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 Virginia Pollutant Discharge Elimination System (VPDES) watershed permit for total nitrogen and total phosphorus discharges and nutrient trading in the Chesapeake Bay watershed in Virginia.

Permit Number: VAN000000

Name of Permittee: Owners of new or existing facilities holding individual VPDES permits that discharge, or propose to discharge, total nitrogen or total phosphorus to the Chesapeake Bay or its tributaries. There are three categories of owners required to register for coverage under this general permit:

Every owner or operator of a facility authorized by a VPDES 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 non-tidal waters, and

Any owner or operator of a facility authorized by a VPDES permit to discharge 40,000 gallons or more per day from a sewage treatment plant, or an equivalent industrial load, directly into tidal or non-tidal 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 VPDES 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 and is subject to an offset requirement.

Facility Location: Within the Chesapeake Bay Watershed of the Commonwealth of Virginia (except for the Washington, DC - Blue Plains WWTP, which is eligible to exchange nutrient credits under this permit). Localities within the Chesapeake Bay Watershed include all or portions of the Counties of Accomack, Albemarle, Alleghany, Amelia, Amherst, Appomattox, Arlington, Augusta, Bath, Bedford, Botetourt, Buckingham, Campbell, Caroline, Charles City, Chesterfield, Clarke, Craig, Culpeper, Cumberland, Dinwiddie, Essex, Fairfax, Fauquier, Fluvanna, Frederick, Giles, Gloucester, Goochland, Greene, Hanover, Henrico, Highland, Isle of Wight, James City, King and Queen, King William, Lancaster, Loudoun, Louisa, Madison, Mathews, Middlesex, Montgomery, Nelson, New Kent, Northampton, Northumberland, Nottoway, Orange, Page, Powhatan, Prince Edward, Prince George, Prince William, Rappahannock, Richmond, Roanoke, Rockbridge, Rockingham, Shenandoah, Spotsylvania, Stafford, Surry, Warren, Westmoreland, and York; and the Cities of Alexandria, Buena Vista, Charlottesville, Chesapeake, Colonial Heights, Covington, Fairfax, Falls Church, Fredericksburg, Hampton, Harrisonburg, Hopewell, Lexington, Lynchburg, Manassas, Manassas Park, Newport News, Norfolk, Petersburg, Poquoson, Portsmouth, Richmond, Staunton, Suffolk, Virginia Beach, Waynesboro, Williamsburg, and Winchester.

Receiving Waters: Surface waters within the Chesapeake Bay watershed, comprised of such waters within the Potomac, Rappahannock, York, and James River Basins, and the creeks and rivers of the Eastern Shore of Virginia that are west of Route 13 and drain into the Chesapeake Bay.

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. This permit will maintain the Water Quality Standards adopted by the Board. This general permit will replace the general permit VAN000000 which expires on December 31, 2021. Owners covered under the expiring general permit who wish to continue to discharge under the general permit must register for coverage under the new permit.

A public comment period was held from March 1 to April 30, 2021. Four public comment letters were received during this period. To address protective measures to help prevent the spread of COVID-19, an electronic public hearing and briefing was held via GoToWebinar teleconferencing on April 1, 2021 at 2 p.m. One comment was received during the public hearing. Only those comments received within the comment period will be considered by the board.

All pertinent information is on file and may be obtained at:

Virginia Department of Environmental Quality
Office of VPDES Permits
P.O. Box 1105
Richmond, Virginia 23218

email: Curtis.Linderman@deq.virginia.gov Telephone: (804) 698-4468

Notice of the public comment period and public hearing was mailed or emailed to all registered permittees, the regulatory development mailing list, and the permit public notice mailing list. Notice of the public comment period and public hearing was also published in the Richmond Times-Dispatch, The Washington Times, The Virginian Pilot and the Daily News Record.

I. 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 VPDES individual 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 Planning regulation (9VAC 25-720) 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 and are subject to offset requirements. 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 any 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 waste load allocation (WLA) to offset any increase in nutrient load from the discharge.

II. 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.

III. 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 Planning Regulation (9 VAC 25-720) codified the point source goals in the Tributary Strategy as waste load allocations (WLAs) for the respective dischargers.

On December 29, 2010, the U.S. Environmental Protection Agency (EPA) established the Chesapeake Bay Total Maximum Daily Load (TMDL) for Nitrogen, Phosphorus, and Sediment. The TMDL applies to the Bay watershed within Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia, and the District of Columbia. The TMDL seeks to ensure pollution control measures needed to fully restore the Bay. Three phases of Watershed Implementation Plans (WIPs) were developed by each of the Bay jurisdictions outlining implementation paths toward accomplishing their Bay TMDL allocation goals. The Phase III WIPs contain strategies to ensure that the necessary pollution control measures are in place by the end of 2025.

§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 WLA is used. The TMDL also includes WLAs 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.

Virginia's Watershed Implementation Plan for
EPA's Chesapeake Bay TMDL for Nitrogen, Phosphorus and Sediment

For the first 5-year term of the watershed general permit (1/1/2007 - 12/31/2011), WLAs were established by the Water Quality Management Planning 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).

In November 2010, Virginia submitted its first WIP to EPA. The initial Phase I WIP provided information to EPA to consider when it established point-source WLAs and non-point source load allocations within the Bay watershed segments designated as impaired. On December 29, 2010, the EPA established the Chesapeake Bay TMDL. The 2010 TMDL included nutrient WLAs in the York and James River Basins that were more restrictive than those contained in the original 2005 Tributary Strategies.

The second 5-year term of the watershed general permit (1/1/2012 – 12/31/2016) implemented additional nutrient reductions in accordance with Virginia's Phase I WIP. These reductions included a 43% reduction in Total Phosphorus WLAs 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.

In March 2012, Virginia submitted its Phase II WIP to EPA. The Phase II WIP subdivided the Bay TMDL allocations into target areas at a local government level. In addition, the Phase II WIP augmented the Phase I WIP by providing more localized strategies, developed with input from Virginia's stakeholders and localities.

The third 5-year term of the watershed general permit (1/1/2017 – 12/31/2021) included additional Total Nitrogen reductions from the aggregate Hampton Roads Sanitation District WLA in the James River as well as reductions in the individual Total Phosphorus WLAs for all but two of the significant James River dischargers. These reductions in James River WLAs completed the reductions necessary to meet Dissolved Oxygen water quality criteria in the James River as outlined in the Phase I WIP and Appendix X to the TMDL. These reduced WLAs were listed in Section 80 of the 2017 watershed general permit 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 Water Quality Management Planning Regulation. The tidal James River is unique in that it is subject to 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 Water Quality Management Planning Regulation consisting of Total Nitrogen and Total Phosphorus WLAs for 125 significant wastewater dischargers throughout the Bay watershed (39 in the James River Basin). Water quality modeling performed by EPA at that time indicated that the 39 significant WLAs, along with needed non-point source reductions, would achieve all of the new water quality criteria for Chlorophyll-a in the James River.

Subsequent water quality modeling performed by EPA in developing the 2010 TMDL established that additional nutrient reductions were necessary in the James River Basin to meet water quality criteria for both Dissolved Oxygen and Chlorophyll-a. The newly required reductions were significantly more stringent than those established during the 2005 development and adoption of the Water Quality Management Planning Regulation and the water quality criteria for Chlorophyll-a. To address the challenges created by this new goal, the Commonwealth implemented a phased implementation strategy for the James River Basin. The strategy was outlined in Section 1.6 of the Commonwealth's Phase I WIP, and is recognized in Appendix X to the Chesapeake Bay TMDL.

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 Water Quality Management Planning 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 were established in the Phase I WIP and Appendix X of the Chesapeake Bay TMDL. Actual schedules of compliance were established when the WLAs were added to the 2012 and 2017 watershed general permits and required 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. The 2017 permit cycle included 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 was included for Total Nitrogen reductions consistent with the Phase I WIP deadline above. The Phase 2 Total Phosphorus reductions were assigned for the first time in 9VAC25-820-80 of the 2017 watershed general permit regulation. In order to achieve those reductions, the WLA for Mead Westvaco was reduced to reflect a seasonal TMDL on the Jackson River. The WLAs of all but two James River dischargers were then reduced by an additional 18.9% to achieve the required total reduction. WLAs 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 was included for the Total Phosphorus reductions as it was established that all of the facilities complying with the previous WLAs, without the acquisition of credits, could also comply with the reduced WLAs in Section 80.

Chlorophyll-a

Water quality modeling performed in developing the Chesapeake Bay TMDL indicate 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 were necessary to meet Chlorophyll-a criteria in the James River. These reductions would require treatment at many facilities to levels considered to be at or below the current "limit of technology". Individual allocations to meet these reductions were not established. However the TMDL included 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. These aggregate TN and TP limitations are included in the proposed general permit.

In developing the 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 called into question the conclusions of the previous attainability determination. In 2011, VA DEQ began a study to ensure the Commonwealth's Chlorophyll-a criteria were appropriately protective of the river's designated uses and are based on the best scientific information and data currently available. As part of the study, DEQ also reviewed the modeling framework used to predict Chlorophyll response to changes in nutrient and sediment inputs in the James River. The study was completed and on June 27, 2019, amendments to the Chlorophyll-a numeric criteria were adopted by the State Water Control Board for the tidal James River. The amended Water Quality Standards regulation became effective January 9, 2020.

On November 25, 2019, DEQ initiated a rulemaking to amend the Water Quality Management Planning Regulation (9VAC25-720) to include (1) TN and TP WLAs necessary to meet the newly adopted Chlorophyll-a criteria for the James River, (2) reallocation of unneeded TN and TP WLAs from industrial facilities to other facilities registered under the general permit or reserving the allocations for future use and (3) establishing floating WLAs for significant municipal facilities in accordance with Initiative No. 52 of Virginia's Phase III WIP. A Regulatory Advisory Panel was formed and nine meetings were held. On December 9, 2020, the State Water Control Board authorized DEQ to publish the proposed amendments to the Water Quality Management Planning Regulation. The proposed amendments are currently in executive review and will be impacted by legislation approved by the General Assembly in 2021 (see HB 2129) eliminating the floating WLA concept in lieu of additional WLA reductions from facilities identified in the bill. Amendments to the Water Quality Management Planning Regulation necessary to implement HB 2129 will be the subject to a subsequent rulemaking as will completion of the amendments to include (1) TN and TP WLAs necessary to meet the newly adopted Chlorophyll-a criteria for the James River and (2) reallocation of unneeded TN and TP WLAs from industrial facilities to other facilities registered under the general permit or reserving the allocations for future use. The rulemaking to adopt Chlorophyll-a based WLAs in the Water Quality Management Plan will also include amendments to the watershed general permit to implement the new WLAs. The current watershed general permit reissuance includes no new WLA reductions other than the Phase 2 TN WLA reduction for the HRSD James River Aggregate identified in 9VAC25-820-80.

New TN and TP delivery factors have been established using EPA's Phase 6.0 Chesapeake Bay Watershed Model and will be used for discharges west of the fall line for each river basin. Discharges located east of the fall line for each river basin are assigned a delivery factor of 1.0. 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 2025, the new delivery factors will not be phased in until 2026. 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.

IV. 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 Planning Regulation does not address allocations for the direct CSOs or CS-C flows exceeding the dry weather flow design capacity of the treatment facilities. The regulation does recognize the concept of CS-C flows for Richmond, Lynchburg and Alexandria 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. The dry weather flow capacities are established as 45 MGD for the Richmond WWTP, 22 MGD for the Lynchburg STP and 54 MGD for the Alexandria Renewal Enterprises WWTP. For Richmond, Lynchburg and AlexRenew flows exceeding the dry weather design flow 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.

Information 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)].

V. Summary of Changes Compared to the Previous Regulation Cycle

Current section number	New section number, if applicable	Current requirement	Change, intent, rationale, and likely impact of new requirements
40.A		Requires submittal of a compliance plan by July 1, 2017 for facilities identified in 9VAC25-820-80 and subject to a limit effective date after January 1, 2017 as defined in 9-VAC25-820-70 I C 1.	Removed. Compliance dates are in the past.
40.B	40	Requires submittal of an annual compliance plan update.	Renumbered.
50.B		Transfer of conditions to new owner.	Change in style: removed "but not limited to".

Current section number	New section number, if applicable	Current requirement	Change, intent, rationale, and likely impact of new requirements
70		Effective date of permit	Updated the effective (2022) and expiration (2026) dates to reflect the reissuance date of the permit.
70.I.A.1.a		Authorization to discharge for owners of facilities that submit a timely Registration Statement.	Updated the date of timely Registration Statement submittal from November 1, 2016 to November 1, 2021 to reflect a new reissuance cycle of the general permit.
70.I.A.3.a		Continuation of permit coverage to owners of facilities that submit a timely Registration Statement.	Updated the date of timely Registration Statement submittal from November 1, 2016 to November 1, 2021 to reflect a new reissuance cycle of the general permit.
70.I.A.3.b.(1) 70.I.A.3.b.(2)		Continuation of permit coverage – board choices when an owner of an expiring or expired permit has violated or is violating the conditions of that permit.	Updated the year citation of the effective date of the previous cycle general permit (from 2012 to 2017).
70.I.B.3		Authorizes two or more consolidating facilities to receive aggregated mass nutrient load limits.	Deleted the word "delivered" preceding both "total nitrogen" and "total phosphorus" to read, "…*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:"* The change (in conjunction with subdivision 70.I.B.3.a, below) addresses situations where consolidating facilities may be assigned different delivery factors, or where delivery factors may change at different consolidating facilities in different increments in future years. Aggregated mass loads are to be applied end-of-pipe to discharged loads.
	70.I.B.3.a	Calculation of aggregated mass nutrient load limits for consolidating facilities.	Added: "*a. Aggregate mass limits will be calculated accounting for delivery factors in effect at the time of the consolidation."* See subdivision 70.I.B.3, above. Addresses situations where consolidating facilities may be assigned different delivery factors, or where delivery factors may change at different consolidating facilities in different increments in future years. Clarifies the calculation of aggregated mass loads are to account for delivery factors at the time of consolidation.
70.I.B.3.a	70.I.B.3.b	Conditions for calculating aggregate mass load limits if all of the affected consolidating 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.	Renumbered.
70.I.B.3.b	70.I.B.3.c	Conditions for calculating aggregate mass load limits if any, but not all of	Renumbered.

Current section number	New section number, if applicable	Current requirement	Change, intent, rationale, and likely impact of new requirements
		the affected consolidating 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.	
70.I.B.3.b.(3)	70.I.B.3.c.(3)	Formulae for calculating aggregated waste load allocations.	Corrected the time period associated with loading units, and added clarifying units for flow to read: Nitrogen Load (lbs/~~day~~year) = flow (MGD) x 8.0 mg/l x 8.345 x 365 days/year Phosphorus Load (lbs/~~day~~year) = flow (MGD) x 1.0 mg/l x 8.345 x 365 days/year
70.I.B.3.c	70.I.B.3.d	Conditions for calculating aggregate mass load limits if none of the affected consolidating 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.	Renumbered.
70.I.B.3.d	70.I.B.3.e	Conditions for facilities consolidated under common ownership or operation that were previously authorized by a Virginia Pollutant Abatement (VPA) permit issued before July 1, 2005.	Renumbered.
70.I.B.3.e	70.I.B.3.f	Conditions for facilities that become regional facilities that were previously authorized by a VPA permit issued before July 1, 2005.	Renumbered.
70.I.C.1		Schedules of compliance pertaining to the TN and TP load allocations that apply to facilities listed in section -80.	Removed. The previous permit cycle's compliance deadlines will need to be met by the January 1, 2022 effective reissuance date of the general permit.
70.I.C.2		Registration List individual dates of compliance with WLAs.	Removed. All compliance schedules will need to be completed by the January 1, 2022 effective reissuance date of the general permit.
70.I.C.3	70.1.C	January 1, 2023 schedule of compliance for significant dischargers in the James River Basin to meet aggregate discharged TN and TP WLAs.	Renumbered.
70.I.E.1 [Table]		Effluent TN and TP load limits for industrial facilities.	Changed the Effluent TN field to read, "≥ 100,000 – ~~350,000~~ lb/yr" and the Effluent TP field to read, "≥ 10,000 – ~~35,000~~ lb/yr. Industrial facility load limits are based on "equivalent" rather than STP design flows. Industrial facilities currently exist whose authorized equivalent loads exceed the upper ranges previously listed.

Current section number	New section number, if applicable	Current requirement	Change, intent, rationale, and likely impact of new requirements
70.I.G.1.c		Criteria for facilities treating domestic sewage > 1,000 GPD and ≤ 39,999 GPD to submit a registration statement with the department.	Added, "…*and is subject to offset requirements in accordance with Part II A 1 c of this general permit…"* to more closely conform to the criteria established in Code of Virginia §§62.1-44.19:14.C.5. and 15.A.5.
70.I.H.2		The registration statement shall be submitted to the DEQ Central Office, Office of VPDES Permits.	Added that once the 9VAC25-31-1020 (Electronic Reporting) date is established for this permit sector, registration statements shall be submitted electronically. Three months' notice shall be given by the department about this requirement. Some impact because once electronic reporting dates are established and technology is developed at the department, the permittees will have no choice but to file registrations statements electronically. No impact to the permittee is anticipated from this modification intended to comply with EPA's e-Reporting Rule and 9VAC25-31-1020.
70.I.J.3		Payment amounts to the Nutrient Offset Fund per pound of TN and TP	Updated based on staff judgement of an increase in unit costs relative to the previous permit cycle. The unit TN price increased from $4.60 to $5.08 per pound, and the unit TP price increased from $10.10 to $11.15 per pound. Removed "but not be limited to" (change of style).
9VAC25-820-70 Part II.B.3		Acquisition of wasteload allocations, priority of options.	Change in style: removed "but not be limited to".
9VAC25-115-50 Part III Conditions Applicable to All Permits		Part III contains conditions applicable to all permits.	Added under Part III I (Reports of noncompliance), a permittee shall promptly submit any facts or incorrect information submitted with a registration statement or any report to the department. This wording is being added at reissuance for all general permits for consistency with the VPDES and NPDES regulations. Minor impact since permittees need to be aware of this new requirement if they discover an error on any report submitted or registration statement on which permit coverage was based. In Part III W (Inspection and entry) added "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… 2. Have access to… 3. Inspect…and 4. Sample... For purposes of this section, the time for inspection shall be deemed reasonable during regular business hours ~~and~~ or whenever the facility is discharging. Nothing contained herein shall make an inspection unreasonable during an emergency.

Current section number	New section number, if applicable	Current requirement	Change, intent, rationale, and likely impact of new requirements
			This wording is being added at reissuance for all general permits for consistency with the VPDES and NPDES regulation. Other changes made in Part III are minor and were done to be consistent with other general permits.

VI. 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 subdivision 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 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 subdivision includes a provision requiring that at the time of registration, new or expanding facilities provide WLAs to offset any increase in nutrient loads for a period of at least 5 years.

In 2015, the EPA published the National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule. The federal rule requires the use of electronic reporting instead of paper-based reporting. Effective July 2017, the VPDES Permit Regulation was amended to incorporate the federal Electronic Reporting Rule. Part XI of the VPDES Permit Regulation (9VAC 25-31-950 through -1030) establishes requirements for the electronic reporting of information by VPDES permittees, including facilities or entities seeking coverage under VPDES general permits.

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.

J.1. 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 subdivision carries forward a 2017 general permit 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 based on staff judgement of an increase in unit costs relative to 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”. This condition is being carried forward from the previous permit cycle. During the development of the 2017 general 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.

Basis for Part II conditions

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 WLAs to offset new or increased loads. Allocations may be provided in the form of WLAs 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 subdivision carries forward Part II.B.1.b.(1) provisions added during the 2017 general permit cycle 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.

Part III.I.4 was added to the 2022 general permit for consistency with 9VAC 25-31-190.L.9.

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.

VII. Fact Sheet Attachments

Attachment No. 1	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

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).