CHAPTER 40.

POLICY REGULATION FOR NUTRIENT ENRICHED WATERS AND DISCHARGERS WITHIN THE CHESAPEAKE BAY WATERSHED.

9 VAC 25-40-10. Purpose.

This policy regulation provides for the control of discharges of nutrients from point sources affecting state waters that have been are designated "nutrient enriched waters" in 9 VAC 25-260-350 or are located within the Chesapeake Bay watershed, which consists of the following Virginia river basins: Potomac River Basin (9 VAC 25-260-390 and 9 VAC 25-260-400), James River Basin (9 VAC 25-260-410, 9 VAC 25-260-415, 9 VAC 25-260-420, and 9 VAC 25-260-430), Rappahannock River Basin (9 VAC 25-260-440), Chesapeake Bay and small coastal basins (9 VAC 25-260-520, Sections 2 through 3g), and the York River Basin (9 VAC 25-260-530).

The provisions of this regulation and the Water Quality Management Planning Regulation (9 VAC 25-720) constitute the nutrient reduction requirements for point source discharges in the Chesapeake Bay Watershed to protect the Chesapeake Bay and its tidal rivers.

9 VAC 25-40-20. Authority. (Repealed.)

The board has adopted this policy under the authority of §§ 62.1-44.15(3), 62.1-44.15(10) and 62.1-44.15(14) of the Code of Virginia.

9 VAC 25-40-25. Definitions.

The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

"Equivalent load" means 2,300 pounds per year of total nitrogen and 300 pounds per year of total phosphorus at a flow volume of 40,000 gallons per day; 5,700 pounds per year of total nitrogen and 760 pounds per year of total phosphorus at a flow volume of 100,000 gallons per day; and 28,500 pounds per year of total nitrogen and 3,800 pounds per year of total phosphorus at a flow volume of 500,000 gallons per day.

"Expansion" or "expands" means initiating construction [ef a at an existing] facility after July 1, 2005, to increase treatment capacity, except that the term does not apply in those cases where a Certificate to Construct was issued on or before July 1, 2005.

"Point source dischargers" or "dischargers" do not include permitted discharges of noncontact cooling water or storm water.

9 VAC 25-40-30. Strategy for "nutrient enriched waters-" outside of Chesapeake Bay Watershed.

As specified here, the board shall reopen the NPDES permits of certain point source dischargers to "nutrient enriched waters" and shall impose effluent limitations on nutrients in the discharges authorized by those permits and certain new permits.

A. All dischargers authorized by NPDES VPDES permits issued on or before July 1, 1988, to discharge 1 1.0 MGD or more to "nutrient enriched waters" shall be required to meet a monthly average total phosphorus effluent limitation of 2 mg/1 as quickly as possible and in any event within three years following modification of the NPDES permit 2.0 mg/l.

At the time of medification of the NPDES permit, any discharger who voluntarily accepts a permit to require installation and operation of nitrogen removal facilities to meet a monthly average total nitrogen effluent limitation of 10 mg/1 for the months of April through October shall be allowed an additional year to meet the phosphorus effluent limitation in 9 VAC 25-40-30 A.

- B. All New source dischargers as defined in 9 VAC 25-30-10- with a permit issued that commence discharging 9 VAC 25-21 9 VAC 25-31 with a permit issued after July 1, 1988, and a design flow greater than or equal to 0.05 are authorized by VPDES permits to discharge 0.050 MGD who propose to discharge or more to "nutrient enriched waters" shall be required to meet a monthly average total phosphorus effluent limitation of 2 mg/l.
- C. This policy regulation shall not be construed to relax any effluent limitation concerning a nutrient that is imposed under any other requirement of state or federal law. No time extensions outlined in 9 VAC 25-40-30 A for installation and operation of nitrogen removal facilities shall be granted to a discharger if such an effluent limitation or a time extension is already imposed under any other requirement of state or federal law or regulation.
- D. Any discharger to "nutrient enriched waters" that is located within the Chesapeake Bay Watershed is not subject to the requirements of this section.

9 VAC 25-40-40. Permit amendments.

Whenever the board determines that a permittee has the potential for discharging monthly average total phosphorus concentrations greater than or equal to $\frac{2 \text{ mg}}{1.0 \text{ x}}$ or monthly average total nitrogen concentrations greater than or equal to $\frac{40 \text{ mg}}{1.0 \text{ x}}$ 10 mg/l to "nutrient enriched waters," the board may reopen the NPDES VPDES permit to impose monitoring requirements for nutrients in the discharge.

9 VAC 25-40-50. Possibility of further limitations.

The board anticipates that, following implementation of the foregoing requirements and evaluation of effects of this policy regulation and of the results of the nonpoint source control programs, further limitations on discharges of phosphorus or of other nutrients may be necessary to control undesirable growths of aquatic plants.

9 VAC 25-40-70. Strategy for Chesapeake Bay Watershed.

- A. [In recognition that nutrient reductions from point source discharges have a significant role in the restoration of the Chesapeake Bay and its tidal rivers since they provide a more immediate benefit to water quality and are more reliable than reductions from nonpoint sources, it shall be the policy of the board that point source dischargers within the Chesapeake Bay Watershed utilize biological nutrient removal technology or its equivalent whenever feasible, as provided by subsection B of this section. For the purposes of this chapter and the related sections of 9 VAC 25-720, the terms "point source dischargers" or "dischargers" do not include permitted discharges of noncontact cooling water or storm water operate installed nutrient removal technologies at the treatment efficiency levels for which they were designed.]
- [BA]. As specified herein, the board shall issue and reissue the VPDES permits of certain point source dischargers within the Chesapeake Bay Watershed and shall impose effluent concentration limitations on nutrients in the discharges authorized by those permits 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.
 - 1. Except as provided under subdivision 4 of this subsection, —all significant dischargers, as defined in 9 VAC 25-720, authorized by VPDES permits issued on or before the effective date of this chapter shall achieve an annual average total nitrogen effluent limitation of not more than 8.0 mg/l and an annual average total phosphorus effluent limitation of not more than 1.0 mg/l; provided, however, these dischargers must achieve an annual total nitrogen waste load allocation and an annual total phosphorus waste load allocation as required by the Water Quality Management Planning Regulation (9 VAC 25-720). The applicable limitations shall be achieved within four years following reissuance or major modification of the VPDES permit, but in no case later than December 31, 2010 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 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 install state-of-the-art nutrient removal technology at the time of the expansion and achieve an annual average total nitrogen effluent concentration of 3.0 milligrams per liter and an annual average total phosphorus effluent concentration of 0.3 milligrams per liter.
 - 2. Except as provided under subdivision 4 of this subsection, -all dischargers that do not meet the definition of a significant discharger and are authorized by VPDES permits issued on or before July 1, 2004, to discharge 0.040 MGD or more shall be required to achieve an annual average total nitrogen effluent limitation of 8.0 mg/l and an annual average total phosphorus

effluent limitation of 1.0 mg/l. These limitations shall be included in reissued or modified permits after December 31, 2010, and shall be achieved within four years following reissuance or major modification of the VPDES permits 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 100,000 gallons or more per day up to and including 499,999 gallons per day, or an equivalent load, directly into nontidal waters shall install, at a minimum, biological nutrient removal technology at the time of the expansion and achieve an annual average total nitrogen effluent concentration of 8.0 milligrams per liter and an annual average total phosphorus effluent concentration of 1.0 milligrams per liter.

- 3. Except as provided under subdivision 4 of this subsection, —all new dischargers or expanded discharges of nitrogen or phosphorus authorized by VPDES permits issued after the effective date of this chapter to discharge 0.040 MGD or more shall achieve an annual average total nitrogen effluent limitation of 3.0 mg/l and an annual average total phosphorus effluent limitation of 0.30 mg/l 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 install:
 - a. At a minimum, biological nutrient removal technology at any facility authorized to discharge up to and including 99,999 gallons per day, or an equivalent load, directly into tidal and nontidal waters or up to and including 499,999 gallons per day, or an equivalent load, to nontidal waters and achieve an annual average total nitrogen effluent concentration of 8.0 milligrams per liter and an annual average total phosphorus effluent concentration of 1.0 milligrams per liter; and
 - b. State-of-the-art nutrient removal technology at any facility authorized 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 and achieve an annual average total nitrogen effluent concentration of 3.0 milligrams per liter and an annual average total phosphorus effluent concentration of 0.3 milligrams per liter.
- 4. On a case-by-case basis, a discharger may demonstrate to the satisfaction of the board through treatability, engineering, or other studies that biological nutrient removal technology or its equivalent at a point source discharge cannot achieve the effluent limitations of subdivision 1, 2 or 3 of this subsection, as applicable. In these cases, the board shall require alternative effluent limitations the board deems appropriate for that discharger; the board may establish a technology-based standard and associated concentration limitation less stringent than the applicable standard specified in subdivision 1, 2 or 3 of this subsection, as applicable, 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

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9 VAC 25-40. Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed (amending 9 VAC 25-40-10, 9 VAC 25-40-30, 9 VAC 25-40-40, and 9 VAC 25-40-50; adding 9 VAC 25-40-25, 9 VAC 25-40-70; and repealing 9 VAC 25-40-20. 9 VAC 25-720. Water Quality Management Planning Regulation (amending 9 VAC 25-720-10, 9 VAC 25-720-50, 9 VAC 25-720-70, 9 VAC 25-720-110); adding 9 VAC 25-720-30, 9 VAC 25-720-40)

comply with his waste load allocation without reliance on nutrient credit exchanges pursuant to § 62.1-44.19:18 of the Code of Virginia, provided, however, the discharger must achieve an annual total nitrogen waste load allocation and an annual total phosphorus waste load allocation as required by the Water Quality Management Planning Regulation (9 VAC 25-720).

5. Any effluent limitation concerning a nutrient that is imposed under any other requirement of state or federal law or regulation that is more stringent than those established herein shall not be affected by this regulation.

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 B 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.

[C. DC]. Notwithstanding subsections A and B of this section, point source dischargers within the Chesapeake Bay Watershed are also governed by the Water Quality Management Planning Regulation (9 VAC 25-720).

[CHAPTER 720

WATER QUALITY MANAGEMENT PLANNING REGULATION]

9 VAC 25-720-10. Definitions.

The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

"Assimilative capacity" means the greatest amount of loading that a water can receive without violating water quality standards, significantly degrading waters of existing high quality, or interfering with the beneficial use of state waters.

"Best management practices (BMP)" means a schedule of activities, prohibition of practices, maintenance procedures and other management practices to prevent or reduce the pollution of state waters. BMPs include treatment requirements, operating and maintenance procedures, schedule of activities, prohibition of activities, and other management practices to control plant site runoff, spillage, leaks, sludge or waste disposal, or drainage from raw material storage.

"Best practicable control technology currently available (BPT)" means control measures required of point source discharges (other than POTWs) as determined by the EPA pursuant to § 304(b)(1) of the CWA (33 USC § 1251 et seq.) as of 1987.

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9 VAC 25-40. Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed (amending 9 VAC 25-40-10, 9 VAC 25-40-30, 9 VAC 25-40-40, and 9 VAC 25-40-50; adding 9 VAC 25-40-25, 9 VAC 25-40-70; and repealing 9 VAC 25-40-20. 9 VAC 25-720. Water Quality Management Planning Regulation (amending 9 VAC 25-720-10, 9 VAC 25-720-50, 9 VAC 25-720-70, 9 VAC 25-720-110); adding 9 VAC 25-720-30, 9 VAC 25-720-40)

"Board" means the State Water Control Board (SWCB).

"Chesapeake Bay Watershed" means the following Virginia river basins: Potomac River Basin (9 VAC 25-260-390 and 9 VAC 25-260-400), James River Basin (9 VAC 25-260-410, 9 VAC 25-260-415, 9 VAC 25-260-420, and 9 VAC 25-260-430), Rappahannock River Basin (9 VAC 25-260-440), Chesapeake Bay and small coastal basins (9 VAC 25-260-520, Sections 2 through 3g), and the York River Basin (9 VAC 25-260-530).

"Clean Water Act or Act (CWA)" means 33 USC § 1251 et seq. as amended, as of 1987.

"Delivered waste load" means the discharged load from a point source in a river basin that is adjusted by a delivery factor for any alteration of that load occurring from biological, chemical, and physical processes during riverine transport to tidal waters.

Delivery factors are calculated using the Chesapeake Bay Program watershed model.

"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.

"Discharge" means when used without qualification, a discharge of a pollutant or any addition of any pollutant or combination of pollutants to state waters or waters of the contiguous zone or ocean or other floating craft when being used for transportation.

"Effluent limitation" means any restriction imposed by the board on quantities, discharge rates or concentrations of pollutants that are discharged from joint sources into state waters.

"Effluent limitation guidelines" means a regulation published by EPA under the Act and adopted by the board.

"Effluent limited segment (EL)" means a stream segment where the water quality does and probably will continue to meet state water quality standards after the application of technology-based effluent limitations required by §§ 301(b) and 306 of the CWA (33 USC § 1251 et seq.) as of 1987.

"Environmental Protection Agency (EPA)" means the United States Environmental Protection Agency.

"Equivalent load" means 2,300 pounds per year of total nitrogen and 300 pounds per year of total phosphorus at a flow volume of 40,000 gallons per day; 5,700 pounds per year of total nitrogen and 760 pounds per year of total phosphorus at a flow volume of 100,000 gallons per day; and 28,500 pounds per year of total nitrogen and 3,800 pounds per year of total phosphorus at a flow volume of 500,000 gallons per day.

"Load or loading" means the introduction of an amount of matter or thermal energy into a receiving water. Loading may be either man-caused (pollutant loading) or natural (background loading).

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9 VAC 25-40. Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed (amending 9 VAC 25-40-10, 9 VAC 25-40-30, 9 VAC 25-40-40, and 9 VAC 25-40-50; adding 9 VAC 25-40-25, 9 VAC 25-40-70; and repealing 9 VAC 25-40-20. 9 VAC 25-720. Water Quality Management Planning Regulation (amending 9 VAC 25-720-10, 9 VAC 25-720-50, 9 VAC 25-720-70, 9 VAC 25-720-110); adding 9 VAC 25-720-30, 9 VAC 25-720-40)

"Load allocation (LA)" means the portion of a receiving water's loading capacity attributable either to one of its existing or future nonpoint sources of pollution or to natural background sources. Load allocations are best estimates of the loading, which may range from accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting the loading. Wherever possible, natural and nonpoint source loads should be distinguished.

"Nonpoint source" means a source of pollution, such as a farm or forest land runoff, urban storm water runoff, mine runoff, or salt water intrusion that is not collected or discharged as a point source.

"Point source" means any discernible, defined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock vessel or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agricultural land.

"Pollutant" means any substance, radioactive material, or heat that causes or contributes to, or may cause or contribute to, pollution. It does not mean:

- 1. Sewage from vessels; or
- 2. Water, gas, or other material that is injected into a well to facilitate production of oil, dry gas, or water derived in association with oil or gas production and disposed of in a well, if the well is used either to facilitate production or for disposal purposes if approved by the Department of Mines, Minerals and Energy unless the board determines that such injection or disposal will result in the degradation of ground or surface water resources.

"Pollution" means such alteration of the physical, chemical or biological properties of any state waters as will or is likely to create a nuisance or render such waters (i) harmful or detrimental or injurious to the public health, safety or welfare, or to the health of animals, fish or aquatic life; (ii) unsuitable with reasonable treatment for use as present or possible future sources of public water supply; or (iii) unsuitable for recreational, commercial, industrial, agricultural, or other reasonable uses; provided that: (a) an alteration of the physical, chemical, or biological property of state waters, or a discharge or deposit of sewage, industrial wastes or other wastes to state waters by any owner, which by itself is not sufficient to cause pollution, but which, in combination with such alteration of or discharge or deposit to state waters by other owners is sufficient to cause pollution; (b) the discharge of untreated sewage by any owner into state waters; and (c) contributing to the contravention of standards of water quality duly established by the board, are "pollution" for the terms and purposes of this water quality management plan.

"Publicly owned treatment works (POTW)" means any sewage treatment works that is owned by a state or municipality. Sewers, pipes, or other conveyances are included in this definition only if they convey wastewater to a POTW providing treatment.

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9 VAC 25-40. Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed (amending 9 VAC 25-40-10, 9 VAC 25-40-30, 9 VAC 25-40-40, and 9 VAC 25-40-50; adding 9 VAC 25-40-25, 9 VAC 25-40-70; and repealing 9 VAC 25-40-20. 9 VAC 25-720. Water Quality Management Planning Regulation (amending 9 VAC 25-720-10, 9 VAC 25-720-50, 9 VAC 25-720-70, 9 VAC 25-720-110); adding 9 VAC 25-720-30, 9 VAC 25-720-40)

"Significant discharges discharger" means a point source discharger within the Chesapeake Bay Watershed that is listed in any of the following subsections: 9 VAC 25-720-50 C, 9 VAC 25-720-60 C, 9 VAC 25-720-70 C, 9 VAC 25-720-110 C, or 9 VAC 25-720-120 C; or a new or expanded point source discharger authorized by a VPDES permit issued after July 1, 2004, to discharge 2,300 pounds per year or more of total nitrogen or 300 pounds per year or more of total phosphorus (i) a point source discharger to the Chesapeake Bay watershed with a design capacity of 0.5 million gallons per day or greater, or an equivalent load; (ii) a point source discharger to the Chesapeake Bay watershed [east downstream] of the fall line with a design capacity of 0.1 million gallons per day or greater, or an equivalent load; (iii) a planned or newly expanding point source discharger to the Chesapeake Bay watershed that is expected to be in operation by 2010 with a permitted design of 0.5 million gallons per day or greater, or an equivalent load; or (iv) a planned or newly expanding point source discharger to the Chesapeake Bay watershed [east-downstream] of the fall line with a design capacity of 0.1 million gallons per day or greater, or an equivalent load, that is expected to be in operation by 2010.

"State waters" means all waters, on the surface and under the ground and wholly or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands.

"Surface water" means all waters in the Commonwealth except ground waters as defined in § 62.1-255 of the Code of Virginia.

"Total maximum daily load (TMDL)" means the sum of the individual waste load allocations (WLAs) for point sources, load allocations (LAs) for nonpoint sources, natural background loading and usually a safety factor. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. The TMDL process provides for point versus nonpoint source trade-offs.

"Toxic pollutant" means any agent or material including, but not limited to, those listed under § 307(a) of the CWA (33 USC § 1251 et seq. as of 1987), which after discharge will, on the basis of available information, cause toxicity.

"Toxicity" means the inherent potential or capacity of a material to cause adverse effects in a living organism, including acute or chronic effects to aquatic life, detrimental effects on human health or other adverse environmental effects.

["Trading" means the transfer of assigned waste load allocations or credits for total nitrogen or total phosphorus among point source dischargers. It does not include the transfer of total nitrogen for total phosphorus, or the reverse.]

"Virginia Pollution Discharge Elimination System (VPDES) permit" means a document issued by the board, pursuant to 9-VAC 25-30 9 VAC 25-31, authorizing, under prescribed conditions, the potential or actual discharge of pollutants from a point source to surface waters.

"Waste load allocation (WLA)" means the portion of a receiving water's loading or assimilative capacity allocated to one of its existing or future point sources of pollution. WLAs are a type of water quality-based effluent limitation.

"Water quality limited segment (WQL)" means any stream segment where the water quality does not or will not meet applicable water quality standards, even after the application of technology-based effluent limitations required by §§ 301(b) and 306 of the CWA (33 USC § 1251 et seq. as of 1987).

"Water quality management plan (WQMP)" means a state- or area-wide waste treatment management plan developed and updated in accordance with the provisions of §§ 205(j), 208 and 303 of the CWA (33 USC § 1251 et seq. as of 1987).

"Water quality standards (WQS)" means narrative statements that describe water quality requirements in general terms, and of numeric limits for specific physical, chemical, biological or radiological characteristics of water. These narrative statements and numeric limits describe water quality necessary to meet and maintain reasonable and beneficial uses such as swimming and, other water based recreation, public water supply and the propagation and growth of aquatic life. The adoption of water quality standards under the State Water Control Law is one of the board's methods of accomplishing the law's purpose.

9 VAC 25-720-30. Reserved. Relationship to 9 VAC 25-40, Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed.

The provisions of this chapter and 9 VAC 25-40, Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed, constitute the nutrient reduction requirements for point source discharges in the Chesapeake Bay Watershed to protect the Chesapeake Bay and its tidal rivers.

9 VAC 25-720-40. Reserved Trading and offsets Implementing Nitrogen and Phosphorus Waste Load Allocations in the Chesapeake Bay Watershed.

A. Nitrogen and phosphorus waste load allocations assigned to individual significant dischargers in 9 VAC 25-720-50 C, 9 VAC 25-720-60 C, 9 VAC 25-720-70 C, 9 VAC 25-720-110 C, and 9 VAC 25-720-120 C may be traded_exchanged among significant dischargers within the same river basin to assist in the achievement and maintenance of the total basin delivered waste load allocations in accordance with the Chesapeake Bay Watershed Nutrient Credit Exchange Program established under Article 4.02 (§ 62.1-44.19:12 et seq.) of Chapter 3.1 of Title 62.1 of the Code of Virginia. [TradesExchanges] must account for the delivery factor applicable to each discharge based upon its location within the river basin and calculated by the Chesapeake Bay Program watershed model.

B. Any proposed trade shall not result in degradation or adverse impacts to local water quality or violations of water quality standards.

- C. Any trade of nitrogen or phosphorus waste load allocation among individual significant dischargers shall not result in the exceedence of the total basin delivered waste load allocation within which the significant dischargers are located.
- D. The board may authorize trading only through VPDES permits. Trades conducted in accordance with this chapter through VPDES permits shall not require any amendments to this chapter.
- E. Any discharge of nitrogen or phosphorus load from a new significant discharger or any increase in the discharge of nitrogen or phosphorus load from an expansion of an existing significant discharger that would exceed the waste load allocation for that significant discharger shall be accompanied by one of the following actions within the same river basin: (i) a trade for an equivalent or greater load reduction of the same pollutant from one or more existing dischargers; (ii) in accordance with the criteria listed below, the installation, monitoring and maintenance of best management practices that achieve an offsetting reduction of nonpoint source delivered load of nitrogen or phosphorus that the board determines is at least twice the reduction in delivered load compared to the new or increased delivered load from the significant discharger; or (iii) both actions in combination:

The board may approve use of the second option (clause (ii)) in the previous paragraph in accordance with the following:

- 1. The VPDES permit for the new or expanded significant discharger includes an annual average total nitrogen effluent limitation of 3.0 mg/l, as appropriate, or alternative limits as required by 9 VAC 245-40-70 B 4;
- 2. Best management practices are installed within the locality or localities served by the new or expanded discharger, unless the board determines that installation of the needed best management practices in another locality provides greater water quality benefits;
- 3. Credit may be given for improvements to best management practices beyond that already required under other federal or state law to the extent that additional reduction in delivered nitrogen or phosphorus load is provided;
- 4. Credit may not be given for portions of best management practices financed by government programs; and
- 5. The installation, monitoring and maintenance of the best management practices are required by the VPDES permit of the new or expanded significant discharger and the best management practices are installed subsequent to the issuance of the VPDES permit.
- F. Any trade or offset involving a new significant discharger must account for the delivery factor that is assigned to the discharger based on its location within the river basin and must recognize that new significant dischargers have no assigned waste load allocations.

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9 VAC 25-40. Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed (amending 9 VAC 25-40-10, 9 VAC 25-40-30, 9 VAC 25-40-40, and 9 VAC 25-40-50; adding 9 VAC 25-40-25, 9 VAC 25-40-70; and repealing 9 VAC 25-40-20. 9 VAC 25-720. Water Quality Management Planning Regulation (amending 9 VAC 25-720-10, 9 VAC 25-720-50, 9 VAC 25-720-70, 9 VAC 25-720-110); adding 9 VAC 25-720-30, 9 VAC 25-720-40)

To ensure the total basin delivered loads of nitrogen and phosphorus are not exceeded, any trading or offsets conducted in accordance with this section shall use delivered loads. The following table contains the delivery factors for both nitrogen and phosphorus assigned to the identified Chesapeake Bay Program watershed model segments within each river basin. A delivered load equals the discharged load multiplied by the delivery factor.

	CBP Watershed	Nitrogen	Phosphorus
River Basin	Model Segment	Delivery Factor	Delivery Factor
Shenandoah-Potomac	170	0.55	0.75
Shenandoah-Potomac	180	0.82	0.75
Shenandoah-Potomac	190	0.42	0.74
Shenandoah-Potomac	200	0.65	0.74
Shenandoah-Potomac	220	0.83	0.75
Shenandoah-Potomac	550	0.58 or 1.00*	0.44 or 1.00*
Shenandoah-Potomac	740	0.74	0.75
Shenandoah-Potomac	900	1.00	1.00
Shenandoah-Potomac	910	1.00	1.00
Shenandoah-Potomac	970	1.00	1.00
Shenandoah-Potomac	980	1.00	1.00
Rappahannock	230	0.61	1.03
Rappahannock	560	1.00	1.00
Rappahannock	580	1.00	1.00
Rappahannock	930	1.00	1.00
York	235	0.27	0.43
York	240	0.42	0.43
York	250	0.02	0.58

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9 VAC 25-40. Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed (amending 9 VAC 25-40-10, 9 VAC 25-40-30, 9 VAC 25-40-40, and 9 VAC 25-40-50; adding 9 VAC 25-40-25, 9 VAC 25-40-70; and repealing 9 VAC 25-40-20. 9 VAC 25-720. Water Quality Management Planning Regulation (amending 9 VAC 25-720-10, 9 VAC 25-720-50, 9 VAC 25-720-70, 9 VAC 25-720-110); adding 9 VAC 25-720-30, 9 VAC 25-720-40)

York	260	0.51	0.58
York	590	1.00	1.00
York	940	1.00	1.00
James	265	0.02	1.10
James	270	0.30	1.10
James	280	0.61	1.10
James	290	0.81	1.00
James	300	0.37	0.42
James	310	0.54	0.39
James	600	1.00	1.00
James	610	1.00	1.00
James	620	1.00	1.00
James	630	1.00	1.00
James	950	1.00	1.00
James	955	1.00	1.00
James	960	1.00	1.00
James	965	1.00	1.00
C. Bay-Eastern Shore	430	1.00	1.00

NOTE: *Drainage to Occoquan Reservoir - delivery factors = 0.58 for nitrogen; 0.44 for phosphorus. Drainage outside

Occoquan Reservoir - delivery factors = 1.00 for both nitrogen and phosphorus.

B. The nitrogen and phosphorus waste load allocations assigned to individual significant dischargers in 9 VAC 25-720-50 C, 9 VAC 25-720-60 C, 9 VAC 25-720-70 C, 9 VAC 25-720-110 C, and 9 VAC 25-720-120 C are considered to be bioavailable to aquatic life. On a case-by-case basis, a discharger may demonstrate to the satisfaction of the board that a significant portion of the nutrients discharged by the facility is not bioavailable to aquatic life. In these cases, the board may limit the permitted discharge to reflect only that portion of the assigned waste load allocation that is bioavailable. [Such limits shall be consistent]

with the assumptions and methods used to derive the allocations through the Chesapeake Bay watershed and water quality models.]

C. Unless otherwise noted, the nitrogen and phosphorus waste load allocations assigned to individual significant dischargers in 9 VAC 25-720-50 C, 9 VAC 25-720-60 C, 9 VAC 25-720-70 C, 9 VAC 25-720-110 C, and 9 VAC 25-720-120 C 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 significant portion of the nutrient load originates in its intake water. In these cases, the board may limit the permitted discharge to reflect only the net nutrient load portion of the assigned waste load allocation. [Such limits shall be consistent with the assumptions and methods used to derive the allocations through the Chesapeake Bay watershed and water quality models.]

[D. The Board may amend this regulation to adjust individual nitrogen and phosphorus waste load allocations. Reasons for considering such an adjustment include, but are not limited to:

1. a discharger completes or does not complete a plant expansion as evidenced by issuance of a Certificate To Operate by December 31, 2010; or

2. a river basin nutrient load allocation is not achieved.

Any adjustment to an individual waste load allocation must ensure water quality standards are maintained.]

9 VAC 25-720-50. Potomac, Shenandoah River Basin.

A. Total maximum daily load (TMDLs).

TMDL	Stream Name	TMDL Title	City/	WBID	Pollutant	WLA	Units
#			County				
1.	Muddy Creek	Nitrate TMDL Development for Muddy Creek/Dry River, Virginia	Rockingham	B21R	Nitrate	49,389.00	LB/YR
2.	Blacks Run	TMDL Development for Blacks Run and Cooks	Rockingham	B25R	Sediment	32,844.00	LB/YR

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		Creek					
3.	Cooks Creek	TMDL Development for	Rockingham	B25R	Sediment	69,301.00	LB/YR
0.	OUOKS OFCER	Blacks Run and Cooks	Rockingham	BZSIK	Ocament	03,301.00	LD/TR
		Creek					
4.	Cooks Creek	TMDL Development for	Rockingham	B25R	Phosphorus	0	LB/YR
		Blacks Run and Cooks					
		Creek					
5.	Muddy Creek	TMDL Development for	Rockingham	B22R	Sediment	286,939.00	LB/YR
		Muddy Creek and					
		Holmans Creek, Virginia					
6.	Muddy Creek	TMDL Development for	Rockingham	B22R	Phosphorus	38.00	LB/YR
		Muddy Creek and					
		Holmans Creek, Virginia					
7.	Holmans Creek	TMDL Development for	Rockingham/	B45R	Sediment	78,141.00	LB/YR
		Muddy Creek and	Shenandoah				
		Holmans Creek, Virginia					
8.	Mill Creek	TMDL Development for	Rockingham	B29R	Sediment	276.00	LB/YR
		Mill Creek and Pleasant					
		Run					
9.	Mill Creek	TMDL Development for	Rockingham	B29R	Phosphorus	138.00	LB/YR
		Mill Creek and Pleasant					
		Run					
10.	Pleasant Run	TMDL Development for	Rockingham	B27R	Sediment	0.00	LB/YR
10.		Mill Creek and Pleasant				3.30	,
		Run					
		INUIT					
11.	Pleasant Run	TMDL Development for	Rockingham	B27R	Phosphorus	0.00	LB/YR
11.	r ieasant Kun	·	Nockingnam	DZ/K	rnosphorus	0.00	LD/ I K
		Mill Creek and Pleasant					

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		Run					
12.	Linville Creek	Total Maximum Load Development for Linville Creek: Bacteria and Benthic Impairments	Rockingham	B46R	Sediment	5.50	TONS/YR
13.	Quail Run	Benthic TMDL for Quail	Rockingham	B35R	Ammonia	7,185.00	KG/YR
14.	Quail Run	Benthic TMDL for Quail	Rockingham	B35R	Chlorine	27.63	KG/YR
15.	Shenandoah River	Development of Shenandoah River PCB TMDL (South Fork and Main Stem)	Warren & Clarke	B41R, B55R, B57R, B58R	PCBs	179.38	G/YR
16.	Shenandoah River	Development of Shenandoah River PCB TMDL (North Fork)	Warren & Clarke	B51R	PCBs	0.00	G/YR
17.	Shenandoah River	Development of Shenandoah River PCB TMDL (Main Stem)	Warren & Clarke	WV	PCBs	179.38	G/YR
18.	Cockran Spring	Benthic TMDL Reports for Six Impaired Stream Segments in the Potomac-Shenandoah and James River Basins	Augusta	B10R	Organic Solids	1,556.00	LB/YR
19.	Lacey Spring	Benthic TMDL Reports for Six Impaired Stream Segments in the Potomac-Shenandoah	Rockingham	B47R	Organic Solids	680.00	LB/YR

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		and James River Basins					
20.	Orndorff Spring	Benthic TMDL Reports	Shenandoah	B52R	Organic Solids	103.00	LB/YR
		for Six Impaired Stream					
		Segments in the					
		Potomac-Shenandoah					
		and James River Basins					
21.	Toms Brook	Benthic TMDL for Toms	Shenandoah	B50R	Sediment	8.1	T/YR
		Brook in Shenandoah					
		County, Virginia					
22.	Goose Creek	Benthic TMDLs for the	Loudoun,	A08R	Sediment	1,587	T/YR
		Goose Creek	Fauquier				
		Watershed					
23.	Little River	Benthic TMDLs for the	Loudoun	A08R	Sediment	105	T/YR
		Goose Creek					
		Watershed					
24.	Christians Creek	Fecal Bacteria and	Augusta	B14R	Sediment	145	T/YR
		General Standard Total					
		Maximum Daily Load					
		Development for					
		Impaired Streams in the					
		Middle River and Upper					
		South River					
		Watersheds, Augusta					
		County, VA					
25.	Moffett Creek	Fecal Bacteria and	Augusta	B13R	Sediment	0	T/YR
		General Standard Total					
		Maximum Daily Load					
		Development for					
		Impaired Streams in the					
		Middle River and Upper					
	1	1	I .		1		

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		South River					
		Watersheds, Augusta					
		County, VA					
26.	Upper Middle River	Fecal Bacteria and	Augusta	B10R	Sediment	1.355	T/YR
		General Standard Total					
		Maximum Daily Load					
		Development for					
		Impaired Streams in the					
		Middle River and Upper					
		South River					
		Watersheds, Augusta					
		County, VA					
27.	Mossy Creek	Total Maxiumum Daily	Rockingham	B19R	Sediment	0.04	T/YR
		Load Development for					
		Mossy Creek and Long					
		Glade Run: Bacteria					
		and General Standard					
		(Benthic) Impairments					
28.	Smith Creek	Total Maxiumum Daily	Rockingham,	B47R	Sediment	353,867	LB/YR
		Load (TMDL)	Shenandoah				
		Development for Smith					
		Creek					
29.	Abrams Creek	Opequon Watershed	Frederick	B09R	Sediment	478	T/YR
		TMDLs for Benthic					
		Impairments: Abrams					
		Creek and Lower					
		Opequon Creek,					
		Frederick and Clarke					
		Counties, Virginia					
J			<u> </u>				

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9 VAC 25-40. Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed (amending 9 VAC 25-40-10, 9 VAC 25-40-30, 9 VAC 25-40-40, and 9 VAC 25-40-50; adding 9 VAC 25-40-25, 9 VAC 25-40-70; and repealing 9 VAC 25-40-20. 9 VAC 25-720. Water Quality Management Planning Regulation (amending 9 VAC 25-720-10, 9 VAC 25-720-50, 9 VAC 25-720-70, 9 VAC 25-720-110); adding 9 VAC 25-720-30, 9 VAC 25-720-40)

30.	Lower Opequon	Opequon \	Vatershed	Frederick,	B09R	Sediment	1,039	T/YR
	Creek	TMDLs for	Benthic	Clarke				
		Impairments:	Abrams					
		Creek and	Lower					
		Opequon	Creek,					
		Frederick an	d Clarke					
		Counties, Virg	inia					

B. Stream segment classifications, effluent limitations including water quality based effluent limitations, and waste load allocations.

TABLE B1 - POTOMAC RIVER SUB-BASIN RECOMMENDED SEGMENT CLASSIFICATIONS

SEGMENT			
NUMBER	DESCRIPTION OF SEGMENT	MILE TO MILE	CLASSIFICATION
1-23	Potomac River tributaries from the Virginia-West Virginia state line downstream to the	176.2 – 149.0	WQ
	boundary of the Dulles Area Watershed Policy		
1-24	Potomac River tributaries located within the boundaries of the Dulles Area Watershed	149.0 – 118.4	WQ
	Policy		
1-25	Potomac River tributaries from the downstream limit of the Dulles Area Watershed Policy	118.4 – 107.6	WQ
	to Jones Point		
1-26	Potomac River tributaries from Jones Point downstream to Route 301 bridge	107.6 – 50.2	WQ
1-27	All Streams included in the Occoquan Watershed Policy		WQ
1-28	Potomac tributaries from Route 301 bridge downstream to the mouth of the Potomac River	50.2-0.0	EL

TABLE B2 - POTOMAC RIVER SUB-BASIN - RECOMMENDED PLAN FOR WASTEWATER FACILITIES

FACILITY		RECEIVING	RECOMMENDED		TREATMENT					INSTITUTIONAL
NUMBER	NAME	STREAM	ACTION	SIZE	LEVEL (4)	BOD₅	OUD	TKN	Р	ARRANGEMENT
1	Hillsboro	North Fork	Construct new	.043 ⁽²⁾	AWT	7 ⁽⁷⁾	-	-	-	Loudoun County
		Catoctin Creek	facility							Sanitation Authority
		WQ (1 –23)								(LCSA)

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2	Middleburg	Wancopin	Construct new	.135	AST	14 ⁽⁵⁾	Ι.	Ι.	l -	LCSA
	Middleburg			.133	701	14				LOOA
		Creek WQ (1-	facility; abandon							
		23)	old facility							
3	Middleburg	Unnamed	Abandon- pump							
	East and	tributary to	to new facility							
	West	Goose Creek								
		WQ (1 -23)								
4	Round Hill	North Fork	No further action	.2	AWT	10 ⁽⁵⁾	-	-	-	Town of Round Hill
		Goose Creek	recommended							
5	St. Louis	Beaver Dam	Construct new	.086	AST	20 ⁽⁵⁾	-	-	-	LSCA
		Creek WQ (1-	facility							
		23)								
6	Waterford	South Fork	No further action	.058	AST	24 ⁽⁵⁾	-	-	-	LSCA
		Catoctin Creek	recommended							
		WQ (1-23)								
7	Hamilton	Unnamed	Upgrade and or	.605 ⁽²⁾	AWT	7 ⁽⁷⁾	-	-	-	Town of Hamilton
		tributary to	expand							
		South Fork of								
		Catoctin Creek								
		WQ (1-23)								
8	Leesburg	Tuscarora	Upgrade and or	2.5	AWT	1 ⁽⁹⁾	-	1	0.1	Town of Leesburg
		Creek (1-24)	expand							
9	Lovettesville	Dutchman	Upgrade and or	.269 ⁽²⁾	AWT	7 ⁽⁷⁾	-	-	-	Town of
		Creek WQ (1-	expand							Lovetteville
		23)								
10	Purcellville	Unnamed	No further action	.5	AST	15 ⁽⁵⁾	-	-	-	Town of Purcellville
		tributary to	recommended							
		North Fork								
		Goose Creek								
		WQ (1-23)								
		/								

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11	Paeonian	Unnamed	Construct new	.264 ⁽²⁾	AWT	7 ⁽⁷⁾	-	-	-	LCSA
	Springs	tributary to	facility							
		South Fork of								
		Catoctin Creek								
		WQ (1-23)								
12	Cedar Run	Walnut Branch	Construct new	1.16 ⁽²⁾	AWT	1 ⁽⁶⁾	-	1	0.1	Fauquier County
'-	Regional	or Kettle Run	facility	1.10	,,,,,				0.1	Sanitation Authority
	rtogioriai	WQ (1-27)	ladinty							Carmation / tathonty
40	Vint Hill			0.40	ACT	14 ⁽⁵⁾			0.5	LLLC America
13		South Run (1-	Upgrade and/or	.246	AST	14(*)	-	-	2.5	U.S. Army
	Farms	27)	expand							
14	Arlington	Four Mile Run	Upgrade and/or	30 ⁽³⁾	AWT	3 ⁽⁸⁾	-	1	0.2	Arlington County
		WQ (1-25)	expand							
15	Alexandria	Hunting Creek	Upgrade and/or	54	AWT	3 ⁽⁸⁾	-	1	.02	Alexandria
		WQ (1-26)	expand							Sanitation Authority
16	Westgate	Potomac River	Abandon- pump							
		WQ (1-26)	to Alexandria							
17	Lower	Pohick Creek	Upgrade and/or	36(3)	AWT	3/8	-	1	0.2	Fairfax County
	Potomac	WQ (1-26)	expand							
18	Little Hunting	Little Hunting	Abandon- pump							
	Creek	Creek WQ (1-	to Lower Potomac							
		26)								
19	Doque	Doque Creek	Abandon- pump							
	Creek	WQ (1-26)	to Lower Potomac							
20	Fort Belvoir	Doque Creek	Abandon- pump							
	1 and 2	WQ (1-26)	to Lower Potomac							
21	Lorton	Mills Branch	Upgrade and/or	1.0	AWT	3 ⁽¹¹⁾	-	1	0.1	District of Columbia
		WQ (1-26)	expand							
22	UOSA	Tributary to	Expanded	10.9 ⁽³⁾	AWT	1 ⁽⁶⁾	-	1	0.1	USOA
		Bull Run WQ	capacity by 5 mgd							
		(1-27)	increments							

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23	Gainesville	Tributary Rock	Abandon Pump to					I	l	
23										
	Haymarket	Branch WQ (1-	UOSA							
		27)								
24	Potomac	Neabsco Creek	Construct new	12 ⁽³⁾	AWT	3 ⁽⁸⁾	-	1	0.2	Occoquan-
	(Mooney)	WQ (1-26)	facility							Woodbridge
										Dumfries-Triangle
										Sanitary District
25	Belmont	Marumana	Abandan numn							, , , , , , , , , , , , , , , , , , , ,
25	Deimoni	Marumsco	Abandon- pump							
		Creek WQ (1-	to Potomac							
		26)								
26	Featherston	Farm Creek	Abandon- pump							
	е	WQ (1-26)	to Potomac							
27	Neabsco	Neabsco Creek	Abandon- pump							
		WQ (1-26)	to Potomac							
28	Dumfries	Quantico Creek	Abandon- pump							
		WQ (1-26)	to Potomac							
29	Dale City #1	Neabsco Creek	Upgrade and /or	4.0	AWT	3 ⁽⁸⁾	-	1	0.2	Dale Service
		WQ (1-26)	expand							Corporation (DSC)
30	Dale City #8	Neabsco Creek	Upgrade and /or	2.0	AWT	3 ⁽⁸⁾	1	1	0.2	DSC
		WQ (1-26)	expand							
31	Quantico	Potomac River	Upgrade and /or	2.0	AWT	3 ⁽⁸⁾	-	1	0.2	U.S. Marine Corps
31				2.0	AVVI	3	-	'	0.2	U.S. Marine Corps
	Mainside	WQ (1-26)	expand							
32	Aquia Creek	Austin Run WQ	Construct new	3.0	AWT	3 ⁽⁸⁾	-	1	0.2	Aquia Sanitary
		(1-26)	facility							District
33	Aquia	Aquia Creek	Abandon- pump							
		WQ (1-26)	to new facility							
34	Fairview	Potomac River	Construct new	.05	Secondary	Secondar	-	-	-	Fairview Beach
	Beach	(estuary)	facility			у				Sanitary District
								1		

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9 VAC 25-40. Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed (amending 9 VAC 25-40-10, 9 VAC 25-40-30, 9 VAC 25-40-40, and 9 VAC 25-40-50; adding 9 VAC 25-40-25, 9 VAC 25-40-70; and repealing 9 VAC 25-40-20. 9 VAC 25-720. Water Quality Management Planning Regulation (amending 9 VAC 25-720-10, 9 VAC 25-720-50, 9 VAC 25-720-70, 9 VAC 25-720-110); adding 9 VAC 25-720-30, 9 VAC 25-720-40)

35	Dahlgren	Upper	Upgrade and/or	.2	Secondary	Secondar	-	-	-	Dahlgren Sanitary
		Machodoc	expand			у				District
		Creek WQ (1-								
		28)								
36	Colonial	Monroe Creek	No further action	.85	Secondary	28 ^{(5) (13)}				Town of Colonial
	Beach	EL (1-28)	recommended							Beach
37	Machodoc		Construct new	.89	Secondary &	48 ^{(10) (13)}	-	-	-	Machodoc Kinsale
	Kinsale		facility		Spray					Sanitary District
					Irrigation					
38	Callao		Construct new	.25	Secondary &	48 ^{(10) (13)}	-	-	-	Callao Sanitary
			facility		Spray					District
					Irrigation					
39	Heathsville		Construct new	.10	Secondary &	48 ^{(10) (13)}	-	-	-	Heathsville
			facility		Spray					Sanitary District
					Irrigation					
40	King George	Pine Creek	Construct new	.039	Secondary	30 ⁽¹³⁾	-	-	-	King George
	Courthouse		facility							County

TABLE B2 - NOTES: POTOMAC RIVER SUB-BASIN - RECOMMENDED PLAN FOR WASTEWATER TREATMENT

FACILITIES

⁽¹⁾ Year 2000 design flow 201 Facility Plan, P.L. 92-500, unless otherwise noted.

⁽²⁾ Year 2000 average flow from Potomac/Shenandoah 303(e) Plans, Vol V-A Appendix, 1975 pp. B-33-B-44.

⁽³⁾ Future expansion at unspecified date.

⁽⁴⁾ Secondary treatment: 24-30 mg/l BOD₅, advanced secondary treatment (AST): 11-23 mg/l, advanced wastewater treatment (AWT): <10mg/l BOD₅. A range is given to recognize that various waste treatment.processes have different treatment efficiencies.

⁽⁵⁾ Effluent limits calculated using mathematical modeling.

⁽⁶⁾ Effluent limits based on Occoquan Watershed Policy, presented under reevaluation.

⁽⁷⁾ Effluent limits based on treatment levels established by the Potomac/Shenandoah 303(e) Plan, Vol. V-A 1975, p. 237, to protect low flow streams and downstream water supply.

- (8) Effluent limits based on Potomac River Embayment Standards, presently under reevaluation. Nitrogen removal limits deferred until reevaluation is complete.
- (9) Effluent limits based on Dulles Watershed Policy, recommended for reevaluation. Interim effluent limits of 12 mg/l BOD₅ and 20 mg/l Suspended Solids will be met until the Dulles Area Watershed Standards are reevaluated.
- (10) Effluent limits based on Virginia Sewerage Regulation, Section 33.02.01.
- (11) Interim effluent limits of 30 mg/l BOD₅, 30mg/l Suspended Solids, and 4 mg/l Phosphorus, will be effective until average daily flows exceeds 0.75 MGD. At greater flows than 0.75 MGD, the effluent limitations will be defined by the Potomac Embayment Standards.
- (12) Secondary treatment is permitted for this facility due to the extended outfall into the main stem of the Potomac River.
- (13) This facility was also included in the Rappahannock Area Development Commission (RADCO) 208 Areawide Waste Treatment Management Plan and Potomac-Shenandoah River Basin 303 (e) Water Quality Management Plan.

TABLE B3 - SHENANDOAH RIVER SUB-BASIN RECOMMENDED SEGMENT CLASSIFICATIONS

SEGMENT			
NUMBER	DESCRIPTION OF SEGMENT	MILE TO MILE	CLASSIFICATION
1-1	North River-main stream and tributaries excluding segments 1-1a, 1-1b	56.4-0.0	EL
1-1a	Muddy Creek-main stream and War Branch, RM 0.1-0.0	3.7 - 1.7	WQ
1-1b	North River-main stream	16.1 - 4.6	WQ
1-2	Middle River-main stream and tributaries excluding segments 1-2a, 1-2b	69.9 - 0.0	EL
1-2a	Middle River-main stream	29.5 - 17.9	WQ
1-2b	Lewis Creek-main stream	9.6 - 0.0	WQ
1-3	South River-main stream and tributaries excluding segment 1-3a	52.2 - 0.0	EL
1-4	South Fork Shenandoah-main stream and tributaries excluding segments 1-4a, 1-	102.9 - 0.0	EL
	4b, 1-4c		
1-4a	South Fork Shenandoah-main stream	88.1 - 78.2	WQ
I-4b	Hawksbill Creek-main stream	6.20 - 0.0	WQ
1-4c	Quail Run-main stream	5.2 - 3.2	WQ
1-5	North Fork Shenandoah- main stream and tributaries excluding segment 1-5a, 1-	108.9 – 0.0	EL
	5h		
1-5a	Stony Creek-main stream	19.9 - 14.9	WQ

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1-5b	North Fork Shenandoah-main stream	89.0 - 81.4	WQ
1-6	Shenandoah River-main stream and tributaries excluding segments 1-6a, 1-6b	57.4 - 19.8	EL
1- 6a	Stephens Run-main stream	8.3 - 0.0	WQ
1-6b	Dog Run-main stream	5.2 - 0.0	WQ
1-7	Opequon Creek-main stream and tributaries excluding segments 1-7a, 1-7b	54.9 - 23.6	EL
I-7a	Opequon Creek-main stream	32.3 - 23.6	WQ
1-7b	Abrams Creek-main stream	8.7 - 0.0	WQ
1-8	All Virginia streams upstream of Opequon-Potomac confluence that have		EL
	headwaters in Frederick County		
1-9	All Virginia streams upstream of Opequon-Potomac confluence that have		EL
	headwaters in Highland County		

^{*} R.M. = River Mile, measured from the river mouth

TABLE B4 - SHENANDOAH RIVER SUB-BASIN - RECOMMENDED PLAN FOR SELECTED INDUSTRIAL WASTEWATER

TREATMENT FACILITIES

FACILITY NUMBER	NAME ⁽¹⁾	INDUSTRIAL CATEGORY	RECEIVING STREAM CLASSIFICATION		OMMEND DAD ALLOO		COMPLIANCE SCHEDULE
1	Wampler	Food Processing	War Branch WQ (1-1a)	84 ⁽³⁾	-	-	None
6	Wayn-Tex	Plastic and Synthetic Materials Mfg.*	South River WQ (I-3a)	44 ⁽⁵⁾	-	-	None
7	DuPont	Plastic and Synthetic Materials Mfg.*	South River WQ (I-3a)	600	-	50	None
8	Crompton- Shenandoah	Textile Mills*	South River WQ (1-3a)	60	173 ⁽⁴⁾	88	None
10	General Electric	Electroplating*	South River WQ (1-3a)	BPT	Effluent Lir	mits	None
12	Merck	Miscellaneous Chemicals (Pharmaceutical)*	S. F. Shenandoah River WQ (1-4a)	3454	2846	1423	Consent Order
17	VOTAN	Leather, Tanning and Finishing*	Hawksbill Creek WQ (I-4b)	240	75	-	None

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9 VAC 25-40. Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed (amending 9 VAC 25-40-10, 9 VAC 25-40-30, 9 VAC 25-40-40, and 9 VAC 25-40-50; adding 9 VAC 25-40-25, 9 VAC 25-40-70; and repealing 9 VAC 25-40-20. 9 VAC 25-720. Water Quality Management Planning Regulation (amending 9 VAC 25-720-10, 9 VAC 25-720-50, 9 VAC 25-720-70, 9 VAC 25-720-110); adding 9 VAC 25-720-30, 9 VAC 25-720-40)

	21	National Fruit	Food Processing	N. F. Shenandoah River WQ	(6)	(6)	(6)	None
				(1-5b)				
ŀ	22	Rockingham	Food Processing	N. F. Shenandoah River WQ	(6)	(6)	(6)	None
		Poultry		(1-5b)				
ľ	23	Shen-Valley	Food Processing	N. F. Shenandoah River WQ	(6)	(6)	(6)	None
		Meat Packers		(1-5b)				
ŀ	35	O'Sullivan	Rubber Processing*	Abrams Creek WQ (I-7b)	BPT	Effluent Lir	nits	None
			Machinery and Mechanical					
			Products Manufacturing					
- 1		1	1					1

TABLE B4 - NOTES: SHENANDOAH RIVER SUB-BASIN - RECOMMENDED PLAN SELECTED INDUSTRIAL WASTEWATER
TREATMENT FACILITIES

- (1) An * identifies those industrial categories that are included in EPA's primary industry classification for which potential priority toxic pollutants have been identified.
- (2) Allocation (lb/d) based upon 7Q10 stream flow. Tiered permits may allow greater wasteloads during times of higher flow. BPT = Best Practicable Technology.
- (3) A summer 1979 stream survey has demonstrated instream D.O. violations. Therefore, the identified wasteload allocation is to be considered as interim and shall be subject to further analysis.
- (4) The NPDES permit does not specify TKN but does specify organic-N of 85 lb/d. TKN is the sum of NH -N and organic -N.
- (5) This allocation is based upon a flow of 0.847 MGD.
- (6) The total assimilative capacity for segment WQ (1-5b) will be developed from an intensive stream survey program and development of an appropriate calibrated and verified model. Wasteload allocations for National Fruit, Rockingham Poultry and Shen-Valley will be determined after the development of the calibrated and verified model and the determination of the segment's assimilative capacity.

TABLE B5 - SHENANDOAH RIVER SUB-BASIN - RECOMMENDED PLAN FOR SELECTED MUNICIPAL WASTEWATER

TREATMENT FACILITIES

Γ	NAME	FACILITY		
1				

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FACILITY	NAME	RECOMMENDED	F	ACILITY		WASTELOAD	INSTITUTIONAL	COMPLIANCE ⁽⁴⁾
NUMBER		RECEIVING				ALLOCATION ⁽³⁾	ARRANGEMENT	SCHEDULE
		STREAM				lb/d BOD₅		
2	Harrisonburg	North River WQ	<u>R</u> €©©MWIENDED	S1 Z E ⁽⁽⁵⁾⁾	TREATSMENT(2)	2,0002 ⁽⁶⁾	Harrisonburg-	None
	Rockingham	(1-1)	ACTION		LEVEL		Rockingham	
	Reg. Sewer						Regional Sewer	
	Auth.						Authority	
3	Verona	Middle River WQ	Construct new	0.8	Secondary	Secondary	Augusta County	July 1, 1983
		(1-2a)	facility, abandon			Limits	Service Authority	
			old plant, correct					
			1/1					
4	Staunton	Middle River WQ	Upgrade, provide	4.5	Secondary	Secondary	City of Staunton	July 1, 1983
		(1-2a)	outfall to Middle			Limits		
			River, correct I/I					
5	Fishersville	Christians Creek	No further action	2.0	Secondary	Secondary	Augusta County	None
		EL (1-2)	recommended			Limits	Service Authority	
9	Waynesboro	South River WQ	Upgrade, correct	4.0	AWT with	250 ⁽⁵⁾	City of	July 1, 1983
		(1-3a)	1/1		nitrification		Waynesboro	
11	Grottoes	South River EL	Construct new	0.225	Secondary	Secondary	Town of Grottoes	No existing
		(1-3)	facility			Limits		facility
13	Elkton	S.F. Shenandoah	Construct new	0.4	Secondary	Secondary	Town of Elkton	July 1, 1983
		River WQ (1-4a)	facility, abandon			Limits		
			old plant					
14	Massanutten	Quail Run WQ (1-	No further action	1.0	AWT	84.0 ⁽⁸⁾	Private	None
	Public	4c)	recommended					
	Service							
	Corporation							
15	Shenandoah	S.F. Shenandoah	Upgrade, expand,	0.35	Secondary	Secondary limits	Town of	No existing
		River EL (1-4)	correct I/I				Shenandoah	facility

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16	Stanley	S.F. Shenandoah	Construct new	0.3	Secondary	Secondary limits	Town of Stanley	No existing
		River EL (1-4)	facility					facility
18	Luray	Hawksbill Creek	Construct new	0.8	Secondary	Secondary	Town of Luray	July 1, 1983
		WQ (1-4b)	facility, abandon			Limits		
			old plant, correct					
			1/1					
19	Front Royal	Shenandoah	Construct new	2.0	Secondary	Secondary	Town of Front	July 1, 1983
		River EL (1-6)	facility, abandon			Limits	Royal	
			old plant, correct					
			1/1					
20	Broadway	N.F. Shenandoah	Upgrade, expand,	(6)	(6)	(6)	Town of	July 1, 1983
		River WQ (1-5b)	investigate I/I				Broadway	
24	Timberville	N.F. Shenandoah	Upgrade, expand,	(6)	(6)	(6)	Town of	July 1, 1983
		River WQ (1-5b)	investigate I/I				Timberville	
25	New Market	N.F. Shenandoah	Upgrade,	0.2	Secondary	Secondary	Town of New	July 1, 1983
		River EL (1-5)	investigate I/I			Limits	Market	
26	Mount	N.F. Shenandoah	Upgrade, expand,	.0.2	Secondary	Secondary	Town of Mount	July 1, 1983
	Jackson	River EL (1-5)	correct I/I			Limits	Jackson	
27	Edinburg	N.F. Shenandoah	Upgrade, expand,	0.15	Secondary	Secondary	Town of Edinburg	July 1, 1983
		River EL (1-5)	investigate I/I		AST	Limits 65	Public	None
28	Stony Creek	River EL (1-5)	No further action	0.6	AST	65	Public	
	Sanitary	Stony Creek WQ	required					
	District	(1-5a)						
29	Woodstock	N.F. Shenandoah		0.5	Secondary	Secondary	Town of	July 1, 1983
		River EL (1-5)				Limits	Woodstock	
30	Toms Brook-	Toms Brook EL	Construct new	0.189	Secondary	Secondary	Toms Brook	No existing
	Mauertown	(1-5)	facility			Limits		facility
31	Strasburg	N.F. Shenandoah	Upgrade, expand,	0.8	Secondary	Secondary	Town of	July 1, 1983
		River EL (1-5)	correct I/I			Limits	Strasburg	

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9 VAC 25-40. Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed (amending 9 VAC 25-40-10, 9 VAC 25-40-30, 9 VAC 25-40-40, and 9 VAC 25-40-50; adding 9 VAC 25-40-25, 9 VAC 25-40-70; and repealing 9 VAC 25-40-20. 9 VAC 25-720. Water Quality Management Planning Regulation (amending 9 VAC 25-720-10, 9 VAC 25-720-50, 9 VAC 25-720-70, 9 VAC 25-720-110); adding 9 VAC 25-720-30, 9 VAC 25-720-40)

32	Middletown	Meadow Brook	Upgrade, expand	0.2	Secondary	Secondary	Town of	July 1, 1983
		EL (1-5)					Middletown	
33	Stephens	Stephens Run EL	Upgrade, expand	0.54	AST	72	Frederick-	July 1, 1983
	City	(1-6a)					Winchester	
	Stephens						Service Authority	
	Run							
34	Berryville	Shenandoah	Upgrade, provide	0.41	Secondary	Secondary	Town of Berryville	July 1, 1983
		River EL (1-6)	outfall to			Limits		
			Shenandoah					
			River, investigate					
			1/1					
36	Frederick-	Opequon Creek	Construct new	6.0	AWT with	456 ⁽⁷⁾	Frederick-	July 1, 1983
	Winchester	WQ (1-7a)	facility, abandon		nitrification		Winchester	
	Regional		county and city				Service Authority	
			plans, correct I/I					
37	Monterey	West Strait Creek	Upgrade, correct	0.075	Secondary	Secondary	Town of Monterey	July 1, 1983
		EL (1-9)	1/1			Limits		

TABLE B5 - NOTES: SHENANDOAH RIVER SUB-BASIN - RECOMMENDED PLAN FOR SELECTED MUNICIPAL

WASTEWATER TREATMENT FACILITIES

- (1) Year 2000 design flow (MGD) unless otherwise noted.
- (2) Secondary treatment: 24-30 mg/l BOD₅, advanced secondary treatment (AST): 11-23 mg/l BOD₅, advanced wastewater treatment (AWT): <10 mg/l BOD₅. A range is given to recognize that various waste treatment processes have different treatment efficiencies.
- (3) Recommended wasteload allocation calculated using mathematical modeling based upon 7Q10 stream flows. Tiered permits may allow greater wasteloads during periods of higher stream flows. Allocations other than BOD₅ are noted by footnote.
- (4) The July 1, 1983, data is a statutory deadline required by P.L. 92-500, as amended by P.L. 92-217. The timing of construction grant funding may result in some localities to miss this deadline.
- (5) Year 2008 design.
- (6) This BOD loading is based on a 7QI0 flow rate of 26.8 cfs at the HRRSA discharge.

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9 VAC 25-40. Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed (amending 9 VAC 25-40-10, 9 VAC 25-40-30, 9 VAC 25-40-40, and 9 VAC 25-40-50; adding 9 VAC 25-40-25, 9 VAC 25-40-70; and repealing 9 VAC 25-40-20. 9 VAC 25-720. Water Quality Management Planning Regulation (amending 9 VAC 25-720-10, 9 VAC 25-720-50, 9 VAC 25-720-70, 9 VAC 25-720-110); adding 9 VAC 25-720-30, 9 VAC 25-720-40)

C. Nitrogen and phosphorus waste load allocations to restore the Chesapeake Bay and its tidal rivers.

The following table presents nitrogen and phosphorus waste load allocations for the identified significant dischargers — the associated delivery factors used for trading or offset purposes, and the total nitrogen and total phosphorus delivered waste load allocation allocations for the [basin listed facilities]. —These individual significant discharger waste load allocations may be revised through the watershed trading program contained in 9 VAC 25-720-30. The waste load allocation listed below for a discharger, or the waste load allocation revised in accordance with 9 VAC 25-720-30, shall be achieved within four years following reissuance or modification of the discharger's VPDES permit, but in no case later than December 31, 2010.

CBP	Virginia	Discharger	VPDES	Total	TN	TN Waste	Total	TP	TP Waste
Watershed	Waterbody	Name	Permit No.	Nitrogen	Delivery	Load	Phosphorus	Delivery	Load
Model	ID			(TN) Waste	Factor	Delivered	(TP) Waste	Factor	Delivered
Segment				Load		Allocation	Load		Allocation
				Allocation		(lbs/yr)	Allocation		(lbs/yr)
				(lbs/yr)			(lbs/yr)		
190	B37R	Coors	VA0073245	55,000	0.42	23,000	4,100	0.74	3,000
		Brewing		54,820			4,112		
		Company							
190	B14R	Fishersville	VA0025291	24,000	0.42	10,000	1,800	0.74	1,400
		Regional STP		48,729			3,655		

 $^{^{(7)}}$ NH₃ -N = 50 lb/d.

⁽⁸⁾ This allocation is based on a TKN loading no greater than 84 lb/day.

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190	B32R	INVISTA -	VA0002160	29,000	0.42	12,000	1,300	0.74	940
		Waynesboro		78,941			1,009		
		(Outfall 101)							
190	B39R	Luray STP	VA0062642	19,000	0.42	8,200	1,500	0.74	1,100
				19,492			1,462		
190	B35R	Massanutten	VA0024732	18,000	0.42	7,700	1,400	0.74	1,000
		PSA STP		18,273			1,371		
190	B37R	Merck -	VA0002178	96,000	0.42	40,000	15,000	0.74	11,000
		Stonewall		[96,184			[15,365		
		WWTP		14,619]			1,096]		
		[(Outfall 101)]							
190	B12R	Middle River	VA0064793	83,000	0.42	35,000	6,200	0.74	4,600
		Regional STP		82,839			6,213		
190	B23R	North River	VA0060640	190,000	0.42	82,000	15,000	0.74	11,000
		WWTF [(2)]		[194,916			[14,619		
				253,391]			19,004]		
190	B22R	Pilgrims	VA0002313	27,000	0.42	12,000	1,400	0.74	1,000
		Pride - VA		27,410			1,371		
		Poultry							
		Growers -							
		Hinton							
	B38R	Pilgrims Pride	VA0001961	18,273			914		
		- Alma							
190	B31R	Stuarts Draft	VA0066877	29,000	0.42	12,000	2,200	0.74	1,600
		WWTP		48,729			3,655		
190	B32R	Waynesboro	VA0025151	49,000	0.42	20,000	3,600	0.74	2,700
		STP		48,729			3,655		
190	B23R	Weyers Cave	VA0022349	6,100	0.42	2,600	460	0.74	340
		STP		6,091			457		
200	B58R	Berryville STP	VA0020532	5,500	0.65	3,600	410	0.74	300

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				8,528			640		
200	B55R	Front Royal	VA0062812	49,000	0.65	32,000	3,600	0.74	2,700
		STP		48,729			3,655		
200	B49R	Georges	VA0077402	31,000	0.65	20,000	1,600	0.74	1,100
		Chicken LLC		31,065			1,553		
200	B48R	Mt. Jackson	VA0026441	7,300	0.65	4,800	550	0.74	410
		STP [(3)]		[7,309			[548		
				8,528]			640]		
200	B45R	New Market	VA0022853	6,100	0.65	4,000	460	0.74	340
		STP		6,091			457		
200	B45R	North Fork	VA0090263	23,000	0.65	15,000	1,800	0.74	1,300
		(SIL) WWTF		23,390			1,754		
200	B49R	Stoney Creek	VA0028380	7,300	0.65	4,800	550	0.74	410
		SD STP		7,309			548		
	B50R	North Fork	VA0090328	9,137			685		
		Regional							
		WWTP (1)							
200	B51R	Strasburg	VA0020311	12,000	0.65	7,800	900	0.74	660
		STP		11,939			895		
200	B50R	Woodstock	VA0026468	9,700	0.65	6,300	730	0.74	540
		STP		24,364			1,827		
220	A06R	Basham	VA0022802	12,000	0.83	10,000	910	0.75	690
		Simms		[12,182			[914		
		WWTF [(4)]		18,273]			1,371]		
220	A09R	Broad Run	VA0091383	120,000	0.83	100,000	3,000	0.75	2,300
		WRF [(5)]		[121,822			[3,046		
				134,005]			3,350]		
220	A08R	Leesburg	MD0066184	120,000	0.83	100,000	9,100	0.75	6,800
		WPCF		121,822			9,137		
220	A06R	Round Hill	VA0026212	6,100	0.83	5,000	460	0.75	340

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		Town WWTF		9,137			685		
550	A25R	DSC - Section	VA0024724	36,000	1.00	36,000	2,200	1.00	2,200
		1 WWTF [(6)]		[36,547		,	[2,193		,
		New Men		42,029]			2,522]		
	1000		1/4.000.40=0						
550	A25R	DSC -	VA0024678	36,000	1.00	36,000	2,200	1.00	2,200
		Section 8		[36,547			[2,193		
		WWTF [(7)]		42,029]			2,522]		
550	A25E	H L Mooney	VA0025101	220,000	1.00	220,000	13,000	1.00	13,000
		WWTF		219,280			13,157		
550	A22R	UOSA -	VA0024988	1,300,000	0.58	760,000	16,000	0.44	7,200
		Centreville		1,315,682			16,446		
550	A19R	Vint Hill	VA0020460	5,500	0.58	3,200	550	0.44	240
		WWTF [(8)]		[5,482			<u>[548</u>		
				8,680]			868]		
740	B08R	Opequon	VA0065552	100,000	0.74	76,000	7,700	0.75	5,700
		WRF		102,336			7,675		
740	B08R	Parkins Mill	VA0075191	26,000	0.74	19,000	1,900	0.75	1,400
		STP [(9)]		[36,547			[2,741		
				60,911]			4,568]		
900	A13E	Alexandria SA	VA0025160	490,000	1.00	490,000	30,000	1.00	30,000
		WWTF		493,381			29,603		
900	A12E	Arlington	VA0025143	360,000	1.00	360,000	22,000	1.00	22,000
		County Water		365,467			21,928		
		PCF							
900	A16R	Noman M	VA0025364	610,000	1.00	610,000	37,000	1.00	37,000
		Cole Jr PCF		612,158			36,729		
910	A12R	Blue Plains	DC0021199	580,000	1.00	580,000	26,000	1.00	26,000
		(VA Share)		581,458			26,166		
970	A26R	Quantico	VA0028363	20,000	1.00	20,000	1,200	1.00	1,200
		WWTF		20,101			1,206		

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980	A28R	Aquia WWTF	VA0060968	59,000	1.00	59,000	3,600	1.00	3,600
				73,093			4,386		
980	A31E	Colonial	VA0026409	18,000	1.00	18,000	1,800	1.00	1,800
		Beach STP		18,273			1,827		
980	A30E	Dahlgren	VA0026514	9,100	1.00	9,100	910	1.00	910
		WWTF		9,137			914		
980	A29E	Fairview	MD0056464	1,800	1.00	1,800	180	1.00	180
		Beach		1,827			183		
980	A30E	US NSWC-	VA0021067	6,600	1.00	6,600	660	1.00	660
		Dahlgren		6,578			658		
		WWTF							
	A31R	Purkins	VA0070106	1,096			110		
		Corner STP							
980	A26R	Widewater	VA0090387	4,600	1.00	4,600	270	1.00	270
		WWTF							
		TOTALS:		4,916,700		3,887,100	245,200		213,130
				[5,121,242			[252,860		
				5,156,169]			246,635]		

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9 VAC 25-40. Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed (amending 9 VAC 25-40-10, 9 VAC 25-40-30, 9 VAC 25-40-40, and 9 VAC 25-40-50; adding 9 VAC 25-40-25, 9 VAC 25-40-70; and repealing 9 VAC 25-40-20. 9 VAC 25-720. Water Quality Management Planning Regulation (amending 9 VAC 25-720-10, 9 VAC 25-720-50, 9 VAC 25-720-70, 9 VAC 25-720-110); adding 9 VAC 25-720-30, 9 VAC 25-720-40)

NOTE: (1) Shenandoah Co. - North Fork Regional WWTP waste load allocations (WLAs) based on a design flow capacity of 0.75 million gallons per day (MGD). If plant is not certified to operate at 0.75 MGD design flow capacity by 12/31/10, the WLAs will be deleted and facility removed from Significant Discharger List.

[(2) Harrisonburg-Rockingham Regional S.A.-North River STP: waste load allocations (WLAs) based on a design flow capacity of 20.8 million gallons per day (MGD). If plant is not certified to operate at 20.8 MGD design flow capacity by 12/31/10, the WLAs will decrease to TN = 194,916 lbs/yr; TP = 14,619 lbs/yr, based on a design flow capacity of 16.0 MGD.]

[(3) Mount Jackson STP: waste load allocations (WLAs) based on a design flow capacity of 0.7 million gallons per day (MGD). If plant is not certified to operate at 0.7 MGD design flow capacity by 12/31/10, the WLAs will decrease to TN = 7,309 lbs/yr; TP = 548 lbs/yr, based on a design flow capacity of 0.6 MGD.]

[(4) Purcellville-Basham Simms STP: waste load allocations (WLAs) based on a design flow capacity of 1.5 million gallons per day (MGD). If plant is not certified to operate at 1.5 MGD design flow capacity by 12/31/10, the WLAs will decrease to TN = 12,182 lbs/yr; TP = 914lbs/yr, based on a design flow capacity of 1.0 MGD.]

[(5) Loudoun Co. S.A.-Broad Run WRF: waste load allocations (WLAs) based on a design flow capacity of 11.0 million gallons per day (MGD). If plant is not certified to operate at 11.0 MGD design flow capacity by 12/31/10, the WLAs will decrease to TN = 121,822 lbs/yr; TP = 3,046 lbs/yr, based on a design flow capacity of 10.0 MGD.]

[(6) Dale Service Corp.-Section 1 WWTF: waste load allocations (WLAs) based on a design flow capacity of 4.6 million gallons per day (MGD). If plant is not certified to operate at 4.6 MGD design flow capacity by 12/31/10, the WLAs will decrease to TN = 36,547 lbs/yr; TP = 2,193 lbs/yr, based on a design flow capacity of 4.0 MGD.]

[(7) Dale Service Corp.-Section 8 WWTF: waste load allocations (WLAs) based on a design flow capacity of 4.6 million gallons per day (MGD). If plant is not certified to operate at 4.6 MGD design flow capacity by 12/31/10, the WLAs will decrease to TN = 36,547 lbs/yr; TP = 2,193 lbs/yr, based on a design flow capacity of 4.0 MGD.]

[(8) Fauquier Co. W&SA-Vint Hill STP: waste load allocations (WLAs) based on a design flow capacity of 0.95 million gallons per day (MGD). If plant is not certified to operate at 0.95 MGD design flow capacity by 12/31/10, the WLAs will decrease to TN = 5,482 lbs/yr; TP = 548 lbs/yr, based on a design flow capacity of 0.6 MGD.]

[(9) Parkins Mill STP: waste load allocations (WLAs) based on a design flow capacity of 5.0 million gallons per day (MGD). If plant is not certified to operate at 5.0 MGD design flow capacity by 12/31/10, the WLAs will decrease to TN = 36,547 lbs/yr; TP = 2,741 lbs/yr, based on a design flow capacity of 3.0 MGD.]

9 VAC 25-720-70. Rappahannock River Basin.

A. Total maximum daily load (TMDLs).

TMDL#	Stream Name	TMDL Title	City/	WBID	Pollutant	WLA	Units
			County				
1.	Pheasanty Run	Benthic TMDL Reports for	Bath	I14R	Organic Solids	1,231.00	LB/YR
		Six Impaired Stream					
		Segments in the Potomac-					
		Shenandoah and James					
		River Basins					
2.	Wallace Mill	Benthic TMDL Reports for	Augusta	I32R	Organic Solids	2,814.00	LB/YR
	Stream	Six Impaired Stream					
		Segments in the Potomac-					
		Shenandoah and James					
		River Basins					
3.	Montebello Sp.	Benthic TMDL Reports for	Nelson	H09R	Organic Solids	37.00	LB/YR
	Branch	Six Impaired Stream					
		Segments in the Potomac-					
		Shenandoah and James					
		River Basins					
4.	Unnamed Tributary	General Standard Total	Nottoway	J11R	Raw Sewage	0	GAL/YR
	to Deep Creek	Maximum Daily Load For					
		Unnamed Tributary to Deep					
		Creek					
5.	Unnamed Tributary	Total Maxiumum Daily Load	Hanover	G05R	Total	409.35	LB/YR
	to Chickahominy	(TMDL) Development for			Phosphorus		
	River	the Unnamed Tributary to					
		the Chickahominy River					

B. Stream segment classifications, effluent limitations including water quality based effluent limitations, and waste load allocations.

TABLE B1 - UPPER JAMES RIVER BASIN RECOMMENDED SEGMENT CLASSIFICATION

				Comments
Stream Name	Segment No.	Mile to Mile	Classification	
Maury River	2-4	80.3-0.0	E.L.	Main & tributaries
James River	2-5	271.5-266.0	W.Q.	Main only
James River	2-6	266.0-115.0	E.L.	Main & tributaries except Tye & Rivanna River
Tye River	2-7	41.7-0.0	E.L.	Main & tributaries except Rutledge Creek
Rutledge Creek	2-8	3.0-0.0	W.Q.	Main only
Piney River	2-9	20.6-0.0	E.L.	Main & tributaries
Rivanna River	2-10	20.0-0.0	E.L.	Main & tributaries
Rivanna River	2-11	38.1-20.0	W.Q.	Main only
Rivanna River	2-12	76.7-38.1	E.L.	Main & tributaries
S.F. Rivanna River	2-13	12.2-0.0	E.L.	Main & tributaries
Mechum River	2-14	23.1-0.0	E.L.	Main & tributaries
N.F. Rivanna River	2-15	17.0-0.0	E.L.	Main & tributaries except Standardsville Run
Standardsville Run	2-16	1.2-0.0	W.Q.	Main only
Appomattox River	2-17	156.2-27.7	E.L.	Main & tributaries except Buffalo Creek, Courthouse Branch, and
				Deep Creek
Buffalo Creek	2-18	20.9-0.0	E.L.	Main & tributaries except Unnamed Tributary @ R.M. 9.3
Unnamed Tributary of	2-19	1.3-0.0	W.Q.	Main only
Buffalo Creek @ R.M.				
9.3				
Courthouse Branch	2-20	0.6-0.0	W.Q.	Main only
Deep Creek	2-21	29.5-0.0	E.L.	Main & tributaries except Unnamed Tributary @ R.M. 25.0
Unnamed Tributary of	2-22	2.2-0.0	W.Q.	Main only
Deep Creek @ R.M.				
25.0				

TABLE B2 - UPPER JAMES RIVER BASIN LOAD ALLOCATIONS BASED ON EXISTING DISCHARGE POINT7

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					Total Assimilative	Wasteload	
					Capacity of	Allocation	Reserve
	Segment				Stream BOD5	BOD5	BOD5
Stream Name	Number	Classification	Mile to Mile	Significant Discharges	lbs/day	lbs/day2	lbs/day5
Cedar Creek	2-3	E.L.	1.9-0.0	Natural Bridge, Inc. STP	35.0	28.0	7.0 (20%)
Elk Creek	2-3	E.L.	2.8-0.0	Natural Bridge Camp for	7.0	3.3	3.7 (53%)
				Boys STP			
Little	2-4	E.L.	10.9-4.0	Craigsville	12.0	9.6	2.4 (20%)
Calfpasture							
River							
Cabin River	2-4	E.L.	1.7-0.0	Millboro	Self -sustaining	None	None
Maury River	2-4	E.L.	19.6-12.2	Lexington STP	380.0	380.0	None
Maury River	2-4	E.L.	12.2-1.2	Georgia Bonded Fibers	760.0	102.03	238.0 (31%)
				Buena Vista STP		420.0	
Maury River	2-4	E.L.	1.2-0.0	Lees Carpets	790.0	425.03	290.0 (37%)
				Glasgow STP		75.0	
James River	2-5	W.Q.	271.5-266.0	Owens-Illinois	4,640.0	4,640.03	None
James River	2-6	E.L.	257.5-231.0	Lynchburg STP	10,100.0	8,000.0	2,060.0 (20%)
				Babcock & Wilcox- NNFD		40.03	
James River	2-6	E.L.	231.0-202.0	Virginia Fibre	3,500.0	3,500.0	None
Rutledge Creek	2-8	W.Q.	3.0-0.0	Amherst STP	46.0	37.0	9.0 (20%)
Town Creek	2-7	E.L.	2.1-0.0	Lovington STP	26.0	21.0	5.0 (20%)
Ivy Creek	2-6	E.L.	0.1-0.0	Schuyler	13.8	11.0	2.8 (20%)
James River	2-6	E.L.	186.0-179.0	Uniroyal, Inc.	1,400.0	19.36	1,336.0
							(95%)
				Scottsville STP		45.0	
North Creek	2-6	E.L.	3.1-0.0	Fork Union STP	31.0	25.0	6.0 (20%)
Howells Branch	2-14	E.L.	0.7-0.0	Morton Frozen Foods	20.0	20.03	None
and Licking							
Hole Creek							

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Standardsville	2-16	W.Q.	1.2-0.0	Standardsville STP	17.9	14.3	3.6 (20%)
Run							
Rivanna River	2-11	W.Q.	23.5-20.0	Lake Monticello STP	480.0	380.0	100.0 (20%)
Rivanna River	2-10	E.L.	15.0-0.0	Palmyra	250.0	4.0	158.0 (63%)
				Schwarzenbach Huber		88.03	
Unnamed	2-6	E.L.	1.2-00	Dillwyn STP	38.0	30.0	8.0 (21%)
Tributary of							
Whispering							
Creek							
South Fork	2-17	E.L.	5.5-0.0	Appomattox Lagoon	18.8	15.0	3.8 (20%)
Appomattox							
River							
Unnamed	2-19	W.Q.	1.3-0.0	Hampden-Sydney Coll.	10.0	8.0	2.0 (20%)
Tributary of				STP			
Buffalo Creek							
Appomattox	2-17	E.L.	106.1-88.0	Farmville STP	280.0	220.0	60.0 (21%)
River							
Unnamed	2-17	E.L.	2.5-1.3	Cumberland H.S. Lagoon	0.6	0.5	0.1 (20%)
Tributary of							
Little Guinea							
Creek							
Unnamed	2-17	E.L.	0.68-0.0	Cumberland Courthouse	8.8	7.0	1.8 (20%)
Tributary of							
Tear Wallet							
Creek							
Courthouse	2-22	W.Q.	2.2-0.0	Amelia STP	21.0	17.0	4.0 (20%)
Branch							
Unnamed	2-22	W.Q.	2.2-0.0	Crewe STP	50.311,12	50.111,12	0.2
Tributary of							(0.4%)11,12,
Deep Creek	1						13

¹ Recommended classification.

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9 VAC 25-40. Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed (amending 9 VAC 25-40-10, 9 VAC 25-40-30, 9 VAC 25-40-40, and 9 VAC 25-40-50; adding 9 VAC 25-40-25, 9 VAC 25-40-70; and repealing 9 VAC 25-40-20. 9 VAC 25-720. Water Quality Management Planning Regulation (amending 9 VAC 25-720-10, 9 VAC 25-720-50, 9 VAC 25-720-70, 9 VAC 25-720-110); adding 9 VAC 25-720-30, 9 VAC 25-720-40)

- 2 Based on 2020 loads or stream assimilative capacity less 20%.
- 3 Load allocation based on published NPDES permits.
- 4 This assimilative capacity is based upon an ammonia loading no greater than 125.1 lbs/day.
- 5 Percentages refer to reserve as percent of total assimilative capacity. Minimum reserve for future growth and modeling accuracy is 20% unless otherwise noted.
- 6 No NPDES Permits published (BPT not established) allocation base on maximum value monitored.
- 7 This table is for the existing discharge point. The recommended plan may involve relocation or elimination of stream discharge.
- 8 Assimilative capacity will be determined upon completion of the ongoing study by Hydroscience, Inc.
- 9 Discharges into Karnes Creek, a tributary to the Jackson River.
- 10 Discharges into Wilson Creek, near its confluence with Jackson River.
- 11 Five-day Carbonaceous Biological Oxygen Demand (cBOD5).
- 12 Revision supersedes all subsequent Crewe STP stream capacity, allocation, and reserve references.
- 13 0.4 percent reserve: determined by SWCB Piedmont Regional Office.

Source: Wiley & Wilson, Inc.

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9 VAC 25-40. Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed (amending 9 VAC 25-40-10, 9 VAC 25-40-30, 9 VAC 25-40-40, and 9 VAC 25-40-50; adding 9 VAC 25-40-25, 9 VAC 25-40-70; and repealing 9 VAC 25-40-20. 9 VAC 25-720. Water Quality Management Planning Regulation (amending 9 VAC 25-720-10, 9 VAC 25-720-50, 9 VAC 25-720-70, 9 VAC 25-720-110); adding 9 VAC 25-720-30, 9 VAC 25-720-40)

TABLE B3 - UPPER JAMES RIVER BASIN ADDITIONAL LOAD ALLOCATIONS BASED ON RECOMMENDED DISCHARGE POINT

					Total		
					Assimilative	Wasteload2	
					Capacity of	Allocation	Reserve4
	Segment				Stream BOD5	BOD5	BOD5
Stream Name	Number	Classification1	Mile to Mile	Significant Discharges	lbs/day	lbs/day	lbs/day5
Mill Creek	2-4	E.L.	5.5-0.0	Millboro	30.0	7.3	22.7 (76%)
Calfpasture River	2-4	E.L.	4.9-0.0	Goshen	65.0	12.0	53.0 (82%)
Maury River	2-4	E.L.	1.2-0.0	Lees Carpet	790.0	425.03	235.0 (30%)
				Glasgow Regional S.T.P.		130.0	
Buffalo River	2-7	E.L.	9.6-0.0	Amherst S.T.P.	150.0	120.0	30.0 (20%)
Rockfish River	2-6	E.L.	9.5-0.0	Schuyler S.T.P.	110.0	25.0	85.0 (77%)
Standardsville Run		E.L.		Standardsville	Land Application		
					Recommended		
South Fork		E.L.		Appomattox Lagoon	Connect to Recor	mmended Facil	ity in Roanoke
Appomattox River					River Basin		
Buffalo Creek	2-17	E.L.	9.3-7.7	Hampden-Sydney College	46.0	23.0	23.0 (50%)
Unnamed trib. of		E.L.		Cumberland Courthouse	Land Application	1	
Tear Wallet Creek					Recommended		
Courthouse Branch		E.L.		Amelia	Land Application		
					Recommended		
Deep Creek	2-17	E.L.	25.0-12.8	Crewe S.T.P.	69.0	55.0	14.0 (20%)

¹Recommended classification.

2Based on 2020 loads or stream assimilative capacity less 20%.

3Load allocation based on published NPDES permit.

4Percentages refer to reserve as percent of total assimilative capacity. Minimum reserve for future growth and modeling accuracy is 20% unless otherwise noted.

5Assimilative capacity will be determined upon completion of the ongoing study by Hydroscience, Inc.

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9 VAC 25-40. Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed (amending 9 VAC 25-40-10, 9 VAC 25-40-30, 9 VAC 25-40-40, and 9 VAC 25-40-50; adding 9 VAC 25-40-25, 9 VAC 25-40-70; and repealing 9 VAC 25-40-20. 9 VAC 25-720. Water Quality Management Planning Regulation (amending 9 VAC 25-720-10, 9 VAC 25-720-50, 9 VAC 25-720-70, 9 VAC 25-720-110); adding 9 VAC 25-720-30, 9 VAC 25-720-40)

Source: Wiley & Wilson, Inc.

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TABLE B4 - SEGMENT CLASSIFICATION UPPER JAMES-JACKSON RIVER SUBAREA

Stream Name	Segment Number	Mile to Mile	Stream Classification	Comments
Back Creek	2-1	16.06-8.46	W.Q.	Main Only
Jackson River	2-1	95.70-24.90	E.L.	Main and Tributaries
Jackson River	2-2	24.90-0.00	W.Q.	Main Only
Jackson River	2-2	24.90-0.00	E.L.	Tributaries Only
James River	2-3	349.50-308.50	E.L.	Main and Tributaries
James River	2-3	308.50-279.41	E.L.	Main and Tributaries

TABLE B5 - UPPER JAMES-JACKSON RIVER SUBAREA WASTELOAD ALLOCATIONS BASED ON EXISTING DISCHARGE POINT1

							VPDES	303(e)3
			SEGMENT			VPDES	PERMIT	WASTELOAD
MAP	STREAM	SEGMENT	CLASSIFICATION	MILE to2		PERMIT	LIMITS BOD5	ALLOCATION
LOCATION	NAME	NUMBER	STANDARDS	MILE	DISCHARGER	NUMBER	kg/day	BOD5 kg/day
1	Jackson	2-1	E.L.	93.05-	Virginia Trout	VA0071722	N/A	Secondary
	River							
В	Warm Springs Run	2-1	E.L.	3.62-0.00	Warm Springs STP	VA0028233	9.10	Secondary
3	Back Creek	2-1	W.Q.	16.06- 8.46	VEPCO	VA0053317	11.50	11.50
С	X-trib to Jackson River	2-1	E.L.	0.40-0.0	Bacova	VA0024091	9.10	Secondary
D	Hot Springs Run	2-1	E.L.	5.30-0.00	Hot Springs Reg. STP	VA0066303	51.10	Secondary

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E	X-trib to	2-1	E.L.	3.00-0.00	Ashwood-	VA0023726	11.30	Secondary
	Cascades				Healing Springs			
	Creek				STP			
F	Jackson	2-1	E.L.	50.36-	U.S. Forest	VA0032123	1.98	Secondary
	River				Service Bolar			
					Mountain			
G	Jackson	2-1	E.L.	43.55	U.S. Army COE	VA0032115	1.70	Secondary
	River				Morris Hill			
					Complex			
Н	Jackson	2-1	E.L.	29.84-	Alleghany	VA0027955	5.70	Secondary
	River				County			
					Clearwater Park			
4	Jackson	2-1	E.L.	25.99	Covington City	VA0058491	N/A	Secondary
	River				Water Treatment			
					Plant			
5	Jackson	2-2	W.Q.	24.64-	Westvaco	VA0003646	4,195.00	4,195.004
	River			19.03				
6					Covington City 5	VA0054411	N/A	N/A
					Asphalt Plant			
7					Hercules, Inc 6	VA0003450	94.00	94.00
J	Jackson	2-2	W.Q.	19.03-	Covington STP	VA0025542	341.00	341.00
	River			10.5				
K	Jackson			10.5-0.0	Low Moor STP7	VA0027979	22.70	22.70
	River							
М					D.S. Lancaster	VA0028509	3.60	3.60
					CC8			
L					Selma STP9	VA0028002	59.00	59.00
10					The Chessie	VA0003344	N/A	N/A
	1	1			System10	1	1	1

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N					Clifton Forge	VA0002984	227.00	227.00
					STP11			
11					Lydall12	VA0002984	6.00	6.00
Р					Iron Gate STP13	VA0020541	60.00	60.00
8	Paint Bank	2-2	E.L.	1.52	VDGIF Paint	VA0098432	N/A	Secondary
	Branch				Bank Hatchery			
I	Jerrys Run	2-2	E.L.	6.72-	VDOT 1-64 Rest	VA0023159	0.54	Secondary
					Area			
AA	East Branch	2-2	E.L.	2.16	Norman F.	VA0078403	0.05	Secondary
	(Sulfer				Nicholas			
	Spring)							
BB	East Branch	2-2	E.L.	1.91-	Daryl C. Clark	VA0067890	0.068	Secondary
	(Sulfer							
	Spring)							
9	Smith Creek	2-2	E.L.	3.44-	Clifton Forge	VA0006076	N/A	Secondary
					Water Treatment			
					Plant			
0	Wilson	2-2	E.L.	0.20-0.0	Cliftondale14	VA0027987	24.00	Secondary
	Creek				Park STP			
2	Pheasanty	2-3	E.L.	0.01-	Coursey Springs	VA0006491	434.90	Secondary
	Run							
Q	Grannys	2-3	E.L	1.20-	Craig Spring	VA0027952	3.40	Secondary
	Creek				Conference			
					Grounds			
CC	X-trib to Big	2-3	E.L	1.10-	Homer Kelly	VA0074926	0.05	Secondary
	Creek				Residence			
12	Mill Creek	2-3	E.L	0.16-	Columbia Gas	VA0004839	N/A	Secondary
					Transmission			
					Corp.			

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R	John Creek	2-3	E.L	0.20-	New Castle	VA0024139	21.00	Secondary
					STP(old)			
S	Craig Creek	2-3	E.L	48.45-	New Castle STP	VA0064599	19.90	Secondary
				36.0	(new)			
Т	Craig Creek	2-3	E.L	46.98-	Craig County	VA0027758	0.57	Secondary
					Schools			
					McCleary E.S.			
DD	Eagle Rock	2-3	E.L.	0.08-	Eagle Rock	VA0076350	2.30	Secondary
	Creek				STP15			
					(Proposed)			
U	X-trib to	2-3	E.L.	0.16	VDMH & R	VA0029475	13.60	Secondary
	Catawba				Catawba			
	Creek				Hospital			
14	Catawba	2-3	E.L.	23.84	Tarmac-	VA0078393	0.80	Secondary
	Creek				Lonestar			
FF	Borden	2-3	E.L	2.00-	Shenandoah	VA0075451	0.88	Secondary
	Creek				Baptist Church			
					Camp			
EE	X-trib to	2-3	E.L	0.36	David B. Pope	VA0076031	0.07	Secondary
	Borden							
	Creek							
V	X-trib to	2-3	E.L	3.21-	U.S. FHA	VA0068233	0.03	Secondary
	Catawba				Flatwood Acres			
	Creek							
V	Catawba	2-3	E.L	11.54-	Fincastle STP	VA0068233	8.50	Secondary
	Creek							
X	Looney Mill	2-3	E.L	1.83-	VDOT I-81 Rest	VA0023141	0.91	Secondary
	Creek				Area			

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9 VAC 25-40. Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed (amending 9 VAC 25-40-10, 9 VAC 25-40-30, 9 VAC 25-40-40, and 9 VAC 25-40-50; adding 9 VAC 25-40-25, 9 VAC 25-40-70; and repealing 9 VAC 25-40-20. 9 VAC 25-720. Water Quality Management Planning Regulation (amending 9 VAC 25-720-10, 9 VAC 25-720-50, 9 VAC 25-720-70, 9 VAC 25-720-110); adding 9 VAC 25-720-30, 9 VAC 25-720-40)

Υ	X-trib to	2-3	E.L	0.57	VDOC Field Unit	VA0023523	1.10	Secondary
	Stoney				No. 25 Battle			
					Creek			
Z	James River	2-3	E.L.	308.5-	Buchanan STP	VA0022225	27.00	Secondary
				286.0				

TABLE B5 - NOTES:

N/A Currently No BOD5 limits or wasteload have been imposed by the VPDES permit. Should BOD5 limits (wasteload) be imposed a WQMP amendment would be required for water quality limited segments only.

- 1 Secondary treatment levels are required in effluent limiting (E.L.) segments. In water quality limiting (W.Q.) segments quantities listed represent wasteload allocations.
- 2 Ending river miles have not been determined for some Effluent Limited segments.
- 3 These allocations represent current and original (1977 WQMP) modeling. Future revisions may be necessary based on Virginia State Water Control Board modeling.
- 4 The total assimilative capacity at critical stream flow for this portion of Segment 2-2 has been modeled and verified by Hydroscience, Inc. (March 1977) to be 4,914 kg/day BOD₅.
- 5 The discharge is to an unnamed tributary to the Jackson River at Jackson River mile 22.93.
- 6 The discharge is at Jackson River mile 19.22.
- 7 The discharge is to the mouth of Karnes Creek, a tributary to the Jackson River at Jackson River mile 5.44.
- 8 The discharge is at Jackson River mile 6.67.
- 9 The discharge is at Jackson River mile 5.14.
- 10 The discharge is at Jackson River mile 4.72.
- 11 The discharge is at Jackson River mile 3.46.
- 12 The discharge is at Jackson River mile 1.17
- 13 The discharge is at Jackson River mile 0.76
- 14 The discharge is to the mouth of Wilson Creek, a tributary to the Jackson River at Jackson River mile 2.44.
- 15 The discharge is to the mouth of Eagle Rock Creek, a tributary to the Jackson River at Jackson River mile 330.35.

TABLE B6 - RICHMOND CRATER INTERIM WATER QUALITY MANAGEMENT PLAN STREAM CLASSIFICATIONS - JAMES RIVER BASIN

SEGMENT	SEGMENT NUMBER	MILE TO MILE	CLASSIFICATION
USGS HUC02080206	2-19	115 0 60 5	IW O
USGS HUC02080206	2-19	115.0-60.5	W.Q.
James River			
USGS HUC02080207	2-23	30.1-0.0	W.Q.
Appomattox			

TABLE B6- * Note: A new stream segment classification for the Upper James Basin was adopted in 1981. The SWCB will renumber or realign these segments in the future to reflect these changes. This Plan covers only a portion of these segments.

TABLE B7 - RICHMOND CRATER INTERIM WATER QUALITY MANAGEMENT PLAN- CURRENT PERMITTED WASTE LOADS (March 1988)

	CON	/IIVIEK (JI	une-Octo	ber)				WINT	ER (Nov	ember-M	ay)	
FLOW	ВО	D5	NH:	3-N1	DO2		FLOW	ВО	D5	NH3	3-N1	DO2
(mgd)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)		(mgd)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)
45.00	3002	8.0	-	-	-		45.00	5367		-	-	-
8.68	936	-	-	-	-		8.68	936	-	-	-	-
9.00	1202	16.0	-	-	5.9		9.00	2253	30.0	-	-	5.9
6.40	1601	30.0	-	-	5.9		11.80	2952	30.0	-	-	5.9
0.39	138	-	7	-	-		0.39	138	-	7	-	-
30.00	3005	12.0	-	-	5.9		30.00	7260	29.0	-	-	5.9
1.94	715	-	-	-	-		1.94	716	-	-	-	-
0.20	152	-	-	-	-		0.20	152	-	-	-	-
1.50	559	-	-	-	-		1.50	557	-	-	-	-
51.00	1207	-	-	-	-		51.00	1207		-	-	-
150.00	2500	-	-	-	-		150.00	2500	-	-	-	-
34.08	12507	44.0	-	-	4.8		34.08	12507	44.0	-	-	4.8
15.00	2804	22.4	-	-	5.0		15.00	2804	22.4	-	-	5.0
353.19	30328						358.59	39349				
	(mgd) 45.00 8.68 9.00 6.40 0.39 30.00 1.94 0.20 1.50 51.00 150.00 34.08 15.00	(mgd) (lbs/d) 45.00 3002 8.68 936 9.00 1202 6.40 1601 0.39 138 30.00 3005 1.94 715 0.20 152 1.50 559 51.00 1207 150.00 2500 34.08 12507 15.00 2804 353.19 30328	(mgd) (lbs/d) (mg/l) 45.00 3002 8.0 8.68 936 - 9.00 1202 16.0 6.40 1601 30.0 0.39 138 - 30.00 3005 12.0 1.94 715 - 0.20 152 - 1.50 559 - 51.00 1207 - 150.00 2500 - 34.08 12507 44.0 15.00 2804 22.4 353.19 30328	(mgd) (lbs/d) (mg/l) (lbs/d) 45.00 3002 8.0 - 8.68 936 - - 9.00 1202 16.0 - 6.40 1601 30.0 - 0.39 138 - 7 30.00 3005 12.0 - 1.94 715 - - 0.20 152 - - 1.50 559 - - 51.00 1207 - - 150.00 2500 - - 34.08 12507 44.0 - 15.00 2804 22.4 - 353.19 30328 - -	(mgd) (lbs/d) (mg/l) (lbs/d) (mg/l) 45.00 3002 8.0 - - 8.68 936 - - - 9.00 1202 16.0 - - 6.40 1601 30.0 - - 0.39 138 - 7 - 30.00 3005 12.0 - - 1.94 715 - - - 1.50 559 - - - 51.00 1207 - - - 150.00 2500 - - - 34.08 12507 44.0 - - 15.00 2804 22.4 - - 353.19 30328 - - -	(mgd) (lbs/d) (mg/l) (lbs/d) (mg/l) (mg/l) 45.00 3002 8.0 - - - 8.68 936 - - - - 9.00 1202 16.0 - - 5.9 6.40 1601 30.0 - - 5.9 0.39 138 - 7 - - 30.00 3005 12.0 - - 5.9 1.94 715 - - - - 1.50 559 - - - - 51.00 1207 - - - - 150.00 2500 - - - - 34.08 12507 44.0 - - 4.8 15.00 2804 22.4 - - 5.0	(mgd) (lbs/d) (mg/l) (lbs/d) (mg/l) (mg/l) 45.00 3002 8.0 - - - 8.68 936 - - - - 9.00 1202 16.0 - - 5.9 6.40 1601 30.0 - - 5.9 0.39 138 - 7 - - 30.00 3005 12.0 - - 5.9 1.94 715 - - - - 0.20 152 - - - - 1.50 559 - - - - 51.00 1207 - - - - 150.00 2500 - - - - 34.08 12507 44.0 - - 4.8 15.00 2804 22.4 - - 5.0	(mgd) (lbs/d) (mg/l) (lbs/d) (mg/l) 45.00 8.68 936 - - - 5.9 9.00 9.00 6.40 1601 30.0 - - 5.9 11.80 0.39 138 - 7 - - 0.39 30.00 3005 12.0 - - 5.9 30.00 1.94 715 - - - - - 0.20 1.50 559 - - - - 51.00 150.00 2500 - -	(mgd) (lbs/d) (mg/l) (mg/l) (mg/l) (mg/l) (mg/l) (lbs/d) 45.00 3002 8.0 - - - 45.00 5367 8.68 936 - - - - 8.68 936 9.00 1202 16.0 - - 5.9 9.00 2253 6.40 1601 30.0 - - 5.9 11.80 2952 0.39 138 - 7 - - 0.39 138 30.00 3005 12.0 - - 5.9 30.00 7260 1.94 715 - - - - 1.94 716 0.20 152 - - - - 0.20 152 1.50 559 - - - - 51.00 1207 150.00 2500 - - - - - 51.00 <td>(mgd) (lbs/d) (mg/l) (mg/l)<</td> <td>(mgd) (lbs/d) (mg/l) (lbs/d) (mg/l) (lbs/d) (mg/l) (lbs/d) (mg/l) (lbs/d) 45.00 3002 8.0 - - - 45.00 5367 - 8.68 936 - - - 5.9 9.00 2253 30.0 - 6.40 1601 30.0 - - 5.9 11.80 2952 30.0 - 0.39 138 - 7 - - 5.9 30.00 7260 29.0 - 1.94 715 - - - - 1.94 716 - - 1.50 559 - - - - 1.50 557 - - 51.00 1207 - - - - 51.00 1207 - - 150.00 2500 - - - - - - - -</td> <td>(mgd) (lbs/d) (mg/l) (lbs/d) (mg/l) (mg/l) (lbs/d) (mg/l) (lbs/d)</td>	(mgd) (lbs/d) (mg/l) (mg/l)<	(mgd) (lbs/d) (mg/l) (lbs/d) (mg/l) (lbs/d) (mg/l) (lbs/d) (mg/l) (lbs/d) 45.00 3002 8.0 - - - 45.00 5367 - 8.68 936 - - - 5.9 9.00 2253 30.0 - 6.40 1601 30.0 - - 5.9 11.80 2952 30.0 - 0.39 138 - 7 - - 5.9 30.00 7260 29.0 - 1.94 715 - - - - 1.94 716 - - 1.50 559 - - - - 1.50 557 - - 51.00 1207 - - - - 51.00 1207 - - 150.00 2500 - - - - - - - -	(mgd) (lbs/d) (mg/l) (lbs/d) (mg/l) (mg/l) (lbs/d) (mg/l) (lbs/d)

¹ NH3-N values represent ammonia as nitrogen.

² Dissolved oxygen limits represent average minimum allowable levels.

³ Richmond STP's BOD5 is permitted as CBOD5

TABLE B7 - WASTE LOAD ALLOCATIONS FOR THE YEAR 1990

		SUN	ИMER (Ju	une-Octob	er)			WINTER	(Novemb	er-May)	
	FLOW	CBC	D5	NH3-I	N1,3	DO2	СВС	DD5	NH3	-N1	DO2
	(mgd)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)
City of Richmond STP	45.00	3002	8.0	2403	6.4	5.6	5367	14.3	5707	15.2	5.6
E.I. DuPont-Spruance	11.05	948		590		4.4	948		756		2.9
Falling Creek STP	10.10	1348	16.0	539	6.4	5.9	2023	24.0	1281	15.2	5.9
Proctor's Creek STP	12.00	1602	16.0	961	9.6	5.9	2403	24.0	1402	14.0	5.9
Reynolds Metals Co.	0.49	172		8		6.5	172		8		6.5
Henrico STP	30.00	3002	12.0	2403	9.6	5.6	4756	19.0	3504	44.0	5.6
American Tobacco Co.	2.70	715		113		5.8	715		113		5.8
ICI Americas, Inc.	0.20	167		8		5.8	167		8		3.1
Phillip Morris- Park 500	2.20	819		92		4.6	819		92		4.6
Allied (Chesterfield)	53.00	1255		442		5.7	1255		442		5.7
Allied (Hopewell)	165.00	2750		10326		6.1	2750		10326		6.1
Hopewell Regional WTF	34.07	12502	44.0	12091	36.2	4.8	12502	44.0	10291	36.2	4.8
Petersburg STP	15.00	2802	22.4	801	6.4	5.0	2802	22.4	2028	16.2	5.0
TOTAL	380.81	31084		28978			36679	35958			

¹ NH3-N values represent ammonia as nitrogen.

² Dissolved oxygen limits represent average minimum allowable levels.

³ Allied (Hopewell) allocation may be redistributed to the Hopewell Regional WTF by VPDES permit.

TABLE B7- WASTE LOAD ALLOCATION FOR THE YEAR 2000

	SUMMER (June-October)						WINTER	(Novemb	er-May)		
	FLOW CBOD5 NH3-N1,3		N1,3	DO2 CBOD5		DD5	NH3-N1		DO2		
	(mgd)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)
City of Richmond STP	45.08	3002	8.0	2403	6.4	5.6	5367	14.3		15.2	5.6
E.I. DuPont-Spruance	196.99	948		590		4.4	948		756		2.9
Falling Creek STP	10.10	1348	16.0	539	6.4	5.9	2023	24.0	1281	15.2	5.9
Proctor's Creek STP	16.80	1602	11.4	961	6.9	5.9	2403	17.1	1402	10.0	5.9
Reynolds Metals Co.	0.78	172		13		6.5	172		13		6.5
Henrico STP	32.80	3002	11.0	2403	8.8	5.6	4756	17.4	3504	12.8	5.6
American Tobacco Co.	3.00	715		113		5.8	715		113		5.8
ICI Americas, Inc.	0.20	167		8		5.8	167		8		3.1
Phillip Morris- Park 500	2.90	819		92		4.6	819		92		4.6
Allied (Chesterfield)	56.00	1255		442		5.7	1255		442		5.7
Allied (Hopewell)	170.00	2750		10326		6.1	2750		10326		6.1
Hopewell Regional WTF	36.78	12502	40.7	12091	33.5	4.8	12502	40.7	10291	33.5	4.8
Petersburg STP	15.00	2802	22.4	801	6.4	5.0	2802	22.4	2028	16.2	5.0
TOTAL	406.43	31084		28982			36679		35963		

¹ NH3-N values represent ammonia as nitrogen.

² Dissolved oxygen limits represent average minimum allowable levels.

³ Allied (Hopewell) allocation may be redistributed to the Hopewell Regional WTF by VPDES permit.

TABLE B7- WASTE LOAD ALLOCATIONS FOR THE YEAR 2010

	SUMMER (June-October)						WINTER	(Novemb	er-May)		
	FLOW	CBC	DD5	NH3-I	N1,3	DO2	СВС	DD5	NH3	-N1	DO2
	(mgd)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)
City of Richmond STP	45.86	3002	7.8	2403	6.3	5.6	5367	14.0		14.9	5.6
E.I. DuPont-Spruance	16.99	948		590		4.4	948		756		2.9
Falling Creek STP	10.10	1348	16.0	539	6.4	5.9	2023	24.0	1281	15.2	5.9
Proctor's Creek STP	24.00	1602	8.0	961	4.8	5.9	2403	12.0	1402	7.0	5.9
Reynolds Metals Co.	0.78	172		13		6.5	172		13		6.5
Henrico STP	38.07	3002	9.5	2403	7.6	5.6	4756	15.0	3504	11.0	5.6
American Tobacco Co.	3.00	715		113		5.8	715		113		5.8
ICI Americas, Inc.	0.20	167		8		5.8	167		8		3.1
Phillip Morris- Park 500	2.90	819		92		4.6	819		92		4.6
Allied (Chesterfield)	56.00	1255		442		5.7	1255		442		5.7
Allied (Hopewell)	180.00	2750		10326		6.1	2750		10326		6.1
Hopewell Regional WTF	39.61	12502	37.8	10291	31.1	4.8	12502	37.8	10291	31.1	4.8
Petersburg STP	15.00	2802	22.4	801	6.4	5.0	2802	22.4	2028	16.2	5.0
TOTAL	432.1	31084		28982			36679		35963		

¹ NH3-N values represent ammonia as nitrogen.

² Dissolved oxygen limits represent average minimum allowable levels.

³ Allied (Hopewell) allocation may be redistributed to the Hopewell Regional WTF by VPDES permit.

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9 VAC 25-40. Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed (amending 9 VAC 25-40-10, 9 VAC 25-40-30, 9 VAC 25-40-40, and 9 VAC 25-40-50; adding 9 VAC 25-40-25, 9 VAC 25-40-70; and repealing 9 VAC 25-40-20. 9 VAC 25-720. Water Quality Management Planning Regulation (amending 9 VAC 25-720-10, 9 VAC 25-720-50, 9 VAC 25-720-70, 9 VAC 25-720-110); adding 9 VAC 25-720-30, 9 VAC 25-720-40)

C. Nitrogen and phosphorus waste load allocations to restore the Chesapeake Bay and its tidal rivers.

The following table presents nitrogen and phosphorus waste load allocations for the identified significant dischargers — the associated delivery factors used for trading or offset purposes, and the total nitrogen and total phosphorus delivered waste load allocation allocations for the [basin listed facilities]. These individual significant discharger waste load allocations may be revised through the watershed trading program contained in 9 VAC 25-720-30. The waste load allocation listed below for a discharger, or the waste load allocation revised in accordance with 9 VAC 25-720-30, shall be achieved within four years following reissuance or modification of the discharger's VPDES permit, but in no case later than December 31, 2010.

CBP	Virginia	Discharger	VPDES	Total	TN	TN Waste	Total	TP	TP Waste
Watershed	Waterbody	Name	Permit No.	Nitrogen	Delivery	Load	Phosphorus	Delivery	Load
Model	ID			(TN) Waste	Factor	Delivered	(TP) Waste	Factor	Delivered
Segment				Load		Allocation	Load		Allocation
				Allocation		(lbs/yr)	Allocation		(lbs/yr)
				(lbs/yr)			(lbs/yr)		
230	E09R	Culpeper	VA0061590	55,000	0.61	33,000	4,100	1.03	4,200
		WWTP (1)		54,820			4,112		
230	E02R	Marshall WWTP	VA0031763	7,800	0.61	4,800	580	1.03	600
				7,797			585		
	E09R	Mountain Run	VA0090212	[18,273			[1,371		
		STP [(2)]		30,456]			2,284]		
230	E13R	Orange STP	VA0021385	18,000	0.61	11,000	1,400	1.03	1,400
				36,547			2,741		
230	E11R	Rapidan STP	VA0090948	7,300	0.61	4,400	550	1.03	560
				7,309			548		
230	E02R	Remington	VA0076805	24,000	0.61	15,000	1,800	1.03	1,900

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		WWTP [(3)]		[24,364			[1,827		
		WWIII I(S)							
				30,456]			2,284]		
230	E02R	South Wales	VA0080527	11,000	0.61	6,700	820	1.03	850
		Utility		[7,309			[548		
		Clevengers		10,964]			822]		
		Corner STP							
		[(4)]							
230	E02R	Warrenton Town	VA0021172	30,000	0.61	18,000	2,300	1.03	2,400
		STP		30,456			2,284		
230	E18R	Wilderness	VA0083411	9,100	0.61	5,600	680	1.03	710
		WWTP		15,228			1,142		
560	E20E	FMC WWTF	VA0068110	66,000	1.00	66,000	4,900	1.00	4,900
				65,784			4,934		
560	E20E	Fredericksburg	VA0025127	43,000	1.00	43,000	3,200	1.00	3,200
		WWTF		42,638			3,198		
560	E21E	Haymount	VA0089125	12,000	1.00	12,000	870	1.00	870
		WWTF [(5)]		[7,066			[530		
				11,695]			877]		
560	E24E	Haynesville CC	VA0023469	2,800	1.00	2,800	210	1.00	210
		WWTP		2,802					
	E21E	Hopyard Farms	VA0089338	6,091			457		
		STP							
560	E20E	Little Falls Run	VA0076392	97,000	1.00	97,000	7,300	1.00	7,300
		WWTF		97,458			7,309		
560	E20E	Massaponax	VA0025658	97,000	1.00	97,000	7,300	1.00	7,300
		WWTF		97,458			7,309		
560	E23R	Montross	VA0072729	1,200	1.00	1,200	<u>[91</u>	1.00	91
		Westmoreland		[1,218			119]		
		WWTP		1,584]					
	E21E	Oakland Park	VA0086789	1,706			128		

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		STP							
560	E23E	Tappahannock	VA0071471	9,700	1.00	9,700	730	1.00	730
		WWTP		9,746			731		
560	E26E	Urbanna WWTP	VA0026263	1,200	1.00	1,200	91	1.00	91
				1,218					
560	E21R	US Army - Ft.	VA0032034	6,400	1.00	6,400	480	1.00	480
		A P Hill WWTP		6,457			484		
560	E23E	Warsaw Aerated	VA0026891	3,600	1.00	3,600	270	1.00	270
		Lagoons		3,655			274		
580	C01E	Omega Protein -	VA0003867	16,000	1.00	16,000	1,200	1.00	1,200
		Reedville		21,213			1,591		
580	C01E	Reedville	VA0060712	2,400	1.00	2,400	180	1.00	180
		Sanitary District		2,436			183		
930	C01E	Kilmarnock	VA0020788	6,100	1.00	6,100	460	1.00	460
		WTP		6,091			457		
		TOTALS:		526,600		462,900	39,512		39,902
				[575,140			[43,135		
				602,062]			45,155]		

NOTE: (1) Town of Culpeper WWTP waste load allocations (WLAs) based on a design flow capacity of 4.5 million gallons per day (MGD). If plant is not certified to operate at 4.5 MGD design flow capacity by 12/31/10, the WLAs will decrease to TN = 36,547 lbs/yr; TP = 2,741 lbs/yr, based on a design flow capacity of 3.0 MGD.

[(2) Mountain Run STP: waste load allocations (WLAs) based on a design flow capacity of 2.5 million gallons per day (MGD). If plant is not certified to operate at 2.5 MGD design flow capacity by 12/31/10, the WLAs will decrease to TN = 18,273 lbs/yr; TP = 1,371 lbs/yr, based on a design flow capacity of 1.5 MGD.]

[(3) Fauquier Co. W&SA-Remington STP: waste load allocations (WLAs) based on a design flow capacity of 2.5 million gallons per day (MGD). If plant is not certified to operate at 2.5 MGD design flow capacity by 12/31/10, the WLAs will decrease to TN = 24,364 lbs/yr; TP = 1,827 lbs/yr, based on a design flow capacity of 2.0 MGD.]

[(4) Clevengers Corner STP: waste load allocations (WLAs) based on a design flow capacity of 0.9 million gallons per day (MGD). If plant is not certified to operate at 0.9 MGD design flow capacity by 12/31/10, the WLAs will decrease to TN = 7,309 lbs/yr; TP = 548 lbs/yr, based on a design flow capacity of 0.6 MGD.]

[(5) Haymount STP: waste load allocations (WLAs) based on a design flow capacity of 0.96 million gallons per day (MGD). If plant is not certified to operate at 0.96 MGD design flow capacity by 12/31/10, the WLAs will decrease to TN = 7,066 lbs/yr; TP = 530 lbs/yr, based on a design flow capacity of 0.58 MGD.]

9 VAC 25-720-110. Chesapeake Bay - Small Coastal - Eastern Shore River Basin.

- A. Total maximum Daily Load (TMDLs).
- B. Stream segment classifications, effluent limitations including water quality based effluent limitations, and waste load allocations.
 - 9 VAC 25-720-70 Rappahannock Area Development Commission (RADCO) 208 Area Wide Waste Treatment Management Plan And Potomac-Shenandoah River Basin 303(e) Water Quality Management Plan is included in The Potomac River Basin section.

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9 VAC 25-40. Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed (amending 9 VAC 25-40-10, 9 VAC 25-40-30, 9 VAC 25-40-40, and 9 VAC 25-40-50; adding 9 VAC 25-40-25, 9 VAC 25-40-70; and repealing 9 VAC 25-40-20. 9 VAC 25-720. Water Quality Management Planning Regulation (amending 9 VAC 25-720-10, 9 VAC 25-720-50, 9 VAC 25-720-70, 9 VAC 25-720-110); adding 9 VAC 25-720-30, 9 VAC 25-720-40)

C. Nitrogen and phosphorus waste load allocations to restore the Chesapeake Bay and its tidal rivers.

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CBP	Virginia	Discharger	VPDES	Total	TN	TN Waste	Total		TP	TP Waste
Watershed	Waterbody	Name	Permit No.	Nitrogen	Delivery	Load	Phospl	horus	Delivery	Load
Model	ID			(TN) Waste	Factor	Delivered	(TP)	Waste	Factor	Delivered
Segment				Load		Allocation	Load			Allocation
				Allocation		(lbs/yr)	Allocat	ion		(lbs/yr)
				(lbs/yr)			(lbs/yr)	1		
440	C16E	Cape Charles	VA0021288	6,100	1.00	6,100		460	1.00	460
		Town WWTP		6,091				457		
		[(1)]								
440	C11E	Onancock	VA0021253	3,000	1.00	3,000		[230	1.00	230
		WWTP [(2)]		[3,046				685]		
				9,137]						
440	C13E	Shore Memorial	VA0027537	1,200	1.00	1,200		91	1.00	91
		Hospital		1,218						
440	C10E	Tangier WWTP	VA0067423	1,200	1.00	1,200		91	1.00	91
				1,218						
440	C10R	Tyson Foods -	VA0004049	20,000	1.00	20,000		980	1.00	980
		Temperanceville		22,842						
		TOTALS:		31,500		31,500		1,852		1,852
				[34,415				[2,010		

QTA:	TE V	1/ATED	CONTROL	BUYDD
SIA	$I \sqsubset V$	VAICK	CUNIRU	DUARD

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	40,506]	2,467]	
[NOTE: (1) Cape Charles STP: was	te load allocations (WLAs) based on a de	esign flow capacity of 0.5 million gallons pe	er da
(MGD). If plant is not certified to ope	erate at 0.5 MGD design flow capacity by	12/31/10, the WLAs will decrease to TN =	3,04
lbs/yr; TP = 228 lbs/yr, based on a de	esign flow capacity of 0.25 MGD.]		
[(2) Onancock STP: waste load allo	cations (WLAs) based on a design flow c	apacity of 0.75 million gallons per day (MC	GD). I
plant is not certified to operate at 0.7	5 MGD design flow capacity by 12/31/10, t	he WLAs will decrease to TN = 3,046 lbs/yr,	;; TP =
228 lbs/yr, based on a design flow ca	apacity of 0.25 MGD.]		
Certified True and Accurate:	Robert G. Burnley		
	Director, DEQ		
Data			