

COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Division of Water Quality Programs
Ellen Gilinsky, Ph.D., Director

Subject: Addendum No. 1 to Guidance Memo No. 07-2008, Amendment No. 2
Permitting Considerations for Facilities in the Chesapeake Bay Watershed

To: Regional Directors, Deputy Regional Directors, Regional Water Permit Managers

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Summary:

This guidance answers questions about the conditions under which (1) wasteload allocations (WLAs) and (2) compliance credits may be acquired under The Chesapeake Bay Watershed Nutrient Credit Exchange Program.

The Chesapeake Bay Watershed Nutrient Credit Exchange Program was established in 2005 when sections 62.1-44.19:12 through 62.1-44.19:19 were added to Chapter 3.1 of Title 62.1 of the Code of Virginia. For the first time in the water permitting program it allows for the limited acquisition of (1) total nitrogen and total phosphorus WLAs established under Subsection C of Sections 50, 60, 70, 110 and 120 of the Water Quality Management Planning (WQMP) Regulation (9 VAC 25-720), and (2) point source nitrogen and total phosphorus compliance credits as defined in the 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.). This document outlines the conditions in 9 VAC 25-820-10 et seq. under which WLAs and compliance credits may be acquired.

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:

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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.

Acquisition of Wasteload Allocations

It is important to distinguish between WLAs and compliance credits. WLAs are discharge allowances that may be acquired to accommodate new or expanding facilities or when two or more facilities consolidate. Such acquisitions are noted on the general permit registration list. Compliance credits are generated by a permittee discharging less than their WLA. Credits may be traded at the end of each calendar year to ensure compliance to another facility that otherwise exceeded their own WLA. Compliance credit trades are not recorded in the general permit.

When may WLAs be acquired?

The provisions under which allocations can be acquired are specified by statute and regulation, which only provide for the transfer of allocations in two cases:

1. the consolidation of two or more existing facilities,
2. to offset increased nutrient loads from new or expanding dischargers.

Allocation acquisitions under these two provisions are included on the general permit registration list after opportunity for public comment and do not require modification of the WQMP Regulation nor approval by the State Water Control Board. A transfer of allocation under any other circumstances is not authorized by the statute or the regulation and could only occur after modification of the WQMP Regulation through the APA process to reflect the transfer.

For what period may WLAs be traded?

Acquisitions of allocations in the event of a treatment plant consolidation are expected to be permanent in most cases. The acquisition of allocations to accommodate new or expanding dischargers may be for any term agreeable to the two parties. Most facilities are not expected to be willing to permanently give up a portion of their WLA. However 5, 10 or 15-year transfer agreements are expected to be available as the trading market matures.

What is an offset plan?

New or expanding facilities designed to discharge greater than or equal to 40,000 gpd (or equivalent load for industries) must offset any increase in discharged nutrient load. Any such new or expanded facility must register under the watershed general permit and provide an "offset plan" indicating how allocations will be obtained to offset any increase in nutrient loads.

Where may new or expanding facilities obtain allocations?

New or expanding facilities may obtain allocations from the following sources:

- From one or more permitted facilities who are not currently making use of their full allocation
- Through the acquisition of nonpoint source (NPS) reductions provided by best management practices (BMPs) in accordance with Part II.B.1.b. of the general permit. These offsets are subject to a 2:1 trading ratio (2 lbs removed by the BMP for every pound discharged by the point source). Further guidance on obtaining nonpoint source reductions from agricultural BMPs is available in the DEQ publication Trading Nutrient Reductions from Nonpoint

Source Best Management Practices in the Chesapeake Bay Watershed: Guidance for Agricultural Landowners and Your Potential Trading Partners.

- Until such time as the Board finds that no allocations are reasonably available in an individual tributary, allocations may be acquired through payments made into the Virginia Water Quality Improvement Fund in accordance with Part II.B.1.c. of the watershed general permit.
- Through other means as may be approved by the Department on a case-by-case basis.

Note that prior to purchasing a WLA from the WQIF or applying for an allocation through other means approved by DEQ on a case-by-case basis, the applicant must demonstrate to the satisfaction of the Board that they have made a good faith effort to acquire sufficient allocations from other point sources and from nonpoint source reductions via BMPs and that such allocations are not reasonably available taking into account timing, cost and other relevant factors. This provision, found in Part II.B.3. of the watershed general permit, prioritizes the first two options listed above.

When must the allocations to offset increased loads be provided?

Neither the regulation nor the law indicates the period which the offset plan must cover. It is recommended that any offset plan include at a minimum:

- a long term plan for acquiring allocations to offset any increased nutrient load over the life of the project, and
- allocations “in hand” to cover any increased nutrient load over at least the first 5 years of operation of the new or expanded facility.

Dischargers are encouraged to acquire allocations “in hand” for as long a period beyond the first 5 years as possible. However, it is up to the traders to establish their contract terms. No discharge may occur without having proof of an adequate allocation as reflected on the general permit registration list.

What dischargers may provide allocations to a new or expanded discharger?

In the case of consolidating facilities, any existing facility that is going off-line can transfer their WLA (or permitted design capacity in the case of non-significant dischargers) to the new receiving facility under the terms included in Part I.B.3 of the watershed general permit.

In the case of new or expanding facilities, any general permit registrant that holds a WLA may provide all or a portion the allocation to a new or expanded facility subject to the restrictions listed below.

What other restrictions are there on the allocation trades?

- All allocations must be generated and used in the same calendar year. (Part II.B.2.a)
For a point source to point source trade, this means for example that a new facility needing an allocation of 2,000 lbs TN beginning in 2011 must acquire that allocation for 2011 and the following four years at a minimum. In this example, the registration list will be modified to transfer 2,000 lbs of the seller’s TN WLA to the new facility for the term of the trade. In the case of allocations generated by NPS reductions or other proposals approved

by DEQ on a case-by-case basis, the BMPs or other projects must be installed and generating the required reductions in the year in which they are used.

- Allocations must be generated in the same tributary in which they are used. (Part II.B.2.b)
- Allocation exchanges may not affect any requirement to comply with local water quality-based limitations, as determined by the Board. (Part II.B.2.c)
- Allocations provided by a permitted point source must 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 WLA. (Part II.B.2.e)
- In the case of NPS reductions (and other proposals approved by DEQ on a case-by-case basis that are not permanent in nature), the allocations must be authenticated by the permittee by February 1st immediately following the calendar year in which the allocations are applied. This requirement should be incorporated into the facility's individual VPDES permit and will consist of a report documenting the practices that were in place in the previous calendar year that produced the required nutrient reductions. (Part II.B.2.d)
- In the case of NPS reductions (and other proposals approved by DEQ on a case-by-case basis that are not permanent in nature), by June 1st of each year the permittee must certify that he has acquired sufficient allocations to satisfy his compliance obligations for the following calendar year. DEQ will provide this certification form to the permittee. The permittee must comply with the terms and conditions contained on the form submitted to DEQ. (Part II.B.2.f)

What happens to WLAs at industries that close?

Wasteload allocations are established by the Board to protect water quality while accommodating the economic and social needs of the discharger. If the basis for that wasteload allocation changes (e.g. an industry shuts down, the property transfers to an industry with different waste characteristics, etc.), the Board reserves the right to modify the wasteload allocations included in the WQMP Regulation accordingly. In the event of a modification to the WQMP Regulation, any portion of the original allocation deemed by the Board to be unnecessary to the discharger will revert to the Commonwealth for possible reallocation. DEQ expects to allow industries that have shut down to maintain their allocations for some period of time to market those properties to other prospective users or to reactivate the previous discharge. Until such time as the WQMP Regulation is modified through the petition process, whether initiated by DEQ or others, the discharger may also provide all or a portion of the allocation to a new or expanding discharger subject to the restrictions listed above.

Are allocation acquisitions subject to DEQ approval?

Yes. Acquisitions of allocations are subject to DEQ approval after an opportunity for public comment. Approval of an allocation transfer is indicated by the modification to the appropriate registration list. Consistency with the provisions in the regulation will serve as the basis for any such approvals.

If a facility installs an alternative disposal system, may they trade their unused WLA?

In the event that the nutrient load discharged by a facility is reduced or eliminated by an alternative disposal method (e.g. land treatment system, drainfield, etc.), the Board may allow the transfer of all

or a portion of the allocation on a case-by-case basis. Such evaluations should account for the potential for nutrients from the alternative disposal system to reach Chesapeake Bay waters. For example, if a discharged load is reduced by the installation of a septic tank/drainfield treatment system, the portion of the original allocation allowed to be traded may be reduced by the expected load from the drainfield system.

Does the WLA have to be in effect in the general permit in order for the allocation to be traded?

Yes. The WLA (limit) must be in effect for any year that a facility chooses to trade a portion of their respective WLA.

Acquisition of Compliance Credits

What is the Virginia Nutrient Credit Exchange Association (the Exchange)?

The Exchange is a non-stock corporation formed to coordinate and facilitate participation in the nutrient credit exchange program by its members.

Does a permittee have to be a member of the Exchange to trade?

No. A permittee does not have to be a member of the Exchange to acquire compliance credits.

What is a “delivered” load?

Delivered load is the portion of the discharged load that reaches tidal waters. It accounts for the portion of the discharged load that is removed from the water column by denitrification, macrophytic uptake, etc. prior to reaching tidal waters. All trades (i.e. WLAs and compliance credits) are made in terms of delivered loads. TN and TP delivery factors for each permittee are included on the registration list.

When may compliance credits be exchanged?

Compliance credits are traded as a means of “truing up” compliance for the previous calendar year. All permittees subject to the watershed general permit must provide an annual report by February 1st indicating the discharged and delivered Total Nitrogen (TN) and Total Phosphorus (TP) loads for the previous calendar year. By April 1st, DEQ staff will compile the annual loads into a report to be published on the agency website. The permittees have until June 1st to certify to DEQ that they have acquired sufficient credits to cover any exceedance of their WLA. This certification must be provided on a DEQ provided form which will also be made available on the DEQ website.

Note that the Virginia Nutrient Credit Exchange Association (the Exchange) has adopted a system of Class A and Class B compliance credit exchanges. Class A exchanges are advanced agreements among their members to supply or purchase guaranteed compliance credits at a set price. Class B credits are those exchanged as part of the “truing up” process described in the previous paragraph. This system was developed in order to give a permittee assurance that credits would be available if they chose not to proceed with a facility upgrade. This system is an important element in the compliance plan submitted by the Exchange on behalf of their members but is considered by DEQ to be a system that is internal to the Exchange’s workings. In reviewing compliance trades for the

previous calendar year, all trades will be reviewed based on the Class B or “truing up” system authorized in the general permit (i.e. credits generated will be based on actual discharged loads regardless of the Class A agreements).

Does the WLA have to be in effect in the general permit in order for compliance credits to be generated?

Yes. The applicable WLA (limit) must be in effect in order to generate compliance credits.

What other restrictions are there on the exchange of compliance credits?

Like wasteload allocations, compliance credits must be:

- Generated and used in the same calendar year, and
- Generated and used in the same tributary, and
- Must not affect any requirements to comply with local water quality based limitations.
- Must 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 (until a facility is constructed and has commenced operation, such credits are held, and may be sold, by the Water Quality Improvement Fund).

The watershed general permit is issued for the protection of the Chesapeake Bay and its tidal tributaries. Only one local water quality based restriction has been identified in these tidal waters. Allocations in the middle and upper portions of the James River are limited by a “hot spot” located below the confluence with the Chickahominy River. The registration list for the James River therefore includes a footnote limiting trading in this basin. Lower James River permittees may purchase allocations or compliance credits from dischargers located upstream of the “hot spot” but may not similarly sell their allocations or compliance credits to upstream permittees.

What are Water Quality Improvement Fund (WQIF) held credits?

Permittees that operate treatment facilities with a design flow (or equivalent industrial activity) less than that for which the WLA was granted may make use of the entire allocation for their own compliance purposes. However for the purpose of generating compliance credits, the WLA is prorated to reflect the facility’s actual design flow. Any compliance credits that would be generated by the portion of the WLA represented by the unconstructed capacity are held by the WQIF and may be sold under Part I.J.1.c of the permit.

For example, a permittee is granted a TN WLA of 30,000 lbs/yr for a treatment plant with a design flow of 2.0 MGD. If at the end of the calendar year the facility is rated at a design flow of only 1.0 MGD and discharged a total of 23,000 lbs TN then they are in compliance with the permit. However, the 7,000 lbs of TN credits would all be held and potentially sold by the WQIF. At a design flow of 1.0 MGD, the facility would only be able to directly sell credits generated under a prorated WLA of 15,000 lbs/yr.

Can the WQIF sell any other compliance credits?

Yes. Under the watershed general permit a permittee may purchase compliance credits from the WQIF provided that the WQIF has credits “in hand” to sell and that the permittee certifies that they

have been unable to acquire credits from other permittees in the basin. Purchases of credits from the WQIF are subject to the following conditions:

- Must be generated and used in the same calendar year.
- Must be generated and used in the same tributary.
- Must not affect any requirement to comply with local water quality-based limitations, as determined by the board.

The WQIF currently has two sources of compliance credits that could be sold:

- The WQIF held credits generated by facilities that have not constructed treatment plants rated at the design flow that served as the basis for the WLA.
- Any compliance credits generated by a permittee in the previous calendar year that has not been traded as of June 1st.

How much do compliance credits sold by the WQIF cost?

The watershed general permit currently prices compliance credits at \$11.06/lb for TN and \$5.04/lb for TP. These prices are based on the average costs of nutrient reductions paid for by previous WQIF financed projects (capital and operating expenses amortized over 20-years).

Can a facility “retire” compliance credits?

Trading is voluntary and any permittee may choose not to sell their compliance credits.

However, § [62.1-44.19:18](#) of the Code of Virginia requires that the general permit provide for the acquisition of nitrogen and phosphorus credits through payments into the Virginia Water Quality Improvement Fund (WQIF). This provision requires that the Commonwealth provide for the purchase of credits “until such time as the Board finds that no credits are reasonably available” is unique to the Virginia trading program. For this reason, DEQ has taken the position that any credits generated by general permit registrants that are unused as of the June 1st trading deadline may be sold by the WQIF if there is a demand for those credits.

Example No. 1 – Total Basin Load in Compliance with Total WLA

	WLA	Actual Discharge	Credits Generated
Facility A	1000	1200	0
Facility B	1000	200	800
Facility C	1000	1600	0
Facility D	1000	900	100
Total	4000	3900	

Facilities A and C need 800 credits and 900 were generated. If facilities B and D both decide not to trade, the WQIF could sell all 900 credits.

Example No. 2 – Total Basin Load Exceeds Total WLA

	WLA	Actual Discharge	Credits Generated
Facility A	1000	1200	0
Facility B	1000	200	800
Facility C	1000	1600	0
Facility D	1000	1400	0
Total	4000	4400	

Facilities A, C and D need 1200 credits. Facility B generated 800 credits but chooses not to trade. Under this example, it may appear counter intuitive that the WQIF could sell credits when the aggregate load cap was exceeded. However, credits must be determined on a facility-by-facility basis. The WQIF can sell all 800 credits just as Facility B had the option to do. Facilities A, C and D violate their aggregate limit by the same 400 pounds that exceeded the basin load cap.