means all industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR chapter I, subchapter N; and any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process wastestream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority as defined in 40 CFR 403.12(a) on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)). Upon a finding that an industrial user meeting above the criteria has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority (as defined in 40 CFR 403.12(a)) may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.
34. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
35. "24-hour composite" sample means a combination of at least 8 discrete sample aliquots of at least 100 milliliters, collected over periodic intervals from the same location, during the operating hours of a facility over a 24 hour period. The composite must be flow proportional. The sample aliquots must be

collected and stored in accordance with procedures prescribed in the most recent edition of Standard Methods for the Examination of Water and Wastewater.

APPENDIX A

MINIMUM LEVELS AND INTERIM MINIMUM LEVELS FOR EXPANDED EFFLUENT TESTING

PARAMETER	Minimum Level (µg/L)	Interim Minimum Level (µg/L)
Acenaphthene	10	---
Acenaphthylene	10	---
Acrolein	---	2.2
Acrylonitrile	---	1.6
Anthracene	10	---
Benzene	---	0.6
Benzidine	---	0.35
Benzo(a)anthracene	---	0.04
3,4-Benzofluoranthene (benzo(b)fluoranthene)	---	0.03
Benzo(ghi)perylene	20	---
Benzo(k)fluoranthene	---	0.054
Bis(2-chloroethoxy)methane	10	---
Bis(2-chloroethyl)ether	---	1.0
Bis(2-chloroisopropyl)ether	10	---
Bis(2-ethylhexyl)phthalate	---	6
Bromoform	---	0.6
Bromomethane (Methyl bromide)	---	3.75
4-Bromophenyl phenyl ether	10	
Butyl benzyl phthalate	10	
Carbon Tetrachloride	---	0.38
Chlorobenzene	10	---
Chlorodibromomethane	---	0.29
Chlorethane	50	---
2-Chloroethyl vinyl ether	10	---
Chloroform	---	5.1
Chloromethane (Methyl chloride)	50	---

PARAMETER	Minimum Level (µg/L)	Interim Minimum Level (µg/L)
4-Chloro-3-methylphenol (p-chloro-m-cresol)	10	---
2-Chloronapthalene	10	---
2-Chlorophenol	10	---
4-Chlorophenyl phenyl ether	10	---
Chrysene	---	0.48
Dibenzo(a,h)anthracene	---	0.10
1,2-Dichlorobenzene	10	---
1,3-Dichlorobenzene	10	---
1,4-Dichlorobenzene	10	---
3,3'-Dichlorobenzidine	---	0.41
Dichlorobromomethane	---	0.3
1,1-Dichloroethane	10	---
1,2-Dichloroethane	---	0.10
1,1 Dichloroethylene	10	---
1,2-trans-Dichloroethene	10	---
2,4-Dichlorophenol	10	---
1,2-Dichloropropane	---	0.13
1,3-Dichloropropene		
cis-1,3-Dichloropropene	---	1.08
trans-1,3-Dichloropropene	---	0.6
Diethyl phthalate	10	---
2,4-Dimethylphenol	10	---
Dimethyl phthalate	10	---
Di-n-butyl phthalate	10	---
2,4-Dinitrophenol	---	41
2,4-Dinitrotoluene	---	0.06
2,6-Dinitrotoluene	---	0.03
Di-n-octyl phthalate	10	---
Ethylbenzene	10	---
Fluoranthene	10	---

PARAMETER	Minimum Level (µg/L)	Interim Minimum Level (µg/L)
Fluorene	10	---
Hexachlorobenzene	---	0.16
Hexachlorobutadiene	---	1.08
Hexachlorocyclopentadiene	10	---
Hexachloroethane	---	0.10
Indeno (1,2,3-cd)pyrene	---	0.137
Isophorone	10	18.1
2-methyl-4,6-dinitrophenol (4,6 dinitro-o-cresol)	20	---
Methylene Chloride	---	0.80
Naphthalene	10	---
Nitrobenzene	10	---
2-Nitrophenol	20	---
4-Nitrophenol	50	---
N-nitrosodimethylamine	---	0.48
N-nitrosodi-n-propylamine	---	1.46
N-nitrosodiphenylamine	---	2.58
Pentachlorophenol	---	1.88
Phenanthrene	---	2.04
Phenol	10	---
Pyrene	10	---
1,1,2,2-Tetrachloroethane	---	0.10
Tetrachloroethylene	---	0.10
Toluene	10	---
1,2,4-Trichlorobenzene	10	---
1,1,1-Trichloroethane	---	0.10
1,1,2-Trichloroethane	---	0.06
Trichloroethylene	---	0.38
2,4,6-Trichlorophenol	---	2.04
Vinyl Chloride	---	0.57

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER RESOURCES

PERMIT

TO DISCHARGE WASTEWATER UNDER THE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended, the

The Neuse River Compliance Association and Its Co-Permittee Members

are hereby authorized to discharge Total Nitrogen from the Co-Permittee Member treatment facilities listed herein

to receiving waters in the Neuse River Basin in accordance with effluent limitations, monitoring and reporting requirements, and other conditions set forth in this permit.

This permit shall become effective .....January 1, 2018.

This permit and the authorization to discharge shall expire at midnight on .....December 31, 2018.

Signed this day.....December 20, 2017.

for Linda Culpepper, Interim Director
Division of Water Resources
By Authority of the Environmental Management Commission

Issued December 30, 2013
Modified December 29, 2014
Modified December 21, 2017

TABLE OF CONTENTS

CERTIFICATE OF COVERAGE i

PART I - SPECIAL CONDITIONS 1
SECTION A - WASTEWATER CONTROLS
A.(1.) DEFINITIONS 1
A.(2.) CO-PERMITTEES AND TN ALLOCATIONS 2
A.(3.) EFFLUENT LIMITATIONS 2
A.(4.) MONITORING REQUIREMENTS 3
A.(5.) REPORTING REQUIREMENTS 4
A.(6.) COMPLIANCE 4

PARTS II & III - STANDARD CONDITIONS 1
SECTION A - APPLICABILITY OF PARTS II & III 1
SECTION B - DEFINITIONS 1
SECTION C - GENERAL CONDITIONS 2
SECTION D - MONITORING AND RECORDS 5
SECTION E - REPORTING REQUIREMENTS 7

PART III - OTHER REQUIREMENTS 9

APPENDIX A - CO-PERMITTEES, TRANSPORT FACTORS, AND TN ALLOCATIONS 1

APPENDIX B - POINT SOURCE FACILITIES ASSIGNED TOTAL NITROGEN ALLOCATIONS 1

PART I
SPECIAL CONDITIONS

A.(1.) DEFINITIONS

(a.) Active TN Allocation: Allocation that is included in calculation of TN Load Limits. Allocation held by a permittee is active by default but may be designated as reserve allocation by the Division or at the request of the permittee. (See also Reserve TN Allocation.)

(b.) Allocation (or "TN Allocation"): (1) The mass quantity (as of TN) that a discharger or group of dischargers (such as the Association) is potentially allowed to release to surface waters in accordance with the Neuse River rule. TN Allocations may be expressed as Estuary TN Allocation or as the equivalent Discharge TN Allocation; also as active or reserve allocation. (2) In practice, the term can refer to a permittee's or group's allocation as a whole or to some lesser quantity.

(c.) Association: The Neuse River Compliance Association, a not-for-profit corporation comprised of NPDES-permitted dischargers in the Neuse River Basin; established voluntarily under the Neuse Wastewater rule to meet the aggregate Estuary TN Allocation of its Co-Permittee Members.

(d.) Co-Permittee Members: Those NPDES dischargers that for a given calendar year are members of the Association and are listed in Appendix A of this permit.

(e.) Discharge TN Allocation: TN Allocation specified as applying at the point of discharge (or "end-of-pipe").

(f.) Discharge TN Load: Actual TN Load measured at a Co-Permittee Member's point of discharge (or "end-of-pipe").

(g.) Estuary: The Neuse River estuary, which extends from approximately Streets Ferry to the Pamlico Sound.

(h.) Estuary TN Allocation: TN Allocation specified as applying at the estuary. A Co-Permittee Member's Estuary TN Allocation is equivalent to its Discharge TN Allocation multiplied by the applicable Transport Factor.

(i.) Estuary TN Limitation: The sum of active TN allocations held by the Association and its Co-Permittee Members (group limit) or a Co-Permittee Member (individual limits), as listed in Appendix A of this permit.

(j.) Estuary TN Load: TN Load estimated to be delivered to the estuary. A Co-Permittee Member's Estuary TN Load is equivalent to its Discharge TN Load multiplied by the applicable Transport Factor.

(k.) Limitation (or "TN Limit(ation)" or "TN Load Limit(ation)"): The mass quantity of TN specified in an NPDES permit as the maximum that an individual discharger or group of dischargers is authorized to discharge to surface waters. The TN Limitation is the sum of active allocations held by an individual Co-Permittee Member (in the case of individual limitations) or held in the aggregate by the Association and its Co-Permittee Members (in the case of the group limitation). For the purposes of this permit, TN Load Limits are expressed in terms of Estuary TN Load.

(l.) Load (or "TN Load"): The actual mass quantity (as of TN) that a discharger or group of dischargers releases into surface waters of the Neuse River Basin. TN Loads may be expressed as Discharge TN Load or as the equivalent Estuary TN Load.

(m.) Neuse Wastewater Rule: The Neuse River Basin Nutrient Sensitive Waters Management Strategy: Wastewater Discharge Requirements rule (T15A NCAC 2B .0234)

(n.) Regionalization: The consolidation of wastewater collection and/or treatment systems that results in the elimination of one or more NPDES-permitted discharges.

(o.) Reserve TN Allocation: Allocation that is not included in calculation of TN Limits. The Division may designate allocation as reserve when water quality-based limits established to prevent

localized impacts render that allocation inactive; when treatment of the allocation as active would be inconsistent with the Neuse Wastewater rule. (See also Active TN Allocation.)

(p.) Total Maximum Daily Load (of TMDL): (1) Generally, the allowable load of a pollutant that can be discharged to a water body without causing loss of that water's designated uses. (2) In the context of this permit, refers to *Phase II of the Total Maximum Daily Load for Total Nitrogen to the Neuse River Estuary, North Carolina*, approved by the U.S. Environmental Protection Agency on March 19, 2002, and subsequent revisions approved by the EPA.

(q.) Total Nitrogen (TN): The sum of the organic, nitrate, nitrite, and ammonia species of nitrogen in a water or wastewater.

(r.) Transport Factor: Fraction of the TN in a discharge that is predicted to reach the estuary, as determined by the Division.

(s.) Water Quality-Based Effluent Limitations (WQBELs): Limitations calculated specifically to ensure that a discharge does not cause an exceedance of water quality standards either in the vicinity of the discharge or further downstream. In the context of this permit, applies only to Total Nitrogen.

A.(2.) CO-PERMITTEES AND TN ALLOCATIONS

(a.) Co-Permittees to this permit shall be the Neuse River Compliance Association (the "Association") and each of its Co-Permittee Members. The Co-Permittee Members, the Transport Factors assigned to each, the Members' individual TN allocations, and the Association Estuary TN Allocation shall be as listed in Appendix A, which is hereby incorporated into this permit in its entirety.

(b.) Upon timely and proper notification by the Association as described elsewhere in this permit, the Division shall revise Appendix A to incorporate changes in Association membership, allowable changes in TN Allocations, or reapportionment by the Association.

(i.) Changes in membership.

(A) Enrollment. In the event that a discharger is admitted to the Association, the Division shall add the discharger and its TN Allocation to Appendix A as a Co-Permittee Member and adjust the Association's Estuary TN Allocation accordingly.

(B) Termination. In the event that a Co-Permittee Member's membership is terminated, the Division shall delete the departing Member and its TN Allocation from Appendix A and adjust the Association's Estuary TN Allocation accordingly.

(ii.) For the purposes of this permit, allowable changes in TN Allocations include those resulting from purchase of allocation from the Wetlands Restoration Fund or other authorized source; purchase, sale, trade, or lease of allocation among the Association, its members, and non-member dischargers; regionalization; and other transactions approved by the Division.

(iii.) The Association and its Co-Permittee Members may reapportion their TN Allocations among themselves; however, the Division shall only incorporate the corresponding changes into Appendix A when specifically requested in writing by the Association and after such changes have been incorporated into the affected individual permits.

(c.) For the purposes of this permit, Association membership, individual or Association TN Allocations and associated limits, and allocation status (active or reserve) are effective on a calendar year basis, and any changes shall become effective no sooner than January 1 of the following calendar year.

A.(3.) EFFLUENT LIMITATIONS

(a.) Beginning on the effective date of this permit and lasting no later than the expiration date, the Co-Permittees are authorized to discharge Total Nitrogen (TN) from the treatment facilities listed in Appendix A subject to the following effluent limitations.

(i.) Association TN Limitation. In any calendar year, the Association's Estuary TN Load shall not exceed its Estuary TN Limitation as specified in Appendix A.

Association TN Limitation: For any calendar year,

Association Estuary TN Load ≤ Association Estuary TN Limitation

where

Association Estuary TN Load (or Limitation) = Sum of Estuary TN Loads (or Limitations) for All Co-Permittee Members and the Association

(ii.) Co-Permittee Member TN Limitations. In any calendar year, a Co-Permittee Member shall be in compliance with its Estuary TN Limitation in Appendix A if:

(A) the Association Estuary TN Load complies with the Association Estuary TN Limitation in Appendix A, or

(B) in the event that the Association Estuary TN Load exceeds its Estuary TN Limitation, the Co-Permittee Member's Estuary TN Load does not exceed that Member's Estuary TN Limitation in Appendix A.

(b.) Individual WQBELs: If the Division determines that a Co-Permittee Member's TN discharge has reasonable potential to cause localized water quality impacts, it may determine an individual water quality-based TN Limit for the Member pursuant to Neuse rule (specifically, T15A NCAC 02B .0234(6)(c), (7)(g), and (8)(h)). The Division will then propose to incorporate the new limit into the Member's individual NPDES permit and this group permit according to standard permitting procedures. Once the individual WQBEL becomes effective in this group permit, the Member is subject to the new limit in lieu of the Association TN Limit. If a Member's individual WQBEL is less than its active TN allocation, the difference is designated as reserve allocation.

(c.) Other Individual Limitations. In the event that a Co-Permittee Member's membership in the Association is terminated, the departing Member shall no longer be eligible for coverage under this permit and shall become subject to the TN limitation set forth in its individual NPDES permit.

(i.) Termination of co-permittee status and re-imposition of a discharger's individual TN limitation shall become effective only at the beginning of a calendar year (January 1).

(ii.) The Association shall notify the Division if it determines that any Member will depart at the end of a calendar year and shall provide an accounting of all allowable changes in the Member's TN Allocation since the most recent issuance of the departing Member's individual NPDES permit.

(iii.) Upon receipt of the notification and accounting described above, the Division shall modify the TN limitation in the departing Member's individual NPDES permit as necessary, effective January 1 of the succeeding year, to reflect all allowable changes in the outgoing Member's TN Allocation and shall also modify Appendix A of this permit accordingly.

A.(4.) MONITORING REQUIREMENTS

(a.) Each Co-Permittee Member shall continue to monitor its discharge(s) and report the results to the Division as specified in its individual NPDES permit.

(b.) The Association shall assemble the results of its Co-Permittee Members and report the combined results to the Division as specified in Condition A.(5.), below.

A.(5.) REPORTING REQUIREMENTS

(a.) The Association shall serve as the primary point of contact between the Division and the Co-Permittee Members on matters related to this permit, unless otherwise noted. The Association's responsibilities in this regard include:

(i.) preparation and submittal of any reports required by this permit or of related information requested by the Division;
(ii.) submittal of any request for modification or renewal of this permit; and
(iii.) distribution to the Co-Permittee Members of correspondence from the Division, including but not limited to that pertaining to permit issuance, modification, and renewal; compliance; and reporting.

(b.) Notification of Membership/ Allocation Changes. No later than July 1 of each year, the Association shall request modification of this permit to reflect changes in membership or TN allocations to become effective in the following calendar year. The Association may revise its request through its Mid-Year Report or other proper written notification.

(c.) Mid-Year Report. No later than September 30 of each year, the Association shall submit a mid-year report to the Division. The report shall include, at a minimum, the following information:

(i.) for the period beginning July 1 of the preceding year and ending June 30 of the current year, a report, for informational purposes only, of each Co-Permittee Member's Discharge and Estuary TN Loads and the Association's Estuary TN Load; this requirement is waived if the Association's Estuary TN Load for the previous calendar year was less than 80 percent of the TN Limitation in that year; and
(ii.) notification of any further changes in Association membership or TN Allocations to become effective in the following calendar year.

(d.) Year-End Report. No later than March 31 of each year, the Association shall submit a year-end report to the Division. The report shall include, at a minimum, the following information for the previous calendar year:

(i.) for the period from January 1 through December 31 of the preceding year, a report of each Co-Permittee Member's Discharge and Estuary TN Loads and the Association's Estuary TN Load;
(ii.) a summary of changes in Association membership; and
(iii.) a summary of all regionalization of discharges, purchases, sales, trades, leases, and other transactions affecting the TN Allocations of the Association or its Co-Permittee Members.

(e.) Five-Year Report. No later than July 1, 2018, in conjunction with application for renewal of this permit, the Association shall submit a 5-year report to the Division. The report shall include, at a minimum, the following information:

(i.) a detailed summary of all membership changes and allowable changes in TN Allocations of the Association or its Co-Permittee Members occurring during the term of this permit;
(ii.) a description of the Association's TN control strategy during that time;
(iii.) a summary of substantial new measures undertaken during that time to control TN discharges;
(iv.) a general assessment of progress made; and
(v.) a description of efforts planned for the upcoming permit term, if known.

A.(6.) COMPLIANCE

(a.) In the event that the Association exceeds its Estuary TN Limitation in a given calendar year, the Association shall make offset payments for that excess TN at a rate consistent with the Nutrient Offsets Payment rule (15A NCAC 2B .0240) or such other rate as may be adopted by the Commission. Payment shall be made no later than May 1 of the year following the exceedance and shall be submitted to:

NCDEQ/ Division of Mitigation Services
Attn: Wetlands Restoration/ In-Lieu Fee Program
1652 Mail Service Center
Raleigh, NC 27699-1652

or other approved mitigation banker, and three copies shall be submitted to:

NCDEQ/ DWR/ Wastewater Branch
Attn: Neuse River Basin Offset Payments
1617 Mail Service Center
Raleigh, NC 27699-1617

(b.) For any calendar year in which the Association exceeds its Estuary TN Limitation, the Association shall be in violation of this permit, and the Division may take appropriate enforcement action against the Association.

(c.) For any calendar year in which the Association exceeds its Estuary TN Limitation, any Co-Permittee Member that exceeds its Estuary TN Limitation shall also be in violation of this permit, and the Division may take appropriate enforcement action against the Member for such exceedance.

(d.) For any calendar year, regardless of Association compliance, any Co-Permittee Member that exceeds an applicable WQBEL for TN shall also be in violation of this permit, and the Division may take appropriate enforcement action against the Member for such exceedance.

(e.) Submittal of offset payments shall not limit the Division's authority to enforce the terms and conditions of this permit nor shall it relieve the Association or its Co-Permittee Members of their responsibility to comply with any other applicable federal, state, or local law, rule, standard, ordinance, order, judgment, or decree. In determining the amount of any penalty to be assessed against the Association or its Co-Permittee Members, the Division shall credit the Association or its Members for any offset payments submitted by each, provided that the Association includes with the offset payment submittal an accounting of each Member's contribution.

(f.) No Co-Permittee Member shall be liable for any other Co-Permittee Member’s non-compliance with this permit.

- END OF PART I -

APPENDIX A
CO-PERMITTEES, TRANSPORT FACTORS, AND TN ALLOCATIONS - NEUSE RIVER COMPLIANCE ASSOCIATION

Permittee	Permit		Facility	TF	Discharge TN Allocations		Estuary TN Allocations/ Limits		
					Holdings	Facility Total	Holdings	Facility Total	Individual WQBELs
1 Apex, Town of	1.1	NC0064050	Apex WRF	50%	40,547	40,547	20,274	20,274	
2 Aqua North Carolina, Inc.	2.1	NC0064564	Neuse Colony WWTP	50%	8,447	8,447	4,224	4,224	
3 Benson, Town of	3.1	NC0020389	Benson WWTP	50%	33,790	33,070	16,895	16,535	
	3.1.1 Sale		*to Central Johnston County WWTP, NC0030716*		*-720*		*-360*		
4 Cary, Town of	4.1	NC0048879	North Cary WRF	50%	135,158	143,246	67,579	71,623	
	4.1.1 Connection		*formerly Morrisville WWTP, NC0050041*		*4,044*		*2,022*		
	4.1.2 Connection		*formerly Morrisville WWTP, NC0050938*		*4,044*		*2,022*		
	4.2	NC0065102	South Cary WRF	50%	180,211	180,211	90,105	90,105	
5 Clayton, Town of	5.1	NC0025453	Little Creek WRF	50%	21,400	22,832	10,700	11,416	
	5.1.1 Purchase		*from UNIFI-Kinston, NC0003760*		*1,432*		*716*		
6 Contentnea Metropolitan Sewerage District	6.1	NC0032077	Contentnea Sewerage District WWTP	70%	32,100	37,100	22,470	25,970	
	6.1.1Purchase		*from UNIFI-Kinston, NC0003760*		*5,000*		*3,500*		
7 CWS Systems, Inc.	7.1	NC0033111	Fairfield Harbour WWTP	100%	11,263	11,263	11,263	11,263	
	7.1.1 Lease		*from NRCA, former Burlington Industries allocation*		*0*		*0*		
8 Craven County	8.1	NC0089460	Craven County WTP	100%	0	0	0	0	
	8.1.1 Lease		*from NRCA, former Burlington Industries allocation*		*0*		*0*[1]		
9 Duke Energy Progress, Inc.	9.1	NC0003417	H.F. Lee Energy Complex	70%	0	0	0	0	
	9.1.1 Lease		*from NRCA, former Burlington Industries allocation*		*0*		*0*[2]		
10 E.I. DuPont de Nemours and Company, Inc.	10.1	NC0003760	E. I. DuPont-Kinston WWTP	70%	35,193	25,493	24,635	17,845	
	10.1.1 Sale		*to Town of Clayton WWTP, NC0025453*		*-2,350*		*-1,645*		
	10.1.2 Sale		*to Central Johnston County WWTP, NC0030716*		*-2,350*		*-1,645*		
	10.1.3 Sale		*to Contentnea MSD WWTP, NC0032077*		*-5,000*		*-3,500*		
11 Farmville, Town of	11.1	NC0029572	Farmville WWTP	50%	39,421	42,211	19,711	21,106	
	11.1.1 Connection		*formerly Walstonburg WWTP, NC0020362*		*2,790*		*1,395*		
12 Goldsboro, City of	12.1	NC0023949	Goldsboro WRF	70%	189,221	199,822	132,455	139,876	
	10.1.1 Connection		*formerly Genoa Industrial Park WWTP, NC0030392*		*8,088*		*5,662*		
	10.1.2 Connection		*formerly Town of Eureka WWTP, NC0048062*		*578*		*404*		
	10.1.3 Connection		*formerly Walnut Creek WWTP, NC0039233*		*1,618*		*1,132*		
	10.1.4 Connection		*formerly Norwayne Jr. HS WWTP, NC0034801*		*173*		*121*		
	10.1.5 Connection		*formerly C.B. Aycock HS WWTP, NC0034819*		*144*		*101*		

(Continued next page)

APPENDIX A (CONTINUED)
CO-PERMITTEES, TRANSPORT FACTORS, AND TN ALLOCATIONS - NEUSE RIVER COMPLIANCE ASSOCIATION

Permittee	Permit		Facility	TF	Discharge TN Allocations		Estuary TN Allocations/ Limits		
					Holdings	Facility Total	Holdings	Facility Total	Individual WQBELs
13 Havelock, City of	13.1	NC0021253	Havelock WWTP	100%	21,400	21,400	21,400	21,400	
14 Johnston County	14.1	NC0030716	Central Johnston County WWTP	50%	56,203	71,476	28,102	35,738	
	14.1.1 Connection		*formerly White Oak Plantation WWTP, NC0060330*		*5,632*		*2,816*		
	14.1.2 Agreement		*formerly Buffalo Creek WWTP, NC0064556*		*5,632*		*2,816*		
	14.1.3 Purchase		*from UNIFI-Kinston, NC0003760*		*3,290*		*1,645*		
	14.1.4 Purchase		*from Town of Benson, NC0020389*		*720*		*360*		
15 Kenly, Town of	15.1	NC0064891	Kenly Regional WWTP	50%	7,096	7,096	3,548	3,548	
16 Kinston, City of	16.1	NC0024236	Kinston Regional WRF	70%	50,684	126,711	35,479	88,697	
	16.1.1 Connection		*formerly Peachtree WWTP, NC0020541*		*76,026*		*53,218*		
17 La Grange, Town of	17.1	NC0021644	La Grange WWTP	70%	8,447	8,447	5,913	5,913	
18 New Bern, City of	18.1	NC0025348	New Bern WWTP	100%	52,937	64,210	52,937	64,210	
	18.1.1 Connection		*formerly Zachary Taylor-Hwy 55 Site, NC0066613*		*5,632*		*5,632*		
	18.1.2 Connection		*formerly Neuse Woods Apts., NC0042430*		*243*		*243*		
	18.1.3 Connection		*formerly W. Craven MS, NC0029904*		*344*		*344*		
	18.1.4 Connection		*formerly Neuse River W&SD, NC0070084*		*2,022*		*2,022*		
	18.1.5 Connection		*formerly Craven Co. W&S-Trent River, NC0056545*		*3,033*		*3,033*		
19 Raleigh, City of	19.1	NC0029033	Neuse River WWTP	50%	675,790	687,373	337,895	343,687	
	19.1.1 Connection		*formerly Plantation Inn WWTP, NC0027570*		*506*		*253*		
	19.1.2 Connection		*formerly Falls Village WWTP, NC0046230*		*121*		*61*		
	19.1.3 Connection		*formerly Neuse Crossings WWTP, NC0064408*		*6,066*		*3,033*		
	19.1.4 Purchase		*from SGWASA WWTP, NC0026824 (originally from Bay River MSD, NC0057011, NC0066109)*		*4,890*		*2,445*		
	19.2	NC0030759	Smith Creek WWTP	50%	67,579	70,814	33,790	35,407	
	19.2.1 Connection		*formerly Jones Dairy Farm WWTP, NC0064149*		*3,235*		*1,618*		
	19.3	NC0079316	Little Creek WWTP	50%	20,837	26,660	10,418	13,330	
	19.3.1 Connection		*formerly Middlesex WWTP, NC0022363*		*1,618*		*809*		
	19.3.2 Connection		*formerly Indian Creek Overlook, NC0060771*		*2,265*		*1,132*		
	19.3.3 Connection		*formerly Riverwalk MHP, NC0039292*		*1,031*		*516*		
	19.3.4 Connection		*formerly Mill Run MHP, NC0056499*		*910*		*455*		

(Continued next page)

APPENDIX A (CONTINUED)
CO-PERMITTEES, TRANSPORT FACTORS, AND TN ALLOCATIONS - NEUSE RIVER COMPLIANCE ASSOCIATION

Permittee	Permit		Facility	TF	Discharge TN Allocations		Estuary TN Allocations/ Limits		
					Holdings	Facility Total	Holdings	Facility Total	Individual WQBELs
20 South Granville Water & Sewer Authority	20.1	NC0026824	SGWASA WWTP	10%	22,420	22,420	2,242	2,242	
21 US MCAS Cherry Point	21.1	NC0003816	Cherry Point WWTP	100%	39,421	39,421	39,421	39,421	
22 Wilson, City of	22.1	NC0023906	Wilson WWTP	50%	157,684	157,886	78,842	78,943	
	22.1.1 Connection		*formerly Willow Springs Country Club, NC0031640*		*202*		*101*		
23 NRCA and Co-Permittee Members	23.1	N/A	[Group allocation held in common]			N/A		24,440	
	23.1.1 Deeded		*by Burlington Industries, formerly NC0001376*				*24,440* [3]		
	23.1.2 Leased		*to Progress Energy, NC0003417, from Burlington Industries allocation*				*0* [2]		
	23.1.3 Leased		*to CWS Systems, Inc., NC0033111, from Burlington Industries allocation*				*0* [1]		
	23.2	N/A	[Individual allocation held in reserve]			N/A		N/A	
	23.2.1 Purchase by Town of Clayton		*from SGWASA, NC0026824 (previously purchased from Bay River MSD)*				*3,668* [4]		
	23.2.2 Purchase by Town of Clayton		*from UNIFI-Kinston, NC0003760*				*929* [4]		
	23.2.1 Held by SGWASA		*formerly active allocation held by SGWASA*				*3,618* [5]		

Association Estuary TN Limit	1,187,213	lb/yr
Total Reserve Estuary Allocation	8,215	lb/yr
Total Estuary Allocation	1,195,428	lb/yr

Footnotes:

1. Craven County is currently leasing Total Nitrogen (TN) allocation from the NRCA until the proposed facility is constructed and a determination is made as to the allocation needed for its discharge. See footnote 3 regarding the TN allocation held by the NRCA.
2. Progress Energy's Lee Steam Plant is allowed a baseline TN load of 3,260 lb/yr at its Outfall 001 (2,282 lb/yr at the estuary). Progress leased additional allocation from the NRCA to ensure coverage for TN discharges from its Rotamix system through 2013. It ceased operation of that system in 2012. The allocations listed in this table and the amounts to be reported by Progress under this permit pertain strictly to any load in excess of the baseline allowance.
3. In 1999, Burlington Industries deeded its TN allocation (since adjusted to 24,400 lb/yr at the estuary) for use by the Association and its Co-Permittee Members. At present, the allocation is a group holding assigned to this group permit and is not associated with any individual permit. Unless noted otherwise in this Appendix A, the entire amount of the allocation is active and is included in the Association Estuary TN Allocation and Limit.
4. Allocation purchased and held in reserve for future use by the co-permittee member.
5. Allocation held in reserve by the co-permittee member; under the Falls Lake nutrient strategy, a more stringent TN limit was set in its individual permit, effective CY2016.

APPENDIX B
POINT SOURCE FACILITIES ASSIGNED TOTAL NITROGEN ALLOCATIONS
NEUSE RIVER BASIN

The following is a list of all treatment facilities that, as holders of individual NPDES permits in 1995, are assigned a Total Nitrogen (TN) allocation pursuant to state rule T15A NCAC 2B .0234, *Neuse River Basin Nutrient Sensitive Waters Management Strategy - Wastewater Discharge Requirements*, adopted December 1997 and revised October 2002.

The rule establishes an aggregate Estuary TN Allocation of **1.64 million pounds TN per year** for these facilities and prescribes how the allocation is to be divided among the individual facilities. The allocations, individual and aggregate, become effective with calendar year 2003.

The *Total Maximum Daily Load for Total Nitrogen to the Neuse River Estuary, North Carolina*, approved by the USEPA Region 4 in July 1999, also concludes that this aggregate allocation is the maximum allowable contribution from point source dischargers to the Neuse River estuary.

	NPDES Permit No.	Permittee	Facility	Subbasin	Transport Factor
1.	NC0037869	Arbor Hills MHP - 1	Arbor Hills Mobile Home Park	30401	10%
2.	NC0066109	Bay River MSD	Bayboro WWTP	30410	100%
3.	NC0057011	Bay River MSD	Oriental WWTP	30410	100%
4.	NC0058785	Bible Baptist Church	Bible Baptist Church WWTP	30401	10%
5.	NC0027570	Bobby L. Murray	Plantation Inn WWTP	30402	50%
6.	NC0001376	Burlington Industries	Wake Plant WWTP	30402	50%
7.	NC0051322	Carolina Water Service, Inc. of NC	Ashley Hill WWTP	30402	50%
8.	NC0056618	Carolina Water Service, Inc. of NC	Carolina Pines WWTP	30410	100%
9.	NC0062219	Carolina Water Service, Inc. of NC	Kings Grant Subdivision WWTP	30402	50%
10.	NC0033111	Carolina Water Service, Inc. of NC	NE Craven WWTP	30410	100%
11.	NC0064378	Carolina Water Service, Inc. of NC	Willowbrook WWTP	30402	50%
12.	NC0023841	City of Durham	North Durham WRF	30401	10%
13.	NC0023949	City of Goldsboro	Goldsboro WWTP	30405	70%
14.	NC0021253	City of Havelock	Havelock WWTP	30410	100%
15.	NC0024236	City of Kinston	Northside WWTP	30405	70%
16.	NC0020541	City of Kinston	Peachtree WWTP	30405	70%
17.	NC0025348	City of New Bern	New Bern WWTP	30410	100%
18.	NC0029033	City of Raleigh	Neuse River WWTP	30402	50%
19.	NC0023906	City of Wilson	Wilson WWTP	30407	50%
20.	NC0032077	Contentnea Metropolitan Sewerage Dist.	Contentnea Sewerage District WWTP	30407	70%
21.	NC0029904	Craven County Schools	West Craven Middle School WWTP	30408	100%
22.	NC0070084	Craven County Water & Sewer	Stately Pines WWTP	30410	100%
23.	NC0056545	Craven County Water & Sewer	Trent River WWTP	30410	100%
24.	NC0065706	Crosby Utilities	Crosby Utilities/Cottonwood	30402	50%
25.	NC0046230	Crosby Water and Sewer, Inc.	Falls Village WWTP	30402	50%
26.	NC0022853	Durham Products	Eno Sewage Facility	30401	10%
27.	NC0003760	E. I. Dupont de Nemours & Company, Inc.	Kinston Plant	30405	70%
28.	NC0066150	FMRK, Inc.	Brighton Forest WWTP	30403	50%
29.	NC0024520	G & S Associates	Days Inn - Durham	30401	10%
30.	NC0043389	Gorman Baptist Church	Gorman BC WWTP	30401	10%
31.	NC0040606	Heater Utilities, Inc.	Barclay Downs WWTP	30402	50%
32.	NC0060577	Heater Utilities, Inc.	Beachwood WWTP	30402	50%

	NPDES Permit No.	Permittee	Facility	Subbasin	Transport Factor
33.	NC0062740	Heater Utilities, Inc.	Briarwood Farms WWTP	30403	50%
34.	NC0062715	Heater Utilities, Inc.	Crooked Creek WWTP	30403	50%
35.	NC0056391	Heater Utilities, Inc.	Cross Creek Mobile Estates WWTP	30402	50%
36.	NC0049662	Heater Utilities, Inc.	Hawthorne Subdivision WWTP	30401	10%
37.	NC0058505	Heater Utilities, Inc.	Mallard Crossing WWTP	30402	50%
38.	NC0064564	Heater Utilities, Inc.	Neuse Colony WWTP	30402	50%
39.	NC0063614	Heater Utilities, Inc.	Wildwood Green WWTP	30401	10%
40.	NC0060771	Indian Creek Overlook	Indian Creek Overlook	30402	50%
41.	NC0063746	Ira D Lee & Associates	Deerchase WWTP	30402	50%
42.	NC0073318	Ira D Lee & Associates	Whippoorwill Valley WWTP	30402	50%
43.	NC0030716	Johnston County	Central Johnston County WWTP	30402	50%
44.	NC0060330	Johnston County	White Oak Plantation WWTP	30402	50%
45.	NC0038938	Johnston County Board of Education	Corinth-Holder Elementary & Middle School	30406	50%
46.	NC0064149	Jones Dairy Farm Utilities	Jones Dairy Farm WWTP	30402	50%
47.	NC0040266	Knightdale MHP Limited Partnership	Knightdale MHP Limited Partnership	30402	50%
48.	NC0059099	Lake Ridge Aero Park	Lake Ridge Aero Park	30401	10%
49.	NC0032573	Lenoir County Public Schools	Moss Hill Elementary School WWTP	30405	70%
50.	NC0032565	Lenoir County Public Schools	North Lenoir High School WWTP	30407	50%
51.	NC0032557	Lenoir County Public Schools	South Lenoir High School WWTP	30407	50%
52.	NC0061492	Maury Sanitary Land District	Maury Sanitary Land District WWTP	30407	50%
53.	NC0049034	Mount Auburn Training Center	Mount Auburn Training Center	30402	50%
54.	NC0043001	Mt. Sylvan United Methodist Church	Mt. Sylvan UMC WWTP	30401	10%
55.	NC0037915	Nash/Rocky Mount Schools	Southern Nash High School	30407	50%
56.	NC0035181	NC Center For Mature Adults	NC Center For Mature Adults	30403	50%
57.	NC0026824	NC DHHS	Butner WWTP	30401	10%
58.	NC0042340	Neuse Woods Apartments	Neuse Woods Apartments	30410	100%
59.	NC0064246	Pace Mobile Home Park	Pace Mobile Home Park	30402	50%
60.	NC0036471	Person County Schools	Helena Elementary School WWTP	30401	10%
61.	NC0001881	Phillips Plating Company	Phillips Plating Company	30410	100%
62.	NC0060526	Pope Industrial Park II Ltd	Pope Industrial Park II Ltd	30402	50%
63.	NC0051071	Redwood Partners LLC	Redwood Academy WWTP	30401	10%
64.	NC0049042	Riley Hill Baptist Church Inc	Riley Hill Baptist Church Inc	30406	50%
65.	NC0064556	River Dell Utilities, Inc.	Buffalo Creek WWTP	30406	50%
66.	NC0056278	River Mill Homeowners Association, Inc.	River Mill WWTP	30402	50%
67.	NC0038784	Riverview Mobile Home Park	Riverview Mobile Home Park	30402	50%
68.	NC0030724	Southside MHP	Southside MHP WWTP	30403	50%
69.	NC0056731	The Chesson Group	Grande Oak Subdivision WWTP	30401	10%
70.	NC0064050	Town of Apex	Middle Creek WWTP	30403	50%
71.	NC0020389	Town of Benson	Benson WWTP	30404	50%
72.	NC0074837	Town of Bridgeton	Bridgeton WWTP	30410	100%
73.	NC0048879	Town of Cary	North WWTP	30402	50%
74.	NC0065102	Town of Cary	South WWTP	30403	50%
75.	NC0025453	Town of Clayton	Little Creek WWTP	30402	50%
76.	NC0048062	Town of Eureka	Eureka Town- WWTP	30407	50%
77.	NC0029572	Town of Farmville	Farmville WWTP	30407	50%
78.	NC0066516	Town of Fuquay-Varina	Terrible Creek WWTP	30403	50%
79.	NC0026433	Town of Hillsborough	Hillsborough WWTP	30401	10%
80.	NC0025712	Town of Hookerton	Hookerton WWTP	30407	50%
81.	NC0064891	Town of Kenly	Kenly Regional WWTP	30406	50%

	NPDES Permit No.	Permittee	Facility	Subbasin	Transport Factor
82.	NC0021644	Town of La Grange	La Grange WWTP	30405	70%
83.	NC0022363	Town of Middlesex	Middlesex WWTP	30407	50%
84.	NC0050938	Town of Morrisville	Morrisville WTP	30402	50%
85.	NC0050041	Town of Morrisville	Morrisville WWTP	30402	50%
86.	NC0026662	Town of Princeton	Princeton WWTP	30406	50%
87.	NC0030406	Town of River Bend	River Bend WWTP	30411	100%
88.	NC0020842	Town of Snow Hill	Snow Hill WWTP	30407	50%
89.	NC0057606	Town of Stantonsburg	Stantonsburg WWTP	30407	50%
90.	NC0021342	Town of Trenton	Trenton WWTP	30411	100%
91.	NC0031828	Town of Vanceboro	Vanceboro WWTP	30409	100%
92.	NC0030759	Town of Wake Forest	Wake Forest WWTP	30402	50%
93.	NC0020362	Town of Walstonburg	Walstonburg WWTP	30407	50%
94.	NC0079316	Town of Zebulon	Little Creek WWTP	30407	50%
95.	NC0065714	Tradewinds Homeowners Association, Inc.	Tradewinds WWTP	30402	50%
96.	NC0056499	Uniprop, Inc.	Mill Run Mobile Home Park	30402	50%
97.	NC0039292	Uniprop, Inc.	Riverwalk Mobile Home Park	30402	50%
98.	NC0003816	US MCAS Cherry Point	Cherry Point WWTP	30410	100%
99.	NC0061638	Utilities Inc	Amherst WWTP	30403	50%
100.	NC0039233	Village of Walnut Creek	Walnut Creek WWTP	30405	70%
101.	NC0025631	Wake Technical Institute	Wake Tech WWTP	30403	50%
102.	NC0030392	Wayne County	Genoa Industrial Park WWTP	30405	70%
103.	NC0034819	Wayne County Board of Education	Charles B. Aycock High School	30407	50%
104.	NC0034801	Wayne County Board of Education	Norwayne Junior High School	30407	50%
105.	NC0003191	Weyerhaeuser Company	New Bern Mill	30408	100%
106.	NC0064408	Whitewood Prop Inc	Neuse Crossing WWTP	30402	50%
107.	NC0031640	Willow Springs Country Club	Willow Springs CC WWTP	30407	50%
108.	NC0081752	Willowhaven Country Club	Willowhaven CC WWTP	30401	10%
109.	NC0066613	Zachary Taylor	Hwy 55 Site WWTP	30410	100%

15A NCAC 02B .0234 NEUSE RIVER BASIN - NUTRIENT SENSITIVE WATERS MANAGEMENT STRATEGY: WASTEWATER DISCHARGE REQUIREMENTS

The following is the National Pollutant Discharge Elimination System (NPDES) wastewater discharge management strategy for the Neuse River Basin:

(1) Purpose. The purpose of this Rule is to establish minimum nutrient control requirements for point source discharges in the Neuse River Basin in order to maintain or restore the water quality in the Neuse River Estuary and protect its designated uses.

(2) Applicability. This Rule applies to all wastewater treatment facilities in the Neuse River Basin that receive nitrogen-bearing wastewater and are required to obtain individual NPDES permits.

(3) Definitions. For the purposes of this Rule, the following definitions apply:

(a) In regard to point source dischargers, treatment facilities, wastewater flows or discharges, or like matters:

(i) "Existing" means that which obtained a NPDES permit on or before December 31, 1995.

(ii) "Expanding" means that which increases beyond its permitted flow as defined in this Rule.

(iii) "New" means that which had not obtained a NPDES permit on or before December 31, 1995.

(b) "MGD" means million gallons per day.

(c) "Nitrogen wasteload allocation" is that portion of the Neuse River nitrogen TMDL assigned to individually permitted wastewater facilities in the basin and represents the maximum allowable load of total nitrogen to the estuary from these point source dischargers.

(d) "Nitrogen estuary allocation" or "estuary allocation" means the mass loading of total nitrogen at the estuary that is reserved for a discharger or group of dischargers. A discharger's or group's estuary allocation is equivalent to its discharge allocation multiplied by its assigned transport factor.

(e) "Nitrogen discharge allocation" or "discharge allocation" means the mass loading of total nitrogen at the point(s) of discharge that is reserved for a discharger or group of dischargers. A discharger's or group's discharge allocation is equivalent to its estuary allocation divided by its assigned transport factor.

(f) "Nitrogen TMDL," or "TMDL," means the total nitrogen load to the Neuse River estuary that is predicted to maintain adequate water quality to support all designated uses in the estuary and is approved by the United States Environmental Protection Agency in accordance with the federal Clean Water Act.

(g) "Nonpoint source load allocation" is that portion of the Neuse River nitrogen TMDL assigned to all other nitrogen sources in the basin other than individually permitted wastewater facilities and represents the maximum allowable load of total nitrogen to the estuary from these nonpoint sources.

(h) "Permitted flow" means the maximum monthly average flow authorized in a facility's NPDES permit as of December 31, 1995, with the following exceptions:

Facility Name	NPDES No.	Permitted Flow (MGD)
Benson	NC0020389	3.00
Goldsboro	NC0023949	16.80
Kenly	NC0064891	0.63
Snow Hill	NC0020842	0.50
Wilson	NC0023906	14.00

(i) "Total nitrogen" means the sum of the organic, nitrate, nitrite, and ammonia forms of nitrogen.

(j) "Transport factor" is the fraction of the total nitrogen in a discharge that is predicted to reach the estuary.

(4) This Item specifies the nitrogen wasteload allocation for point sources.

(a) Beginning with the calendar year 2003, the nitrogen wasteload allocation for point sources shall not exceed 1.64 million pounds per calendar year plus any portion of the nonpoint

source load allocation purchased in accordance with the provisions in Items (7) and (8) of this Rule and 15A NCAC 02B .0240.

(b) The Commission shall order future revisions in the nitrogen wasteload allocation whenever necessary to ensure that water quality in the estuary meets all standards in 15A NCAC 02B .0200 or to conform with applicable state or federal requirements.

(5) This Item specifies nitrogen discharge allocations for point sources.

(a) Upon adoption of this Rule and until revised as provided elsewhere in this Rule, the following group and individual discharge allocations for total nitrogen shall apply in order to comply with the nitrogen wasteload allocation for point sources in Item (4) of this Rule:

(i) Dischargers with permitted flows less than 0.5 MGD shall be assigned collectively an annual discharge allocation of 138,000 pounds of total nitrogen.

(ii) Dischargers upstream of Falls Lake Dam and with permitted flows greater than or equal to 0.5 MGD shall be assigned collectively an annual discharge allocation of 443,700 pounds of total nitrogen.

(iii) Municipal dischargers downstream of Falls Lake Dam and with permitted flows greater than or equal to 0.5 MGD shall be assigned collectively an annual discharge allocation of 2,021,400 pounds of total nitrogen.

(iv) Industrial dischargers downstream of Falls Lake Dam and with permitted flows greater than or equal to 0.5 MGD shall be assigned collectively an annual discharge allocation of 396,900 pounds of total nitrogen.

(v) Within each group in Sub-Items (i) - (iv) of this Item, each individual discharger shall be assigned an individual discharge allocation and the equivalent estuary allocation. Each discharger's discharge allocation shall be calculated as its permitted flow divided by the total permitted flow of the group, multiplied by the group discharge allocation.

(b) In the event that the nitrogen wasteload allocation for point sources is revised, as provided in Item (4) of this Rule, the Commission shall apportion the revised load among the existing facilities and shall revise discharge allocations as needed. The Commission may consider such factors as:

(i) fate and transport of nitrogen in the river basin;

(ii) technical feasibility and economic reasonableness of source reduction and treatment methods;

(iii) economies of scale;

(iv) nitrogen control measures already implemented;

(v) probable need for growth and expansion;

(vi) incentives for responsible planning, utilities management, resource protection, and cooperative efforts among dischargers; and

(vii) other factors the Commission deems relevant.

(6) This Item specifies nutrient controls for existing facilities.

(a) Beginning with calendar year 2003, each discharger with a permitted flow equal to or greater than 0.5 MGD shall be subject to a total nitrogen permit limit equal to its individual discharge allocation, pursuant to Item (5) of this Rule.

(b) Effective January 1, 2003, dischargers shall be subject to the following limits for total phosphorus:

(i) All existing facilities above Falls Lake Dam with permitted flows greater than or equal to 0.05 MGD shall meet a quarterly average total phosphorus limit of 2 mg/L.

(ii) All existing facilities below Falls Lake Dam with permitted flows greater than or equal to 0.5 MGD shall meet a quarterly average total phosphorus limit of 2 mg/L.

(c) The director shall establish more stringent limits for nitrogen or phosphorus upon finding that such limits are necessary to protect water quality standards in localized areas.

(7) This Item specifies nutrient controls for new facilities.

(a) New facilities proposing to discharge wastewater shall evaluate all practical alternatives to surface water discharge, pursuant to 15A NCAC 02H .0105(c)(2), prior to submitting an application to discharge.

(b) New facilities submitting an application shall make every reasonable effort to obtain estuary allocation for the proposed wastewater discharge from existing dischargers. If estuary allocation cannot be obtained from the existing facilities, new facilities may purchase a portion of the nonpoint source load allocation for a period of 30 years at a rate of 200 percent of the cost as set in 15A NCAC 02B .0240 to implement practices designed to offset the loading created by the new facility. Payment for each 30-year portion of the nonpoint source load allocation shall be made prior to the ensuing permit issuance.

(c) No application for a new discharge shall be made or accepted without written documentation demonstrating that the requirements of Sub-Items (a) and (b) of this Item have been met.

(d) The nitrogen discharge allocation for a new facility treating municipal or domestic wastewaters shall not exceed the mass equivalent to a concentration of 3.5 mg/L at the maximum monthly average flow limit in the facility's NPDES permit.

(e) The nitrogen discharge allocation for a new facility treating industrial wastewaters shall not exceed the mass equivalent of either the best available technology economically achievable or a discharge concentration of 3.2 mg/L at the maximum monthly average flow limit in the facility's NPDES permit, whichever is less.

(f) New dischargers must meet a monthly average total phosphorous limit of 1 mg/L.

(g) The director shall establish more stringent limits for nitrogen or phosphorus upon finding that such limits are necessary to protect water quality standards in localized areas.

(8) This Item specifies nutrient controls for expanding facilities.

(a) Expanding facilities shall evaluate all practical alternatives to surface water discharge, pursuant to 15A NCAC 02H .0105(c)(2), prior to submitting an application to discharge.

(b) Facilities submitting an application for increased discharge shall make every reasonable effort to minimize increases in their nitrogen discharges, such as reducing sources of nitrogen to the facility or increasing the nitrogen treatment capacity of the facility; or to obtain estuary allocation from existing dischargers.

(c) No application for an expanding facility shall be made or accepted without written documentation demonstrating that the requirements of Sub-Items (a) and (b) of this Item have been met.

(d) If these measures do not produce adequate estuary allocation for the expanded flows, facilities may purchase a portion of the nonpoint source load allocation for a period of 30 years at a rate of 200 percent of the cost as set in 15A NCAC 02B .0240 to implement practices designed to offset the loading created by the new facility. Payment for each 30-year portion of the nonpoint source load allocation shall be made prior to the ensuing permit issuance.

(e) The nitrogen discharge allocation for an expanded facility treating municipal or domestic wastewaters shall not exceed the mass equivalent to a concentration of 3.5 mg/L at the maximum monthly average flow limit in the NPDES permit, or its existing allocation, whichever is greater.

(f) The nitrogen discharge allocation for expanding facilities of an industrial nature shall not exceed the mass equivalent to the best available technology economically achievable or a concentration of 3.2 mg/L at the maximum monthly average flow limit in the facility's modified NPDES permit, whichever is less. If the resulting mass is less than the facility's existing discharge allocation, the existing discharge allocation shall not be reduced.

(g) Expanding facilities must meet a monthly average total phosphorous limit of 1 mg/L unless they are a member in good standing of a group compliance association described in Item (9) of this Rule, in which case they must meet a quarterly average total phosphorus limit of 2 mg/L.

(h) The director shall establish more stringent limits for nitrogen or phosphorus upon finding that such limits are necessary to protect water quality standards in localized areas.

(9) This Item describes the option for dischargers to join a group compliance association to collectively meet nutrient load allocations.

(a) Any or all facilities within the basin may form a group compliance association to meet nitrogen estuary allocations collectively. Any such association must apply for and shall be subject to an NPDES permit that establishes the effective total nitrogen allocations for the

association and for its members. More than one group compliance association may be established. No facility may belong to more than one association at a time.

(b) No later than 180 days prior to expiration of the association NPDES permit, the association and its members shall submit an application for a NPDES permit for the discharge of total nitrogen to the surface waters of the Neuse River Basin. The NPDES permit shall be issued to the association and its members as co-permittees ("association NPDES permit"). It shall contain the association's estuary allocation and individual estuary allocations for each of the members.

(c) An association's estuary allocation of total nitrogen shall be the sum of its members' individual estuary allocations plus any other estuary allocation obtained by the association or its members.

(d) An association may reapportion the individual estuary allocations of its members on an annual basis. The association NPDES permit shall be modified to reflect the revised individual estuary allocations.

(e) Beginning in calendar year 2003, if an association does not meet its estuary allocation, it shall make offset payments for nonpoint source controls no later than May 1 of the following year at the rate set in 15A NCAC 02B .0240.

(f) Association members shall be exempted from the permit limits for total nitrogen contained in their individually issued NPDES permits so long as they remain members in an association. Association members shall be exempted from their individual estuary allocations in the association NPDES permit as long as the association is in compliance with its estuary allocation. If the association fails to meet its estuary allocation, the association and the members that have failed to meet their individual estuary allocations in the association NPDES permit will be out of compliance with the association NPDES permit.

(10) Regional Facilities. In the event that an existing discharger or group of dischargers accepts wastewater from another NPDES-permitted treatment facility in the Neuse River Basin and that acceptance results in the elimination of the discharge from the treatment facility, the eliminated facility's total nitrogen estuary allocation shall be transferred and added to the accepting discharger's estuary allocation.

History Note: *Authority G.S. 143-214.1; 143-215; 143-215.1; 143-215.3(a) (1); S.L. 1995, c. 572;*
Temporary Adoption Eff. January 22, 1998;
Eff. August 1, 1998;
Temporary Amendment Eff. March 15, 2000;
Temporary Amendment Expired on December 10, 2000;
Amended Eff. April 1, 2003.

§ 96.8. Use of offsets and tradable credits from pollution reduction activities in the Chesapeake Bay Watershed.

(a) *Definitions*. The following words and terms, when used in this section, have the following meanings, unless the context indicates otherwise:

Aggregator—A person that arranges for the sale of credits generated by another person, or arranges for the credits to be certified, verified and registered.

Agricultural operation—The management and use of farming resources for the production of crops, livestock or poultry, or for equine activity.

Baseline—

(i) The compliance activities and performance standards that must be implemented to meet current environmental laws and regulations related to the pollutant for which credits or offsets are generated.

(ii) The term includes allocations established under this chapter, in a TMDL or in a similar allocation, for the pollutant.

BMP—Best management practice—

(i) Schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce pollutants to surface waters of this Commonwealth.

(ii) The term includes treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

(iii) The term includes activities, facilities, measures, planning or procedures used to minimize accelerated erosion and sedimentation and manage stormwater to protect, maintain, reclaim and restore the quality of waters and the existing and designated uses of waters within this Commonwealth before, during and after earth disturbance activities.

(iv) The term also includes riparian buffers, soil and slope stabilization measures, control of fertilization practices, and other actions and measures designed to reduce erosion and runoff of soil, sediment and pollutants from the land surface during precipitation events; or to reduce the contamination of groundwater with pollutants that may affect surface waters.

(v) The term includes BMP measures developed under this title to reduce pollutant loading to surface waters.

Certification—Written approval by the Department of a proposed pollutant reduction activity to generate credits before the credits are verified and registered to be used to comply with NPDES permit effluent limitations.

Credit—The tradable unit of compliance that corresponds with a unit of reduction of a pollutant as recognized by the Department which, when certified, verified and registered, may be used to comply with NPDES permit effluent limitations.

Credit reserve—Credits set aside by the Department to address pollutant reduction failures and uncertainty.

DMR—Discharge monitoring report—The Department or EPA supplied forms for reporting of self-monitoring results by the permittee.

Delivery ratio—A ratio that compensates for the natural attenuation of a pollutant as it travels in water before it reaches a defined compliance point.

Edge of segment ratio—A ratio that identifies the amount of a pollutant expected to reach the surface waters at the boundary of a Chesapeake Bay Watershed Model segment through surface runoff and groundwater flows from a pollutant source within a watershed segment.

Nutrient—Nitrogen or phosphorus.

Offset—The pollutant load reduction measured in pounds that is created by an action, activity or technology which when approved by the Department may be used to comply with NPDES permit effluent limitations, conditions and stipulations under Chapter 92a (relating to National Pollutant Discharge Elimination System permitting, monitoring and compliance). The offset may only be used by the NPDES permittee that the Department determines is associated with the load reduction achieved by the action, activity or technology.

Pollutant—Nutrient or sediment.

Pollutant reduction activity—An activity, such as a BMP or effluent control, that is implemented to prevent or reduce a pollutant load to surface waters of this Commonwealth.

Registration—An accounting mechanism used by the Department to track certified and verified credits before they may be used to comply with NPDES permit effluent limitations.

Reserve ratio—A 10% ratio that is applied to the pollutant reductions generated, which establishes the credits to be set aside for the Department's credit reserve.

Threshold—Activities and performance standards beyond baseline compliance which are required under subsection (d)(3) before credits may be certified.

Tradable load—The amount of nonpoint source pollutant reduction determined to be the projected future pollutant load that is the difference between the total reduction theoretically possible from maximum implementation of pollutant reduction activities, and the reduction associated with a level of pollutant reduction activities identified by the Department as reasonably attainable.

Trade—A transaction that involves the sale or other exchange, through a contractual agreement, of credits that have been certified, verified and registered.

Trading ratio—A ratio applied to adjust a pollutant reduction when calculating credits for a pollutant reduction activity. A trading ratio is used to address uncertainty, water quality, reduction failures or other considerations. The term will include a delivery ratio, an edge of segment ratio and a reserve ratio.

Verification—Assurance that the verification plan contained in a certification, permit or other approval issued by the Department under this section has been implemented. Verification is required prior to registration of the credits for use in an NPDES permit to comply with NPDES permit effluent limitations.

(b) *Chesapeake Bay water quality.*

(1) Credits and offsets may be used to meet legal requirements for restoration, protection and maintenance of the water quality of the Chesapeake Bay.

(2) Credits may be generated only from a pollutant reduction activity that has been certified, verified and registered under this section.

(3) Credits and offsets may be used by permittees to meet effluent limits for nitrogen, phosphorus and sediment expressed as annual loads in pounds contained in NPDES permits that are based on compliance with water quality standards established under the Federal Water Pollution Control Act (33 U.S.C.A. § § 1251—1387), specifically for restoration, protection and maintenance of the water quality of the Chesapeake Bay.

(4) Credits and offsets may only be used for comparable pollutants, unless otherwise authorized by the Department. For example, nitrogen credits or offsets may only be used to meet nitrogen effluent limits.

(5) The use of credits and offsets must comply with legal requirements under applicable laws and regulations, including the requirements of this section.

(6) Credits and offsets may not be used to comply with technology-based effluent limits, except as expressly authorized under Federal regulations administered by the EPA.

(c) *Methodology.*

(1) *General.* The Department will use one or more of the methods, data sources or conclusions contained in this subsection when certifying a pollutant reduction activity to generate credits.

(2) Credits may be calculated by use of pollutant removal efficiencies for BMPs, and edge of segment and delivery ratios addressing fate and transport of pollutants, consistent with the most up-to-date version of the Chesapeake Bay watershed model. The pollutant removal efficiencies and edge of segment and delivery ratios will be available on the Department's Nutrient Trading web site.

(3) The Department may rely on results from the following modeling tools, as amended or updated, to approve other pollutant removal efficiencies for BMPs:

(i) Science Algorithms of the EPA Models-3 Community Multiscale Air Quality (CMAQ) Modeling System, Atmospheric Modeling Division, National Research Laboratory, U.S. Environmental Protection Agency, EPA/600/R-99/030, (Daewon Byun and Kenneth L. Schere, 2006).

(ii) EPA Watershed Model (Donigian et al. 1994; Linker 1996; Linker et al. 2000).

(iii) EPA Chesapeake Bay Hydrodynamic Model (Wang and Johnson 2000).

(iv) EPA Estuarine Water Quality Model (Cerco and Cole 1993, 1995a, 1995b; Thomann et al. 1994; Cerco and Meyers 2000; Cerco 2000; Cerco and Moore 2001; Cerco et al. 2002a).

(4) The Department may rely on the methods, data sources and conclusions in the following EPA documents, as amended or updated:

(i) *Technical Support Document for Identification of Chesapeake Bay Designated Uses and Attainability.* EPA 903-R-03-004. Region III Chesapeake Bay Program Office, Annapolis, Maryland (2003).

(ii) *Technical Support Document for Identification of Chesapeake Bay Designated Uses and Attainability-2004 Addendum.* EPA 903-R-04-006. Region III Chesapeake Bay Program Office, Annapolis, Maryland (2004).

(iii) *Revision, Chesapeake Bay Program Analytical Segmentation Schemes: decisions and rationales, 1983-2003.* EPA 903-R-04-008. CBP/TRS 268/04. Chesapeake Bay Program Office, Annapolis, Maryland (2004).

(iv) *Revision, Chesapeake Bay Program Analytical Segmentation Schemes: decisions and rationales, 1983-2003—2005 Addendum.* EPA 903-R-05-004. CBP/TRS 278/06. Chesapeake Bay Program Office, Annapolis, Maryland (2005).

(v) *Setting and Allocating the Chesapeake Bay Basin Nutrient and Sediment Loads. The Collaborative Process, Technical Tools and Innovative Approaches.* EPA 903-R-03-007. Region III Chesapeake Bay Program Office, Annapolis, Maryland (2006).

(vi) *Summary of Decisions Regarding Nutrient and Sediment Load Allocations and New Submerged Aquatic Vegetation (SAV) Restoration Goals.* April 25, 2003, Memorandum to the Principals' Staff Committee members and representatives of the Chesapeake Bay headwater states. Virginia Office of the Governor, Natural Resources Secretariat, Richmond, Virginia.

(vii) *The 2002 Chesapeake Bay Eutrophication Model.* EPA 903-R-04-004. U.S. Army Corps of Engineers, Engineer Research & Development Center, Environmental Laboratory (Cerco, C.F., and Noel, M.R., 2004).

(viii) *Ecosystem Models of the Chesapeake Bay Relating Nutrient Loadings, Environmental Conditions and Living Resources Technical Report.* Chesapeake Bay Program Office, Annapolis MD (Kemp, MW., R. Bartlescn, S. Blumenshine, J.D. Hagey, and W.R Boynlen, 2000).

(ix) *Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and Its Tidal Tributaries.* U.S. EPA 2003b. EPA 903-R-03-002. Chesapeake Bay Program Office, Annapolis, Maryland.

(5) For a point source, the Department may rely on the information supplied by the permittee in the DMR, including offset information, when certifying a pollutant reduction activity to generate credits.

(6) When certifying a pollutant reduction activity to generate credits, the Department may rely on methods, data sources and conclusions contained in the *Pennsylvania Agronomy Guide* published by Pennsylvania State University, and the *Pennsylvania Technical Guide* published by the Federal Natural Resources Conservation Service. The Department may also rely on other published or peer-reviewed scientific sources.

(d) *Eligibility requirements for the Chesapeake Bay.*

(1) *General.* To generate credits or offsets, the person shall demonstrate a reduction in the pollutant load beyond the pollutant load allowed under applicable baseline requirements, and beyond any applicable threshold.

(2) *Baseline requirements to generate credits.*

(i) For a nonpoint source, the baseline is the set of requirements in regulations applicable to the source at the location where the credits or offsets are generated, and the pollutant load associated with that location as of January 1, 2005. If since that date new requirements or operation changes have occurred that necessitate a revised set of requirements those establish the baseline. For an agricultural operation, baseline includes compliance with the erosion and sedimentation requirements for agricultural operations in Chapter 102 (relating to erosion and sediment control), the requirements for agricultural operations under § 91.36 (relating to pollution control and prevention at agricultural operations), § 92a.29 (relating to CAFO) and the requirements for agricultural operations under Chapter 83, Subchapter D (relating to nutrient management), as applicable.

(ii) For a point source, the baseline is the pollutant effluent load associated with effluent limitations contained in the NPDES permit based on the applicable technology based requirements, or the load in a TMDL or similar allocation, whichever is more stringent.

(3) *Threshold requirements to generate credits.*

(i) To generate credits, an agricultural operation must meet one of the following threshold requirements at the location where the credits are generated.

(A) Manure is not mechanically applied within 100 feet of a perennial or intermittent stream with a defined bed or bank, a lake or a pond. This threshold can be met through one of the following:

(I) There is not a perennial or intermittent stream with a defined bed or bank, a lake or a pond on or within 100 feet of the agricultural operation.

(II) The agricultural operation does not mechanically apply manure, and applies commercial fertilizer at or below agronomic rates contained in the current *Penn State University Agronomy Guide* published by Pennsylvania State University.

(B) A minimum of 35 feet of permanent vegetation is established and maintained between the field and any perennial or intermittent stream with a defined bed or bank, a lake or a pond. The area may be grazed or cropped under a specific management plan provided that permanent vegetation is maintained at all times and there is no mechanical application of manure within the buffer area.

(C) The applicant applies an adjustment of at least 20% to the overall amount of the pollutant reduction generated by the pollutant reduction activity the person is submitting for certification.

(ii) The Department may establish other threshold requirements necessary to ensure the effectiveness of the use of credits to meet legal requirements for restoration, protection and maintenance of the water quality of the Chesapeake Bay.

(4) *Compliance status.* A person who by past or current noncompliance has demonstrated a lack of ability or intention to comply with any of the following is not eligible for certification or offset approval or to use credits or offsets to meet permit effluent limits:

(i) A Department regulation, permit, schedule of compliance, order or certification.

(ii) A law or regulation that addresses pollution of waters of this Commonwealth.

(iii) A contract for the exchange of credits.

(5) *Other requirements.* The Department may establish other eligibility requirements to ensure the effectiveness of the use of credits and offsets to meet legal requirements for restoration, protection and maintenance of the water quality of the Chesapeake Bay.

(6) *Failure to meet eligibility requirements.* If at any time prior to registration of a credit the Department determines that a person no longer meets the eligibility requirements under this section, the Department may take appropriate action, such as prohibiting the person from participating in any trading under this section or denying a request for certification, registration of any credits or approval of offsets.

(e) *Certification requirements for the Chesapeake Bay.*

(1) *General.* A pollutant reduction activity must be certified by the Department for the generation of credits before the credits may be applied to meet permit effluent limitations. Certification will serve as the Department's final determination of the amount of credits that the pollutant reduction activity may generate. A permittee may only use credits to meet permit effluent limits if certification is followed by verification and registration of the credits.

(2) *Request for certification.* A person who wishes to have a pollutant reduction activity certified by the Department to generate credits shall submit a written request for certification in the format required by the Department.

(i) The request for certification must contain information sufficient to demonstrate the following:

(A) That the location where the pollutant reduction activity will be implemented will meet applicable eligibility requirements under subsection (d) and will continue to meet those requirements throughout the applicable term of the certification.

(B) That the pollutant reduction activity will meet acceptable standards for construction and performance, including operation and maintenance, throughout the applicable term of the certification.

(C) That the calculation requirements of this section have been met.

(D) That the implementation of the pollutant reduction activity will be verified as described in a verification plan that meets the requirements of paragraph (5).

(ii) The request for certification must contain the following additional information:

(A) A detailed description of how the credits will be generated by the pollutant reduction activity, including calculations, assumptions and photos.

(B) A map illustrating the locations of the proposed pollutant reduction activity.

(C) Details on the timing of credits, such as the timing of credit generation and delivery, timing of a phase-in period and the time frame for sale and use of credits toward permit effluent limits.

(D) The water quality classification under Chapter 93 (relating to water quality standards), and any applicable impairment listings under section 303(d) of the Federal Water Pollution Control Act (33 U.S.C.A. § 1313(d)), for the receiving stream segment nearest the location of the proposed pollutant reduction activity.

(E) Information on sources of funding used to pay for any portion of the pollutant reduction activity, including the dollar amount and any conditions and restrictions regarding the use of the funds toward the generation or sale of credits.

(F) A description of how risks of failure of the pollutant reduction activity will be managed, such as the use of financial guarantee mechanisms, contractual arrangements, insurance products or reduction of the concentration of projects in a particular sub-watershed.

(G) A description of preservation and conservation easements on lands where the pollutant reduction activity is to be implemented.

(H) Identification of notations on documents submitted in the request which the person submitting the request claims to be confidential business information or a protected trade secret protected from disclosure by law, and a justification for the claims.

(I) The name of the person submitting the request and the names of the participants involved in the pollutant reduction activity.

(J) The professional qualifications of the persons who completed the calculations, conducted the baseline and threshold determinations or otherwise contributed to the technical merits of the request.

(K) Contact information for the person submitting the request.

(3) *Calculation requirements.* The following credit calculation requirements apply:

(i) The calculations must demonstrate how the pollutant reductions will be achieved from the proposed pollutant reduction activity to generate credits for the applicable period of time.

(ii) The pollutant reductions must be expressed in pounds per year.

(iii) The calculations used must be based on methodologies that the Department determines are appropriate under subsection (c).

(iv) The calculation for a point source may include excess load capacity attributable to activities such as effluent controls or the use of offsets.

(v) The calculation must include a 10% set aside for the Department's credit reserve.

(vi) The Department may establish other calculation requirements necessary to ensure that the use of credits is effective in meeting water quality requirements, and to address uncertainty for reasons such as unforeseen events that may disrupt pollutant reduction activities. The calculation requirements may include the need to use trading ratios, risk-spreading mechanisms and credit reserves. These calculation requirements may reduce the amount of credits the Department may certify for a pollutant reduction activity.

(4) *Other requirements considered for certification.*

(i) The annual sum of all credits certified from nonpoint sources in this Commonwealth's portion of the Chesapeake Bay Watershed may not exceed the applicable tradable load calculated by the Department for this Commonwealth's portion of the Chesapeake Bay Watershed. The tradable load will be available on the Department's Nutrient Trading web site.

(ii) If State or Federal funds are used to cost-share any portion of the pollutant reduction activity contained in the request for certification, the Department may allow the portion of the credits or offsets paid for by State and Federal funds to be available for certification, unless to restrict trading of that portion of the credits restrictions have been placed on the funds by the provider of the funds.

(iii) The Department will not certify a request that includes a pollutant reduction activity related to a farm land conversion action that includes the purchase and idling of a whole farm or a substantial portion of a farm to provide credits for use offsite. The Department will not certify a request that includes a pollutant reduction activity related to a farm land conversion action that includes farmland that is converted from agricultural land to another development type such as commercial or residential. However, to support farm land conservation programs, if a portion of farm land is retired or converted through a program such as one of the following, the action may be eligible for certification:

(A) The United States Department of Agriculture's Farm Services Agency Conservation Reserve Program (CRP).

(B) The United States Department of Agriculture's Conservation Reserve Enhanced Program (CREP).

(C) The United States Department of Agriculture's Natural Resources and Conservation Service's Environmental Quality Incentives Program (EQIP).

(5) *Verification plan.* A request for certification must contain a verification plan.

(i) The verification plan must include the methods for credit verification, such as the documentation of the implemented pollutant reduction activity, sufficient to allow the Department to verify that the pollutant reduction activity in the certification was properly implemented during the applicable compliance period.

(ii) The verification plan must also include one of the following methods. The method contained in the verification plan is subject to approval by the Department:

(A) Self-verification by the person responsible for implementing the pollutant reduction activity.

(B) Third-party verification.

(6) *Certification by the Department.* The Department will certify a pollutant reduction activity when it has determined that the requirements of paragraphs (1)—(5) have been met. In addition, the following apply:

(i) The Department may make a certification contingent on conditions to ensure that the requirements of this chapter will be satisfied.

(ii) The Department may only certify the pollutant reduction activity that will generate credits for use to meet permit effluent limits for the compliance period for which they are certified, verified and registered under this section.

(iii) The Department will only approve a request for certification for multiple compliance periods if the pollutant reduction activity that will generate the credits will be verified and registered separately for each compliance period.

(7) *Compliance.* A person to whom the Department issues a certification under this section shall comply with the terms and

(7) *Compliance.* A person to whom the Department issues a certification under this section shall comply with the terms and conditions of the certification.

(8) *Duration of certification.* The term of a certification is 5 years, unless the certification expressly states otherwise. To obtain a certification term longer than 5 years, a person requesting certification shall demonstrate to the Department's satisfaction that a longer term is warranted based on technological or economic factors, taking into consideration the requirements for restoration, protection and maintenance of the water quality of the Chesapeake Bay.

(9) *Renewal of certification.*

(i) A person seeking renewal of a certification shall submit a written request for renewal at least 180 days prior to the expiration of the certification.

(ii) The Department will provide public notice and an opportunity for informal comment when an administratively complete request is submitted.

(iii) The Department's final determination on a request for renewal will be based on the requirements of this section and on other applicable laws, water quality standards and requirements in effect at the time of the Department's determination.

(iv) By April 13, 2015, the recipient of a certification issued prior to October 9, 2010, shall submit a request for renewal of the certification. The Department will process the request in accordance with this paragraph. This subparagraph does not apply to a certification containing an expiration date.

(10) *Revocation.* The Department may revoke a certification for failure to comply with the conditions of the certification.

(f) *Verification requirements for the Chesapeake Bay.*

(1) *General.* Credits must be verified prior to registration. The following applies to verification:

(i) Verification must be conducted as described in the approved verification plan.

(ii) Verification must demonstrate that the pollutant reduction activity has been implemented as described in the certification, and that other requirements, such as baseline and threshold, are met.

(2) The Department may conduct other verification activities, such as monitoring and conducting inspections and compliance audits, to ensure that the pollutant reduction obligations are being met.

(g) *Registration requirements for the Chesapeake Bay.*

(1) *General.* Credits must be registered by the Department before they may be applied to a permit to meet effluent limitations.

(2) *Registration requirements.* The following registration requirements apply:

(i) Credits must be certified under the provisions of subsection (e).

(ii) Credits must be addressed in a valid contract that ensures that the requirements of this section will be met.

(iii) Credits must be verified prior to registration, under subsection (f).

(iv) The Department will assign a registration number to each registered credit for reporting and tracking purposes.

(3) *Failure to implement.* The Department will not register credits if the person who generates the credits has not implemented, or demonstrates a lack of ability or intention to implement, operations and maintenance requirements contained in the certification, verification plan, or other requirements of this section. The Department will not register credits submitted by an aggregator that is currently not complying, or demonstrates a lack of ability or intention to comply, with this section.

(h) *Use of credits and offsets to meet NPDES permit requirements related to the Chesapeake Bay.*

(1) A permittee will only be authorized to use credits and offsets through the provisions of its NPDES permit. The permit conditions will require appropriate terms, such as recordkeeping, monitoring and tracking, and reporting in DMRs.

(2) Only credits and offsets generated from activities located within the Chesapeake Bay Watershed may be used to meet NPDES permit requirements related to the Chesapeake Bay. Credits generated in either the Susquehanna or Potomac basins may only be used in the basin in which they were generated, unless otherwise approved by the Department.

(3) A permittee shall ensure that the credits and offsets that the permittee applies to its permit for compliance purposes are certified, verified and registered, or approved, under this section for the compliance period in which they are used.

(4) The Department may authorize a period of 60 days or less following the completion of the annual compliance period in an NPDES permit, for a permittee to come into compliance through the application of credits and offsets to the permit provided that the credits were registered and offsets were approved for use during that compliance period.

(5) A permittee relying on credits to demonstrate compliance with its permit effluent limitations, conditions and stipulations under Chapter 92a shall attain and maintain compliance with its permit. A permittee is responsible for enforcing the terms of its trade contract, when needed to ensure compliance with its permit. The Department may waive this requirement where the pollutant reduction

activity fails due to uncontrollable or unforeseeable circumstances such as extreme weather conditions, and timely notice is provided to the Department, if the following apply:

(i) The failure is not due to negligence or willfulness on the part of the permittee.

(ii) The Department determines that replacement credits will be available.

(iii) The Department determines that the requirements for restoration, protection and maintenance of the water quality of the Chesapeake Bay will be met due to the requirements of this section, which may include the type of methodologies used when certifying credits, the existence of an approved legal mechanism that is enforceable by the Department, and the use of a credit reserve.

(6) A permittee shall document the use of credits and offsets in DMR forms, which the permittee shall submit at the end of each compliance year or as otherwise provided or required in the permit. Credits and offsets shall only be used to meet permit effluent limits for the compliance period for which they are certified, verified and registered, or approved, by the Department under this section.

(i) *Water quality and TMDLs.*

(1) Use of credits and offsets under this section will be allowed only where surface water quality will be protected and maintained as required by applicable regulations, including this chapter, Chapters 92a and 93, as well as Department permits, schedules of compliance and orders.

(2) Use of credits and offsets under this section must ensure that there is no net increase in discharge of pollutants to the compliance point used for purposes of determining compliance with the water quality standards established by the states of Maryland and Virginia for restoration, protection and maintenance of water quality of the Chesapeake Bay.

(3) Where a TMDL has been established for the watershed where the permitted activity is located, the use of credits and offsets under this section will be consistent with the assumptions and requirements upon which the TMDL is based.

(4) Use of credits and offsets under this section will comply with the antidegradation requirements contained in Department regulations.

(j) *Public participation.* The Department will publish a notice in the *Pennsylvania Bulletin* of the receipt of administratively complete requests for certifications of a pollutant reduction activity to generate credits. The notice will provide an opportunity for informal comments. This notice is not required to follow the requirements of § 92a.82 (relating to public notice of permit applications and draft permits). The Department will also publish notice in the *Pennsylvania Bulletin* of its final certification determination.

(k) *Use of credits and offsets generally.* Nothing in this section precludes the Department from allowing the use of credits and offsets to be used to meet permit limits other than those established for restoration, protection and maintenance related to the water quality of the Chesapeake Bay.

Authority

The provisions of this § 96.8 issued under sections 5(b), 202, 307, and 402 of The Clean Streams Law (35 P. S. § § 691.5(b), 691.202, 691.307, and 691.402).

Source

The provisions of this § 96.8 adopted October 8, 2010, effective October 9, 2010, 40 Pa.B. 5790.

RULES AND REGULATIONS

ENVIRONMENTAL QUALITY BOARD

[25 PA. CODE CH. 96]

Water Quality Standards Implementation

[40 Pa.B. 5790]
[Saturday, October 9, 2010]

The Environmental Quality Board (Board) amends Chapter 96 (relating to water quality standards implementation) to read as set forth in Annex A. The final-form rulemaking codifies, with some revisions, the Department's existing guidance entitled "Final Trading of Nutrient and Sediment Reduction Credits—Policy and Guidelines" (No. 392-0900-001, December 2006) as it relates to the Chesapeake Bay (Nutrient Credit Trading Policy). The Nutrient Credit Trading Policy provides a cost-effective means for facilities subject to meet limits for nitrogen, phosphorus and sediment to meet those limits by working with other facilities or with nonpoint sources, or both. The Nutrient Trading Program helps the Commonwealth achieve its Chesapeake Bay nutrient reduction goals from the agriculture sector and provides a source of revenue to farmers and other property owners while advancing the restoration and protection of the water quality of the Chesapeake Bay.

This order was adopted by the Board at its meeting on July 13, 2010.

A. *Effective Date*

This final-form rulemaking will be effective upon publication in the *Pennsylvania Bulletin*.

B. *Contact Persons*

For further information, contact Ann Roda, Program Analyst, Water Planning Office, P. O. Box 2063, Rachel Carson State Office Building, Harrisburg, PA 17105-2063, (717) 772-4785; or Kristen Furlan, Assistant Counsel, Bureau of Regulatory Counsel, P. O. Box 8464, Rachel Carson State Office Building, Harrisburg, PA 17105-8464, (717) 787-7060. Persons with a disability may use the Pennsylvania AT&T Relay Service, (800) 654-5984 (TDD users) or (800) 654-5988 (voice users). This final-form rulemaking is available electronically through the Department of Environmental Protection's (Department) web site (http://www.dep.state.pa.us).

C. *Statutory Authority*

The final-form rulemaking is being made under the authority of section 5(b) of The Clean Streams Law (35 P. S. § 691.5(b)), which provides for the adoption of regulations necessary for implementation of The Clean Streams Law (35 P. S. §§ 691.1—691.1001); sections 202, 307 and 402 of The Clean Streams Law (35 P. S. §§ 691.202, 691.307 and 691.402), which authorize the Department to establish requirements related to pollution and potential pollution; and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20(b)), which authorizes the Board to promulgate rules and regulations as may be determined by the Board for the proper performance of the work of the Department.

D. *Background and Purpose*

The Chesapeake Bay is polluted from nutrients and sediment and in 2005 water quality standards under the Federal Clean Water Act (33 U.S.C.A. §§ 1251—1387) to address this pollution came into effect. To meet these requirements under the Federal Clean Water Act, the United States Environmental Protection Agency (EPA) and the affected states developed a maximum nutrient load, or "cap load," for each major tributary. As a result, approximately 200 municipal sewage treatment plants and others discharging nutrients to this Commonwealth's Bay tributaries must cap those discharges or they will be in violation of the downstream water quality standards, under Federal and State law.

In January 2006, the Department initiated an intensive stakeholder process regarding these legal requirements. First, it refocused and expanded the standing Chesapeake Bay Advisory Committee of the Department to include local government associations, the agricultural community and multiple associations. The Chesapeake Bay Advisory Committee was tasked with discussing the wide variety of issues surrounding the Commonwealth's compliance strategy and to consider various approaches to meeting the Federally driven water quality obligations.

After receiving input through a series of meetings held over a 9-month period, the Department developed a revised plan to address the legal mandate. The plan included permitting requirements for sewage treatment plants and other "point sources" governed by the Federal National Pollutant Discharge Elimination System (NPDES) regulations controlling agricultural run-off and the Nutrient Credit Trading Policy.

The Nutrient Credit Trading Policy was one of several compliance alternatives provided to NPDES permittees required to reduce their effluent discharges under the Department's plan. The other compliance alternatives identified for NPDES permittees were as follows: implementation of nutrient reduction treatment technology; retirement of existing onlot septic systems; wastewater reuse; and

land application. Nutrient trading provides those sewage treatment plants with options that have the potential to reduce compliance costs substantially. For example, in 2008, Fairview Township decided to use credits to meet its nutrient reduction obligation and in so doing announced a cost savings of approximately 75%. The Mount Joy Borough Authority investigated costs of upgrading and found that by installing the first level of nitrogen treatment they could reduce nitrogen by about 50% for about $8 per pound. However, to reach their cap loads, an additional upgrade would increase the price to about $12 per pound. Instead, the Mount Joy Borough Authority contracted with a local farmer and invested in more than 900 acres of no-till agriculture to meet their permit cap at a cost of only $3.81 for every pound reduced.

Another important example is the Harrisburg Authority. The Harrisburg Authority underwent a public bidding process, the first of its kind, to help it incorporate nutrient credits into its compliance plan for meeting nitrogen and phosphorous limits. The Harrisburg Authority used the bids to help estimate design and construction costs to compare the costs of three different approaches for compliance: one that completely relied on treatment plant upgrades; one that completely relied on nutrient trading; and one that combined trading with construction. Working with its consultant, the Harrisburg Authority determined that the lowest cost of compliance would be a combination of trading and construction. By purchasing nutrient credits, the Harrisburg Authority estimates that it will save $28 million over the next 20 years, which will save ratepayers an estimated $48 per year on sewer service charges.

The Department's nutrient credit trading program is built upon the core elements prescribed for a valid trading program. For example, credits can only be generated for nutrient reductions above and beyond those required for regulatory compliance. There are also caps on the total tradable credits for "nonpoint sources" at the excess level available in the watershed from best management practices (BMPs) beyond those needed to meet compliance goals.

Since the publication of the interim final policy and as of May 2010, the Department has received 89 proposals that have been submitted for review to generate nutrient reduction credits in the Chesapeake Bay watershed, mostly but not exclusively by farmers. Of those, 59 have been approved for a total of 2,999,765 nitrogen credits and 249,543 phosphorous credits. There have also been eight contracts entered into for the use of credits toward permit compliance.

The Department and its partners continue to seek enhancements to the Department's nutrient trading program. For example, the Pennsylvania Infrastructure Investment Authority (PENNVEST) has been authorized by the EPA as well as by the PENNVEST Board to invest up to $50 million to facilitate the nutrient credit trading program. PENNVEST is also preparing to provide an exchange role to facilitate the use of credits by sewage treatment plants. Further, the Department regularly meets with stakeholders to improve the trading program.

The Department consulted with a number of boards and committees throughout the process of developing the Nutrient Credit Trading Policy, the proposed rulemaking and this final-form rulemaking. The Department presented a summary of comments received on the proposed rulemaking to the Water Resources Advisory Committee (WRAC) on April 14, 2010, and then presented the final-form rulemaking to the WRAC on May 11, 2010. At that meeting, the WRAC endorsed the final-form rulemaking. The Department presented a summary of comments received on the proposed rulemaking to the Agricultural Advisory Board (AAB) on April 21, 2010. The AAB raised few comments or concerns.

The EPA supports credit trading generally, having published a National policy in that regard in 2003, and a detailed NPDES permit writer's manual on the subject in 2007. The Department conferred with the EPA on this program for the past several years and the EPA agrees with the approach. There are no Federal regulations for nutrient credit trading, although there are several air quality-related trading programs administered by the EPA and other states, including the Commonwealth.

The Commonwealth has been leading the way Nationally in developing its nutrient trading program and it is one of the first programs in the country to have both nonpoint sources and point sources utilizing a nutrient credit trading program. Harnessing market forces can be an effective way to achieve environmental regulatory goals at less expense than traditional command and control regulations. Market-based programs such as trading provide incentives for entities to create credits by going beyond statutory or regulatory obligations.

This final-form rulemaking will provide clear and certain standards for nutrient credit trading in this Commonwealth and thereby support the Department's efforts to implement its nutrient credit trading program. To ensure the continued effectiveness of the nutrient credit trading program and to meet new Federal or Commonwealth requirements, the Department will periodically review the nutrient trading program and recommend modifications that may be advisable.

E. *Summary of Regulatory Requirements and Major Changes to the Proposed Rulemaking*

Subsection (a)—Definitions

The final-form rulemaking adds a number of definitions to clarify various new terms. Most of the definitions were taken from the Nutrient Credit Trading Policy, with revision in some cases based on the Department's experience in implementing the program since the Nutrient Credit Trading Policy was finalized and also based on public comments and comments from stakeholders. Some of the definition revisions are intended solely for clarification or style.

There are several substantive changes to definitions from the proposed rulemaking. The Department added a subparagraph to the definition of "BMP—Best management practice" to conform to the definitions in Chapter 102 (relating to erosion and sediment control). The Department retained the four existing subparagraphs to ensure adequate flexibility for point and nonpoint source pollutant reduction activities.

The Department revised the definition of "DMR—Discharge monitoring report" to adopt the definition of the term as it is stated in the concurrent final-form rulemaking replacing Chapter 92 with Chapter 92a (relating to National Pollutant Discharge Elimination System permitting, monitoring and compliance).

The Department removed references to "offsets" from the definitions of "certification," "registration," "threshold," "trading ratio" and "verification" as offsets do not get certified, verified and registered and may not be traded under the final-form rulemaking. Deletion of the word "offset" is made throughout the final-form rulemaking, where applicable, for the same reason.

The final-form rulemaking amends the definition of "edge of segment ratio" by deleting "land-applied" because land application is not a necessary prerequisite to the use of the edge of segment (EOS) ratio. The final-form rulemaking also deletes "nonpoint" from the definition because the EOS ratio may also be employed when calculating credits generated by point sources.

The final-form rulemaking amends the definition of "offset" to conform better to the definition in the NPDES permit and the one used in a Department implementation guideline, namely its *Chesapeake Bay Tributary Strategy Implementation Plan for Sewage Facilities Planning*, dated April 24, 2007.

The final-form rulemaking adds a definition of "pollutant reduction activity" because the term is used throughout the final-form rulemaking. The definition was created for this final-form rulemaking and applies to activities by both point and nonpoint sources.

The final-form rulemaking expressly defines the "reserve ratio" as "10%." This number was included to ensure the regulated community that the reserve ratio will be consistent among persons receiving certifications.

The final-form rulemaking clarifies in the definition of "threshold" that the activities and performance standards required beyond baseline compliance are specified in subsection (d)(3).

The final-form rulemaking clarifies the definition of "tradable load" by indicating that it applies to an amount of nonpoint source pollutant reductions. This term is defined to ensure that reductions needed by nonpoint sources to meet the Commonwealth's Chesapeake Bay Tributary Strategy (Tributary Strategy) will not be traded away.

The final-form rulemaking amends the definition of "verification" to cover situations in which a technology, rather than a practice, will be used to generate credits. Sometimes for these projects, the verification plan will be in a permit or other Department approval needed for the project.

Subsections (b), (i) and (k)—General provisions

The final-form rulemaking contains several subsections with overarching provisions. Subsection (b) sets forth the core concepts and basic requirements of the trading program. Subsection (i) contains provisions regarding the interaction of § 96.8 and important provisions elsewhere in 25 Pa. Code (relating to environmental protection) regarding protection of water quality. Subsection (k) makes it clear that this final-form rulemaking is not intended to limit the Department's existing authority to allow the use of credits or offsets in other contexts.

Subsection (c)—Methodology for calculating credits and offsets

Much of the methodology for establishing the water quality standards for the Chesapeake Bay, and determining effectiveness of various activities to meet those standards, is based on scientific work done by the EPA. This includes the use of several complex models and the scientific research related to them. Subsection (c) identifies those models and the research and establishes them as a basis for the Department's decisions regarding, among other things, the amount of reductions (and therefore credits) to assign to a given pollutant reduction activity. These models and the related research are an ongoing effort and the language of this subsection allows for the use of the most up-to-date versions of the models and most current research. Changes from the proposed rulemaking in this subsection are designed to add certainty, clarity and transparency.

An important provision in this subsection is paragraph (2), which allows the person seeking certification to use pollutant removal efficiencies, EOS ratios and delivery ratios that are consistent with the most up-to-date version of the Chesapeake Bay Watershed Model (the version at the time of writing this preamble is Version 4.3) in calculating credits. The removal efficiencies represent average nutrient and sediment reduction performance capabilities for various BMPs. They undergo extensive peer review by a technical review team managed by the EPA Chesapeake Bay Program. Recommendations are then reviewed by the EPA Chesapeake Bay Program committee and subcommittee process. These efficiencies change with the science of the models and related research. The final-form rulemaking states that the pollutant removal efficiencies and EOS and delivery ratios will be available on the Department's Nutrient Credit Trading web site: http://www.dep.state.pa.us, Keyword: "Nutrient Trading."

The EOS and delivery ratios are used to identify the fate and transport of nutrients and sediment from their initial creation at a certain location to the Bay. For example, a pound of nitrogen reduced in the upper reaches of the Susquehanna has much less impact than a pound reduced near the border with Maryland. The delivery ratio accounts for that difference.

Subsection (d)—Eligibility requirements

This subsection describes the various requirements for a source to be able to generate credits for use under the final-form rulemaking. There are two components. First, the generator shall meet "baseline" requirements, which essentially are the legal requirements that apply to that operation. For a nonpoint source, these are the legal requirements and pollutant load associated with the location applicable on January 1, 2005, or later.

The second requirement is "threshold." This requirement is defined as either a 100-foot manure set back, a 35-foot vegetative buffer or a 20% adjustment made to the overall reduction. It provides an added level of nutrient and sediment reduction that would not necessarily be accomplished without the financial incentives of trading. Threshold, therefore, adds to the nutrient reduction benefits for the Bay, especially from the agriculture sector.

Therefore, only after demonstrating compliance with the applicable legal requirements (baseline) and achieving an additional set of

Therefore, only after demonstrating compliance with the applicable legal requirements (baseline) and achieving an additional set of pollutant reductions (threshold) can a person begin to generate credits under the final-form rulemaking. The Department received numerous proposals for the generation of credits that achieve these requirements and has approved many of them.

Subsection (d) also addresses a person's compliance status as a consideration in the Department's certification decision. In the final-form rulemaking, the Department narrowed subsection (d)(4) to apply when past or current noncompliance indicates a lack of ability or intention to comply with the stated items. The Department does not intend to let minor infractions exclude a person from engaging in trading.

Subsections (e), (f) and (g)—Certification, verification and registration

These subsections describe the procedural requirement that the Department has in place to ensure that credits are calculated correctly and accomplish pollutant reductions.

The first step is "certification," which is typically done in advance of pollutant reduction activities. In reviewing certification requests, the Department evaluates detailed requests for approval of a pollutant reduction activity for the purpose of certifying that activity as being capable of generating credits. A person may want to have a proposed pollutant reduction activity certified to obtain from the Department the number of credits that can be expected, prior to completing the activity.

Calculation of the number of credits a certified pollutant reduction activity may generate will include appropriate adjustments such as the reserve and delivery ratios, with particular attention being paid to the requirements of subsection (c), regarding methodology. The result is a letter from the Department indicating the pollutant reduction activity being certified and the amount of credits that may be generated. The person can use the certification to market the anticipated credits. The Department's certification decision is a final action.

Certification requirements have been clarified in the final-form rulemaking to explain elements of the calculation for a point source generating credits and to explain, consistent with the definition of "reserve ratio," that a credit calculation for a point or nonpoint source must include a 10% set aside for the Department's credit reserve.

Certification requirements also include a restriction on certification of requests that include a pollutant reduction activity regarding farmland conversion. This is described more fully in Part F of this preamble.

A paragraph has been added to subsection (e) to affirm that a person to whom the Department issues a certification under § 96.8 shall comply with the terms and conditions of the certification. Failure to comply will expose the person to available remedies, including the remedies available under The Clean Streams Law. Provisions have also been added to subsection (e) to specify a typical certification term of 5 years, to describe the process for renewal of a certification and to provide for revocation of a certification in the event of failure to comply with conditions of a certification.

A second important procedural requirement and a key component of the certification decision is a review of the "verification" plan. This plan is required by subsection (e)(5). This paragraph has been amended to clarify that one of the two methods listed for verification must be selected, namely self-verification (which can include submission of DMRs by a point source) and third-party verification.

The verification process, itself, has been moved to subsection (f), regarding verification requirements for the Chesapeake Bay. Verification is a condition of "registration," the final step, under subsection (f)(1). Verification can take a number of forms, but it must demonstrate that the pollutant reduction activity was implemented as described in the certification. The Department may also conduct other verification activities, in addition to those in the plan submitted under subsection (f)(2).

The final procedural step in these subsections is "registration," under subsection (g). This is the Department's accounting mechanism to track verified credits before they are used to comply with the NPDES permit effluent limits for the Bay.

Under subsection (g)(3), the Department will not register credits for persons who demonstrate a lack of ability or intention to comply with the requirements of § 96.8, Department regulations or other relevant requirements. See also subsection (d)(4) and (6).

Subsection (h)—Use of credits and offsets

This subsection addresses the obligations of persons who use credits and offsets to meet permit requirements. This underscores that the use of credits and offsets only applies to the nutrient and sediment effluent limits in NPDES permits for the purposes of restoration and protection of the water quality of the Chesapeake Bay. See subsection (h)(1) and (2). This language is not intended to limit the Department's existing authority to allow the use of credits or offsets in other contexts. See subsection (k).

Credit and offset failure is addressed in subsection (h)(5). There are several factors that come into play with this issue. First, it is important that credits and offsets generate real reduction in pollutant loads delivered to the Bay. In addition, the one sector most likely to purchase credits, sewage treatment plant operators, has expressed concern over purchasing credits and then later being subject to enforcement action by the Department if the credits are not accepted due to credit failure. This subsection seeks to address both concerns while reminding facility operators of their obligation to meet permit effluent limitations, conditions and stipulations.

Two key components of this subsection are "the Department determines that replacement credits will be available" and "the existence of an approved legal mechanism that is enforceable by the Department." An example is the use of the credit reserve.

Subsection (i)—Water quality and Total Maximum Daily Loads (TMDLs)

This subsection is aimed at protecting and restoring the water quality of the Chesapeake Bay. However, there may be local water quality issues that can affect a decision on a credit or offset proposal. This would be most likely if the receiving waterbody at the

location where the credits or offsets will be generated is listed as "impaired" through the Department's formal listing process under The Clean Water Act. There are also local antidegradation requirements that are part of the Commonwealth's water quality regulations. This subsection makes it clear that those and other existing regulatory requirements take precedence over any decisions made under this final-form rulemaking.

Subsection (j)—Public participation

The Department is committed to a transparent process in the implementation of its trading program. Therefore, the final-form rulemaking codifies the current process of publishing notice in the *Pennsylvania Bulletin* whenever: (1) a credit proposal is submitted and is administratively complete; and (2) the Department makes a final decision on certification.

Subsection (k)—Use of credits and offsets generally

While this final-form rulemaking only authorizes trading to meet the nutrient and sediment cap loads for the Chesapeake Bay, it is not intended to foreclose the use of credits or offsets in other contexts.

F. *Summary of Major Comments and Responses on the Proposed Rulemaking*

The Board approved publication of the proposed rulemaking at its meeting of November 17, 2009. The proposed rulemaking was published at 40 Pa.B. 876 (February 13, 2010) with a 30-day public comment period. The public comment period closed on March 15, 2010.

A number of commentators pointed out concerns with the terms "offset" and "credit," suggesting, among other things, that they be addressed separately and that offsets not be subject to the certification, verification and registration processes in the proposed rulemaking. In response, the Department made a number of revisions to the final-form rulemaking to address the concerns raised by the commentators. Specifically, the definition of "offset" has been revised to more accurately reflect the use of the term and to match more closely the permit definition. The term was also removed from many sections of the final-form rulemaking, which was clarified so that offsets are approved rather than being treated the same as credits.

Several commentators requested that the definition of "baseline," and also the point source baseline requirements in subsection (d), be revised so as not to prevent sources from generating Bay-related credits if a local TMDL limit results in greater reductions than those needed to comply with Bay annual cap loads. Several commentators stated that more guidance is needed on how a TMDL may affect baseline and that it was not clear if a participant needed to meet the TMDL requirements before they could be considered in baseline or if they only needed to meet their State regulatory requirements for baseline before they start trading. In addition, one commentator thought the term "similar allocation" in subparagraph (ii) of this definition and subsection (d)(2)(ii) was unclear. That commentator recommended that the Department work with stakeholders to address these concerns and use greater detail in setting forth its intent in the final-form rulemaking. Similar comments were received regarding proposed subsection (h). Changes were not made to the final-form rulemaking. In the 2003 "Water Quality Trading Policy Statement," the EPA outlined that baselines for generating credits should be derived from and be consistent with water quality standards. The policy states that when a TMDL has been approved or established by the EPA the applicable point source waste load allocation or nonpoint source load allocation would establish the baseline for generating credits. The final-form rulemaking is consistent with this EPA guidance and provides consistency across sectors.

Two commentators requested that "liquidity in the market" be removed from the definition of "credit reserve." The Department made this change.

One commentator stated that the definition of "credit" should reflect how a delivery ratio, when applied to a point source cap load, determines how many credits are needed. A change has not been made to the final-form rulemaking. The authorizing language in NPDES permits will contain the conditions by which credits may be applied toward compliance with point source cap loads.

Several comments sought clarification on the meaning of the term "defined compliance point" in the definition of "delivery ratio." The Department responds that a compliance point is typically defined in a TMDL.

One commentator requested clarification on the definition of "DMR—Discharge monitoring report" in light of the fact that in § 92.1 a discharge monitoring report (DMR) is the same as an NPDES reporting form. Clarification has been added by adopting the definition of the term as it is stated in the concurrent rulemaking replacing Chapter 92 with Chapter 92a.

Several commentators stated that it was unclear how the EOS ratio reflects pollutant contributions associated with groundwater flows and asked if the ratio really reflects pollutant contributions associated with groundwater flows. The comments requested clarification to address the comparison between the relatively short amount of time it takes for surface runoff of pollutants into streams, saying it should take considerably longer for groundwater contributions to occur in those same streams. The Department responds that the EOS ratios were developed by dividing the amount of nutrients coming from the model segment (the EOS loads) by the total amount of nutrients applied to the land within the segment (the input loads). The total nitrogen inputs are first adjusted to subtract out the amount of nitrogen that would be removed by crop uptake.

Several commentators questioned the use of the EOS factor on a specific farm field, since the EOS was not developed for site specifics, but rather larger watershed segments. The Department responds that the EOS factor is the best science that is currently available to make this correlation. As the science and values evolve, the Department will make additions to the quantification and application of the ratio.

Two commentators suggested that the credit reserve of 10% should be set in the regulation to add certainty to the final-form rulemaking. The Department made this revision in the definition of "reserve ratio."

One commentator questioned what criteria and process will be used by the Department in determining what is "reasonably attainable" in the definition of "tradable load." The Department retained this language in the final-form rulemaking, as flexibility is needed. During program development, the Commonwealth recognized that the Chesapeake Bay Watershed model estimates were based on the assumption that everyone who can reduce nutrients and sediment will do so to the maximum extent. This is commonly referred to as the "everything, everywhere, by everybody" (E3) scenario. Since the E3 scenario likely overestimated the maximum feasible nutrient and sediment load reductions, the Commonwealth made adjustments to the estimates to better represent a feasible effort. The Commonwealth reduced nonpoint source reductions in E3 by 10% and estimated the reductions for those BMPs in the Tributary Strategy that were not included in the E3 scenario. After adjusting the E3 scenario estimates, the Commonwealth estimated the maximum allowable credits as the difference between the load estimates from the revised E3 scenario and the Tributary Strategy loadings goal. The scenario values and the tradable load values will change as new BMPs are developed or the efficiencies of existing BMPs are revised. The Department notes that the modifier "reasonable" is found in other environmental regulations, as well when the exercise of judgment and flexibility are similarly appropriate.

Two commentators suggested that offsets should not be mentioned in the definition of "threshold" and that the definition of "tradable load" should somehow incorporate the term "threshold." It was also stated that the term "reasonably attainable" in the definition of "tradable load" is ambiguous and open-ended. The term "offset" has been removed from the definition of "threshold." Additionally, when the tradable load was developed, it did not include reductions associated with threshold so it would be inappropriate to add "threshold" to the definition. Information on how the tradable load was developed can be found on the Department's Nutrient Trading web site. Changes have not been made regarding the term "reasonably attainable." The Department will need flexibility regarding the information generated by TMDL models and water quality standards and it is not possible to have a more accurate terminology.

One commentator suggested that it was unclear what is meant by "water quality" or what would be included in "other considerations" as set forth in the definition of "trading ratios." The commentator stated that if the Department intends to impose a trading ratio, reserve or other reduction on the sale of credits from a point source seller to a point source buyer, then the regulation should set forth specific amounts. The Department responds that much of the definition of the term "trading ratio" is taken from the EPA's 2003 "Water Quality Trading Policy Statement." The phrases "water quality" and "other considerations" are used in the definition of "trading ratios" because when calculating the reductions, trading ratios need to be considered and used as appropriate to help ensure the trade provides the desired level of nutrient reductions and water quality benefits. Point source credits are calculated based on reductions to the Chesapeake Bay and will include the application of the delivery ratio and reserve ratio. This information on the applicable trading ratios for calculating credits is readily available on the Department's Nutrient Trading web site. The authorizing language in NPDES permits will contain the conditions by which credits may be applied toward compliance and will address what ratios may be used by a permittee when credits are applied toward permit compliance.

Several commentators stated that there is ambiguity in how the Department will have the ability to readjust BMP reduction efficiencies, thresholds and delivery ratios. The comments stated that to maintain confidence and stability in the trading program, it must be stated clearly in the regulation that once credits are verified, registered and sold, the number of credits is guaranteed for the current or future years for which they are purchased and cannot be reduced based on further review of how they were originally determined. The Department responds that flexibility in the BMP efficiencies and in the EOS and delivery ratios is needed to ensure the actions undertaken within the program reflect the water quality standards downstream. The Chesapeake Bay model is ever evolving to accurately measure and model the progress that is made in reaching a restored Bay. To balance this flexibility, the Department added section subsection (e)(8), which outlines that a pollutant reduction activity will generally be certified for a duration of 5 years.

One commentator stated that the proposed rulemaking failed to establish objective standards. A major concern is that the regulated community is not apprised of the specific criteria that the Department will use, such as the following: the specific reserve factor, if any, that would apply to point source trades; how trades will be calculated based upon the deliverable loads of the seller; and how trades will be calculated based upon the deliverable loads of the purchaser. The final-form rulemaking should identify the underlying criteria for how trades can occur. The Department responds that the final-form rulemaking identifies how credits and offsets may be used in the Chesapeake Bay Watershed. Subsection (h) refers to the use of credits to meet NPDES permit requirements. Credits are calculated based on what is delivered to the Chesapeake Bay. The authorizing language in NPDES permits will contain the conditions by which credits may be applied toward compliance, which will address delivered loads. The Department provided clarification in the definition of "reserve ratio" that it will be 10%. The final-form rulemaking states that information on the delivery and EOS ratios will be available on the Department's Nutrient Trading web site.

One commentator stated that the rules governing the trading market must be consistent and predictable to encourage investment and participation and that, therefore, the Board and the Department need to work with stakeholders to develop greater specificity in the criteria, procedures and standards in the final-form rulemaking. The Department worked with stakeholders to develop the final-form rulemaking and added greater specificity to it. The Department added clarity by identifying where ratios and efficiencies can be found, clarifying the three-step process regarding certification, verification and registration, providing a time frame for certification and clarifying permittee responsibility.

A commentator requested more transparency regarding information the Department uses in calculating credits and offsets. The Department responds that this information will be readily available on the Department's Nutrient Trading web site.

One commentator asked that the final-form rulemaking address timetables and notification requirements regarding eligibility determinations, credit certifications, verifications or other types of decisions to be made by the Department to increase predictability. In the final-form rulemaking, eligibility determinations will be made as part of the credit certification action. Consistent with current practice, the Department will attempt to issue decisions on certification within 60 days of receipt of a complete proposal. This time period will also include a 30-day period for informal comments from the public. The final-form rulemaking does not include a time period because projects vary widely in scope, some requiring significantly more review. In addition to maintaining communication with submitters during the Department's review, the Department will publish notice in the *Pennsylvania Bulletin* when it makes a final certification decision, under subsection (j). The Department's web site and on-line trading platform, which is called NutrientNet, will contain information about certified projects as well as market pricing.

One commentator expressed concern about being able to appeal if credits are not registered and to be able to use credits in a later water year. The Department responds that the final-form rulemaking does not include an appeal process, as it is not necessary and the Department does not typically set forth appeal processes in its regulations. For the nutrient trading program, the Department's certification action (approval or denial) is a final action of the Department that is intended to be appealable.

Comments were submitted in support of, and questioning, the use of "delivery ratios" to calculate credits. Some commentators also thought that a delivery ratio should not be applied to credits generated by a point source. The Department responds that credits are calculated based on what is delivered to the Chesapeake Bay and will include the application of the reserve ratio. The authorizing language in NPDES permits will contain the conditions by which credits may be applied towards compliance. The permit conditions will address the issue raised regarding delivered loads.

Several comments were submitted regarding clarification on how the proposed rulemaking affects point source to point source trades. One commentator believed that point source to point source credits should be certified as pound for pound without the 10% reserve ratio or with a less restrictive reserve ratio. These commentators also felt that point source credits should not be subject to the reserve ratio because there is a certainty that the credits were actually generated by virtue of certification on the DMR by the permittee. One commentator stated that the final-form rulemaking should be clarified to indicate that pollution reduction failures and uncertainty are generally associated with nonpoint source projects. The Department has not made these changes. The credit reserve is intended to provide an insurance pool of credits in times of need and it will be populated by a 10% reserve ratio applied across the board.

One commentator suggested that point sources should not have to wait until the end of the water year to receive certification and verification, as verification can be done through DMRs. One commentator suggested that a signed DMR should replace the certification and verification process for point sources. The final-form rulemaking has been revised to clarify that a point source may obtain certification of a pollutant reduction activity prior to the end of the compliance year, the definition of "DMR—Discharge monitoring report" has been expanded, "pollutant reduction activity" has been defined and includes "effluent control," subsection (c)(5) has been revised regarding the use of DMR and offset information as an acceptable methodology and subsection (e)(3)(iv) has been added for calculating reductions generated by a point source. As outlined in subsection (e)(5)(ii)(A), the verification plan can be self verification, which can include the signed DMR.

One commentator requested a mechanism to transfer the long-term responsibility for ensuring that nutrient credits are in place to offset the pollution loads generated by a new development from the builder or developer to a third party once a project is completed. The Department responds as follows. The Department has not made revisions to the final-form rulemaking to include this mechanism because the mechanism that the commentator seeks is related to Act 537 planning and guidance is available in the Department's "Implementation Plan for Sewage Facilities Planning" document. Specifically, the Act 537 planning submission must include assurances that will be provided to guarantee the long-term operation, maintenance and compliance of the treatment facility in accordance with 25 Pa. Code §§ 71.65, 71.71 and 71.72 (relating to individual and community sewerage systems; general requirements; and sewage management programs for Department permitted sewage facilities and community onlot systems). If a developer or municipality chooses to purchase credits for compliance they are only required to purchase credits sufficient to satisfy each NPDES permit cycle but they must have assurances in place, as they would for other permit obligations, to address long term operation and maintenance. A formal agreement between the municipality and a permittee that establishes the permittee's responsibility for operating and maintaining the system in compliance with its permit by providing credits, and the responsibility of the municipality or local agency for oversight of the system, would normally be an acceptable assurance.

One commentator requested that the Department replace general references to other laws and regulations to the specific laws and regulations. The Department has not made these revisions to the final-form rulemaking since the applicable laws and regulations are dynamic. The approach in the final-form rulemaking is consistent with that in some environmental statutes, such as the Oil and Gas Act (58 P. S. §§ 601.101—601.605) and the Pennsylvania Safe Drinking Water Act (35 P. S. §§ 721.1—721.17).

One commentator recommended that a "stormwater BMP offset" option be developed as part of Chapter 102 and that the option may also have applicability to the nutrient credit trading program. Under a "stormwater BMP offset" program, the commentator suggested that builders, developers and other applicants would be permitted to fund offsite stream buffers or other BMP in return for offsets of certain postconstruction stormwater management BMP requirements. The commentator stated that applicants would still need to install erosion and sedimentation control measures, as well as stormwater facilities, to control the runoff rate to predevelopment conditions but would offset stormwater infiltration areas. The final-form rulemaking will allow the use of credits to meet permit effluent limits for pollutants (namely, nitrogen and phosphorus) and sediment. The recent amendments to Chapter 102 authorize trading and credits for riparian buffers in the stormwater context. These Chapter 102 amendments are consistent with and would build upon this final-form rulemaking.

Two commentators suggested changes to the definition of "BMP—Best management practices." The suggested revisions have not been made in the final-form rulemaking; however, subparagraph (iii) has been added to the definition of "BMP—Best Management Practice" to include the activities regarding stormwater. This added definition mirrors the BMP definition included in the recent amendments to the Chapter 102 final-form rulemaking.

Two commentators asked that the Department publish an advance notice of final rulemaking to allow an additional public comment period. The Department did not do this. During the drafting process of the proposed rulemaking, the Department solicited comments during a number of stakeholder meetings and the proposed rulemaking is based on *Nutrient and Sediment Reduction Credit Trading—Final Policy and Guidelines*, which involved two comment periods.

Commentators questioned referencing a specific version of the Chesapeake Bay model and other models and technical references in subsection (c) saying most of the references are already out of date. For the most part, the Department has not removed the references as they serve as background material to the Chesapeake Bay program and watershed model.

One commentator asked how the regulated community will know what other sources the Department may rely upon under subsection (c)(6), which includes the sentence "The Department may also rely on other published or peer-reviewed scientific sources." The commentator asked whether the Department will publish a list in the *Pennsylvania Bulletin*. The Department will not publish a list of all published and peer reviewed scientific sources that may be available. Subsection (c)(6) provides flexibility to the regulated community in what methodology they propose to use for calculating reductions but the important component to the methodology is that it must fall within the outlined criteria.

One commentator asked for explicit regulatory language to prohibit changes in the credit calculation methods for certifications covering multiple years. The commentator stated that there needs to be certainty and predictability for both the sellers who are making investments in BMPs and buyers who are relying on those credits being available. Similarly, this commentator stated that subsection (e)(5)(ii) and (iii) creates a time line bottleneck in which many credits must be certified in the fall and early winter so that the entity implementing the BMPs can have an idea how many credits will be available for sale if he goes through the expense of implementing the BMPs in the spring. The Department added subsection (e)(8) to address the duration of credit certification. By the addition of subsection (e)(8), the Department does not feel a bottleneck will occur as the commentator expressed. The term of a certification will generally be 5 years, during which time the Department would not anticipate changing the terms of the certification. If, at the end of the 5-year period, the holder of the certification wishes to renew it, the certification may be renewed.

One commentator asked how a generator will know what the applicable threshold is. The Department has added certainty to the threshold provisions by removing the words "by the Department" from subsection (d)(1). Applicable threshold requirements are in subsection (d)(3).

One commentator stated that the nonpoint source baseline requirements, while logical, could result in unintended consequences due to the details of compliance with current regulations. For example, in Chapter 83 (relating to State Conservation Commission) there is a wide range in management that can be used to meet the requirements of the chapter. A plan for a farm could be written with all surface application of manure or with all manure being injected; the commentator questioned which manure management activity would meet baseline compliance and stated that the answer has major implications for calculating credits. The commentator explained, for example, that if the plan for surface application is the baseline and is modified to all manure being injected then the management change could be used to generate credits but if the plan already calls for the injection of the manure this could not be used to generate credits. It was suggested by this comment and several others that in addition to simply requiring compliance with current regulations, additional criteria may be required, such as using the existing compliance management on a certain date as the baseline. These commentators stated that setting a specific date in the regulation the Department would ensure that operations do not go backward in management just to generate nutrient credits. The Department revised the final-form rulemaking to include January 1, 2005, as the date for baseline, unless a revision to baseline has been made since that date, in which case the revised requirements must be met. For example, in the recent amendments to Chapter 102, an agricultural operation may need to meet those requirements for baseline.

Two commentators suggested that a reference be added to the nonpoint source baseline provision that an operation must also meet in § 92.5a (relating to CAFOs), if applicable to their operation. This reference has been added to the final-form rulemaking and reflects the new numbering of this section as § 92a.29 (relating to CAFOs).

Two commentators suggested that additional information be included in subsection (d)(3)(i)(B) so that no applications of mechanically applied manure be allowed in the 35 feet of permanent vegetation between the field and surface water. These commentators recommended the use of language from Chapter 83, which is "There is no mechanical application of manure within the buffer area." The Department revised the final-form rulemaking to include this language.

Several commentators felt the threshold provisions contained too much flexibility. One commentator asked whether the "other requirements" will be promulgated as regulations and, if not, how generators will know what they are. The commentator expressed concern about enforceability if the requirements are not set out in the regulations. The commentator expressed similar concerns for subsection (d)(5), regarding other eligibility requirements, and subsection (e)(3)(v), regarding calculation requirements. The Department responds that flexibility in this final-form rulemaking is needed to ensure the actions undertaken within the program reflect the water quality standards downstream and reflect changes regarding the protection and restoration of the Chesapeake Bay. The Department will establish requirements in the most prudent manner available under the circumstances, taking into account many factors. By way of example, if the EPA establishes a TMDL that necessitates a quick determination by the Department, then the Department will likely post notice on its Nutrient Trading web site and make case-by-case determinations until a regulatory amendment, if necessary, is adopted.

Several commentators questioned the "compliance status" provision in subsection (d)(4), saying it is too broad and should be eliminated. The Department responds that it has narrowed subsection (d)(4) to apply when past or current noncompliance indicates a lack of ability or intention to comply with the stated items. The Department does not intend to let minor infractions exclude a person from engaging in trading.

One commentator asked what the appeal process is for someone under subsection (d)(6) and suggested it should be cross-referenced or set forth in the final-form rulemaking. The Department responds that the final-form rulemaking does not include an appeal process, as it is not necessary and the Department does not typically set forth appeal processes in its regulations.

One commentator suggested that the regulation address the issue of eligibility for generation of nutrient credits as a result of idling of whole farms or substantial portions of farms and that the regulation should expressly prohibit the ability of nutrient credits to be generated and utilized in a manner that facilitates the idling and nonfarm development of farmland. The commentator also expressed concern with respect to the ability of nutrient credits to be generated through manipulation of Federal conservation programs to finance long-term land-banking of farms for future nonfarm development. The Department incorporated the requested protections into subsection (e).

One commentator suggested that the Department should make clear that projects already certified do not need to be recertified under the new standards and that the new regulation should only apply prospectively to new projects. The Department added subsection (e)

the new standards and that the new regulation should only apply prospectively to new projects. The Department added subsection (e)(9)(iv) to address this comment. If a proposal has been certified and the certification does not contain an expiration date, the recipient of the certification must submit a request for renewal by April 13, 2015. At that point, the certification, if renewed, will be updated to meet the requirements in § 96.8 and other applicable laws, water quality standards and requirements in effect at that time.

Subsection (e)(2)(i)(D) states the "implementation of the pollutant reduction activity must be verified to the extent acceptable to the Department. . . ." The commentator asked what "the extent acceptable" to the Department means. The commentator wrote that there is a reference to paragraph (4) and the "verification plan" but that it is unclear how the "extent acceptable" is identified. The commentator added that paragraph (2)(i)(D) appears to be unnecessary since verification is covered in paragraph (4). The Department responds that the phrase "to the extent acceptable to the Department" has been deleted. Paragraph (2)(i)(D) remains in the final-form rulemaking as a useful reference point.

One commentator suggested that subsection (e)(2)(ii)(E) should require only that information on any source of "public or governmental" funding be provided. The commentator sought clarification on the terms "financial guarantee mechanisms," "contractual arrangements" and "insurance products" in subsection (e)(2)(ii)(F). The Department has not made these revisions. Information on all sources of funding is useful to help the Department assure the viability of a proposed credit generation operation. The questioned terms are used as an example of ways that a person may outline how failure of the pollutant reduction activity will be managed. For example, a person may provide an explanation that they have contracts with multiple farms but only half of those farms are submitted for certification and, if needed, the remainder could be used to address nutrient reduction failure. Another example would be an explanation of the performance guarantee that is provided by the product manufacture.

Several commentators wondered if it is appropriate or necessary to include actual numbers for the tradable load, as had been proposed in subsection (e)(3)(vi). One comment suggested that the Department should provide public information on the genesis of the numbers. One comment stated the section should include the fact that tradable load for the Chesapeake Bay Watershed is for the portion of the watershed in this Commonwealth. It was suggested that the numbers be deleted to allow the Department to periodically reevaluate tradable load without subsequent amendments to the regulation. The Department revised this subsection, renumbered as subsection (e)(4)(i). The revisions include the removal of the specific tradable load amount, clarification that the tradable load is for the portion of the Chesapeake Bay Watershed in this Commonwealth and assurance that the specific loading can be found on the Department's Nutrient Trading web site.

One commentator questioned the phrase ". . . unless otherwise revised by the Department" in subsection (e)(3)(vi), which sets forth the level at which the sum of all credits may not exceed. The Department responds that the phrase ". . . unless otherwise revised by the Department" has been deleted from the final-form rulemaking.

Several commentators suggested that subsection (e)(3)(vii), regarding cost-sharing, should add some clarifying statement that the credits may be available "to the applicant" for certification, if the funding source provider allows. A commentator stated that this subsection should be struck because the Department should simply be following the rules established by the funding agency, not enforcing additional rules on the funding source. According to the commentator, such latitude on being able to approve or deny credits accrued from a BMP implementation project that was fully or partially subsidized by Federal funds limits the predictability for credit generation and thereby inhibits initiating nutrient trading activities and projects that would implement BMPs, reduce pollutant loads and generate nutrient credits through the use of Federal or State funds. The commentator is also concerned with how this provision may affect point source to point source trades. The Department responds that trading of cost-shared BMPs, when allowed by the grantor, encourages participation in BMP programs and remains constant with the goal of maximizing the rate of BMP implementation. Credits will only be restricted if the funding source restricts the use or ability of that funding to be used to generate marketable credits.

A commentator suggested that the regulation include a provision allowing a seller to use the credits in a subsequent water year when, due to no fault of the seller, the Department does not timely act upon the verification and certification. The commentator stated that protections can be built into this approach to assure that it will not result in more deliverable loads to the Chesapeake Bay than is otherwise provided for. The Department responds that, consistent with past practice and EPA guidance, the final-form rulemaking only allows credits generated by a pollutant reduction activity to be used to meet permit effluent limits for the compliance period for which they are certified, verified and registered. Currently, a credit has a shelf life of 1 year, which means it can only be used for that year, though the activity that generated the reduction will be generally certified for 5 years.

A commentator questioned the reference to "basic contract elements" in proposed subsection (f)(2)(ii). The reference to "basic contract elements" has been removed from the final-form rulemaking.

Regarding proposed subsection (f)(2)(ii), several commentators questioned, based on the definition of "registration," why a contract needs to be in place to buy or sell credits prior to those credits being registered. These commentators questioned whether the requirement creates a predicament for credit generators who may not yet have a customer but have actually created credits. This subsection, final-form subsection (g)(2)(ii), still requires a valid contract that ensures that the requirements under § 96.8 will be met. This requirement will help ensure the integrity of the nutrient trading program. The requirement for a contract is also in the Department's Nutrient Trading guidance document.

Many comments were submitted regarding proposed subsection (g)(5). Many commentators stated that a broad exception needs to be included. It was suggested that if a permittee has purchased credits through a valid contract, and the credits later become unavailable through no fault of the permittee, then the permittee should not be penalized and should not risk enforcement action by the Department. One commentator said the expectations of the introductory sentence are unclear and asked what enforcement tools will be available to permittees. One commentator questioned if the permittee would still be responsible if PENNVEST becomes the nutrient credit clearinghouse.

The Department responds that this paragraph, now subsection (h)(5), is designed to offer protection to a permittee when credits are unavailable through no fault of the permittee. The Department made efforts to provide mechanisms for assistance and to help ensure that failure of credit availability in the market as a whole, during a major storm event, for instance, does not occur. The final-form

rulemaking specifies that the Department will retain a 10% credit reserve, which will be set aside to address pollutant reduction failures and uncertainty. In addition, credit purchases through private aggregators or PENNVEST may help minimize risk. The Department is unable to extend the protection as far as the commentators requested, however, because the permittees are required by law to meet their effluent limits, regardless of the manner in which they have chosen to do so. A permittee can enforce the terms of its contract in the same manner that it can enforce any other contract; to some extent, this will be dependent upon the contract language. Similarly, if PENNVEST could not provide replacement credits, a permittee would still be responsible for meeting the terms of its permit. The Department's approach is consistent with the EPA's "Water Quality Trading Policy," dated January 13, 2002, which states the following: "In the event of default by another source generating credits, an NPDES permittee using those credits is responsible for complying with the effluent limitations that would apply if the trade had not occurred."

One commentator suggested that proposed subsection (h)(2) is vague and should be eliminated. This commentator also asked if discharges from New York going through waterways in this Commonwealth impact facilities in this Commonwealth from the right to trade if New York is above its cap load. This commentator suggested that if this subsection means that trading will be based upon the consideration of deliverable loads, then the regulation should reflect how the adjustments will be made. Proposed subsection (h)(2), final-form subsection (i)(2), has not been deleted. The Department responds that in the 2003 "Water Quality Trading Policy Statement," the EPA outlined that trading may be used to maintain water quality in waters where water quality standards are attained in ways such as compensating for new or increased discharges of pollutants. Typically, compliance points are outlined in a defined TMDL. Discharges from New York going through this Commonwealth at this time do not impact this Commonwealth's ability to trade.

A comment was submitted that the public notices called for under § 92.61 are significantly different than what the Department has been using for credit generating proposals and are not appropriate for this purpose. This commentator suggested that the last sentence of proposed subsection (i) should be deleted. The Department did not delete this sentence in the final-form rulemaking as the sentence makes clear that the public participation requirements for the Nutrient Trading Program are different from what is required for permit applications.

G. *Benefits, Costs and Compliance*

Benefits

Harnessing market forces can be an effective way to achieve environmental regulatory goals at less expense than traditional command and control regulations. Market-based programs such as trading provide incentives for entities to create credits by going beyond any statutory or regulatory obligations. The final-form rulemaking provides clear and certain standards for nutrient credit trading in this Commonwealth and thereby supports the Department's efforts to implement its nutrient credit trading program.

Compliance costs

The final-form rulemaking does not create new compliance requirements. It is essentially a voluntary program that provides economic incentives for increased pollutant reductions beyond those required by law.

Compliance Assistance Plan

While there are not new compliance requirements in this final-form rulemaking, the Department has an active and comprehensive outreach and education effort. Department staff will continue to attend public meetings of various kinds to describe the program and assist with its use by interested persons.

Paperwork requirements

There are no paperwork requirements as that term is normally used, as this is a voluntary program. The final-form rulemaking does contain requirements for submittal of certain information, as stated in § 96.8(e). However, the cost of these requirements will normally be returned through revenue earned in the sale of the credits or avoidance of more expensive compliance methods if credits or offsets were not used.

H. *Pollution Prevention*

The Pollution Prevention Act of 1990 (42 U.S.C.A. §§ 13101—13109) establishes a National policy that promotes pollution prevention as the preferred means for achieving state environmental protection goals. The Department encourages pollution prevention, which is the reduction or elimination of pollution at its source, through the substitution of environmentally-friendly materials, more efficient use of raw materials and the incorporation of energy efficiency strategies. Pollution prevention practices can provide greater environmental protection with greater efficiency because they can result in significant cost savings to facilities that permanently achieve or move beyond compliance. This final-form rulemaking is essentially a pollution prevention incentive program, as described previously in this preamble.

I. *Sunset Review*

This final-form rulemaking will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulation effectively fulfills the goals for which it was intended.

J. *Regulatory Review*

Under section 5(a) of the Regulatory Review Act (71 P. S. § 745.5(a)), on February 3, 2010, the Department submitted a copy of the notice of proposed rulemaking, published at 40 Pa.B. 876, to the Independent Regulatory Review Commission (IRRC) and to the House and Senate Environmental Resources and Energy Committees (Committees) for review and comment.

Under section 5(c) of the Regulatory Review Act, IRRC and the Committees were provided with copies of the comments received during the public comment period, as well as other documents when requested. In preparing the final-form rulemaking, the Department has considered all comments from IRRC, the Committees and the public.

Under section 5.1(j.2) of the Regulatory Review Act (71 P. S. § 745.5a(j.2)), on August 18, 2010, the final-form rulemaking was deemed approved by the Committees. Under section 5.1(e) of the Regulatory Review Act, IRRC met on August 19, 2010, and approved the final-form rulemaking.

K. *Findings*

The Board finds that:

(1) Public notice of proposed rulemaking was given under sections 201 and 202 of the act of July 31, 1968 (P. L. 769, No. 240) (45 P. S. §§ 1201 and 1202) and regulations promulgated thereunder, 1 Pa. Code §§ 7.1 and 7.2.

(2) A public comment period was provided as required by law and all comments were considered.

(3) This final-form rulemaking does not enlarge the purpose of the proposed rulemaking published at 40 Pa.B. 876.

(4) This final-form rulemaking is necessary and appropriate for administration and enforcement of the authorizing acts identified in Section C of this preamble.

L. *Order*

The Board, acting under the authorizing statutes, orders that:

(a) The regulations of the Department, 25 Pa. Code Chapter 96, are amended by adding § 96.8 to read as set forth in Annex A.

(b) The Chairperson of the Board shall submit this order and Annex A to the Office of General Counsel and the Office of Attorney General for review and approval as to legality and form as required by law.

(c) The Chairperson of the Board shall submit this order and Annex A to IRRC and the Committees as required by the Regulatory Review Act.

(d) The Chairperson of the Board shall certify this order and Annex A and deposit them with the Legislative Reference Bureau, as required by law.

(e) This order shall take effect immediately upon publication in the *Pennsylvania Bulletin*.

JOHN HANGER,
Chairperson

(*Editor's Note*: For the text of the order of the Independent Regulatory Review Commission relating to this document, see 40 Pa.B. 5106 (September 4, 2010).)

Fiscal Note: Fiscal Note 7-451 remains valid for the final adoption of the subject regulation.

[Continued on next Web Page]

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Virginia Administrative Code
Title 9. Environment
Agency 25. State Water Control Board
Chapter 820. General Virginia Pollutant Discharge Elimination System (VPDES) Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia

9VAC25-820-10. Definitions.

Except as defined below, the words and terms used in this chapter shall have the meanings defined in the Virginia Pollution Discharge Elimination System (VPDES) Permit Regulation (9VAC25-31).

"Annual mass load of total nitrogen" (expressed in pounds per year) means the sum of the total monthly loads for all of the months in one calendar year. See Part I E 4 of the general permit in 9VAC25-820-70 for calculating total monthly load.

"Annual mass load of total phosphorus" (expressed in pounds per year) means the sum of the total monthly loads for all of the months in one calendar year. See Part I E 4 of the general permit in 9VAC25-820-70 for calculating total monthly load.

"Association" means the Virginia Nutrient Credit Exchange Association authorized by § 62.1-44.19:17 of the Code of Virginia.

"Attenuation" means the rate at which nutrients are reduced through natural processes during transport in water.

"Board" means the Virginia State Water Control Board or State Water Control Board.

"Delivered total nitrogen load" means the discharged mass load of total nitrogen from a point source that is adjusted by the delivery factor for that point source.

"Delivered total phosphorus load" means the discharged mass load of total phosphorus from a point source that is adjusted by the delivery factor for that point source.

"Delivery factor" means an estimate of the number of pounds of total nitrogen or total phosphorus delivered to tidal waters for every pound discharged from a permitted facility, as determined by the specific geographic location of the permitted facility, to account for attenuation that occurs during riverine transport between the permitted facility and tidal waters. Delivery factors shall be calculated using the Chesapeake Bay Program watershed model. For the purpose of this regulation, delivery factors with a value greater than 1.00 in the Chesapeake Bay Program watershed model shall be considered to be equal to 1.00.

"Department" means the Department of Environmental Quality.

"Eastern Shore trading ratio" means the number of point source credits from another tributary that can be acquired and applied by a facility in the Eastern Coastal Basin. Trading ratios are expressed in the form "credits supplied: credits received."

"Equivalent load" means:

2,300 pounds per year of total nitrogen or 300 pounds per year of total phosphorus discharged by an industrial facility are considered equivalent to the load discharged from sewage treatment works with a design capacity of 0.04 million gallons per day,

5,700 pounds per year of total nitrogen or 760 pounds per year of total phosphorus discharged by an industrial facility are considered equivalent to the load discharged from sewage treatment works with a design capacity of 0.1 million gallons per day, and

28,500 pounds per year of total nitrogen or 3,800 pounds per year of total phosphorus discharged by an industrial facility are considered equivalent to the load discharged from sewage treatment works with a design capacity of 0.5 million gallons per day.

"Existing facility" means a facility holding a current individual VPDES permit that has either commenced discharge from, or has received a Certificate to Construct (for sewage treatment works, or equivalent DEQ approval for discharges from industrial facilities) the treatment works used to derive its waste load allocation on or before July 1, 2005, or has a waste load allocation listed in 9VAC25-720-50 C, 9VAC25-720-60 C, 9VAC25-720-70 C, 9VAC25-720-110 C, and 9VAC25-720-120 C of the Water Quality Management Planning Regulation. Existing facility shall also mean and include any facility, without an individual VPDES permit, which holds a separate waste load allocation in 9VAC25-720-120 C of the Water Quality Management Planning Regulation.

"Expansion" or "expands" means (i) initiating construction at an existing treatment works after July 1, 2005, to increase design flow capacity, except that the term does not apply in those cases where a Certificate to Construct (for sewage treatment works, or equivalent DEQ approval for discharges from industrial facilities) was issued on or before July 1, 2005, or (ii) industrial production process changes or the use of new treatment products at industrial facilities that increase the annual mass load of total nitrogen or total phosphorus above the waste load allocation.

"Facility" means a point source discharging or proposing to discharge total nitrogen or total phosphorus to the Chesapeake Bay or its tributaries. This term does not include confined animal feeding operations, discharges of storm water, return flows from irrigated agriculture, or vessels.

"General permit" means this general permit authorized by § 62.1-44.19:14 of the Code of Virginia.

"Industrial facility" means any facility (as defined above) other than sewage treatment works.

"Local water quality-based limitations" means limitations intended to protect local water quality including applicable total maximum daily load (TMDL) allocations, applicable Virginia Pollution Discharge Elimination System (VPDES) permit limits, applicable limitations set forth in water quality standards established under § 62.1-44.15 (3a) of the Code of Virginia, or other limitations as established by the State Water Control Board.

"New discharge" means any discharge from a facility that did not commence the discharge of

pollutants prior to July 1, 2005, except that the term does not apply in those cases where a Certificate to Construct (for sewage treatment works, or equivalent DEQ approval for discharges from industrial facilities) was issued to the facility on or before July 1, 2005.

"Nonsignificant discharger" means (i) a sewage treatment works discharging to the Chesapeake Bay watershed downstream of the fall line with a design capacity of less than 0.1 million gallons per day, or less than an equivalent load discharged from industrial facilities, or (ii) a sewage treatment works discharging to the Chesapeake Bay watershed upstream of the fall line with a design capacity of less than 0.5 million gallons per day, or less than an equivalent load discharged from industrial facilities.

"Offset" means to acquire an annual waste load allocation of total nitrogen or total phosphorus by a new or expanding facility to ensure that there is no net increase of nutrients into the affected tributary of the Chesapeake Bay.

"Permitted design capacity" or "permitted capacity" means the allowable load (pounds per year) assigned to an existing facility that is a nonsignificant discharger, that does not have a waste load allocation listed in 9VAC25-720-50 C, 9VAC25-720-60 C, 9VAC25-720-70 C, 9VAC25-720-110 C, and 9VAC25-720-120 C of the Water Quality Management Planning Regulation. The permitted design capacity is calculated based on the design flow and installed nutrient removal technology (for sewage treatment works, or equivalent discharge from industrial facilities) at a facility that has either commenced discharge, or has received a Certificate to Construct (for sewage treatment works, or equivalent DEQ approval for discharges from industrial facilities) prior to July 1, 2005. This mass load is used for (i) determining whether the expanding facility must offset additional mass loading of nitrogen and phosphorus and (ii) determining whether the facility must acquire credits at the end of a calendar year. For the purpose of this regulation, facilities that have installed secondary wastewater treatment (intended to achieve BOD and TSS monthly average concentrations equal to or less than 30 milligrams per liter) are assumed to achieve an annual average total nitrogen effluent concentration of 18.7 milligrams per liter and an annual average total phosphorus effluent concentration of 2.5 milligrams per liter. Permitted design capacities for facilities that, before July 1, 2005, were required to comply with more stringent nutrient limits shall be calculated using the more stringent values.

"Permitted facility" means a facility authorized by this general permit to discharge total nitrogen or total phosphorus. For the sole purpose of generating point source nitrogen credits or point source phosphorus credits, "permitted facility" shall also mean the Blue Plains wastewater treatment facility operated by the District of Columbia Water and Sewer Authority.

"Permittee" means a person authorized by this general permit to discharge total nitrogen or total phosphorus.

"Point source nitrogen credit" means the difference between (i) the waste load allocation for a permitted facility specified as an annual mass load of total nitrogen and (ii) the monitored annual mass load of total nitrogen discharged by that facility, where clause (ii) is less than clause (i), and where the difference is adjusted by the applicable delivery factor and expressed

as pounds per year of delivered total nitrogen load.

"Point source phosphorus credit" means the difference between (i) the waste load allocation for a permitted facility specified as an annual mass load of total phosphorus and (ii) the monitored annual mass load of total phosphorus discharged by that facility, where clause (ii) is less than clause (i), and where the difference is adjusted by the applicable delivery factor and expressed as pounds per year of delivered total phosphorus load.

"Quantification level (QL)" means the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence in accordance with 1VAC30-45, Certification for Noncommercial Environmental Laboratories, or 1VAC30-46, Accreditation for Commercial Environmental Laboratories.

"Registration list" means a list maintained by the department indicating all facilities that have registered for coverage under this general permit, by tributary, including their waste load allocations, permitted design capacities and delivery factors as appropriate.

"Significant discharger" means (i) a sewage treatment works discharging to the Chesapeake Bay watershed upstream of the fall line with a design capacity of 0.5 million gallons per day or greater, or an equivalent load discharged from industrial facilities; (ii) a sewage treatment works discharging to the Chesapeake Bay watershed downstream of the fall line with a design capacity of 0.1 million gallons per day or greater, or an equivalent load discharged from industrial facilities; (iii) a planned or newly expanding sewage treatment works discharging to the Chesapeake Bay watershed upstream of the fall line that is expected to be in operation by December 31, 2010, with a permitted design of 0.5 million gallons per day or greater, or an equivalent load to be discharged from industrial facilities; or (iv) a planned or newly expanding sewage treatment works discharging to the Chesapeake Bay watershed downstream of the fall line that is expected to be in operation by December 31, 2010, with a design capacity of 0.1 million gallons per day or greater, or an equivalent load to be discharged from industrial facilities.

"State-of-the-art nutrient removal technology" means (i) technology that will achieve an annual average total nitrogen effluent concentration of three milligrams per liter and an annual average total phosphorus effluent concentration of 0.3 milligrams per liter or (ii) equivalent load reductions in total nitrogen and total phosphorus through recycle or reuse of wastewater as determined by the department.

"Tributaries" means those river basins for which separate tributary strategies were prepared pursuant to § 2.2-218 of the Code of Virginia and includes the Potomac, Rappahannock, York, and James River Basins, and the Eastern Coastal Basin, which encompasses the creeks and rivers of the Eastern Shore of Virginia that are west of Route 13 and drain into the Chesapeake Bay.

"Waste load allocation" means the most limiting of (i) the water quality-based annual mass load of total nitrogen or annual mass load of total phosphorus allocated to individual facilities pursuant to 9VAC25-720-50 C, 9VAC25-720-60 C, 9VAC25-720-70 C, 9VAC25-720-110 C, and 9VAC25-720-120 C of the Water Quality Management Planning Regulation or its successor, or permitted capacity in the case of nonsignificant dischargers; (ii) the water

quality-based annual mass load of total nitrogen or annual mass load of total phosphorus acquired pursuant to § 62.1-44.19:15 of the Code of Virginia for new or expanded facilities; or (iii) applicable total nitrogen or total phosphorus waste load allocations under the Chesapeake Bay total maximum daily loads (TMDLs) to restore or protect the water quality and beneficial uses of the Chesapeake Bay or its tidal tributaries.

Statutory Authority
§ 62.1-44.15 of the Code of Virginia.

Historical Notes
Derived from Virginia Register Volume 23, Issue 2, eff. November 1, 2006; amended, Virginia Register Volume 24, Issue 21, eff. August 7, 2008; Volume 28, Issue 4, eff. January 1, 2012; Volume 29, Issue 4, eff. November 21, 2012.

9VAC25-820-20. Purpose, applicability, delegation of authority.

A. This regulation fulfills the statutory requirement for the General VPDES Watershed Permit for Total Nitrogen and Total Phosphorus discharges and nutrient trading in the Chesapeake watershed issued by the board pursuant to the Clean Water Act (33 USC § 1251 et seq.) and § 62.1-44.19:14 of the Code of Virginia.

B. This general permit regulation governs facilities holding individual VPDES permits or that otherwise meet the definition of existing facility that discharge or propose to discharge total nitrogen or total phosphorus to the Chesapeake Bay or its tributaries.

C. The director may perform any act of the board provided under this regulation, except as limited by § 62.1-44.14 of the Code of Virginia.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.19:4 of the Code of Virginia; § 303 of the Clean Water Act.

Historical Notes

Derived from Virginia Register Volume 23, Issue 2, eff. November 1, 2006; amended, Volume 24, Issue 21, eff. August 7, 2008.

9VAC25-820-30. Relation to existing VPDES permits issued in accordance with 9VAC25-31.

A. This general permit shall control in lieu of conflicting or duplicative mass loading effluent limitations, monitoring or reporting requirements for total nitrogen and total phosphorus contained in individual VPDES permits for facilities covered by this general permit, where these requirements are based upon standards, criteria, waste load allocations, policy, or guidance established to restore or protect the water quality and beneficial uses of the Chesapeake Bay or its tidal tributaries.

B. This general permit shall not control in lieu of more stringent water quality-based effluent limitations for total nitrogen or total phosphorus in individual permits where those limitations are necessary to protect local water quality, or more stringent technology-based effluent concentration limitations in the individual permit for any facility that has installed technology for the control of nitrogen and phosphorus whether by new construction,

expansion, or upgrade.

C. The compliance schedule in this general permit shall control in lieu of conflicting or duplicative schedule requirements contained in individual VPDES permits for facilities covered by this general permit, where those requirements address mass loading of total nitrogen or total phosphorus and are based upon standards, criteria, waste load allocations, policy, or guidance established to restore or protect the water quality and beneficial uses of the Chesapeake Bay or its tidal tributaries.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.19:14 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 23, Issue 2, eff. November 1, 2006.

9VAC25-820-40. Compliance plans.

A. By July 1, 2012, every owner or operator of a facility subject to reduced individual total nitrogen or total phosphorus waste load allocations in the Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus and Sediment dated December 29, 2010, (as identified in 9VAC25-820-80) shall either individually or through the Virginia Nutrient Credit Exchange Association submit compliance plans to the department for approval.

1. The compliance plans shall contain any capital projects and implementation schedules needed to achieve total nitrogen and phosphorus reductions sufficient to comply with the individual and combined waste load allocations of all the permittees in the tributary as soon as possible. Permittees submitting individual plans are not required to account for other facilities' activities.

2. As part of the compliance plan development, permittees shall either:

a. Demonstrate that the additional capital projects in subdivision 1 of this subsection are necessary to ensure continued compliance with these allocations through the applicable deadline for the tributary to which the facility discharges (Part I C of the permit), or

b. Request that their individual waste load allocations become effective on January 1, 2012.

3. The compliance plans may rely on the exchange of point source credits in accordance with this general permit, but not the acquisition of credits through payments into the Water Quality Improvement Fund (§ 10.1-2128 et seq. of the Code of Virginia), to achieve compliance with the individual and combined waste load allocations in each tributary.

B. Every owner or operator of a facility required to submit a registration statement shall either individually or through the Virginia Nutrient Credit Exchange Association submit annual compliance plan updates to the department for approval as required by Part I D of this general permit.

Statutory Authority

§ 62.1-44.15 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 23, Issue 2, eff. November 1, 2006; amended, Virginia Register Volume 28, Issue 4, eff. January 1, 2012.

9VAC25-820-50. Transfer of permit coverage.

A. This general permit shall be transferred by the current permittee to a new owner or operator concurrently with the transfer of the individual permit(s) in accordance with 9VAC25-31-380. If the current permittee holds an aggregated waste load allocation for multiple facilities in accordance with Part I B 2 of this general permit, the current permittee shall submit a revised registration statement for any facilities retained and the new owner shall submit a registration statement for the facilities transferred.

B. All conditions of this general permit, including, but not limited to, the submittal of a registration statement, annual nutrient allocation compliance and reporting requirements, shall apply to the new owner or operator immediately upon the transfer date.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.19:14 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 23, Issue 2, eff. November 1, 2006.

9VAC25-820-60. Termination of permit coverage.

The owner or operator shall terminate coverage under this general permit concurrently with any request for termination of the individual permit(s) in accordance with 9VAC25-31-370.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.19:14 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 23, Issue 2, eff. November 1, 2006.

9VAC25-820-70. General permit.

Any owner whose registration statement is accepted by the board will receive the following general permit and shall comply with the requirements therein.

General Permit No.: VAN000000
Effective Date: January 1, 2012
Amended Effective Date: November 21, 2012
Expiration Date: December 31, 2016

GENERAL PERMIT FOR TOTAL NITROGEN AND TOTAL PHOSPHORUS DISCHARGES AND

NUTRIENT TRADING IN THE CHESAPEAKE WATERSHED IN VIRGINIA
AUTHORIZATION TO DISCHARGE UNDER THE VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM AND THE VIRGINIA STATE WATER CONTROL LAW

In compliance with the provisions of the Clean Water Act, as amended, and pursuant to the State Water Control Law and regulations adopted pursuant thereto, owners of facilities holding a VPDES individual permit or owners of facilities that otherwise meet the definition of an existing facility, with total nitrogen and/or total phosphorus discharges to the Chesapeake Bay or its tributaries, are authorized to discharge to surface waters and exchange credits for total nitrogen and/or total phosphorus.

The authorized discharge shall be in accordance with the registration statement filed with DEQ, this cover page, Part I-Special Conditions Applicable to All Facilities, Part II-Special Conditions Applicable to New and Expanded Facilities, and Part III-Conditions Applicable to All VPDES Permits, as set forth herein.

PART I

SPECIAL CONDITIONS APPLICABLE TO ALL FACILITIES

A. Authorized activities.

1. Authorization to discharge for facilities required to register.

a. Every owner or operator of a facility required to submit a registration statement to the department by November 1, 2011, and thereafter upon the reissuance of this general permit, shall be authorized to discharge total nitrogen and total phosphorus subject to the requirements of this general permit upon the department's approval of the registration statement.

b. Any owner or operator of a facility required to submit a registration statement with the department at the time he makes application with the department for a new discharge or expansion that is subject to an offset or technology-based requirement in Part II of this general permit, shall be authorized to discharge total nitrogen and total phosphorus subject to the requirements of this general permit upon the department's approval of the registration statement.

c. Upon the department's approval of the registration statement, a facility will be included in the registration list maintained by the department.

2. Authorization to discharge for facilities not required to register. Any facility authorized by a Virginia Pollutant Discharge Elimination System permit and not required by this general permit to submit a registration statement shall be deemed to be authorized to discharge total nitrogen and total phosphorus under this general permit at the time it is issued. Owners or operators of facilities that are deemed to be permitted under this subsection shall have no obligation under this general permit prior to submitting a registration statement and securing coverage under this general permit based upon such registration statement.

3. Continuation of permit coverage.

a. Any owner authorized to discharge under this general permit and who submits a complete registration statement for the reissued general permit by November 1, 2016, in accordance with Part III A or who is not required to register in accordance with Part I A 2 is authorized to continue to discharge under the terms of this general permit until such time as the board either:

(1) Issues coverage to the owner under the reissued general permit, or

(2) Notifies the owner that coverage under the reissued permit is denied.

b. When the owner that was covered under the expiring or expired general permit has violated or is violating the conditions of that permit, the board may choose to do any or all of the following:

(1) Initiate enforcement action based upon the general permit that has been continued,

(2) Issue a notice of intent to deny coverage under the amended general permit if the general permit coverage is denied the owner would then be required to cease the activities authorized by the continued general permit or be subject to enforcement action for operating without a permit, or

(3) Take other actions authorized by the State Water Control Law.

B. Waste load allocations.

1. Waste load allocations allocated to permitted facilities pursuant to 9VAC25-720-50 C, 9VAC25-720-60 C, 9VAC25-720-70 C, 9VAC25-720-110 C, and 9VAC25-720-120 C of the Water Quality Management Planning Regulation, or applicable total maximum daily loads, or waste load allocations acquired by new and expanding facilities to offset new or increased delivered total nitrogen and delivered total phosphorus loads from a new discharge or expansion under Part II B of this general permit, and existing loads calculated from the permitted design capacity of expanding facilities not previously covered by this general permit, shall be incorporated into the registration list maintained by the department. The waste load allocations contained in this list shall be enforceable as annual mass load limits in this general permit. Credits shall not be generated by facilities whose operations were previously authorized by a Virginia Pollution Abatement (VPA) permit that was issued before July 1, 2005.

2. Except as described in subdivisions 2 c and 2 d of this subsection, an owner or operator of two or more facilities covered by this general permit and located in the same tributary may apply for and receive an aggregated mass load limit for delivered total nitrogen and an aggregated mass load limit for delivered total phosphorus reflecting the total of the water quality-based total nitrogen and total phosphorus waste load allocations or permitted design capacities established for such facilities individually.

a. The permittee (and all of the individual facilities covered under a single registration) shall be deemed to be in compliance when the aggregate mass load discharged by the

facilities is less than the aggregate load limit.

b. The permittee will be eligible to generate credits only if the aggregate mass load discharged by the facilities is less than the total of the waste load allocations assigned to any of the affected facilities.

c.

The aggregation of mass load limits shall not affect any requirement to comply with local water quality-based limitations.

d. Facilities whose operations were previously authorized by a Virginia Pollution Abatement (VPA) permit that was issued before July 1, 2005, cannot be aggregated with other facilities under common ownership or operation.

e. Operation under an aggregated mass load limit in accordance with this section shall not be deemed credit acquisition as described in Part I J 2 of this general permit.

3. An owner who consolidates two or more facilities located in the same tributary into a single regional facility may apply for and receive an aggregated mass load limit for delivered total nitrogen and an aggregated mass load limit for delivered total phosphorus, subject to the following conditions:

a. If all of the affected facilities have waste load allocations in 9VAC25-720-50 C, 9VAC25-720-60 C, 9VAC25-720-70 C, 9VAC25-720-110 C, and 9VAC25-720-120 C of the Water Quality Management Planning Regulation, the aggregate mass load limit shall be calculated by adding the waste load allocations of the affected facilities. The regional facility shall be eligible to generate credits.

b. If any, but not all, of the affected facilities has a waste load allocation in 9VAC25-720-50 C, 9VAC25-720-60 C, 9VAC25-720-70 C, 9VAC25-720-110 C, and 9VAC25-720-120 C of the Water Quality Management Planning Regulation, the aggregate mass load limit shall be calculated by adding:

(1) Waste load allocations of those facilities that have waste load allocations in 9VAC25-720-50 C, 9VAC25-720-60 C, 9VAC25-720-70 C, 9VAC25-720-110 C, and 9VAC25-720-120 C of the Water Quality Management Planning Regulation;

(2) Permitted design capacities assigned to affected industrial facilities; and

(3) Loads from affected sewage treatment works that do not have a waste load allocation in 9VAC25-720-50 C, 9VAC25-720-60 C, 9VAC25-720-70 C, 9VAC25-720-110 C, and 9VAC25-720-120 C of the Water Quality Management Planning Regulation, defined as the lesser of a previously calculated permitted design capacity, or the values calculated by the following formulae:

Nitrogen Load (lbs/day) = flow x 8.0 mg/l x 8.345 x 365 days/year

Phosphorus Load (lbs/day) = flow x 1.0 mg/l x 8.345 x 365 days/year

Flows used in the preceding formulae shall be the design flow of the treatment works

from which the affected facility currently discharges.

The regional facility shall be eligible to generate credits.

c. If none of the affected facilities have a waste load allocation in 9VAC25-720-50 C, 9VAC25-720-60 C, 9VAC25-720-70 C, 9VAC25-720-110 C, and 9VAC25-720-120 C of the Water Quality Management Planning Regulation, the aggregate mass load limit shall be calculated by adding the respective permitted design capacities for the affected facilities. The regional facility shall not be eligible to generate credits.

d. Facilities whose operations were previously authorized by a Virginia Pollution Abatement (VPA) permit that was issued before July 1, 2005, may be consolidated with other facilities under common ownership or operation, but their allocations cannot be transferred to the regional facility.

e. Facilities whose operations were previously authorized by a VPA permit that was issued before July 1, 2005, can become regional facilities, but they cannot receive additional allocations beyond those permitted in Part II B 1 d of this general permit.

4. Unless otherwise noted, the nitrogen and phosphorus waste load allocations assigned to permitted facilities are considered total loads including nutrients present in the intake water from the river, as applicable. On a case-by-case basis, an industrial discharger may demonstrate to the satisfaction of the board that a portion of the nutrient load originates in its intake water. This demonstration shall be consistent with the assumptions and methods used to derive the allocations through the Chesapeake Bay models. In these cases, the board may limit the permitted discharge to the net nutrient load portion of the assigned waste load allocation.

5. Bioavailability. Unless otherwise noted, the entire nitrogen and phosphorus waste load allocations assigned to permitted facilities are considered to be bioavailable to organisms in the receiving stream. On a case-by-case basis, a discharger may demonstrate to the satisfaction of the board that a portion of the nutrient load is not bioavailable; this demonstration shall not be based on the ability of the nutrient to resist degradation at the wastewater treatment plant, but instead, on the ability of the nutrient to resist degradation within a natural environment for the amount of time that it is expected to remain in the bay watershed. This demonstration shall also be consistent with the assumptions and methods used to derive the allocations through the Chesapeake Bay models. In these cases, the board may limit the permitted discharge to the bioavailable portion of the assigned waste load allocation.

C. Schedule of compliance.

1. The following schedule of compliance pertaining to the load allocations for total nitrogen and total phosphorus applies to the facilities listed in 9VAC25-820-80.

a. Compliance shall be achieved as soon as possible, but no later than the following dates, subject to any compliance plan-based adjustment by the board pursuant to subdivision 1 b of this subsection, for each parameter:

Tributary	Parameter	Final Effluent Limits Effective Date
James River	Nitrogen	January 1, 2017
York River	Phosphorus	January 1, 2016

b. Following submission of compliance plans and compliance plan updates required by 9VAC25-820-40, the board shall reevaluate the schedule of compliance in subdivision 1 a of this subsection, taking into account the information in the compliance plans and the factors in § 62.1-44.19:14 C 2 of the Code of Virginia. When warranted based on such information and factors, the board shall adjust the schedule in subdivision 1 a of this subsection as appropriate by modification or reissuance of this general permit.

2. The registration list shall contain individual dates for compliance (as defined in Part I J 1 a-b of this general permit) for dischargers, as follows:

a. Facilities listed in 9VAC25-820-80 will have individual dates for compliance based on their respective compliance plans, that may be earlier than the basin schedule listed in subdivision 1 of this subsection.

b. Facilities listed in 9VAC25-820-70 that waive their compliance schedules in accordance with 9VAC25-820-40 A 2 b shall have an individual compliance date of January 1, 2012.

c. Upon completion of the projects contained in their compliance plans, facilities listed in 9VAC25-820-80 may receive a revised individual compliance date of January 1 for the calendar year immediately following the year in which a Certificate to Operate was issued for the capital projects, but not later than the basin schedule listed in subdivision 1 of this subsection.

d. New and expanded facilities will have individual dates for compliance corresponding to the date that coverage under this general permit was extended to the facility.

3. The 39 significant dischargers in the James River Basin shall meet aggregate discharged waste load allocations of 8,968,864 lbs/yr TN and 545,558 lbs/yr TP by January 1, 2023.

D. Annual update of compliance plan. Every owner or operator of a facility required to submit a registration statement shall either individually or through the Virginia Nutrient Credit Exchange Association submit updated compliance plans to the department no later than February 1 of each year. The compliance plans shall contain sufficient information to document a plan for the facility to achieve and maintain compliance with applicable total nitrogen and phosphorus individual waste load allocations on the registration list and aggregate waste load allocations in Part I C 3. Compliance plans for facilities that were required to submit a registration statement with the department under Part I G 1 a may rely on the acquisition of point source credits in accordance with Part I J of this general permit, but not the acquisition of credits through payments into the Water Quality Improvement Fund, to achieve compliance with the individual and combined waste load allocations in each tributary. Compliance plans for expansions or new discharges for facilities that are required to submit a registration statement with the department under Part I G 1 b and c may rely on

the acquisition of allocation in accordance with Part II B of this general permit to achieve compliance with the individual and combined waste load allocations in each tributary.

E. Monitoring requirements.

1. Discharges shall be monitored by the permittee during weekdays as specified below unless the department determines that weekday only sampling results in a non-representative load. Weekend monitoring and/or alternative monthly load calculations to address production schedules or seasonal flows shall be submitted to the department for review and approval on a case-by-case basis. Facilities that exhibit instantaneous discharge flows that vary from the daily average discharge flow by less than 10% may submit a proposal to the department to use an alternative sample type; such proposals shall be reviewed and approved by the department on a case-by-case basis.

Parameter	Sample Type and Collection Frequency			
STP design flow	20.0 MGD	1.0 - 19.999 MGD	0.040 - 0.999 MGD	
Effluent TN load limit for industrial facilities	>100,000 lb/yr	487 - 99,999 lb/yr	<487 lb/yr	
Effluent TP load limit for industrial facilities	>10,000 lb/yr	37 - 9,999 lb/yr	<37 lb/yr	
Flow	Totalizing, Indicating, and Recording			in
Nitrogen Compounds (Total Nitrogen = TKN + NO2- (as N) + NO3- (as N))	24 HC 3 Days/Week	24 HC 1/Week	8 HC 2/Month, > 7 days apart	
Total Phosphorus	24 HC 3 Days/Week	24 HC 1/Week	8 HC 2/Month, > 7 days apart	

2. Monitoring for compliance with effluent limitations shall be performed in a manner identical to that used to determine compliance with effluent limitations established in the individual VPDES permit. Monitoring or sampling shall be conducted according to analytical laboratory methods approved under 40 CFR Part 136, unless other test or sample collection procedures have been requested by the permittee and approved by the department in writing. All analysis for compliance with effluent limitations shall be in accordance with 1VAC30-45, Certification for Noncommercial Environmental Laboratories, or 1VAC30-46, Accreditation for Commercial Environmental Laboratories. Monitoring may be performed by the permittee at frequencies more stringent than listed above; however, the permittee shall report all results of such monitoring.

3. Loading values greater than or equal to 10 pounds reported in accordance with Part I E and F of this general permit shall be calculated and reported to the nearest pound without regard to mathematical rules of precision. Loading values of less than 10 pounds reported

in accordance with Part I E and F of this general permit shall be calculated and reported to at least two significant digits with the exception that all complete calendar year annual loads shall be reported to the nearest pound.

4. Data shall be reported on a form provided by the department, by the same date each month as is required by the facility's individual permit. The total monthly load shall be calculated in accordance with the following formula:

$$ML = \left(\frac{\sum DL}{s} \right) \times d$$

where:

ML = total monthly load (lb/mo) = average daily load for the calendar month multiplied by the number of days of the calendar month on which a discharge occurred

DL = daily load = daily concentration (expressed as mg/l to the nearest 0.01 mg/l) multiplied by the flow volume of effluent discharged during the 24-hour period (expressed as MGD to at least the nearest 0.01 MGD and in no case less than two significant digits), multiplied by 8.345. Daily loads greater than or equal to 10 pounds may be rounded to the nearest whole number to convert to pounds per day (lbs/day). Daily loads less than or equal to 10 pounds may be rounded to no fewer than two significant fiqures.

s = number of days in the calendar month in which a sample was collected and analyzed

d = number of discharge days in the calendar month

For total phosphorus, all daily concentration data below the quantification level (QL) for the analytical method used should be treated as half the QL. All daily concentration data equal to or above the QL for the analytical method used shall be treated as it is reported. If all data are below the QL, then the average shall be reported as half the QL.

For total nitrogen (TN), if none of the daily concentration data for the respective species (i.e., TKN, nitrates/nitrites) are equal to or above the QL for the respective analytical methods used, the daily TN concentration value reported shall equal one half of the largest QL used for the respective species. If one of the data is equal to or above the QL, the daily TN concentration value shall be treated as that data point as reported. If more than one of the data is above the QL, the daily TN concentration value shall equal the sum of the data points as reported.

The total year-to-date mass load shall be calculated in accordance with the following formula:

$$AL_{YTD} = \sum_{(Jan-present)} ML$$

where:

AL-YTD = calendar year-to-date annual load (lb/yr)

ML = total monthly load (lb/mo)

The total annual mass load shall be calculated in accordance with the following formula:

$$AL = \sum_{(Jan-Dec)} ML$$

where:

AL = calendar year annual load (lb/yr)

ML = total monthly load (lb/mo)

5. The department may authorize a chemical usage evaluation as an alternative means of determining nutrient loading for outfalls where the only source of nutrients is those found in the surface water intake and chemical additives used by the facility. Such an evaluation shall be submitted to the department for review and approval on a case-by-case basis. Implementation of approved chemical usage evaluations shall satisfy the requirements specified under Part I E 1 and 2.

F. Annual reporting.

On or before February 1, annually, each permittee shall file a discharge monitoring report with the department identifying the annual mass load of total nitrogen and the annual mass load of total phosphorus discharged by the permitted facility during the previous calendar year.

G. Requirement to register; exclusions.

1. The following owners or operators are required to register for coverage under this general permit:

a. Every owner or operator of an existing facility authorized by a Virginia Pollutant Discharge Elimination System permit to discharge 100,000 gallons or more per day from a sewage treatment work, or an equivalent load from an industrial facility, directly into tidal waters, or 500,000 gallons or more per day from a sewage treatment work, or an equivalent load from an industrial facility, directly into nontidal waters, shall submit a registration statement to the department by November 1, 2011, and thereafter upon the reissuance of this general permit in accordance with Part III B. The conditions of this general permit will apply to such owner and operator upon approval of a registration statement.

b. Any owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination System permit to discharge 40,000 gallons or more per day from a sewage treatment work, or an equivalent load from an industrial facility, directly into tidal or nontidal waters shall submit a registration statement with the department at the time he makes application for an individual permit with the department for a new discharge or expansion that is subject to an offset requirement in Part II of this general permit or technology-based requirement in 9VAC25-40-70, and thereafter upon the reissuance of this general permit in accordance with Part III B. The conditions of this general permit will apply to such owner or operator beginning on the start of the calendar year

immediately following approval of a registration statement and issuance or modification of the individual permit.

c. Any owner or operator of a facility treating domestic sewage authorized by a Virginia Pollutant Discharge Elimination System permit with a discharge greater than 1,000 gallons per day up to and including 39,999 gallons per day that has not commenced the discharge of pollutants prior to January 1, 2011, shall submit a registration statement with the department at the time he makes application for an individual permit with the department or prior to commencing a discharge, which ever occurs first, and thereafter upon the reissuance of this general permit in accordance with Part III B.

2. All other categories of discharges are excluded from registration under this general permit.

H. Registration statement.

1. The registration statement shall contain the following information:

a. Name, mailing address and telephone number, e-mail address and fax number of the owner (and facility operator, if different from the owner) applying for permit coverage;

b. Name (or other identifier), address, city or county, contact name, phone number, e-mail address and fax number for the facility for which the registration statement is submitted;

c. VPDES permit numbers for all permits assigned to the facility, or pursuant to which the discharge is authorized;

d. If applying for an aggregated waste load allocation in accordance with Part I B 2 of this permit, list all affected facilities and the VPDES permit numbers assigned to these facilities;

e. For new and expanded facilities, a plan to offset new or increased delivered total nitrogen and delivered total phosphorus loads, including the amount of waste load allocation acquired. Waste load allocations or credits sufficient to offset projected nutrient loads must be provided for period of at least five years; and

f. For existing facilities, the amount of a facility's waste load allocation transferred to or from another facility to offset new or increased delivered total nitrogen and delivered total phosphorus loads from a new discharge or expansion.

2. The registration statement shall be submitted to the DEQ Central Office, Office of Water Permits and Compliance Assistance.

3. An amended registration statement shall be submitted upon the acquisition or transfer of a facility's waste load allocation to offset new or increased delivered total nitrogen and delivered total phosphorus loads from a new discharge or expansion.

I. Public notice for registration statements proposing modifications or incorporations of new waste load allocations or delivery factors.

1. All public notices issued pursuant to a proposed modification or incorporation of a (i) new waste load allocation to offset new or increased delivered total nitrogen and delivered total phosphorus loads from a new discharge or expansion, or (ii) delivery factor, shall be published once a week for two consecutive weeks in a major local newspaper of general circulation serving the locality where the facility is located informing the public that the facility intends to apply for coverage under this general permit. At a minimum, the notice shall include:

a. A statement of the owner or operator's intent to register for coverage under this general permit;

b. A brief description of the facility and its location;

c. The amount of waste load allocation that will be acquired or transferred if applicable;

d. The delivery factor for a new discharge or expansion;

e. A statement that the purpose of the public participation is to acquaint the public with the technical aspects of the facility and how the standards and the requirements of this chapter will be met, to identify issues of concern, to facilitate communication and to establish a dialogue between the owner or operator and persons who may be affected by the facility;

f. An announcement of a 30-day comment period and the name, telephone number, and address of the owner's or operator's representative who can be contacted by the interested persons to answer questions;

g. The name, telephone number, and address of the DEQ representative who can be contacted by the interested persons to answer questions, or where comments shall be sent; and

h. The location where copies of the documentation to be submitted to the department in support of this general permit notification and any supporting documents can be viewed and copied.

2. The owner or operator shall place a copy of the documentation and support documents in a location accessible to the public in the vicinity of the proposed facility.

3. The public shall be provided 30 days to comment on the technical and the regulatory aspects of the proposal. The comment period will begin on the date the notice is published in the local newspaper.

J. Compliance with waste load allocations.

1. Methods of compliance. The permitted facility shall comply with its waste load allocation contained in the registration list maintained by the department. The permitted facility shall be in compliance with its waste load allocation if:

a. The annual mass load is less than or equal to the applicable waste load allocation assigned to the facility in this general permit (or permitted design capacity for

expanded facilities without allocations);

b. The permitted facility acquires sufficient point source nitrogen or phosphorus credits in accordance with subdivision 2 of this subsection; provided, however, that the acquisition of nitrogen or phosphorus credits pursuant to this section shall not alter or otherwise affect the individual waste load allocations for each permitted facility; or

c. In the event it is unable to meet the individual waste load allocation pursuant to subdivision 1 a or 1 b of this subsection, the permitted facility acquires sufficient nitrogen or phosphorus credits through payments made into the Water Quality Improvement Fund pursuant to subdivision 3 of this subsection; provided, however, that the acquisition of nitrogen or phosphorus credits pursuant to this section shall not alter or otherwise affect the individual waste load allocations for each permitted facility.

2. Credit acquisition from permitted facilities. A permittee may acquire point source nitrogen credits or point source phosphorus credits from one or more permitted facilities only if:

a. The credits are generated and applied to a compliance obligation in the same calendar year;

b. The credits are generated by one or more permitted facilities in the same tributary, except that permitted facilities in the Eastern Coastal Basin may also acquire credits from permitted facilities in the Potomac and Rappahannock tributaries. Eastern Coastal Basin facilities may acquire credits from the Potomac tributary at a trading ratio of 1:1. A trading ratio of 1.3:1 shall apply to the acquisition of credits from the Rappahannock tributary by an Eastern Coastal Basin facility;

c. The exchange or acquisition of credits does not affect any requirement to comply with local water quality-based limitations as determined by the board;

d. The credits are acquired no later than June 1 immediately following the calendar year in which the credits are applied;

e. The credits are generated by a facility that has been constructed, and has discharged from treatment works whose design flow or equivalent industrial activity is the basis for the facility's waste load allocations (until a facility is constructed and has commenced operation, such credits are held, and may be sold, by the Water Quality Improvement Fund; and

f. No later than June 1 immediately following the calendar year in which the credits are applied, the permittee certifies on a credit exchange notification form supplied by the department that he has acquired sufficient credits to satisfy his compliance obligations. The permittee shall comply with the terms and conditions contained in the credit exchange notification form submitted to the department.

3. Credit acquisitions from the Water Quality Improvement Fund. Until such time as the board finds that no allocations are reasonably available in an individual tributary,

permittees that cannot meet their total nitrogen or total phosphorus effluent limit may acquire nitrogen or phosphorus credits through payments made into the Virginia Water Quality Improvement Fund established in § 10.1-2128 of the Code of Virginia only if, no later than June 1 immediately following the calendar year in which the credits are to be applied, the permittee certifies on a form supplied by the department that he has diligently sought, but has been unable to acquire, sufficient credits to satisfy his compliance obligations through the acquisition of point source nitrogen or phosphorus credits with other permitted facilities, and that he has acquired sufficient credits to satisfy his compliance obligations through one or more payments made in accordance with the terms of this general permit. Such certification may include, but not be limited to, providing a record of solicitation or demonstration that point source allocations are not available for sale in the tributary in which the permittee is located. Payments to the Water Quality Improvement Fund shall be in the amount of $6.04 for each pound of nitrogen and $15.08 for each pound of phosphorus and shall be subject to the following requirements:

a. The credits are generated and applied to a compliance obligation in the same calendar year.

b. The credits are generated in the same tributary, except that permitted facilities in the Eastern Coastal Basin may also acquire credits from the Potomac and Rappahannock tributaries. Eastern Coastal Basin facilities may acquire credits from the Potomac tributary at a trading ratio of 1:1. A trading ratio of 1.3:1 shall apply to the acquisition of credits from the Rappahannock tributary by an Eastern Coastal Basin facility.

c. The acquisition of credits does not affect any requirement to comply with local water quality-based limitations, as determined by the board.

4. This general permit neither requires, nor prohibits a municipality or regional sewerage authority's development and implementation of trading programs among industrial users, which are consistent with the pretreatment regulatory requirements at 40 CFR Part 403 and the municipality's or authority's individual VPDES permit.

PART II

SPECIAL CONDITIONS APPLICABLE TO NEW AND EXPANDED FACILITIES

A. Offsetting mass loads discharged by new and expanded facilities.

1. An owner or operator of a new or expanded facility shall comply with the applicable requirements of this section as a condition of the facility's coverage under this general permit.

a. An owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination System permit first issued before July 1, 2005, that expands his facility to discharge 40,000 gallons or more per day, or an equivalent load, shall demonstrate to the department that he has acquired waste load allocations sufficient to offset any increase in his delivered total nitrogen and delivered total phosphorus loads resulting from any expansion beyond his permitted capacity as of July 1, 2005.

b. An owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination System permit first issued on or after July 1, 2005, to discharge 40,000 gallons or more per day, or an equivalent load, shall demonstrate to the department that he has acquired waste load allocations sufficient to offset his delivered total nitrogen and delivered total phosphorus loads.

c. An owner or operator of a facility treating domestic sewage authorized by a Virginia Pollutant Discharge Elimination System permit with a discharge greater than 1,000 gallons per day up to and including 39,999 gallons per day that has not commenced the discharge of pollutants prior to January 1, 2011, shall demonstrate to the department that he has acquired waste load allocations sufficient to offset his delivered total nitrogen and delivered phosphorus loads prior to commencing the discharge, except when the facility is for short-term temporary use only or when treatment of domestic sewage is not the primary purpose of the facility.

2. Offset calculations shall address the proposed discharge that exceeds:

a. The applicable waste load allocation assigned to the facility in this general permit, for expanding significant dischargers with a waste load allocation listed in 9VAC25-720-50 C, 9VAC25-720-60 C, 9VAC25-720-70 C, 9VAC25-720-110 C, and 9VAC25-720-120 C of the Water Quality Management Planning Regulation;

b. The permitted design capacity, for all other expanding dischargers; and

c. Zero, for facilities with a new discharge.

3. An owner or operator of multiple facilities located in the same tributary, and assigned an aggregate mass load limit in accordance with Part I B 2 of this general permit, that undertakes construction of new or expanded facilities, shall be required to acquire waste load allocations sufficient to offset any increase in delivered total nitrogen and delivered total phosphorus loads resulting from any expansion beyond the aggregate mass load limit assigned these facilities.

B. Acquisition of waste load allocations. Waste load allocations required by this section to offset new or increased delivered total nitrogen and delivered total phosphorus loads shall be acquired in accordance with this section.

1. Such allocations may be acquired from one or a combination of the following:

a. Acquisition of all or a portion of the waste load allocations or point source nitrogen or point source phosphorus credits from one or more permitted facilities, based on delivered pounds by the respective trading parties as listed by the department;

b. Acquisition of credits certified by the board pursuant to § 62.1-44.19:20 of the Code of Virginia or certified by the Soil and Water Conservation Board pursuant to § 10.1-603.15:2 of the Code of Virginia. Credits used to offset new or increased nutrient loads under this subdivision shall be:

(1) Subject to a trading ratio of two pounds reduced for every pound to be discharged if

certified by the Soil and Water Conservation Board pursuant to § 10.1-603.15:2 of the Code of Virginia;

(2) Calculated using best management practices efficiency rates and attenuation rates, as established by the latest science and relevant technical information, and approved by the board;

(3) Based on appropriate delivery factors, as established by the latest science and relevant technical information, and approved by the board;

(4) Demonstrated to have achieved reductions beyond those already required by or funded under federal or state law, or by Virginia's Chesapeake Bay TMDL Watershed Implementation Plan;

(5) Included as conditions of the facility's individual Virginia Pollutant Discharge Elimination System permit; and

(6) In the case of allocations generated by land use conversions and urban source reduction controls (BMPs), beyond those in place as of July 1, 2005;

c. Until such time as the board finds that no allocations are reasonably available in an individual tributary, acquisition of allocations through payments made into the Virginia Water Quality Improvement Fund established in § 10.1-2128 of the Code of Virginia; or

d. Acquisition of allocations through such other means as may be approved by the department on a case-by-case basis. This includes allocations granted by the board to an owner or operator of a facility that is authorized by a VPA permit to land apply domestic sewage if:

(1) The VPA permit was issued before July 1, 2005;

(2) The allocation does not exceed the facility's permitted design capacity as of July 1, 2005;

(3) The waste treated by the facility that is covered under the VPA permit will be treated and discharged pursuant to a VPDES permit for a new discharge; and

(4) The owner or operator installs state-of-the-art nutrient removal technology at such a facility.

2. Acquisition of allocations or point source nitrogen or point source phosphorus credits is subject to the following conditions:

a. The allocations or credits shall be generated and applied to an offset obligation in the same calendar year;

b. The allocations or credits shall be generated in the same tributary;

c. Such acquisition does not affect any requirement to comply with local water quality-based limitations, as determined by the board;

d. The allocations are authenticated (i.e., verified to have been generated) by the

permittee as required by the facility's individual Virginia Pollutant Discharge Elimination permit, utilizing procedures approved by the board, no later than February 1 immediately following the calendar year in which the allocations are applied; and

e. If obtained from a permitted point source, the allocations shall be generated by a facility that has been constructed, and has discharged from treatment works whose design flow or equivalent industrial activity is the basis for the facility's waste load allocations.

f. Such allocations or credits shall be provided for a period of five years with each registration under the general permit.

3. Priority of options. The board shall give priority to allocations or credits acquired in accordance with subdivisions 1 a, b, and d of this subsection. The board shall approve allocations acquired in accordance with subdivision 1 c of this subsection only after the owner or operator has demonstrated that he has made a good faith effort to acquire sufficient allocations in accordance with subdivisions 1 a and 1 b of this subsection, and that such allocations are not reasonably available taking into account timing, cost and other relevant factors. Such demonstration may include, but not be limited to, providing a record of solicitation, or other demonstration that point source allocations or nonpoint source allocations are not available for sale in the tributary in which the permittee is located.

4. Annual allocation acquisitions from the Water Quality Improvement Fund. The cost for each pound of nitrogen and each pound of phosphorus shall be determined at the time payment is made to the WQIF, based on the higher of (i) the estimated cost of achieving a reduction of one pound of nitrogen or phosphorus at the facility that is securing the allocation, or comparable facility, for each pound of allocation acquired; or (ii) the average cost, as determined by the Department of Conservation and Recreation on an annual basis, of reducing two pounds of nitrogen or phosphorus from nonpoint sources in the same tributary for each pound of allocation acquired.

PART III

CONDITIONS APPLICABLE TO ALL VPDES PERMITS

A. Duty to comply. The permittee must comply with all conditions of the permit. Any permit noncompliance constitutes a violation of the law and the Clean Water Act, except that noncompliance with certain provisions of the permit may constitute a violation of the law but not the Clean Water Act. Permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

B. Duty to register for reissued general permit. If the permittee wishes to continue an activity regulated by the general permit after its expiration date, the permittee must register for coverage under the new general permit, when it is reissued by the department.

C. Need to halt or reduce activity not a defense. It shall not be a defense for a permittee in an

enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

D. Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of the permit that has a reasonable likelihood of adversely affecting human health or the environment.

E. Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

F. Permit actions. Permits may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

G. Property rights. Permits do not convey any property rights of any sort, or any exclusive privilege.

H. Duty to provide information. The permittee shall furnish to the department, within a reasonable time, any information that the board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. The board may require the permittee to furnish, upon request, such plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of state waters, or such other information as may be necessary to accomplish the purposes of the law. The permittee shall also furnish to the department upon request, copies of records required to be kept by the permit, pertaining to activities related to the permitted facility.

I. Inspection and entry. The permittee shall allow the director, or an authorized representative (including an authorized contractor acting as a representative of the administrator), upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the permit; and

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act and the law, any substances or

parameters at any location.

J. Monitoring and records.

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

2. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three years from the date of the sample, measurement, report or application. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the board.

3. Records of monitoring information shall include:

a. The date, exact place, and time of sampling or measurements;

b. The individual(s) who performed the sampling or measurements;

c. The date(s) analyses were performed;

d. The individual(s) who performed the analyses;

e. The analytical techniques or methods used; and

f. The results of such analyses.

4. Monitoring results must be conducted according to test procedures approved under 40 CFR Part 136 or alternative EPA-approved methods, unless other test procedures have been specified in the permit.

K. Signatory requirements. All applications, reports, or information submitted to the department shall be signed and certified as required by 9VAC25-31-110.

L. Reporting requirements.

1. The permittee shall give notice to the department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 9VAC25-31-180 A; or

b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in the permit, nor to notification requirements under 9VAC25-31-200 A 1.

2. The permittee shall give advance notice to the department of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.

3. Permits are not transferable to any person except after notice to the department. The board may require modification or revocation and reissuance of permits to change the name of the permittee and incorporate such other requirements as may be necessary under the law or the Clean Water Act.

4. Monitoring results shall be reported at the intervals specified in the permit.

a. Monitoring results must be reported on a Discharge Monitoring Report (DMR).

b. If the permittee monitors any pollutant specifically addressed by the permit more frequently than required by the permit using test procedures approved under 40 CFR Part 136, or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR specified by the department.

c. Calculations for all limitations that require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.

5. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date.

6. If any unusual or extraordinary discharge including a bypass or upset should occur from a facility and such discharge enters or could be expected to enter state waters, the owner shall promptly notify, in no case later than 24 hours, the department by telephone after the discovery of such discharge. This notification shall provide all available details of the incident, including any adverse affects on aquatic life and the known number of fish killed. The permittee shall reduce the report to writing and shall submit it to the department within five days of discovery of the discharge in accordance with subdivision 7 a of this subsection. Unusual and extraordinary discharges include but are not limited to any discharge resulting from:

a. Unusual spillage of materials resulting directly or indirectly from processing operations;

b. Breakdown of processing or accessory equipment;

c. Failure or taking out of service of the treatment work or auxiliary facilities (such as sewer lines or wastewater pump stations); and

d. Flooding or other acts of nature.

7. Twenty-four-hour reporting.

a. The permittee shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and

times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

b. The following shall be included as information that must be reported within 24 hours under this subdivision.

(1) Any unanticipated bypass that exceeds any effluent limitation in the permit.

(2) Any upset that exceeds any effluent limitation in the permit.

(3) Violation of a maximum daily discharge limitation for any of the pollutants listed in the permit to be reported within 24 hours.

c. The board may waive the written report on a case-by-case basis for reports under this subdivision if the oral report has been received within 24 hours.

8. The permittee shall report all instances of noncompliance not reported under subdivisions 4, 5, 6, and 7 of this subsection, in writing at the time the next monitoring reports are submitted. The reports shall contain the information listed in subdivision 7 of this subsection.

9. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the department, it shall promptly submit such facts or information.

M. Bypass.

1. The permittee may allow any bypass to occur that does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of subdivisions 2 and 3 of this subsection.

2. Notice.

a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.

b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in subdivision L 7 of this section (24-hour notice).

3. Prohibition of bypass.

a. Bypass is prohibited, and the board may take enforcement action against a permittee for bypass, unless:

(1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering

judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The permittee submitted notices as required under subdivision 2 of this subsection.

b. The board may approve an anticipated bypass, after considering its adverse effects, if the board determines that it will meet the three conditions listed above in subdivision 3 a of this subsection.

N. Upset.

1. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of subdivision 2 of this subsection are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

2. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An upset occurred and that the permittee can identify the cause(s) of the upset;

b. The permitted facility was at the time being properly operated;

c. The permittee submitted notice of the upset as required in subdivision L 7 b (2) of this section (24-hour notice); and

d. The permittee complied with any remedial measures required under subsection D of this section.

3. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

Statutory Authority

§ 62.1-44.15 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 23, Issue 2, eff. November 1, 2006; amended, Virginia Register Volume 24, Issue 21, eff. August 7, 2008; Volume 28, Issue 4, eff. January 1, 2012; Volume 29, Issue 4, eff. November 21, 2012.

9VAC25-820-80. Facilities subject to reduced individual total nitrogen and total phosphorus waste load allocations.

The facilities identified in this section are subject to reduced individual total nitrogen and total phosphorus waste load allocations as indicated.

Facility	Registration No.	Basin	Reduced Waste Allocation
Caroline Co. Regional STP	VAN030045	York	609 lbs/yr T

Gordonsville STP	VAN030046	York	1,145 lbs/yr
Hanover County Aggregate1	VAN030051	York	11,390 lbs/yr (delivered
White Birch Paper - Bear Island LLC Division	VAN030133	York	10,233 lbs/yr
Western Refinery - Yorktown	VAN030047	York	17,689 lbs/yr
HRSD York River Aggregate2	VAN030052	York	19,315 lbs/yr (delivered
Parham Landing WWTP	VAN030048	York	2,436 lbs/yr
RockTenn CP LLC - West Point	VAN030049	York	56,038 lbs/yr
HRSD James River Aggregate3	VAN040090	James	4,400,000 lbs/y (delivered

1Hanover County Aggregate includes Ashland STP (VA0024899), Doswell WWTP (VA0029521), and Totopotomoy WWTP (VA0089915)

2HRSD York River Aggregate includes York River STP (VA0081311), West Point STP (VA0075434), and King William STP (VA0028819).

3HRSD James River Aggregate includes Boat Harbor STP (VA0081256), James River STP (VA0081272), Williamsburg STP (VA0081302), Nansemond STP (VA0081299), Army Base STP (VA0081230), Virginia Initiative STP (VA0081281), and Chesapeake Elizabeth STP (VA0081264).

Statutory Authority

§ 62.1-44.15 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 28, Issue 4, eff. January 1, 2012.

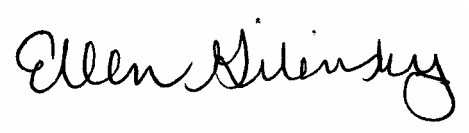
Forms (9VAC25-820)

Virginia Pollutant Discharge Elimination System General Permit Registration Statement for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Watershed in Virginia (rev. 10/11).

COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Division of Water Quality Programs
Ellen Gilinsky, Ph.D., Director

Subject: Guidance Memo No. 07-2008, Amendment No. 2
Permitting Considerations for Facilities in the Chesapeake Bay Watershed

To: Regional Directors

From: Ellen Gilinsky, Ph.D., Director 

Date: October 23, 2007

Copies: Deputy Regional Directors, Regional Water Permit Managers, James Golden, Rick Weeks, CBP staff, OWPP staff, OWE staff

Summary:

The purpose of this guidance is to provide instructions for establishing nutrient limits and offset requirements in VPDES permits for dischargers to the Chesapeake Bay. The guidance replaces Guidance Memorandum GM 05-2009, "VPDES Nutrient Limitations for Significant Dischargers to the Chesapeake Bay Watershed" and reflects key changes made as a result of the requirements of 9 VAC 25-40 (Policy for Nutrient Enriched Waters), 9 VAC 25-720 (Water Quality Management Plan), § *62.1-44.19:15 of the Code of Virginia* (as of July 1, 2005)(establishing treatment technology and offset requirements for new and expanded facilities in the Chesapeake Bay watershed) and *9 VAC 25-820, General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Watershed in Virginia*.

This guidance was previously amended to provide a summary of permit conditions and corresponding fact sheet narrative that should be included in all permits for facilities subject to the aforementioned regulations, and the discussion of concentration limits was edited to provide clearer guidance.

This amendment addresses the timing of inclusion of concentration limits in individual VPDES permits.

This amendment also addresses non-significant industrial dischargers, located in the Chesapeake Bay Watershed, that received phosphorus limits under the Nutrient Enriched Waters Policy. *Aside from this amendment, this guidance does not apply to existing non-significant dischargers until they propose expansion of their facilities.*

Electronic Copy:

An electronic copy of this guidance in PDF format is available for staff internally on DEQNET, and for the general public on DEQ's website at: http://www.deq.virginia.gov/waterguidance/permits.html.

Contact Information:

Please contact Kyle Ivar Winter, P.E., Office of Water Permit Programs, at (804) 698-4182 or kiwinter@deq.virginia.gov with any questions regarding the application of this guidance.

Disclaimer:

This document is provided as guidance and, as such, sets forth standard operating procedures for the agency. However, it does not mandate any particular method nor does it prohibit any particular method for the analysis of data, establishment of a wasteload allocation, or establishment of a permit limit. If alternative proposals are made, such proposals should be reviewed and accepted or denied based on their technical adequacy and compliance with appropriate laws and regulations.

Guidance Memo No. 07-2008, Amendment No. 2
Permitting considerations for facilities in the Chesapeake Bay watershed

TABLE OF CONTENTS

1. Introduction 1
   Background 1
   Purpose 1
   Impact of pending regulations 2
2. Application for individual permits and registration for coverage under watershed general permit 3
   Legislative and regulatory requirements 3
   Recommended actions 3
3. Loading Limits 5
   Legislative and regulatory requirements 5
   Recommended actions 6
      Existing facilities 6
      Expanding facilities 6
      New facilities 8
4. Technology Requirements and Concentration Limits 8
   Legislative and regulatory requirements 8
   Recommended Actions 9
5. Offset Requirements 13
   Legislative and regulatory requirements 13
   Recommended actions 13
6. Facilities that were formerly subject to the Nutrient Enriched Waters Policy 15
7. Regionalization Issues 17
   Legislative and regulatory requirements 17
   Recommended actions 17
8. Public Notice Requirements 19
   Legislative and regulatory requirements 19
   Recommended actions 20
9. Elimination of Duplicative Reporting 22
10. Decision Chart 24

Appendices
- A. Sample Transmittal Letter for Registration Statement
- B. November 30, 2006 Letter from EPA Region 3
- C. Permitting strategy for VPA facilities that are located in the Chesapeake Bay watershed
- D. Permit Requirements for facilities subject to 9 VAC 25-820

1. Introduction

Background: On March 24, 2005, Governor Mark Warner signed legislation (Senate Bill 1275) authorizing a Chesapeake Bay Watershed Nutrient Credit Exchange Program and directing DEQ to issue a watershed general permit for significant point source discharges of nutrients to the Chesapeake Bay and its tributaries. This legislation (found in § 62.1-44.19:12-19 of the *Code of Virginia)* also required that as of July 1, 2005, new and expanded dischargers to the Chesapeake Bay and its tributaries obtain offsets for the nutrients discharged to state waters. The WGP regulation, 9 VAC 25-820-10 et seq. – *General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Watershed in Virginia*, (referred to in this guidance as the "WGP"; individual permits will be referred to simply as "IPs") was approved by the State Water Control Board at its September 6, 2006 meeting; the requirements of this regulation extend to the IPs issued to by new and expanded facilities. Facilities subject to this regulation are required to register for coverage under the WGP in addition to being covered by their existing IPs.

Purpose: The purpose of the guidance is to help regional permit staff process IP applications consistently and accurately in accordance with the Chesapeake Bay nutrient regulations. Each section of this guidance contains the legislative background to the regulations and the recommended action to be taken by the regional permit staff. The guidance also features a table that should help the permit staff identify appropriate requirements for a given permittee's situation, and contains sample correspondence for use by regional permit staff.

The general impact of the various nutrient regulations on IP processing is listed below:

- The annual loading limits in the WGP (total nitrogen, total phosphorus or both) become effective for a given permittee when any of the following events occur:
  - The tributary-wide compliance date for a given parameter lapses;
  - A facility receives a Certificate to Operate (CTO) for nutrient removal equipment (the limit will actually take effect January 1 of the year following the year in which the CTO is issued), or
  - A facility waives their schedule of compliance (the limit will actually take effect January 1 of the year designated by the permittee).

- When the loading limits in the WGP become effective for a given permittee, they supersede loading limits in IPs that:
  - are directed solely toward restoration and protection of the Chesapeake Bay, and
  - became effective *prior to* January 1, 2007.

- The schedule of compliance in the WGP supersedes all schedules of compliance for loading limits in IPs that:
  - are solely directed toward restoration and protection of the Chesapeake Bay, and
  - were to become effective *on or after* January 1, 2007.

- Several IPs contain concentration limits that are intended to apply to nutrient removal equipment that has not yet been constructed. These limits shall be revised in accordance with this guidance as a permit modification, or alternately, revocation and reissuance, to be initiated by regional permit staff upon the issuance of a Certificate to Construct (municipal facilities) or the approval of a Concept Engineering Report (industrial facilities) for nutrient removal technology.

- The monitoring and reporting requirements in the WGP supersede those in IPs where the monitoring is not necessary to demonstrate compliance with an effective limit in the IP. This monitoring should be deleted from DMRs associated with IPs in accordance with the procedures contained on Page 21 of this guidance. Monitoring that is necessary to demonstrate compliance with an effective limit in the IP (e.g.,

TP concentration limits based on technology that has been installed, or TKN where it is limited to protect in-stream dissolved oxygen) is retained in the IP.

- The WGP requirement that permittees submit a compliance plan (and that permittees submit annual updates to the plan) supersedes the Basis of Design (BoD) and Interim Optimization Plan (IOP) requirements in IPs. It does not affect requirements that exist outside of IPs, such as grant agreements.

- The WGP does not address site specific water quality conditions related to nutrients (e.g., TMDLs); both the WGP and IPs may contain loading limits, monitoring requirements and schedules of compliance as dictated by site specific water quality conditions. A permittee may generate and sell credits based on compliance with its WGP load limit while violating a more stringent load limit in its IP. Likewise, local water quality issues may impact a facility's ability to acquire credits in order to comply with the load limit in the WGP, and how multiple facilities under common ownership or operation may be able to aggregate or "bubble" their load limits.

- The WGP does not address technology-based limits (e.g., Federal Effluent Guidelines for industrial dischargers, NEW limits) and allows that IPs may include concentration-based limits based on nutrient technology installed, whether by new construction, expansion or upgrade. A facility may generate and sell credits based on compliance with its WGP load limit while violating concentration limits in its IP. Likewise, facility-specific concentration limits may require facilities that have been aggregated or "bubbled" by registration with other facilities under common ownership or operation to operate their treatment technology to a higher standard than would be otherwise required for the owner/operator to comply with the aggregated or "bubbled" load limit.

Impact of pending regulations upon this guidance: DEQ is developing regulations for the reclamation and reuse of wastewater (9 VAC 25-740). Permittees will have the option of reducing the loads of nutrients discharged by reclaiming and reusing their treated wastewater in accordance with this regulation; this may result in permittees proposing to install treatment technology less stringent than what would otherwise be required under the nutrient regulations. This may also result in the owners/operators of new and expanded dischargers proposing to acquire fewer load reductions to offset the waste loads discharged from their facilities. The basis for this option can be found in by § 62.1-44.19:13 of the *Code of Virginia:*

"Biological nutrient removal technology" means (i) technology that will achieve an annual average total nitrogen effluent concentration of eight milligrams per liter and an annual average total phosphorus effluent concentration of one milligram per liter, or (ii) equivalent reductions in loads of total nitrogen and total phosphorus through the recycle or reuse of wastewater as determined by the Department.

"State-of-the-art nutrient removal technology" means (i) technology that will achieve an annual average total nitrogen effluent concentration of three milligrams per liter and an annual average total phosphorus effluent concentration of 0.3 milligrams per liter, or (ii) equivalent load reductions in total nitrogen and total phosphorus through recycle or reuse of wastewater as determined by the Department.

If a permittee provides, as part of their compliance plan (for significant dischargers) or in their registration statement (for new and expanding facilities) a demonstration that reclamation and reuse of water will result in their meeting their load limit without installing nutrient removal technology that might otherwise be required, DEQ may approve this option. Land treatment not otherwise associated with reclamation and reuse may also be considered.

2. Application for IPs and registration for coverage under the WGP:

A. Legislative and regulatory requirements:

Existing significant dischargers are addressed by § 62.1-44.19:14.C.5 of the *Code of Virginia* as follows:

> *"..every owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination System permit to discharge 100,000 gallons or more per day, or an equivalent load, directly into tidal waters, or 500,000 gallons or more per day, or an equivalent load, directly into nontidal waters (shall) secure general permit coverage by filing a registration statement with the Department within a specified period after each effective date of the general permit."*

OWPP has already issued coverage to these facilities. OWPP is also populating the CEDS database for these facilities. CEDS data rules for this permit will be included in the CEDS users' manual.

New and expanded facilities are addressed by § 62.1-44.19:14.C.5 of the *Code of Virginia* as follows:

> *"..any owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination System permit to discharge 40,000 gallons or more per day, or an equivalent load, directly into tidal or nontidal waters (shall) secure general permit coverage by filing a registration statement with the Department at the time he makes application with the Department for a new discharge or expansion that is subject to an offset or technology-based requirement in § 62.1-44.19:15…"*

9 VAC 25-820-10 states:

> *"New discharge" means any discharge from a facility that did not commence the discharge of pollutants prior to July 1, 2005, except that the term does not apply in those cases where a Certificate to Construct (for sewage treatment works, or equivalent DEQ approval for discharges from industrial facilities) was issued to the facility on or before July 1, 2005… "Expansion" or "expands" means initiating construction at an existing treatment works after July 1, 2005 to increase design flow capacity, except that the term does not apply in those cases where a Certificate to Construct (for sewage treatment works, or equivalent DEQ approval for discharges from industrial facilities) was issued on or before July 1, 2005.*

Appendix C of this guidance discusses situations in which owners/operators of facilities currently operating under a Virginia Pollution Abatement (VPA) permit may apply for an IP and register for WGP coverage.

B. Recommended Actions:

When reviewing IP applications for new and expanding facilities, regional permit staff should alert the applicant to the WGP registration requirement, and provide registration statements as part of the application package for the IP, as applicable. This guidance provides sample correspondence (see Appendix A).

Regional staff should send registration packages to owners/operators of new and expanded facilities that are already subject to these requirements, as they are required by law to register for coverage.

Eligibility for WGP coverage is restricted to facilities permitted by an IP for the activity in question.

Since the offset requirement clearly links information provided in the WGP registration statement to compliance conditions in the IP, permit staff should recognize that an IP application for new and expanded facilities is only complete when the registration statement is complete. **Offset proposals shall provide for the waste loads that are projected to be discharged on an annual basis for the term of the IP.**

Note that new and expanding facilities were subject to the offset requirements of Senate Bill 1275 as of July 1, 2005; however, as neither the WGP or the implementation guidance documents existed at that time, permittees may not be able to declare how their proposed waste loads will be offset. Until the non-point offset guidance is finalized, DEQ will grant WGP coverage to the owners/operators of new and expanding facilities with the condition that a Certificate to Operate will not be issued for the new or expanded facility until an offset declaration has been received and approved by the Department. Suggested IP language to address this situation can be found on Page 14 of this guidance.

Once the policies pertaining to offset acquisition have been finalized, applicants for new and expanded facilities must demonstrate that they can fulfill the offset requirement in § 62.1-44.19:15.B.1.b of the *Code of Virginia* as a prerequisite for any associated IP application submitted to DEQ. No IP processing should be undertaken for such applicants who fail to make this demonstration. Previously registered facilities that have not been issued a Certificate to Construct (CTC) will be required to provide the demonstration prior to issuance of the CTC.

OWPP intends that new and expanded facilities concurrently apply for the IP and WGP according to the following timeline:

1) Facility submits a registration statement to OWPP concurrently with submittal of an IP application to the regional office.

2) OWPP reviews the registration statement and the plan for offsetting additional loads, and
    i) Compares any proposed purchase of allocations from an existing point source to the allocations on the registration list to determine whether:
        (a) The purchase is in the same tributary as the proposed discharge;
        (b) The exchange would affect any requirement to comply with local water quality-based limitations, and
        (c) The proposed seller is capable of selling the allocation listed on the application.
    ii) Verifies (with assistance from the Department of Conservation and Recreation (DCR), that any proposed purchase of an allocation from a non-point source BMP is
        (a) In the same tributary as the proposed discharge;
        (b) Capable of affecting any requirement to comply with local water quality-based limitations, and
        (c) One which the proposed seller is capable of selling.
    iii) If no allocation is available for purchase through i) or ii), coordinates acquisition of an allocation through Water Quality Improvement Fund (WQIF), or reviews the facility-specific plan for offsetting the expanded discharge;
    iv) Populates the CEDS database with relevant links to the IP, and
    v) Forwards registration statement to regional office for continued processing of the WGP and the IP.

3) Regional office performs concurrent review of IP application; the IP application is deemed complete only after the registration statement is deemed complete.

4) Regional office completes the IP action; when the IP is signed, the regional office concurrently grants coverage under the WGP and completes the relevant CEDS data entry.

OWPP will be responsible for all modifications to the basin specific registration lists and for maintaining a copy of the current list on the agency website.

Expanding facilities that are currently non-significant dischargers will be subject to load limits that will be derived from current design flows and installed nutrient removal technology (for industrial facilities that provide nutrient treatment, regional staff should request an engineering analysis that indicates what concentrations should be achievable with the existing treatment works; for industrial facilities that do not provide nutrient treatment, current nutrient effluent concentrations may be considered); because of this, regional office staff should refrain from waiving nutrient testing requirements contained in Form 2A and/or 2C unless the permittee has previously submitted a large body of data.

3. Loading limits:

A. Legislative and regulatory requirements:

The load limits in the WGP are derived from one of three sources, and, in accordance with the enabling legislation, are to be expressed to the nearest pound (the regulation notes that this is without regard to the rules of mathematical precision):

- **Significant dischargers** have a waste load allocation in the Water Quality Management Planning Regulation (9 VAC 25-720). Waste load allocations may be traded.

- **Expanding non-significant dischargers** are not included in 9 VAC 25-720, which implies that these facilities do not have a waste load allocation that can be traded; however, § 62.1-44.19:15 A.1 of the *Code of Virginia* contains the phrase "expansion beyond his waste load allocations or permitted design capacity as of July 1, 2005". "Permitted design capacity" (or "permitted capacity, in § 62.1-44.19:15 A.2., A.3) refers to the nutrient load discharged by a non-significant discharger (for a municipal facility, this is based on the facility's design flow and treatment technology; industrial facilities must be considered on a case-by-case basis) and is defined in 9 VAC 25-820-10.

- No waste load allocation or "permitted design capacity" is provided to **new facilities** in either the law or the regulations, except in the case of certain VPA permittees (see Appendix C for a discussion of this).

When the loading limits in the WGP become effective, they will supersede certain loading limits already in effect in the IPs of the permittees affected by this new regulation. Per the code, the WGP shall control in lieu of technology-based, water quality-based, and best professional judgment, interim or final effluent limitations for total nitrogen and total phosphorus in IPs for facilities covered by the WGP where the effluent limitations for total nitrogen and total phosphorus in the IPs are based upon standards, criteria, waste load allocations, policy, or guidance established solely to restore or protect the water quality and beneficial uses of the Chesapeake Bay or its tidal tributaries.

Mass loading limits for nutrients in IPs *that are currently in effect and enforceable will remain so until the effective date of the nutrient limit in the WGP for the parameter of concern* (i.e., currently the January 1, 2011 "final effluent limits effective date" in Part I of the WGP); such limits include:

- Water quality based mass load limits, such as those prescribed by basin management plans and nutrient enriched waters designations that are less stringent than the nutrient limits in the WGP; and
- Performance-based or WQIF agreement-based mass load limits established for significant dischargers in accordance with GM04-2017

DEQ remains authorized to establish and enforce more stringent effluent limitations for total nitrogen or total phosphorus in IPs, as necessary; in addition to the mass loading limits in the WGP, IPs may contain:

- More stringent water quality based nutrient limits in IPs needed to protect local water quality, such as those prescribed by Total Maximum Daily Loads (TMDLs);
- More stringent technology-based effluent concentration limits for facilities that have installed nutrient control technology, or
- More stringent mass loading limits based on Federal Effluent Guidelines for industrial process water.

Several IPs have included schedules of compliance associated with loading limits. The tributary wide schedules of compliance in the WGP supersede conflicting or duplicative compliance schedules for nutrient limits in IPs whose final (nutrient) limit compliance dates have not passed as of the WGP effective date (January 1, 2007).

By letter dated November 30, 2006, EPA Region 3 expressed concurrence with this approach to addressing existing load limits in IPs (see Appendix B to this guidance).

B. Recommended actions:

Load limits derived from the waste load allocations found in 9 VAC 25-720 will not be included in IPs.

IPs with an associated WGP will include the following footnote on each effluent limits page for outfalls covered by the WGP, in which there are NO concentration limits or monitoring)

> *"This facility has Total Nitrogen and Total Phosphorus calendar year load limits associated with this outfall included in the current Registration List under registration number VAN010094, enforceable under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Watershed in Virginia."*

The following footnote will be included on each effluent limits page for outfalls covered by the WGP, in which there ARE concentration limits or monitoring)

> *"In addition to any Total Nitrogen or Total Phosphorus concentration limits (or monitoring requirements without associated limits) listed above, this facility has Total Nitrogen and Total Phosphorus calendar year load limits associated with this outfall included in the current Registration List under registration number VAN010094, enforceable under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Watershed in Virginia."*

Existing facilities:

Except for those circumstances in which site-specific or facility-specific conditions warrant the inclusion of limits more stringent than those in the WGP, no loading limits or compliance schedules are required when reissuing or modifying IPs for any significant dischargers in the Chesapeake Bay Watershed. In addition, BoD and IOP submittals are not required and are now moot in any IP that contains them. Note that BoD and IOP submittals may still be required under previous WQIF grant agreements.

Expanding facilities:

As previously discussed, the annual loading limit for total nitrogen and total phosphorus for these facilities is what is referred to in the legislation as "waste load allocations", (for facilities that received waste load

allocations in the WQMP regulation) or "permitted (design) capacity" (for all other expanding facilities). **The loading limits will be contained in the registration list associated with the WGP.**

For facilities that are significant dischargers, the loading limit in the WGP will remain equal to the allocation for that facility that is contained in 9 VAC 25-720 (Water Quality Management Plan).

For municipal facilities that are not currently significant dischargers (i.e., they have no allocation in 9 VAC 25-720), the "permitted design capacity" or "permitted capacity" should be calculated using the following formula (Equation 1):

> **Total N or P (in pounds/yr, to the nearest whole pound) = concentration (mg/l, to the nearest 0.01 mg/d) x design flow (mgd, to the nearest 0.001 MGD) x 8.3438 x 365 (days/yr), where**
>
> Concentration = the appropriate value from Table 1 (below), and
> Design flow = the design flow for the facility from which the facility was discharging as of July 1, 2005, or the design flow for a proposed facility for which a Certificate to Construct was issued prior to July 1, 2005, whichever is greater.

Industrial facilities' permitted design capacity should be calculated on a case-by-case basis; contact OWPP for assistance.

Note that the Biological Nutrient Removal (BNR) and State-of-the-art (SOA) technology concentrations listed below should only be used if those levels of treatment were required by the IP or a grant agreement with DEQ.

Table 1
Summary of total nitrogen and total phosphorus concentrations associated with levels of treatment technology

Parameter	Level of technology (when calculating "permitted design capacity", consider the level installed that corresponds to the "design flow" used)	Concentration (mg/l)
Total N	Secondary	18.70
	BNR	8.00
	SOA	3.00
Total P	Secondary	2.50
	BNR	1.00
	SOA	0.30

An example of this follows:

An STP west of the fall line, constructed in 1995 to provide secondary treatment at a design flow of 0.40 MGD is expanding to 0.60 MGD. A CTC for the 0.60 MGD plant was issued on October 1, 2005. There is no local water quality concern related to nutrients.

The facility is currently non-significant and has no allocation in the WQMP. The "permitted design capacity" is defined as

> ***Total N or P (in pounds/yr) = concentration (mg/l) x design flow (mgd) x 8.3438 x 365 (days/yr), where (Eq.1)***

Design flow – as of July 1, 2005, the approved flow was 0.40 MGD.
Concentration – the treatment provided as of July 1, 2005; use the values for secondary treatment on Table 1:

Total Nitrogen = 18.70 mg/l x 0.40 MGD x 8.3438 x 365 days/yr = 22780 pounds/yr
Total Phosphorus = 2.50 mg/l x 0.40 MGD x 8.3438 x 365 days/yr = 3045 pounds/yr

These numbers represent the loading limits that would be recorded by OWPP in the registration list for the 0.60 MGD expansion and would be enforced through the WGP; these limits would not be included in the IP.

In addition, load reductions or waste load allocations that are acquired by expanding facilities to offset increases in their discharged waste loads will be recorded in the registration list.

New facilities:

New facilities will receive an annual load limit of zero, to be recorded by OWPP in the registration list and would be enforced through the WGP; these limits would not be included in the IP. Load reductions or waste load allocations that are acquired by the owners/operators of new facilities to offset their discharged waste loads will be recorded in the registration list.

4. Technology requirements and concentration limits:

A. Legislative and regulatory requirements:

Both § 62.1-44.19:15.A. of the *Code of Virginia* and 9 VAC 25-40-70, *Strategy for Chesapeake Bay Watershed*, address treatment technology requirements. 9 VAC 25-40-70 A. states:

> *"A. As specified herein, the board shall include technology-based effluent concentration limitations in the individual permit for any facility that has installed technology for the control of nitrogen and phosphorus whether by new construction, expansion, or upgrade. Such limitations shall be based upon the technology installed by the facility and shall be expressed as annual average concentrations."*

A summary of the technology requirements for new and expanding facilities in § 62.1-44.19:15.A. of the *Code of Virginia* and 9 VAC 25-40-70 can be found in Table 2:

Table 2
Summary of treatment technology requirements for new and expanding facilities located in the Chesapeake Bay watershed

Proposed design flow	New facility?	Receiving stream	Minimum Treatment technology
0.10 MGD > Q ≥ 0.04 MGD	No	Tidal or Non-Tidal	Secondary Treatment
0.10 MGD > Q ≥ 0.04 MGD	Yes	Tidal or Non-Tidal	BNR
0.50 MGD > Q ≥ 0.10 MGD		Non-Tidal	BNR
Q ≥ 0.10 MGD		Tidal	SOA
Q ≥ 0.50 MGD		Non-Tidal	SOA

The application of these requirements differs between significant dischargers that are not undergoing expansion, expanding facilities and new facilities; even within the aforementioned categories of dischargers, these requirements are not universal. § 62.1-44.19:16. A. of the *Code of Virginia* and 9 VAC 25-40-70 A.4 allow less stringent requirements for new and expanding facilities, in that on a case-by-case basis, DEQ may establish a technology-based standard and associated concentration limitation less stringent than the technology standards

summarized in Table 2 above, based on a demonstration by an owner or operator that the specified standard is not technically or economically feasible for the affected facility or that the technology-based standard and associated concentration limitation would degrade receiving waters or require the owner or operator to construct treatment facilities not otherwise necessary to comply with his waste load allocation (or permitted design capacity) without reliance on the acquisition of compliance credits pursuant to § 62.1-44.19:18 of the *Code of Virginia*.

Another exception to the technology requirement can be found in 9 VAC 25-40-70 B.:

> *"In accordance with Article 1.1 (§ 10.1-1187.1 et seq.) of Chapter 11.1 of Title 10.1 of the Code of Virginia, the board may approve an alternate compliance method to the technology-based effluent concentration limitations as required by subsection A of this section. Such alternate compliance method shall be incorporated into the permit of an Exemplary Environmental Enterprise (E3) facility or an Extraordinary Environmental Enterprise (E4) facility to allow the suspension of applicable technology-based effluent concentration limitations during the period the E3 or E4 facility has a fully implemented environmental management system that includes operation of installed nutrient removal technologies at the treatment efficiency levels for which they were designed. "*

Suggested IP language to address this situation can be found on Page 12 of this guidance.

On occasion, more restrictive limits may be necessary. DEQ is authorized by § 62.1-44.19:14.B. of the *Code of Virginia* and 9 VAC 25-40-70 A.5 to establish and enforce more stringent water quality-based effluent limitations for total nitrogen or total phosphorus in IPs where those limitations are necessary to protect local water quality.

B. Recommended Actions:

Before setting concentration limits in IPs, permit staff should discuss with the permittee the options that are available to them. For example, significant dischargers that have not installed technology to comply with site-specific nutrient limits, and are not undergoing expansion, are not subject to the technology requirements listed in Table 2 of this guidance, and may meet their annual load limits in the WGP through implementing one or more of the following practices:

- installing treatment technology (the permittee may phase in the installation of treatment technology as part of its overall compliance strategy);
- acquiring compliance credits;
- reducing their discharged load through reclamation/reuse, land treatment, source reduction or (in the case of industrial facilities) other physical or operational changes (these are defined below);
- acquiring additional load limit through regionalizing (i.e., accepting the flow from other treatment plants), or
- bubbling (operating under a common registration with other facilities under common ownership or operation).

With the exception of acquiring compliance credits as an alternative to installing technology, owners/operators of new or expanding facilities may exercise most of the preceding options, such as maintaining their discharged load through reclamation/reuse in addition to the installation of technology. They may also acquire sufficient load reductions to offset increased waste loads from their facilities, and may also invoke § 62.1-44.19:16.A. of the *Code of Virginia*, when proposing treatment technology for their facilities: for example, an expanding facility could employ reclamation/reuse and acquire offsets in order to install less stringent nutrient control technology than would otherwise be required.

Permit staff should develop concentration limits for IPs according to one of the following scenarios; note that should the nutrient removal design criteria in subsequent plans/specifications or Concept Engineering Report differ from technology-based concentration limits already in the IP, DEQ shall initiate modification, or alternately, revocation and reissuance, of the IP to reflect the technology listed in the CTC (municipal facilities) or CER approval letter. This is applicable irrespective of whether the proposed technology is more, or less, stringent than in the IP.

1. If the facility is constructed, upgraded or expanded in accordance with grant or loan funding provided by DEQ, or if the permittee has made an affirmative statement regarding the performance of proposed nutrient removal equipment, concentration limits based on the available documentation (grant agreement, Preliminary Engineering Report etc.) should be included in the permit, with an effective date of January 1 following the issuance of a CTO for the nutrient removal equipment.

2. If the facility construction, upgrade or expansion is not undertaken with grant or loan funding from DEQ, AND if the permittee has not affirmed the performance level of equipment to be installed, AND if the permittee has not proposed or discussed alternatives to construction (that would be necessary to meet the facility load limit at design flow), concentration limits for municipal facilities should be included in the permit in accordance with the information provided in Tables 1 and 2 of this guidance, with an effective date of January 1 following the issuance of a CTO for the nutrient removal equipment.

By their nature, industrial facilities have a degree of operational flexibility that municipal facilities generally do not. They also vary in how their waste streams are generated and treated; consequently, it may be difficult to determine when an upgrade has occurred. The following guidelines are provided:

Physical or operational changes at industrial facilities would **not** be defined as upgrades, if directed toward either:

- The quantity or quality of the materials produced or services rendered;
- Operations, maintenance and repair of process equipment, or
- Repair or replacement (with a functionally similar item) of existing wastewater treatment equipment.

The following physical or operational changes at an industrial facility would **not** be defined as upgrades, even if directed exclusively toward reduction of nutrients in the effluent:

- Source reduction (such as, but not limited to, the elimination of phosphorus as a nutrient source for mixed liquor in the wastewater treatment process);
- Materials substitution (such as, but not limited to, changing cooling water additives), or
- Reclamation and reuse of wastewater or materials contained in wastewater.

Any physical upgrade of the industrial facility's treatment works requires the submittal of a Concept Engineering Report (CER); further, such upgrades are subject to the technology requirements and concentration limits.

As industrial facilities are often designed to manage wastes not normally encountered at a POTW, permit staff should recognize that nutrient removal technology may not achieve the reductions at industrial facilities that would be expected from comparable technology installed at a POTW, and concentration limits in IPs should be developed with this in mind, with an effective date of January 1 following the completion of construction for which a Concept Engineering Report has been approved by the DEQ regional office.

3. If the facility construction, upgrade or expansion is not undertaken with grant or loan funding from DEQ, AND the permittee has not affirmed the performance level of the equipment, BUT the permittee has proposed or discussed alternatives to construction (that would be necessary to meet the facility load limit at design flow), the IP may be issued without concentration limits, with the following condition included in the IP:

> *(municipal facilities, to be added to the standard CTC/CTO condition) Upon issuance of a CTC, DEQ staff shall initiate modification, or alternately, revocation and reissuance, of this permit, to include annual concentration limits based on the nutrient removal technology listed in the CTC. Upon issuance of a CTO, any nutrient removal facilities installed shall be operated to achieve design effluent levels.*
>
> *(industrial facilities, as a stand-alone condition) This facility shall submit a Concept Engineering Report (CER) for DEQ approval prior to installation of any nutrient removal wastewater treatment technology. Upon approval of a CER for the installation of nutrient removal technology, DEQ staff shall initiate modification, or alternately, revocation and reissuance, of this permit, to include annual concentration limits based on the technology proposed in the CER. The permittee shall inform the DEQ regional office within 14 days of completion of construction of any project for which a CER has been approved. Upon completion of construction in accordance with a CER that has been approved by the DEQ regional office, any nutrient removal facilities installed shall be operated to achieve design effluent levels.*

The following language should be included in the IP fact sheet language:

> *9 VAC 25-40-70 A authorizes DEQ to include technology-based annual concentration limits in the permits of facilities that have installed nutrient control equipment, whether by new construction, expansion or upgrade.*
>
> *(Industrial facilities only) § 62.1-44.16 of the Code of Virginia requires industrial facilities to obtain DEQ approval for proposed discharges of industrial wastewater.*

All IPs that contain annual concentration limits should contain the following special condition:

> ***Nutrient reporting calculations:***
>
> *For each calendar month, the DMR shall show the calendar year-to-date average concentration (mg/L) calculated in accordance with the following formulae:*
>
> $$AC_{avg}\text{-}YTD = \left(\sum_{(Jan\text{-}current\ month)} MC_{avg} \right) \div (\#\ of\ months)$$
>
> *where:*
> *AC_{avg}-YTD = calendar year-to-date average concentration (mg/L)(parameter codes 805 and 806)*
> *MC_{avg} = monthly average concentration (mg/L) as reported on DMR*
>
> *The total nitrogen and phosphorus average concentrations (mg/L) for each calendar year (AC) shall be shown on the December DMR due January 10th of the following year. These values shall be calculated in accordance with the following formulae:*
>
> $$AC_{avg} = \left(\sum_{(Jan\text{-}Dec)} MC_{avg} \right) \div 12$$
>
> *where:*
> *AC_{avg} = calendar year average concentration (mg/L)(parameter codes 792 and 794)*

MC_{avg} = monthly average concentration (mg/L) as reported on DMR

For Total Phosphorus, all daily concentration data below the quantification level (QL) for the analytical method used should be treated as half the QL. All daily concentration data equal to or above the QL for the analytical method used shall be treated as it is reported.

For Total Nitrogen (TN), if none of the daily concentration data for the respective species (i.e., TKN, Nitrates/Nitrites) are equal to or above the QL for the respective analytical methods used, the daily TN concentration value reported shall equal one half of the largest QL used for the respective species. If one of the data is equal to or above the QL, the daily TN concentration value shall be treated as that data point is reported. If more than one of the data is above the QL, the daily TN concentration value shall equal the sum of the data points as reported.

Specific QLs should not be included in IPs.

The following language should be included in the IP fact sheet language:

Nutrient reporting calculations

Rationale: §62.1-44.19:13 of the Code of Virginia defines how annual nutrient loads are to be calculated; this is carried forward in 9 VAC 25-820-70. As annual concentrations (as opposed to loads) are limited in the individual permit, this special condition is intended to reconcile the reporting calculations between the permit programs, as the permittee is collecting a single set of samples for the purpose of ascertaining compliance with two permits.

It should be noted that some facilities discharge very low concentrations of nutrients at very high volumes. For these facilities, DEQ recognizes that the previous reporting convention (treating concentration data below the QL as zero) would result in permittees reporting "no load discharged". Under the new convention, it is theoretically possible for these permittees to report a load in excess of their limit in the WGP using similarly unquantifiable data. These cases should be handled on a case-by-case basis, and permittees should be encouraged to investigate analytical methods that enable their effluent to be quantified at very low concentrations.

Regional permit staff should include the following language in any IP that includes a Total Nitrogen or Total Phosphorus annual average concentration limit:

The annual average concentration limitations for Total Nitrogen and/or Total Phosphorus are suspended during any calendar year in which the facility is considered by DEQ to be a participant in the Virginia Environmental Excellence Program in good standing at either the Exemplary Environmental Enterprise (E3) level or the Extraordinary Environmental Enterprise (E4) level, provided that the following conditions have also been met:

a. The facility has applied for (or renewed) participation, been accepted, maintained a record of sustained compliance and submitted an annual report according to the program guidelines;
b. The facility has demonstrated that they have in place a fully implemented environmental management system (EMS) with an alternative compliance method that includes operation of installed nutrient removal technologies to achieve the annual average concentration limitations, and
c. The E3/E4 designation from DEQ and implementation of the EMS has been in effect for the full calendar year.

The annual average concentration limitations for Total Nitrogen and/or Phosphorus, as applicable, are not suspended in any calendar year following a year in which the facility failed to achieve the annual average concentration limitations as required by b. above.

The following language should be included in the IP fact sheet language:

Suspension of concentration limits for E3/E4 facilities

9 VAC 25-40-70 B authorizes DEQ to approve an alternate compliance method to the technology-based effluent concentration limitations as required by subsection A of this section. Such alternate compliance method shall be incorporated into the permit of an Exemplary Environmental Enterprise (E3) facility or an Extraordinary Environmental Enterprise (E4) facility to allow the suspension of applicable technology-based effluent concentration limitations during the period the E3 or E4 facility has a fully implemented environmental management system that includes operation of installed nutrient removal technologies at the treatment efficiency levels for which they were designed.

When a permittee applies for E3/E4 status, it may request which (or all) activities are to be designated as E3/E4 participants, subject to DEQ approval. The conditions listed above apply to the activity (or activities) specifically designated by DEQ.

5. Requirements to offset additional discharged pounds of nitrogen and phosphorus:

A. Legislative requirement:

§ 62.1-44.19:15. A. of the *Code of Virginia* requires owners or operators of expanded facilities to offset any increase in delivered total nitrogen and delivered total phosphorus loads resulting from any expansion beyond the waste load allocations or permitted design capacity as of July 1, 2005, and requires owners or operators of new facilities to offset the entire delivered total nitrogen and total phosphorus loads discharged.

§ 62.1-44.19:15. B and C of the *Code of Virginia* outline four options for obtaining such offsets:

- Acquisition of all or a portion of the waste load allocations from one or more permitted facilities in the same tributary;
- Acquisition of nonpoint source load allocations through the use of best management practices acquired through a public or private entity acting on behalf of the land owner. Such best management practices shall achieve reductions beyond those already required by or funded under federal or state law, or the Virginia tributaries strategies plans, and shall be installed in the same tributary in which the new or expanded facility is located and included as conditions of the facility's IP;
- Acquisition of allocations from the Water Quality Improvement Fund, or
- Acquisition of allocations in accordance with the terms of the WGP or through such other means as may be approved by the Department on a case-by-case basis.

Currently, OWPP, with assistance from DCR, is developing the mechanisms by which permittees would comply with § 62.1-44.19:15.B and C.

B. Recommended Actions:

Owners/operators of expanded facilities must offset any load in excess of their waste load allocations (for facilities that are significant dischargers) or "permitted design capacity" (for facilities that are non-significant

dischargers). Owners/operators of new facilities must offset their entire load. **Several categories of facilities will not require offset conditions in their IPs, if these facilities:**

- With the submittal of a registration statement, provide evidence that a waste load allocation was acquired from a significant discharger whose loading limits have become effective (in this case, the registration list and DMRs of the affected facilities will be revised to reflect the amount and term of the waste load acquisition);
- Hold a VPA permit that was issued prior to July 1, 2005, and are treating and land applying sewage (see Appendix C of this guidance)
- Acquired waste load allocations or permitted design capacity through regionalization;
- Are to be "bubbled" with other facilities in the same tributary under common ownership or operation, or
- Purchase offsets through the Water Quality Improvement Fund.

The load limits of these facilities will be included in the registration list, according to the mass of nutrients acquired.

Until the final procedures for review and approval of offsets have been developed by OWPP, regional staff should include the following language in IPs for owners/operators that are required to offset increased nutrient waste loads from their facilities, whether by new construction or by expansion:

> ***Offset Requirement***
>
> *"Any annual Total Nitrogen and/or Total Phosphorus loadings above and beyond those permitted prior to July 1, 2005 shall be offset subject to a DEQ-approved trading contract prepared in accordance with § 62.1-44.19:12 - :19 of the Law and 9 VAC 25-820-10 et seq., and which includes, but is not limited to, the following:*
>
> *a. Discussion of the source of the acquired allocations,*
> *b. Discussion of other permitted facilities involved in the trade, and*
> *c. Discussion of any non-point source allocations acquired.*
>
> *"This proposal shall provide for the waste loads that are projected to be discharged on an annual basis for the term of this permit, and shall be approved prior to the commencement of discharge from the new or expanded facility. Once approved, the conditions of the proposal pertaining to verification of non-point allocations acquired, or self-offsetting practices implemented, become an enforceable part of this permit."*

Once the final procedures for review and approval of offsets have been developed by OWPP, regional staff should insert the following language in IPs for permittees that have elected to acquire non-point load reductions, or have submitted a proposal to offset their waste load themselves:

> *"The permittee has elected to offset the annual Total Nitrogen and/or Total Phosphorus loadings above and beyond those permitted prior to July 1, 2005 through (the acquisition of non-point source load reductions) or (through a proposal approved by the Department that involves (insert brief summary here)). Records of this acquisition shall be maintained on site by the permittee and are subject to field verification by, or on behalf of, the Department. Should the reductions not be verifiable, or should they not be fully achieved, the permittee shall be required to obtain any additional waste load or load reductions necessary to offset the waste load discharged by the permittee in the calendar year for which the load reductions were acquired .*

The following language should be included in the IP fact sheet language:

Offset Requirement

Rationale: The Virginia General Assembly, in its 2005 session, enacted a new Article 4.02 (Chesapeake Bay Watershed Nutrient Credit Exchange Program) to the Code of Virginia to address nutrient loads to the Bay. Section 62.1-44.19:15 sets forth the requirements for new and expanded dischargers, including the requirement that non-point load reductions acquired for the purpose of offsetting nutrient discharges be enforced through the individual VPDES permit.

An example of an offset calculation follows:

A facility with a design flow of 0.40 MGD installed SOA treatment with grant money in 2000 and was now proposing an expansion to 0.60 MGD: Again referring to Table 2,

	Proposed TN Load = 3.00 mg/l x 0.60 MGD x 8.3438 x 365 days/yr	=	*5482 pounds/yr*
-	*Current TN Load = 3.00 mg/l x 0.40 MGD x 8.3438 x 365 days/yr*	=	*3655 pounds/yr*
	Required offset for expanded discharge	=	*1827 pounds/yr*
	Proposed TP Load = 0.30 mg/l x 0.60 MGD x 8.3438 x 365 days/yr	=	*548 pounds/yr*
-	*Current TP Load = 0.30 mg/l x 0.40 MGD x 8.3438 x 365 days/yr*	=	*365 pounds/yr*
	Required offset for expanded discharge	=	*183 pounds/yr*

The permittee in this example would have to demonstrate as part of its WGP registration that the waste load allocations had been secured and could be proven prior to the commencement of discharge from the new or expanded facility.

6. Facilities that were formerly subject to the Nutrient Enriched Waters Policy:

When the Nutrient Enriched Waters policy was promulgated, facilities discharging to NEW-designated waters, with design flows of $\geq$1.0 MGD were assigned a technology-based Total Phosphorus monthly average concentration limit of 2 mg/l. This was done with little, if any, quantification of phosphorus in the effluent of the facilities affected.

Many of these facilities were later determined to be significant dischargers of nutrients to the Chesapeake Bay; these are subject to the WGP, and are discussed later in this section; however, several industrial facilities were NOT classified as significant dischargers. Regional staff may delete the phosphorus limits from the IPs of non-significant industrial facilities, if they are able to provide the following documentation in the fact sheet (and if the region cannot provide this documentation, OWPP recommends against deleting the limit):

- The limit is technology-based (backsliding is permissible);
- 9 VAC 25-40-30-D exempts facilities located in the Chesapeake Bay watershed from this limit;
- The facility did not install treatment in order to comply with the limit;
- The facility has not undertaken any process or site management changes in order to comply with the limit, and
- Calculations using existing effluent data show that the facility is not a significant discharger.
- In any subsequent expansion resulting in discharged annual waste loads or above 2,300 pounds per year of TN or 300 pounds per year of TP, these facilities shall register for WGP coverage and will be limited to the "permitted design capacity" calculated at the time the NEW limit was deleted from the IP.

IPs for significant dischargers with Total Phosphorus limitations based on a Nutrient Enriched Waters designation should contain the following condition as appropriate (see note below):

Watershed General Permit Controls

Upon the effective date of the permittee's Watershed General Permit Total Phosphorus limitation, the monthly average and weekly (choose one average or maximum) Total Phosphorus loading limitations contained herein are waived. This permit shall receive annual average concentration limits to reflect technology installed by the permittee for the control of total phosphorus, whether by new construction, expansion, or upgrade.

The following language should be included in the IP fact sheet language:

Watershed General Permit Controls

9 VAC 25-40-30 D exempts facilities located in the Chesapeake Bay watershed from Total Phosphorus loading limits that are based on the receiving stream's previously being classified as Nutrient Enriched Waters, on the basis that more stringent annual loading limits (i.e., from the Watershed General Permit) apply to such facilities.

Note that this is only applicable to limits based on a Nutrient Enriched Waters designation. It is not applicable to any limitations required under a Special Standards designation (9 VAC 25-260-310) (e.g. Policy for the Potomac Embayments, Occoquan Watershed Policy, Chickahominy watershed above Walker's Dam, etc.) or any other more stringent limitations necessary to maintain local water quality.

IPs for these facilities should include annual concentration limits for Total Phosphorus based on the technology installed, including cases in which the technology was installed to meet limits that were based on a Nutrient Enriched Waters designation, and these annual concentration limits should be included in the IP in the first permit reissuance or modification following the effective date of the WGP total phosphorus limit. These limits should take effect in the first calendar year following the year in which the IP was modified or reissued.

In deriving these limits, permit writers should research any applicable grant agreement documentation, statements regarding the performance of the technology by the permittee or design engineer, CTOs issued for the nutrient removal technology or back-calculating from the WLA assigned to the facility.

Permit writers should note that while facilities operating under a "bubbled" registration receive a degree of flexibility regarding compliance with the aggregate loading limit assigned to the joint owner/operator, "bubbling" does not relieve the owner/operator of the individual facilities from the obligation to operate nutrient removal facilities as designed and installed.

The following reopener should be included in IPs that are issued, reissued or modified pursuant to this guidance:

Nutrient Reopener

This permit may be modified or, alternatively, revoked and reissued:

a. If any approved wasteload allocation procedure, pursuant to Section 303(d) of the Clean Water Act, imposes wasteload allocations, limits or conditions on the facility that are not consistent with the permit requirements;

b. To incorporate technology-based effluent concentration limitations for nutrients in conjunction with the installation of nutrient control technology, whether by new construction, expansion or upgrade, or

c. To incorporate alternative nutrient limitations and/or monitoring requirements, should:
   i. the State Water Control Board adopt new nutrient standards for the water body receiving the discharge, including the Chesapeake Bay or its tributaries, or
   ii. a future water quality regulation or statute require new or alternative nutrient control.

The following language should be included in the IP fact sheet language:

Nutrient Reopener

9 VAC 25-40-70 A authorizes DEQ to include technology-based annual concentration limits in the permits of facilities that have installed nutrient control equipment, whether by new construction, expansion or upgrade. 9 VAC 25-31-390 A authorizes DEQ to modify VPDES permits to promulgate amended water quality standards.

7. Regionalization issues:

A. Legislative requirement:

§ 62.1-44.19:14.C.1 of the *Code of Virginia*, in describing the waste load allocations in the WGP, states:

> "…An owner or operator of two or more facilities located in the same tributary may apply for and receive an aggregated waste load allocation for total nitrogen and an aggregated waste load allocation for total phosphorus for multiple facilities reflecting the total of the water quality-based total nitrogen and total phosphorus waste load allocations established for such facilities individually."

While this language actually addresses the aggregated or "bubbled" WGP registration of facilities under common ownership or operation that continue to operate under separate IPs, it is reasonable for a regional discharger, formed from the consolidated treatment of wastewater formerly treated by facilities located in the same tributary, to aggregate the waste load allocations attributed to the affected facilities. The practice is extended (albeit partially) to the assumption of loads from facilities with permitted design capacities.

B. Recommended Actions:

Loading limits:

An owner who consolidates the treatment provided by two or more facilities, located in the same tributary, into a single regional facility, may apply for and receive an aggregated mass load limit for delivered total nitrogen and an aggregated mass load limit for delivered total phosphorus, subject to the following conditions:

- If all of the affected facilities have waste load allocations listed in Subsection C of Sections 50, 60, 70, 110 or 120 of the Water Quality Management Planning Regulation (9 VAC 25-720), the aggregate mass load limit shall be calculated by adding the waste load allocations of the affected facilities. The regional facility shall be eligible to generate credits.

- If any, but not all, of the affected facilities has a waste load allocation listed in Subsection C of Sections 50, 60, 70, 110 or 120 of the Water Quality Management Planning Regulation (9 VAC 25-720), the aggregate mass load limit shall be calculated by adding:

  - Waste load allocations of those facilities that have wasteload allocations listed in Subsection C of Sections 50, 60, 70, 110 or 120 of the Water Quality Management Planning Regulation (9 VAC 25-720),
  - Permitted design capacities assigned to affected industrial facilities, and
  - Loads from affected sewage treatment works that do not have a waste load allocation listed in Subsection C of Sections 50, 60, 70, 110 or 120 of the Water Quality Management Planning Regulation (9 VAC 25-720). These loads are considered the lesser of a previously established permitted design capacity or the loads calculated by the following formulae:

    Nitrogen Load (lbs/day) = flow (expressed as MGD to the nearest 0.01 MGD) x 8.0 mg/l x 8.3438 x 365 days/year

    Phosphorus Load (lbs/day) = flow (expressed as MGD to the nearest 0.01 MGD) x 1.0 mg/l x 8.3438 x 365 days/year

    Flows used in the preceding formulae shall be the design flow of the treatment works from which the affected facility currently discharges.

  The regional facility shall be eligible to generate credits based on the aggregate mass load limits.

An example of this follows; consider a significant discharger that expands to accept the flows currently treated by two other POTWs located in the same tributary, as well as an industrial discharger.

Initial Design Flow of significant discharger:	*4.00 MGD*	
Nitrogen WLA and concentration:	*48,729 lbs/yr*	*4.00 mg/l*
Phosphorus WLA and concentration:	*3,655 lbs/yr*	*0.30 mg/l*

Design flows for STPs to be consolidated into the regional facility: 0.40 MGD and 0.20 MGD

Permitted design capacity for industrial discharger: 2,000 lbs/yr total nitrogen, 500 lbs/yr total phosphorus

Nitrogen WLA for regional STP = 48,729 + 2000 + [(0.40+0.20)(8.00 mg/l x 8.3438 x 365)] = 65,347 lbs/yr
Phosphorus WLA for regional STP = 3,655 + 500 + [(0.40+0.20)(1.00 mg/l x 8.3438 x 365)] = 5,982 lbs/yr

These limits would be included in the WGP registration list and the regional facility would be eligible to generate credits based on the aggregate mass load limits.

Concentration limits for the regional facility would be no less stringent than those for the existing significant discharger, and could be more stringent depending on the technology installed at the regional facility.

- If none of the affected facilities have a waste load allocation in Subsection C of Sections 50, 60, 70, 110 and 120 of the Water Quality Management Planning Regulation (9 VAC 25-720), the aggregate mass

load limit shall be calculated by adding the respective permitted design capacities for the affected facilities. The regional facility shall not be eligible to generate credits.

An example of this follows; consider several non-significant POTWs, currently treating to secondary standards, which are replaced by a single regional POTW.

Design flows for STPs to be consolidated into the regional facility: 0.30, 0.30, and 0.20 MGD, respectively

Total Nitrogen = 18.70 mg/l x 0.80 MGD x 8.3438 x 365 days/yr = 45560 pounds/yr
Total Phosphorus = 2.50 mg/l x 0.80 MGD x 8.3438 x 365 days/yr = 6091 pounds/yr

These limits would be included in the WGP registration list and the owner/operator of the facility would not be eligible to generate credits.

Concentration limits for this facility would be determined in a manner similar to that for a new or expanded facility.

In most cases, offsets should not be required for a regional facility unless the new facility will have a design flow significantly greater than the sum of the flows (in the case of STPs) or loads (in the case of industrial facilities) consolidated. In these cases, the permittee may have the option of employing reclamation/reuse or selecting treatment sufficiently stringent to ensure that the load resulting from the increased flow does not exceed the sum of the existing loads. Contact OWPP if you have any questions regarding this.

The following language should be used in IPs of permittees who are reasonably expected to terminate its discharge and connect to a regional facility:

Should (insert name of permittee) terminate its discharge by connecting to (insert name of regional facility), (insert name of permit holder of regional facility) may apply for and receive an additional mass load limit in accordance with Part I.B.3. of 9 VAC 25-820-70. The additional mass load limits for nitrogen and phosphorus have been determined to be as follows (if calculated, provide formulae below):

Total Nitrogen: = [] lbs/year
Total Phosphorus: = [] lbs/year.

These nutrient loadings are to be assigned to the (permit holder of regional facility) upon transfer of flow from the (insert name of permittee) and termination of this permit.

8. Public Notice Requirements:

A. Legislative and Regulatory Requirements:

§62.1-44.19:14 C.6 of the Code requires DEQ to establish "A procedure for efficiently modifying the lists of facilities covered by the WGP where the modification does not change or otherwise alter any waste load allocation or delivery factor adopted pursuant to the Water Quality Management Planning Regulation (9 VAC 25-270) or its successor, or an applicable total maximum daily load. The procedure shall also provide for modifying or incorporating new waste load allocations or delivery factors, including the opportunity for public notice and comment on such modifications or incorporations…"
Part I.I. of the WGP contains requirements that address modification or incorporation of new waste load allocations or delivery factors; however, in most cases, adequate notice will have been provided to the public through one of the following means:

1. A permittee petitions DEQ-Chesapeake Bay Office (CBO) for an expanded waste load allocation; as part of the response to this petition, DEQ-CBO subjects the petition to a public review and comment period. No further action is required of regional staff in this instance.

2. DEQ changes the delivery factors in the nutrient trading regulation (and, by extension, the delivered WLAs in the WGP); this would probably be undertaken in conjunction with modification of the WGP and would already be subject to a public notice and comment requirement. Again, no further action is required of regional staff.

3. An owner/operator submits a registration statement (or a modified registration statement) for WGP coverage in conjunction with an individual VPDES application for proposed new construction or expansion. In this case, the regional office will submit the IP to public notice and comment.

It is possible that an owner/operator may submit a registration statement (or a modified registration statement) for WGP coverage, independently of an individual VPDES application for proposed new construction or expansion. Such a submittal may be predicated on a decision by an owner/operator to "bubble" facilities currently operating under independent WGP registrations, regionalization (with no attendant plant expansion, if reclamation/reuse will be employed) or a change in how a new or expanding facility offsets its discharge. If the regional office receives such a registration statement, contact OWPP for assistance.

B. Recommended Actions:

The following language should be added to public notices for permittees subject to 9 VAC 25-820:

This facility is subject to the requirements of 9 VAC 25-820 and has registered for coverage under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia.

(add this sentence for <u>new</u> facilities that were not operating under a VPA permit prior to, and as of, July 1, 2005)

As a condition of this permit, the permittee will be required to offset in advance, any loads of total nitrogen or total phosphorus that are expected to be discharged in a given calendar year.

(add this sentence for <u>new</u> facilities that were operating under a VPA permit prior to, and as of, July 1, 2005)

The permittee has been assigned a waste load allocation in accordance with the 2007 amendment to Title 62.1-44.19.15 of the Code of Virginia; this allocation cannot be traded or assigned to another facility, and the permittee will be required to achieve nutrient reductions equivalent to state-of-the-art, whether by nutrient removal technology or by reclamation/reuse.

(add this sentence for <u>expanding</u> facilities only)

As a condition of this permit, the permittee will be required to offset in advance, any loads of total nitrogen or total phosphorus that are expected to be discharged in a given calendar year, in excess of those levels previously allowed by the facility's VPDES permit. The permittee may opt (has opted) to install nutrient removal treatment that will maintain the existing load of nutrients discharged.
(add this language when the facility is, or will be, <u>registered for coverage under the WGP with other facilities under common ownership or operation; in other words, "bubbled"</u>)

This facility is registered for coverage under the WGP with other facilities under common ownership or operation in the (name of tributary) watershed.

(insert this language if applicable) (name of owner or operator) will address load increases associated with new or expanded discharges from this facility by managing the aggregate delivered load discharged from all of the facilities under common ownership or operation in the (name of tributary) watershed..

(add this language when the facility assumes the influent flow from other permitted facilities; in other words, regionalizes)

This facility will treat wastewater currently being directed to other permitted treatment works. When the flow influent to (list facilities) is redirected to (name of permittee) and the discharge permits associated with these facilities has (have) been terminated, all or part of the delivered loads associated with these facilities will be assigned to (name of permittee) in the General VPDES Watershed Permit registration list to reflect this.
(add this language when the facility opts to purchase allocations from other permitted facilities)

This facility has elected to offset its future nutrient loads by acquiring waste load allocations from (insert name of seller(s)). The delivered load limits(s) of (insert name of seller(s)) have been reduced in the General VPDES Watershed Permit registration list to reflect this acquisition.

(add this language when the facility opts to purchase non-point reductions)

This facility has elected to offset its future nutrient loads by acquiring load reductions that were achieved by non-point best management practices. The inspection and verification of these reductions will be carried out pursuant to this individual VPDES permit.

(add this language when the permittee opts to achieve its own offsets; note that this should be occurring only when the facility has made a bona fide demonstration that it could not offset the proposed discharge either by purchasing a waste load allocation from another permitted facility or by purchasing non-point load reductions)

The permittee has elected to offset its future nutrient loads through a plan submitted to, and approved by, the Department that involves (insert brief summary here). The inspection and verification of this offset will be carried out pursuant to this individual VPDES permit.

(add this language when the facility opts to purchase allocations from the WQIF; note that this should be occurring only when the facility has made a bona fide demonstration that it could not offset the proposed discharge either by purchasing a waste load allocation from another permitted facility or by purchasing non-point load reductions)

This facility has elected to offset its future nutrient loads by acquiring load reductions through the Water Quality Improvement Fund, and has provided evidence that it attempted, but was unable, to acquire the load reductions by other means.

9. Elimination of duplicative reporting requirements in IPs:

As previously stated in this guidance, the monitoring and reporting requirements in the WGP supersede those in IPs where the monitoring is not necessary to demonstrate compliance with an effective limit in the IP. The limits should be deleted from IP DMRs in accordance with the following procedure (it is not necessary to modify the permit to accomplish this; the IP was superseded at the time the WGP became effective):

Note that the Permit Authorized Change feature in CEDS is being used to generate a new DMR, enable appropriate limitations and reporting requirements to be uploaded to PCS and to properly populate DMR "skeleton" records in CEDS. 9 VAC 25-820-10 et seq., and the enabling legislation allows for these changes without the IP being modified. The IP should not be actually modified under these procedures. If the permit is open for other reasons or if the permittee requests the changes and pays the appropriate modification fee, then requirements may be removed as appropriate under DEQ's regular permit modification procedures. Removal of any limits, schedules of compliance or special conditions from the IP would not be considered a minor modification under 9 VAC 25-31-400.

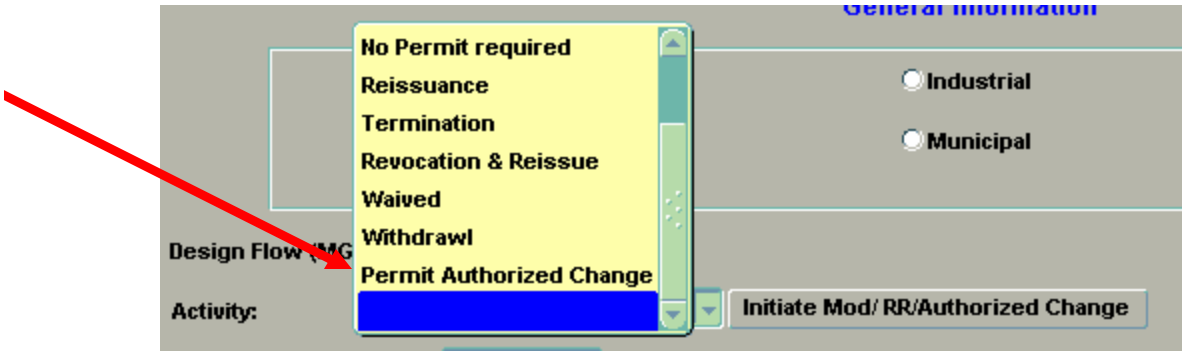
It is critical that these CEDS procedures be followed consistently because of the implications on DEQ uploads to EPA's PCS system and the e-DMR program. It is strongly recommended that each regional office designate a single staff member to enter these changes and that that staff member coordinate closely with the regional compliance auditor and the PCS coordinator (Joanne Lam) in central office.

1) In CEDS, query by permit number for the active record.
2) User may wish to print the data in the events table, as the data must be re-keyed into the application record.

3) Click on the Initiate Mod/RR/Authorized Change button located on the "General Information" screen.

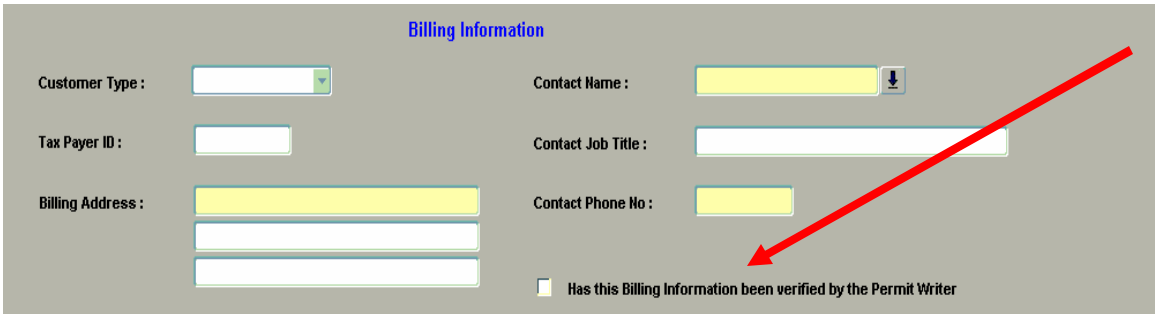
4) Click "OK" to create a new application record.

5) Query the application record and change the activity type on the general information screen to "permit authorized change".



6) Modify the nutrient trading parameter data based on the individual permit requirement. DO NOT CHANGE ANY DATES (i.e., limit start date, limit end date, first DMR due date, or monitor start date). If during this process the permit writer finds incorrect monitoring start dates or first DMR due dates, please contact the CEDS business analyst for further instructions.

7) Users will be required to click the billing verification check box on the billing screen.



8) Permit writers may also take advantage of the permit authorized change to delete from CEDS (**again, not the IP unless it is open for other reasons or if the permittee requests the changes and pays the appropriate modification fee**) any compliance schedule events that were superseded by the WGP.

9) Key in the event dates into the events table exactly as they are in the active record EXCEPT FOR THE DATE SIGNED (DTSIGN). The date signed is the trigger that will move the permit authorized change record from application to active. In order for the record to move from application to active the date signed date must be less than or equal to the current date; OWPP recommends that the permit writer use the later of 1/1/07 or the date that coverage was granted under the WGP. Permit writers should also type "Permit modified to eliminate parameters monitored through WGP" in the comments field located beside DTSIGN and in the comment field on the general information screen.

10) Notify the compliance auditor so that they may verify the accuracy of the skeleton records in CEDS and the eDMR system.

11) Notify the PCS coordinator (Joanne Lam) when changes have been made for major permits and provide the parameter codes and their modification status indicator of "deleted" or "changed" to assist the updates and to avoid inaccurate data/violations in PCS.

When using this table for screening IP applications and preliminary engineering reports, work from left to right; the four left columns are provided by the permit writer, the four right columns outline the applicable requirements for the given situation. For facilities that were operating under a VPA permit prior to, and as of, July 1, 2005, refer to Appendix C.

Facility status	Existing design capacity (or equivalent load)	Proposed design capacity (or equivalent load)	Upstream or downstream of fall line	Requirement to register for WGP	Technology requirements *	Annual loading limits	Offset required
New	N/A	Q < 0.04 MGD	Either	None	*	None	None
		0.10 MGD > Q ≥ 0.04 MGD	Either	Must submit registration statement when applying for new IP	BNR	Limit of zero in GP	100% of proposed load
		0.50 MGD > Q ≥ 0.10 MGD	Upstream				
			Downstream		SOA		
		Q ≥ 0.50 MGD	Either				
Expanding	Q < 0.04 MGD	Q < 0.04 MGD	Either	None	*	None	None
		0.10 MGD > Q ≥ 0.04 MGD	Either	Must submit registration statement when applying for modified or reissued IP	*	"permitted design capacity" calculated by regional permit staff and provided to Central Office for inclusion as limit in WGP	100% of proposed load above "permitted design capacity" calculated by regional permit staff
		0.50 MGD > Q ≥ 0.10 MGD	Upstream		BNR		
			Downstream		SOA		
		Q ≥ 0.50 MGD	Either				
	0.10 MGD > Q ≥ 0.04 MGD	0.10 MGD > Q ≥ 0.04 MGD	Either		BNR		
		0.50 MGD > Q ≥ 0.10 MGD	Upstream		BNR		
			Downstream		SOA		
		Q ≥ 0.50 MGD	Either				
	0.50 MGD > Q ≥ 0.10 MGD	0.50 MGD > Q ≥ 0.10 MGD	Upstream		BNR		
			Downstream	Prior to 1/1/07; must submit new registration statement when applying for modified or reissued IP	SOA	Loading limits in WGP	100% of proposed load above limit in WGP
		Q ≥ 0.50 MGD	Either				
	Q ≥ 0.50 MGD						
Existing	Q < 0.10 MGD	N/A	Either	None	*	None	None
	0.50 MGD > Q ≥ 0.10 MGD		Upstream	None	*	None	
			Downstream	Prior to 1/1/07	*	Loading limits in WGP	
	Q ≥ 0.50 MGD		Either				

- All discharges must be evaluated with regard to E3/E4 participation, currently installed technology, federal effluent guidelines or local water quality considerations irrespective of status, design flow or location. **Unless the permittee provides a demonstration to the contrary, new and expanding facilities are required to install the appropriate treatment.** Technology based concentration limits for applicable new and expanded facilities and existing facilities performing upgrades are 8.00 mg/l TN and 1.00 mg/l TP for facilities installing BNR and 3.00 mg/l TN and 0.30 mg/l TP for facilities installing SOA.

SAMPLE TRANSMITTAL LETTER FOR REGISTRATION STATEMENT

Name and address -

RE: Registration for the General VPDES Permit for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Watershed in Virginia

Dear VPDES Permittee (or applicant):

9 VAC 25-820-10 et seq., General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Watershed in Virginia was approved by the State Water Control Board on September 6, 2006 and became effective on November 1, 2006. The permit that is contained in the regulation has an effective date of January 1, 2007, and will expire on December 31, 2011. The permit regulation may be found at http://www.deq.virginia.gov/vpdes/pdf/9VAC25-820-NutrientDischargesGP-09-06-06.pdf.

In addition to the permit, registration for coverage under this WGP is required by law of every owner or operator of a new or expanding facility at the time he makes application with the Department for a new discharge or expansion that results in a discharge of 40,000 gallons or more per day from a sewage treatment work, or an equivalent load from an industrial facility.

(for applications for new construction and expansions, that are not currently accounted for in an permit, use the following paragraph)

The application for your permit cannot be processed without your concurrent registration for WGP coverage. Please submit the registration statement in order that permit processing may continue. Instructions for completing the registration form and an application fee form are included in this package. The application fee for this WGP is $600.00. Please follow the instructions on the fee form for submitting this fee.

(for new construction and expansions that are already accounted for in an permit, use the following paragraph)

New or expanding facilities that have not received a Certificate to Construct prior to July 1, 2005 are subject to this requirement. As the law and regulation require registration by the permit effective date (January 1, 2007), we request your immediate submittal of the registration statement. Instructions for completing the registration form and an application fee form are included in this package. The application fee for this WGP is $600.00. Please follow the instructions on the fee form for submitting this fee.

If you have any questions, please contact DEQ's Office of Water Permit Programs at (804) 698-4182.

Sincerely,

Permit Writer

Attachments:

- Registration Statement and instructions
- Permit Fee Form
- Summary of WGP monitoring and reporting requirements
- Summary of compliance plan requirements

SUMMARY OF MONITORING REQUIREMENTS

1. Discharges shall be monitored by the permittee, during weekdays, as specified below:

STP design flow	>20.000 MGD	1.000- 19.999 MGD	0.040-0.999 MGD
Effluent TN load limit for industrial facilities		>100000 lb/yr	487-99999 lb/yr
Effluent TP load limit for industrial facilities		>10000 lb/yr	37-9999 lb/yr
Parameter	**Sample Type and Collection Frequency**		
Flow	Totalizing, Indicating and Recording		
Nitrogen Compounds (Total Nitrogen = TKN + NO_2^- (as N) + NO_3^- (as N))	24 HC 3 Days/Week	24 HC 1/Week	8 HC 2/Month, > 7 days apart
Phosphorus Compounds (Total Phosphorus and Orthophosphate)	24 HC 3 Days/Week	24 HC 1/Week	8 HC 2/Month, > 7 days apart

2. Monitoring for compliance with effluent limitations shall be performed in a manner identical to that used to determine compliance with effluent limitations established in the individual VPDES permit, and monitoring or sampling shall be conducted according to analytical laboratory methods approved under 40 CFR Part 136 (2006), unless other test or sample collection procedures have been requested by the permittee and approved by the Department in writing. Monitoring may be performed by the permittee at frequencies more stringent than listed above; however, the permittee shall report all results of such monitoring.

3. Loading values reported in accordance with Part I, Paragraphs E and F of this WGP shall be calculated and reported to the nearest pound without regard to mathematical rules of precision.

4. Data shall be reported on a form provided by the Department, by the same date each month as is required by the facility's permit. The total monthly load shall be calculated in accordance with the following formula;

$$\mathbf{ML = ML_{avg} * d}$$

where:
ML = total monthly load (lb/mo)
ML_{avg} = monthly average load as reported on DMR (lb/d)
d = number of discharge days in the calendar month

$$\mathbf{ML_{avg} = \frac{\sum DL}{s}}$$

where:
DL = daily load, = daily concentration (expressed as mg/l to the nearest 0.01 mg/l) multiplied by the flow volume of effluent discharged during the 24-hour period (expressed as MGD to the nearest 0.01 MGD), multiplied by 8.3438 and rounded to the nearest whole number to convert to pounds per day (lbs/day)
s = number of days in the calendar month in which a sample was collected and analyzed

All daily concentration data below the quantification level (QL) for the analytical method used should be treated as half the QL. All daily concentration data equal to or above the QL for the analytical method used shall be treated as it is reported.

The total year-to-date mass load shall be calculated in accordance with the following formula:

$$\mathbf{AL\text{-}YTD = \sum_{(Jan\text{-}current\ month)} ML}$$

where:
AL-YTD = calendar year-to-date annual load (lb/yr)
ML = total monthly load (lb/mo) as reported on DMR

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

NOV 3 0 2006

Ms. Ellen Gilinsky, Ph.D.
Director of Division Water Quality Programs
Department of Environmental Quality
629 East Main Street
Richmond, VA 23219

Dear Ms. Gilinsky:

On September 6, 2006, the State Water Control Board approved the final regulation entitled "General Virginia Pollutant Discharge Elimination System (VPDES) Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia," 9 VAC 25-820-10 et seq. On September 20, 2006, the Virginia Department of Environmental Quality (VADEQ) forwarded for the Environmental Protection Agency (EPA) review a submission that included the general permit regulation, fact sheet, and registration statement. EPA expects to complete this review within ninety (90) days of VADEQ's September 20, 2006 submission.

As part of this review, EPA requests VADEQ's position on the applicability of 9 VAC 25-820-30 ("Relation to existing VPDES permits issued in accordance with 9VAC 25-31"). Specifically, EPA is interested in clarifying whether and how the nutrient effluent limits contained in the general permit affect enforceable nutrient limits that are in already contained in individual VPDES permits. Following is the italicized text of 9 VAC 25-820-30 A., B., and C, followed by EPA's interpretation of these regulatory provisions.

A. This general permit shall control in lieu of conflicting or duplicative mass loading effluent limitations, monitoring or reporting requirements for total nitrogen and total phosphorus contained in individual VPDES permits for facilities covered by this general permit, where these requirements are based upon standards, criteria, waste load allocations, policy, or guidance established to restore or protect the water quality and beneficial uses of the Chesapeake Bay or its tidal tributaries.

EPA interprets 9 VAC 25-820-30.A to mean that mass loading effluent limits for total nitrogen or total phosphorus ("nutrient limits") in individual VPDES permits that are currently in effect and enforceable would remain so until the effective date of the nutrient limits in the general permit (i.e., no later than the January 1, 2011 "final effluent limits effective date"in Part I, Section A of the General Permit). Effective nutrient limits in individual permits would include water quality based limits such as prescribed by basin management plans, nutrient enriched waters designations, and Total Maximum Daily Loads (TMDLs) or Water Quality Improvement Fund (WQIF) projects or other grant stipulations that imposed nutrient treatment performance characteristics being expressed as mass effluent limitations.

B. This general permit shall not control in lieu of more stringent water quality-based effluent limitations for total nitrogen or total phosphorus in individual permits where those limitations are necessary to protect local water quality, or more stringent technology-based effluent concentration limitations in the individual permit for any facility that has installed technology for the control of nitrogen and phosphorus whether by new construction, expansion, or upgrade.

EPA interprets 9 VAC 25-820-30.B to mean that the nutrient limits in the general permit will not supercede either (a) more stringent water-quality based nutrient limits in individual permits needed to protect local water quality, or (b) more stringent technology-based effluent concentration limits in individual permits for facilities that have installed nutrient control technology.

C. The compliance schedule in this general permit shall control in lieu of conflicting or duplicative schedule requirements contained in individual VPDES permits for facilities covered by this general permit, where those requirements address mass loading of total nitrogen or total phosphorus and are based upon standards, criteria, waste load allocations, policy, or guidance established to restore or protect the water quality and beneficial uses of the Chesapeake Bay or its tidal tributaries.

EPA interprets 9 VAC 25-820-30.C to mean that the compliance schedule in the general permit replaces conflicting or duplicate compliance schedules for nutrient limits in individual VPDES permits, as specified. EPA further interprets this provision as only applying to individual permits' compliance schedules in which the final compliance date has not passed as of the effective date of the general permit.

It would be helpful to EPA's review of the general permit to know whether our interpretation of the regulatory language above accords with VADEQ's position. If you have any questions or comments on this matter, please feel free to contact me or Mark D. Smith at 215-814-3105 of my staff.

Sincerely,

David McGuigan, Ph.D.
Associate Director
Office of NPDES Permits & Enforcement

Permitting strategy for Virginia Pollution Abatement (VPA) facilities that are located in the Chesapeake Bay watershed, and that apply for VPDES permits.

Background:

Several facilities in the Chesapeake Bay Watershed are authorized to treat and dispose of domestic sewage under VPA permits. For a variety of reasons (lack of sufficient acreage, impacts to groundwater etc.), these facilities may apply for VPDES permits. Under the WGP regulation, such facilities were considered new facilities and would have to offset all of their discharged loads in spite of the fact that the wastewater treatment works may have been existence for decades.

In 2007, the General Assembly passed, and Gov. Kaine signed into law, legislation that authorized the owners/operators of such facilities to petition the Board for a waste load allocation, subject to the following conditions:

- The VPA permit was issued before July 1, 2005;
- The allocation does not exceed the facility's permitted design capacity as of July 1, 2005;
- The waste treated by the facility that is covered under the VPA permit will be treated and discharged pursuant to a VPDES permit for a new discharge;
- The owner or operator installs state-of-the-art nutrient removal technology at such a facility, and
- Such facilities cannot generate credits or waste load allocations, based upon the removal of land application sites that can be acquired by other permitted facilities to comply with the nutrient trading legislation or WGP.

The legislation becomes effective on July 1, 2007. OWPP has identified the facilities that would be eligible to make such a petition to the Board; these facilities, and the permitted design capacities for which they may apply, are found on the following table:

VPA permittees in the Chesapeake Bay watershed that may be eligible for WLAs as VPDES dischargers

Facility Name	Permit Number	Region	Tributary	Design Flow (MGD) as of 7/1/05	Permitted design capacity (discharged lbs/yr) as of 7/1/05	
					TN	TP
Cherrystone Campground	VPA01022	TRO	Eastern Shore	0.08	4556	609
Best Western Motel - Cape Charles	VPA01058	TRO	Eastern Shore	0.02	1139	152
Roxbury Industrial Park	VPA00524	PRO	James	0.01	814	109
Craigsville STP	VPA01542	VRO	James	0.25	14238	1903
PWCSA – Occoquan Forest WWTP	VPA00007	NVRO	Potomac	0.09	5012	670
Bristow Manor Golf Club	VPA00012	NVRO	Potomac	0.01	626	84
Coles Point WWTS	VPA01423	PRO	Potomac	0.15	8543	1142
USA - Fort A P Hill - Cook Camp	VPA00008	NVRO	Rappahannock	0.02	957	128
Rappahannock Associates	VPA01409	PRO	Rappahannock	0.03	1709	228
Westminster Canterbury	VPA01401	PRO	Rappahannock	0.05	2848	381
Greene County WWTF	VPA01547	VRO	Rappahannock	0.18	10251	1370

Recommended Actions:

This legislation was intended strictly to relieve existing VPA permittees of the offset requirement that would otherwise be imposed on new VPDES dischargers. The allocations cannot be traded; accordingly, they cannot be "bubbled" to provide additional capacity to the owner/operator of any other permitted facility, and "regionalization" is permitted only if no WLA is transferred to the regional facility.

Owners/operators should request the WLA concurrently with their application for the IP, in a cover letter to their registration for coverage under the WGP, and should request the mass loads for total nitrogen and total phosphorus as described below. If approved, the WLA will be recorded on the WGP Registration List as an annual load limit:

Total Nitrogen WLA = LESSER OF Permitted design capacity (from table in this Appendix), OR
3.00 mg/l x proposed design flow (MGD) x 8.3438 x 365 days/yr

Total Phosphorus WLA = LESSER OF Permitted design capacity (from table in this Appendix), OR
0.30 mg/l x proposed design flow (MGD) x 8.3438 x 365 days/yr

The IP for these facilities should contain the applicable reopeners, technology based annual concentration limits and monitoring/reporting requirements as outlined in this guidance. Regional permit staff should recognize that the owner/operator may opt to comply with the IP by retaining the land application capacity; this may affect the nutrient removal technology installed (and, by extension, the annual concentration limits).

The following table summarizes permit requirements for facilities subject to nutrient trading regulation. Where example language is provided, it must be used verbatim.

Situation or Requirement	Permit language	Fact sheet language
Except in the case of local WQS or TMDLs, the effluent limit pages of individual permits should not address loading. Monitoring (typically associated with annual concentration limits) may be included.	(as a footnote on each effluent limits page for outfalls covered by the Watershed General Permit, in which there are NO concentration limits or monitoring) *This facility has Total Nitrogen and Total Phosphorus calendar year load limits associated with this outfall included in the current Registration List under registration number VAN010094, enforceable under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Watershed in Virginia.*	Any narrative describing the applicability of the Watershed General Permit to the facility (whether existing, expanding or new) is acceptable.
	(as a footnote on each effluent limits page for outfalls covered by the Watershed General Permit, in which there ARE concentration limits or monitoring) *In addition to any Total Nitrogen or Total Phosphorus concentration limits (or monitoring requirements without associated limits) listed above, this facility has Total Nitrogen and Total Phosphorus calendar year load limits associated with this outfall included in the current Registration List under registration number VAN010094, enforceable under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Watershed in Virginia.*	
As facilities design treatment works to meet the annual load limits in the WGP, some may propose staged construction of treatment units, reclamation/reuse, purchasing compliance credits, bubbling or some combination of the above. In these cases, permit staff may have difficulty establishing appropriate technology-based concentration limits for IPs. The following language is provided for these cases, and should be added as a separate paragraph to the boilerplate CTC/CTO condition and fact sheet justification, respectively.	*(municipal facilities, to be added to the standard CTC/CTO condition) Upon issuance of a CTC, DEQ staff shall initiate modification, or alternately, revocation and reissuance, of this permit, to include annual concentration limits based on the nutrient removal technology listed in the CTC. Upon issuance of a CTO, any nutrient removal facilities installed shall be operated to achieve design effluent levels.* *(industrial facilities, as a stand-alone condition) This facility shall submit a Concept Engineering Report (CER) for DEQ approval prior to installation of any nutrient removal wastewater treatment technology. Upon approval of a CER for the installation of nutrient removal technology, DEQ staff shall initiate modification, or alternately, revocation and reissuance, of this permit, to include annual concentration limits based on the technology proposed in the CER. The permittee shall inform the DEQ regional office within 14 days of completion of construction of any project for which a CER has been approved. Upon completion of construction in accordance with a CER that has been approved by the DEQ regional office, any nutrient removal facilities installed shall be operated to achieve design effluent levels.*	*9 VAC 25-40-70 A authorizes DEQ to include technology-based annual concentration limits in the permits of facilities that have installed nutrient control equipment, whether by new construction, expansion or upgrade.*

Situation or Requirement	Permit language	Fact sheet language
Special condition pertaining to reporting of monitoring data	***Nutrient reporting calculations:*** *For each calendar month, the DMR shall show the calendar year-to-date average concentration (mg/L) calculated in accordance with the following formulae:* AC_{avg}-YTD = (å (Jan-current month) MC_{avg}) ÷ (# of months) *where:* *AC_{avg}-YTD = calendar year-to-date average concentration (mg/L)(parameter codes 805 and 806)* *MC_{avg} = monthly average concentration (mg/L) as reported on DMR* *The total nitrogen and phosphorus average concentrations (mg/L) for each calendar year (AC) shall be shown on the December DMR due January 10th of the following year. These values shall be calculated in accordance with the following formulae:* AC_{avg} = (å (Jan-Dec) MC_{avg}) ÷ 12 *where:* *AC_{avg} = calendar year average concentration (mg/L)(parameter codes 792 and 794)* *MC_{avg} = monthly average concentration (mg/L) as reported on DMR* *For Total Phosphorus, all daily concentration data below the quantification level (QL) for the analytical method used should be treated as half the QL. All daily concentration data equal to or above the QL for the analytical method used shall be treated as it is reported.* *For Total Nitrogen (TN), if none of the daily concentration data for the respective species (i.e., TKN, Nitrates/Nitrites) are equal to or above the QL for the respective analytical methods used, the daily TN concentration value reported shall equal one half of the largest QL used for the respective species. If one of the data is equal to or above the QL, the daily TN concentration value shall be treated as that data point is reported. If more than one of the data is above the QL, the daily TN concentration value shall equal the sum of the data points as reported.*	***Nutrient reporting calculations*** *Rationale: §62.1-44.19:13 of the Code of Virginia defines how annual nutrient loads are to be calculated; this is carried forward in 9 VAC 25-820-70. As annual concentrations (as opposed to loads) are limited in the individual permit, this special condition is intended to reconcile the reporting calculations between the permit programs, as the permittee is collecting a single set of samples for the purpose of ascertaining compliance with two permits.*
For facilities whose permits contain annual concentration limits (it is not necessary for the facility to be an E3/E4 facility at the time of permit issuance for this condition to be included in the permit; this may serve as a placeholder)	*The annual average concentration limitations for Total Nitrogen and/or Total Phosphorus are suspended during any calendar year in which the facility is considered by DEQ to be a participant in the Virginia Environmental Excellence Program in good standing at either the Exemplary Environmental Enterprise (E3) level or the Extraordinary Environmental Enterprise (E4) level, provided that the following conditions have also been met:* *a. The facility has applied for (or renewed) participation, been accepted, maintained a record of*	***Suspension of concentration limits for E3/E4 facilities*** *9 VAC 25-40-70 B authorizes DEQ to approve an alternate compliance method to the technology-based effluent concentration limitations as*

Situation or Requirement	Permit language	Fact sheet language
	sustained compliance and submitted an annual report according to the program guidelines; *b. The facility has demonstrated that they have in place a fully implemented environmental management system (EMS) with an alternative compliance method that includes operation of installed nutrient removal technologies to achieve the annual average concentration limitations, and* *c. The E3/E4 designation from DEQ and implementation of the EMS has been in effect for the full calendar year.* *The annual average concentration limitations for Total Nitrogen and/or Phosphorus, as applicable, are not suspended in any calendar year following a year in which the facility failed to achieve the annual average concentration limitations as required by b. above.*	*required by subsection A of this section. Such alternate compliance method shall be incorporated into the permit of an Exemplary Environmental Enterprise (E3) facility or an Extraordinary Environmental Enterprise (E4) facility to allow the suspension of applicable technology-based effluent concentration limitations during the period the E3 or E4 facility has a fully implemented environmental management system that includes operation of installed nutrient removal technologies at the treatment efficiency levels for which they were designed.*
Until the final procedures for review and approval of offsets have been developed by OWPP, regional staff should include the following language in IPs for owners/operators that are required to offset increased nutrient waste loads from their facilities, whether by new construction or by expansion:	***Offset Requirement*** *"Any annual Total Nitrogen and/or Total Phosphorus loadings above and beyond those permitted prior to July 1, 2005 shall be offset subject to a DEQ-approved trading contract prepared in accordance with § 62.1-44.19:12 - :19 of the Law and 9 VAC 25-820-10 et seq., and which includes, but is not limited to, the following:* *a. Discussion of the source of the acquired allocations,* *b. Discussion of other permitted facilities involved in the trade, and* *c. Discussion of any non-point source allocations acquired.* *"This proposal shall provide for the waste loads that are projected to be discharged on an annual basis for the term of this permit, and shall be approved prior to the <u>commencement of discharge from</u> the new or expanded facility. Once approved, the conditions of the proposal pertaining to verification of non-point allocations acquired, or self-offsetting practices implemented, become an enforceable part of this permit."*	***Offset Requirement*** *Rationale: The Virginia General Assembly, in its 2005 session, enacted a new Article 4.02 (Chesapeake Bay Watershed Nutrient Credit Exchange Program) to the Code of Virginia to address nutrient loads to the Bay. Section 62.1-44.19:15 sets forth the requirements for new and expanded dischargers, including the requirement that non-point load reductions acquired for the purpose of offsetting nutrient discharges be enforced through the individual VPDES permit.*
Once the final procedures for review and approval of offsets have been developed by OWPP, regional staff should insert the following language in IPs for permittees that have elected to acquire non-point load reductions, or have submitted a proposal to offset their waste load themselves:	***Offset Requirement*** *"The permittee has elected to offset the annual Total Nitrogen and/or Total Phosphorus loadings above and beyond those permitted prior to July 1, 2005 through (the acquisition of non-point source load reductions) or (through a proposal approved by the Department that involves (insert brief summary here)). Records of this acquisition shall be maintained on site by the permittee and are subject to field verification by, or on behalf of, the Department. Should the reductions not be verifiable, or should they not be fully achieved, the permittee shall be required to obtain any additional waste load or load reductions necessary to offset the waste load discharged by the permittee in the calendar year for which the load reductions were acquired .*	

Situation or Requirement	Permit language	Fact sheet language
IP with Total Phosphorus limitations based on a Nutrient Enriched Waters designation should contain the following condition as appropriate:	***Watershed General Permit Controls*** *Upon the effective date of the permittee's Watershed General Permit Total Phosphorus limitation, the monthly average and weekly (choose one average or maximum) Total Phosphorus loading limitations contained herein are waived. This permit may receive annual average concentration limits to reflect technology installed by the permittee for the control of total phosphorus, whether by new construction, expansion, or upgrade.*	***Watershed General Permit Controls*** *9 VAC 25-40-30 D exempts facilities located in the Chesapeake Bay watershed from Total Phosphorus loading limits that are based on the receiving stream's previously being classified as Nutrient Enriched Waters, on the basis that more stringent annual loading limits (i.e., from the Watershed General Permit) apply to such facilities.*
This should be included in all permits that are subject to the nutrient trading regulation. Note that if the permit contains other reopeners, any language complementary to this condition may be added, but this language (as well as the fact sheet justification) must otherwise be retained as provided in the guidance.	***Reopener*** *This permit may be modified or, alternatively, revoked and reissued:* *b. If any approved wasteload allocation procedure, pursuant to Section 303(d) of the Clean Water Act, imposes wasteload allocations, limits or conditions on the facility that are not consistent with the permit requirements;* *c. To incorporate technology-based effluent concentration limitations for nutrients in conjunction with the installation of nutrient control technology, whether by new construction, expansion or upgrade, or* *d. To incorporate alternative nutrient limitations and/or monitoring requirements, should:* *i. the State Water Control Board adopt new nutrient standards for the water body receiving the discharge, including the Chesapeake Bay or its tributaries, or* *ii. a future water quality regulation or statute require new or alternative nutrient control.*	***Reopener*** *9 VAC 25-40-70 A authorizes DEQ to include technology-based annual concentration limits in the permits of facilities that have installed nutrient control equipment, whether by new construction, expansion or upgrade.* *9 VAC 25-31-390 A authorizes DEQ to modify VPDES permits to promulgate amended water quality standards.*

Chapter NR 217

EFFLUENT STANDARDS AND LIMITATIONS FOR PHOSPHORUS

Subchapter I — General
NR 217.01 Purpose.

Subchapter II — Phosphorus Effluent Standards and Limitations
NR 217.02 Applicability.
NR 217.03 Definitions.
NR 217.04 Effluent standards and limitations for phosphorus.

Subchapter III — Water Quality Based Effluent Limitations for Phosphorus
NR 217.10 Applicability.
NR 217.11 Definitions.
NR 217.12 General.
NR 217.13 Calculation of water quality based effluent limitations for phosphorus.
NR 217.14 Expression of limitations.
NR 217.15 Determination of necessity for water quality based effluent limitations for phosphorus.
NR 217.16 Relationship of WQBELs and TMDL based limitations.
NR 217.17 Schedules of compliance.
NR 217.18 Watershed adaptive management option.
NR 217.19 Variances for stabilization ponds and lagoon systems.

Note: Effluent standards are being created for phosphorus at this time. Effluent standards for other pollutants may be added to this chapter at later dates.

Note: Corrections made under s. 13.93 (2m) (b) 7., Stats., Register, August, 1997, No. 500.

Subchapter I — General

NR 217.01 Purpose. The purpose of this chapter is to reduce the amount of phosphorus discharged to surface waters by establishing effluent standards and limitations, including water quality based effluent limitations, for phosphorus in effluent discharged to surface waters of the state. Effluent standards and limitations are developed pursuant to ch. 283, Stats.

History: Cr. Register, November, 1992, No. 443, eff. 12−1−92; CR 10−035: am. Register November 2010 No. 659, eff. 12−1−10.

Subchapter II — Phosphorus Effluent Standards and Limitations

NR 217.02 Applicability. This subchapter is applicable to point sources which discharge phosphorus to the surface waters of the state.

History: Cr. Register, November, 1992, No. 443, eff. 12−1−92; CR 10−035: am. Register November 2010 No. 659, eff. 12−1−10.

NR 217.03 Definitions. Definitions of terms and the meaning of abbreviations used in this subchapter are as defined in ss. NR 102.03, 106.03, 205.03, 210.03, and 243.03. In addition: "effluent standard" means any requirement for phosphorus established pursuant to s. 283.11 (3), Stats., and this subchapter.

History: Cr. Register, November, 1992, No. 443, eff. 12−1−92; CR 10−035: am. Register November 2010 No. 659, eff. 12−1−10.

NR 217.04 Effluent standards and limitations for phosphorus. (1) GENERAL. Effluent limitations for total phosphorus shall be imposed in WPDES permits for wastewaters discharged to surface waters as specified in this section.

(a) An effluent standard for total phosphorus shall apply as follows:

1. An effluent limitation equal to 1 mg/L total phosphorus as a monthly average shall apply to publicly owned treatment works and privately owned domestic sewage works subject to ch. NR 210 which discharge wastewater containing more than 150 pounds of total phosphorus per month, unless an alternative limitation is provided under sub. (2).

2. An effluent limitation equal to 1 mg/L total phosphorus as a monthly average shall apply in cases where the discharge of wastewater from all outfalls of a facility other than those subject to ch. NR 210 contains a cumulative total of more than 60 pounds of total phosphorus per month, unless an alternative limitation is provided under sub. (2). Outfalls consisting of noncontact cooling water without phosphorus containing additives may not be included in the calculation of the cumulative total of phosphorus discharged from the facility. Compliance with the concentration limit shall be determined as a rolling 12 month average as determined by the total phosphorus from all outfalls subject to the effluent limitation for the most recent 12 months divided by the total flow for all those outfalls for the same period.

3. Effluent limitations for phosphorus equal to 1 mg/L as a monthly average contained in permits on December 1, 1992 shall remain in effect.

4. Effluent limitations for phosphorus equal to 85% removal of influent concentrations of phosphorus contained in permits on December 1, 1992 shall be modified to 1 mg/L total phosphorus as a monthly average upon reissuance of the permit unless an alternative limitation is provided under sub. (2).

5. Runoff to surface waters from animal feeding operations shall be controlled using best management practices to achieve the purpose of this chapter pertaining to phosphorus.

6. The department shall determine if a permittee is discharging more than the applicable threshold value specified in subd. 1. or 2. by examining available data on or requiring monitoring of the amount of phosphorus contained in the wastewater effluent. Such data shall be representative of the amount of phosphorus contained in the wastewater effluent during periods of discharge or operation.

Note: The threshold values of this section will be applied at the time of WPDES permit reissuance or permit modification which may occur due to changes in waste characteristics.

Note: See NR 102.06 in reference to water quality standards.

(2) ALTERNATIVE EFFLUENT LIMITATIONS TO THE EFFLUENT STANDARD FOR PHOSPHORUS. (a) Permittees subject to sub. (1) (a) 1., 2., or 4. may request an alternative effluent limitation for total phosphorus if one or more of the following apply:

1. A permittee may request an alternative effluent limitation in cases where achieving the 1 mg/L total phosphorus effluent standard is not practically achievable.

a. A permittee requesting an alternative effluent limitation under this subdivision shall provide, as a part of the WPDES permit process, information which demonstrates that the 1 mg/L total phosphorus effluent standard is not practically achievable and information necessary for the department to establish an alternative effluent limitation. The information provided shall include but not be limited to the following: the results of a comprehensive phosphorus minimization study to determine the sources of phosphorus to the wastewater, an evaluation of possible methods to reduce the sources of phosphorus to the wastewater, a description of actions implemented to reduce the sources of phosphorus to the wastewater. In addition, the permittee shall provide data on the phosphorus concentrations in the influent to and effluent from the wastewater treatment facilities which are achievable after phosphorus minimization steps have been implemented, alternative treatment technologies which may be employed to achieve the 1 mg/L effluent standard, and their associated removal efficiencies and costs and the requested alternative effluent limitation.

b. The department shall review requests and the information provided by permittees and may establish alternative effluent limitations to the effluent standard imposed under sub. (1) (a) 1., 2. or 4. where this standard, in the best professional judgment of the department, is not practically achievable. For these cases, the department shall establish an alternative effluent limitation considering the effluent quality achievable with the application of treatment technologies, process changes, and phosphorus minimization steps to reduce the amount of phosphorus to the maximum extent practically achievable taking into account energy, economic and environmental impacts.

2. A permittee may request an alternative effluent limitation in cases where the operation of specific biological phosphorus removal technologies will achieve a level of performance equivalent to a 1 mg/L effluent standard. Systems which employ biological phosphorus removal technology shall result in the removal of not less than 90% of the phosphorus which would be removed by achieving the 1 mg/L total phosphorus effluent standard based upon a mass determination.

a. A permittee requesting an alternative effluent limitation under this subdivision shall, as a part of the WPDES permit application process, provide information which demonstrates that achieving the requested alternative effluent limitation using biological phosphorus removal will achieve this requirement. The information shall include data on the total mass of phosphorus discharged using biological removal with and without chemical polishing and the total mass of phosphorus discharged using treatment technologies to achieve the 1 mg/L effluent standard and the information necessary for the department to establish an alternative effluent limitation.

b. The department shall review requests and the information provided by permittees and may establish alternative effluent limitations to the effluent standard imposed under sub. (1) (a) 1., 2., or 4. where the alternative limitation, in the best professional judgment of the department, will result in insignificant differences in the amount of phosphorus discharged, on a mass basis, compared to the mass which would be discharged by achieving the 1 mg/L total phosphorus effluent standard. For these cases, the department shall establish an alternative effluent limitation considering the effluent quality achievable with the application of biological phosphorus removal technologies, taking into account the total phosphorus removal performance on a mass basis. The alternative effluent limitation established by the department under this subparagraph may not exceed 2 mg/L as a monthly average.

3. A permittee may request an alternative effluent limitation in cases where phosphorus−deficient wastewaters necessitate the addition of phosphorus to a biological treatment system to assure efficient operation and compliance with other effluent limitations.

a. A permittee requesting an alternative effluent limitation under this subdivision shall, as a part of the WPDES application process, provide information which demonstrates that achieving the 1 mg/L total phosphorus effluent standard is not practically achievable and the information necessary for the department to establish an alternative effluent limitation. The information provided shall include but not be limited to the following: the results of a comprehensive phosphorus minimization study to minimize the amount of phosphorus discharged while allowing efficient operation of the wastewater treatment system, a description of actions implemented to reduce the amount of phosphorus discharged, the phosphorus effluent concentrations achievable after phosphorus minimization steps have been implemented, the removal efficiencies and costs associated with alternative treatment technologies which would be necessary to achieve the 1 mg/L effluent standard and the requested alternative limitation.

b. The department shall review requests and the information provided by the permittee and may establish alternative effluent limitations to the effluent standard imposed under sub. (1) (a) 2. where this standard, in the best professional judgment of the department, is not practically achievable. The department shall establish an alternative effluent limitation considering the minimum phosphorus effluent quality achievable while allowing efficient operation of the wastewater treatment system. The alternative effluent limitation established by the department under this subdivision may not exceed 2 mg/L as a monthly average.

(b) Permittees subject to sub. (1) (a) 1. or 2. which do not discharge their effluent into the basins of the Great Lakes or the Fox (Illinois) river may request an alternative effluent limitation for total phosphorus according to the provision of this paragraph.

1. A permittee may request an alternative effluent limitation under this paragraph in cases where achieving the 1 mg/L effluent standard would not result in an environmentally significant improvement in water quality and material progress towards the attainment and maintenance of associated surface water quality standards for the receiving water as established in chs. NR 102 to 104.

2. A permittee requesting an alternative effluent limitation under this paragraph shall propose for the department's approval a study plan to identify the receiving waters affected or potentially affected by the discharge, describe how information will be obtained to justify an alternative effluent limitation under this paragraph, and provide the information necessary to establish interim and alternative effluent limitations under this paragraph. This study plan shall be submitted as a part of the WPDES permit application process. The results of the study shall include an evaluation of all point and non−point sources of phosphorus in the watersheds and the impacts of the phosphorus contributions on biological and chemical water quality conditions. Upon review of the study plan, the department may require additional information as deemed necessary and may expand the study to include other watersheds or portions thereof that may be significantly impacted by the permittee's discharge of phosphorus.

3. The department may establish an alternative effluent limitation where, in the best professional judgment of the department and based upon the information provided by the permittee pursuant to the study plan and other relevant information, achieving the effluent standard under sub. (1) (a) 1. or 2. would not result in an environmentally significant improvement in water quality and material progress towards the attainment of associated surface water quality standards for the receiving waterbody as established in chs. NR 102 to 104.

4. An interim effluent limitation and compliance schedule for completing the study shall be imposed in a permit until the request for an exemption from the 1 mg/L effluent standard is approved or denied. The interim effluent limitation shall be equal to the representative concentration of total phosphorus as a monthly average in the effluent based on the information provided by the permittee as a part of the WPDES permit application process.

5. Alternative effluent limitations established under this paragraph may not exceed the interim effluent limitation established under subd. 4.

(3) ANALYTICAL METHODS AND LABORATORY PROCEDURES. Methods used for analysis of influent and effluent samples shall be as described in ch. NR 219 unless alternative methods are specified in the WPDES discharge permit.

(4) COMPLIANCE. The department shall determine and specify a reasonable compliance schedule in the permittee's WPDES permit if the facility is unable to meet the effluent standard or limitations determined according to this section at the time of permit issuance or reissuance. The date for compliance with this section may not extend beyond 3 years from the date of permit issuance or reissuance, unless the department determines that circumstances beyond the permittee's control, such as an environmental impact statement, require additional time for compliance. In such circumstances, the date for compliance with this section may not

extend beyond 5 years from the date of permit issuance or reissuance.

(5) DEPARTMENT DETERMINATIONS. Effluent standards and limitations established under subs. (1) (a) and (2) are not subject to the variance procedure under s. 283.15, Stats.

History: Cr. Register, November, 1992, No. 443, eff. 12−1−92.

Subchapter III — Water Quality Based Effluent Limitations for Phosphorus

NR 217.10 Applicability. This subchapter applies to discharges of phosphorus to surface waters of the state from the following point sources:

(1) Publicly and privately owned wastewater facilities or treatment works;

(2) Noncontact cooling water discharges which contain phosphorus unless 100 percent of the phosphorus in the discharge originates from the receiving water as intake water;

(3) Concentrated animal feeding operations that discharge manure or process wastewater from the production area through alternative treatment facilities under s. NR 243.13; and

(4) A facility or site that is regulated under ch. NR 216 only where the department has determined that compliance with the standards in chs. NR 151 and 216 are not sufficient to meet phosphorus criteria in s. NR 102.06.

Note: There may be other point sources that are not subject to the procedures in this subchapter, but which are be subject to s. 283.13 (5), Stats., or procedures in other rules (e.g., ch. NR 243 requirements for concentrated animal feeding operations).

History: CR 10−035: cr. Register November 2010 No. 659, eff. 12−1−10.

NR 217.11 Definitions. Definitions of terms and the meaning of abbreviations used in this subchapter are as defined in ss. NR 102.03, 106.03, 205.03, 210.03, and 243.03. In addition, for purposes of this subchapter, the following definitions apply:

(1) "303 (d) list" means a list of waters established by the department and approved by US EPA pursuant to 33 USC 1313 (d) (1) (A) and 40 CFR 130.7.

(2) "Adaptive management" means the use of monitoring data and other information at the time of permit reissuance to reassess management decisions and permit requirements.

(3) "New discharger" means a point source which was not authorized by a WPDES permit as of December 1, 2010. A new discharger includes a relocation of an outfall to a different receiving water.

(4) "Phosphorus impaired water" means a surface water listed on the 303 (d) list that is impaired for phosphorus, nutrients, or diurnal swings of dissolved oxygen.

Note: A surface water may be impaired and placed on the 303 (d) list for a reason other than phosphorus, nutrients, or dissolved oxygen (e.g., mercury), however the procedures in this subchapter only apply to impairments related to phosphorus, nutrients, or diurnal swings of dissolved oxygen.

(5) "Privately owned wastewater facilities or treatment works" means a facility or treatment works owned by a nongovernmental entity that discharges domestic wastewater, commercial wastewater, or industrial wastewater or a combination thereof.

(6) "Technology based limitation" means an effluent limitation for phosphorus established pursuant to s. 283.11 (3), Stats., and subch. II or s. 283.13 (2) or (4), Stats.

(7) "Total maximum daily load" or "TMDL" means the amount of pollutants specified as a function of one or more water quality parameters that can be discharged into a water quality limited segment and still ensure attainment of the applicable water quality standard in a watershed.

(8) "US EPA" means the United States Environmental Protection Agency.

(9) "WQBEL" means a water quality based effluent limitation.

History: CR 10−035: cr. Register November 2010 No. 659, eff. 12−1−10.

NR 217.12 General. (1) Water quality based effluent limitations for phosphorus shall be included in a permit whenever the department determines:

(a) The discharge from a point source contains phosphorus at concentrations or loadings which will cause, has the reasonable potential to cause or contribute to an exceedance of the criteria in s. NR 102.06 in either the receiving water or downstream waters; and

(b) The technology based effluent limitation or the alternative treatment technology limitation calculated under s. NR 243.13 is less stringent than necessary to achieve the applicable water quality standard for phosphorus in s. NR 102.06.

(2) If the technology based limitation expressed as a concentration is more stringent than the water quality based effluent limitation expressed as a concentration under s. NR 217.13, then the technology based limit shall be included in the permit, along with any mass limitations calculated under this subchapter as required under s. NR 217.14 (1) and (3).

History: CR 10−035: cr. Register November 2010 No. 659, eff. 12−1−10.

NR 217.13 Calculation of water quality based effluent limitations for phosphorus. (1) BASIS FOR LIMITATIONS. (a) The department shall calculate potential water quality based effluent limitations for point source dischargers of phosphorus using the procedures in this section.

(b) Water quality based effluent limitations for phosphorus shall be calculated based on the applicable phosphorus criteria in s. NR 102.06 at the point of discharge, except the department may calculate the limitation to protect downstream waters.

(2) DISCHARGES TO STREAMS AND RIVERS. (a) *Limitation calculation.* For discharges of phosphorus to flowing streams and rivers, the water quality based effluent limitation shall be calculated using the following conservation of mass equation:

$$\text{Limitation} = [(WQC)\,(Qs+(1-f)Qe) - (Qs - fQe)\,(Cs)]/Qe$$

Where:

Limitation = Water quality based effluent limitation (in units of mass per unit of volume),

WQC = The water quality criterion concentration (in units of mass per unit volume) from s. NR 102.06,

Qs = Receiving water design flow (in units of volume per unit time) as specified in par. (b),

Qe = Effluent flow (in units of volume per unit time) as specified in par. (c),

f = Fraction of the effluent flow that is withdrawn from the receiving water, and

Cs = Upstream concentration (in units of mass per unit volume) as specified in par. (d).

(b) *Receiving water design flow (Qs).* Based on the availability of information and the professional judgment of the department, the value of Q_s to be used in calculating the effluent limitation for discharges to flowing waters shall be determined using one of the following:

1. The average minimum 7−day flow which occurs once every 2 years (7−day Q_2) based on information derived by the U. S. geological survey or other department approved information source, using data from a representative gauging station with a period of record of at least 10 years.

2. If provided by the permittee and approved by the department, the average low 30−day flow which occurs once every 3 years (30−day Q_3) based on information derived by the U. S. geological survey or other department approved information source, using data from a representative gauging station with a period of record of at least 10 years.

3. Other flow deemed more representative of flow conditions and approved by the department.

(c) *Effluent flows (Q_e).* 1. For dischargers subject to ch. NR 210 and which discharge for 24 hours per day on a year−round basis, Q_e shall equal the maximum effluent flow, expressed as a daily average, that is anticipated to occur for 12 continuous months during the design life of the treatment facility unless it is demonstrated to the department that this design flow rate is not representative of projected flows at the facility.

2. For other dischargers not subject to ch. NR 210, Q_e shall equal, based on the best professional judgment of the department, one of the following:

a. The maximum effluent flow, expressed as a 365 day rolling average of daily discharges that has occurred for 12 continuous months and represents normal operations.

b. The maximum effluent flow, expressed as a 30 day rolling average, which has occurred for 30 continuous days and represents normal operations.

3. For seasonal discharges, discharges proportional to stream flow, or other non−continuous discharge situations, Q_e shall be determined on a case by case basis.

(d) *Upstream concentrations (C_s).* The representative upstream concentration of phosphorus shall be used in specific water quality based effluent limit calculations. At a minimum, the representative upstream concentration shall be either a concentration derived by the department based on data from the specific stream or from a similar location. Where data is collected on the upstream location, the concentration used shall equal the median of at least four samples collected throughout the period of May through October. All samples collected during a 28−day period shall be considered as a single sample and the average of the concentrations used. Where data is available from more than one year in the last five years, the department may use all of the years of data in the calculation of the upstream concentration. The department may also use data older than five years provided that it is representative of current conditions. Upstream concentrations may not be measured at a location within the direct influence of a point source discharge. The determination of upstream concentrations shall be evaluated at each permit reissuance.

Note: The department has guidance on collection methods for ambient water sampling and may develop guidance for the evaluation of representative data. The guidance may be obtained from the offices of the department of natural resources, bureau of watershed management at 101 South Webster Street, P.O. Box 7921, Madison, Wisconsin 53707.

(3) DISCHARGES TO INLAND LAKES AND RESERVOIRS. For discharges of phosphorus directly to inland lakes, reservoirs, and other receiving waters which do not exhibit a unidirectional flow at the point of discharge, the department shall set the effluent limit equal to the criterion for the receiving water or the downstream water.

Note: As described in s. NR 217.16, effluent limitations for discharges to lakes may also be based on the wasteload allocation of a total maximum daily load, where the total maximum daily load has been approved by US EPA.

(4) DISCHARGES DIRECTLY TO GREAT LAKES. For discharges directly to the Great Lakes, the department shall set effluent limits consistent with nearshore or whole lake model results approved by the department. The department may set an interim effluent limit based on the best readily available phosphorus removal technology commonly used in Wisconsin.

Note: At the time this rule was promulgated, December 1, 2010, the best readily available phosphorus removal technology indicates a limit of 0.6 mg/L.

(5) OTHER METHODS OF LIMIT CALCULATION. The department may use other models and equations for calculating a water quality based effluent limitation if, in the best professional judgment of the department, the model provides a more accurate representation of the conditions.

(6) MULTIPLE DISCHARGES. (a) Except as provided in par. (b), whenever the department determines that more than one discharge may be affecting the water quality of the same receiving water, the resultant combined allowable load shall be divided among the various discharges using an allocation method based on site−specific considerations. Whenever the department makes a determination under this subsection, the department shall notify all permittees who may be affecting the water quality of the same receiving water of the determination and any limitations developed under this subsection. Permittees shall be given the opportunity to comment to the department on any determination made under this subsection.

(b) This subsection does not apply if there is a US EPA approved TMDL for phosphorus for the receiving water. If there is a US EPA approved TMDL, the combined allowable load shall be divided in accordance with the approved TMDL.

(7) MINIMUM EFFLUENT LIMITATIONS. If the water quality based effluent limitation calculated pursuant to the procedures in this section is less than the phosphorus criterion specified in s. NR 102.06 for the water body, the effluent limit shall be set to be equal to the criterion.

(8) NEW DISCHARGERS. If a new discharger is proposing a discharge of phosphorus to a receiving or downstream water that is a phosphorus impaired water, the new discharger may not discharge phosphorus except as follows:

(a) The new discharge of phosphorus is allocated part of the reserve capacity or part of the wasteload allocation in a US EPA approved TMDL;

(b) The new discharger can demonstrate the new discharge of phosphorus will improve water quality in the phosphorus impaired segment; or

(c) The new discharger can demonstrate that the new phosphorus load will be offset through a phosphorus trade or other means with another discharge of phosphorus to the 303 (d) listed water. The offset must be approved by the department and must be implemented prior to discharge.

Note: Section 283.84, Stats., establishes requirements for pollutant trades.
History: CR 10−035: cr. Register November 2010 No. 659, eff. 12−1−10.

NR 217.14 Expression of limitations.

(1) GENERAL. (a) Water quality based effluent limitations, when required pursuant to s. NR 217.15, shall be expressed in a discharge permit as a concentration. A mass limit shall also be included in a permit for discharges of phosphorus to any of the following receiving or downstream waters:

1. A lake or reservoir;

2. An outstanding or exceptional resource water, as designated in ss. NR 102.10 and 102.11;

3. A phosphorus impaired water; or

4. A surface water that has an approved TMDL for phosphorus.

(b) The department may establish mass limitations in permits for any other discharges of phosphorus if a concentration limit for phosphorus is included in the permit, and where an increase in phosphorus load is likely to result in adverse effects on water quality in the receiving water or downstream water.

(c) For discharges to lakes, the department shall also include an annual mass limit for phosphorus in the permit.

(d) If there is a US EPA approved TMDL for the receiving water, the department shall include a mass limit expressed in the manner consistent with the requirements of the TMDL. As provided in s. NR 217.16, this TMDL based mass limit may be included in the permit in addition to, or in lieu of the mass limit established pursuant to this section.

Note: In accordance with s. 283.84, Stats., the department may approve the use of phosphorus trading as a means for a point source to achieve compliance with the water quality based effluent limitation, including a TMDL based limitation. The trade shall be incorporated into the terms of the WPDES permit for the point source and must be approved by the department prior to implementation.

(2) CONCENTRATION BASED LIMITATIONS. Concentration effluent limitations calculated under s. NR 217.13 shall be expressed as a monthly average in permits, except for concentrations of less than or equal to 0.3 mg/L for which limitations may be expressed as six−month averages. If a concentration limitation expressed as a six−month average is included in a permit, a monthly average

concentration limitation equal to three times the water based effluent limitation calculated under s. NR 217.13 shall also be included in the permit.

(3) MASS BASED LIMITATIONS. Concentration effluent limitations calculated under s. NR 217.13 shall be converted into mass effluent limitations using the effluent flow identified in s. NR 217.13 and an appropriate conversion factor, and expressed as a monthly average in the permit, except for concentration based limitations of less than or equal to 0.3 mg/L for which mass limitations may be expressed as six−month averages.

History: CR 10−035: cr. Register November 2010 No. 659, eff. 12−1−10; **CR 15−085: am. (2), (3) Register August 2016 No. 728, eff. 9−1−16.**

NR 217.15 Determination of necessity for water quality based effluent limitations for phosphorus. **(1)** (a) *General.* The department shall include a water quality based effluent limitation for phosphorus in a permit whenever the discharge or discharges from a point source or point sources contain phosphorus at concentrations or loadings which will cause, has the reasonable potential to cause or contribute to, an exceedance of the water quality standards in s. NR 102.06 in either the receiving water or downstream waters. The department shall use the procedures in this section to make this determination.

(b) *Permittees with existing phosphorus limitations.* If a permittee has a technology based phosphorus limitation in a permit that is less restrictive than a water quality based effluent limitation for phosphorus calculated pursuant to s. NR 217.13, then the department shall include the water quality based effluent limitation in the permit.

(c) *Permittees without existing phosphorus limitations.* If a permittee discharges phosphorus, but does not have a technology based limitation for phosphorus in its permit, the department shall use the procedures in this paragraph to determine whether a discharge will cause, has the reasonable potential to cause or contribute to an exceedance of the phosphorus water quality criterion in s. NR 102.06 in the receiving or downstream waters, and whether to include a water quality based effluent limit for phosphorus in the WPDES permit.

1. Using at least 11 daily discharge concentrations of phosphorus, if the upper 99th percentile of the 30 day average discharge concentration of phosphorus exceeds the potential phosphorus limitation calculated under s. NR 217.13, then the water quality based effluent limitation for phosphorus shall be included in the WPDES permit. If the upper 99th percentile of the 30 day average discharge concentration of phosphorus is less than the potential phosphorus limitation calculated under s. NR 217.13, then a water quality based effluent limitation for phosphorus is not required in the WPDES permit. The upper 99th percentile of available discharge concentrations shall be calculated pursuant to s. NR 106.05 (5).

2. If 11 daily discharge concentrations of phosphorus are not available for a permittee, then a water quality based effluent limitation for phosphorus shall be included in the permit when the mean of available effluent concentrations is greater than one−fifth of the limit.

3. If no phosphorus effluent data is available for an existing permittee, the department may require phosphorus sampling as part of a permit application for reissuance to determine whether a water quality based effluent limit is necessary in the WPDES permit under par. (a), or the department may use effluent data information from similar point sources to make the determination under par. (a).

Note: The department will develop guidance regarding the administration of this section to ensure that permitted discharges with a reasonable potential to cause or contribute to exceedances of the applicable phosphorus water quality criterion in s. NR 102.06 are identified.

(d) *Sampling.* Prior to permit reissuance, a permittee discharging any phosphorus shall collect effluent samples of phosphorus at a frequency specified by the department in the permit application for reissuance.

(e) *New dischargers.* The department shall include a water quality based phosphorus limitation in a permit for a new discharger if the department determines the new discharger will discharge phosphorus at concentrations or loadings which may cause or contribute to exceedances of the water quality criteria in s. NR 102.06 in either the receiving water or downstream waters. To estimate the amount of phosphorus discharged by a new discharger, the department may consider projected discharge information from the permit applicant and phosphorus discharge information from similar sources.

(2) If the department determines a water quality based effluent limitation is not necessary in a permit based on the procedures in this section, the department may still require monitoring for phosphorus discharges.

History: CR 10−035: cr. Register November 2010 No. 659, eff. 12−1−10; correction in (1) (c) 1. made under s. 13.92 (4) (b) 7., Stats., Register November 2010 No. 659.

NR 217.16 Relationship of WQBELs and TMDL based limitations. **(1)** In addition to a water quality based effluent limitation calculated pursuant to s. NR 217.13, the department may derive a water quality based effluent limitation for phosphorus consistent with the wasteload allocation and assumptions of a US EPA approved TMDL that is designed to achieve water quality standards in ch. NR 102. This TMDL based limitation may be included in a permit in addition to, or in lieu of, the water quality based limitation calculated under s. NR 217.13. When deciding whether to use a TMDL based limit as a substitute for the limitation calculated under s. NR 217.13, the department shall consider the following factors:

(a) The degree to which nonpoint sources contribute phosphorus to the impaired water;

(b) Whether waters upstream of the impaired waters are meeting the phosphorus criteria; and

(c) Whether waters downstream of the impaired water are meeting the phosphorus criteria.

(2) If the phosphorus limitation based on an approved TMDL is less stringent than the water quality based effluent limitation calculated in s. NR 217.13, the department may include the TMDL based limit in lieu of the limit calculated in s. NR 217.13 if the limit calculated under s. NR 217.13 has not yet taken effect. If the department includes the TMDL based limitation for phosphorus in the WPDES permit in lieu of the limit calculated in s. NR 217.13, the TMDL based limit may remain in the permit for up to two permit terms to allow time for implementation of the TMDL, or the implementation period specified in the TMDL, whichever is less. The department may include a schedule of compliance to achieve a TMDL based limit if the department determines a schedule of compliance is necessary. If after two permit terms, the department determines the nonpoint source load allocation has not been substantially reduced, the department may impose the more stringent water quality based effluent limitation calculated under s. NR 217.13, or may include the TMDL based limitation for an additional permit term if the department determines there will be significant nonpoint source load reductions within the upcoming permit term. If the department decides to remove a TMDL based phosphorus limit from a permit and instead include a more stringent water quality based phosphorus limit in the permit calculated under s. NR 217.13, the department may provide a schedule of compliance for the more stringent limit if the department determines additional time is needed for the permittee to comply with the revised limit. Such schedules shall require compliance as soon as possible, but in no case no more than five years from the date that the permit is reissued or modified to include the revised effluent limitations.

(3) If a phosphorus water quality based limit calculated under s. NR 217.13 has already taken effect in a permit, the department may replace the limit with a less stringent TMDL based limit, if allowed pursuant to antidegradation procedures in ch. NR 207.

Note: The TMDL based limitation may be less stringent than the water quality based effluent limitation calculated under s. NR 217.13 in cases where nonpoint sources are the significant phosphorus sources responsible for the impairment.

(4) If the phosphorus limitation based on an approved TMDL is more stringent than the water quality based effluent limitation calculated under s. NR 217.13, the department shall include the more stringent TMDL based limitation in the WPDES permit.

History: CR 10−035: cr. Register November 2010 No. 659, eff. 12−1−10.

NR 217.17 Schedules of compliance. (1) GENERAL. (a) Except as provided in sub. (4), the department may provide a schedule of compliance for a water quality based phosphorus limitation in a WPDES permit, where based on available information the department finds that:

1. The schedule of compliance will lead to compliance with the water quality based effluent limitation as soon as possible; and

2. The schedule of compliance is appropriate and necessary because the permittee cannot immediately achieve compliance with the water quality based effluent limitation based on existing operation of its treatment system.

Note: Before any compliance schedule is established in a permit pursuant to this subchapter, the department must make the finding in par (a).

(b) In determining whether a compliance schedule is appropriate and determining the length of the compliance schedule, the department shall consider all of the following factors:

1. Whether there is any need for modifications to the treatment facilities, operations or measures to meet the water quality based effluent limitation, and if so, how long it will take to implement the modifications. If the department determines that a permittee only needs to make operational changes to achieve compliance with a limitation, the compliance schedule shall be as brief as possible and only allow time for operational start−up adjustments.

2. The amount of time the discharger has already had to meet the water quality based effluent limitation under prior permits.

3. The extent to which the discharger has made good faith efforts to comply with the water quality based effluent limitation and other requirements in prior permits, if applicable.

4. The extent to which the phosphorus removal process technologies have been developed and proven to be effective.

(c) In determining whether a compliance schedule is appropriate and determining the length of the compliance schedule, the department may also consider any of the following factors:

1. Whether there is a need to acquire a substantial amount of property to accommodate the needed modifications; and

2. Whether there is a need to develop an extensive financing plan and obtain financing for the proposed treatment plant upgrade.

Note: A compliance schedule may be provided for a water quality based effluent limit for phosphorus calculated under s. NR 217.13 and a TMDL based limit for phosphorus.

(2) MAXIMUM COMPLIANCE SCHEDULE PERIOD. Except for situations where filtration or a similar phosphorus removal process is required, any compliance schedule established by the department under sub. (1) may not exceed seven years from the date a permit was first modified or reissued to include a water quality based phosphorus limit calculated under s. NR 217.13. Where compliance with the water quality based phosphorus limit requires the construction of filtration or a similar phosphorus removal process, the department may grant a schedule of compliance not to exceed nine years from the date that the permit is first reissued or modified to include effluent limitations developed under provisions of this subchapter. In cases where a compliance schedule extends beyond five years, the department may revise the schedule at reissuance or pursuant to a permit modification.

(3) REQUIREMENTS, LIMITATIONS, DATES, AND REPORTING. When granting a schedule of compliance, the department shall include, as conditions of the permit, the following:

(a) Dates for achievement of interim requirements. The time between interim dates may not exceed one year.

(b) A sequence of actions or operations that may include, as appropriate, but are not limited to:

1. Development and implementation of a phosphorus discharge optimization plan for the current operation.

2. Preparation of preliminary and final designs for new or modified treatment technology.

3. Initiation and completion of construction.

(c) Interim effluent limitations representing good management and operation for similar treatment processes based on performance of other wastewater treatment facilities that will lead to compliance with the final water quality based effluent limitation.

(d) A requirement that no later than 30 days following each interim date and the final date of compliance, the permittee shall notify the department in writing of its compliance or non−compliance with the interim or final requirements, including submittal of progress reports. If any interim requirement will take more than one year to complete, the permit shall also include a projected completion date for the interim requirement.

(e) The final water quality based effluent limit for phosphorus calculated pursuant to s. NR 217.13 shall be included in the permit even if the limit is not effective during the permit term. The department may revise the final limit at permit reissuance or pursuant to a permit modification.

(f) If the permittee chooses to engage in pollutant trading as a means to achieve compliance with interim limitation or final water quality based effluent limitations, then the terms and conditions related to the trade shall be incorporated into the permit.

(4) NEW DISCHARGERS. Any new discharger may not receive a compliance schedule to achieve compliance with a phosphorus water quality based effluent limitation.

History: CR 10−035: cr. Register November 2010 No. 659, eff. 12−1−10.

NR 217.18 Watershed adaptive management option. (1) GENERAL. The adaptive management option is a strategy to achieve the phosphorus water quality criteria in s. NR 102.06 in the most economically efficient manner, and as soon as possible, taking into consideration the contributions of phosphorus from point and nonpoint sources in a watershed.

(2) APPLICATION. If requested by the permittee in the permit application for reissuance and if approved by the department, the permittee may implement a watershed adaptive management approach under this section as a means to achieve compliance with the phosphorus water quality standards in s. NR 102.06. The department may approve and authorize the adaptive management option in this section only if the permittee demonstrates and the department concurs that all of the following conditions are met:

(a) The exceedance of the applicable phosphorus criterion in s. NR 102.06 is caused by phosphorus contributions from both point sources and nonpoint sources.

(b) Either the sum of the nonpoint sources and the permitted municipal separate storm sewer system contribution of phosphorus to the receiving water is at least 50 percent of a total contribution within the watershed of the receiving water where the applicable phosphorus criterion in s. NR 102.06 is exceeded; or the permittee demonstrates that the applicable phosphorus criterion cannot be met in the watershed without the control of phosphorus from nonpoint sources.

(c) Documentation that the proposed water quality based effluent limit in the applicant's permit will require filtration or other equivalent treatment technology to achieve compliance.

(d) The permittee has submitted an adaptive management plan that identifies specific actions to be implemented that will achieve

compliance with the applicable phosphorus criterion in s. NR 102.06 through verifiable reductions of phosphorus from point and nonpoint sources in the watershed. At a minimum, the plan shall include the following:

1. An analysis of the levels of phosphorus in the permittee's effluent and significant sources of point and nonpoint phosphorus loadings in the watershed.

2. Goals and measures for determining whether the actions identified in the plan are effective in achieving compliance with the applicable phosphorus criterion in s. NR 102.06.

3. Identification of any anticipated partners that will assist in implementing the phosphorus reductions to achieve compliance with the applicable phosphorus criterion in s. NR 102.06, including the partner's level of support for the plan.

4. A demonstration that the permittee has the ability to fund and implement the plan either individually, or in conjunction with other permittees and nonpoint sources, or other partners, including municipal and county governments, in the watershed. Plans should include any contracts reflecting commitments by partners to implement applicable actions.

(3) PERMIT TERMS AND CONDITIONS. If the department determines that the permittee has provided all necessary information and the conditions in sub. (2) have been met, it may issue a permit that includes watershed adaptive management actions to achieve compliance with the applicable phosphorus criterion in s. NR 102.06 on a schedule approved by the department. At a minimum, the permit shall include the following:

(a) Monitoring in the receiving water at locations and times established in the permit to assess phosphorus loading and to document progress toward achieving the applicable phosphorus criterion in s. NR 102.06. The department shall also require permittees to monitor, record and report the mass and concentration of phosphorus in the effluent at an appropriate frequency specified by the department in the permit.

(b) Requirements to design and implement the actions identified in the permittee's approved adaptive management plan in accordance with the goals and measures identified in the plan and any compliance schedule included in the permit.

(c) Requirements to optimize the permittee's treatment system to control phosphorus.

(d) Reporting procedures and deadlines for all monitoring, assessment and data gathering requirements in the plan. Permittees shall be required to file and the department will review an annual report that identifies implementation of actions in the plan that were completed the previous year, and that documents any progress in achieving the goals and measures in the adaptive management plan. Adjustment or corrections, to the extent that they are needed, will be incorporated into the permit via permit modification procedures.

(e) Numerical effluent limitations as follows:

1. All permits issued under the adaptive management option in this section shall include water quality based effluent limitations calculated consistent with the federal water pollution control act, 33 USC 1251 to 1387, that are established according to s. NR 217.13 or a US EPA approved TMDL. These limitations shall take effect in accordance with the timeframe established in this paragraph, or pursuant to par. (g) if the adaptive management option is terminated.

2. In the first permit reissuance term following approval by the department under sub. (2), the initial interim effluent limitation shall be no higher than 0.6 mg/L of total phosphorus expressed as a six−month average. An effluent limit not to exceed 1.0 mg/L of total phosphorus expressed as a monthly average shall also be included in the permit. The department may allow the permittee a compliance schedule that may not exceed five years if necessary to meet this interim limitation.

3. If the permittee has met all of the requirements of its previous permit, but the monitoring data of the receiving water indicate that the applicable phosphorus water quality criterion in s. NR 102.06 has not been met by the time the first permit issued under the adaptive management option expires, the department may issue a subsequent adaptive management permit. The subsequent permit shall include an interim effluent limitation of no higher than 0.5 mg/L expressed as a six−month average. An effluent limit not to exceed 1.0 mg/L of total phosphorus expressed as a monthly average shall also be included in the permit. The subsequent permit shall also include an updated adaptive management plan to achieve the phosphorus water quality criterion in s. NR 102.06. The department may allow the permittee a compliance schedule that may not exceed five years if necessary to meet this interim limitation.

4. If by the expiration of the second permit issued under the adaptive management option, monitoring data collected for the receiving water indicate that the applicable phosphorus criterion under s. NR 102.06 has not been met, the department shall require compliance with a water quality based effluent limitation for phosphorus calculated under s. NR 217.13 or a US EPA approved TMDL. The department may allow the permittee a compliance schedule that may not exceed five years if necessary to meet this limitation.

(f) A statement that failure to implement any of the terms or conditions established under pars. (a) through (e) above, is a violation of the permit.

(g) Provisions that the department may terminate the adaptive management option for a permittee and require compliance with a phosphorus effluent limitation calculated under s. NR 217.13 or a US EPA approved TMDL based on any of the following reasons:

1. Failure to implement the adaptive management actions in accordance with the approved adaptive management plan and compliance schedule established in the permit.

2. New information becomes available that changes the department's determinations made under sub. (2).

3. Circumstances beyond the permittee's control have made compliance with the applicable phosphorus criterion in s. NR 102.06 pursuant to the plan's goals and measures infeasible.

4. A determination by the department that sufficient reductions have not been achieved to timely reduce the amount total phosphorus to meet the criteria in s. NR 102.06.

History: CR 10−035: cr. Register November 2010 No. 659, eff. 12−1−10.

NR 217.19 Variances for stabilization ponds and lagoon systems. (1) GENERAL. (a) An owner or operator of a permitted wastewater treatment system that consists primarily of a stabilization pond system or a lagoon system may apply for a variance to the phosphorus water quality based effluent limitations pursuant to s. 283.15 (4) (a) 1. f., Stats., using the procedures in this section.

Note: Stabilization ponds and lagoons are operated primarily by communities serving a population of 2000 or less and small industries. With currently available technology that could be used in conjunction with stabilization ponds or lagoons, it is unlikely that phosphorus water quality based effluent limits less than 1 mg/L can be consistently met. To meet phosphorus water quality based effluent limits of less than 1 mg/L, it will be necessary for owners of the systems to construct new wastewater treatment plants which could result in substantial and widespread adverse social and economic impacts.

(b) A new discharger may not receive approval for a variance under this section or pursuant to any other variance procedure.

(2) APPLICATION FOR A VARIANCE. (a) The application for a variance under this section shall be submitted with the WPDES permit application for reissuance, or within 30 days after the permittee receives written notification of the proposed phosphorus limits, if the notification occurs later. The application shall be submitted on the phosphorus lagoon and stabilization pond variance form made available from the department or on a form containing equivalent information.

Note: Owners or operators of stabilization ponds or lagoon systems may obtain the variance application form from the offices of the department of natural resources, bureau of watershed management at 101 South Webster Street, P.O. Box 7921, Madison, Wisconsin 53707. The form will provide guidance on the type of information needed to demonstrate widespread social and economic impacts.

(b) The application shall, at a minimum, include the following information:

1. Information required by s. NR 200.22, except for the information in s. NR 200.22 (1) (e) 6.

2. A statement that the permittee is seeking a variance pursuant to this section and s. 283.15 (4) (a) 1. f., Stats.

3. Information on the number and volume of lagoon or pond treatment cells, treatment processes, discharge periods, retention times, population served, influent flow, and available capacity for holding wastewater.

4. Other information requested by the department that is relevant to the review conducted under sub. (3).

Note: It is recommended that the permittee ask for calculation of potential phosphorus water quality based limits at least 12 months prior to permit expiration. This information will help the permittee complete their variance request portion of the permit application which is due 180 days prior to permit expiration.

(3) DEPARTMENT REVIEW. (a) The department shall review the submitted application for the variance and determine whether the permittee can achieve the phosphorus effluent limitations calculated pursuant to s. NR 217.13 without widespread adverse social and economic impacts. In making this determination, the department shall:

1. Compare the calculated phosphorus effluent limitations to the phosphorus effluent data submitted under sub. (2). If the permittee does not have sufficient phosphorus discharge data for its system, the department may augment the data set with effluent data from a similar lagoon or pond system in the state to make the comparison. The department may apply statistical methodologies to make its determination on the ability of the current lagoon or stabilization pond system to meet phosphorus limitations.

2. Evaluate the financial affordability analysis submitted by the permittee in response to the variance application requirement in s. NR 200.22 (1) (p).

Note: The department may use a US EPA publication titled, Interim Economic Guidance for Water Quality Standards — Workbook, EPA−823−B−95−002, March 1995, which provides information on evaluating economic and social impacts.

(b) The department's decision to approve or deny a variance under this section shall be made on or before the date of the s. 283.53 (3) (d), Stats., public notice for the proposed permit reissuance and shall be made in accordance with the following:

1. If the department determines that the permittee cannot meet the phosphorus water quality based effluent limitation without widespread adverse social and economic impacts, the department shall approve the variance. If the variance is approved, the department shall specify in the permit that the variance has been granted for phosphorus, and the requirements in sub. (4) shall also be included in the permit.

2. If the department determines that the permittee can meet the phosphorus effluent limitations without widespread adverse social and economic impacts or that effluent limitations are not necessary as determined by s. NR 217.15, the department shall deny the variance and notify the applicant of this determination in writing.

(c) If the department denies a variance under this section, a permittee may not apply again after the permit is issued for a variance from the phosphorus water quality standard based on the factor in s. 283.15 (4) (a) 1. f., Stats., for the same permit term.

(d) A permittee may seek a variance from a phosphorus limit in a reissued WPDES permit based on the factors in s. 283.15 (4) (a) 1. a. to e., Stats., and using the procedures and requirements in s. 283.15, Stats., and ch. NR 200.

Note: All variances are subject to US EPA review and approval.

(4) PERMIT TERMS IF VARIANCE IS APPROVED. If the department approves a variance to the phosphorus effluent limitations under this section, the following requirements shall be included in the reissued permit:

(a) The permit shall include a phosphorus variance effluent limitation as follows:

1. The numeric limitation shall equal the upper 99th percentile of representative daily discharge concentrations (one−day P_{99}) as calculated in s. NR 106.05 (5) (a).

2. The variance limitation shall be expressed as a daily maximum concentration.

(b) The permittee shall conduct monitoring of phosphorus during discharge periods at a frequency specified in the permit.

(c) The permittee shall, to the extent practicable, identify and minimize the non−domestic sources of phosphorus to the system and operate the treatment system to minimize exceedances of the calculated limits.

(d) The permittee shall investigate treatment technologies, process changes, pollutant source reduction steps, wastewater reuse or other techniques that may result in compliance by the permittee with the applicable phosphorus water quality standard, and shall submit reports on those investigations as required by the department.

(5) CONTINUED VARIANCES. If a permittee received approval for a variance to the phosphorus standard under this section in a reissued permit, the permittee may request a continued variance from the phosphorus standard in a subsequent reissued permit pursuant to the procedures and requirements in this section.

History: CR 10−035: cr. Register November 2010 No. 659, eff. 12−1−10; correction in (3) (a) 2. made under s. 13.92 (4) (b) 7., Stats., Register January 2011 No. 661.

CHAPTER 283

POLLUTION DISCHARGE ELIMINATION

SUBCHAPTER I
POLICY AND PURPOSE
283.001 Statement of policy and purpose.
SUBCHAPTER II
DEFINITIONS
283.01 Definitions.
SUBCHAPTER III
STANDARDS; EFFLUENT LIMITATIONS
283.11 State and federal standards.
283.13 Effluent limitations.
283.15 Variances to water quality standard.
283.16 Statewide variance for phosphorus.
283.17 Thermal effluent limitations.
283.19 Standards of performance.
283.21 Toxic and pretreatment effluent standards.
SUBCHAPTER IV
PERMITS
283.31 Water pollutant discharge elimination system; permits, terms and conditions.
283.33 Storm water discharge permits.
283.35 General permits.
283.37 Applications for permit.
283.39 Public notice.
283.41 Notice to other government agencies.
283.43 Public access to information.
283.45 Fact sheets.
283.47 Requests for information by permittee.
283.49 Public hearing.
283.51 Mining hearing.
283.53 Permit duration, modification, revocation and reissuance.
283.55 Monitoring and reporting; access to premises.
283.57 Waste treatment service charges.
283.59 Reporting of new discharges.
283.60 Waiver for certain nutrient management research projects.
283.61 Exemption for certain alcohol fuel production systems.
283.62 Exemption for certain fruit and vegetable washing facilities.
283.63 Review of permits, decisions, terms and conditions.
SUBCHAPTER V
GENERAL PROVISIONS; ENFORCEMENT
283.81 Waiver.
283.82 Land application of sewage sludge.
283.83 Continuing planning process.
283.84 Trading of water pollution credits.
283.85 Design of publicly owned treatment facilities.
283.87 Liability for water pollution.
283.89 Enforcement.
283.91 Civil and criminal remedies.
283.93 Environmental pollution.
283.95 Savings clause.

Cross−reference: See also NR 200− and chs. NR 102, 103, 104, and 105 Wis. adm. code.

SUBCHAPTER I

POLICY AND PURPOSE

283.001 Statement of policy and purpose. (1) Although in recent years intensive efforts have been made toward the abatement of pollution of the waters of this state, pollution of these waters continues. Unabated pollution of the waters of this state continues to arouse widespread public concern. It continues to endanger public health; to threaten fish and aquatic life, scenic and ecological values; and to limit the domestic, municipal, recreational, industrial, agricultural and other uses of water. It is the policy of this state to restore and maintain the chemical, physical, and biological integrity of its waters to protect public health, safeguard fish and aquatic life and scenic and ecological values, and to enhance the domestic, municipal, recreational, industrial, agricultural, and other uses of water. In order to achieve this policy, the legislature declares that:

(a) It is the goal of the state of Wisconsin to eliminate the discharge of pollutants into the waters of the state by 1985;

(b) It is also the goal of the state of Wisconsin that, wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by 1983;

(c) It is also the policy of the state of Wisconsin that the discharge of toxic pollutants in toxic amounts be prohibited.

(2) The purpose of this chapter is to grant to the department of natural resources all authority necessary to establish, administer and maintain a state pollutant discharge elimination system to effectuate the policy set forth under sub. (1) and consistent with all the requirements of the federal water pollution control act amendments of 1972, P.L. 92−500; 86 Stat. 816.

History: 1973 c. 74; 1995 a. 227 s. 846; Stats. 1995 s. 283.001.

Cross−reference: See also NR 200−, chs. NR 102, 103, 104, and 105 and s. NR 1.50, Wis. adm. code.

In the context of regulating concentrated animal feeding operation (CAFO) manure applications, the broad grant of authority under sub. (2) is not limited by s. 283.11 (2). Maple Leaf Farms, Inc. v. DNR, 2001 WI App 170, 247 Wis. 2d 96, 633 N.W.2d 720, 00−1389.

A concentrated animal feeding operation (CAFO) under s. 283.01 (12) includes not only where the animals are confined, but also the equipment that applies the animal waste to fields outside the confinement area, whether the fields are owned by the CAFO operator or others. Any overapplication of manure by the operator is a discharge under s. 283.01 (5) whether because of runoff to surface waters or percolation to groundwater. DNR has authority to regulate discharges from overapplication of manure from a CAFO regardless of whether the discharge occurs on land owned by the CAFO. Maple Leaf Farms v. DNR, 2001 WI App 170, 247 Wis. 2d 96, 633 N.W.2d 720, 00−1389.

Fish on Morphine: Protecting Wisconsin's Natural Resources through a Comprehensive Plan for Proper Disposal of Pharmaceuticals. Christenson. 2008 WLR 141.

SUBCHAPTER II

DEFINITIONS

283.01 Definitions. In this chapter:

(1) "Biological monitoring" means the determination of the effects on aquatic life, including accumulation of pollutants in tissue, in receiving waters due to the discharge of pollutants by techniques and procedures, including sampling of organisms representative of appropriate levels of the food chain appropriate to the volume and the physical, chemical and biological characteristic of the effluent and at appropriate frequencies and locations.

(2) "Construction" means any placement, assembly or installation of facilities or equipment, including contractual obligations to purchase such facilities or equipment, at the premises where such equipment will be used, including preparation work at such premises.

(3) "Department" means the department of natural resources.

(4) "Discharge" when used without qualification includes a discharge of any pollutant.

(5) "Discharge of pollutant" or "discharge of pollutants" means any addition of any pollutant to the waters of this state from any point source.

(6) "Effluent limitation" means any restriction established by the department, including schedules of compliance, on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into waters of this state.

(6m) "Environmental pollution" means the contaminating or rendering unclean or impure the air, land or waters of the state, or making the same injurious to public health, harmful for commer-

cial or recreational use, or deleterious to fish, bird, animal or plant life.

(7) "Municipality" means any city, town, village, county, county utility district, town sanitary district, town utility district, school district or metropolitan sewage district or any other public entity created pursuant to law and having authority to collect, treat or dispose of sewage, industrial wastes or other wastes.

(8) (a) "New source" means, except as provided in par. (b), any point source the construction of which commenced after the effective date of a standard of performance under 33 USC 1316 that is applicable to the point source.

(b) If the federal environmental protection agency proposes a standard of performance under 33 USC 1316 that is applicable to a point source and if the standard of performance takes effect within 120 days of the publication of that proposed standard of performance, "new source" means a point source the construction of which commenced after the date of publication of that proposed standard of performance.

(9) "Owner or operator" means any person owning or operating a point source of pollution.

(10) "Permit" means a permit for the discharge of pollutants issued by the department under this chapter.

(11) "Person" means an individual, owner, operator, corporation, limited liability company, partnership, association, municipality, interstate agency, state agency or federal agency.

(12) "Point source" means either of the following:

(a) A discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft from which pollutants may be discharged either into the waters of the state or into a publicly owned treatment works except for a conveyance that conveys only storm water. This term does not include agricultural storm water discharges and return flows from irrigated agriculture.

(b) A discernible, confined, and discrete conveyance of storm water for which a permit is required under s. 283.33 (1). This term does not include agricultural storm water discharges and return flows from irrigated agriculture.

(13) "Pollutant" means any dredged spoil, solid waste, incinerator residue, sewage, garbage, refuse, oil, sewage sludge, munitions, chemical wastes, biological materials, radioactive substance, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal and agricultural waste discharged into water.

(14) "Pollution" means man−made or man−induced alteration of the chemical, physical, biological or radiological integrity of water.

(15) "Schedule of compliance" means a schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with an effluent limitation or other limitation, prohibition or standard.

(16) "Secretary" means the secretary of natural resources or his or her designee.

(17) "Toxic pollutants" means those pollutants or combinations of pollutants, including disease−causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the department, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction or physical deformations, in such organisms or their offspring.

(18) "Treatment work" means any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial waste of a liquid nature or necessary to recycle or reuse water at the most economical cost over the estimated life of the work, including intercepting sewers, outfall sewers, sewage collection systems, cooling towers and ponds, pumping, power and other equipment, and their appurtenances; extensions, improvements, remodeling, additions, and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities; and any works, including site acquisition of the land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment. Additionally, "treatment work" means any other method or system for preventing, abating, reducing, storing, treating, separating or disposing of municipal waste, including storm water runoff, or industrial waste, including waste in combined storm water and sanitary sewer systems.

(19) "Vessel" means any watercraft or other artificial contrivance used or capable of being used as a means of transportation on water.

(20) "Waters of the state" means those portions of Lake Michigan and Lake Superior within the boundaries of Wisconsin, all lakes, bays, rivers, streams, springs, ponds, wells, impounding reservoirs, marshes, water courses, drainage systems and other surface water or groundwater, natural or artificial, public or private within the state or under its jurisdiction, except those waters which are entirely confined and retained completely upon the property of a person.

History: 1973 c. 74; 1979 c. 221; 1983 a. 189; 1987 a. 403; 1993 a. 16, 112, 482; 1995 a. 227 s. 847; Stats. 1995 s. 283.01; 2015 a. 307; 2017 a. 59.

A concentrated animal feeding operation (CAFO) under sub. (12) includes not only where the animals are confined, but also the equipment that applies the animal waste to fields outside the confinement area, whether the fields are owned by the CAFO operator or others. Any overapplication of manure by the operator is a discharge under sub. (5) whether because of runoff to surface waters or percolation to groundwater. Maple Leaf Farms v. DNR, 2001 WI App 170, 247 Wis. 2d 96, 633 N.W.2d 720, 00−1389.

SUBCHAPTER III

STANDARDS; EFFLUENT LIMITATIONS

283.11 State and federal standards.

(1) DEPARTMENT TO ESTABLISH STANDARDS. The department shall promulgate by rule effluent limitations, standards of performance for new sources, toxic effluent standards or prohibitions and pretreatment standards for any category or class of point sources established by the U.S. environmental protection agency and for which that agency has promulgated any effluent limitations, toxic effluent standards or prohibitions or pretreatment standards for any pollutant.

(2) COMPLIANCE WITH FEDERAL STANDARDS. (a) Except for rules concerning storm water discharges for which permits are issued under s. 283.33, all rules promulgated by the department under this chapter as they relate to point source discharges, effluent limitations, municipal monitoring requirements, standards of performance for new sources, toxic effluent standards or prohibitions and pretreatment standards shall comply with and not exceed the requirements of the federal water pollution control act, 33 USC 1251 to 1387, and regulations adopted under that act.

(b) Rules concerning storm water discharges may be no more stringent than the requirements under the federal water pollution control act, 33 USC 1251 to 1387, and regulations adopted under that act.

(3) STANDARDS FOR NITROGEN, PHOSPHORUS AND DISINFECTION IN THE ABSENCE OF FEDERAL STANDARDS. (a) *Standards for nitrogen and disinfection.* Notwithstanding sub. (1) or (2), the department may promulgate by rule effluent limitations representing the best available demonstrated control technology, processes, operating methods or other alternatives concerning the discharge of nitrogen compounds and concerning the disinfection of sanitary wastewaters if the U.S. environmental protection agency has not promulgated an effluent limitation, effluent standard or prohibition concerning this type of discharge or disinfection.

(am) *Standards for phosphorus.* Notwithstanding sub. (1) or (2), the department shall promulgate by rule effluent limitations representing the best available demonstrated control technology, processes, operating methods or other alternatives concerning the

discharge of phosphorus if the U.S. environmental protection agency has not promulgated an effluent limitation, effluent standard or prohibition concerning this type of discharge.

(b) *Exemptions.* The department may exempt by rule specified types of discharges from the effluent limitations concerning the discharge of phosphorus or nitrogen compounds established under par. (a) or (am) based upon:

1. The amount of phosphorus or nitrogen discharged;

2. The impact of nonpoint sources on the waters affected by the discharge;

3. The additional cost of treatment per unit of phosphorus or nitrogen removed;

4. The type of waters affected by the discharge; or

5. The impact of the discharge on the maintenance or achievement of water quality standards.

(c) *Advisory committee.* In promulgating rules under pars. (a), (am) and (b), the department shall establish an advisory committee under s. 227.13 composed of representatives of municipal dischargers, industrial point sources, farm groups, environmental groups, nonpoint sources and the public to assist in drafting the rules, evaluating technical studies and advising the department.

(d) *Impact of subsequent federal standards.* If the U.S. environmental protection agency promulgates an effluent limitation, effluent standard or prohibition concerning a type of discharge or disinfection specified under par. (a) or (am) for a category or class of point sources which is applicable to a permit holder, the department may modify, and at the request of the permit holder shall modify, the effluent limitation specified in the permit to conform with the effluent limitation, effluent standard or prohibition promulgated by the U.S. environmental protection agency.

(e) *Compliance dates.* A publicly owned treatment works shall comply with effluent limitations established under par. (a) by July 1, 1983. Any point source other than a publicly owned treatment works shall comply with effluent limitations established under par. (a) by July 1, 1984.

(4) STANDARDS FOR TOXIC POLLUTANTS IN THE ABSENCE OF FEDERAL STANDARDS. (a) *Authorization.* Notwithstanding sub. (1) or (2), the department may promulgate by rule, under s. 283.21, a toxic effluent standard or prohibition applicable to a category or class of point sources for the discharge of an identified toxic pollutant, if the U.S. environmental protection agency has not done either of the following for that identified toxic pollutant:

1. Promulgated, under 33 USC 1311 (b) (2), an effluent limitation applicable to the specified category or class of point sources.

2. Promulgated, under 33 USC 1317, an effluent standard or prohibition applicable to the specified category or class of point sources.

(b) *Identification.* An identified toxic pollutant is:

1. Any toxic pollutant or combination of pollutants on the list prepared under s. 283.21 (1) (a).

2. Any toxic pollutant or combination of pollutants on a list prepared under 33 USC 1317.

3. Any other substance which the department has proposed to be added to the list of toxic pollutants under s. 283.21 (1) (a).

(c) *Concurrent rule making.* A toxic effluent standard or a prohibition for a substance identified under par. (b) 3. may not be promulgated before the list of toxic pollutants has been revised under s. 283.21 (1) (a) to include that substance. The revision under s. 283.21 (1) (a) and the toxic effluent standard or prohibition under s. 283.21 (1) (b) may be promulgated concurrently.

(d) *Additional procedures.* As part of the rule−making process for a rule to which this subsection applies, the department shall do all of the following:

1. Specify in the proposed rule whether it applies to all waters of the state or to designated portions of the waters of the state.

2. Consider whether there are available removal technologies which provide the capability of achieving compliance at or for representative point sources likely to be affected by the rule and whether there are alternative control strategies which provide the capability of achieving compliance.

3. If the department finds that the level of pollutant control resulting from the application of available removal technologies or alternative control strategies is inadequate to protect public health, safety or welfare or the environment, consider any evidence presented on the relationship of the economic and social costs of the proposed standard or prohibition, including any social or economic dislocation in representative communities likely to be affected by the rule, to the social and economic benefits likely to be obtained, including attainment of the objectives of this chapter.

(e) *Impact of subsequent federal standards.* 1. If the U.S. environmental protection agency, under 33 USC 1317, promulgates a toxic effluent standard or prohibition for a toxic pollutant after the department promulgates a toxic effluent standard or prohibition, the department may modify its standard or prohibition to conform to the federal standard or prohibition. At the request of a permittee to which the standard or prohibition promulgated by the department applies under the terms of a permit, the department shall modify the permit to conform to the federal standard or prohibition.

2. If the U.S. environmental protection agency, under 33 USC 1311 (b) (2), promulgates an effluent limitation applicable to the discharge of a toxic pollutant from a point source after the department promulgates a toxic effluent standard or prohibition, the department may modify its standard or prohibition to conform to the federal toxic effluent limitation. A permittee to which the standard or prohibition promulgated by the department applies under the terms of a permit may request that the department modify the permit to conform to the federal effluent limitation. The department shall use the procedures specified under s. 283.53 (2) (b) to (f) to determine whether to grant the request. The department shall grant the request unless it finds that the resulting limitation, as applied to the permittee and to any other permittees subject to the department's standard or prohibition which discharge into the receiving water, would be inadequate to protect the public health, safety or welfare or the environment in the receiving water or any other waters directly affected by the discharge. A decision by the department not to grant the request is reviewable under s. 283.63.

(5) NONAPPLICABILITY. This section does not apply to any water quality based effluent limitation established under s. 283.13 (5).

History: 1973 c. 74; 1979 c. 221 ss. 650c, 650e; 1985 a. 29; 1985 a. 182 s. 57; 1987 a. 27; 1991 a. 39; 1993 a. 16; 1995 a. 227 s. 859; Stats. 1995 s. 283.11; 2013 a. 173 s. 33.

Cross−reference: See also NR 200−, Wis. adm. code.

Sub. (2) does not unlawfully delegate legislative power. Niagara of Wisconsin Paper Corp. v. DNR, 84 Wis. 2d 32, 268 N.W.2d 153 (1978).

The DNR violated sub. (2) by adopting chlorine limitations in pollution discharge elimination system permits that were more stringent than federal limitations. Wisconsin Electric Power Co. v. DNR, 93 Wis. 2d 222, 287 N.W.2d 113 (1980).

In the context of regulating concentrated animal feeding operation manure applications, the broad grant of authority under s. 283.001 (2) is not limited by sub. (2). Maple Leaf Farms v. DNR, 2001 WI App 170, 247 Wis. 2d 96, 633 N.W.2d 720, 00−1389.

283.13 Effluent limitations.

(1) CATEGORIES AND CLASSES OF POINT SOURCES. The department shall promulgate a list of categories and classes of point sources which is at least as comprehensive as the list appearing in section 1316 (b) (1) (A) of the federal water pollution control act, as amended, 33 USC 1251 to 1376.

(2) SOURCES OTHER THAN PUBLIC TREATMENT WORKS. The discharge from any point source, other than a publicly owned treatment works or a source of storm water permitted under s. 283.33, shall comply with the following requirements:

(a) *Best practicable technology.* The application of the best practicable control technology currently available.

(b) *Requirements for certain pollutants.* For pollutants identified under pars. (c), (d) and (f):

1. a. The application of the best available technology economically achievable for a point source or a category or class of

point sources which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants as stated in the federal water pollution control act, as amended, 33 USC 1251 to 1376; or

b. The application of the best available technology which will result in the elimination of the discharge of all pollutants if the department finds on the basis of information available to it that the elimination is technologically and economically achievable for a category or class of point sources.

2. The application of any applicable pretreatment requirements or any other requirements under s. 283.21 to any point source discharging pollutants into a publicly owned treatment works.

(c) *Certain toxic pollutants; compliance by July 1, 1984.* Compliance with the effluent limitations under par. (b) with respect to all toxic pollutants referred to in table 1 of committee print number 95−30 of the committee on public works and transportation of the U.S. house of representatives by no later than July 1, 1984.

(d) *Other toxic pollutants; compliance within 3 years after limitations are established.* Compliance with effluent limitations under par. (b) with respect to all toxic pollutants included on the list promulgated under s. 283.21 (1) (a) but which are not included in the table referred to under par. (c) not later than 3 years after the date the effluent limitations are established.

(e) *Conventional pollutants; compliance by July 1, 1984.* The application of the best conventional pollutant control technology for pollutants identified under section 1314 (a) (4) of the federal water pollution control act, as amended, 33 USC 1251 to 1376 by no later than July 1, 1984.

(f) *Other pollutants.* Compliance with effluent limitations under par. (b) with respect to all pollutants not included under pars. (c) to (e) not later than 3 years after the date effluent limitations are established, but in no case before July 1, 1984 or after July 1, 1987.

(g) *Certain innovative processes; compliance before July 1, 1987.* 1. For a facility which proposes to comply with the requirements of par. (b) by utilizing an innovative production process, innovative control technique or innovative system by a date established by the department after consulting with U.S. environmental protection agency but not later than July 1, 1987.

2. An innovative production process is a process to replace existing production capacity with a process which will result in an effluent reduction significantly greater than that required by the applicable effluent limitation and which moves toward the goal of eliminating the discharge of all pollutants.

3. An innovative control technique is a technique which has a substantial likelihood of enabling the facility to achieve a significantly greater effluent reduction than that required by the applicable effluent limitation and which moves toward the national goal of eliminating the discharge of all pollutants as stated under the federal water pollution control act, as amended, 33 USC 1251 to 1376.

4. An innovative system is a system which has the potential for significantly lower costs than the systems which the department has determined to be economically achievable if the department determines that the system has the potential for industrywide application.

(3) MODIFICATIONS. (a) *Maximum use of technology and reasonable progress.* The department may modify the requirements of sub. (2) (f) in accordance with s. 283.63 for any point source for which a permit application is filed after July 1, 1977 if the owner or operator of the point source satisfactorily demonstrates to the department that the modified requirements will represent the maximum use of technology within the economic capability of the owner or operator and will result in reasonable further progress toward the national goal of elimination of the discharge of pollutants as stated in the federal water pollution control act, as amended, 33 USC 1251 to 1376.

(b) *Minimum compliance.* 1. The department with the concurrence of the U.S. environmental protection agency shall modify the requirements of sub. (2) (f) with respect to the discharge of any pollutant other than heat from any point source upon a showing by the owner or operator of the point source satisfactory to the department in a proceeding under s. 283.63 that:

a. The modified requirements will result in compliance with the requirements of sub. (2) (a) or (5), whichever is applicable;

b. The modified requirements will not result in any additional requirements for any other point or nonpoint source; and

c. The modification will not interfere with the attainment or maintenance of water quality which assures protection of public water supplies, which assures the protection and propagation of a balanced population of shellfish, fish, and wildlife and which allows recreational activities in and on the water and that the modification will not result in the discharge of pollutants in quantities which reasonably may be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistency in the environment, acute toxicity, chronic toxicity including carcinogenicity, mutagenicity or teratogenicity or synergistic propensities.

2. If an owner or operator of a point source applies for a modification under this paragraph with respect to the discharge of any pollutant, that owner or operator is eligible to apply for modification under this subsection with respect to that pollutant only during the same time period as the owner or operator is eligible to apply for a modification under this paragraph.

(c) *Applications for modification.* 1. Any application filed under this subsection for a modification of the requirements of sub. (2) (b) as it applies to pollutants identified in sub. (2) (f) shall be filed not later than 270 days after the date of promulgation of an applicable effluent limitation by the department under this chapter.

2. Any application for a modification filed under this subsection does not operate to stay any requirement under this chapter, unless in the judgment of the department the stay or the modification sought will not result in the discharge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistency in the environment, acute toxicity, chronic toxicity, including carcinogenicity, mutagenicity or teratogenicity, or synergistic propensities and there is a substantial likelihood that the applicant will succeed on the merits of the application. If an application is filed under this subsection, the department may condition any stay granted under this subdivision upon the filing of a bond or other appropriate security to assure timely compliance with the requirements from which a modification is sought.

(d) *No modification for toxic pollutants.* Notwithstanding pars. (a) and (b), the department may not modify any requirement of this subsection or sub. (2) applicable to any toxic pollutant which is on the list promulgated under s. 283.21 (1).

(4) EFFLUENT LIMITATIONS FOR PUBLIC TREATMENT WORKS. Discharges from publicly owned treatment works, except storm water discharges for which a permit is issued under s. 283.33, shall comply with the following requirements:

(a) *Secondary treatment for certain works.* Secondary treatment by no later than July 1, 1977, for all publicly owned treatment works in existence on that date or approved prior to June 30, 1974, and for which construction is completed within 4 years of approval;

(b) *Best practicable waste treatment technology.* The application of the best practicable waste treatment technology over the life of the works consistent with the purposes of this chapter by no later than July 1, 1983.

(c) *Other limitations for combined sewer overflows.* In lieu of pars. (a) and (b), effluent limitations required by subs. (2) (a) and (5) for combined sewer systems tributary to treatment works owned and operated by any metropolitan sewerage district created under ss. 200.21 to 200.65.

(5) MORE STRINGENT LIMITATIONS. The department shall establish more stringent effluent limitations than required under subs. (2) and (4) and shall require compliance with such water quality based effluent limitations in any permit issued, reissued or modified if these limitations are necessary to meet applicable water quality standards, treatment standards, schedules of compliance or any other state or federal law, rule or regulation. The department shall require compliance with these water quality based effluent limitations by no later than July 1, 1977, or by a later date as specified in the water quality standard, treatment standard, schedule of compliance or other state or federal law, rule or regulation.

(6) MODIFICATION OF TIME LIMITS. (a) Except as provided under par. (d), the department may modify the time limitations specified under subs. (4) and (5) for any publicly owned treatment works to increase the period of time for compliance with effluent limitations.

(b) The modification of the time limitations mentioned under par. (a) may be granted if the department determines that the construction of treatment works necessary to achieve compliance with effluent limitations cannot be completed within the prescribed time period due to events over which the permittee has little or no control unless the modification is prohibited under par. (d).

(c) The modification of the time limitations mentioned under par. (a) shall be granted if the department determines that the construction of treatment works necessary to achieve compliance with effluent limitations cannot be completed within the prescribed time period due to the unavailability of federal or state funds unless the modification is prohibited under the federal water pollution control act, as amended, 33 USC 1251 to 1376.

(d) Except as provided under par. (c), no modification of the time limitations under par. (a) may extend beyond December 31, 1985.

(7) ADAPTIVE MANAGEMENT. (a) In this subsection, "adaptive management option" means an approach to achieving compliance with a water quality standard adopted under s. 281.15 or a total maximum daily load under 33 USC 1313 (d) (1) (C) approved by the federal environmental protection agency under which a permittee implements a plan to achieve the water quality standard or total maximum daily load through verifiable reductions in the amount of water pollution from point sources and nonpoint sources, as defined in s. 281.16 (1) (e), in a basin or other area specified by the department and uses monitoring data, modeling, and other appropriate information to adjust the plan if needed to achieve compliance.

(b) The department may authorize a permittee to use an adaptive management option to achieve compliance with the water quality standard for phosphorus or an approved total maximum daily load for total suspended solids, and if it does so, the department may specify a date under sub. (5) that provides 4 permit terms for the permittee to comply with its water quality based effluent limitation for phosphorus or total suspended solids.

History: 1973 c. 74; 1975 c. 206; 1979 c. 34, 221; 1981 c. 282; 1981 c. 314 s. 146; 1981 c. 393; 1987 a. 27; 1989 a. 56; 1993 a. 16; 1995 a. 227 s. 860; Stats. 1995 s. 283.13; 1997 a. 35; 1999 a. 150 s. 672; 2013 a. 378.

Cross−reference: See also NR 200− and ch. NR 106, Wis. adm. code.

283.15 Variances to water quality standard.

(1) DEFINITION. In this section, "variance" means a variance to a water quality standard adopted under s. 281.15.

(2) REQUEST FOR VARIANCE. (a) If a permit contains a variance or if a permittee anticipates that a reissued permit will include a water quality based effluent limitation under s. 283.13 (5), when the permittee applies for reissuance of the permit the permittee may apply to the department for renewal of the variance or for a variance from the water quality standard that would be used to derive the water quality based effluent limitation.

(am) 1. Within 60 days after the department reissues or modifies a permit to include a water quality based effluent limitation under s. 283.13 (5), the permittee may apply to the department for a variance from the water quality standard used to derive the limitation.

2. After an application for a variance is submitted to the department under subd. 1., and until the last day for seeking review of the secretary's final decision on the application or a later date fixed by order of the reviewing court, the water quality based effluent limitation under s. 283.13 (5) and the corresponding compliance schedule are not effective. All other provisions of the permit continue in effect except those for which a petition for review has been submitted under s. 283.63. For those provisions for which an application for variance has been submitted under this section, the corresponding or similar provisions of the prior permit continue in effect until the last day for seeking review of the department's final decision or a later date fixed by order of the reviewing court.

(b) The department shall specify by rule the information to be included in an application under this subsection.

(c) The department may request additional information from the permittee within 30 days after receiving an application under par. (am) 1. The permittee shall provide the additional information within 30 days after receipt of the department's request. An application is not complete until the additional information is provided to the department.

(d) If the permittee does not provide information as required under par. (b) or (c), the department shall deny the application.

(3) TENTATIVE DECISION. (a) The secretary shall issue a tentative decision on an application for a variance under sub. (2) (a) in the notice under s. 283.39 for the reissuance of the permit.

(b) The secretary shall issue a tentative decision on an application for a variance under sub. (2) (am) 1. within 120 days after receipt of a completed application. The department shall circulate the tentative decision to the permittee and to the parties in s. 283.53 (2) (c). If the tentative decision is to grant a variance based upon one or more of the conditions specified in sub. (4) (a) 1. a. to e., the department shall include in the notice under this paragraph a statement on the effect of the variance, if granted, on the designated use of the water body during the term of the underlying permit. The department shall provide a 30−day period for written comments on the tentative decision.

(4) FINAL DECISION ON VARIANCE. (a) 1. The secretary shall approve all or part of a requested variance, or modify and approve a requested variance if the permittee demonstrates, by the greater weight of the credible evidence, that attaining the water quality standard is not feasible because:

a. Naturally occurring pollutant concentrations prevent the attainment of the standard;

b. Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the standard, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating water conservation requirements;

c. Human caused conditions or sources of pollution prevent the attainment of the standard and cannot be remedied or would cause more environmental damage to correct than to leave in place;

d. Dams, diversions or other types of hydrologic modifications preclude the attainment of the standard, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the standard;

e. Physical conditions related to the natural features of the water body, such as the lack of proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or

f. The standard, as applied to the permittee, will cause substantial and widespread adverse social and economic impacts in the area where the permittee is located.

2. The secretary shall deny a requested variance if the permittee fails to make the demonstration required under subd. 1.

(d) The decision under this subsection is reviewable under subch. III of ch. 227, except that ss. 227.40 to 227.46, 227.485 to 227.51 and 227.60 do not apply to the decision under this subsection.

(4m) VARIANCES FOR FISH FARMS. In deciding whether to grant an application for a variance for a fish farm, the secretary shall rely on the same guidance documents and other information that would be used by the federal environmental protection agency to review and approve or disapprove the variance as required under 40 CFR 131.14.

(5) CONDITIONS ON VARIANCES. (a) A variance applies only to the permittee requesting the variance and to the pollutant specified in the variance. A variance does not affect or require the department to modify the corresponding water quality standard adopted under s. 281.15.

(b) A variance applies for the term established by the secretary, but not to exceed 5 years. The term of the initial variance and any renewals thereof may not exceed the time that the secretary determines is necessary to achieve the water quality based effluent limitation. Initial and interim effluent limitations established under par. (c) 1. apply, as appropriate, for the term of the underlying permit as reissued or modified to implement the decision under sub. (4) (a) 1. or as extended by operation of s. 227.51 (2). Notwithstanding sub. (4) (d), s. 227.51 (2) shall apply for the purposes of continuing the provisions of a permit pending the reissuance of a permit.

(c) The department shall require all of the following in a permit reissued or modified to implement a variance:

1. Compliance with an initial effluent limitation that at the time the variance is approved represents the level currently achievable by the permittee and that is no less stringent than the effluent limitation achieved under the permit before reissuance. At the time a variance is approved a compliance schedule and an interim effluent limitation that is achievable by the permittee during the term of the variance may be specified. The initial and the interim effluent limitations may not be less stringent than a categorical effluent limitation that applies to the permittee under s. 283.13 (2) or (4) or 283.19 or a toxic effluent standard that applies to the permittee under s. 283.21.

2. Investigation of treatment technologies, process changes, pollution prevention, wastewater reuse or other techniques that may result in compliance by the permittee with the water quality standard adopted under s. 281.15, and submission of reports on the investigations at such times as required by the department. The secretary shall modify or waive the requirements specified in this subdivision if the secretary determines, based upon comments received on the tentative decision under sub. (3), that the requirements of this subdivision are:

a. Reasonably beyond the technical or financial capability of the permittee; or

b. Unreasonable in light of the conditions specified in sub. (4) (a) 1. a. to e.

(d) The department may impose conditions in the permit as necessary to administer the variance including, but not limited to, additional monitoring requirements.

(6) RENEWAL. A variance may not be renewed if the permittee did not submit the reports required under sub. (5) (c) 2. or substantially comply with all other conditions of the variance.

(7) DELEGATION OF SECRETARY'S AUTHORITY. The secretary may designate an officer or employee of the department to make any decision that the secretary is required to make under this section.

(8) NO RIGHT TO A HEARING. Notwithstanding s. 227.42, there is no right to a hearing under this section.

(9) RELATION TO PERMIT REVIEW. If the secretary approves part or all of a variance or modifies and approves the variance under this section and the department issues a modified water quality based effluent limitation under s. 283.63 for the same substance, the permittee shall comply with the least stringent of the 2 effluent limitations.

(10) APPLICABILITY. (a) Subsections (2) to (5) do not apply if the water quality based effluent limitation results from the decision of the department under s. 283.63 to make the water quality based effluent limitation less stringent than the effluent limitation in the permit as issued, reissued or modified.

(b) Subsections (2) to (5) apply if the water quality based effluent limitation results from the decision of the department under s. 283.63 to make the water quality based effluent limitation more stringent than the effluent limitation in the permit as issued, reissued or modified.

(c) This section does not apply to the issuance, reissuance or modification of a permit to incorporate a toxic effluent standard or prohibition promulgated by rule under s. 283.11 (4) or 283.21.

(11) WATER QUALITY STANDARDS REVIEW. As part of the review of water quality standards under s. 281.15 (6), as required by 33 USC 1313 (c) (1), the department shall review the variances to water quality standards approved under s. 283.15 or 283.16. The department shall receive information regarding these variances at the public hearing held under s. 281.15 (6). If the department determines that a water quality standard to which a variance applies is attainable, the department shall modify the standard or variance accordingly at the time the permit containing the variance is reissued, modified, or revoked and reissued.

(12) FEDERAL REQUIREMENTS. Notwithstanding any of the provisions of this section, the department shall comply with the provisions of 40 CFR 131.14 when approving and implementing a variance under this section.

History: 1973 c. 74; 1979 c. 221 s. 2202 (39); 1985 a. 29; 1987 a. 27, 60; 1995 a. 227 s. 861; Stats. 1995 s. 283.15; 2011 a. 32; 2015 a. 205; 2017 a. 21.

Cross−reference: See also ch. NR 212 and s. NR 200.01, Wis. adm. code.

283.16 Statewide variance for phosphorus.

(1) DEFINITIONS. In this section:

(a) "Basin" means the drainage area identified by an 8−digit hydrologic unit code, as determined by the U.S. Geological Survey.

(b) "Category" means a class or category of point sources specified by the department under s. 283.13 (1) or publicly owned treatment works.

(d) "Existing source" means a point source that was covered by a permit on December 1, 2010.

(e) "Major facility upgrade" means the addition of new treatment equipment and a new treatment process.

(g) "Nonpoint source" has the meaning given in s. 281.16 (1) (e).

(h) "Target value" means the following:

1. For a point source in a watershed for which a federally approved total maximum daily load under 33 USC 1313 (d) (1) (C) is in effect on April 25, 2014, the number of pounds of phosphorus that would be discharged from the point source during a year if the point source complied with its effluent limitation based on the total maximum daily load in effect on April 25, 2014.

2. For a point source in a watershed for which no federally approved total maximum daily load under 33 USC 1313 (d) (1) (C) is in effect on April 25, 2014, the number of pounds of phosphorus that would be discharged from the point source during a year if the average concentration of phosphorus in the effluent discharged by the point source during the year was 0.2 milligrams per liter.

(i) "Water quality based effluent limitation" means an effluent limitation under s. 283.13 (5), including an effluent limitation based on a total maximum daily load under 33 USC 1313 (d) (1) (C) approved by the federal environmental protection agency.

(2) INITIAL DETERMINATION CONCERNING THE WATER QUALITY STANDARD FOR PHOSPHORUS. (a) The department of administration, in consultation with the department of natural resources, shall determine whether attaining the water quality standard for phosphorus, adopted under s. 281.15, through compliance with water quality based effluent limitations by point sources that cannot achieve compliance without major facility upgrades is not feasible because it would cause substantial and widespread adverse social and economic impacts on a statewide basis. The department of administration may make separate determinations under this paragraph for statewide categories of point sources.

(b) The department of administration shall include all of the following in its determination under par. (a), based on water quality based effluent limitations for phosphorus determined by the department of natural resources:

1. A calculation of the statewide cost of compliance with water quality based effluent limitations for phosphorus by point sources that cannot achieve compliance without major facility upgrades.

2. A calculation of the statewide per household cost for water pollution control by publicly owned treatment works that cannot achieve compliance with water quality based effluent limitations for phosphorus without major facility upgrades, including the projected costs of compliance with those water quality based effluent limitations, and a calculation of the percentage of median household income the per household cost represents.

4. A determination of whether the cost of compliance with water quality based effluent limitations for phosphorus by point sources that cannot achieve compliance without major facility upgrades would cause substantial adverse social and economic impacts on a statewide basis.

5. A determination of whether the cost of compliance with water quality based effluent limitations for phosphorus by point sources that cannot achieve compliance without major facility upgrades would cause widespread adverse social and economic impacts on a statewide basis.

(c) The department of administration shall make a preliminary determination under par. (a) no later than the 240th day after April 25, 2014. The department of administration shall provide public notice, through an electronic notification system that it establishes or selects, of its preliminary determination and shall provide the opportunity for public comment on the preliminary determination for at least 30 days following the public notice.

(d) The department of administration shall consider any public comments in making its final determination under par. (a) and shall make the final determination no later than the 30th day after the end of the public comment period.

(e) The department of administration shall send a notice that describes its final determination under par. (a) to the legislative reference bureau for publication in the administrative register.

(em) If the department of administration determines under par. (a) that attaining the water quality standard for phosphorus through compliance with water quality based effluent limitations by point sources that cannot achieve compliance without major facility upgrades is not feasible, the department of natural resources shall seek approval under 40 CFR Part 131 from the federal environmental protection agency for the variance under this section.

(f) If the department of administration determines under par. (a) that attaining the water quality standard for phosphorus through compliance with water quality based effluent limitations by point sources that cannot achieve compliance without major facility upgrades is not feasible, the determination remains in effect until the department of administration finds under sub. (3) (c) that the determination is no longer accurate.

(2m) WATER QUALITY STANDARDS REVIEW. As part of the review of water quality standards under s. 281.15 (6), as required by 33 USC 1313 (c) (1), if the variance under this section is in effect, the department shall determine whether formal review under sub. (3) should be undertaken, considering any comments it receives on the variance.

(3) REVIEW OF FINDINGS AND REQUIREMENTS OF VARIANCE. (a) Within 10 years after the federal environmental protection agency approves, under sub. (2) (em), the variance under this section, if a determination under sub. (2) (a) that attaining the water quality standard for phosphorus through compliance with water quality based effluent limitations by point sources that cannot achieve compliance without major facility upgrades is not feasible is in effect, or upon a determination under sub. (2m) that review under this subsection should be undertaken, the department of administration, in consultation with the department of natural resources, shall prepare a report, no later than September 1, to evaluate whether the determination under sub. (2) (a) remains accurate. The department of administration shall consult with permittees that would be subject to water quality based effluent limitations for phosphorus and other interested parties in preparing the report.

(b) The department of natural resources shall provide all of the following to the department of administration for the report under par. (a):

1. A determination of whether technology is reasonably available for point sources to comply with effluent limitations for phosphorus that are more stringent than those in sub. (6) (a).

2. A determination of whether technology is reasonably available for any category of point sources to comply with effluent limitations for phosphorus that are more stringent than those in sub. (6) (a).

3. A determination of whether any technology that is reasonably available for compliance with effluent limitations for phosphorus that are more stringent than those in sub. (6) (a) is cost effective.

4. The results of the most recent review under sub. (3m) (a).

(c) Based on its report under par. (a), the department of administration, in consultation with the department of natural resources, shall decide whether the determination that attaining the water quality standard for phosphorus through compliance with water quality based effluent limitations by point sources that cannot achieve compliance without major facility upgrades is not feasible remains accurate.

(cm) If the department of administration decides under par. (c) that the determination remains accurate, the department of natural resources shall decide whether it is appropriate to apply more stringent effluent limitations than those in sub. (6) (a) to all point sources or to any category of point sources, based on the availability and cost effectiveness of technology for compliance and, if so, specify those more stringent effluent limitations based on the report under par. (a).

(d) The department of administration shall provide public notice of its preliminary decisions under par. (c) no later than the 60th day after preparing the report under par. (a) and shall provide the opportunity for public comment on the decisions for at least 30 days following the public notice.

(e) The department of administration shall consider any public comments in making its final decisions under par. (c) and shall make the final decisions no later than the 30th day after the end of the public comment period.

(f) The department of administration shall send a notice that describes its final decisions under par. (c) to the legislative reference bureau for publication in the administrative register.

(g) If the department of administration decides under par. (c) that the determination described in that paragraph remains accurate, the department of natural resources shall seek aproval from the federal environmental protection agency under 40 CFR 131.21 for renewal of the variance under this section.

(3m) HIGHEST ATTAINABLE CONDITION REVIEW. (a) Every 5 years after the variance under this section is approved by the federal environmental protection agency, the department shall, as part of the review required by 40 CFR 131.14 (b) (1) (v), review the interim effluent limitations under sub. (6) (a), or any other effluent limitations that are in effect as a result of a previous review under this subsection or sub. (3), and determine whether they are consistent with the highest attainable condition for the point sources and categories of point sources that are eligible for the variance under this section. In conducting this review, the department shall use all existing and readily available information. The department shall hold a public hearing in order to receive additional information and public comment. The department shall publish notice of the hearing on the department's Internet site at least 45 days before the hearing date.

(b) The department shall submit the results of a review under this subsection to the federal environmental protection agency within 30 days after determining that the review under par. (a) has been completed.

(c) If the department does not conduct a review within the time specified under par. (a), the variance under this section will cease to be available until the department completes the review and submits the results of the review to the federal environmental protection agency.

(d) If the department does not submit the results of a review to the federal environmental protection agency within the time specified under par. (b), the variance under this section will cease to be available until the department submits the results of the review to the federal environmental protection agency.

(e) In addition to the review under par. (a), at the time the variance under this section is initially approved for a point source, and at the time the source's permit is reissued, modified, or revoked and reissued, the department may review the interim effluent limitations under sub. (6) (a), or any other effluent limitations that are in effect as a result of a previous review under this subsection or sub. (3), and determine whether they are consistent with the highest attainable condition for the point source.

(4) AVAILABILITY OF VARIANCE. (a) When a determination under sub. (2) (a) that attaining the water quality standard for phosphorus through compliance with water quality based effluent limitations by point sources that cannot achieve compliance without major facility upgrades is not feasible and approval of the variance under this section by the federal environmental protection agency are in effect, a permittee is eligible for a variance to the water quality standard for phosphorus for an existing source if all of the following apply:

1. The determination applies to the existing source.

2. Subject to par. (am) 1., the permittee certifies that the existing source cannot achieve compliance with the water quality based effluent limitation for phosphorus without a major facility upgrade.

3. The permittee agrees to comply with the requirements under sub. (6).

(am) 1. The department shall approve an application for a variance if the requirements in pars. (a) and (b) are complied with, unless the department determines that the certification under par. (a) 2. is substantially inaccurate.

2. The department shall act on an application for a variance under this section no later than the 30th day after the day on which the department receives the application for the variance.

3. If the department does not act on the application for a variance by the deadline under subd. 2., the application is approved.

(b) A permittee may apply for the variance under this section in any of the following ways:

1. By requesting the variance in the application for reissuance of the permit.

2. By requesting the variance within 60 days after the department reissues or modifies the permit to include a water quality based effluent limitation for phosphorus.

3. If the department issued a permit to the permittee before April 25, 2014, that includes a water quality based effluent limitation for phosphorus, by requesting a modification of the permit.

4. If the department issued a permit to the permittee before April 25, 2014, that includes a water quality based effluent limitation for phosphorus and that requires the permittee to submit to the department options for complying with the water quality based effluent limitation, by submitting a request for the variance as a compliance option.

(c) After an application for a variance is submitted to the department under par. (b) 2., 3., or 4., and until the last day for seeking review of the department's final decision on the application or a later date fixed by order of the reviewing court, the water quality based effluent limitation for phosphorus and any corresponding compliance schedule are not effective. All other provisions of the permit continue in effect except those for which a petition for review has been submitted under s. 283.63.

(d) Notwithstanding sub. (3m) (c) and (d), the variance under this section remains in effect for an approved point source until the point source's permit is reissued, modified, or revoked and reissued.

(e) Notwithstanding s. 227.42, there is no right to a hearing under this subsection.

(f) If the department approves a variance under this section and the department issues a modified water quality based effluent limitation under s. 283.63 for phosphorus, the permittee shall comply with the least stringent of the 2 effluent limitations.

(6) VARIANCE PROVISIONS. (a) Except as provided in par. (ae) or (am) or sub. (7), in the permit for a point source for which the department approves the variance under this section the department may include a requirement that the permittee optimize the performance of the point source in controlling phosphorus discharges and shall include the following interim limits:

1. In the first permit for which the department approves the variance, a requirement to achieve, by the end of the term of that permit, compliance with an effluent limitation for phosphorus equal to 0.8 milligrams per liter as a monthly average.

2. In the 2nd permit for which the department approves the variance, a requirement to achieve, by the end of the term of that permit, compliance with an effluent limitation for phosphorus equal to 0.6 milligrams per liter as a monthly average.

3. In the 3rd permit for which the department includes the variance, a requirement to achieve, by the end of the term of that permit, compliance with an effluent limitation for phosphorus equal to 0.5 milligrams per liter as a monthly average.

4. In the 4th permit for which the department includes the variance, a requirement to achieve, by the end of the term of that permit, compliance with the water quality based effluent limitation for phosphorus.

(ae) If a permittee who chose an option for complying with a water quality based effluent limitation for phosphorus other than the variance under this section applies for the variance under this section, the department shall count a permit that included the other compliance option as though the permit had included the variance, for the purposes of par. (a), including determining the applicable interim limit.

(am) If a permittee certifies that the point source cannot achieve compliance with an interim limit in par. (a) 1., 2., or 3. without a major facility upgrade, the department shall include in the permit a requirement to achieve compliance with the most stringent achievable interim limit, except that the department may not include an interim limit that is higher than the limit established under s. 283.11 (3) (am).

(b) In the permit for a point source for which the department approves the variance under this section, in addition to the requirements under par. (a) or (am) or sub. (7), the department shall require the permittee to implement the permittee's choice of the following measures to reduce the amount of phosphorus entering the waters of the state:

1. Making payments to counties as provided in sub. (8).

2. Entering into a binding, written agreement with the department under which the permittee constructs a project or implements a plan that is designed to result in an annual reduction of phosphorus pollution from other sources in the basin in which the point source is located, in an amount equal to the difference between the annual amount of phosphorus discharged by the point source and the target value.

3. Entering into a binding written agreement, that is approved by the department, with another person under which the person constructs a project or implements a plan that is designed to result in an annual reduction of phosphorus pollution from other sources in the basin in which the point source is located, in an amount equal to the difference between the annual amount of phosphorus discharged by the point source and the target value.

(7) MORE STRINGENT EFFLUENT LIMITATIONS. If the department determines under sub. (3) (cm) or (3m) (a) or (e) that the interim effluent limitations under sub. (6) (a), or any other effluent limitations that are in effect as a result of a previous review under sub. (3) or (3m), are not consistent with the highest attainable condition for a point source or category of point sources eligible for the variance under this section, the department shall include the more stringent effluent limitations that were specified under sub. (3) (cm) or (3m) (a) or (e) as being consistent with the highest attainable condition in permits that are reissued, modified, or revoked and reissued after that determination for the point source or category of point sources to which the more stringent effluent limitations apply.

(8) PAYMENTS TO COUNTIES. (a) 1. A permittee that chooses to make payments for phosphorus reduction under sub. (6) (b) 1. shall make the payments to each county that is participating in the program under this subsection and that has territory within the basin in which the point source is located in proportion to the amount of territory each county has within the basin. The permittee shall make a total payment by March 1 of each calendar year in the amount equal to the per pound amount under subd. 2. times the number of pounds by which the amount of phosphorus discharged by the point source during the previous year exceeded the point source's target value or $640,000, whichever is less. If no county that has territory within the basin is participating in the program under this subsection, the department shall direct the permittee to make payments to participating counties selected by the department.

2. The per pound payment for this subsection is $50 beginning on April 25, 2014. Beginning in 2015, the department shall adjust the per pound payment each year by a percentage equal to the average annual percentage change in the U.S. consumer price index for all urban consumers, U.S. city average, as determined by the federal department of labor, for the 12 months ending on the preceding December 31. The adjusted amount takes effect for permits reissued on April 1. The per pound payment in effect when a permit is reissued applies for the term of the permit.

(b) 1. A county shall use payments received under this subsection to provide cost sharing under s. 281.16 (3) (e) or (4) for projects to reduce the amount of phosphorus entering the waters of the state, for staff to implement projects to reduce the amount of phosphorus entering the waters of the state from nonpoint sources, or for modeling or monitoring to evaluate the amount of phosphorus in the waters of the state for planning purposes.

2. A county shall use at least 65 percent of the amounts received under this subsection to provide cost sharing under s. 281.16 (3) (e) or (4).

2m. No later than March 1 of each year, a county shall develop a plan for using the payments received under this subsection in the previous year that is consistent with the county's land and water resource management plan under s. 92.10. A county shall do all of the following in the plan under this subdivision:

a. Identify projects that have, or watersheds in which there exists, the greatest potential to reduce the amount of phosphorus per acre entering the waters of the state, based on an assessment of the land and land use practices in the county.

b. Describe the measures it will take to ensure that each project that it funds is completed and evaluated.

3. No later than May 1 of the 2nd year following a year in which a county receives payments under this subsection, the county shall submit an annual report to the department of natural resources, the department of agriculture, trade and consumer protection, and each permittee from which it received those payments. In the annual report, the county shall describe the projects for which it provided cost sharing, quantify, in pounds, the associated phosphorus reductions achieved using accepted modeling technology, and identify any staff funded with the payments.

4. The department shall evaluate reports submitted under subd. 3. If the department determines that a county is not using the payments to effectively reduce the amount of phosphorus entering the waters of the state from nonpoint sources, the department may require permittees who made the payments to eliminate or reduce future payments to the county.

5. A county shall notify the department by January 1 of each year if it chooses not to participate in the program under this subsection.

(8m) PROJECTS OR PLANS. (a) A person who constructs a project or implements a plan under an agreement under sub. (6) (b) 2. or 3. that involves activities for which performance standards and prohibitions have been prescribed under s. 281.16 (2) or (3) shall comply with those performance standards and prohibitions and any associated technical standards.

(b) A person who constructs a project or implements a plan under an agreement under sub. (6) (b) 2. or 3. shall annually submit a report to the department that quantifies, in pounds, the phosphorus reductions achieved through the project or plan, using accepted modeling technology. The department shall review reports submitted under this paragraph. If the department determines, based on the results of the modeling, that a project or plan is not effectively reducing the amount of phosphorus entering the waters of the state, the department shall terminate or modify the agreement.

(9) FEDERAL REQUIREMENTS. Notwithstanding any of the provisions of this section, the department shall comply with the provisions of 40 CFR 131.14 when approving and implementing a variance under this section.

History: 2013 a. 378; 2015 a. 205.

283.17 Thermal effluent limitations. (1) Any thermal effluent limitation proposed by the department may be modified by it in accordance with s. 283.63, if the owner or operator of the point source which is the subject of the proposed limitation demonstrates to the satisfaction of the department that the proposed limitation is more stringent than necessary to assure the protection and propagation of a balanced indigenous population of shellfish, fish and wildlife in and on the body of water into which the discharge is made.

(2) If a point source with a discharge having a thermal component is modified, the point source shall not be subject to any more stringent effluent limitation with respect to the thermal component of its discharge during either the 10−year period beginning on the date of completion of the modification or the period of depreciation or amortization of the facility for the purpose of section 167 or 169 of the internal revenue code, whichever ends first, if all of the following apply:

(a) The modification of the point source commenced after October 18, 1972.

(b) The point source, as modified, meets the most stringent effluent limitation established under s. 283.13.

(c) The limitation under par. (b) assures protection and propagation of a balanced indigenous population of shellfish, fish, and wildlife in and on the water into which the discharge is made.

History: 1987 a. 27 ss. 1846mg, 1846ms; Stats. 1987 s. 147.055; 1991 a. 39; 1995 a. 227 s. 862; Stats. 1995 s. 283.17; 2015 a. 307.

283.19 Standards of performance. (1) The department shall, by rule, promulgate standards of performance, for each class or category of sources referred to under s. 283.13 (1) that is required to be covered by permits issued under s. 283.31, which shall reflect the greatest degree of effluent reduction achievable through the application of the best available demonstrated control technology, processes, operating methods, or other alternatives. Where practicable, a standard of performance permitting no discharge of pollutants shall be adopted.

(2) Standards of performance adopted under this section shall apply to all new sources within each class or category of sources for which a standard of performance has been adopted under this section.

(3) The department shall revise such standards to reflect changes in control technology, processes, operating methods or other alternatives. When establishing or revising standards of performance under this section, the department shall consider the cost of achieving such effluent reductions and the nonwater quality environmental impact and energy requirements of such reductions.

(4) The department may distinguish among classes, types and sizes within categories of sources for the purpose of establishing or revising standards of performance under this section.

(5) No owner or operator of any new source may operate such source in violation of any standard of performance applicable to such a source.

History: 1973 c. 74; 1993 a. 16.; 1995 a. 227 s. 863; Stats. 1995 s. 283.19; 2015 a. 307.

Cross−reference: See also NR 200−, Wis. adm. code.

283.21 Toxic and pretreatment effluent standards. (1) TOXIC EFFLUENT LIMITATIONS AND STANDARDS. (a) *List.* The department shall promulgate by rule a list of toxic pollutants or combinations of pollutants subject to this chapter which consists of those toxic pollutants referred to in table 1 of committee print number 95−30 of the committee on public works and transportation of the U.S. house of representatives. After promulgation of this list, the department may revise by rule the list periodically and may add to or remove from the list any pollutant. In revising this list the department shall consider the toxicity of the pollutant, its persistence, degradability, the usual or potential presence in any waters of any organisms affected by the discharge of the toxic pollutant or combination of pollutants, the importance of the affected organism and the nature and extent of the effect of the toxic pollutant on these organisms. A determination by the department under this subsection is subject to declaratory judgment proceedings under s. 227.40.

(b) *Effluent standards.* The department may promulgate by rule an effluent standard, which may include a prohibition, establishing requirements for a toxic pollutant which, if an effluent limitation is applicable to a class or category of point sources, is applicable to that category or class of point sources only if this effluent standard imposes more stringent requirements than are imposed under s. 283.13 (2) (b). An effluent standard promulgated under this section shall take into account the toxicity of the pollutant, its persistence, degradability, the usual or potential presence of affected organisms in any waters, the importance of affected organisms, the nature and extent of the effect of the toxic pollutant on these organisms and the extent to which effective control is being or may be achieved under other regulatory authority.

(c) *Promulgation; review.* The department shall promulgate by rule an effluent standard which may include a prohibition in accordance with par. (a) for each toxic pollutant referred to in table 1 of committee print number 95−30 of the committee on public works and transportation of the U.S. house of representatives as soon as practicable but no later than one year after the U.S. environmental protection agency promulgates an effluent standard for the pollutant. The department shall establish effluent standards for any other toxic pollutant listed under par. (a) as soon as practicable after it is listed. Each effluent standard promulgated under this paragraph shall be reviewed and, if appropriate, revised every 3 years.

(d) *Ample margin of safety.* An effluent standard promulgated under this subsection shall be established at that level which the department determines provides an ample margin of safety.

(e) *Applicability to classes or categories of sources.* If the department proposes or promulgates an effluent standard under this subsection, it shall designate the class or category of point sources to which the effluent standard applies. The department may include the disposal of dredged material in a class or category of point sources.

(f) *Effective date.* An effluent standard promulgated under this subsection takes effect on the date specified in the order promulgating the standard, but not more than one year after the date of the order. If the department determines that compliance within one year after the date of the order is technologically infeasible for a class or category of sources, the department may establish the effective date for the effluent standard for that class or category of sources at the earliest date upon which compliance can be feasibly attained by those sources, but in no case more than 3 years after the date of the order.

(g) *Procedure for promulgation in absence of federal standards.* In promulgating rules establishing a toxic effluent standard or prohibition for which the U.S. environmental protection agency has not promulgated a toxic effluent limitation, standard or prohibition, the department shall follow the additional procedures specified in s. 283.11 (4) (d).

(2) PRETREATMENT STANDARDS. (a) The department shall by rule promulgate pretreatment standards to regulate the introduction into publicly owned treatment works of pollutants which are not susceptible to treatment by such treatment works or which would interfere with the operation of such treatment works.

(b) Pretreatment standards promulgated under this section shall specify a time for compliance, not to exceed 3 years after the date of promulgation, and shall be established to prevent the discharge through any publicly owned treatment work of any pollutant which interferes with, passes through, or otherwise is incompatible with the treatment works. If any toxic pollutant under sub. (1) is introduced by a source into a publicly owned treatment works, if the treatment by the works removes all or any part of that toxic pollutant, if the discharge from the works does not violate the effluent limitation or standard which would be applicable to that toxic pollutant if it were discharged by the source other than through a publicly owned treatment works and if the treatment of that toxic pollutant does not prevent sludge use or disposal by the works in accordance with section 1345 of the federal water pollution control act, as amended, 33 USC 1251 to 1376, then the pretreatment requirements for the sources actually discharging the toxic pollutant into the publicly owned treatment works may be revised by the owner or operator of the works to reflect the removal of that toxic pollutant by the works.

(c) The department shall by rule promulgate the classes or categories of sources to which the pretreatment standards adopted under this section shall apply.

(d) The department shall revise the pretreatment standards adopted under this section to reflect changes in control technology, processes, operating methods or other alternatives.

History: 1973 c. 74; 1979 c. 221; 1985 a. 29; 1985 a. 182 ss. 11, 57; 1995 a. 227 s. 864; Stats. 1995 s. 283.21.

Cross−reference: See also NR 200−, Wis. adm. code.

SUBCHAPTER IV

PERMITS

283.31 Water pollutant discharge elimination system; permits, terms and conditions. (1) The discharge of any pollutant into any waters of the state or the disposal of sludge from a treatment work by any person is unlawful unless such discharge or disposal is done under a permit issued by the department under this section or s. 283.33. The department may by rule exempt certain classes or categories of vessels from this section.

(2) No permit shall be issued by the department for the discharge into the waters of the state of any of the following:

(a) Any radiological, chemical or biological warfare agent or high−level radioactive waste.

(b) Any discharge which the secretary of the army acting through the chief of the U.S. army corps of engineers has objected to in writing on the ground that anchorage and navigation would be substantially impaired.

(c) Any discharge to which the U.S. environmental protection agency has objected to in writing pursuant to s. 283.41.

(d) Any discharge from a point source which is in conflict with any existing area−wide waste treatment management plan approved by the department. No area−wide waste treatment management plan may require the abandonment of existing waste treatment facilities which meet the requirements of this chapter unless the abandonment of such facilities clearly represents the most efficient and cost−effective method of providing waste treatment for the entire planning area.

(3) The department may issue a permit under this section for the discharge of any pollutant, or combination of pollutants, other than those prohibited under sub. (2), upon condition that such discharges will meet all the following, whenever applicable, subject to sub. (5m):

(a) Effluent limitations.

(b) Standards of performance for new sources.

(c) Effluent standards, effluents prohibitions and pretreatment standards.

(d) Any more stringent limitations, including those:

1. Necessary to meet federal or state water quality standards, or schedules of compliance established by the department; or

2. Necessary to comply with any applicable federal law or regulation; or

3. Necessary to avoid exceeding total maximum daily loads established pursuant to a continuing planning process developed under s. 283.83.

(e) Any more stringent legally applicable requirements necessary to comply with an approved areawide waste treatment management plan.

(f) Groundwater protection standards established under ch. 160.

(4) The department shall prescribe conditions for permits issued under this section to assure compliance with the requirements of sub. (3). Such additional conditions shall include at least the following, subject to sub. (5m):

(a) That the discharge of any pollutant more frequently than or at a level in excess of that identified and authorized by the permit shall constitute a violation of the terms and conditions of the permit;

(b) That facility expansions, production increases, or process modifications which result in new or increased discharges of pollutants at frequencies or levels in excess of the maximum discharges described in the permit shall be reported to the department under s. 283.59 (1);

(c) That the permittee shall permit authorized representatives of the department upon the presentation of their credentials to enter upon any premises in which an effluent source is located or in which any records are required to be kept for the purpose of administering s. 283.55;

(d) That the permittee shall at all times maintain in good working order and operate as efficiently as possible any facilities or systems of control installed by the permittee to achieve compliance with the terms and conditions of the permit;

(e) That if a toxic effluent standard or prohibition, including any schedule of compliance specified in such effluent standard or prohibition, is established under s. 283.21 (1) for a toxic pollutant present in the permittee's discharge and, if such standard or prohibition is more stringent than any limitation upon such pollutant in the permit, the department shall revise or modify the permit in accordance with the toxic effluent standard or prohibition;

(f) That, if the permit is for a discharge from a publicly owned treatment work, the permittee shall:

1. Inform the department of any new introduction of pollutants into the treatment works under s. 283.59 (2);

2. Require that any industrial user of such treatment work comply with the requirements of ss. 283.21 (2), 283.55 and 283.57.

(5) Each permit issued by the department under this section shall, in addition to those criteria provided in subs. (3) and (4), specify maximum levels of discharges. Maximum levels of discharges shall be developed from the permittee's reasonably foreseeable projection of maximum frequency or maximum level of discharge resulting from production increases or process modifications during the term of the permit.

(5m) The department shall include the requirements of 40 CFR 451.11 in permits issued under this section for concentrated aquatic animal production facilities described in 40 CFR 451.10. The department may not include additional conditions in a permit for a fish farm except as necessary for the farm to meet the applicable limitations, standards, and other provisions described in sub. (3) (a) to (f). Any conditions included in a permit issued under this section for a fish farm shall be limited to site−specific best management practices to the greatest extent allowed under federal law.

(6) Any permit issued by the department under this chapter which by its terms limits the discharge of one or more pollutants into the waters of the state may require that the location, design, construction and capacity of water intake structures reflect the best technology available for minimizing adverse environmental impact.

(7) The holder of a permit under this section shall pay $100 to the department as a groundwater fee on January 1 if the permittee discharges effluent on land or if the permittee produces sludge from a treatment work which is disposed of on land. If the permittee discharges effluent on land and disposes of sludge from a treatment work on land, the permittee shall pay $200 to the department as a groundwater fee on January 1. The moneys collected under this subsection shall be credited to the environmental fund for environmental management.

(8) (a) The holder of a permit under this section for a concentrated animal feeding operation shall annually pay to the department a fee of $345.

(b) Of each fee paid under par. (a), $95 shall be credited to the appropriation account under s. 20.370 (4) (mi).

(c) The department shall annually submit a report to the joint committee on finance and, under s. 13.172 (3), to the standing committees of the legislature with jurisdiction over agricultural

and environmental matters describing the use of the moneys credited to the appropriation account under s. 20.370 (4) (mi) under par. (b).

History: 1973 c. 74; 1975 c. 349; 1983 a. 410; 1993 a. 16.; 1995 a. 227 s. 851, 857; Stats. 1995 s. 283.31; 1997 a. 27; 1999 a. 85; 2009 a. 28; 2011 a. 207; 2013 a. 70; 2015 a. 196; 2017 a. 21.

Cross−reference: See also chs. NR 203, 204, 206, 208, 213, 214, 231, and 236 and s. NR 200.01, Wis. adm. code.

This section does not govern dam removal. Chapter 31 does. Froebel v. DNR, 217 Wis. 2d 652, 579 N.W.2d 774 (Ct. App. 1998), 97−0844.

A concentrated animal feeding operation (CAFO) under s. 283.01 (12) includes not only where the animals are confined, but also the equipment that applies the animal waste to fields outside the confinement area, whether the fields are owned by the CAFO operator or others. Any overapplication of manure by the operator is a discharge under s. 283.01 (5) whether because of runoff to surface waters or percolation to groundwater. DNR has authority to regulate discharges from overapplication of manure from a CAFO regardless of whether the discharge occurs on land owned by the CAFO. Maple Leaf Farms v. DNR, 2001 WI App 170, 247 Wis. 2d 96, 633 N.W.2d 720, 00−1389.

The DNR has authority under sub. (1) to issue permits to federal agencies. 68 Atty. Gen. 52.

283.33 Storm water discharge permits. (1) REQUIREMENT. Except as provided in sub. (1m), an owner or operator shall obtain a permit under this section for any of the following:

(a) A discharge from a discernible, confined, and discrete conveyance of storm water associated with an industrial activity that meets criteria in rules promulgated by the department.

(am) A discharge from a discernible, confined, and discrete conveyance of storm water associated with a construction site, including a construction site for a building, that meets criteria in rules promulgated by the department.

(b) A discharge of storm water from a municipal separate storm sewer system serving an incorporated area with a population of 100,000 or more, as determined by the 1990 federal census.

(c) A discharge of storm water from a municipal separate storm sewer system serving an area located in an urbanized area, as determined by the U.S. bureau of the census based on the latest decennial federal census.

(cg) A discharge of storm water from a municipal separate storm sewer system serving an area with a population of 10,000 or more and a population density of 1,000 or more per square mile, if the system is designated by the department to be regulated under this section based on an evaluation of whether the storm water discharge results in, or has the potential to result in, water quality standards being exceeded, including impairment of designated uses, or in other significant water quality impacts, including habitat and biological impacts.

(cr) A discharge of storm water from a municipal separate storm sewer system that is designated by the department to be regulated under this section because the system contributes substantially to the pollutant loadings of a physically interconnected municipal separate storm sewer system that is regulated under this section.

(d) A discharge of storm water from a facility or activity, other than a facility or activity under pars. (a) to (cr), if the department determines that the discharge either contributes to a violation of a water quality standard or is a significant contributor of pollutants to the waters of the state.

(1m) EXEMPTIONS; LIMITATION ON LOCAL PERMITTING. (a) An owner or operator is not required to obtain a permit under this section for any of the following:

1. A discharge of storm water associated with planting, growing, cultivating, or harvesting crops for use or consumption by humans, livestock, as defined in s. 95.80 (1) (b), or poultry, including sod farms and tree nurseries.

2. A discharge of storm water associated with pasturing or yarding livestock, as defined in s. 95.80 (1) (b), or poultry.

3. A discharge of storm water from land containing dredged material removed from a drainage district ditch, if the land is adjacent to the ditch from which the dredged material was removed.

4. Any other discharge of storm water exempted by the department by rule from obtaining a permit under this section.

(b) A political subdivision may not require an owner or operator to obtain a permit from the political subdivision for any discharge described under par. (a) 1. to 4. In this paragraph, "political subdivision" means a city, village, town, or county.

(c) The exemptions under par. (a) and the prohibition under par. (b) do not apply to the construction of barns, manure storage facilities, barnyard runoff control systems, or other similar structures.

(2) MUNICIPAL SEPARATE STORM SEWER SYSTEMS; APPLICATIONS. The owner or operator of a portion of a municipal separate storm sewer system for which a permit is required under sub. (1) shall do one of the following:

(a) Submit a permit application for its portion of the municipal separate storm sewer system.

(b) Submit a permit application jointly with one or more other owners or operators of the municipal separate storm sewer system.

(c) Authorize a regional authority with control over discharges to a separate storm sewer system that serves areas in more than one municipality to submit an application for a permit that covers the owner's or operator's portion of the municipal separate storm sewer system and other portions of the system if all of the following apply:

1. The regional authority, together with the owners or operators, has authority over a storm water management program that will be in operation by the deadline established by the department.

2. The regional authority or the owners or operators demonstrate their ability to supply all of the required application information by the deadlines established by the department.

3. Each of the owners or operators of a portion of the system covered by the application provides the information required by the department.

(3) MUNICIPAL SEPARATE STORM SEWER SYSTEMS; PERMITS. (a) The department may issue one permit for all discharges from a municipal separate storm sewer system for which a permit is required under sub. (1) or may issue separate permits for each municipality served by the system, for each type of discharge from the system, for individual discharges from the system or for other categories specified by the department.

(b) If the department issues more than one permit for discharges from a municipal separate storm sewer system, the permits may specify differing requirements.

(c) In a permit for part or all of a municipal separate storm sewer system, the department may specify differing conditions relating to different discharges covered by the permit, including differing management programs for the various drainage areas that contribute storm water to the system.

(4) DISCHARGES THROUGH MUNICIPAL SEPARATE STORM SEWER SYSTEMS. (a) In addition to obtaining a permit under this section, the owner or operator of an activity described in sub. (1) (a) or (am) that discharges storm water through a municipal separate storm sewer system described in sub. (1) (b) to (cr) shall submit the following information to the owner or operator of the municipal separate storm sewer system:

1. The name of the facility from which the release occurs.

2. The name and address of a person to contact for information about the discharge.

3. The location of the discharge.

4. A description of the principal products or services provided by the facility and the number of any permit covering the facility.

(b) 1. If a person required to provide information under par. (a) is releasing storm water into the municipal separate storm sewer system before the system is subject to sub. (1), the person shall provide the information no later than 60 days after the system becomes subject to sub. (1).

2. If a person required to provide information under par. (a) is not releasing storm water into the municipal separate storm sewer system before the system is subject to sub. (1), the person

shall provide the information no later than 180 days before beginning to release storm water into the system.

(4m) TRANSPORTATION ACTIVITIES. (a) In this subsection, "transportation activity" has the meaning given in s. 30.2022 (1g).

(b) 1. The department of natural resources shall issue a general permit under this section on or before June 30, 2018, that authorizes the department of transportation to discharge storm water from the site of a transportation activity. A general permit issued under this paragraph is subject to the requirements for general permits issued under s. 283.35.

2. The department of natural resources shall notify the legislative reference bureau when it issues a general permit under subd. 1. The legislative reference bureau shall publish the notice in the Wisconsin Administrative Register.

(c) Beginning on the date on which the department of natural resources issues a general permit under par. (b) 1., the department of transportation may not discharge storm water from the site of a transportation activity unless it obtains an individual permit under sub. (1) or it is covered by a general permit issued under par. (b) 1.

(d) A general permit issued under this section shall incorporate the interdepartmental liaison procedures established under s. 30.2022 (2) and the requirements specified in rules promulgated under ss. 30.2022, 283.33, and 283.35.

(5) OTHER DISCHARGERS. A person who is required to obtain a permit under sub. (1) (a), (am), or (d) may apply for an individual permit or request coverage under a general permit issued by the department under s. 283.35.

(6) OTHER COVERAGE. (a) A municipal separate storm sewer system that is combined with a sanitary sewer system is not required to be covered by a permit under this section but is required to be covered by a permit under s. 283.31.

(b) The department may include coverage of a storm water discharge in a permit issued under s. 283.31. For the purposes of this chapter, the portion of a permit issued under s. 283.31 that covers a storm water discharge is considered a permit issued under this section.

(7) PETITIONS. The owner or operator of a municipal separate storm sewer system may petition the department to require a permit under this section for any discharge through the municipal separate storm sewer system. The department may approve the petition only if a permit for the discharge is required under sub. (1) (a), (am), or (d).

(7m) ISSUANCE. The department shall base the priority for the initial issuance of permits under this section on the relative impact of the discharges on water quality.

(8) RULE MAKING. The department shall promulgate rules for the administration of this section. The department may not require a permit under this section for diffused surface drainage or agricultural storm water discharges.

(9) STORM WATER FEES. (a) The department shall promulgate rules setting all of the following:

1. A storm water construction permit fee to be paid by any person who applies for a permit under this section for the discharge of storm water from a construction site.

2. A storm water permit annual fee that is to be paid upon issuance of the permit and annually thereafter by a person who holds a permit under this section for the discharge of storm water, other than for the discharge of storm water from a construction site.

(b) The department shall establish the amount of the fee under par. (a) for permits for construction sites, other industrial permits and municipal separate storm sewer permits based on the costs associated with each type of permit.

(bm) The annual fees under par. (a) are due on June 30 annually, beginning with 1994.

(c) All moneys collected under par. (a) shall be credited to the appropriation under s. 20.370 (9) (bj).

History: 1993 a. 16; 1995 a. 227 s. 852, 858; Stats. 1995 s. 283.33; 1997 a. 27; 2001 a. 16; 2013 a. 20; 2015 a. 307; 2017 a. 59, 115.

Cross−reference: See s. NR 216.41, Wis. adm. code.

283.35 General permits. (1) AUTHORIZATION. Instead of issuing a separate permit to an individual point source, the department may issue a general permit applicable to a designated area of the state authorizing discharges from specified categories or classes of point sources located within that area.

(1m) BALLAST WATER DISCHARGES. (a) The department may issue a general permit authorizing a vessel that is 79 feet or greater in length to discharge ballast water into the waters of the state. A general permit issued under this subsection may contain effluent limitations.

(b) If the department issues a general permit under par. (a), the department shall charge the following fees:

1. An application fee of $1,200 to be paid by any person who applies for coverage under a general permit issued under this subsection.

2. An annual fee of $345 to be paid upon initial coverage under the permit and annually thereafter.

(e) Coverage under a general permit issued under this subsection is valid for a period of 5 years. The department may renew coverage under a general permit issued under this subsection upon application.

(f) The department shall credit the fees collected under this subsection to the appropriation account under s. 20.370 (4) (aj).

(2) VOLUNTARY WITHDRAWAL. Upon the request of the owner or operator of a point source, the department shall withdraw the point source from the coverage of the general permit and issue a separate permit for that source.

(3) WITHDRAWAL. The department may withdraw a point source from the coverage of a general permit and issue a separate permit for that source if:

(a) The point source is a significant contributor of pollution;

(b) The point source is not in compliance with the terms and conditions of the general permit;

(c) A change occurs in the availability of demonstrated technology or practices for the control or abatement of pollutants from the point source;

(d) Effluent limitations or standards are promulgated for a point source covered by the general permit after the issuance of that permit; or

(e) A water quality management plan containing requirements applicable to the point source is approved.

History: 1979 c. 221; 1995 a. 227 s. 853; Stats. 1995 s. 283.35; 2009 a. 28; 2013 a. 20; 2015 a. 55.

283.37 Applications for permit. (1) The department shall promulgate rules relating to applications for permits under this chapter which shall require at a minimum that every owner or operator of a point source discharging pollutants into the waters of the state shall have on file either a completed permit application on forms provided by the department or a completed permit application under section 13 of the rivers and harbors act of 1899, 33 USC 407 or under the federal water pollution control act, as amended, 33 USC 1251 to 1376. The rules may specify different requirements for permits issued under s. 283.31 and for permits issued under s. 283.33.

(2) Any owner or operator of a point source for which a permit is required by s. 283.31 (1) wishing to commence discharging pollutants into state waters from a new source, the construction of which commenced after July 22, 1973, shall submit a completed application not later than 180 days prior to the date on which it is desired to commence discharges.

(3) The application form shall be signed as follows:

(a) In the case of a corporation, by a principal executive officer of at least the level of vice president or by the principal executive officer's authorized representative responsible for the overall operation of the point source for which a permit is sought.

(aL) In the case of a limited liability company, by a member or manager.

(b) In the case of a partnership, by a general partner.

(c) In the case of a sole proprietorship, by the proprietor.

(d) In the case of publicly owned treatment works or a municipal separate storm sewer system by a principal executive officer, ranking elected official, or other duly authorized employee.

(4) Prior to the submittal of a permit application for a publicly owned treatment works, each person discharging into such works who is subject to s. 299.15 and rules promulgated thereunder shall submit a discharge report to the owner or operator of such works upon request. The report shall state the person's current discharges, and maximum discharges based on reasonably foreseeable projections of production increases, process modification or facility expansions during the next 5 years. The owner or operator of such publicly owned treatment works shall submit the discharge reports to the department as part of the permit application. The form of the discharge report shall be prescribed by department rule.

(5) The department may require the applicant to submit information in addition to that supplied on the permit application.

(6) Subsections (1) to (5) do not apply to an owner or operator of a point source eligible for coverage under a general permit under s. 283.35 and rules promulgated by the department under that section. The department may require the owner or operator to submit information regarding any discharge.

History: 1973 c. 74; 1979 c. 221 ss. 650d, 650dg, 2202 (39); 1993 a. 16, 112, 482; 1995 a. 227 s. 854; Stats. 1995 s. 283.37.

Cross−reference: See also s. NR 200.01, Wis. adm. code.

283.39 Public notice. (1) The department shall promulgate by rule procedures for providing to interested members of the public notices of each complete application for a permit. Procedures for providing public notices shall include at least the following:

(a) Publication of the notice as a class 1 notice under ch. 985;

(b) Mailing of the notice to any person or group upon request.

(c) Publication of the notice through an electronic notification system established by the department.

(d) Publication of the notice on the department's Internet website.

(1m) Public notice under this section shall be considered to be provided on the date that the department first publishes the notice on its Internet website.

(2) The department shall provide a period of not less than 30 days following the date of the public notice during which time interested persons may submit their written views on the tentative determinations with respect to the permit application. All written comments submitted during the period for comment shall be retained by the department and considered in the formulation of the final determinations for the permit application.

(3) The department shall by rule prescribe the form and content of public notices issued under sub. (1). Every such notice issued by the department shall include at least the following information:

(a) The name and address of each applicant;

(b) A brief description of each applicant's activities or operations which result in the discharge described in the application;

(bg) Information indicating where the complete application may be viewed on the department's Internet website.

(c) The name of the waterway to which each discharge is made and a short description of the location of each discharge on the waterway indicating whether such discharge is a new or existing discharge;

(d) A statement of the tentative determination to issue or deny a permit for the discharge described in the application;

(dm) If the applicant applied, under s. 283.15 (2) (a), for a variance, as defined in s. 283.15 (1), a tentative decision to approve or deny the variance, including, if the tentative decision is to grant the variance based upon one or more of the conditions specified in s. 283.15 (4) (a) 1. a. to e., a statement on the effect of the variance, if granted, on the designated use of the water body during the term of the permit;

(e) A brief description of the procedures for the formulation of final determinations, including the 30−day comment period required under sub. (2).

History: 1973 c. 74; 1975 c. 349; 1995 a. 227 s. 866; Stats. 1995 s. 283.39; 2011 a. 32, 167; 2017 a. 365 s. 112.

283.41 Notice to other government agencies. (1) The department shall promulgate by rule procedures for notifying the U.S. environmental protection agency, the U.S. army corps of engineers, other states potentially affected by the proposed discharge, and any other interested agency or unit of government of any complete application or proposed modification thereof for a permit.

(2) The department shall provide the U.S. environmental protection agency a period of time not to exceed 90 days to submit to the department its written views, recommendations or objections. All other interested government agencies and affected states shall be given 30 days to submit to the department written views or recommendations.

(3) When the department receives an application for a permit for a discharge that would return water transferred from the Great Lakes basin to the source watershed through a stream tributary to one of the Great Lakes, the department shall provide notice of the application to the governing body of each city, village, and town through which the stream flows or that is adjacent to the stream downstream from the point at which the water would enter the stream.

History: 1973 c. 74; 1975 c. 349; 1995 a. 227 s. 869; Stats. 1995 s. 283.41; 2007 a. 227.

283.43 Public access to information. (1) (a) The department shall make available to and provide facilities for the public to inspect and copy completed permit application forms, fact sheets, draft permits, or any public document thereon.

(b) The department shall make available to the U.S. environmental protection agency any completed permit application forms, fact sheets, draft permits, or any public comments thereon, and shall also make available any other records, reports, plans or other information obtained by the department under this chapter.

(2) The department shall protect as confidential any information, other than effluent data, contained in permit application forms, or in other records, reports or plans, that is found to be confidential under s. 283.55 (2) (c).

(3) Any information afforded confidential status may be disclosed by the department to the U.S. environmental protection agency or its authorized representative.

History: 1973 c. 74; 1995 a. 227 s. 870; Stats. 1995 s. 283.45.

283.45 Fact sheets. (1) For every discharge which has a total volume of more than 500,000 gallons on any day of the year, except a storm water discharge for which a permit is issued under s. 283.33, the department shall, following public notice, prepare and send to any person who so requests, a fact sheet concerning the application described in the public notice.

(2) The contents of such fact sheets shall be established by the department by rule and shall include at least the following information:

(a) A sketch or detailed description of the location of the discharge described in the application;

(b) A quantitative description of the discharges described in the application;

(c) A statement of the tentative determination to issue or deny the permit application;

(d) If a determination to issue a permit is made, then the following information shall also be included:

1. The proposed effluent limitation for those pollutants proposed to be limited;

2. A proposed schedule of compliance, including interim dates and requirements, for meeting the proposed effluent limitations;

3. A brief description of any other proposed special conditions which will have a significant impact upon the discharge described in the application;

(e) A brief description of the uses for which the receiving waters have been classified, of the applicable water quality standards and effluent standards;

(f) A more detailed description of the procedures for the formulation of final determinations than that given in the public notice.

(3) If the department proposes to include a water quality based effluent limitation in the permit, a fact sheet prepared under this section shall include all of the following:

(a) A description of the calculation used by the department to derive the water quality based effluent limitation.

(b) A discussion of the rationale used by the department to determine whether or not a compliance schedule for the water quality based effluent limitation shall be included in the proposed permit and the rationale used to develop any such schedule. The discussion shall include a description of treatment technologies or control strategies that may be available to the permittee for achieving compliance with the water quality based effluent limitation.

(c) The assumptions and information used by the department to calculate the mixing zone for the discharge.

History: 1973 c. 74; 1987 a. 60; 1993 a. 16; 1995 a. 227 s. 867; Stats. 1995 s. 283.45.

Cross−reference: See also ch. NR 201, Wis. adm. code.

283.47 Requests for information by permittee. When a permit for which a fact sheet is required to be prepared under s. 283.45 is issued, reissued or modified, if the permittee submits, during the public comment period afforded under s. 283.39, to the department a written request for information on the background levels in the receiving water of substances for which a water quality based effluent limitation under s. 283.13 (5) is included in the proposed permit, the department shall, to the extent the information is available, provide to the permittee no later than the time that the permit is issued, reissued or modified such information or list of documents which present such information. Nothing in this section limits rights under ss. 19.31 to 19.37.

History: 1987 a. 60; 1995 a. 227 s. 868; Stats. 1995 s. 283.47.

283.49 Public hearing. (1) (a) The department shall provide an opportunity for the applicant, any affected state, the U.S. environmental protection agency, any interested state or federal agency, person or group of persons to request a public hearing with respect to a permit application. Such request for a public hearing shall be filed with the department within 30 days after the public notice of the complete permit application is provided and shall indicate the interest of the party filing the request and the reasons why a hearing is warranted.

(b) The department shall hold a public hearing on a permit application or a group of applications if requested by the U.S. environmental protection agency, any affected state, on the petition of 5 or more persons or if the department deems that there is a significant public interest in holding such a hearing.

(c) The department shall promulgate by rule procedures for the conduct of public hearings held under this section. Hearings held under this section are not contested cases under s. 227.01 (3).

(2) (a) Public notice of any hearing held under this section shall be provided in accordance with the requirements of s. 283.39 (1) and the public notice shall be considered to be provided on the date specified in s. 283.39 (1m).

(b) The form and content of such public notice shall be established by departmental rule.

History: 1973 c. 74; 1985 a. 182 s. 57; 1995 a. 227 s. 871; Stats. 1995 s. 283.49; 2011 a. 167.

Cross−reference: See also s. NR 203.04, Wis. adm. code.

283.51 Mining hearing. If a hearing on the permit application is conducted as a part of a hearing under s. 293.43, the notice, comment and hearing provisions in that section supersede the notice, comment and hearing provisions of ss. 283.39, 283.41 and 283.49.

History: 1979 c. 221; 1995 a. 227 s. 872; Stats. 1995 s. 283.51.

283.53 Permit duration, modification, revocation and reissuance. (1) No permit issued by the department under s. 283.31 or 283.33 shall have an initial term for more than 5 years. Upon the request of a permit holder, the department may renew the permit for a term of not more than 5 years, subject to sub. (3).

(2) (a) Any permit issued by the department under s. 283.31 or 283.33 may, after an opportunity for hearing, be modified, terminated, or revoked and reissued, in whole or in part, for cause, including but not limited to:

1. Violation of any terms or conditions of the permit;

2. Obtaining a permit by misrepresentation or failure to disclose fully all relevant facts;

3. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;

(b) Whenever, on the basis of any information available to it, the department finds that there is cause for modifying, terminating, or revoking and reissuing a permit, in whole or in part, the department shall notify the permittee by certified mail or personal service of its intention to modify, terminate, or revoke and reissue the permit, in whole or in part, except that if the department proposes to modify a permit to authorize a substantial change to a nutrient management plan of a concentrated animal feeding operation, the department may notify the permittee by electronic mail. Such notice shall specify the information upon which the department relies, and if the department intends to modify the permit, shall explain the modifications which the department intends to make in the permit.

(c) The department shall also notify the U.S. environmental protection agency, the U.S. army corps of engineers, any affected state, any interested agency of this state, and any interested members of the public of its intention to modify, terminate, or revoke and reissue a permit. Such notice shall incorporate the terms of the notice sent to the permittee and shall be provided to members of the public in accordance with s. 283.39 (1), except that if the department proposes to modify a permit to authorize a substantial change to a nutrient management plan of a concentrated animal feeding operation, the department is not required to provide notice of the substantial change under s. 283.39 (1) (a). The department shall provide a 14−day period, from the date on which notice is provided under s. 283.39 (1) (d), for written comments on a proposed modification to authorize a substantial change to a nutrient management plan.

(d) The department may hold a public hearing on a proposed permit modification, termination, or revocation and reissuance if the department determines that there is a significant public interest in holding such a hearing or upon the petition of 5 or more persons. The petition shall indicate the interest of the petitioners and the reasons why a hearing is warranted. A petition for a hearing on a proposed permit modification to authorize a substantial change to a nutrient management plan of a concentrated animal feeding operation shall be filed within 14 days of the date notice is provided under s. 283.39 (1) (d).

(e) Public notice of any hearing held under this section shall be provided in accordance with the requirements of pars. (b) and (c).

(f) Hearings held under this section are not contested cases under s. 227.01 (3).

(2d) The department may, with the consent of the permittee, modify a permit issued under s. 283.31 or 283.33 without following the procedures in sub. (2) (b) to (f) in order to do any of the following:

(a) Correct a typographical error.

(b) Require more frequent monitoring or reporting by the permittee.

(c) Change an interim compliance date in a schedule of compliance to a date that is not more than 120 days after the date specified in the existing permit if the change does not delay attainment of final compliance.

(d) Reflect a change in the owner or operator of a facility if the department determines that no other change in the permit is necessary and if the current and new owners or operators submit to the department a written agreement that specifies a date for the new owner to assume responsibility for compliance with the permit and liability for violations of the permit.

(e) Change the construction schedule for a new source if the change does not affect the permittee's obligation to have required pollution control equipment installed and in operation before beginning to discharge.

(f) Eliminate a point source from a permit if the discharge from that point source terminates and that termination does not cause the discharge of pollutants from other point sources to exceed permit limits.

(g) Incorporate into a permit a condition of a publicly owned treatment works pretreatment program that has been approved by the department.

(2h) The department may, with the consent of the permittee, terminate a permit issued under s. 283.31 or 283.33 without following the procedures in sub. (2) (b) to (f).

(2m) The department may, upon request of the permittee, revise or modify a schedule of compliance in an issued permit if it determines that the revision or modification is necessary because of the happening of an event over which the permittee has little or no control. The first revision made under this subsection during the term of a permit need comply only with sub. (2) (c). Subsequent requests shall be subject to sub. (2) (b) to (f).

(3) (a) Any permittee who wishes to continue to discharge after the expiration date of the permittee's permit shall file an application for reissuance of the permit at least 180 days prior to its expiration.

(b) The department shall review each application for reissuance of a permit to ensure that:

1. The permittee is in substantial compliance with all the terms, conditions, requirements and schedules of compliance of the expired permit;

2. The department has current information on the permittee's production levels, waste treatment practices, and the nature, volume, content and frequency of the permittee's discharge;

3. The discharge is consistent with applicable effluent limitations and standards, water quality standards and any other legally applicable requirements, including any additions to, or revisions or modifications of such effluent limitations and standards, water quality standards, or other legally applicable requirements made during the term of the permit.

(c) If, after such review, the department finds that the requirements of par. (b) have not been met, the department shall not reissue such a permit.

(d) The department shall adhere to the notice and public participation procedures specified in ss. 283.39 to 283.49 in connection with each request for reissuance of a permit.

(e) Notwithstanding any other provisions of this section, any new source the construction of which is commenced after October 18, 1972, and which is so constructed to meet all standards of performance adopted under s. 283.19 shall not be subject to any more stringent standard of performance during either the 10−year period beginning on the date of completion of such construction or the period of depreciation or amortization of such facility for the purposes of section 167 or 169 of the internal revenue code, whichever period ends first.

(f) For the purposes of s. 283.63, denial of any application for the reissuance of a permit shall be treated as a denial of an application for a permit.

History: 1973 c. 74, 243; 1979 c. 221; 1985 a. 182 s. 57; 1991 a. 39; 1993 a. 16, 482; 1995 a. 227 s. 855; Stats. 1995 s. 283.53; 2011 a. 167; 2015 a. 307.

Timely review under s. 147.20 [now s. 283.63] of a modified permit does not reopen for consideration those unmodified portions of the permit for which the review period has expired. Village of Thiensville v. DNR, 130 Wis. 2d 276, 386 N.W.2d 519 (Ct. App. 1986).

283.55 Monitoring and reporting; access to premises.

(1) MONITORING AND REPORTING REQUIREMENTS. Every owner or operator of a point source who is required to obtain a permit issued under s. 283.31 shall do all of the following:

(a) Establish and maintain records of the volume of effluent discharged and the amount of each pollutant discharged from each point source under the owner's or operator's ownership or control.

(b) Make regular reports to the department on the volume of effluent discharged and the amount of each pollutant discharged from each point source under the owner's or operator's ownership or control.

(c) Install, use and maintain such monitoring equipment or methods, including where appropriate, biological monitoring methods, as are necessary to determine the volume of effluent discharged and to identify and determine the amount of each pollutant discharged from each point source under the owner's or operator's ownership or control.

(d) Sample the effluents discharged from each point source under the owner's or operator's ownership or control in accordance with such methods, at such locations and in such manner as the department shall by rule prescribe.

(dm) Report any unscheduled discharge of untreated sewage or other wastewater to the department orally within 24 hours of the discharge and in writing within 5 days after the discharge.

(e) Provide such other information as the department finds is necessary to identify the type and quantity of any pollutants discharged from the point source.

(1m) REPORTS TO WATER UTILITIES. The department shall determine, after consultation with the owner or operator of the point source, whether to notify a public utility, as defined in s. 196.01 (5), that furnishes water to the public about a discharge reported under sub. (1) (dm) that may affect the public utility. The department shall base the determination on the public health risk caused by the discharge.

(2) ACCESS TO MONITORING EQUIPMENT AND RECORDS. (a) Any duly authorized officer, employee or representative of the department shall have right to enter upon or through any premises in which an effluent source that is required to be covered by a permit issued under s. 283.31 is located or in which any records required to be maintained by this section are located, and may at reasonable times have access to and copy any records, inspect any monitoring equipment or method required by this section, and sample any effluents which the owner and operator of such source is required to sample under this section.

(b) No person shall refuse entry or access to any authorized representative of the department who requests entry under this subsection, and who presents appropriate credentials nor shall any person obstruct, hamper or interfere with any such inspection.

(c) Any records or other information furnished to or obtained by the department in the administration of this chapter, including effluent data, shall be a public record as provided in subch. II of ch. 19. Any records or other information, except effluent data, provided to the department may be treated as confidential upon a showing to the secretary that said records or information is entitled to protection as a trade secret as defined in s. 134.90 (1) (c). Noth-

ing herein shall prevent the use of any confidential records or information obtained by the department in the administration of this section in compiling or publishing general analyses or summaries, if such analyses or summaries do not identify a specific owner or operator.

(3) CONSTRUCTION OF LAW. Subsection (1) shall be construed so as not to require actions unnecessarily redundant with s. 299.15. When a publicly owned treatment facility is required under state or federal law to monitor discharges into its system, records of such monitoring provided to the department, if substantially in compliance with the requirements of this section, shall serve in the place of the monitoring which would ordinarily be required of a person discharging into such system. Nothing in this section shall be construed to affect the validity of s. 299.15, nor shall that section be construed to limit the application of this section.

History: 1973 c. 74; 1979 c. 221 s. 2202 (39); 1981 c. 335 s. 26; 1985 a. 236; 1993 a. 16, 482; 1995 a. 227 s. 865; Stats. 1995 s. 283.55; 1999 a. 85.

Cross−reference: See also chs. NR 210, 211, 218, and 219, Wis. adm. code.

283.57 Waste treatment service charges. No permit shall be issued to any publicly owned treatment works any part of which was constructed with the aid of federal grants made after March 1, 1973, unless it has adopted or will adopt a system of charges to assure that:

(1) Each recipient of waste treatment services shall pay its proportionate share of the cost of operation and maintenance, including replacement, of any waste treatment services provided by such treatment works;

(2) Each industrial user of the treatment works shall pay that portion of the cost of construction of the treatment works paid by the federal government allocable to the treatment of its industrial waste.

History: 1973 c. 74; 1995 a. 227 s. 874; Stats. 1995 s. 283.57.

283.59 Reporting of new discharges. (1) Any permittee discharging pollutants into the waters of the state shall report to the department any facility expansion, production increases, or process modifications which result in new or increased discharges of pollutants exceeding the terms of the permit. Such report shall be by submission of a new permit application or, if the new or increased discharge does not violate the effluent limitations specified in the permit, by submission of notice to the department of the nature of such new or increased discharge. The form and content of such notice shall be prescribed by departmental rule.

(2) Any person discharging, or intending to begin discharging, into a publicly owned treatment works who is or will become subject to the discharge reporting requirements of s. 283.37 (4), shall give notice to the department and the owner or operator of such works the following:

(a) Any introduction of pollutants into such treatment works from any new source; or

(b) Any types or volumes of pollutants being introduced into such treatment works which were not described in the report submitted under s. 283.37 (4).

(3) The owner or operator of a publicly owned treatment works receiving a notice under sub. (2) is subject to sub. (1), and shall also include information on the quality and quantity of effluent to be introduced into such treatment works and any anticipated impact of such pollutants on the quantity or quality of effluent to be discharged from such works.

(4) Notice of a new or increased discharge submitted to the department under this section shall be given at least 180 days prior to the date such new or increased discharge shall commence. The department, through the department of justice as provided under s. 283.89, may enforce violations of this section directly against persons subject to s. 283.37 (4).

History: 1973 c. 74; 1995 a. 227 s. 873; Stats. 1995 s. 283.59.

283.60 Waiver for certain nutrient management research projects. (1) The department may waive compliance with any requirement of this chapter or of a permit issued under this chapter for a research project for the purpose of evaluating advanced agricultural nutrient management tools and precision agricultural technology, if all of the following conditions are met:

(a) The department determines that the project is unlikely to have a negative impact on, or to threaten, the environment or public health.

(b) The department reviews and approves the project before the project begins.

(c) The person who will operate the project agrees to take necessary actions to maintain compliance with surface water and groundwater requirements under ch. 281 and this chapter, other than a requirement waived under this section, and to take necessary actions to regain compliance with those requirements if a violation occurs in the course of the project.

(2) A person seeking a waiver under sub. (1) shall apply to the department in writing. The department shall approve or deny an application in writing no more than 45 days after receiving a complete application. The department may approve an application with conditions, including requirements for reporting project activities to the department and limitations on the duration of the project or the waiver for the project.

(3) A project for which the department grants a waiver under sub. (1) is an agricultural practice for the purposes of s. 823.08.

History: 2011 a. 32, 188.

283.61 Exemption for certain alcohol fuel production systems. (1) DEFINITIONS. As used in this section:

(a) "Distillate waste product" has the meaning designated under s. 289.44 (1) (a).

(b) "Environmentally sound storage facility" has the meaning designated under s. 289.44 (1) (b).

(c) "Private alcohol fuel production system" has the meaning designated under s. 289.44 (1) (c).

(2) EXEMPTION. No permit is required under this chapter for the owner of a private alcohol fuel production system to discharge or dispose of any distillate waste product if the waste product is stored in an environmentally sound storage facility and disposed of using an environmentally safe land spreading technique and the discharge or disposal is confined to the property of the owner.

History: 1979 c. 221; 1995 a. 227 s. 848; Stats. 1995 s. 283.61.

283.62 Exemption for certain fruit and vegetable washing facilities. (1) DEFINITIONS. As used in this section:

(b) "Washing station" means a facility where fruits or vegetables are washed or cleaned after harvesting and before further processing.

(c) "Wash water" means water that has been used at a washing station to wash or clean fruits or vegetables and that may contain dirt or other substances removed from the fruits or vegetables during the washing process or biodegradable additives used during the washing process.

(d) "Wash water storage facility" means a facility, including a settling pond or lagoon, that is used to store wash water.

(2) EXEMPTION. The owner of a washing station may discharge or dispose of wash water, and may land spread or compost plant parts separated from the wash water, without a permit under this chapter if all of the following requirements are met:

(a) The washing station is not adjacent to or operated as part of a food processing plant, as defined in s. 97.29 (1) (h).

(b) All wash water is either stored in a sealed wash water storage facility or is dispersed on land owned or leased by the owner of the washing station in a manner which avoids ponding, runoff and nuisance conditions and in accordance with acceptable agricultural practices or acceptable practices for the land spreading of waste.

(c) All plant parts that are separated from the wash water are either composted or stored in a plant parts storage facility and dis-

posed of using an environmentally safe land spreading technique. The disposal or composting must be confined to property owned or leased by the owner of the washing station.

(d) For a washing station that anticipates operating at least 100 days per year or that operated at least 100 days during the immediately preceding year, do all of the following:

1. Register annually with the department as a washing station.

2. Submit annually an operating plan that implements best management practices and that is approved by the department.

3. Operate only in accordance with the approved operating plan.

History: 1995 a. 99; 1995 a. 227 s. 849; Stats. 1995 s. 283.62.

283.63 Review of permits, decisions, terms and conditions. (1) Any permit applicant, permittee, affected state or 5 or more persons may secure a review by the department of any permit denial, modification, termination, or revocation and reissuance, the reasonableness of or necessity for any term or condition of any issued, reissued or modified permit, any proposed thermal effluent limitation established under s. 283.17 or any water quality based effluent limitation established under s. 283.13 (5). Such review shall be accomplished in the following manner:

(a) A verified petition shall be filed with the secretary setting forth specifically the issue sought to be reviewed by the department. Such petition must be filed within 60 days after notice of any action which is reviewable under this section is issued by the department. The petition shall indicate the interest of the petitioners and the reasons why a hearing is warranted. Upon receipt of such petitions, the department shall provide a notice of public hearing in accordance with the requirements of s. 283.39 (1) at least 10 days prior to holding a public hearing thereon. The public notice shall be considered to be provided on the date specified in s. 283.39 (1m).

(am) After a verified petition for review is filed and until the last day for seeking review of the department's decision or a later date fixed by order of the reviewing court, any term or condition, thermal effluent limitation or water quality based effluent limitation which is the subject of the petition is not effective. All other provisions of the permit continue in effect except those for which an application for a variance has been submitted under s. 283.15 or 283.16. For those provisions for which a petition for review has been submitted under this section, the corresponding or similar provisions of the prior permit continue in effect until the last day for seeking review of the department's final decision or a later date fixed by order of the reviewing court.

(b) The department shall hold a public hearing at the time and place designated in the notice of hearing. At the beginning of each such hearing the petitioner shall present evidence to the department which is in support of the allegation made in the petition. All interested persons or their representative shall be afforded an opportunity to present facts, views or arguments relevant to the issues raised by the petitioners, and cross−examination shall be allowed. The department shall consider anew all matters concerning the permit denial, modification, termination, or revocation and reissuance. No person may be required to appear by attorney at any hearing under this section.

(c) Any duly authorized representative of the department may administer oaths or affirmations, compel the attendance of witnesses and the production of information by subpoena and continue or postpone the hearing to such time and place as the department determines.

(d) The department shall issue its decision on the issues raised by the petitioner within 90 days after the close of the hearing.

(2) The decisions of the department issued under this section shall be subject to judicial review as provided in ss. 227.52 to 227.58.

(3) Subsections (1) and (2) do not apply if a hearing on the permit application is conducted as a part of a hearing under s. 293.43.

(4) Subsections (1) and (2) do not apply to the modification of a permit which implements a decision under s. 283.15 or 283.16 or the denial of a request for a variance under s. 283.15 or 283.16. A proceeding under subs. (1) and (2) shall not be delayed pending completion of the review of a variance request under s. 283.15 or 283.16.

(5) Rules promulgated under s. 281.15 may not be reviewed under this section. The application of rules promulgated under s. 281.15 may be reviewed under this section.

History: 1973 c. 74; 1979 c. 110, 221; 1985 a. 182 s. 57; 1987 a. 27, 60; 1995 a. 227 s. 875; Stats. 1995 s. 283.63; 2011 a. 167; 2013 a. 378.

The judicial review procedure under this section, in conjunction with s. 227.05, 1983 stats [now s. 227.40], is exclusive. Sewerage Commission of Milwaukee v. DNR, 102 Wis. 2d 613, 307 N.W.2d 189 (1981).

Timely review under s. 147.20 [now s. 283.63] of a modified permit does not reopen for consideration those unmodified portions of the permit for which the review period has expired. Village of Thiensville v. DNR, 130 Wis. 2d 276, 386 N.W.2d 519 (Ct. App. 1986).

This section does not require DNR to hold a public hearing on a petition for review when the premise of the petition is that the permit fails to comply with basic requirements of the federal Clean Water Act and federal regulations promulgated thereunder. By approving the WPDES permit program and by failing to object to the permit, the EPA effectively determined that the permit complies with federal regulations. Requiring DNR to subsequently determine whether the permit complies with those same federal regulations would be to empower DNR to undercut the EPA's determination. Andersen v. Department of Natural Resources, 2011 WI 19, 332 Wis. 2d 41, 796 N.W.2d 1, 08−3235.

Sewerage Commission of Milwaukee explicitly held that the commission's failure to follow the procedure set forth in this section precluded a later challenge under ch. 227, because this section is the exclusive method of administrative and judicial review of the DNR's action. Because the contested case procedure to challenge a pollution discharge elimination system permit is exclusive, it follows that no other procedure, whether a rule challenge, a declaratory judgment, or as here, a premature judicial review petition, can circumvent it. Clean Water Action Council of Northeast Wisconsin v. Department of Natural Resources, 2014 WI App 61, 354 Wis. 2d 286, 848 N.W.2d 336, 13−2112.

SUBCHAPTER V

GENERAL PROVISIONS; ENFORCEMENT

283.81 Waiver. The department may waive compliance with any requirement of this chapter or shorten the time periods under this chapter to the extent necessary to prevent an emergency condition threatening public health, safety or welfare.

History: 1983 a. 410; 1995 a. 227 s. 850; Stats. 1995 s. 283.81.

283.82 Land application of sewage sludge. (1) The department shall oversee, set technical standards for, and regulate the application of sewage sludge to land.

(2) No city, village, town, or county may prohibit, through zoning or any other means, the application of sewage sludge to land if that application complies with this section and rules promulgated under this section.

(3) A city, village, town, or county may regulate the application of sewage sludge to land if the regulation is identical to regulations of the department under sub. (1).

History: 2005 a. 347.

283.83 Continuing planning process. (1) The department shall establish a continuing water quality management planning process which is consistent with applicable state requirements. The continuing planning process shall result in plans for all waters of the state, which plans shall include:

(a) Adequate effluent limitations and schedules of compliance;

(b) The incorporation of all elements of any applicable areawide water quality management plans, basin plans and statewide land use plans;

(c) Total maximum daily load for pollutants;

(d) Procedures for revision;

(e) Procedures for intergovernmental cooperation;

(f) Implementation procedures, including schedules of compliance, for revised or new water quality standards;

(g) Controls over the disposition of all residual waste from any water treatment processing;

(h) An inventory and ranking, in order of priority, of needs for construction of waste treatment works required to meet applicable requirements.

(1m) (a) The department shall approve or reject proposed revisions to the areawide water quality management plan for the area consisting of Dane County. The department shall base a decision under this paragraph on whether the proposed revision complies with the water quality standards under s. 281.15. The department may place conditions on its approval of a proposed revision to the plan.

(b) The department, or a person contracting with the department under par. (f), may not require information concerning a proposed revision to the areawide water quality management plan for the area consisting of Dane County other than information that is reasonably necessary to determine whether the proposed revision complies with water quality standards under s. 281.15.

(c) 1. Except as provided under subd. 2., the department shall approve or reject a proposed revision to the areawide water quality management plan for the area consisting of Dane County no later than the 90th day after the day on which the department, or a person contracting with the department under par. (f), receives the formal application for the proposed revision, including a letter from the applicant certifying that the proposed revision is consistent with water quality standards and information supporting the certification. If the department determines that the application is incomplete, the department shall notify the applicant in writing within 10 days after the department receives the application and may make only one request for additional information during the 90−day period under this subdivision.

2. If the department does not approve or reject a proposed revision to the areawide water quality management plan by the 90th day after the day on which the request is received, the revision is approved on the 120th day after the day on which the department receives the formal application for the revision, unless the department petitions the circuit court for an order extending the time to act on the proposed revision. The court may issue an order extending the time for the department to act on the proposed revision by an amount it determines is reasonable.

(e) The department may not contract with Dane County or any of its subunits, including the Dane County lakes and watershed commission, to provide advisory services relating to the review of proposed revisions to the areawide water quality management plan for the area consisting of Dane County.

(f) Except as provided in par. (e), the department may contract with a regional planning commission or other entity to provide advisory services relating to the review of proposed revisions to the areawide water quality management plan for the area consisting of Dane County, but the department may not delegate its authority to approve or reject proposed revisions. The deadline under par. (c) 1. is not affected by a contract entered into under this paragraph.

(2) When the department receives for review or prepares a new plan under sub. (1) or a revision to a plan under sub. (1) that includes a proposal to return water transferred from the Great Lakes basin to the source watershed through a stream tributary to one of the Great Lakes, the department shall provide notice of the plan or revision to the governing body of each city, village, and town through which the stream flows or that is adjacent to the stream downstream from the point at which the water would enter the stream.

History: 1973 c. 74; 1995 a. 227 s. 878; Stats. 1995 s. 283.83; 2007 a. 227; 2015 a. 55.

Cross−reference: See also chs. NR 121 and 212, Wis. adm. code.

283.84 Trading of water pollution credits. (1) The department shall administer a program for the trading of water pollution credits that is consistent with the federal Water Pollution Control Act, 33 USC 1251 to 1387. Subject to sub. (1m), under the program the department may authorize a person required to obtain a permit to increase the discharge of pollutants above levels that would otherwise be authorized in the permit if the person does one of the following:

(a) Reaches a binding, written agreement with another person who is required to obtain a permit under which the other person agrees to reduce the discharge of pollutants below the levels that would otherwise be authorized in the other person's permit.

(b) Reaches a binding, written agreement with another person who is not required to obtain a permit under which the other person agrees to reduce the amount of water pollution that it causes below the levels of water pollution that it causes when the agreement is reached.

(c) Reaches a binding, written agreement with the department or a local governmental unit, as defined in s. 16.97 (7), under which the person pays money to the department or local governmental unit and the department or local governmental unit uses the money to reduce water pollution or to provide cost−sharing, for the purposes of s. 281.16 (3) (e) or (4), for projects to reduce water pollution.

(d) Reaches a binding, written agreement with the department under which the person reduces the discharge of pollutants under another permit that the person holds below the levels that would otherwise be authorized in the other permit.

(e) Reaches a binding, written agreement with the department under which the person constructs a project or implements a plan that results in reducing the amount of water pollution from sources other than the source covered by the permit.

(1m) Under the program, the department may authorize a person to increase a discharge of pollutants above levels that would otherwise be authorized in the permit only if all of the following apply:

(a) The agreement under sub. (1) results in an improvement in water quality.

(b) The increase in pollutants and the reduction in pollutants provided for in the agreement under sub. (1) involve the same pollutant or the same water quality standard.

(d) The increase in pollutants and the reduction in pollutants occur within the same basin or portion of a basin, as determined by the department.

(3m) A person engaged in mining, as defined in s. 293.01 (9) or 295.41 (26), prospecting, as defined in s. 293.01 (18), bulk sampling, as defined in s. 293.01 (2m) or 295.41 (7), or nonmetallic mining, as defined in s. 295.11 (3), may not enter into an agreement under sub. (1).

(3r) The department shall include terms and conditions related to agreements under sub. (1) in new and reissued permits.

(4) The department shall modify the permits of persons entering into agreements under sub. (1) to enable the agreements to be implemented and to include terms and conditions related to the agreements.

(6) The department may promulgate rules for the administration of this section.

History: 1997 a. 27; 2001 a. 16; 2003 a. 33; 2011 a. 151; 2013 a. 1; 2017 a. 134.

283.85 Design of publicly owned treatment facilities. (1) The department shall encourage the design of publicly owned treatment works which provide for:

(a) The recycling of sewage pollutants by using them in agriculture, silviculture or aquaculture;

(b) The confined and contained disposal of those pollutants not recycled;

(c) The reclamation of wastewater;

(d) The ultimate disposal of sludge in a manner not resulting in environmental hazards; and

(e) The integration of facilities for sewage disposal with other facilities designed to dispose of solid waste and thermal pollution, for the purpose of producing revenues in excess of cost in the operation of the integrated facility.

(2) All plans submitted under s. 281.41 after July 22, 1973, for new treatment works, or modifications of treatment works, which will be eligible for construction grants or loans under s. 281.55 or 281.57 or under ss. 281.58 and 281.59, shall contain:

(a) Adequate analysis and data establishing that the works or modification is the most cost efficient method of meeting limitations and standards required of the facility; and

(b) A feasibility plan on using ultimate disposal of pollutants to land rather than to air or the waters of the state.

History: 1973 c. 74; 1979 c. 34 s. 2102 (39) (d); 1987 a. 399; 1989 a. 366; 1995 a. 227 s. 879; Stats. 1995 s. 283.85.

283.87 Liability for water pollution. (1) DEPARTMENT MAY RECOVER COSTS. In an action against any person who violates this chapter or any provision of s. 29.601 or chs. 30, 31, 281, 285 or 289 to 299 relating to water quality the department may recover the cost of removing, terminating or remedying the adverse effects upon the water environment resulting from the unlawful discharge or deposit of pollutants into the waters of the state, including the cost of replacing fish or other wildlife destroyed by the discharge or deposit. All moneys recovered under this section shall be deposited into the environmental fund.

(2) ADVERSE EFFECTS. The department may introduce evidence of the environmental pollution that resulted from the unlawful discharge or deposit and evidence of the potential of the water environment for public use if the unlawful discharge or deposit had not occurred in order to assist the court in determining the adverse effects upon the water environment resulting from the unlawful discharge or deposit and in determining the amount of liability under sub. (1).

(3) ADMINISTRATION OF AWARD. The court shall administer an award made under this section. An award made under this section may be used to remove, terminate or remedy the adverse effects of the discharge or deposit, to restore or develop the water environment for public use or to provide grants to municipalities consistent with any court order.

(4) AIDS TO MUNICIPALITIES; ENVIRONMENTAL DAMAGE COMPENSATION. The department may make grants to any county, city, village, or town for the acquisition or development of recreational lands and facilities from moneys appropriated under s. 20.370 (4) (dv). Use and administration of the grant shall be consistent with any court order issued under sub. (3). A county, city, village, or town which receives a grant under this section is not required to share in the cost of a project under this section.

History: 1973 c. 74; 1979 c. 221; 1995 a. 27; 1997 a. 248; 1999 a. 150 s. 375; 2005 a. 347; 2017 a. 59.

Note: 2005 Wis. Act 347, which affected this section, contains extensive explanatory notes.

283.89 Enforcement. (1) Except as provided in sub. (2m), whenever on the basis of any information available to it the department finds that any person is violating this chapter, any rule adopted thereunder or any term or condition of any permit issued pursuant to this chapter, including general permits issued under s. 283.35, the department shall refer the matter to the department of justice for enforcement under s. 283.91.

(2) The department of justice shall initiate the legal action requested by the department under sub. (1). In any action commenced by it under this subsection, the department of justice shall, prior to stipulation, consent order, judgment or other final disposition of the case, consult with the department for the purpose of determining the department's views on final disposition. The department of justice shall not enter into a final disposition different than that previously discussed without first informing the department.

(2m) If the department finds a violation of s. 283.33 (1) to (8) for which a person is subject to a forfeiture under s. 283.91 (2), the department may issue a citation and, if the department does issue a citation, the procedures in ss. 23.50 to 23.99 apply.

(3) In any criminal action commenced under s. 283.91, the department of justice may request the assistance of the district attorney of any county in which the violation occurred, and the district attorney shall provide the requested assistance.

(4) Any civil action on a violation shall be commenced in the circuit court for the county in which the violation occurred in whole or in part, unless all the parties consent to the commencement of the action in the circuit court for Dane County. Any criminal action on a violation shall be commenced in the circuit court for the county in which the violation occurred.

History: 1973 c. 74; 1979 c. 34; 1993 a. 16; 1995 a. 227 s. 881; Stats. 1995 s. 283.89; 1997 a. 193; 2001 a. 16.

283.91 Civil and criminal remedies. (1) The department of justice, upon a referral pursuant to s. 283.89, may initiate a civil action for a temporary or permanent injunction for any violation of this chapter or any rule promulgated thereunder or of a term or condition of any permit issued under this chapter.

(2) Any person who violates this chapter, any rule promulgated under this chapter, any term or condition of a permit issued under this chapter, or any rule promulgated or order issued under s. 200.45 (1) or (2) shall forfeit not less than $10 nor more than $10,000 for each day of violation, except that the minimum forfeiture does not apply if the point source at which the violation occurred is an animal feeding operation.

(3) Any person who willfully or negligently violates this chapter, any rule promulgated under this chapter or any term or condition of a permit issued under this chapter shall be fined not less than $10 nor more than $25,000 per day of violation, or imprisoned for not more than 6 months or both. If the conviction is for a violation committed after a first conviction of such person under this subsection, the person shall be fined not less than $10 nor more than $50,000 per day of violation, or imprisoned for not more than one year in the county jail or both. The minimum forfeiture does not apply if the point source at which the violation occurred is an animal feeding operation. In determining the amount of the fine under this subsection, the court shall assess an amount which represents an actual and substantial economic deterrent to the action which was the basis of the conviction.

(4) Any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this chapter or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this chapter shall be fined not less than $10 nor more than $10,000 or imprisoned for not more than 6 months or both.

(5) In addition to all other civil and criminal penalties prescribed under this chapter, the court may assess as an additional penalty a portion or all of the costs of the investigation, including monitoring, which led to the establishment of the violation. The court may award the department of justice the reasonable and necessary expenses of the prosecution, including attorney fees. The department of justice shall deposit in the state treasury for deposit into the general fund all moneys that the court awards to the department or the state under this subsection. The costs of investigation and the expenses of prosecution, including attorney fees, shall be credited to the appropriation account under s. 20.455 (1) (gh).

(6) For the purposes of subs. (3) and (4), the term "person" means in addition to the definition under s. 283.01 (11), any responsible corporate officer.

History: 1973 c. 74; 1983 a. 189 s. 329 (16); 1987 a. 157; 1989 a. 337; 1995 a. 27; 1995 a. 227 s. 876; Stats. 1995 s. 283.91; 1999 a. 150 s. 672; 2001 a. 109; 2003 a. 309.

283.93 Environmental pollution. Regulatory actions taken by the department to eliminate or control environmental pollution shall be exempt from the provisions of s. 1.11, other than:

(1) Involvement in federal financial assistance grants for the construction of publicly owned treatment works;

(2) Financial assistance under s. 281.55 or 281.57 or under ss. 281.58 and 281.59; and

(3) Issuance of permits or approvals for new sources of environmental pollution.

History: 1973 c. 74; 1979 c. 34 s. 2102 (39) (d); 1987 a. 399; 1989 a. 366; 1995 a. 227 s. 882; Stats. 1995 s. 283.93.

283.95 Savings clause. Except as provided in this chapter, nothing in this chapter shall be deemed to supersede any other statute or session law.

History: 1973 c. 74; 1995 a. 227 s. 880; Stats. 1995 s. 283.95.

Attachment E:

Watershed Organizations in the Southeast Handout

- Lake Lanier Handout - Alternative Nutrient Strategies