Title 26 DEPARTMENT OF THE ENVIRONMENT

Subtitle 08 WATER POLLUTION

Chapter 01 General

Authority: Environment Article, §§9-313—9-316, 9-319, 9-320, 9-325, 9-327, and 9-328, Annotated Code of Maryland

.01 Definitions.

A. General.

(1) The following definitions describe the meaning of terms used in the water quality and water pollution control regulations of the Department of the Environment (COMAR 26.08.01—26.08.04).

(2) The terms "discharge", "discharge permit", "disposal system", "effluent limitation", "industrial user", "national pollutant discharge elimination system", "person", "pollutant", "pollution", "publicly owned treatment works", and "waters of this State" are defined in the Environment Article, §§1-101, 9-101, and 9-301, Annotated Code of Maryland. The definitions for these terms are provided below as a convenience, but persons affected by the Department's water quality and water pollution control regulations should be aware that these definitions are subject to amendment by the General Assembly.

B. Terms Defined.

(1) "Acute toxicity" means the capacity or potential of a substance to cause the onset of deleterious effects in living organisms over a short-term exposure as determined by the Department.

(2) "Administrative order" means a written notification issued by the Department under State law and regulations, and requiring correction of a water pollution condition or compliance with provisions of pertinent law and regulations.

(3) "Advanced waste treatment" means treatment of wastes or wastewaters to:

(a) Reduce the level of specific constituents which are not sufficiently controlled by best available technology (BAT) for industrial discharges or by secondary treatment for municipal discharges; or

(b) Reduce organic oxygen demand beyond the level attainable by BAT or secondary treatment to comply with waste load allocations in water quality limited waters.

(4) "Affiliate" means a person who wholly or partially owns a controlling interest in, controls, or operates the applicant, or who is wholly or partially owned, controlled, or operated by the applicant.

(5) "Alternate effluent limitations" means all effluent limitations or standards of performance for the control of the thermal component of any discharges which are established under the Environment Article, Title 9, Subtitle 3, Annotated Code of Maryland, and COMAR 26.08.03.03.

(5-1) "Animal feeding operation (AFO)" means a feedlot or facility where:

(a) Non-aquatic animals are confined, fed, and maintained for at least 45 days in any 12-month period; and

(b) Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.

(5-2) Animal Waste.

(a) "Animal waste" means liquid or solid waste, or both, from animal feeding, milking, holding, or other animal operations.

(b) "Animal waste" includes manure, poultry litter, offal, and process wastewater generated by an AFO.

(6) "Aquifer" means any formation of soil, sand, rock, gravel, limestone, sandstone, or other material, or any crevice from which underground water is or may be produced.

(7) "Average ebb tidal excursion" means the average velocity (feet/second) of the ebb tide passing through the cross section of the receiving waters at the point of discharge, multiplied by the duration of the tide (slack before ebb to slack before flood). The average velocity shall be determined from measurement of transect velocities at three neap tides with low fresh water input and three spring tides with high fresh water input.

(8) "Balanced indigenous community" means a biotic community typically characterized by diversity, the capacity to sustain itself through cyclic seasonal changes, presence of necessary food chain species, and by a lack of domination by pollution-tolerant species. This community may include historically non-native species introduced in connection with a program of wildlife management and species whose presence or abundance results from substantial, irreversible environmental modifications. Normally, however, this community does not include species whose presence or abundance is attributable to:

(a) The introduction of pollutants that will be eliminated by compliance by all sources with effluent limitations; and

(b) Alternate effluent limitations imposed under COMAR 26.08.03.03.

(9) "Base flow" means the discharge entering stream channels from ground water or other delayed sources; that is, stream flow periods not affected by recent rainfall.

(9-1) "Benthos" means a group of organisms, often invertebrates that live in or on the bottom in aquatic habitats.

(10) "Best available technology (BAT)" means, for discharges from industrial facilities, the best existing wastewater treatment technology economically achievable within an industrial category. BAT is equivalent to the EPA effluent limitation guidelines in the Federal Act for best available technology economically achievable and best conventional pollutant control technology (BCT). For discharges from all sewage treatment facilities, BAT means the secondary treatment levels specified by the Department in discharge permits.

(11) "Biocide residual" means the level remaining in an effluent of a chemical substance added as part of the treatment process for the purpose of controlling bacteria, fungi, algae, or other microorganisms. This term includes chlorine and ozone.

(11-1) "Certification of conformance" means a certification by a dry manure chicken (other than laying hens) AFO that:

(a) The AFO has, and is implementing:

(i) A current nutrient management plan; and

(ii) A current soil conservation and water quality plan (conservation plan);

(b) The AFO's NMP and conservation plan are consistent with the requirements of COMAR 26.08.03.09C(5)(b) and incorporates all buffers, setbacks, and storage requirements otherwise applicable to MAFOs as required in the general permit for animal feeding operations issued under COMAR 26.08.04.09N in effect at the time of the certification;

(c) The AFO agrees to allow the Department the access necessary to confirm conformance; and

(d) The AFO agrees to provide researchers authorized by the Maryland Department of Agriculture (MDA) and the Department the same access otherwise applicable to MAFOs as required in the general permit for animal feeding operations issued under COMAR 26.08.04.09N in effect at the time of the certification.

(11-2) "Chesapeake Bay" means all tidally-influenced waters within the Chesapeake Bay watershed.

(11-3) "Chesapeake Bay program segment" means a segment or segments of the Chesapeake Bay mainstem or its tidal tributaries the boundaries of which are defined by a set of georeferenced points.

(11-4) "Chlorophyll a" means one of three green pigments in plant cells, used as a measure of productivity in aquatic environments. Elevated levels of nutrients are usually reflected in corresponding elevations in chlorophyll a.

(12) "Chronic toxicity" means the capacity or potential of a substance to cause deleterious effects in living organisms over a long-term exposure as determined by the Department.

(12-1) "Coal remining" means a coal mining operation which begins after January 2, 1995 at a site on which coal mining was conducted before August 3, 1977, the effective date of the federal Surface Mining Control and Reclamation Act of 1977.

(13) "Coliform organisms" means all of the aerobic and facultative anaerobic, gram-negative, non-spore-forming, rod-shaped bacteria that ferment lactose broth with gas formation within 48 hours at 35?C.

(13-1) "Comprehensive nutrient management plan (CNMP)" means a nutrient management and conservation plan that is developed in accordance with the Natural Resources Conservation Service (NRCS) planning policy and meets NRCS technical standards.

(13-2) "Concentrated animal feeding operation (CAFO)" means:

(a) A medium AFO or large AFO, based upon the size categories established in Table 1 of COMAR 26.08.03.09A, that discharges or proposes to discharge, as defined by the Federal Act, to surface waters of this State;

(b) A small AFO designated a CAFO by the Department in accordance with COMAR 26.08.03.09B; or

(c) An AFO designated as a CAFO by the Regional Administrator (RA) of the EPA in accordance with the Federal Act.

(14) "Control" means the possession of the power to direct or cause the direction of the management policies of a person.

(15) "Criteria" means elements of State water quality standards expressed as constituent concentrations, levels, or narrative statements representing a quality of water that supports a particular use.

(16) "Critical periods" means that time of the year during which sensitive life stages or densities of representative important species (RIS) are present in the plant intake or receiving waters.

(17) "Department" means the Department of the Environment.

(18) "Design stream flow" means the minimum 7 consecutive day average stream discharge having a recurrence interval of 10 years.

(19) "Designated use" means those uses specified in the State's water quality standards for each water body or segment whether or not the uses are being attained.

(20) "Discharge" means:

(a) The addition, introduction, leaking, spilling, or emitting of any pollutant to waters of this State; or

(b) The placing of a pollutant in a location where the pollutant is likely to pollute.

(21) "Discharge permit" means a permit issued by the Department for the discharge of any pollutant or combination of pollutants into the waters of this State.

(22) "Disposal system" means a system for disposing of wastes by surface, above surface, or underground methods. Disposal system includes a treatment works and a disposal well.

(22-1) "Dissolved oxygen" means gaseous oxygen that is dissolved in the water.

(23) "Effluent" means the outflow of treated or untreated waste from an industrial process, holding tank, pond, sewer, or other point source into the waters of this State.

(24) "Effluent limitation" means any restriction or prohibition that:

(a) Is established under federal law or a law of this State;

(b) Specifies quantities, rates or concentrations of chemical, physical, biological, or other constituents that are discharged into the waters of this State;

(c) Includes:

(i) Parameters for the discharge of toxic and nontoxic substances, and

(ii) Standards of performance for new sources.

(25) "Effluent limited waters" means waters of this State which the Department has identified as those in which BAT for industrial discharges and secondary treatment for sewage discharges is sufficiently stringent to maintain applicable water quality standards.

(26) "Emergency conditions" means those circumstances resulting from a permittee's actions, or lack of actions, which the Department determines constitute a present or imminent danger to the public health, welfare, or the environment.

(27) "Entrainment" means the incorporation of organisms into the cooling water flow.

(28) "EPA" means the United States Environmental Protection Agency, or its successor.

(28-1) "Epifauna" means organisms that live upon aquatic substrates.

(29) "Estuary" means a semi-enclosed coastal body of water having a free connection with the open sea and within which the seawater is measurably diluted with fresh water deriving from land drainage.

(30) "Eutrophication" or "eutrophic" means:

(a) The excessive enrichment of the waters of this State by the discharge to or addition of nutrients; or

(b) The degradation of water quality or undesirable ecological changes as indicated by excessive rooted or dispersed plant growth, loss of water clarity, or nuisance conditions.

(31) "Existing use" means those uses actually attained in the water body after November 27, 1975, whether or not the uses are included in the water quality standards.

(32) "Fecal coliform" means the portion of the coliform bacteria group which is present in the gut or the feces of warm-blooded animals. It generally includes organisms which are capable of producing gas from lactose broth in a suitable culture medium within 24 hours at 44.5° +=/-0.5°C.

(33) "Federal Act" means the Federal Water Pollution Control Act (33 U.S.C. §1251 et seq.), its amendments, and all regulations and rules adopted under the Act.

(34) "Fish" means any of numerous cold-blooded aquatic vertebrates of the Superclass Pisces, characteristically having fins, gills and a streamlined body. Fish includes:

(a) Any of the Class Osteichthyes having a bony skeleton;

(b) Any of the Class Chondrichthyes, having a cartilaginous skeleton (sharks, rays, and skates); and

(c) Any of the Class Agnatha which lack jaws (lampreys and hagfishes).

(35) "General permit" is a discharge permit issued to a class of dischargers.

(36) "Ground water" means underground water in a zone of saturation.

(37) "Impingement" means the blocking of larger organisms by a structure in the cooling water intake system.

(38) "Includes" or "including" means includes or including by way of illustration and not by way of limitation.

(39) "Industrial user" means:

(a) A person who is engaged in manufacturing, fabricating, or assembling goods; or

(b) A member of any class of significant producers of pollutants identified under regulations adopted by:

(i) The Department, or

(ii) The Administrator of the United States Environmental Protection Agency.

(40) "Industrial waste" means any liquid, gaseous, solid, or other waste substance, or combination thereof, resulting from:

(a) Any process of industry, manufacturing, trade or business; or

(b) The development of any natural resource, including agriculture.

(40-1) "Infauna" means organisms that live within the sediment in aquatic substrates.

(41) "Interference" means:

(a) An inhibition or disruption of a POTW, its treatment processes or operations, or its sludge generation processes or utilization which causes a violation of any requirement of the POTW's discharge permit or which prevents sewage sludge utilization by the POTW in accordance with the following statutory provisions and regulations or permits issued under them:

(i) Section 405 of the Clean Water Act;

(ii) The Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA) and any State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SWDA);

(iii) The Clean Air Act; and

(iv) The Toxic Substances Control Act.

(b) Damage to sewer systems and threats to POTW worker and public health, safety, and comfort.

(42) "Intermittent stream" means a [nontidal body of flowing water for which the computed design stream flow is zero] stream that does not have flowing surface water during dry periods of the year, but may have groundwater-based surface flow at other times.

(42-1) "Maryland animal feeding operation (MAFO)" means an AFO that is not a CAFO and is:

(a) A large AFO according to Table 1 of COMAR 26.08.03.09A;

(b) A medium AFO according to Table 1 of COMAR 26.08.03.09A, designated a MAFO in accordance with COMAR 26.08.03.09C(2); or

(c) A chicken (other than laying hens) AFO with dry manure handling and at least 75,000 square feet total house capacity:

(i) That has not submitted to the Department a certification of conformance required under COMAR 26.08.03.09F; or

(ii) For which the certification of conformance has been rejected in accordance with that regulation.

(43) "Material balance" means an inventory accounting system for determining quantities of materials on hand, used in process, converted to product, lost to the environment, or contained in waste matter generated, stored, discharged, or otherwise processed.

(43-1) "Mean low water" means the average of all the low water heights observed over the National Tidal Datum Epoch.

(43-2) "Mesohaline" means tidal waters with salinities from 5 to less than 18 parts per thousand.

(43-3) "Minimum level" means the lowest concentration of a substance as determined by the Department that generally can be quantified within specified limits of interlaboratory precision and accuracy under routine laboratory operating conditions in the matrix of concern.

(44) "Mixing zone" means an area contiguous to a discharge where surface water quality or ground water quality does not have to meet:

(a) All water quality criteria; or

(b) All requirements otherwise applicable to the natural water.

(45) "National Pollutant Discharge Elimination System (NPDES)" means the national system for issuing permits as designated by the Federal Act.

(46) "National pretreatment requirements" means any general pretreatment regulation established by EPA in accordance with the Federal Act.

(47) "National pretreatment standard" means a pollutant discharge limit that:

(a) Applies to industrial users of publicly owned treatment works; and

(b) Is promulgated by EPA under the Federal Act.

(48) "NPDES application" means the current revised EPA standard national forms for applying for an NPDES permit.

(49) "NPDES permit" means the permit issued under the Federal Act.

(50) "Natural" or "naturally occurring", when used to describe water quality, means:

(a) Those water quality values which exist unaffected by, or unaffected as a consequence of, any water use;

(b) Those water quality values which exist unaffected by the discharge, or direct or indirect deposit, of any solid, liquid, or gaseous substance; or

(c) Any other water quality values which represent conditions which the Department by its regulations defines as natural. For the purposes of this definition, the following conditions shall be considered as natural:

(i) Infestations of water milfoil, myriophyllum spicatum,

(ii) Infestations of water chestnut, trapa natans,

(iii) The presence of sea lettuce, ulva lactuca, and

(iv) The presence of sea nettles, aurelia sp.

(51) "Natural trout waters" means waters capable of supporting self-sustaining trout populations, including propagation, and their associated food organisms.

(52) "New source" means any source, the construction of which is commenced after the publication by the EPA of proposed regulations prescribing a standard of performance which will be applicable to the source if the standard is promulgated.

(53) "Nontidal water" means water not subject to regular and periodic tidal action (generally freshwater).

(53-1) "Nutrient management plan (NMP)" means a plan written by a nutrient management planner certified by the Maryland Department of Agriculture (MDA) that meets all requirements of COMAR 15.20.07 and 15.20.08 and any other requirements specified by the Department in a discharge permit issued pursuant to this subtitle.

(53-2) Offal.

(a) "Offal" means the refuse from slaughtered or salvageable dead animals, crustaceans, or any other animal form.

(b) "Offal" includes heads, feet, viscera, hair, blood, feathers, bones, scales, or oils.

(54) "Oil" means any of a number of unctuous combustible substances which are liquid at ambient temperature and atmospheric pressure, or easily liquefiable on warming and soluble in ether, and which include fuel oil, gasoline, kerosene, lubricating oil, other petroleum products, oil bearing sludge, oil refuse, oil mixed with ballast or bilge water, and oil mixed with wastes.

(54-1) "Oligohaline" means tidal waters with salinities from 0.5 to less than 5 parts per thousand.

(55) "Operator" means that person or those persons with responsibility for the management and performance of each facility.

(55-1) "Opportunistic species" means an organism that tolerates or thrives in a disturbed environment, or both, and has a competitive edge in some situations.

(56) "Other aquatic life" means all organisms, other than fish, which grow in, live in, or frequent water.

(57) "Other waste" means garbage, refuse, wood, sawdust, shavings, bark, sand, lime, cinders, ashes, offal, oil, tar, dyestuffs, acids, chemicals, and all discarded substances other than sewage or industrial waste.

(58) "Pass through" means discharge of pollutants through the POTW into waters of the State in quantities or concentrations which cause a violation of any requirement of the POTW's discharge permit.

(58-1) "Percent-light-through-water (PLW)" means the amount of light reaching just above the canopy of underwater bay grasses, expressed as a fraction of the light at the water surface.

(59) "Permeability of an aquifer" means the volume of water at the prevailing kinematic viscosity that will move in unit time under a unit hydraulic gradient through a unit area measured at right angle to the direction of flow.

(60) "Permit" means written authorization issued by the Department under pertinent law and regulations and describing required performance for specific activities and operations.

(61) "Permittee" means the person holding a permit issued by the Department.

(62) "Person" means an individual, receiver, trustee, guardian, personal representative, fiduciary, or representative of any kind, and any partnership, firm, association, corporation or other entity. Person includes the federal government, this State, any county, municipal corporation, or other political subdivision of this State or any of their units.

(63) "Person in charge" means the person designated by an operator or permittee as the one with direct supervisory responsibility for an activity or operation at a facility.

(64) "Point of discharge" means that location in or adjacent to a body of water at which any liquid, solid, or gaseous substances are discharged or deposited.

(65) "Point source" means any discernible, confined and discrete conveyance, including any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, large animal feeding operation, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are, or may be, discharged.

(66) "Pollutant" means:

(a) Any waste or wastewater that is discharged from:

(i) Any publicly owned treatment works, or

(ii) An industrial source; or

(b) Any other liquid, gaseous, solid, or other substances which will pollute any waters of this State.

(67) "Pollution" means any contamination or other alteration of the physical, chemical, or biological properties of any waters of this State, including a change in temperature, taste, color, turbidity, or odor of the waters or the discharge or deposit of any organic matter, harmful organism, or liquid, gaseous, solid, radioactive, or other substance into any waters of this State that will render the waters harmful, or detrimental, to:

(a) Public health, safety, or welfare;

(b) Domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses;

(c) Livestock, wild animals, birds; or

(d) Fish or other aquatic life.

(67-1) "Polyhaline" means tidal waters with salinities from 18 to 30 parts per thousand. These areas are typically in the lower portion of an estuary, where the ocean and estuary meet.

(67-2) "Preexisting discharge" means any discharge which existed at the time of application for a coal remining discharge permit.

(68) "Pretreatment" means a reduction in the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in a wastewater before discharging to or otherwise introducing pollutants into a POTW.

(69) "Pretreatment requirements" means any:

(a) Federal pretreatment requirements and federal pretreatment standards;

(b) Pretreatment regulations developed in accordance with Environment Article, §9-319(a), Annotated Code of Maryland;

(c) Pretreatment requirements listed within the delegation document issued by the Department approving a pretreatment program developed by owners of a POTW;

(d) Pretreatment requirements developed by owners of POTWs in accordance with approved pretreatment programs; or

(e) Pretreatment requirements established in a permit or agreement between a POTW and an industrial user issued in accordance with an approved pretreatment program.

(70) "Propagation" means the continuance of species by generation of successive production in the natural environment, as opposed to the maintenance of species by artificial culture and stocking.

(71) "Publicly owned treatment works (POTW)" means a facility that is:

(a) Owned by this State or a political subdivision, municipal corporation, or other public entity; and

(b) Used for the treatment of pollutants.

(72) "Public water supply" means any water of this State with the designated use of public water supply and which is suitable for human consumption when treated to meet the requirements of COMAR 26.04.01.

(72-1) "Pycnocline" means the portion of the water column where density changes rapidly because of salinity, temperature, or both. In an estuary the pycnocline is the zone separating deep, cooler, more saline waters from the less saline, warmer, surface waters. The upper and lower boundaries of a pycnocline are defined by a change in density per unit of depth. The upper pycnocline is the shallowest occurrence of a density gradient of 0.1 kg/m^4 or greater and the lower pycnocline depth is the deepest occurrence of a density gradient of 0.2 kg/m^4.

(73) "Receiving water" means the surface waters of this State into which waters or wastewaters are or may be discharged.

(74) "Recreational trout waters" means cold or warm waters capable of holding or supporting adult trout for put-and-take fishing, usually seasonal.

(75) "Refuse Act" means §13 of the River and Harbor Act of March 3, 1899.

(76) "Refuse Act application" means the application for a permit under the Refuse Act.

(77) "Refuse Act permit" means any permit issued under the Refuse Act.

(78) "Regular or periodic tidal action" means the rise and fall of the sea produced by the gravitational attraction of the sun and moon unaffected by wind or any other circumstances.

(78-1) "Remined area" means only that area of any coal remining operation on which coal mining was conducted before August 3, 1977.

(78-2) "Restoration variance" means a temporary exception to the water quality standards allowing nonattainment of designated uses granted in situations where no enforcement action will be taken if the nonattainment is due to the existence of one or more of the justifications in 40 CFR §131.10(g). Restoration variances will be reviewed every 3 years at a minimum as required by the Clean Water Act and EPA regulations.

(79) "Schedule of compliance" means a schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with effluent limitations or water quality standards as specified by an order or permit requirement of the Department.

(79-1) "Secchi disk" means a device for measuring water clarity that consists of a circular weighted disk painted in flat black and white in alternating quarters that is suspended on an incremented rope or line.

(79-2) "Secchi depth" means the depth at which a Secchi disk is just visible when viewed vertically from a shaded perspective. The measure is taken by lowering the device to a depth below which it can be seen and then raising it until it is just visible.

(80) "Secondary treatment" means the treatment of sewage to produce effluent equal to or better than the following quality:

(a) Five-day biochemical oxygen demand:

(i) 30 milligrams/liter—average for a 30-day period,

(ii) 45 milligrams/liter—average for a 7-day period;

(b) Total suspended solids:

(i) 30 milligrams/liter—average for a 30-day period,

(ii) 45 milligrams/liter—average for a 7-day period;

(c) Bacterial control: As required to meet water quality standards.

(81) "Sewage" means the water-carried domestic waste from residences, buildings, industrial establishments, or other places.

(81-1) Sewerage System.

(a) "Sewerage system" means:

(i) The channels used or intended to be used to collect and dispose of sewage; and

(ii) A structure or appurtenance used or intended to be used to collect or prepare sewage for discharge into a treatment works or the waters of the State.

(b) "Sewerage system" includes a sewer of any size.

(c) "Sewerage system" does not include the plumbing system inside a building served by the sewerage system.

(82) "Shellfish harvesting waters" means waters that are actual or potential areas for the harvesting of shellfish including oysters, softshell clams, and brackish water clams.

(83) "Sludge" means the settleable solids that are:

(a) Naturally present in waters and wastewaters; or

(b) Derived from nonsettleable matter by chemical coagulation and precipitation or by biological flocculation and precipitation.

(83-1) "Soil conservation and water quality plan (conservation plan)" means a plan that is developed by a soil conservation district, MDA, a Natural Resources Conservation Service (NRCS) planner, or a technical service provider certified by the NRCS that addresses the following minimum elements:

(a) Storage for animal manure and litter, including any need for additional storage or manure transfer;

(b) Stabilized surfaces in heavy use areas;

(c) Diversion of storm water away from the production area;

(d) Maintenance of vegetation around the production area;

(e) Construction and maintenance of filter strip or strips or water control structures between the production area and surface water; and

(f) Mortality management.

(84) "Source" means any building, structure, facility, or installation from which there is, or may be, a discharge of pollutants.

(85) "Spill (spilling)" means any loss of control or release of oil or other hazardous substance that moves or is capable of moving into the aquatic environment.

(86) "Standard of performance" means a standard for the control of the discharge of pollutants which reflects the greatest degree of effluent reduction achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives as established by the State or the Environmental Protection Agency.

(87) "State" means the State of Maryland.

(88) "Stream flow" means the nontidal water movement that occurs in a natural channel.

(89) "Sub-basin" means one of the 20 watershed areas delineated by the Department and comprising, in sum total, the surface waters of the State.

(89-1) "Submerged aquatic vegetation (SAV; underwater bay grass)" means rooted vascular plants that generally grow beneath the water surface, but may have leaves that extend to, and grow on, the surface of the water.

(89-2) "Subpycnocline" means waters that occur below the lower level of the pycnocline.

(90) "Surface waters" means all waters of this State which are not ground waters.

(91) "Thermal barrier" means a pattern of artificially created temperature change and distribution.

(91-1) "Tidal fresh" means tidal waters with salinities from 0 to less than 0.5 parts per thousand.

(92) "Tidal water" means water subject to regular or periodic tidal action.

(93) "Toxic substance" means any liquid, gaseous, or solid substance in a concentration which, when applied to, discharged to, or deposited in the waters of this State, may, in the judgment of the Department, exert a detrimental effect on humans or on the propagation, cultivation, or conservation of terrestrial or aquatic life.

(94) "Transmissivity of an aquifer" means the rate at which water of the prevailing kinematic viscosity is transmitted through a unit width of the aquifer under a unit hydraulic gradient.

(95) "Treatment works" means any plant or other works used for the purpose of treating, or stabilizing, wastes.

(96) "Vessel" means every watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on the waters of this State.

(97) "Waste load allocation" means the identification and allotment by the Department of quantities of residual wastes which may be discharged from point sources. This allotment shall include:

(a) Limits on the quantities of wastes which may be discharged;

(b) Consideration of seasonal variations;

(c) A margin of safety; and

(d) The contribution of non-point sources.

(98) "Waste" means industrial waste and all other liquid, gaseous, solid, or other substances which will pollute any waters of this State.

(99) "Wastewater" means any:

(a) Liquid waste substance derived from industrial, commercial, municipal, residential, agricultural, recreational, or other operations or establishments; and

(b) Other liquid waste substance containing liquid, gaseous, or solid matter and having characteristics which will pollute any waters of the State.

(100) "Water" means the liquid substance which is derived from a ground water source, a surface source, or any combination of these sources, and which will be discharged, without change in quality, into the waters of this State, with the exception of storm water runoff.

(100-1) "Water clarity" means a relative measure of the ability of water to transmit light, expressed as a percentage of light penetrating the water in terms of expected Secchi depth for the defined waterbody.

(100-2) "Water quality criteria" means the numeric threshold or narrative description of a water quality parameter that would be expected to support and protect a particular designated use.

(101) "Water quality limited waters" means shellfish waters and other waters of this State for which BAT for industrial discharges and secondary treatment for sewage discharges is not sufficiently stringent to maintain applicable water quality standards.

(102) "Watercourse" means a specific body or channel of water which is part of the waters of this State.

(103) "Waters of this State" includes:

(a) Both surface and underground waters within the boundaries of this State subject to its jurisdiction, including that part of the Atlantic Ocean within the boundaries of this State, the Chesapeake Bay and its tributaries, and all ponds, lake, rivers, streams, tidal and nontidal wetlands, public ditches, tax ditches, and public drainage systems within this State, other those designed and used to collect, convey, or dispose of sanitary sewage;

(b) The flood plain of free-flowing waters determined by the Department of Natural Resources on the basis of the 100-year flood frequency.

.02 Principles of Water Pollution Control.

A. General. In the exercise of its responsibilities to improve, conserve, and manage the quality of the waters of the State, the Department recognizes and shall utilize the general principles set forth in this regulation for decision making and action.

B. Sampling and Analysis.

(1) Samples shall be collected, and preserved as necessary, using procedures and precautions as specified in "Guidelines Establishing Test Procedures for Analysis of Pollutants" (40 CFR 136) as amended.

(2) Collections shall be make by trained personnel in such manner and place, and of such type, number, and frequency as to assure that samples:

(a) Are representative of prevailing conditions; and

(b) Will accurately reflect, upon analysis, the effect of any discharges to the waters of the State.

(3) Analysis shall be performed according to procedures and precautions described in the above-mentioned "Guidelines Establishing Test Procedures for Analysis of Pollutants".

C. Waste Load Allocation.

(1) If the Department determines that compliance with the established water quality standards or nutrient control requirements cannot be achieved through the application of best practicable control technology currently available for all industrial discharges and secondary treatment for all sewage discharges within a specific river segment or water region, the Department shall impose additional restrictions in a State Discharge Permit which designate for each point source maximum quantities of wastes which may be discharged to those receiving waters.

(2) In making the necessary allocations and determinations, the Department shall consider the relative contributions of all sources, existing and planned, including non-point sources, required control for point sources, and the potential of control for non-point sources.

D. Best Practicable Control Technology Currently Available. The State shall require the use of best practicable control technology currently available, to achieve a level of water pollution control which produces the least impact on the environment. This technology includes procedures, practices, facilities, equipment, instrumentation, and supplies for which:

(1) Technical and economic feasibility is established to the satisfaction of the Department; and

(2) Conditions and requirements for use have been established by the administrator of the Environmental Protection Agency in accordance with regulations promulgated pursuant to the Federal Water Pollution Control Act, as amended, Title 33, U.S.C.

E. Public Participation.

(1) Although primary responsibility for water quality decision making is vested by law in public agencies at the various levels of government, active public involvement throughout the intergovernmental decision-making process shall be encouraged and utilized to accomplish the objectives of State and federal laws and regulations.

(2) The Department shall made a maximum effort to seek out and involve the interested public both at the preliminary stage and throughout the process of development of regulations, plans, and other program actions.

(3) Public meetings and citizen information and education programs on water quality shall be encouraged and assisted as a legitimate and necessary function of federal and State administration of pertinent laws and regulations.

(4) The major objectives of public participation include greater responsiveness of governmental actions to public concerns and priorities, and improved popular understanding and support of often complex and difficult official programs and actions.

Administrative History

Effective date: September 1, 1974 (1:1 Md. R. 33)

Annotation: Regulations .01—.06 and .08—.13 were transferred from the Department of Natural Resources (COMAR 08.05.04) pursuant to Executive Order 01.01.1980.04, effective July 1, 1980 (7:13 Md. R. 1277)

Annotation: COMAR 10.50.01 cited in Harcum v. Department of Health and Mental Hygiene, Circuit Court for Wicomico County, Docket No. CG 2/42 (March 18, 1985)

Annotation: COMAR 10.50.01.08H cited in Citizens for Rewastico Creek v. Commissioners of Hebron, 67 Md. App. 466 (1986)

Annotation: COMAR 10.50.01.01 and .11 recodified to COMAR 26.08.01.01 and .02, respectively.

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Regulation .01 amended effective August 3, 1981 (8:15 Md. R. 1308)

Regulation .01A amended effective January 28, 1985 (12:2 Md. R. 141)

Regulation .01B amended effective December 5, 1974 (1:6 Md. R. 278); April 21, 1978 (5:8 Md. R. 593); May 24, 1982 (9:10 Md. R. 1022); June 6, 1983 (10:11 Md. R. 976); December 19, 1983 (10:25 Md. R. 2269); January 28, 1985 (12:2 Md. R. 141); August 26, 1985 (12:17 Md. R. 1706); February 19, 1990 (17:3 Md. R. 301); April 16, 1990 (17:7 Md. R. 854); June 7, 1993 (20:11 Md. R. 917); January 2, 1995 (21:26 Md. R. 2195); November 6, 1995 (22:22 Md. R. 1670); August 29, 2005 (32:17 Md. R. 1440)

Regulation .02 amended effective April 21, 1978 (5:8 Md. R. 593); July 11, 1980 (7:14 Md. R. 1348)

Title 26 DEPARTMENT OF THE ENVIRONMENT

Subtitle 08 WATER POLLUTION

Chapter 02 Water Quality

Authority: Environment Article, §§9-303.1, 9-313—9-316, 9-319, 9-320—9-325, 9-327, and 9-328, Annotated Code of Maryland

.01 Surface Water Quality Protection.

A. Purpose. To protect surface water quality, this State shall adopt water quality standards to:

(1) Protect public health or welfare;

(2) Enhance the quality of water;

(3) Protect aquatic resources; and

(4) Serve the purposes of the Federal Act.

B. Water Quality Standards.

(1) The surface water quality standards consist of two parts:

(a) Designated uses of the waters of this State; and

(b) Water quality criteria to protect the designated uses.

(2) Water quality standards shall provide water quality for the designated uses of:

(a) Water contact recreation;

(b) Fishing;

(c) Propagation of fish, other aquatic life, and wildlife; and

(d) Agricultural and industrial water supply.

(3) Waters of this State shall be protected for the basic designated uses in Regulation .02A.

(4) Water quality standards shall consider the use and value of public water supplies.

(5) Regulations .02—.08 of this chapter implement this State's water quality standards by:

(a) Defining and establishing specific designated uses for the surface waters of this State;

(b) Assigning a designated use to all surface waters;

(c) Establishing water quality criteria for each designated use;

(d) Defining this State's antidegradation policy;

(e) Defining this State's criteria for mixing zones; and

(f) Defining other water quality protective policies.

.02 Designated Uses.

A. General.

(1) The determination of the designated use of a water body shall include consideration of the following factors:

(a) Existing conditions; and

(b) Potential uses which may be made possible by anticipated improvements in water quality.

(2) The actual uses of surface water are not limited to those designated in this chapter. Any reasonable and lawful use is permitted provided that the surface water quality is not adversely affected by the use.

B. Specific Designated Uses.

(1) Use I: Water Contact Recreation, and Protection of Nontidal Warmwater Aquatic Life. This use designation includes waters that are suitable for:

(a) Water contact sports;

(b) Play and leisure time activities where individuals may come in direct contact with the surface water;

(c) Fishing;

(d) The growth and propagation of fish (other than trout), other aquatic life, and wildlife;

(e) Agricultural water supply; and

(f) Industrial water supply.

(2) Use I-P: Water Contact Recreation, Protection of Aquatic Life, and Public Water Supply. This use designation includes:

(a) All uses identified for Use I; and

(b) Use as a public water supply.

(3) Use II: Support of Estuarine and Marine Aquatic Life and Shellfish Harvesting. This use designation includes all applicable uses identified for Use I in:

(a) All tidally influenced waters of the Chesapeake Bay and tributaries, the Coastal Bays, and the Atlantic Ocean to the 3-nautical-mile boundary; and

(b) Tidally influenced waters that are or have the potential for:

(i) Shellfish propagation and storage, or harvest for marketing purposes; and

(ii) Actual or potential areas for the harvesting of oysters, soft-shell clams, hard-shell clams, and brackish water clams.

(4) Use II-P: Tidal Fresh Water Estuary. This use designation includes:

(a) All uses identified for Use II waters; and

(b) Use as a public water supply.

(5) Use III: Nontidal Cold Water. This use designation includes all uses identified for Use I and waters which have the potential for or are:

(a) Suitable for the growth and propagation of trout; and

(b) Capable of supporting self-sustaining trout populations and their associated food organisms.

(6) Use III-P: Nontidal Cold Water and Public Water Supply. This use designation includes:

(a) All uses identified for Use III waters; and

(b) Use as a public water supply.

(7) Use IV: Recreational Trout Waters. This use designation includes all uses identified for Use I in cold or warm waters that have the potential for or are:

(a) Capable of holding or supporting adult trout for put-and-take fishing; and

(b) Managed as a special fishery by periodic stocking and seasonal catching.

(8) Use IV-P: Recreational Trout Waters and Public Water Supply. This use designation includes:

(a) All uses identified for Use IV waters; and

(b) Use as a public water supply.

.02-1 Support of Estuarine and Marine Aquatic Life and Shellfish Harvesting.

A. Use II includes the subcategories of designated uses described in this section.

B. Shellfish Harvesting. This subcategory includes waters where there are:

(1) Actual or potential areas for the harvesting of oysters, soft-shell clams, hard-shell clams, or brackish water clams; or

(2) Actual or potential areas suitable for the propagation or storage of oysters, hard-shell clams, soft-shell clams, and brackish water clams for marketing purposes, except areas excluded by the Department.

C. Seasonal Migratory Fish Spawning and Nursery Subcategory. This subcategory includes waters of the Chesapeake Bay and its tidal tributaries that have the potential for or are supporting the survival, growth, and propagation of balanced indigenous populations of ecologically, recreationally, and commercially important anadromous, semi-anadromous and tidal-fresh resident fish species inhabiting spawning and nursery grounds from February 1 through May 31.

D. Seasonal Shallow-Water Submerged Aquatic Vegetation Subcategory. This subcategory includes:

(1) Tidal fresh waters of the Chesapeake Bay and its tidal tributaries that have the potential for or are supporting the survival, growth, and propagation of rooted, underwater bay grasses in tidally influenced waters from April 1 through October 1; and

(2) Low salinity (oligohaline and mesohaline) waters of the Chesapeake Bay and its tidal tributaries that have the potential for or are supporting the survival, growth, and propagation of rooted, underwater bay grasses in tidally influenced waters from April 1 through October 1.

E. Open-Water Fish and Shellfish Subcategory.

(1) This subcategory includes waters of the Chesapeake Bay and its tidal tributaries that have the potential for or are supporting the survival, growth, and propagation of balanced, indigenous populations of ecologically, recreationally, and commercially important fish and shellfish species inhabiting open-water habitats.

(2) This subcategory applies from June 1 to September 30 in tidally influenced waters from the shoreline to the adjacent shoreline (and from the shoreline to the opposite shoreline), and from the surface to the measured boundary of the pycnocline, if the pycnocline prevents oxygen replenishment, otherwise the subcategory is applied from the surface to the bottom.

(3) If a pycnocline exists but other physical circulation patterns, such as the inflow of oxygen-rich oceanic bottom waters, provide oxygen replenishment to the deep waters, the open-water fish and shellfish designated use extends to the bottom.

(4) From October 1 through May 31, the boundaries of the open-water designated use include all tidally influenced waters from the shoreline measured from the shoreline to the adjacent or opposite shoreline and down to the bottom.

F. Seasonal Deep-Water Fish and Shellfish Subcategory. This subcategory includes waters of the Chesapeake Bay and its tidal tributaries that have the potential for or are supporting the survival, growth, and propagation of balanced, indigenous populations of important fish and shellfish species inhabiting deep-water habitats as described as follows:

(1) One of the following applies:

(a) From June 1 through September 30 in tidally influenced waters located between the measured depths of the upper and lower boundaries of the pycnocline, where a pycnocline is present and presents a barrier to oxygen replenishment; or

(b) From June 1 through September 30 from the upper boundary of the pycnocline down to the sediment/water interface at the bottom, where a lower boundary of the pycnocline cannot be calculated due to the depth of the water column; and

(2) From October 1 to May 31, criteria under §A(5) of this regulation apply.

G. Seasonal Deep-Channel Refuge Use.

(1) This subcategory includes waters of the Chesapeake Bay and its tidal tributaries that have the potential for or are supporting the survival of balanced, indigenous populations of ecologically important benthic infaunal and epifaunal worms and clams, which provide food for bottom-feeding fish and crabs.

(2) This subcategory applies from June 1 through September 30 in tidally influenced waters located below the measured lower boundary of the pycnocline to the bottom where a measured pycnocline is present and presents a barrier to oxygen replenishment.

(3) From October 1 to May 31, criteria under §A(5) of this regulation apply.

.03 Surface Water Quality Criteria.

A. Applicability.

(1) Surface water quality criteria shall apply:

(a) In fresh water streams and rivers:

(i) For toxic substances, under the conditions stipulated in Regulations .03-2A and .05A, and

(ii) Under design stream flow for all other substances;

(b) In tidal waters:

(i) For toxic substances, under the conditions stipulated in Regulations .03-2A and .05A, and

(ii) Under average tidal conditions during design stream flows for all other substances;

(c) Outside of any mixing zones which may be designated by the Department.

(2) If the natural water quality of a stream segment is not consistent with the criteria established for the stream then:

(a) The natural conditions do not constitute a violation of the water quality standards; and

(b) The water quality to be maintained and achieved is not required to be substantially different from that which would occur naturally.

(3) When coal remining permits are issued under §301 of the Federal Water Pollution Control Act (33 U.S.C. §1311), a variance to the specific water quality criteria for pH, iron, and manganese in the State's water quality standards may be given at the discretion of the Department for the duration of the remining activity. This variance may not be given if there is no demonstrated potential for improved water quality from the remining operation and if degradation of existing in-stream conditions is likely to occur.

B. General Water Quality Criteria. The waters of this State may not be polluted by:

(1) Substances attributable to sewage, industrial waste, or other waste that will settle to form sludge deposits that:

(a) Are unsightly, putrescent, or odorous, and create a nuisance, or

(b) Interfere directly or indirectly with designated uses;

(2) Any material, including floating debris, oil, grease, scum, sludge, and other floating materials attributable to sewage, industrial waste, or other waste in amounts sufficient to:

(a) Be unsightly;

(b) Produce taste or odor;

(c) Change the existing color to produce objectionable color for aesthetic purposes;

(d) Create a nuisance; or

(e) Interfere directly or indirectly with designated uses;

(3) High temperature or corrosive substances attributable to sewage, industrial waste, or other waste in concentrations or combinations which:

(a) Interfere directly or indirectly with designated uses, or

(b) Are harmful to human, animal, plant, or aquatic life;

(4) Acute toxicity from any discharge outside the mixing zone established under Regulation .05 of this chapter for the application of acute criteria for protection of aquatic life; and

(5) Toxic substances attributable to sewage, industrial wastes, or other wastes in concentrations outside designated mixing zones, which:

(a) Interfere directly or indirectly with designated uses, or

(b) Are harmful to human, plant, or aquatic life.

.03-1 Toxic Substance Water Quality Criteria for Surface Waters.

A. General.

(1) Numerical toxic substance criteria for ambient surface waters are established to protect human health or aquatic life.

(2) Four types of numerical toxic substance criteria shall be adopted. The purpose of these criteria is to protect:

(a) Human health through ingestion of public water supplies;

(b) The wholesomeness of fish for human consumption;

(c) Fresh, estuarine, and salt water aquatic life from acute toxicity impacts; and

(d) Fresh, estuarine, and salt water aquatic life from chronic toxicity impacts.

B. Fresh Water, Estuarine, and Salt Water Boundaries.

(1) For any toxic substance for which no estuarine criteria appear in Regulation .03-2G, Table 1, the salt water criteria apply in estuarine waters.

(2) Fresh water and estuarine or salt water boundaries begin at specific points for the purpose of applying the numerical toxic substance criteria for aquatic life protection. These points are:

(a) The stream segment and all tributaries which confluence with the stream segment upstream from the boundaries specified in § B(3) are assumed to be fresh water.

(b) Except for Sub-Basin 02-13-01-----Coastal Area, the stream segment and all tributaries which confluence with the stream segment downstream from the boundaries specified in § B(3) are assumed to be estuarine water.

(c) In Sub-Basin 02-13-01-----Coastal Area, the stream segment and all tributaries which confluence with the stream segment downstream from the boundaries specified in § B(3) are assumed to be salt water.

(d) Tributary headwaters. Since the headwaters of some tributaries to stream segments designated as estuarine or salt water may be fresh, the Department may:

(i) Require the discharger to provide site specific salinity measurements or accept site specific salinity measurements provided voluntarily by the applicant; and

(ii) Review the information provided in § B(2)(d)(i), and determine that the area is more appropriately designated as fresh water.

(3) For the purpose of applying numerical toxic substance criteria, the following are designated as the boundaries between fresh waters and estuarine or salt waters:

(a) Lower Susquehanna River Area (Sub-Basin 02-12-02)-----All waters are fresh waters.

(b) Coastal Area (Sub-Basin 02-13-01) boundaries are:

(i) Bishopville Prong-----State boat ramp at Daye Road;

(ii) Birch Branch-----Route 113;

(iii) Middle Branch-----Route 113;

(iv) Church Branch-----Route 113;

(v) Turville Creek-----Route 589;

(vi) Ayer Creek-----Route 376;

(vii) Newport Creek-----Hayes Landing Road; and

(viii) Poplartown Creek-----Beaverdam Creek Road.

(c) Pocomoke River Area (Sub-Basin 02-13-02) boundaries are:

(i) Pocomoke River-----A line connecting the mouth of Bullbegger Creek and the east entrance of Fair Hill Channel; and

(ii) Manokin River-----Sharps Point.

(d) Nanticoke River Area (Sub-Basin 02-13-03) boundaries are:

(i) Nanticoke River-----A line connecting Newfoundland Point and Hat Crown Point (includes Marshyhope Creek);

(ii) Wicomico River-----A line connecting Pine Beach and Holland Point;

(iii) Blackwater River-----Mouth at Snake Island; and

(iv) Transquaking River-----Mouth at Fishing Bay.

(e) Choptank River Area (Sub-Basin 02-13-04) boundary is a line connecting Bow Knee Point and Wrights Wharf.

(f) Chester River Area (Sub-Basin 02-13-05) boundaries are:

(i) Chester River-----A line connecting Piney Grove and Primrose Point;

(ii) Grays Inn Creek-----A line crossing the creek at Cherry Tree Point;

(iii) Herringtown Creek-----All waters are fresh;

(iv) West Fork Langford Creek-----A line crossing creek at Fox Point;

(v) East Fork Langford Creek-----A line connecting Piney Point and Longmarsh Point;

(vi) Philip Creek-----All waters are fresh;

(vii) Reed Creek-----Tilghmans Neck Road;

(viii) Corsica Creek-----A line crossing the creek at Jacobs Nose;

(ix) Emory Creek-----All waters are estuarine water; and

(x) All tributaries to the Chester River upstream from Deep Point.

(g) Elk River Area (Sub-Basin 02-13-06)-----All waters are fresh water.

(h) Bush River Area (Sub-Basin 02-13-07)-----All waters are fresh water.

(i) Gunpowder River Area (Sub-Basin 02-13-08)-----All waters are fresh water.

(j) Patapsco River Area (Sub-Basin 02-13-09) boundaries are:

(i) Patapsco River-----A line connecting Lazaretto Point and the southern terminus of the Baltimore Harbor Tunnel; and

(ii) Back River-----a line connecting Rocky Point and Cuckhold Point.

(k) West Chesapeake Bay Area (Sub-Basin 02-13-09) boundaries are:

(i) Severn River-----Bridge on State Highway 3;

(ii) All tributaries to the Severn River upstream from MD Route 648;

(iii) Magothy River-----A line connecting Henderson Point and Pea Patch Point;

(iv) All tributaries to the Magothy River are fresh water; and

(v) South River-----A line drawn due north from Beards Point.

(l) Patuxent River Area (Sub-Basin 02-13-11) boundary is a line connecting Chalk Point and God's Grace Point.

(m) Lower Potomac River Area (Sub-Basin 02-14-01) boundaries are:

(i) Potomac River-----A line connecting Upper Cedar Point and Chotank Creek; and

(ii) All Maryland tributaries of the Potomac River upstream from St. Catherine Island are fresh water.

(n) Washington Metropolitan Area (Sub-Basin 02-14-02)-----All waters are fresh water.

(o) Middle Potomac River Area (Sub-Basin 02-14-03)-----All waters are fresh water.

(p) Upper Potomac River Area (Sub-Basin 02-14-05)-----All waters are fresh water.

(q) North Branch Potomac River Area (Sub-Basin 02-14-10)-----All waters are fresh water.

(r) Youghiogheny River Area (Sub-Basin 05-02-02)-----All waters are fresh water.

(s) Conewago Creek Area (Sub-Basin 02-05-03)-----All waters are fresh water.

(t) Chesapeake Bay Proper (Sub-Basin 02-13-99) boundary is a line connecting Booby Point (39 degrees 17 minutes 4.5 seconds north latitude, 76 degrees 10 minutes 54 seconds west longitude) with Handy's Point (39 degrees 17 minutes 31 seconds north latitude, 76 degrees 10 minutes 54 seconds west longitude).

.03-2 Numerical Criteria for Toxic Substances in Surface Waters.

A. Numerical toxic substance criteria shall be applied:

(1) In intermittent streams, at the end of the discharge pipe; and

(2) In all other water bodies, at the edge of the mixing zones determined in accordance with Regulation .05C—E of this chapter.

B. Acceptable laboratory methods for the detection and measurement of toxic substances shall be specified by the Department.

C. Site-specific numerical toxic substance criteria may be developed on a site-specific basis. A person who wishes to develop a site-specific numerical toxic substance criterion shall:

(1) Do so in accordance with a scientifically defensible methodology approved by the Department; and

(2) Notify the Department of their intent not later than the time specified in COMAR 26.08.04.01-1.

D. The toxicity of certain substances in Tables 1 and 4 of §G of this regulation is increased or decreased by hardness or pH. For these toxic substances:

(1) The Department may:

(a) Require the discharger to provide site-specific measurements; or

(b) Recalculate the aquatic life criteria based on available water quality data.

(2) The permittee may voluntarily provide site-specific information for the recalculation of the criteria. It is within the Department's discretion to determine the weight given this information.

(3) After reviewing the information provided in §D(1) or (2), the Department shall determine if one or more of these criteria should be modified at a particular location.

(4) For calculation of site-specific copper criteria, a discharger may use the Biotic Ligand Model in accordance with "Aquatic Life Ambient Freshwater Quality Criteria-Copper 2007 Revision (EPA-822-R-07-001, February 2007)" which is incorporated by reference.

E. In those cases where numerical toxic substance criteria for aquatic life protection and protection of human health both apply, the most restrictive of the criteria shall be used.

F. Acute and chronic numeric toxic substance criteria for fresh, estuarine, and salt water aquatic life protection and for human health protection are shown in Tables 1—4 of §G. For the instream application of the acute and chronic criteria for the protection of aquatic life in Tables 1—4 of §G of this regulation:

(1) The metals shall be measured as dissolved metal or as biologically available equivalence and may be translated to total recoverable measurements for waste load allocation to derive discharge permit limits using the procedures for the biological translator or chemical translator described in COMAR 26.08.04;

(2) The organic substances shall be measured directly or as biologically available equivalence and may be translated for waste load allocation to derive discharge permit limits using the procedures for the biological translator described in COMAR 26.08.04; and

(3) Cyanide shall be measured as either free cyanide or cyanide amenable to chlorination.

G. Tables of Ambient Water Quality Criteria.

(1) Table 1. Toxic Substances Criteria for Ambient Surface Waters-Inorganic Substances.

Substance	CAS#	Aquatic Life (µg/L)						Human Health for Consumption of:		
		Fresh Water		Estuarine Water		Salt Water		Drinking Water + Organism (*µg/L)*	Organism Only (*µg/L)*	Drinking Water MCL (mg/L)
		Acute	Chronic	Acute	Chronic	Acute	Chronic			
Antimony	7440360							5.6	640	0.006
Arsenic[1]	7440382	340	150			69	36	0.18	1.4[a]	0.010
Asbestos	1332214								7 million fibers/L	7 million fibers/L
Barium	7440393							1,000		2
Beryllium								4		0.004
Cadmium[1]	7440439	2.0	0.25			40	8.8	5		0.005
Chlorine[2]	7782505	19	11			13	7.5			
Chromium (total)	7440473							100		0.1
Chromium III[1]	16065831	570	74							
Chromium VI	18540299	16	11			1100	50			
Copper[1]	7440508	13	9	6.1		4.8	3.1	1,300		1.3[c]
Cyanide	57125	22	5.2			1	1	140	140	0.2
Lead[1]	7439921	65	2.5			210	8.1			0.015[c]
Mercury	7439976	1.4	0.77			1.8	0.94			0.002
Methylmercury[b]	22967926								0.3 mg/kg in fish tissue	
Nickel[1]	7440020	470	52			74	8.2	610	4,600	
Selenium	7782492	20	5			290	71	170	4,200	0.05

Silver[1]	7440224	3.2				1.9				0.10
Thallium	7440280							0.24	0.47	0.002
Zinc[1]	7440666	120	120			90	81	7,400	26,000	

[1] Refer to §D of this regulation.

[2] The more stringent of these criteria or the discharge requirements in COMAR 26.08.03.06 shall be used as the basis for determining discharge permit limitations.

[a] This criterion will be applied against the actual measurement of inorganic arsenic (As+3) rather than total arsenic.

[b] Per EPA recommendation, total mercury concentrations, as opposed to methylmercury, will be used in MDE fish consumption risk-calculation. This approach is deemed to be most protective of human health and most cost-effective.

[c] Lead and Copper are regulated by a treatment technique that requires systems to control the corrosiveness of their water. If more than 10 percent of tap water samples exceed the action level, water systems must take additional steps. The values listed are technically action levels.

(2) Table 2. Toxic Substances for Ambient Water Quality Criteria-Organic Compounds.

Substance	CAS#	Aquatic Life (µg/L)				Human Health for Consumption of:		
		Fresh Water		Salt Water		Drinking Water + Organism (µg/L)	Organism Only (µg/L)	Drinking Water MCL (mg/L)
		Acute	Chronic	Acute	Chronic			
1,1 Dichloroethylene (DCE)	75354					330	7100	0.007
1,1,1-Trichloroethane (TCA)	71556					200		0.2
1,1,2,2-Tetrachloroethane	79345					1.7	40	
1,1,2-Trichloroethane	79005					5.9	160	0.005
1,2,4-Trichlorobenzene	120821					35	70	0.07
1,2-Dichlorobenzene	95501					420	1300	0.6
1,2-Dichloroethane	107062					3.8	370	0.005
1,2-Dichloropropane	78875					5	150	0.005
1,2-Diphenylhydrazine	122667					0.36	2	
1,2-Trans-Dichloroethylene	156605					140	10000	0.1
1,3-Dichlorobenzene	541731					320	960	
1,3-Dichloropropene	542756					3.4	210	
1,4-Dichlorobenzene	106467					63	190	0.075
2,4,6-Trichlorophenol	88062					14	24	
2,4-Dichlorophenol	120832					77	290	
2,4-Dimethylphenol	105679					380	850	
2,4-Dinitrophenol	51285					69	5300	

2,4-Dinitrotoluene	121142					1.1	34	
2-Chloronapthalene	91587					1000	1600	
2-Chlorophenol	95578					81	150	
2-Methyl-4,6-Dinitrophenol	534521					13	280	
3,3'-Dichlorobenzidine	91941					0.21	0.28	
Acrolein	107028					190	290	
Acrylonitrile	107131					0.51	2.5	
Benzene	71432					22	510	0.005
Benzidine	92875					0.00086	0.002	
Bis(2-Chloroethyl) Ether	111444					0.3	5.3	
Bis2(Chloroisopropyl) Ether	108601					1400	65000	
Bromoform[1]	75252					See Trihalomethanes	1400	
Carbon tetrachloride	56235					2.3	16	0.005
Chlorobenzene	108907					130	1600	0.1
Chlorodibromomethane[1]	124481					See Trihalomethanes	130	
Chloroform[1]	67663					See Trihalomethanes	4700	
Dichlorobromomethane[1]	75274					See Trihalomethanes	170	
Ethylbenzene	100414					530	2100	0.7
Hexachlorobenzene	118741					0.0028	0.0029	0.001
Hexachlorobutadiene	87683					4.4	180	
Hexachlorocyclopenta-diene	77474					40	1100	0.05
Hexachloroethane	67721					14	33	
Isophorone	78591					350	9600	
Methyl bromide	74839					47	1500	
Methylene chloride	75092					46	5900	0.005
Nitrobenzene	98953					17	690	
N-Nitrosodimethylamine	62759					0.0069	30	
N-Nitrosodi-n-Propylamine	621647					0.05	5.1	
N-Nitrosodiphenylamine	86306					33	60	
Phenol	108952					21000	1700000	
Tetrachloroethylene	127184					6.9	33	0.005
Toluene	108883					1300	15000	1
Trichloroethylene (TCE)	79016					25	300	0.005
Trihalomethanes[1]						80		0.08
Vinyl chloride	75014					0.25	24	0.002

[1] Four compounds (bromoform, chlorodibromomethane, chloroform, and dichlorodibromomethane) are found in combination and comprise a category of contaminants called "trihalomethanes" formed as a result of drinking water disinfection. The concentration of any of these compounds individually, or all of them in sum, may not exceed 80 micrograms per liter. This criterion is equal to the Safe Drinking Water Act Maximum Contaminant Level.

(3) Table 3. Toxic Substances for Ambient Water Quality Criteria-Polycyclic Aromatic Hydrocarbons and Phthalates.

Substance	*CAS#*	*Aquatic Life (µg/L)*				*Human Health for Consumption of:*		
		Fresh Water		*Salt Water*		*Drinking Water + Organism (µg/L)*	*Organism Only (µg/L)*	*Drinking Water MCL (mg/L)*
		Acute	*Chronic*	*Acute*	*Chronic*			
Acenaphthene	*83329*					*670*	*990*	
Anthracene	*120127*					*8,300*	*40,000*	
Benzo(a)Anthracene	*56553*					*0.038*	*0.18*	
Benzo(a)Pyrene	*50328*					*0.038*	*0.18*	*0.0002*
Benzo(b)Fluoranthene	*205992*					*0.038*	*0.18*	
Benzo(k)Fluoranthene	*207089*					*0.038*	*0.18*	
Chrysene	*218019*					*0.038*	*0.18*	
Dibenzo(a,h)Anthracene	*53703*					*0.038*	*0.18*	
Fluoranthene	*206440*					*130*	*140*	
Fluorene	*86737*					*1,100*	*5,300*	
Ideno(1,2,3-cd)Pyrene	*193395*					*0.038*	*0.18*	
Pyrene	*129000*					*830*	*4,000*	
Bis(2-Ethylhexyl) Phthalate	*117817*					*12*	*22*	*0.006*
Butylbenzyl Phthalate	*85687*					*1,500*	*1,900*	
Diethyl Phthalate	*84662*					*17,000*	*44,000*	
Dimethyl Phthalate	*131113*					*270,000*	*1,100,000*	
Di-n-Butyl Phthalate	*84742*					*2,000*	*4,500*	

(4) Table 4. Toxic Substances for Ambient Water Quality Criteria-Pesticides and Chlorinated Compounds.

Substance	*CAS#*	*Aquatic Life (µg/L)*				*Human Health for Consumption of:*		
		Fresh Water		*Salt Water*		*Drinking Water + Organism (µg/L)*	*Organism Only (µg/L)*	*Drinking Water MCL (mg/L)*
		Acute	*Chronic*	*Acute*	*Chronic*			
2, 3, 7, 8-TCDD (Dioxin)	*1746016*					*0.00000005*	*0.00000051*	*3 X 10-8*

4,4'-DDD	*72548*					*0.0031*	*0.0031*	
4,4'-DDE	*72559*					*0.0022*	*0.0022*	
4,4'-DDT	*50293*	*1.1*	*0.001*	*0.13*	*0.001*	*0.0022*	*0.0022*	
Aldrin	*309002*	*3*		*1.3*		*0.00049*	*0.00050*	
alpha-BHC	*319846*				*0.026*	*0.049*		
alpha-Endosulfan	*959988*	*0.22*	*0.056*	*0.034*	*0.0087*	*62*	*89*	
Atrazine	*319857*					*3*		*0.003*
beta-BHC	*319857*					*0.091*	*0.17*	
beta-Endosulfan	*33213659*	*0.22*	*0.056*	*0.034*	*0.0087*	*62*	*89*	
Chlordane	*57749*	*2.4*	*0.0043*	*0.09*	*0.004*	*0.0080*	*0.0081*	*0.002*
Chlorpyrifos	*2921882*	*0.083*	*0.041*	*0.011*	*0.0056*			
Dieldrin	*60571*	*0.24*	*0.056*	*0.71*	*0.0019*	*0.00052*	*0.00054*	
Endosulfan Sulfate	*1031078*					*62*	*89*	
Endrin	*72208*	*0.086*	*0.036*	*0.037*	*0.0023*	*0.059*	*0.060*	*0.002*
Endrin Aldehyde	*7421934*					*0.29*	*0.30*	
gamma-BHC (Lindane)	*58899*	*0.95*		*0.16*		*0.98*	*1.8*	*0.0002*
Heptachlor	*76448*	*0.52*	*0.0038*	*0.053*	*0.0036*	*0.00079*	*0.00079*	*0.0004*
Heptachlor Epoxide	*1024573*	*0.52*	*0.0038*	*0.053*	*0.0036*	*0.00039*	*0.00039*	*0.0002*
Polychlorinated Biphenyls PCBs			*0.014*		*0.03*	*0.00064*	*0.00064*	*0.0005*
Toxaphene	*8001352*	*0.73*	*0.002*	*0.21*	*0.002*	*0.0028*	*0.0028*	*0.003*
Tributyltin (TBT)		*0.46*	*0.072*	*0.42*	*0.0074*			
Pentachlorophenol (PCP)1	*87865*	*19*	*15*	*13*	*7.9*	*2.7*	*30*	*0.001*

[1] Refer to §D of this regulation.

H. Acute Numeric Toxic Substance Criteria for Ammonia for the Protection of Fresh Water Aquatic Life (Table 1).

(1) Presence of Salmonid Fish. In Use III, III-P, IV, and IV-P waters, the concentration of total ammonia (in milligrams of nitrogen per liter) may not exceed the acute criterion listed under "Salmonids Present" in Table 1.

(2) Absence of Salmonid Fish. In Use I and I-P waters, the concentration of total ammonia (in milligrams of nitrogen per liter) may not exceed the acute criterion listed under "Salmonids Absent" in Table 1.

(3) Table 1. Acute Water Quality Criteria for freshwater Aquatic Life for Ammonia (milligrams of nitrogen per liter).

pH	Salmonids Present[1]	Salmonids Absent[2]
6.5	32.6	48.8
6.6	31.3	46.8
6.7	29.8	44.6

6.8	28.1	42.0
6.9	26.2	39.1
7.0	24.1	36.1
7.1	22.0	32.8
7.2	19.7	29.5
7.3	17.5	26.2
7.4	15.4	23.0
7.5	13.3	19.9
7.6	11.4	17.0
7.7	9.65	14.4
7.8	8.11	12.1
7.9	6.77	10.1
8.0	5.62	8.40
8.1	4.64	6.95
8.2	3.83	5.72
8.3	3.15	4.71
8.4	2.59	3.88
8.5	2.14	3.20
8.6	1.77	2.65
8.7	1.47	2.20
8.8	1.23	1.84
8.9	1.04	1.56
9.0	0.885	1.32

[1] The acute water quality criteria for total ammonia where salmonids may be present was calculated using the following equation, which may also be used to calculate unlisted values: Acute water quality criteria for ammonia (salmonids present) = [0.275/(1+10^ (7.204-pH))]+[39.0/(1+10^ (pH-7.204))]

[2] The acute water quality criteria for total ammonia where salmonids are absent were calculated using the following equation, which may also be used to calculate unlisted values: Acute water quality criteria for ammonia (salmonids absent) = [0.411/(1+10^ (7.204-pH))]+[58.4/(1+10^ (pH-7.204))]

I. Chronic Numeric Toxic Substance Criteria for Ammonia, Expressed as a 30-day Average, for the Protection of Fresh Water Aquatic Life (Tables 1 and 2).

(1) Averaging Period. The concentration of total ammonia nitrogen (in milligrams of nitrogen per liter) expressed as a 30-day average may not exceed the chronic criterion listed in Tables 1 or 2.

(2) The use of Table 2 requires documentation acceptable to the Department of the absence of fish early life stages.

(3) In addition, the highest 4-day average within the 30-day period may not exceed 21/2 times the chronic criterion.

(4) Table 1. Chronic Ammonia Criteria for Waters Where Freshwater Fish Early Life Stages May Be Present (milligrams of nitrogen per liter).1

	Temperature (°C)									
pH	0	14	16	18	20	22	24	26	28	30
6.5	6.67	6.67	6.06	5.33	4.68	4.12	3.62	3.18	2.80	2.46
6.6	6.57	6.57	5.97	5.25	4.61	4.05	3.56	3.13	2.75	2.42
6.7	6.44	6.44	5.86	5.15	4.52	3.98	3.50	3.07	2.70	2.37
6.8	6.29	6.29	5.72	5.03	4.42	3.89	3.42	3.00	2.64	2.32
6.9	6.12	6.12	5.56	4.89	4.30	3.78	3.32	2.92	2.57	2.25
7.0	5.91	5.91	5.37	4.72	4.15	3.65	3.21	2.82	2.48	2.18
7.1	5.67	5.67	5.15	4.53	3.98	3.50	3.08	2.70	2.38	2.09
7.2	5.39	5.39	4.90	4.31	3.78	3.33	2.92	2.57	2.26	1.99
7.3	5.08	5.08	4.61	4.06	3.57	3.13	2.76	2.42	2.13	1.87
7.4	4.73	4.73	4.30	3.78	3.32	2.92	2.57	2.26	1.98	1.74
7.5	4.36	4.36	3.97	3.49	3.06	2.69	2.37	2.08	1.83	1.61
7.6	3.98	3.98	3.61	3.18	2.79	2.45	2.16	1.90	1.67	1.47
7.7	3.58	3.58	3.25	2.86	2.51	2.21	1.94	1.71	1.50	1.32
7.8	3.18	3.18	2.89	2.54	2.23	1.96	1.73	1.52	1.33	1.17
7.9	2.80	2.80	2.54	2.24	1.96	1.73	1.52	1.33	1.17	1.03
8.0	2.43	2.43	2.21	1.94	1.71	1.50	1.32	1.16	1.02	0.897
8.1	2.10	2.10	1.91	1.68	1.47	1.29	1.14	1.00	0.879	0.773
8.2	1.79	1.79	1.63	1.43	1.26	1.11	0.973	0.855	0.752	0.661
8.3	1.52	1.52	1.39	1.22	1.07	0.941	0.827	0.727	0.639	0.562
8.4	1.29	1.29	1.17	1.03	0.906	0.796	0.700	0.615	0.541	0.475
8.5	1.09	1.09	0.990	0.870	0.765	0.672	0.591	0.520	0.457	0.401
8.6	0.920	0.920	0.836	0.735	0.646	0.568	0.499	0.439	0.386	0.339
8.7	0.778	0.778	0.707	0.622	0.547	0.480	0.422	0.371	0.326	0.287
8.8	0.661	0.661	0.601	0.528	0.464	0.408	0.359	0.315	0.277	0.244
8.9	0.565	0.565	0.513	0.451	0.397	0.349	0.306	0.269	0.237	0.208
9.0	0.486	0.486	0.442	0.389	0.342	0.300	0.264	0.232	0.204	0.179

[1] The freshwater chronic water quality criteria for total ammonia where fish early life stages may be present were calculated using the following equation, which may also be used to calculate unlisted values:

Freshwater chronic water quality criterion for ammonia (fish early life stages present) = [0.0577/(1 + 107.688 - pH)]+[2.487/(1 + 10pH - 7.688)] X MIN(2.85, 1.45 X 100.028 xw(25 - T))

Where MIN indicates the lesser of the two values separated by a comma.

(5) Table 2. Chronic Ammonia Criteria for Waters Where Freshwater Fish Early Life Stages Are Absent (milligrams of nitrogen per liter).1

Temperature (°C)										
pH	0—7	8	9	10	11	12	13	14	15[2]	16[2]
6.5	10.8	10.1	9.51	8.92	8.36	7.84	7.35	6.89	6.46	6.06
6.6	10.7	9.99	9.37	8.79	8.24	7.72	7.24	6.79	6.36	5.97
6.7	10.5	9.81	9.20	8.62	8.08	7.58	7.11	6.66	6.25	5.86
6.8	10.2	9.58	8.98	8.42	7.90	7.40	6.94	6.51	6.10	5.72
6.9	9.93	9.31	8.73	8.19	7.68	7.20	6.75	6.33	5.93	5.56
7.0	9.60	9.00	8.43	7.91	7.41	6.95	6.52	6.11	5.73	5.37
7.1	9.20	8.63	8.09	7.58	7.11	6.67	6.25	5.86	5.49	5.15
7.2	8.75	8.20	7.69	7.21	6.76	6.34	5.94	5.57	5.22	4.90
7.3	8.24	7.73	7.25	6.79	6.37	5.97	5.60	5.25	4.92	4.61
7.4	7.69	7.21	6.76	6.33	5.94	5.57	5.22	4.89	4.59	4.30
7.5	7.09	6.64	6.23	5.84	5.48	5.13	4.81	4.51	4.23	3.97
7.6	6.46	6.05	5.67	5.32	4.99	4.68	4.38	4.11	3.85	3.61
7.7	5.81	5.45	5.11	4.79	4.49	4.21	3.95	3.70	3.47	3.25
7.8	5.17	4.84	4.54	4.26	3.99	3.74	3.51	3.29	3.09	2.89
7.9	4.54	4.26	3.99	3.74	3.51	3.29	3.09	2.89	2.71	2.54
8.0	3.95	3.70	3.47	3.26	3.05	2.86	2.68	2.52	2.36	2.21
8.1	3.41	3.19	2.99	2.81	2.63	2.47	2.31	2.17	2.03	1.91
8.2	2.91	2.73	2.56	2.40	2.25	2.11	1.98	1.85	1.74	1.63
8.3	2.47	2.32	2.18	2.04	1.91	1.79	1.68	1.58	1.48	1.39
8.4	2.09	1.96	1.84	1.73	1.62	1.52	1.42	1.33	1.25	1.17
8.5	1.77	1.66	1.55	1.46	1.37	1.28	1.20	1.13	1.06	0.990
8.6	1.49	1.40	1.31	1.23	1.15	1.08	1.01	0.951	0.892	0.836
8.7	1.26	1.18	1.11	1.04	0.976	0.915	0.858	0.805	0.754	0.707
8.8	1.07	1.01	0.944	0.885	0.829	0.778	0.729	0.684	0.641	0.601
8.9	0.917	0.860	0.806	0.756	0.709	0.664	0.623	0.584	0.548	0.513
9.0	0.790	0.740	0.694	0.651	0.610	0.572	0.536	0.503	0.471	0.442

[1]The freshwater chronic water quality criteria for total ammonia where fish early life stages are absent were calculated using the following equation, which may also be used to calculate unlisted values:

Freshwater chronic water quality criterion for ammonia (fish early life stages absent) = [0.0577/(1 + 107.688 - pH)] + [2.487/(1 + 10pH - 7.688)] x 1.45 x 100.028 \x (25 - MAX(T,7))

Where MAX indicates the greater of the two values separated by a comma.

[2]At 15°C and above, the criterion for fish early life stage absent is the same as the criterion for fish early life stage present.

J. Saltwater and Estuarine Acute Criteria for Ammonia. Acute numeric toxic substance criteria for ammonia to protect marine and estuarine life are shown in Table 1. In estuarine and saltwaters, the concentration of total ammonia (in milligrams/liter) may not exceed the acute criterion listed in Table 1. Milligrams per liter total ammonia in saltwater (Table 1) may be converted to milligrams of ammonia nitrogen per liter (as used in §§H and I of this regulation) by multiplying the criteria values in Table 1 by 14/17 (or 0.82353) to result in total ammonia nitrogen.

Table 1 Acute Water Quality Criteria for Saltwater Aquatic Life (milligrams per liter total ammonia).

Temperature (°C)								
	0	5	10	15	20	25	30	35
pH	Salinity = 10 parts per thousand							
7.0	270	191	131	92	62	44	29	21
7.2	175	121	83	58	40	27	19	13
7.4	110	77	52	35	25	17	12	8.3
7.6	69	48	33	23	16	11	7.7	5.6
7.8	44	31	21	15	10	7.1	5.0	3.5
8.0	27	19	13	9.4	6.4	4.6	3.1	2.3
8.2	18	12	8.5	5.8	4.2	2.9	2.1	1.5
8.4	11	7.9	5.4	3.7	2.7	1.9	1.4	1.0
8.6	7.3	5.0	3.5	2.5	1.8	1.3	0.98	0.75
8.8	4.6	3.3	2.3	1.7	1.2	0.92	0.71	0.56
9.0	2.9	2.1	1.5	1.1	0.85	0.67	0.52	0.44
pH	Salinity = 20 parts per thousand							
7.0	291	200	137	96	64	44	31	21
7.2	183	125	87	60	42	29	20	14
7.4	116	79	54	37	27	18	12	8.7
7.6	73	50	35	23	17	11	7.9	5.6
7.8	46	31	23	15	11	7.5	5.2	3.5
8.0	29	20	14	9.8	6.7	4.8	3.3	2.3
8.2	19	13	8.9	6.2	4.4	3.1	2.1	1.6
8.4	12	8.1	5.6	4.0	2.9	2.0	1.5	1.1
8.6	7.5	5.2	3.7	2.7	1.9	1.4	1.0	0.77
8.8	4.8	3.3	2.5	1.7	1.3	0.94	0.73	0.56
9.0	3.1	2.3	1.6	1.2	0.87	0.69	0.54	0.44
pH	Salinity = 30 parts per thousand							
7.0	312	208	148	102	71	48	33	23
7.2	196	135	94	64	44	31	21	15
7.4	125	85	58	40	27	19	13	9.4
7.6	79	54	37	25	21	12	8.5	6.0
7.8	50	33	23	16	11	7.9	5.4	3.7
8.0	31	21	15	10	7.3	5.0	3.5	2.5
8.2	20	14	9.6	6.7	4.6	3.3	2.3	1.7
8.4	12.7	8.7	6.0	4.2	2.9	2.1	1.6	1.1
8.6	8.1	5.6	4.0	2.7	2.0	1.4	1.1	0.81
8.8	5.2	3.5	2.5	1.8	1.3	1.0	0.75	0.58
9.0	3.3	2.3	1.7	1.2	0.94	0.71	0.56	0.46

K. Saltwater and Estuarine Chronic Criteria for Ammonia.

(1) Chronic numeric toxic substance criteria for ammonia to protect marine and estuarine life are shown in Table 1.

(2) Averaging Period. The concentration of total ammonia (in milligrams/liter) expressed as a 30-day average may not exceed the chronic criterion listed in Table 1.

(3) Milligrams per liter total ammonia in saltwater (Table 1) may be converted to milligrams of ammonia nitrogen per liter (as used in §§H and I of this regulation) by multiplying the criteria values in Table 1 by 14/17 (or 0.82353) to result in total ammonia nitrogen.

Table 1 Chronic Water Quality Criteria for Saltwater Aquatic Life (milligrams/liter total ammonia).

Temperature (°C)								
	0	5	10	15	20	25	30	35
pH	Salinity = 10 parts per thousand							
7.0	41	29	20	14	9.4	6.6	4.4	3.1
7.2	26	18	12	8.7	5.9	4.1	2.8	2.0
7.4	17	12	7.8	5.3	3.7	2.6	1.8	1.2
7.6	10	7.2	5.0	3.4	2.4	1.7	1.2	0.84
7.8	6.6	4.7	3.1	2.2	1.5	1.1	0.75	0.53
8.0	4.1	2.9	2.0	1.40	0.97	0.69	0.47	0.34
8.2	2.7	1.8	1.3	0.87	0.62	0.44	0.31	0.23
8.4	1.7	1.2	0.81	0.56	0.41	0.29	0.21	0.16
8.6	1.1	0.75	0.53	0.37	0.27	0.20	0.15	0.11
8.8	0.69	0.50	0.34	0.25	0.18	0.14	0.11	0.08
9.0	0.44	0.31	0.23	0.17	0.13	0.10	0.08	0.07
pH	Salinity = 20 parts per thousand							
7.0	44	30	21	14	9.7	6.6	4.7	3.1
7.2	27	19	13	9.0	602	4.4	3.0	2.1
7.4	18	12	8.1	5.6	4.1	2.7	1.9	1.3
7.6	11	7.5	5.3	3.4	2.5	1.7	1.2	0.84
7.8	6.9	4.7	3.4	2.3	1.6	1.1	0.78	0.53
8.0	4.4	3.0	2.1	1.5	1.0	0.72	0.50	0.34
8.2	2.8	1.9	1.3	0.94	0.66	0.47	0.31	0.24
8.4	1.8	1.2	0.84	0.59	0.44	0.30	0.22	0.16
8.6	1.1	0.78	0.56	0.41	0.28	0.20	0.15	0.12
8.8	0.72	0.50	0.37	0.26	0.19	0.14	0.11	0.08
9.0	0.47	0.34	0.24	0.18	0.13	0.10	0.08	0.07
pH	Salinity = 30 parts per thousand							
7.0	47	31	22	15	11	7.2	5.0	3.4
7.2	29	20	14	9.7	6.6	4.7	3.1	2.2
7.4	19	13	8.7	5.9	4.1	2.9	2.0	1.4
7.6	12	8.1	5.6	3.7	3.1	1.8	1.3	0.90
7.8	7.5	5.0	3.4	2.4	1.7	1.2	0.81	0.56
8.0	4.7	3.1	2.2	1.6	1.1	0.75	0.53	0.37

8.2	3.0	2.1	1.4	1.0	0.69	0.50	0.34	0.25
8.4	1.9	1.3	0.90	0.62	0.44	0.31	0.23	0.17
8.6	1.2	0.84	0.59	0.41	0.30	0.22	0.16	0.12
8.8	0.78	0.53	0.37	0.27	0.20	0.15	0.11	0.09
9.0	0.50	0.34	0.26	0.19	0.14	0.11	0.08	0.07

.03-3 Water Quality Criteria Specific to Designated Uses.

A. Criteria for Use I Waters—Water Contact Recreation and Protection of Nontidal Warmwater Aquatic Life.

(1) Bacteriological.

(a) Table 1. Bacteria Indicator Criteria for Frequency of Use.

Steady State Geometric Mean Indicator Density		Single Sample Maximum Allowable Density			
Indicator	All Areas	Frequent Full Body Contact Recreation (Upper 75% CL)	Moderately Frequent Full Body Contact Recreation (Upper 82% CL)	Occasional Full Body Contact Recreation (Upper 90% CL)	Infrequent Full Body Contact Recreation (Upper 95% CL)
Freshwater (Either apply)					
Enterococci	33	61	78	107	151
E. coli	126	235	298	410	576
Marine water					
Enterococci	35	104	158	275	500

CL = confidence level

All numbers are counts per 100 milliliters

(b) In freshwater for E. coli, the following formula is used to calculate the upper 75 percent confidence interval for single sample maximum allowable density: antilog[(log 126) + 0.675 * log(SD)].

(c) In freshwater for enterococci, the following formula is used to calculate the upper 75 percent confidence interval for single sample maximum allowable density: antilog[(log 33) + 0.675 * log(SD)], where log(SD) is the standard deviation of the log transformed E. coli or enterococci data. If the site data are insufficient to establish a log standard deviation, then 0.4 is used as the log standard deviation for both indicators. At the default log standard deviation, the values are 235 for E. coli and 61 for enterococci.

(d) In saltwater, for enterococci, the following formula is used to calculate the upper 75 percent confidence interval for single sample maximum allowable density: antilog[(log 35) + 0.675 * log(SD)], where log(SD) is the standard deviation of the log transformed enterococci data. If the site data are insufficient to establish a log standard deviation, then 0.7 is used as the log standard deviation. At the default log standard deviation, the value is 104.

(e) Confidence Level Factors.

(i) The factors in Table 2 are used in the formulas in this subsection to calculate the appropriate confidence limits when site-specific standard deviations are used.

(ii) Table 2.

Confidence Level	Factor
75%	0.675
82%	0.935
90%	1.280
95%	1.650

(f) Establishment of a Site-Specific Standard Deviation. A site-specific standard deviation for use in the formulas in this subsection shall be based on at least 30 samples, taken over not more than one recreational season, at base flows.

(g) When a sanitary survey and an epidemiological study approved by the Department disclose no significant health hazard, the criteria in Table 1 do not apply.

(2) Dissolved Oxygen. The dissolved oxygen concentration may not be less than 5 milligrams/liter at any time.

(3) Temperature.

(a) The maximum temperature outside the mixing zone determined in accordance with Regulation .05 of this chapter or COMAR 26.08.03.03 —.05 may not exceed 90°F (32°C) or the ambient temperature of the surface surface waters, whichever is greater.

(b) A thermal barrier that adversely affects aquatic life may not be established.

(c) Ambient temperature is the water temperature that is not impacted by a point source discharge.

(d) Ambient temperature shall be measured in areas of the stream representative of typical or average conditions of the stream segment in question.

(e) The Department may determine specific temperature measurement methods, times, and locations.

(4) pH. Normal pH values may not be less than 6.5 or greater than 8.5.

(5) Turbidity.

(a) Turbidity may not exceed levels detrimental to aquatic life.

(b) Turbidity in the surface water resulting from any discharge may not exceed 150 units at any time or 50 units as a monthly average. Units shall be measured in Nephelometer Turbidity Units.

(6) Color. Color in the surface water may not exceed 75 units as a monthly average. Units shall be measured in Platinum Cobalt Units.

(7) Toxic Substance Criteria. All toxic substance criteria to protect:

(a) Fresh water aquatic organisms apply in waters designated as fresh water in Regulation .03-1B;

(b) Estuarine or salt water aquatic organisms apply in waters designated as estuarine or salt waters as specified in Regulation .03-1B; and

(c) The wholesomeness of fish for human consumption apply in fresh, estuarine, and salt waters.

B. Criteria for Subcategory Use I-P Waters—Water Contact Recreation, Protection of Nontidal Warmwater Aquatic Life and Public Water Supply. The following criteria apply:

(1) The criteria for Use I waters in §A(1)—(5); and

(2) Toxic Substance Criteria. All toxic substance criteria:

(a) For protection of fresh water aquatic organisms apply; and

(b) To protect public water supplies and the wholesomeness of fish for human consumption apply.

C. Criteria for Use II Waters—Support of Estuarine and Marine Aquatic Life and Shellfish Harvesting.

(1) Bacteriological Criteria. These criteria are the same as for Use I, criteria for protection of recreational use, except, in Shellfish Harvest Waters, the following criteria also apply. In Shellfish Harvest waters, there may not be any pathogenic or harmful organisms in sufficient quantities to constitute a public health hazard in the use of waters for shellfish harvesting. A public health hazard for the consumption of raw shellfish will be presumed:

(a) If the most probable number (MPN) of fecal coliform organisms exceeds a median concentration of 14 MPN per 100 milliliters;

(b) If more than 10 percent of samples taken exceed 43 MPN per 100 milliliters for a 5-tube decimal dilution test or 49 per 100 milliliters for a 3-tube decimal dilution test; or

(c) Except when a sanitary survey approved by the Department of the Environment discloses no significant health hazard, §C(1)(a) and (b) do not apply and a public health hazard from the consumption of shellfish will not be presumed.

(2) Classification of Use II Waters for Harvesting.

(a) Approved classification means that the median fecal coliform MPN of at least 30 water sample results taken over a 3-year period to incorporate inter-annual variability does not exceed 14 per 100 milliliters; and:

(i) In areas affected by point source discharges, not more than 10 percent of the samples exceed an MPN of 43 per 100 milliliters for a five tube decimal dilution test or 49 MPN per 100 milliliters for a three tube decimal dilution test; or

(ii) In other areas, the 90th percentile of water sample results does not exceed an MPN of 43 per 100 milliliters for a five tube decimal dilution test or 49 MPN per 100 milliliters for a three tube decimal dilution test.

(b) Conditionally approved classification means that the Department has determined that under certain conditions an area is restricted, but when not restricted, meets the conditions for the approved classification.

(c) Restricted classification means that the median fecal coliform MPN of at least 30 water sample results taken over a 3-year period does not exceed 88 per 100 milliliters or that the Department has determined that a public health hazard exists; and:

(i) In areas affected by point source discharges, not more than 10 percent of the samples exceed an MPN of 260 per 100 milliliters for a five tube decimal dilution test or 300 MPN per 100 milliliters for a three tube decimal dilution test; or

(ii) In other areas, the 90th percentile of water sample results does not exceed an MPN of 260 per 100 milliliters for a five tube decimal dilution test or 300 MPN per 100 milliliter for a three tube decimal dilution test.

(d) Prohibited classification means that the fecal coliform values exceed those required for the restricted classification or is an area designated by the Department as a closed safety zone adjacent to a sewage treatment facility outfall or is an area closed due to a known pollution source.

(3) Temperature—same as Use I waters.

(4) pH—same as Use I waters.

(5) Turbidity—same as Use I waters.

(6) Color—same as Use I waters.

(7) Toxic Substance Criteria. All toxic substance criteria to protect:

(a) Estuarine or salt water aquatic organisms apply in accordance with the requirements of Regulation .03-1B; and

(b) The wholesomeness of fish for human consumption apply.

(8) Dissolved Oxygen Criteria for Use II Waters.

(a) This criteria is the same as for Use I waters, except for the Chesapeake Bay mainstem and associated tidal tributary subcategories.

(b) Seasonal and Migratory Fish Spawning and Nursery Subcategory. The dissolved oxygen concentrations in areas designated as migratory spawning and nursery seasonal use shall be:

(i) Greater than or equal to 6 milligrams/liter for a 7-day averaging period from February 1 through May 31;

(ii) Greater than or equal to 5 milligrams/liter as an instantaneous minimum from February 1 through May 31; and

(iii) Applicable to the open-water fish and shellfish subcategory criteria from June 1 to January 31.

(c) The seasonal shallow-water submerged aquatic vegetation subcategory is the same as for the open-water fish and shellfish subcategory year-round.

(d) Open-Water Fish and Shellfish Subcategory. The dissolved oxygen concentrations in areas designated as open-water fish and shellfish subcategory shall be:

(i) Greater than or equal to 5.5 milligrams/liter for a 30-day averaging period year-round in tidal fresh waters (salinity less than or equal to 0.5 parts per thousand);

(ii) Greater than or equal to 5 milligrams/liter for a 30-day averaging period year-round (salinity greater than 0.5 parts per thousand);

(iii) Greater than or equal to 4.0 milligrams/liter for a 7-day averaging period year-round;

(iv) Greater than or equal to 3.2 milligrams/liter as an instantaneous minimum year-round;

(v) For protection of the endangered shortnose sturgeon, greater than or equal to 4.3 milligrams/liter as an instantaneous minimum at water column temperatures greater than 29°C (77°F); and

(vi) For the Upper Pocomoke River Tidal Fresh (POCTF) and the Maryland portion of the Middle Pocomoke River Oligohaline (POCOH), greater than or equal to 4.0 milligrams/liter for a 30-day averaging period year-round.

(e) Seasonal Deep-Water Fish and Shellfish Subcategory. The dissolved oxygen concentrations in areas designated as seasonal deep-water fish and shellfish subcategory shall be:

(i) Greater than or equal to 3.0 milligrams/liter for a 30-day averaging period from June 1 through September 30;

(ii) Greater than or equal to 2.3 milligrams/liter for a 1-day averaging period from June 1 through September 30;

(iii) Greater than or equal to 1.7 milligrams/liter as an instantaneous minimum from June 1 through September 30;

(iv) The open-water fish and shellfish subcategory criteria apply from October 1 to May 31;

(v) For the dissolved oxygen criteria restoration variance for Chesapeake Bay Mainstem Segment 4 mesohaline (CB4MH) seasonal deep-water fish and shellfish subcategory, not lower for dissolved oxygen in segment CB4MH than the stated criteria for the seasonal deep-water seasonal fish and shellfish use for more than 7 percent spatially and temporally (in combination), from June 1 to September 30; and

(vi) For dissolved oxygen criteria restoration variance for Patapsco River mesohaline (PATMH) seasonal deep-water fish and shellfish subcategory, not lower for dissolved oxygen in segment PATMH than the stated criteria for the deep-water seasonal fish and shellfish use for more than 7 percent spatially and temporally (in combination), from June 1 to September 30.

(f) Seasonal Deep-Channel Refuge Subcategory. The dissolved oxygen concentrations in areas designated as deep-channel seasonal refuge use shall be:

(i) Greater than or equal to 1.0 milligrams/liter as an instantaneous minimum from June 1 through September 30 except for Chesapeake Bay segments subject to variances;

(ii) For dissolved oxygen criteria restoration variance for Chesapeake Bay Mainstem Segment 4 mesohaline (CB4MH) deep-channel refuge subcategory, not lower for dissolved oxygen in segment CB4MH than the stated criteria for the seasonal deep-channel refuge for more than 2 percent spatially or temporally (in combination), from June 1 to September 30;

(iii) For the dissolved oxygen criteria restoration variance for Lower Chester River Mesohaline (CHSMH) seasonal deep-channel refuge subcategory, not lower for dissolved oxygen in segment CHSMH than the stated

criteria for the seasonal deep-channel refuge use for more than 16 percent spatially and temporally (in combination), from June 1 to September 30;

(iv) For the dissolved oxygen criteria restoration variance for Eastern Bay Mesohaline (EASMH) seasonal deep-channel refuge subcategory, not lower for dissolved oxygen in segment EASMH than the stated criteria for the seasonal deep-channel refuge use for more than 2 percent spatially and temporally (in combination), from June 1 to September 30; and

(v) The same as for the open-water fish and shellfish subcategory from October 1 to May 31.

(g) Implementation of the Dissolved Oxygen Water Quality Standard. The attainment of the dissolved oxygen criteria that apply to the Chesapeake Bay and tidally influenced tributary waters shall be determined using the guidelines established in the U.S. Environmental Protection Agency publications "Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and its Tidal Tributaries (EPA 903-R-03-002), Chapter III", "Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and its Tidal Tributaries (EPA 903-R-03-002), Chapter III", "Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and its Tidal Tributaries—2004 Addendum (EPA 903-R-04-005) Chapter V", "Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and its Tidal Tributaries—2007 Addendum (EPA 903-R-07-003), Chapter IV", “Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and Its Tidal Tributaries — 2008 Technical Support for Criteria Assessment Protocols Addendum (EPA 903-R-08-001), Chapter III”, and “Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and Its Tidal Tributaries — 2010 Technical Support for Criteria Assessment Protocols Addendum (EPA 903-R-10-002), Chapters II and III”, which are incorporated by reference.

(h) Restoration Variance. The percentage of allowable exceedance for restoration variances is based on water quality modeling and incorporates the best available data and assumptions. The restoration variances are temporary, and will be reviewed at a minimum every three years, as required by the Clean Water Act and EPA regulations. The variances may be modified based on new data or assumptions incorporated into the water quality model.

(9) Water Clarity Criteria for Seasonal Shallow-Water Submerged Aquatic Vegetation Subcategory.

(a) Water Clarity Criteria Measurement. A Bay segment has attained the shallow water designated use if:

(i) Submerged aquatic vegetation (SAV) acreage meets or exceeds the SAV acreage restoration goal in Table 2 of this regulation;

(ii) The shallow-water acreage that meets or exceeds the water clarity criterion expressed in Secchi depth equivalence from Table 1 of this regulation at the segment specific application depth specified in Regulation .08 of this chapter (excluding SAV no grow zones) is 2.5 times greater than the SAV Acreage Restoration Goal from Table 2 of this regulation; or

(iii) A combination of the actual SAV acreage attained and meeting the applicable water clarity criteria in an additional, unvegetated shallow water surface area equals 2.5 times the remaining SAV acreage necessary to meet the segment's restoration goal.

(a-1) If none of §C(9)(a)(i), (ii), or (iii) applies, the segment has not attained the water clarity designated use.

(b) Table 1. Numerical Water Clarity Criteria (in Secchi Depth Equivalents) for General Application to Shallow Water Aquatic Vegetation Bay Grass Designated Use (Application Depths Given in 0.5 Meter Attainment Intervals[1]).

Salinity Regime	Water Clarity Criteria as Percent Light through Water	Water Clarity Criteria as Secchi Depth (meters)				Seasonal Application
		Water Clarity Criteria Application Depths (meters)				
		0.5	1.0	1.5	2.0	
		Secchi Depth Equivalents for Criteria Application Depth				
Tidal Fresh	13%	0.4	0.7	1.1	1.4	Apri1 1 to October 1
Oligohaline	13%	0.4	0.7	1.1	1.4	Apri1 1 to October 1
Mesohaline	22%	0.5	1.0	1.4	1.9	Apri1 1 to October 1

[1]Based on application f the formula PLW = 100exp(-K_dZ), the appropriate PLW criterion value and the selected application depth (Z) are inserted and the equation is solved for K_d. The generated K_d value is then converted to Secchi depth (in meters) using the conversion factor K_d = 1.45/Secchi depth.

(c) Table 2. SAV Acreage Restoration Goals.

Segment Description[1]	Segment Designator	SAV Acreage Restoration Goal	Secchi Application Depth
Northern Chesapeake Bay	CB1TF2	12,149	2 meters
Northern Chesapeake Bay	CB1TF1	754	1.0 meters
Lower Pocomoke River Mesohaline	POCMH	877[2]	1.0 meters
Manokin River Mesohaline	MANMH1	4,294	2.0 meters
Manokin River Mesohaline	MANMH2	59	0.5 meters
Big Annemessex River Mesohaline	BIGMH1	2,021	2.0 meters
Big Annemessex River Mesohaline	BIGMH2	22	0.5 meters
Tangier Sound Mesohaline	TANMH1	24,683[2]	2.0 meters
Tangier Sound Mesohaline	TANMH2	74	0.5 meters
Middle Nanticoke River Oligohaline	NANOH	12	0.5 meters
Lower Nanticoke River Mesohaline	NANMH	3	0.5 meters
Wicomico River Mesohaline	WICMH	3	0.5 meters
Fishing Bay Mesohaline	FSBMH	197	0.5 meters
Middle Choptank River Oligohaline	CHOOH	72	0.5 meters
Lower Choptank River Mesohaline	CHOMH2	1,621	1.0 meters
Mouth of Choptank River Mesohaline	CHOMH1	8,184	2.0 meters
Little Choptank River Mesohaline	LCHMH	4,076	2.0 meters
Honga River Mesohaline	HNGMH	7,761	2.0 meters
Eastern Bay	EASMH	6,209	2.0 meters
Upper Chester River Tidal Fresh	CSHTF	1	0.5 meters
Middle Chester River Oligohaline	CHSOH	77	0.5 meters
Lower Chester River Mesohaline	CHSMH	2,928	1.0 meters
Chesapeake & Delaware (C&D) Canal	C&DOH	7	0.5 meters
Northeast River Tidal Fresh	NORTF	89	0.5 meters
Bohemia River Oligohaline	BOHOH	354	0.5 meters

Elk River Oligohaline	ELKOH1		1,844	2.0 meters
Elk River Oligohaline	ELKOH2		190	0.5 meters
Sassafras River Oligohaline	SASOH1		1,073	2.0 meters
Sassafras River Oligohaline	SASOH2		95	0.5 meters
Bush River Oligohaline	BSHOH		350	0.5 meters
Gunpowder River Oligohaline	GUNOH2		572	2.0 meters
Mouth of Gunpowder River	GUNOH1		1,860	0.5 meters
Middle River Oligohaline	MIDOH		879	2.0 meters
Back River Oligohaline	BACOH	30		0.5 meters
Patapsco River Mesohaline	PATMH		389	1.0 meters
Magothy River Mesohaline	MAGMH		579	1.0 meters
Severn River Mesohaline	SEVMH		455	1.0 meters
South River Mesohaline	SOUMH		479	1.0 meters
Rhode River Mesohaline	RHDMH		60	0.5 meters
West River Mesohaline	WSTMH		238	0.5 meters
Upper Patuxent River Tidal Fresh	PAXTF		205	0.5 meters
Middle Patuxent River Oligohaline	PAXOH		115	0.5 meters
Lower Patuxent River Mesohaline	PAXMH1		1,459	2.0 meters
Lower Patuxent River Mesohaline	PAXMH2		172	0.5 meters
Lower Patuxent River Mesohaline	PAXMH4		1	0.5 meters
Lower Patuxent River Mesohaline	PAXMH5		2	0.5 meters
Lower Potomac River Tidal Fresh	POTTF		2,142[2]	2.0 meters
Piscataway Creek Tidal Fresh	PISTF		789	2.0 meters
Mattawoman Creek Tidal Fresh	MATTF		792	1.0 meters
Lower Potomac River Oligohaline	POTOH1		1,387[2]	2.0 meters
Lower Potomac River Oligohaline	POTOH2		262	1.0 meters
Lower Potomac River Oligohaline	POTOH3		1,153	1.0 meters
Lower Potomac River Mesohaline	POTMH		7,088[2]	1.0 meters
Upper Chesapeake Bay	CB2OH		705	0.5 meters
Upper Central Chesapeake Bay	CB3MH		1,370	0.5 meters
Middle Central Chesapeake Bay	CB4MH		2,533	2.0 meters
Lower Central Chesapeake Bay	CB5MH		8,270[2]	2.0 meters

[1] The segments West Branch Patuxent River (WBRTF-application depth = 0.5 meters), and Lower Patuxent River Mesohaline Subsegments 3 and 6 (PAXMH3 & PAXMH6-application depths = 0.5 meters), and the Anacostia River Tidal Fresh (ANATF-application depth = 0.5 meters) are not listed above because the SAV Restoration goal for each segment is 0 acres, based on no historical mapped SAV and because the available bathymetry data is too limited to allow for a calculation of an SAV restoration acreage goal using the method described in the U.S. Environmental Protection Agency publication "Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and its tidal Tributaries—2007 Addendum (EPA 903-R-07-003)". These segments have been assigned a water clarity criteria and application depth. Attainment of the shallow-water designated use will be determined using the method outlined in §C(9)(a)(iii) and (e) of this regulation.

[2]Maryland portion of the segment.

(d) SAV No Grow Zones. Certain Chesapeake Bay segments contain areas designated as shallow water use that are not suitable for growth of submerged aquatic vegetation due to natural conditions and permanent physical alterations. Tables V-1 and Figures V-1 to V-12 in the 2004 U.S. Environmental Protection Agency publication "Technical Support Document for Identification of Chesapeake Bay Designated Uses and Attainability — 2004 Addendum (EPA 903-R-04-006)", which is incorporated by reference, indicate the SAV No Grow Zones. The segments Upper Choptank River (CHOTF), Upper Nanticoke River (NANTD), Upper Pocomoke River (POCTF), and Middle Pocomoke River Oligohaline (POCOH) are entirely SAV no grow zones, therefore, the shallow-water designated use does not apply to these segments.

(e) Implementation. The attainment of the water clarity criteria that apply to the seasonal shallow-water submerged aquatic vegetation use subcategory in the Chesapeake Bay and tidally influenced tributary waters will be determined using the guidelines documented within the U.S. Environmental Protection Agency publications "Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and its Tidal Tributaries (EPA 903-R-03-002)", "Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and its Tidal Tributaries — 2004 Addendum (EPA 903-R-04-005)", "Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and it Tidal Tributaries — 2007 Addendum (EPA 903-R-07-003)", “Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and Its Tidal Tributaries — 2008 Technical Support for Criteria Assessment Protocols Addendum (EPA 903-R-08-001)”, "Technical Support Document for Identification of Chesapeake Bay Designated Uses and Attainability (EPA 903-R-03-004)", and "Technical Support Document for Identification of Chesapeake Bay Designated Uses and Attainability — 2004 Addendum (EPA 903-R-04-006)" which are incorporated by reference.

(10) Chlorophyll a. Concentrations of chlorophyll a in free-floating microscopic aquatic plants (algae) may not exceed levels that result in ecologically undesirable consequences that would render tidal waters unsuitable for designated uses.

(11) Compliance Schedules for Protection of Downstream Uses in Tidal Waters.

(a) The compliance schedule provisions of COMAR 26.08.04.02C are applicable to discharge permits issued to existing dischargers which contain new or revised effluent limitations based on water quality standards contained in §C(8) and (9) of this regulation.

(b) An upstream state issuing discharge permits to existing dischargers which contain new or revised effluent limitations based on the water quality standards contained in §C(8) and (9) of this regulation may apply the compliance schedule provisions of COMAR 26.08.04.02C.

C-1. Criteria for Use II-P Waters—Support of Estuarine and Marine Aquatic Life and Shellfish Harvesting and Public Water Supplies. The following criteria apply:

(1) The criteria for Use II waters in §C(1)—(8), (9)(a)—(c), (10), and (11); and

(2) All toxic substance criteria:

(a) For protection of fresh water and freshwater-adapted estuarine aquatic organisms apply; and

(b) To protect public water supplies and the wholesomeness of fish and shellfish for human consumption.

D. Criteria for Use III Waters—Nontidal Cold Water.

(1) Bacteriological—same as Use I waters.

(2) Dissolved Oxygen. The dissolved oxygen concentration may not be less than 5 milligrams/liter at any time, with a minimum daily average of not less than 6 milligrams/liter.

(3) Temperature.

(a) The maximum temperature outside the mixing zone determined in accordance with Regulation .05 of this chapter or COMAR 26.08.03.03—.05 may not exceed 68°F (20°C) or the ambient temperature of the surface waters, whichever is greater.

(b) Ambient temperature—Same as Use I.

(c) A thermal barrier that adversely affects salmonid fish may not be established.

(d) It is the policy of the State that riparian forest buffer adjacent to Use III waters shall be retained whenever possible to maintain the temperatures essential to meeting this criterion.

(4) pH—same as Use I waters.

(5) Turbidity—same as Use I waters.

(6) Color—Same as Use I waters.

(7) Total Residual Chlorine (TRC). Except as provided in COMAR 26.08.03.06, the Department may not issue a permit allowing the use of chlorine or chlorine-containing compounds in the treatment of wastewaters discharging to Use III and Use III-P waters.

(8) Toxic Substance Criteria. All toxic substance criteria to protect:

(a) Fresh water aquatic organisms apply; and

(b) The wholesomeness of fish for human consumption apply.

E. Criteria for Use III-P Waters—Nontidal Cold Water and Public Water Supplies.

(1) Exception. Authorized operation of the Little Seneca Creek Dam means that all operational activities permitted are met under the conditions of a dam operating permit issued by the Department of Natural Resources under Natural Resources Article, §§8-801—8-814, Annotated Code of Maryland, and COMAR 08.05.03. Injury resulting from the authorized operation of Little Seneca Creek Dam to the Use III natural trout fishery recognized in the stream use designation assigned to Little Seneca Creek in Regulation .08 of this chapter is not considered a violation of this chapter.

(2) The following criteria apply:

(a) The criteria for Use III waters in §D(1)—(7); and

(b) All toxic substance criteria to protect:

(i) Fresh water aquatic organisms, and

(ii) Public water supplies and the wholesomeness of fish for human consumption.

F. Criteria for Use IV Waters—Recreational Trout Waters.

(1) Bacteriological—same as Use I waters.

(2) Dissolved oxygen—same as Use I waters.

(3) Temperature.

(a) The maximum temperature outside the mixing zone determined in accordance with Regulation .05 of this chapter or COMAR 26.08.03.03—.05 may not exceed 75°F (23.9°C) or the ambient temperature of the surface waters, whichever is greater.

(b) Ambient temperature—Same as Use I.

(c) A thermal barrier that adversely affects salmonid fish may not be established.

(d) It is the policy of the State that riparian forest buffer adjacent to Use IV waters shall be retained whenever possible to maintain the temperatures essential to meeting this criterion.

(4) pH—same as Use I waters.

(5) Turbidity—same as Use I waters.

(6) Color—same as for Use I waters.

(7) Toxic Substance Criteria. All toxic substance criteria to protect:

(a) Fresh water aquatic organisms apply; and

(b) The wholesomeness of fish for human consumption apply.

G. Criteria for Use IV-P Waters—Recreational Trout Waters and Public Water Supplies. The following criteria apply:

(1) The criteria for Use IV waters in §F(1)—(6); and

(2) Toxic Substance Criteria. All toxic substance criteria to protect:

(a) Fresh water aquatic organisms, and

(b) Public water supplies and the wholesomeness of fish for human consumption.

H. Criteria for Public Water Supply Reservoirs. The following criteria apply in freshwater reservoirs designated Use I-P, III-P or IV-P:

(1) The arithmetic mean of a representative number of samples of chlorophyll a concentrations, measured during the growing season (May 1 to September 30) as a 30-day moving average may not exceed 10 micrograms per liter; and

(2) The 90th-percentile of measurements taken during the growing season may not exceed 30 micrograms per liter.

.03-4 Biological Water Quality Criteria.

A. Quantitative assessments of biological communities in streams (biological criteria) may be used separately or in conjunction with the chemical and physical criteria promulgated in this chapter to assess whether water quality is consistent with the purposes and uses in Regulations .01 and .02 of this chapter.

B. The results of the quantitative assessments of biological communities shall be used for purposes of water quality assessment, including, but not limited to, those assessments required by §§303(d) and 305(b) of the federal Clean Water Act (33 U.S.C. §§1313(d) and 1315(b)).

C. These assessments shall use documented methods that have been subject to technical review, produce consistent and repeatable results, and are objectively interpretable.

D. In using biological criteria to determine whether aquatic life uses are being met, the Department shall allow for the uncertainty and natural variability in environmental monitoring results by using established quantitative and statistical methodologies to establish the appropriate level of uncertainty for these determinations.

E. The Department shall determine whether the application and interpretation of the assessment method are appropriate. In those instances where the Department determines the assessment method is not appropriate, it will provide its justification for that determination.

.04 Anti-Degradation Policy.

A. Waters of this State shall be protected and maintained for existing uses and the basic uses of water contact recreation, fishing, protection of aquatic life and wildlife, and agricultural and industrial water supply as identified in Use I.

B. Certain waters of this State possess an existing quality that is better than the water quality standards established for them. The quality of these waters shall be maintained unless:

(1) The Department determines a change in quality is justifiable as a result of necessary economic or social development; and

(2) The change will not diminish uses made of, or presently existing, in these waters.

C. To accomplish the objective of maintaining existing water quality:

(1) New and existing point sources shall achieve the highest applicable statutory and regulatory effluent requirements; and

(2) Nonpoint sources shall achieve all cost effective and reasonable best management practices for nonpoint source control.

D. The Department shall discourage the downgrading of any stream from a designated use with more stringent criteria to one with less stringent criteria. Downgrading may only be considered if:

(1) The designated use is not attainable because of natural causes;

(2) The designated use is not attainable because of irretrievable man-induced conditions; or

(3) Controls more stringent than the effluent limitations and national performance standards mandated by the Federal Act, and required by the Department, would result in substantial and widespread economic and social impact.

E. The Department shall provide public notice and opportunity for a public hearing on the proposed change before:

(1) Permitting a change in high quality waters; or

(2) Downgrading any stream use designation.

F. Water which does not meet the standards established for it shall be improved to meet the standards.

.04-1 Antidegradation Policy Implementation Procedures.

A. Where water quality is better than the minimum requirements specified by the water quality standards, that water quality shall be maintained. These waters are listed by the Department as Tier II waters. An antidegradation review of new or proposed amendments to water and sewer plans (county plans) and discharge permits is required to assure consistency with antidegradation requirements.

B. General. An applicant for proposed amendments to county plans or discharge permits for discharge to Tier II waters that will result in a new, or an increased, permitted annual discharge of pollutants and a potential impact to water quality, shall evaluate alternatives to eliminate or reduce discharges or impacts. If impacts are unavoidable, an applicant shall prepare and document a social and economic justification. The Department shall determine, through a public process, whether these discharges can be justified.

C. Compilation and Maintenance of the List of High Quality Waters. When the water quality of a water body is better than that required by water quality standards to support the existing and designated uses, the Department shall list the water body as a Tier II water body. All readily available information may be considered to determine a listing. The Department shall compile and maintain a public list of the waters identified as Tier II waters. Tier II listings shall be made only for those specific characteristics for which monitoring data indicates the water body exceeds numeric water quality criteria or thresholds established under the narrative standards for biocriteria. The Department shall consider information available from the categories listed under §D(2) and (3) of this regulation.

D. Waters Not Listed as Tier II.

(1) All water bodies not listed as Tier II or as Outstanding National Resource Waters (Tier III, described and defined in Regulation .04-2 of this chapter) are Tier I.

(2) Waters That May Not be Listed as Tier II. Water bodies included in the List of Impaired Waters (303(d) List) are not Tier II waters for the impairing substance.

(3) Waters may be listed as Tier II, if the exclusion under §D(2) of this regulation is not applicable and if:

(a) Measured water quality characteristics for which numeric criteria have been promulgated are significantly better than the water quality criteria specified in Regulations .03—.03-3 of this chapter; or

(b) Biological assessment data indicate water quality is within 20 percent of the maximum attainable value of the index of biological integrity.

(4) Significantly better is evaluated statistically to demonstrate at least a 90 percent certainty that the mean of the available data is better than the applicable standard (for example, the criterion is outside the outer bound of the 90 percent confidence interval).

E. Designation for Specific Water Quality Measures. Where a water body is designated a Tier II water based on a specific water quality measure, potential impacts to only that specific characteristic shall be subject to Tier II review. For example, where a water body is designated Tier II because of high dissolved oxygen, only potential impacts to dissolved oxygen are subject to Tier II review.

F. Need for Tier II Antidegradation Review.

(1) Permits. Before submitting an application for a new discharge permit or major modification of an existing discharge permit (for example, expansion), the discharger or applicant shall determine whether the receiving water body is Tier II or, if a Tier II determination is pending, by consulting the list of Tier II waters.

(2) Water and Sewer Plans (County Plans). As part of its continuing planning process, the Department shall review proposed amendments to county plans for any new or major modifications to discharges to Tier II bodies of water. If a proposed amendment to a County Plan results in a new discharge or a major modification of an existing discharge to a Tier II water, the applicant shall perform a Tier II antidegradation review.

(3) Exemptions. The requirement to perform a Tier II antidegradation review does not apply to individual discharges of treated sanitary wastewater of less than 5,000 gallons per day, if all of the existing and current uses continue to be met.

G. Tier II Antidegradation Review.

(1) If a Tier II antidegradation review is required, the applicant shall provide an analysis of reasonable alternatives that do not require direct discharge to a Tier II water body (no-discharge alternative). The analysis shall include cost data and estimates to determine the cost effectiveness of the alternatives.

(2) If a cost effective alternative to direct discharge is reasonable, the alternative is required as a condition of the discharge permit or amendment to the county plan.

(3) If the Department determines that the alternatives that do not require direct discharge to a Tier II water body are not cost effective, the applicant shall:

(a) Provide the Department with plans to configure or structure the discharge to minimize the use of the assimilative capacity of the water body, which is the difference between the water quality at the time the water body was designated as Tier II (baseline) and the water quality criterion; and

(b) If an impact cannot be avoided, or no assimilative capacity remains as described in §G(3)(a) of this regulation, provide the Department with a social and economic justification for permitting limited degradation of the water quality.

(4) An applicant shall update an antidegradation review when applying for a new permit or major modification to an existing permit.

H. Potential Determinations Resulting from Antidegradation Reviews.

(1) If there is a cost-effective alternative to direct discharge, the applicant shall implement the no discharge alternative and it shall be a condition of the discharge permit.

(2) If there is no cost-effective alternative to direct discharge, but there is potential for further minimization of the use of assimilative capacity, the applicant shall revise the initial application to further minimize the use of assimilative capacity.

(3) If there is no cost-effective, no-discharge alternative, and minimization of the use of assimilative capacity is adequate, but the social and economic justification (SEJ) is not adequately performed, the applicant shall revise the SEJ.

(4) If there is no cost-effective alternative to direct discharge, minimization of the use of assimilative capacity is adequate, the SEJ is adequately performed but does not justify the water quality impact, the proposed amendment to the county plan or discharge permit application shall be denied.

(5) If there is no cost-effective alternative to direct discharge, all reasonable efforts have been made to minimize the use of assimilative capacity, and the SEJ is adequate and justifies the discharge, the proposed amendment to the county plan or discharge permit shall be granted subject to other applicable requirements.

I. Wetlands Permits and Water Quality Certifications. Maryland's wetlands and waterways regulatory process, governed by the Tidal Wetlands (COMAR 26.24.01—26.24.05), Nontidal Wetlands (COMAR 26.23.01—26.23.06), and Waterway Construction (COMAR 26.17.04) regulations, satisfies the requirements of this regulation.

J. Social and Economic Justification (SEJ).

(1) An SEJ shall be submitted if:

(a) No cost effective alternative to the discharge is available; or

(b) The cumulative degradation resulting from nonpoint source pollution and any other permitted discharges would diminish water quality.

(2) To allow for natural variability, water quality shall be considered diminished only if the assimilative capacity as defined in §G(3)(a) of this regulation is cumulatively reduced by more than 25 percent from the baseline water quality determined when the water body was listed as Tier II.

K. Demonstrating Social and Economic Justification for an Impact to Tier II Waters.

(1) In order to promote compact development, maintain habitat and open lands, and minimize water impacts in undeveloped areas, the requirement for social and economic justification is met if the following demonstrations are made:

(a) The watershed affecting the Tier II water is located in a priority funding area as defined in State Finance and Procurement Article, §5-7B-02, Annotated Code of Maryland;

(b) The Department determines, in consultation with the Maryland Department of Planning, that the local jurisdiction in which the watershed affecting Tier II waters are located, is using to the extent reasonably practical, innovative development approaches to minimize impacts to water quality from development;

(c) Physical development after the date of the Tier II listing is necessary to accommodate the projected growth within the watershed, and use of innovative development approaches are maximized to the extent reasonably practicable to encourage redevelopment, reuse and infill development; and

(d) If the Department of Planning's growth projections for the watershed affecting the Tier II waters demonstrate that additional physical development of undeveloped land is required to accommodate the projected growth and that development is consistent with the applicable county master plan.

(2) The approaches described in §K(1)(b) of this regulation include, but are not limited to, innovative stormwater management and sediment and erosion control design practices, green building design techniques, nutrient removal technology for septic systems, innovative technologies designed to reduce point source discharges of pollutants, uniform building codes designed to remove impediments to rehabilitation projects,

model infill development guidelines designed by the Maryland Department of Planning, and transit-oriented development.

L. Components of the Social and Economic Justification.

(1) Components of the SEJ may vary depending on factors including, but not limited to, the extent and duration of the impact from the proposed discharge and the existing uses of the water body.

(2) The economic analyses shall include impacts that result from treatment beyond the costs to meet technology-based or water quality-based requirements.

(3) The economic analysis shall address the cost of maintaining high water quality in Tier II waters and the economic benefit of maintaining Tier II waters.

(4) The economic analysis shall determine whether the costs of the pollution controls needed to maintain the Tier II water would limit growth or development in the watershed including the Tier II water.

M. Department Responsibilities.

(1) The Department shall determine whether the SEJ demonstrates that the costs of water pollution controls are reasonable and would not limit development or growth and, if not, shall determine whether lowering of the water quality is necessary for development or growth to take place in the watershed.

(2) The Department shall determine whether the SEJ demonstrates that the impact to water quality is necessary for development or growth to take place in the watershed. Evaluation of the SEJ shall consider the relative magnitude of costs and benefits of development, recognizing the difficulty in quantifying benefits, and the extent to which denial of the amendment or permit would substantially impact future development within the watershed.

(3) The Department shall propose a tentative determination to either issue or deny the permit application. If the tentative determination is made to issue a permit, the notice of tentative determination shall state that these waters are designated as Tier II and, if applicable, that a social and economic justification is available for review.

(4) Existing in-stream water uses and the level of water quality necessary to protect existing uses shall be maintained and protected.

(5) All required point and nonpoint source controls under State statutes and regulations shall be achieved.

N. Public Participation.

(1) Public participation for a permit to discharge to a Tier II water is the same as that required for any permit subject to the Administrative Procedure Act or the requirements of Environment Article, Title 1, Subtitle 6, Annotated Code of Maryland.

(2) If an SEJ is not required, the public notice shall reflect the Tier II status of the waterbody and note that an SEJ is not required and note the justification.

O. List of Tier II Waters.

								Baseline:	
Date	Stream Name	County	12-Digit Watershed	From Lat	From Long	To Lat	To Long	Fish IBI	Benthic IBI
2007	Black Sulphur Run 1	Allegany	021405110138	39.66571	-78.49952	39.65183	-78.47808	4.33	4.25
2007	Elklick Run 1	Allegany	021410040090	39.57690	-78.91140	39.57095	-78.93507	4.00	4.50
2007	Fifteenmile Creek 1	Allegany	021405110137	39.71230	-78.44577	39.70747	-78.45106	4.67	4.25
2007	Fifteenmile Creek 2	Allegany	021405110137	39.69293	-78.45128	39.67463	-78.45777	4.67	4.00
2003	Fifteenmile Creek 3	Allegany	021405110135	39.64046	-78.39719	39.63082	-78.38600	5.00	4.25
2007	Fifteenmile Creek 4	Allegany	021405110137	39.71921	-78.44378	39.71230	-78.44577	4.67	4.00
2007	Fifteenmile Creek 5	Allegany	021405110137	39.70188	-78.44975	39.69293	-78.45128	4.67	4.25
2007	Mudlick Hollow 1	Allegany	021405110141	39.69590	-78.39292	39.65611	-78.40011	4.33	4.50
2007	Murley Branch 1	Allegany	021405120130	39.66398	-78.61768	39.66340	-78.61151	4.33	4.00
2007	Town Creek 1	Allegany	021405120122	39.54048	-78.54280	39.52337	-78.54404	4.67	4.25
2007	Town Creek 2	Allegany	021405120131	39.71306	-78.53643	39.69388	-78.54752	4.33	4.00
2007	White Sulphur Run 1	Allegany	021405110137	39.65183	-78.47808	39.66107	-78.45709	4.00	4.25
2003	Sideling Hill Creek 1	Allegany, Washington	021405100148	39.66097	-78.36225	39.63948	-78.33408	4.67	4.25
2003	Lyons Creek 1	Anne Arundel, Calvert	021311020910	38.76807	-76.62204	38.76693	-76.63353	5.00	4.71
2007	Lyons Creek 2	Anne Arundel, Calvert	021311020909	38.76498	-76.65334	38.76474	-76.65903	4.67	5.00
2009	Patuxent River 1	Anne Arundel,	021311040937	39.01110	-76.73676	39.00709	-76.73319	4.00	4.71

		Prince George's							
2007	Beetree Run 1	Baltimore Co.	021308050311	39.68323	-76.66591	39.66633	-76.67247	4.33	5.00
2007	Blackrock Run 1	Baltimore Co.	021308050303	39.54230	-76.73384	39.52739	-76.72217	4.67	4.00
2007	Cooks Branch 1	Baltimore Co.	021309071048	39.43616	-76.84026	39.43789	-76.86894	4.67	4.84
2007	Cooks Branch 2	Baltimore Co.	021309071048	39.43792	-76.86879	39.43825	-76.87277	4.84	5.00
2007	Deer Creek 1	Baltimore Co.	021202020332	39.72289	-76.61175	39.70730	-76.59021	4.67	4.00
2007	Delaware Run 1	Baltimore Co.	021308050303	39.49910	-76.77293	39.50196	-76.76216	4.00	4.33
2007	Indian Run 1	Baltimore Co.	021308050307	39.54821	-76.74264	39.54230	-76.73384	4.00	4.33
2003	Keysers Run 1	Baltimore Co.	021309071048	39.46914	-76.83976	39.47156	-76.87929	5.00	4.00
2008	Little Falls 1	Baltimore Co.	021308050309	39.62193	-76.63046	39.61385	-76.62302	4.33	4.00
2007	North Branch Patapsco River UT 1	Baltimore Co.	021309071048	39.48558	-76.84373	39.49465	-76.86359	4.67	4.67
2007	Peggys Run 1	Baltimore Co.	021308060314	39.60906	-76.79718	39.61597	-76.79254	5.00	4.00
2007	Peggys Run UT 1	Baltimore Co.	021308060314	39.60402	-76.82804	39.60906	-76.79718	5.00	4.67
2007	Red Run 1	Baltimore Co.	021309051045	39.41111	-76.81224	39.40074	-76.79887	4.67	4.17
2003	Timber Run 1	Baltimore Co.	021309071048	39.44400	-76.84151	39.43794	-76.86878	4.48	4.67
2007	Western Run 1	Baltimore Co.	021308050303	39.51503	-76.74060	39.52739	-76.72217	4.00	4.00
2007	Gunpowder Falls 1	Baltimore Co., Carroll	021308060316	39.69574	-76.80339	39.68389	-76.76963	4.00	4.50
2007	First Mine Branch 1	Baltimore Co., Harford	021308050309	39.62700	-76.55549	39.62524	-76.59857	4.33	4.33
2003	Little Gunpowder	Baltimore Co., Harford	021308040298	39.50453	-76.42982	39.48592	-76.42739	4.00	4.33

	Falls 1								
2003	Little Gunpowder Falls 2	Baltimore Co., Harford	021308040298	39.48150	-76.42516	39.47306	-76.40243	4.33	4.17
2008	Little Gunpowder Falls 3	Baltimore Co., Harford	021308040298	39.52930	-76.51334	39.52561	-76.49405	4.00	4.00
2007	Choptank River UT 1	Caroline	021304040494	38.89921	-75.80250	38.90032	-75.82887	4.33	4.43
2007	Choptank River UT 2	Caroline	021304040487	38.88450	-75.87640	38.87218	-75.85988	4.33	4.14
2007	Faulkner Branch 1	Caroline	021303060611	38.71178	-75.79381	38.71002	-75.77321	4.00	4.71
2007	Forge Branch 1	Caroline	021304040505	38.99411	-75.81912	38.96356	-75.82510	4.67	4.14
2008	Herring Run 1 (Caroline Co.)	Caroline	021304040490	38.85163	-75.78393	38.84814	-75.80201	5.00	4.43
2008	Hog Creek 1	Caroline	021304040484	38.75614	-75.90846	38.78274	-75.93954	5.00	4.71
2007	Hunting Creek 1	Caroline	021304030471	38.71848	-75.88225	38.70389	-75.89296	4.33	4.43
2009	Marsh Creek 1	Caroline	021304040476	38.71487	-75.93561	38.70310	-75.94396	4.00	4.71
2007	Robins Creek 1	Caroline	021304040486	38.79651	-75.84430	38.81482	-75.86926	4.67	4.43
2008	Sullivan Branch 1	Caroline	021303060614	38.75398	-75.78257	38.72927	-75.76085	4.33	4.43
2008	Tull Branch 1	Caroline	021303060613	38.74128	-75.79902	38.71843	-75.77007	4.33	4.14
2008	Watts Creek 1	Caroline	021304040492	38.87704	-75.78880	38.85750	-75.81524	4.67	5.00
2008	Tuckahoe River 1	Caroline, Queen Anne's	021304050531	38.99067	-75.92972	38.98128	-75.93486	4.67	5.00
2007	Beaver Run 1	Carroll	021309071057	39.52564	-76.94339	39.51553	-76.93306	4.67	4.00
2007	Gillis Falls 1	Carroll	021309081030	39.41843	-77.07169	39.41370	-77.07350	5.00	4.33
2003	Gillis Falls 2	Carroll	021309081025	39.38573	-	39.36202	-	4.67	4.00

					77.08755		77.06503		
2007	Joe Branch 1	Carroll	021309071050	39.49684	-76.98763	39.47308	-76.98504	5.00	4.67
2007	Little Morgan Run 1	Carroll	021309071049	39.44303	-77.00405	39.43667	-76.98714	5.00	5.00
2008	Little Morgan Run 2	Carroll	021309071049	39.43418	-76.97782	39.42667	-76.96086	4.00	4.33
2003	Little Morgan Run UT 1	Carroll	021309071049	39.44732	-77.02609	39.44303	-77.00405	5.00	5.00
2007	Little Morgan Run UT 2	Carroll	021309071049	39.45284	-76.99936	39.43667	-76.98714	4.33	4.00
2008	Middle Run 1	Carroll	021309071056	39.49246	-76.94485	39.47679	-76.92717	5.00	4.33
2007	Morgan Run 1	Carroll	021309071050	39.47892	-76.99912	39.47308	-76.98504	4.33	4.00
2007	Morgan Run UT 1	Carroll	021309071047	39.41909	-76.94624	39.42504	-76.94703	4.67	4.00
2007	North Branch Patapsco River 1	Carroll	021309071048	39.52245	-76.87527	39.51010	-76.88719	4.00	4.17
2007	North Branch Patapsco River 2	Carroll	021309071048	39.52579	-76.87790	39.52245	-76.87527	4.00	4.00
2009	Piney Branch 2 (Carroll Co.)	Carroll	021309081026	39.37318	-77.01189	39.35703	-76.99621	4.67	4.00
2007	South Branch Gunpowder Falls UT 1	Carroll	021308060317	39.66661	-76.88386	39.70835	-76.85661	5.00	4.00
2007	South Branch Patapsco River 1	Carroll, Howard	021309081025	39.36322	-77.07507	39.36202	-77.06503	5.00	4.00
2007	Basin Run 1	Cecil	021202030344	39.65615	-76.08164	39.65530	-76.11020	4.33	4.67
2007	Big Elk Creek 1	Cecil	021306060386	39.66985	-75.82816	39.66294	-75.82655	4.00	4.33
2007	Big Elk Creek 2	Cecil	021306060386	39.66297	-75.82656	39.61737	-75.82005	4.67	4.43
2007	Gramies Run 1	Cecil	021306060387	39.70360	-75.85958	39.66983	-75.82808	4.50	4.67

2003	Little North East Creek 1	Cecil	021306080377	39.72566	-75.95853	39.66625	-75.93462	4.67	4.67
2007	Mill Creek 1	Cecil	021202010319	39.58515	-76.05275	39.56460	-76.06549	4.00	4.33
2007	Principio Creek 1	Cecil	021306090380	39.64415	-76.03558	39.61434	-76.03344	4.67	4.00
2007	Principio Creek 2	Cecil	021306090380	39.59454	-76.02519	39.58707	-76.02894	4.00	4.67
2009	Principio Creek 3	Cecil	021306090380	39.58703	-76.02897	39.57064	-76.03058	4.33	4.00
2003	Principio Creek UT 1	Cecil	021306090380	39.61544	-76.05885	39.60709	-76.03070	4.00	4.67
2007	Hill Top Fork UT 1	Charles	021401100775	38.48924	-77.16391	38.46113	-77.15144	4.33	4.43
2008	Hoghole Run 1	Charles	021401090773	38.51805	-77.03583	38.50957	-77.02469	4.13	4.60
2009	Jennie Run 1	Charles	021401090774	38.56786	-76.98150	38.54646	-77.01716	4.33	4.29
2007	Mattawoman Creek UT 1	Charles	021401110780	38.53477	-77.16806	38.54767	-77.17246	4.00	4.43
2003	Mattawoman Creek UT 2	Charles	021401110780	38.53761	-77.18100	38.55605	-77.19043	4.33	4.71
2008	Mattawoman Creek UT 3	Charles	021401110781	38.56562	-77.13269	38.58862	-77.12501	4.67	4.43
2009	Mill Dam Run 1	Charles	021401080767	38.56503	-76.83737	38.56415	-76.84207	4.67	4.71
2008	Mill Run 3 (Charles Co.)	Charles	021401100779	38.49943	-77.08434	38.47626	-77.08420	4.11	4.62
2007	Mill Run UT 1 (Charles Co.)	Charles	021401100779	38.51104	-77.10720	38.50039	-77.08561	4.50	4.29
2008	Nanjemoy Creek 1	Charles	021401100777	38.42378	-77.21466	38.41522	-77.20368	4.00	4.86
2003	Old Womans Run 1	Charles	021401110784	38.59669	-77.02960	38.59612	-77.05501	4.33	4.71
2007	Old Womans Run 2	Charles	021401110784	38.59708	-77.00973	38.59669	-77.02960	4.67	4.43
2007	Piney Branch 1 (Charles	Charles	021401080764	38.56180	-76.87701	38.55004	-76.87041	4.33	4.43

	Co.)								
2008	Potomac River UT 1	Charles	021401020789	38.46814	-77.24377	38.47086	-77.26168	4.67	4.14
2007	Reeder Run 1	Charles	021401020789	38.50839	-77.18502	38.51782	-77.20231	4.84	4.29
2003	Reeder Run 2	Charles	021401020789	38.51592	-77.21343	38.53274	-77.22703	4.33	4.71
2007	Swanson Creek UT 1	Charles	021311010892	38.55236	-76.77384	38.56324	-76.75700	4.67	4.43
2003	Wards Run 1	Charles	021401100778	38.51808	-77.13581	38.51012	-77.14786	4.67	4.71
2009	Wards Run 2	Charles	021401100778	38.50346	-77.15071	38.48449	-77.13184	4.00	4.71
2003	Wolf Den Branch 1	Charles	021401080769	38.63601	-76.82109	38.62192	-76.82043	4.33	4.71
2003	Zekiah Swamp Run 1	Charles	021401080769	38.63464	-76.79846	38.62196	-76.82036	4.33	4.14
2007	Zekiah Swamp Run 2	Charles	021401080768	38.60216	-76.83388	38.59608	-76.83771	4.67	4.71
2003	Zekiah Swamp Run 3	Charles	021401080765	38.58953	-76.84107	38.56355	-76.85086	4.50	4.57
2007	Zekiah Swamp Run 4	Charles	021401080760	38.52679	-76.90389	38.51257	-76.91427	4.67	4.43
2007	Zekiah Swamp Run 5	Charles	021401080760	38.49396	-76.92612	38.48639	-76.92853	4.00	4.71
2007	Zekiah Swamp Run 6	Charles	021401080768	38.61391	-76.83263	38.60216	-76.83388	4.00	4.43
2003	Zekiah Swamp Run UT 1	Charles	021401080762	38.52253	-76.87598	38.52817	-76.89208	5.00	4.43
2007	Zekiah Swamp Run UT 2	Charles	021401080766	38.61249	-76.86986	38.58952	-76.84111	4.34	4.00
2008	Zekiah Swamp Run UT 3	Charles	021401080763	38.54068	-76.83338	38.55595	-76.86021	4.33	4.14
2008	Mattawoman Creek 1	Charles, Prince George's	021401110786	38.65497	-76.93916	38.65767	-76.98456	5.00	4.43

2003	Swanson Creek 1	Charles, Prince George's	021311010893	38.60760	-76.74634	38.58927	-76.74244	4.67	5.00
2007	Swanson Creek 2	Charles, Prince George's	021311010890	38.55844	-76.74044	38.55404	-76.72821	4.67	4.14
2007	Swanson Creek 3	Charles, Prince George's	021311010893	38.58927	-76.74244	38.55844	-76.74044	4.67	4.43
2007	Smoots Pond Run 1	Charles, Saint Mary's	021401070751	38.47788	-76.79137	38.49444	-76.80455	5.00	4.43
2007	Blinkhorn Creek 1	Dorchester	021304030467	38.65297	-75.90070	38.65195	-75.93188	4.33	4.71
2003	Davis Millpond Branch 1	Dorchester	021303060607	38.66525	-75.75797	38.67465	-75.77339	4.67	5.00
2008	Skinners Run 1	Dorchester	021303060608	38.67503	-75.82252	38.66851	-75.81497	4.00	4.29
2003	Big Hunting Creek 1	Frederick	021403030251	39.62634	-77.45965	39.60990	-77.41044	4.33	4.25
2008	High Run 1	Frederick	021403030251	39.60468	-77.46215	39.60823	-77.41093	4.00	4.50
2007	Talbot Branch UT 1	Frederick	021403020238	39.46420	-77.13548	39.45535	-77.16043	4.33	4.25
2007	Weldon Creek 1	Frederick	021403020238	39.47694	-77.15018	39.47488	-77.16046	4.00	4.00
2003	Bear Creek 1	Garrett	050202010018	39.65018	-79.28886	39.65101	-79.29905	4.43	4.07
2007	Bear Creek 2	Garrett	050202010018	39.65484	-79.36376	39.65316	-79.38472	4.67	4.00
2008	Bear Creek 3	Garrett	050202010018	39.66006	-79.32011	39.65441	-79.33055	4.67	4.25
2008	Bear Creek 4	Garrett	050202010016	39.56476	-79.32195	39.65018	-79.28886	4.00	4.50
2007	Bear Creek 5	Garrett	050202010018	39.65482	-79.36370	39.65593	-79.33884	4.67	4.00
2003	Bear Creek UT 1	Garrett	050202010018	39.64821	-79.34058	39.65559	-79.33808	5.00	4.50
2007	Bear Pen Run 1	Garrett	021410060077	39.59163	-79.14355	39.57341	-79.12028	4.75	4.25

2007	Big Run UT 1	Garrett	021410060078	39.57855	-79.19347	39.58348	-79.17124	4.00	4.75
2007	Blacklick Run 1	Garrett	021410060080	39.63910	-79.09647	39.61727	-79.08702	4.00	4.25
2007	Buffalo Run 1	Garrett	050202010019	39.68685	-79.40998	39.69053	-79.40417	4.67	4.00
2008	Buffalo Run 2	Garrett	050202010019	39.69264	-79.43757	39.68915	-79.42334	4.00	4.25
2010	Casselman River 1	Garrett	050202040034	39.66851	-79.17745	39.67513	-79.17104	4.67	4.00
2003	Crabtree Creek 1	Garrett	021410060074	39.47779	-79.19210	39.50564	-79.15474	4.47	4.30
2003	Double Lick Run 1	Garrett	021410060076	39.54257	-79.21921	39.53356	-79.20082	4.92	4.38
2007	Dry Run 1	Garrett	021410060077	39.54299	-79.17013	39.52313	-79.14385	4.00	4.50
2007	Hoyes Run 1	Garrett	050202010012	39.53193	-79.40384	39.52879	-79.41254	5.00	4.25
2003	Little Bear Creek 1	Garrett	050202010016	39.65775	-79.26858	39.65019	-79.28882	4.50	4.25
2008	Little Savage River 1	Garrett	021410060081	39.65111	-78.99097	39.59315	-79.04834	4.00	4.00
2003	Middle Fork Crabtree Creek 1	Garrett	021410060076	39.51193	-79.16195	39.51261	-79.15403	4.67	4.50
2009	Middle Fork Crabtree Creek 2	Garrett	021410060076	39.53353	-79.20087	39.53507	-79.18800	5.00	4.25
2003	Mill Run 1 (Garrett Co.)	Garrett	050202010021	39.71883	-79.30088	39.70909	-79.34891	4.21	4.56
2003	Mill Run 2 (Garrett Co.)	Garrett	050202010021	39.70907	-79.36308	39.71472	-79.38469	4.67	4.00
2003	Monroe Run 1	Garrett	021410060078	39.54471	-79.22830	39.54944	-79.14434	4.00	4.25
2003	Poplar Lick Run 1	Garrett	021410060079	39.59098	-79.10319	39.58389	-79.09140	4.50	4.38
2003	Puzzley Run 1	Garrett	50202010022	39.69028	-79.22870	39.72189	-79.23219	4.00	4.75
2007	Savage River	Garrett	021410060077	39.57974	-	39.56218	-	4.34	4.25

	1				79.08983		79.11099		
2003	Savage River 2	Garrett	021410060077	39.56219	-79.11102	39.54306	-79.13744	4.72	4.29
2007	Savage River 3	Garrett	021410060075	39.50101	-79.10657	39.48643	-79.08279	4.33	4.13
2009	Savage River 4	Garrett	021410060081	39.59811	-79.05554	39.60227	-79.07229	5.00	4.50
2007	South Branch Bear Creek 1	Garrett	050202010015	39.62367	-79.37594	39.65316	-79.38472	4.33	4.50
2007	South Branch Casselman River 1	Garrett	050202040033	39.62616	-79.19151	39.64653	-79.18124	4.67	4.00
2007	South Branch Casselman River 2	Garrett	050202040033	39.64814	-79.18152	39.66851	-79.17745	4.00	4.25
2007	Youghiogheny River UT 1	Garrett	050202010020	39.67943	-79.35317	39.68632	-79.38164	4.00	4.00
2007	Broad Creek 1	Harford	021202050339	39.67899	-76.35243	39.66468	-76.32487	4.00	4.17
2008	Bynum Run UT 1	Harford	021307041131	39.50923	-76.27523	39.50505	-76.28355	4.33	4.00
2007	Deer Creek 2	Harford	021202020329	39.67564	-76.45429	39.67445	-76.44291	4.00	4.67
2003	Deer Creek 3	Harford	021202020324	39.63225	-76.41051	39.61776	-76.39938	4.33	5.00
2003	Deer Creek 4	Harford	021202020322	39.59924	-76.26823	39.60333	-76.24910	4.33	4.33
2008	Deer Creek 5	Harford	021202020330	39.68097	-76.51724	39.67993	-76.50004	4.00	4.00
2008	Deer Creek 6	Harford	021202020327	39.65641	-76.43661	39.65238	-76.43784	4.00	5.00
2008	Deer Creek 7	Harford	021202020322	39.61660	-76.23174	39.62119	-76.21763	4.33	4.00
2009	Deer Creek 8	Harford	021202020327	39.64722	-76.43147	39.63217	-76.41041	4.00	4.33
2007	Deer Creek UT 1	Harford	021202020330	39.64980	-76.55578	39.67578	-76.54223	4.33	4.00
2007	Deer Creek UT 2	Harford	021202020321	39.58866	-76.20168	39.61740	-76.19373	4.33	5.00

2007	Deer Creek UT 3	Harford	021202020324	39.65935	-76.39446	39.64010	-76.35041	4.67	4.00
2007	Falling Branch 1	Harford	021202020329	39.72913	-76.46723	39.67453	-76.44299	4.00	4.33
2007	Hollands Branch 1	Harford	021202020322	39.64115	-76.24400	39.62126	-76.21756	4.00	4.67
2007	Little Deer Creek 1	Harford	021202020328	39.64640	-76.50645	39.65453	-76.49075	4.67	4.33
2008	Little Deer Creek 2	Harford	021202020328	39.65455	-76.49075	39.66009	-76.48109	4.00	4.00
2008	Otter Point Creek 1	Harford	021307021130	39.43296	-76.29982	39.43281	-76.28558	4.33	4.14
2003	Wet Stone Branch 1	Harford	021202020327	39.63021	-76.45688	39.64721	-76.43147	4.67	4.33
2007	Carrolls Branch 1	Howard	021331060960	39.19818	-76.95531	39.19474	-76.93510	4.00	4.67
2007	Dorsey Branch 1	Howard	021311080968	39.28402	-77.00921	39.26105	-77.04475	4.00	5.00
2007	Patuxent River UT 2	Howard	021311070942	39.18842	-76.97725	39.16340	-76.97520	4.06	4.44
2007	Rocky Gorge Reservoir UT 1	Howard	021311070941	39.17385	-76.96164	39.15066	-76.96862	4.67	4.00
2007	South Branch Patapsco River UT 1	Howard	021309081022	39.34471	-76.96235	39.34836	-76.95941	4.33	5.00
2007	Cypress Branch 1	Kent	021305100427	39.30475	-75.74799	39.28812	-75.78414	4.00	4.14
2009	Cypress Branch 2	Kent	021305100427	39.28429	-75.79552	39.27214	-75.81757	4.67	4.14
2003	East Fork Langford Creek UT 1	Kent	021305060408	39.21050	-76.13505	39.19893	-76.11633	4.67	4.14
2010	Goshen Run UT 1	Montgomery	021402080864	39.21470	-77.17439	39.21709	-77.14649	4.00	4.75
2003	Patuxent River UT 1	Montgomery	021311080969	39.28851	-77.19257	39.28496	-77.13996	4.17	5.00
2007	Bald Hill Branch 1	Prince George's	021311030925	38.99228	-76.84371	38.92241	-76.82020	4.00	4.14

2007	Beaverdam Creek 1	Prince George's	021402050823	39.02370	-76.85045	39.02190	-76.85974	4.33	4.43
2007	Beaverdam Creek 2	Prince George's	021402050823	39.02287	-76.86218	39.01585	-76.89775	4.33	4.71
2007	Mataponi Creek UT 1	Prince George's	021311020905	38.72979	-76.82511	38.71989	-76.79437	4.00	4.43
2003	Piscataway Creek 1	Prince George's	021402030803	38.73428	-76.86811	38.73258	-76.87590	4.67	4.43
2007	Piscataway Creek 2	Prince George's	021402030799	38.70638	-76.97208	38.69906	-76.98589	4.33	4.14
2007	Rock Creek 1	Prince George's	021311010904	38.69443	-76.75155	38.69093	-76.72613	4.67	4.71
2009	Turkey Branch 1	Prince George's	021311030921	38.84980	-76.84000	38.85763	-76.78847	4.67	4.14
2008	Alder Branch 1	Queen Anne's	021305070395	39.07879	-76.06344	39.07197	-76.07868	4.67	4.71
2003	Andover Branch 1	Queen Anne's	021305100425	39.22355	-75.76977	39.23043	-75.78289	4.17	4.57
2009	Andover Branch 2	Queen Anne's	021305100425	39.23044	-75.78285	39.24174	-75.79593	4.33	5.00
2007	Andover Branch UT 1	Queen Anne's	021305100425	39.21407	-75.80767	39.24699	-75.82277	4.67	4.71
2007	Blockston Branch UT 1	Queen Anne's	021304050529	38.98971	-75.99870	38.98086	-75.97180	4.00	4.14
2008	Browns Branch 1	Queen Anne's	021305080401	39.11759	-75.95646	39.11650	-75.96562	4.33	4.71
2008	Browns Branch 2	Queen Anne's	021305080401	39.11651	-75.96563	39.13035	-75.97788	4.44	4.71
2007	Granny Finley Branch 1	Queen Anne's	021305080399	39.08786	-75.95688	39.11766	-76.04025	4.00	4.00
2008	Mill Stream Branch 1	Queen Anne's	021305070396	39.01998	-76.03938	39.02288	-76.06394	4.67	4.43
2007	Norwich Creek 1	Queen Anne's	021304050522	38.97574	-76.01146	38.95164	-75.99614	4.67	4.71
2003	Red Lion Branch 1	Queen Anne's	021305100419	39.22756	-75.90160	39.23418	-75.90438	4.22	4.43
2003	Red Lion Branch 2	Queen Anne's	021305100419	39.18442	-75.89387	39.20305	-75.89646	4.27	4.43
2007	Red Lion	Queen	021305100419	39.20657	-	39.22756	-	4.50	4.57

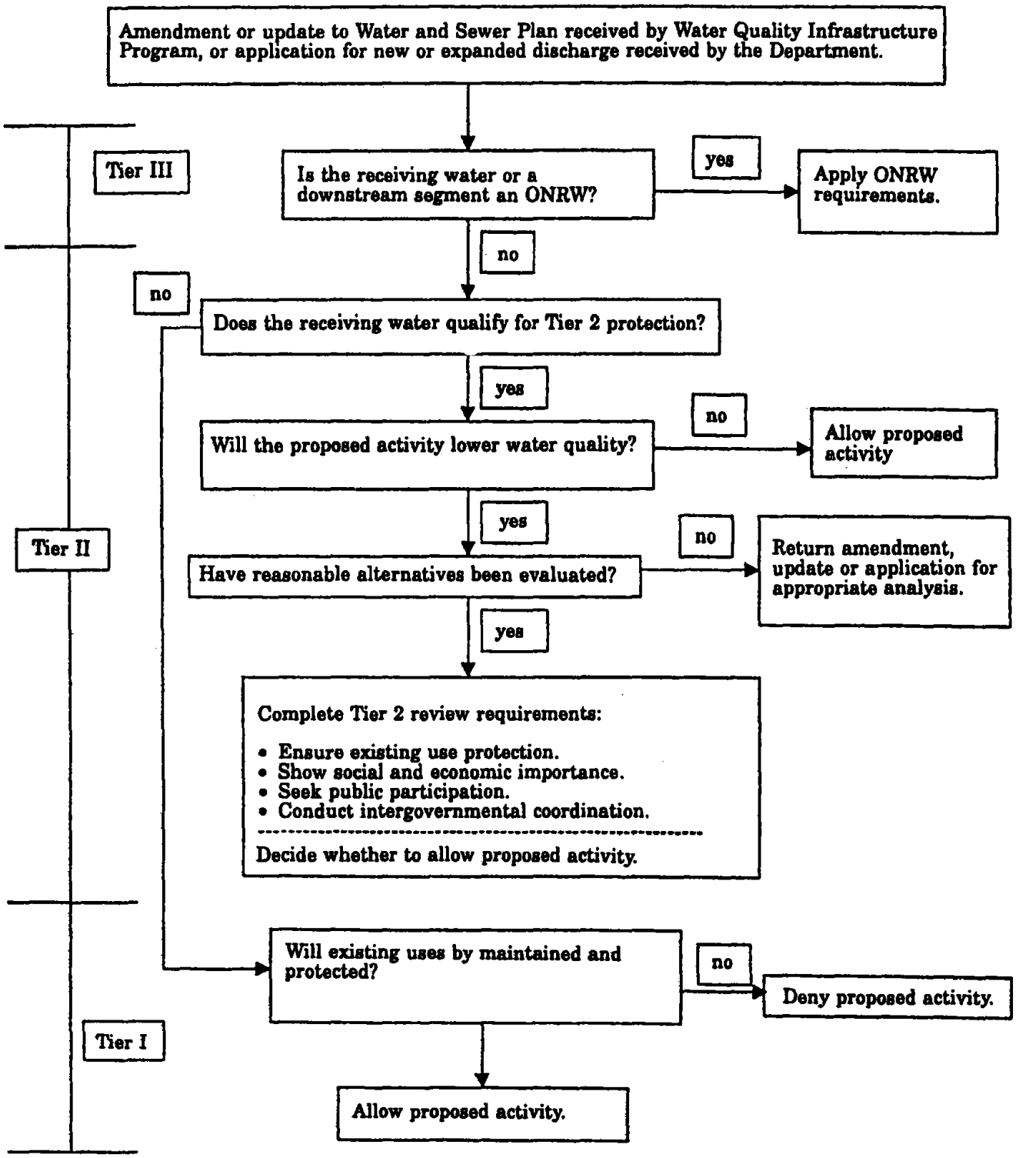
	Branch 3	Anne's			75.89344		75.90160		
2007	Red Lion Branch UT 1	Queen Anne's	021305100420	39.17411	-75.86903	39.18442	-75.89387	4.33	4.14
2007	Southeast Creek 1	Queen Anne's	021305060401	39.13192	-75.97889	39.13975	-75.98786	4.67	4.43
2008	Southeast Creek 2	Queen Anne's	021305080401	39.13989	-75.98794	39.14592	-75.98986	4.17	4.29
2003	Southeast Creek UT 1	Queen Anne's	021305080403	39.15968	-75.92076	39.16360	-75.95177	4.33	5.00
2007	Three Bridges Branch 1	Queen Anne's	021305070397	39.05323	-76.03293	39.05027	-76.06391	4.17	4.43
2007	Wye East River UT 1	Queen Anne's	021305030436	38.98305	-76.08860	38.94966	-76.10908	4.67	4.71
2008	Wye East River UT2	Queen Anne's	021305030436	38.99155	-76.03511	38.99231	-76.07751	4.00	4.14
2007	Burnt Mill Creek 1	Saint Mary's	021401040724	38.36375	-76.65992	38.34639	-76.64235	4.00	4.43
2007	Burnt Mill Creek UT 1	Saint Mary's	021401040724	38.38129	-76.66945	38.37031	-76.65860	4.00	4.71
2007	Chaptico Run 1	Saint Mary's	021401060736	38.37100	-76.75610	38.36489	-76.78197	4.67	4.43
2008	Forrest Hall Branch 1	Saint Mary's	021401060742	38.42298	-76.72010	38.38460	-76.74243	5.00	4.14
2007	Hayden Run 1	Saint Mary's	021401060742	38.43916	-76.73770	38.41884	-76.74437	4.33	4.43
2009	Hillton Run 1	Saint Mary's	021401030715	38.24596	-76.46944	38.22383	-76.46161	4.00	4.43
2007	Johns Creek 1	Saint Mary's	021401030714	38.23144	-76.52353	38.23587	-76.49717	4.34	4.43
2008	McIntosh Run 1	Saint Mary's	021401040721	38.32959	-76.63552	38.32555	-76.64338	4.00	4.86
2008	McIntosh Run 2	Saint Mary's	021401040721	38.31354	-76.65517	38.32555	-76.64337	4.00	4.43
2007	Persimmon Creek 1	Saint Mary's	021311010880	38.42150	-76.71305	38.44077	-76.69696	4.00	4.14
2007	Saint Clements Bay UT 1	Saint Mary's	021401050726	38.32481	-76.69673	38.29953	-76.71233	4.33	4.71
2007	Saint	Saint Mary's	021401050728	38.34856	-	38.33257	-	4.17	4.43

	Clements Creek 1				76.73058		76.72384		
2007	Saint Mary's River 1	Saint Mary's	021401030717	38.27485	-76.51438	38.25265	-76.50721	4.00	4.71
2007	Saint Marys River UT 1	Saint Mary's	021401030710	38.21487	-76.43063	38.21155	-76.45141	4.00	4.00
2007	Saint Marys River UT 2	Saint Mary's	021401030712	38.21065	-76.40308	38.19760	-76.41921	5.00	4.14
2010	Saint Mary's River UT 3	Saint Mary's	021401030719	38.27771	-76.51543	38.30595	-76.52726	4.00	4.43
2003	Warehouse Run 1	Saint Mary's	021401030714	38.20522	-76.49843	38.22150	-76.48619	4.67	4.43
2007	Dividing Creek 1	Somerset, Worcester	021302040064	38.21149	-75.57593	38.18183	-75.54768	4.33	5.00
2007	Highfield Creek 1	Talbot	021304050517	38.89321	-75.97110	38.89050	-75.96166	4.17	4.72
2007	Jadwins Creek 1	Talbot	021304050516	38.84859	-75.97328	38.83436	-75.93300	4.00	4.43
2007	Kings Creek 1	Talbot	021304040473	38.79141	-76.02193	38.79367	-75.99319	4.67	4.71
2007	Skipton Creek UT 1	Talbot	021305030434	38.88226	-76.04616	38.87955	-76.05344	4.00	4.43
2003	Adkins Race 1	Wicomico	021302030648	38.33427	-75.37668	38.31965	-75.35493	4.67	4.15
2007	Aydelotte Branch 1	Wicomico	021302030653	38.41395	-75.44652	38.40576	-75.38133	4.67	4.14
2008	Little Burnt Branch 1	Wicomico	021303040567	38.43934	-75.62701	38.41103	-75.59458	4.00	5.00
2007	Nassawango Creek 1	Wicomico	021302050668	38.31299	-75.46914	38.30312	-75.46400	4.17	4.57
2007	Plum Creek 1	Wicomico	021303050584	38.51243	-75.70759	38.53541	-75.74588	4.00	4.43
2010	Little Mill Creek 1	Worcester	021301060672	38.02677	-75.46306	38.04621	-75.42736	4.00	4.71
2007	Nassawango Creek 2	Worcester	021302050668	38.28361	-75.45386	38.25998	-75.46283	4.67	4.21
2008	Nassawango Creek 3	Worcester	021302050667	38.26000	-75.46286	38.23505	-75.47196	4.56	4.62

P. Flow Chart.

P. Flow Chart.

Maryland's Antidegradation Procedure



.04-2 Outstanding National Resource Water.

A. Scope. There are many tools available to protect special resources including the Smart Growth Initiative, Rural Legacy Program, local comprehensive plans, Program Open Space, and others that work through the private sector and nongovernment organizations. This regulation applies the Tier III ONRW designation only where the most stringent protection is necessary and appropriate to protect and maintain existing exceptional resources. Where high quality waters constitute an outstanding national resource, such as waters of national and State parks and wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

B. Exceptional Biological Resources.

(1) Exceptional Biological Resources.

(a) "Exceptional biological resources" means ecologically significant aquatic or wetland habitat that is:

(i) Distinctive because of its unique or very rare combination of natural species and communities; and

(ii) Dependent on maintaining high or pristine water quality or special conditions of existing water quality, such as a bog, which can best be assured protection by no new or increased discharge.

(b) "Exceptional biological resources" includes, if appropriate:

(i) Wholly aquatic threatened or endangered species as defined in Natural Resources Article, §10-2A-01, Annotated Code of Maryland;

(ii) Wholly aquatic species in need of conservation identified in COMAR 08.03.08.09; or

(iii) Wetlands of special concern as defined in COMAR 26.23.06.

(2) "Protected Area" means a permanently protected area such as:

(a) Wildlife refuges or similar habitat protection areas which include but are not limited to wildlife management areas, national parks, State parks, and management areas;

(b) Areas under permanent conservation easement or rural legacy status as determined in consultation with the Rural Legacy Board, Natural Resources Article, Subtitle 9A, §5-9A-03, Annotated Code of Maryland, or easement holder to assure that the location meets the intent and needs of the ONRW designation as determined by the Department of the Environment; or

(c) Areas under some other demonstrated protection, by which the Department may be assured that there will be no changes in land use which could result in nonpoint source runoff posing a direct or indirect threat to the biological values proposed in the nomination.

C. Eligible Nominations.

(1) Required Components. The nominating group or individual shall provide:

(a) Evidence of the presence of exceptional biological resources or exceptional recreational resources dependent on such biological resources;

(b) Scientific information and analysis concerning existing water quality in the body of water including a demonstration that the water quality is typical of the nominated body of water;

(c) Specific boundaries of the nominated waters and upstream watershed, and a statement whether the nominated body of water and upstream watershed are fully within a protected area except as provided in §F of this regulation; and

(d) Demonstration that an attempt has been made to notify all impacted riparian landowners of the nomination by delivering or mailing notice of proposed nomination to the reparian landowner.

(2) A mailed notice shall request "Restricted Delivery" and show to whom it was delivered and the date and address of delivery.

(3) Additional Information That May Be Required. The Department may require the nominee to submit an economic analysis to address community economic and social concerns.

(4) Assessment. Before proposing the ONRW designation for a body of water, the Department will analyze the information in the nomination package for completeness and confirmation that the body of water achieves and meets the conditions of the ONRW designation.

D. Requirements for an ONRW.

(1) The area nominated for ONRW designation shall be an exceptional biological resource or exceptional recreational resource dependent on exceptional biological resources.

(2) The exceptional biological resource shall be dependent on maintaining high or pristine water quality or special conditions of existing water quality, such as a bog, which can best be assured protection by no new or increased discharge.

(3) To be designated an Outstanding National Resource Water, the area shall be wholly within a permanently protected area.

(4) If the area nominated for ONRW designation has high water quality but does not have exceptional biological resources, it will be protected against degradation under Regulation .04 of this chapter.

E. Protection for Upstream Areas that Feed the ONRW Water Body. In determining whether to designate a body of water as ONRW, the Department may consider whether the watershed upstream of the proposed ONRW area has protections in place that are consistent with the maintenance and protection of biological resources in the ONRW segment. These protections can include, but are not limited to:

(1) A county comprehensive plan or other plan that designates the upstream watershed as a "no growth area"; or

(2) An easement or other legal instrument that protects and maintains the existing land use.

F. Endangered Species. If a nomination is based on a federally threatened or endangered wholly aquatic species, the Department may, but is not required to, designate a water body as an ONRW without requiring protected status. Although the presence of an endangered species may be an indication of a special biological resource, the primary protection for endangered species is provided by the Maryland Nongame and Endangered Species Conservation Act, Natural Resources Article, Subtitle 2A, Annotated Code of Maryland, and the Federal Endangered Species Act. If an ONRW is approved for a body of water that is not in a protected status, any regulated activities in the watershed which would adversely impact the aquatic threatened or endangered species population, or impair the habitat required by the species, will require the maximum practical application of best management practices and implementation of antidegradation policies by the Department. The implementation requirements set forth in §I of this regulation also apply.

G. Designation of an Area as an ONRW.

(1) The Department may designate an area as an ONRW if:

(a) All provisions of the Administrative Procedure Act, Title 10, Subtitle 1, Annotated Code of Maryland, have been met;

(b) The application is complete and all requirements have been met; and

(c) Written permission for the designation has been received from the landowner or landowners within the proposed area for ONRW.

(2) Notice to property owners shall be based on property and tax records in the affected jurisdictions.

H. Public Involvement. The Department shall provide public notice and opportunity for a public informational hearing on the proposed designation of an ONRW before that designation is made. Local jurisdictions shall have 60 days after notification of the nomination to comment on the consistency of the nomination with the locality's comprehensive plan.

I. Implementation.

(1) A wastewater or industrial discharge NPDES permit that would allow a new discharge or an increase in an individual discharge may be issued within an ONRW only if there is mitigation or offsets elsewhere in the ONRW segment that result in no net increase in any substance which might impact or impair the ONRW values for which the body of water was nominated.

(2) A water quality certification may permit an impact only if:

(a) The water quality necessary to maintain and protect the exceptional biological resource is maintained; and

(b) There is mitigation or restoration elsewhere in the ONRW water segment.

(3) Sources of pollution may be allowed by the Department for temporary degradation, if, after a minimal period of time (weeks to months), the waters are returned or restored to conditions equal to or better than those existing just before the temporary source of pollution.

(4) After a public informational hearing, the Secretary may make exceptions to §I(1), (2), and (3) of this regulation to protect critical public health and safety concerns.

.05 Surface Water Mixing Zones.

A. General.

(1) Effluents may be mixed with surface waters in the mixing zone.

(2) Effluents may not be treated in the mixing zone.

(3) Lethality to passing organisms may not occur in any mixing zone.

(4) Surface waters outside the mixing zones shall meet the water quality criteria for that particular body of water.

(5) Mixing zones may be designated by the Department provided that the following requirements are met outside the mixing zones:

(a) There shall be no interference with biological communities or populations of indigenous species to a degree which is damaging to the aquatic life or ecosystem;

(b) There shall be no diminishing of other legitimate beneficial uses;

(c) Mixing zones may not form barriers to the migratory routes of aquatic life;

(d) Mixing zones shall be designated and located to protect surface waters and shallow water shoreline areas;

(e) The general water quality criteria set out in Regulation .03B(1)—(3) of this chapter apply within the mixing zones.

(6) Complete mixing within the mixing zone shall be assumed for toxic substance discharges to streams, rivers, and estuaries unless site-specific information indicates that another mixing pattern is more appropriate.

(7) Stream flows other than the design flow values set forth in §§B—E of this regulation may be used, at the Department's discretion, on a case-by-case basis for mixing zones associated with noncontinuous discharges.

(8) Toxic pollutants shall be treated as conservative substances when calculating instream waste concentrations. The assumption of conservatism may be waived based on pollutant-specific and site-specific information.

(9) Unless a later time is stipulated by the Department, the discharger shall submit to the Department, at the time of permit application, the mixing zone technique preferred for each of its discharges, and actual mixing zone calculations together with supporting documentation.

(10) A mixing zone may not cause a significant human health risk, considering likely pathways of human exposure.

(11) Except when the applicant can demonstrate to the satisfaction of the Department that adverse aquatic life or human health effect does not occur, overlapping mixing zones are not permitted. Demonstration may include chemical monitoring, ambient toxicity testing, or examination of benthic communities or fish tissue.

(12) A mixing zone may not be granted in water body segments with documented occurrences of any endangered or threatened species listed under §4 of the federal Endangered Species Act, if that discharge would likely have an adverse effect on those species.

B. Mixing Zones for Conventional Pollutants. The following requirements apply to the calculation of the regulatory mixing zones for conventional pollutants as identified in the Federal Act:

(1) Except for thermal mixing zones established in accordance with COMAR 26.08.03.03—.05 and toxic substance mixing zones established in accordance with §§C—E of this regulation, any mixing zone may not exceed the following maximum limits:

(a) In freshwater streams and rivers, a mixing zone width may not exceed 1/3 of the width of the surface water body;

(b) In lakes, the combined area of all mixing zones may not exceed 10 percent of the lake surface area; and

(c) In estuarine areas, the maximum cross-sectional area of the mixing zone may not exceed 10 percent of the cross-sectional area of the receiving water body; and

(2) The flows used shall be:

(a) For freshwater streams and rivers, the design stream flow; and

(b) For estuaries and the open ocean, determined from:

(i) Specific data, when available, for the mean water level and average tidal velocity and, where appropriate, the design stream flow,

(ii) Specific data on waste dispersion or dilution, when available for a specific discharge, or

(iii) Dispersion or dilution studies required at the Department's discretion.

C. Application of Toxic Substance Acute Criteria for the Protection of Aquatic Life.

(1) In intermittent streams, the acute criterion shall be applied at the end of the discharge pipe.

(2) In other water bodies, achievement of the acute criterion to protect aquatic life shall be provided:

(a) Within a very short distance from the outfall using:

(i) A high velocity discharge with an initial velocity of 3 meters per second or more, and

(ii) A mixing zone limited to 50 times the discharge length scale in any direction, where the discharge length scale is defined as the square root of the cross-sectional area of any discharge outlet;

(b) Without a high velocity discharge, within a short distance from the outfall using the most restrictive of the following conditions:

(i) Meeting the acute toxicity criterion within 10 percent of the distance from the edge of the outfall structure in any direction to the edge of the mixing zone used for application of toxic substance chronic criteria,

(ii) Meeting the acute toxicity criterion within a distance of 50 times the discharge length scale in any direction, when the discharge length is defined as the square root of the cross-sectional area of any discharge outlet, or

(iii) Meeting the acute toxicity criterion within a distance of five times the local water depth in any horizontal direction from the discharge outlet, where appropriate; or

(c) By demonstration or calculation that a drifting organism may not be exposed to a 1-hour average concentration exceeding the acute aquatic life criterion.

(3) For the application of the acute criteria, any mixing zone may not exceed the following maximum limits:

(a) In freshwater streams and rivers, a width equal to 1/3 the width of the surface water body;

(b) In lakes, for all discharges combined, 5 percent of the lake surface area; and

(c) In estuarine areas, a cross-sectional area equal to 5 percent of the cross-sectional area of the receiving water body.

(4) The flows used shall be:

(a) For freshwater streams and rivers, the design stream flow; and

(b) For estuaries and the open ocean, determined from:

(i) Specific data, when available, for the mean low water and minimum daily average 1-hour tidal velocity and, when appropriate, the design stream flow,

(ii) Specific data on waste dispersion or dilution, when available for a specific discharge, or

(iii) Dispersion or dilution studies required at the Department's discretion.

D. Application of Toxic Substance Chronic Criteria for the Protection of Aquatic Life.

(1) Any mixing zone may not exceed the following:

(a) In freshwater streams and rivers, a mixing zone width may not exceed 1/3 of the width of the surface water body;

(b) In lakes, the combined area of all mixing zones may not exceed 10 percent of the lake surface area; and

(c) In estuarine areas, the maximum cross-sectional area of the mixing zone may not exceed 10 percent of the cross-sectional area of the receiving water body.

(2) The flows used shall be:

(a) For freshwater streams and rivers, the 30Q5 value; and

(b) For estuaries and the open ocean, determined from:

(i) Specific data, when available, for the mean water level and average tidal velocity and, when appropriate, the 30Q5 stream flow,

(ii) Specific data on waste dispersion or dilution, when available for a specific discharge, or

(iii) Dispersion or dilution studies required at the Department's discretion.

E. Application of Toxic Substance Criteria for the Protection of Human Health. The flow used to determine impacts to human health shall be the mean annual flow value.

.05-1 Intermittent Streams.

A. New wastewater discharges to intermittent streams are not permitted after the effective date of this regulation except to resolve existing on-site sewage disposal failures when other alternatives are not available.

B. Effluent limitations for discharge to intermittent streams may not be less stringent than:

(1) The minimum national effluent guidelines established under the Federal Act;

(2) Those levels necessary to maintain the water quality standards of the intermittent stream and of downstream segments;

(3) Those levels necessary to protect the biological community of the intermittent stream; or

(4) Those levels necessary to protect public health.

.06 Review and Revision.

A. Procedure. Under State law and § 303(c) of the Federal Act, the Department shall review and revise its water quality standards as appropriate. Changes shall be transmitted to the EPA.

B. Hearing Transcripts. Transcripts of public hearings on proposed standards revisions shall be available for public inspection in the main office of the Department. Transcripts shall be furnished to the EPA upon request.

.07 Surface Water Use Designation.

A. All surface waters of this State shall be protected for water contact recreation, fishing, and protection of aquatic life and wildlife.

B. For interstate waters, these classifications apply only to those waters within this State.

C. A stream segment is a distinct portion of a sub-basin.

D. If the stream segment limits are specified as beginning at a specific point, streams terminating downstream of this point are not included in the same segment. For example, "Deer Creek and all tributaries above Eden Mill Dam" does not include Little Deer Creek.

E. Stream segments, listed below in tabular form, shall be given the additional protection required for:

(1) Shellfish harvesting waters (Use II waters);

(2) Shallow water submerged aquatic vegetation (Use II waters);

(3) Migratory fish spawning and nursery (Use II waters);

(4) Natural trout waters (Use III and Use III-P waters);

(5) Recreational trout waters (Use IV and Use IV-P waters);

(6) Public water supply (Use I-P, II-P, III-P, and IV-P waters).

F. For each sub-basin in Regulation .08, information is arranged under the following headings:

(1) Use—Refers to water classification;

(2) Waters—Exact name of stream segment or segments;

(3) For geographic reference:

(a) MCGS—Most downstream point or line for each stream segment using the Maryland Coordinate Grid System (East/North);

(b) Latitude/Longitude—Point may reference a limit (NAD 27 or NAD 83) as a point identifier for a tidal (Use II) segment; or may indicate most downstream point or line for a stream segment as in §F(3)(a) of this regulation;

(4) Limits—Written description of boundary of stream segment or tidal segment established by MCGS or MDE;

(5) Any stream segment not listed in Regulation .08 is Use I water.

G. Stream segment classifications for each sub-basin are in Regulation .08.

.08 Stream Segment Designations.

A. General.

(1) If using the Maryland Coordinate Grid System (MCGS) (Easting/Northing), the limits indicate the most downstream point or line for the segment. The North American Datum (NAD) for the MCGS is NAD27.

(2) Tidal Segmentation Rationale. Water quality standards for the Chesapeake Bay and its tidal tributaries will be assessed on a "Bay Segment" scale. The segmentation is based on decisions made by the Chesapeake Bay Program in 1998 and 2003, and documented in Chesapeake Bay Program Analytical Segmentation Scheme Revisions, Decisions, and Rationales: 1983-2003 (EPA 903-R-04-008) as adjusted by the Chesapeake Bay Program after discussions with the affected State jurisdictions.

(3) Tidal Segment Boundaries. When using latitude and longitude to delineate Chesapeake Bay tidal segments, the limits are narrative descriptions that delineate the base points of reference. Chesapeake Bay tidal segments generally follow the shoreline contour at mean low water, and include all major bays, creeks, and branches present within the narrative limits of a given segment. The origin of latitudes and longitudes used for the Chesapeake Bay and its tidal tributaries is NAD83.

(4) Application of Chesapeake Bay Segmentation Scheme. The tidal boundaries set forth in this regulation are defined for water quality standards purposes within the Department only, and are not applicable to other agency regulations identified for other purposes.

(5) No Grow Zones. Submerged Aquatic Vegetation (SAV) "No-Grow" Zones (NGZ) are present in some shallow water designated use segments. The SAV "No Grow Zones" are identified in Technical Support Document for Identification of Chesapeake Bay Designated Uses and Attainability-2004 Addendum (EPA 903-R-04-006), Figures V-1 to V-12, which is incorporated by reference. The no grow zones shall be excluded from the assessment of the shallow water designated use.

B. Sub-Basin 02-12-02: Lower Susquehanna River Area.

Use	Waters	MCGS or Latitude/ Longitude	Limits
(1) Use I-P: Susquehanna River and all tributaries except those designated below as Use III-P or Use IV-P		1068.8/625.5 to 1056.8/621.3	From Mainstem from north side of Conowingo Dam to MD/PA line
(2) Use II:			
(a) Northern Chesapeake Bay (CB1TF2-Use II-P): Susquehanna River mainstem from south side of Conowingo Dam on eastern and western shores to confluence with Chesapeake Bay.			

Designated Uses Present in Segment	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Limits
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive	39.475132	-76.097580	(1) West side of Spesutie Narrows bridge
	39.476006	-76.094421	(2) East side of Spesutie Narrows bridge

Use: April 1 to October 30, inclusive Application Depth: 2.0 meters NGZ present Open Water Fish and Shellfish Use: January 1 to December 31, inclusive	39.475323	-76.072807	(3) Locust Pt. on Spesutie Island
	39.449471	-76.010475	(4) Turkey Pt., 0.1 miles WSW of lighthouse
	39.529629	-75.979271	(5) Red Pt.
	39.540794	-76.002899	(6) East side of Carpenter Pt.
	39.608994	-76.121094	(7) Port Deposit
	39.608959	-76.132683	(8) East side Spencer Island
	39.609001	-76.135147	(9) West side Spencer Island
	39.608971	-76.143379	(10) Just south of Rock Run on western shore
(b) Northern Chesapeake Bay (CB1TF1): Upper Bay mainstem to confluence with CB1TF2 (Susquehanna River), Northeast River (NORTF), Elk River (ELKOH), and CB2OH.			
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 1 meters NGZ present Open Water Fish and Shellfish Use: January 1 to December 31, inclusive	39.420143	-76.123344	(1) 1,000 feet SW of Cherry Tree Pt., APG
	39.401688	-76.035194	(2) North of Chesapeake Haven, Grove Neck
	39.429420	-75.997681	(3) 1,300 feet SW of Wroth Pt.
	39.449200	-76.007698	(4) Turkey Pt.
	39.449471	-76.010475	(5) Turkey Pt., 0.1 miles WSW of lighthouse
	39.475323	-76.072807	(6) Locust Pt. on Spesutie Island
	39.476006	-76.094421	(7) East side of Spesutie Narrows bridge
	39.475132	-76.097580	(8) West side of Spesutie Narrows bridge

Use Waters	MCGS or Latitude/ Longitude	Limits
(3) Use III: None.		
(4) Use III-P:		
(a) Deer Creek and all tributaries	956/671	Above Eden Mill Dam
(b) Basin Run and all tributaries	1040/667	
(c) Kellogg Branch and all tributaries	966/655.5	
(d) North Stirrup Run and all tributaries	969/650.2	
(e) South Stirrup Run and all tributaries	968.3/649	
(f) Deep Run and all tributaries	1008.2/677.8	
(g) Gladden Branch and all tributaries	967/658	
(h) Rock Hollow Branch and all tributaries	958/663	
(i) Love Run and all tributaries	1046/678	
(j) Stone Run and all tributaries	1050.5/682.5	

(5) Use IV: None.

(6) Use IV-P:

(a) Deer Creek and all tributaries	1040/649.3	From mouth to Eden Mill Dam
(b) Octoraro Creek	1036.7/665	Mainstem only

C. Sub-Basin 02-13-01: Coastal Area.

(1) Use I-P: None.

(2) Use II (Shellfish Harvest Use). All portions of the territorial seas and estuarine portions of bays and tributaries except:

(a) Bishopville Prong and tributaries	1321.7/216.4	Above confluence with St. Martins River
(b) Shingle Landing Prong and its tributaries	1323/214	Above confluence with St. Martins River at Piney Island
(c) Herring Creek and its tributaries	1336.4/189.9	Above Rt. 50
(d) Ocean City Harbor	1345/185.5	Above entrance to West Ocean City Harbor

(3) Use III: None.

(4) Use III-P: None.

(5) Use IV: None.

(6) Use IV-P: None.

D. Sub-Basin 02-13-02: Pocomoke River Area.

(1) Use I-P: None.

(2) Use II:

(a) Upper Pocomoke River Tidal Fresh (POCTF):

Designated Uses Present in Segment	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Limits
Migratory Spawning and Nursery Use:	38.062958	-75.617470	(1) West of Unionville, Somerset Co. side
February 1 to May 31, inclusive	38.062840	-75.616302	(2) West of Unionville, Worcester Co. side
Shallow Water Submerged Aquatic	38.183201	-75.391991	(3) Snow Hill, 1,900 feet upstream of Rt. 12
Vegetation Use: April 1 to October 30, inclusive			
Application Depth**:** .05 meters			
NGZ Present			
Open Water Fish and Shellfish Use:			
January 1 to December 31, inclusive			

(b) Middle Pocomoke River Oligohaline (POCOH):

Migratory Spawning and Nursery Use:	37.966858	-75.674603	(1) On mainland 4,000 feet NW of Fair Island
February 1 to May 31, inclusive	37.951850	-75.676225	(2) MD/VA State Line-Pocomoke Sound
Shallow Water Submerged Aquatic	37.949924	-75.667353	(3) MD/VA State Line-Pocomoke Sound
Vegetation	37.945125	-75.656153	(4) MD/VA State Line south of Williams Pt.
Use: April 1 to October 30, inclusive	37.946728	-75.648248	(5) MD/VA State Line-Pocomoke Sound
Application Depth: 0.5 meters	37.966423	-75.648553	(6) MD/VA State Line-700' upstream of mouth
NGZ Present	37.994347	-75.624314	(7) Intersection of Somerset Co. and Worcester Co., MD, and Accomack Co., VA
Open Water Fish and Shellfish Use: January 1 to December 31, inclusive	37.994449	-75.623122	(8) Worcester Co., MD-Accomack Co., VA

			boundary
	38.062840	-75.616302	(9) West of Unionville, Worcester Co. side
	38.062958	-75.617470	(10) West of Unionville, Somerset Co. side
(c) Lower Pocomoke River Mesohaline (POCMH):			
Migratory Spawning and Nursery Use:	37.924927	-75.848007	(1) Eastward Pt., on eastern side of Broad Creek
February 1 to May 31, inclusive	37.911789	-75.837732	(2) MD/VA State Line, 1.15 miles south of Cow Gap Island
Shallow Water Submerged Aquatic			
Vegetation Use: April 1 to October 30,	37.912169	-75.801148	(3) MD/VA State Line-Pocomoke Sound
inclusive	37.941226	-75.761753	(4) MD/VA State Line-Pocomoke Sound
Application Depth: 1.0 meters	37.954523	-75.704753	(5) MD/VA State Line-Pocomoke Sound
NGZ Present	37.955237	-75.691653	(6) MD/VA State Line-Pocomoke Sound
Open Water Fish and Shellfish Use:	37.951850	-75.676225	(7) MD/VA State Line-Pocomoke Sound
January 1 to December 31, inclusive	37.966858	-75.674603	(8) On mainland 4,000 feet NW of Fair Island
Shellfish Harvest Use: See §D(2)(j) of this regulation			
(d) Manokin River Mesohaline (MANMH1):			
Migratory Spawning and Nursery Use:	38.131565	- 75.948860	(1) Wenona on Deal Island, north of channel
February 1 to May 31, inclusive	38.125946	-75.941216	(2) Eastern point on north side of Little Deal Island
Shallow Water Submerged Aquatic			
Vegetation	38.122917	-75.937126	(3) Eastern side of Little Deal Island
Use: April 1 to October 30, inclusive	38.078552	-75.877586	(4) Hazard Island, 1,200 feet NE of tip of Hazard Pt.
Application Depth: 2.0 meters			
Open Water Fish and Shellfish Use:	38.075663	-75.871155	(5) Gut between Hazard Cove and Mine Creek, N side
January 1 to December 31, inclusive			
Shellfish Harvest: See §D(2)(j) of this regulation	38.075314	-75.870750	(6) Gut between Hazard Cove and Mine Creek, S side
	38.069160	-75.855591	(7) West part Hazard Island at Shirtpond Cove
	38.069599	-75.853897	(8) East part Hazard Island at Shirtpond Cove
	38.073784	-75.848656	(9) W side of gut heading N from Flatland Cove
	38.074146	-75.848228	(10) E side of gut heading N from Flatland Cove
	38.133823	-75.827339	(11) Cormal Pt.
	38.142979	-75.821144	(12) Champ Pt.
	38.160442	-75.929558	(13) Upper Thorofare at the mouth of Moores Gut
	38.160080	-75.932388	(14) Upper Thorofare, Deal Island side
(e) Manokin River Mesohaline (MANMH2):			
Migratory Spawning and Nursery Use:	38.142979	-75.821144	(1) Champ Pt.
February 1 to May 31, inclusive	38.133823	-75.827339	(2) Cormal Pt.
Shallow Water Submerged Aquatic	38.172668	-75.732979	(3) Manokin River confluence with Hall Branch
Vegetation Use: April 1 to October 30, inclusive			
Application Depth: 0.5 meters			
Open Water Fish and Shellfish Use:			
January 1 to December 31, inclusive			
Shellfish Harvest: See §D(2)(j) of this regulation			
(f) Big Annemessex River Mesohaline (BIGMH1):			
Migratory Spawning and Nursery Use:	38.058910	-75.868744	(1) South shore of Pat Island
February 1 to May 31, inclusive	38.036049	-75.868935	(2) 700 feet East of Flatcap Pt., Janes Island
Shallow Water Submerged Aquatic	38.020973	-75.856819	(3) North side of gut SW of Acre Creek
Vegetation Use: April 1 to October 30,	38.020733	-75.856712	(4) South side of gut SW of Acre Creek
inclusive	38.016033	-75.846458	(5) West side of Daugherty Creek Canal

Application Depth: 2.0 meters	38.015781	-75.845947	(6) East side of Daugherty Creek Canal
Open Water Fish and Shellfish Use:	38.078850	-75.782249	(7) Persimmon Pt.
January 1 to December 31, inclusive	38.074585	-75.787170	(8) Charles Pt.
Shellfish Harvest: See §D(2)(j) of this	38.074146	-75.848228	(9) East side of gut heading N from Flatland
regulation	38.073784	-75.848656	Cove
	38.069599	-75.853897	(10) W side of gut heading N from Flatland
	38.069160	-75.855591	Cove
	38.065315	-75.866608	(11) East part Hazard Island at Shirtpond Cove
	38.064907	-75.866974	(12) West part Hazard Island at Shirtpond Cove
			(13) Hazard Island, across gut from Pat Island
			(14) NE Pat Island, across gut from Hazard Island
(g) Big Annemessex River Mesohaline (BIGMH2):			
Migratory Spawning and Nursery Use:	38.074585	-75.787170	(1) Charles Pt.
February 1 to May 31, inclusive	38.078850	-75.782249	(2) Persimmon Pt.
Shallow Water Submerged Aquatic	38.087246	-75.733032	(3) 1,000 feet below confluence with
Vegetation Use: April 1 to October 30, inclusive			Annemesex Creek
Application Depth: 0.5 meters			
Open Water Fish and Shellfish Use:			
January 1 to December 31, inclusive			
Shellfish Harvest: See §D(2)(j) of this regulation			
(h) Tangier Sound Mesohaline (TANMH1):			
Shallow Water Submerged Aquatic	37.941404	-76.083908	(1) MD/VA boundary, 2.25 miles west of Smith
Vegetation Use: April 1 to October 30,			Gut Pt.
inclusive	37.953599	-76.052055	(2) MD/VA boundary, 1,450' west of Hog Neck
Application Depth: 2.0 meters	37.953392	-75.993331	(3) MD/VA boundary, 400' east of Horse
NGZ Present	37.946050	-75.943628	Hammock
Open Water Fish and Shellfish Use:	37.906718	-75.952630	(4) MD/VA boundary, between Smith and
January 1 to December 31, inclusive			Cedar Is
Shellfish Harvest: See §D(2)(j) of this	37.911304	-75.883558	(5) MD/VA boundary, 2.75 miles west of
regulation	37.911789	-75.837732	Clump Island
			(6) MD/VA boundary, 300' north of Green
	37.924927	-75.848007	Harbor I.
	38.015781	-75.845947	(7) MD/VA boundary, 1.15miles south of Cow
	38.016033	-75.846458	Gap Island
	38.020733	-75.856712	(8) Eastward Pt., on eastern side of Broad Creek
	38.020973	-75.856819	(9) East side of Daugherty Creek Canal
	38.036049	-75.868935	(10) West side of Daugherty Creek Canal
	38.058910	-75.868744	(11) South side of gut SW of Acre Creek
	38.064907	-75.866974	(12) North side of gut SW of Acre Creek
	38.065315	-75.866608	(13) 700 feet east of Flatcap Pt., Janes Island
	38.075314	-75.870750	(14) South shore of Pat Island
			(15) NE Pat Island, across gut from Hazard
	38.075665	-75.871155	Island
			(16) Hazard Island, across gut from Pat Island
	38.078552	-75.877586	(17) Gut between Hazard Cove and Mine Cr.,
	38.122917	-75.937126	south side
	38.125946	-75.941216	(18) Gut between Hazard Cove and Mine Cr.,
	38.131565	-75.948860	north side
	38.136566	-75.959633	(19) Hazard Island, 1,200 feet NE of tip of
	38.232738	-75.972618	Hazard Pt.
	38.216042	-76.032051	(20) Eastern side of Little Deal Island
	38.215809	-76.032349	(21) Eastern point on north side of Little Deal
	38.231964	-76.134285	Island
			(22) Wenona on Deal Island, north of channel

	38.231445	-76.135773	(23) Twiggs Pt. (24) Southern-most point of Clay Island (25) Bishops Head Pt. (26) Bishops Head Pt. (27) Lower Hooper I. between Nancys and Creek Pts. (28) Lower Hooper I. between Nancys and Creek Pts.
(i) Tangier Sound Mesohaline (TANMH2):			
Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 0.5 meters NGZ Present Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §D(2)(j) of this regulation	38.232738 38.136566 38.160080 38.160442 38.202679 38.227970 38.243217 38.244740	-75.972618 -75.959633 -75.932388 -75.929558 -75.890579 -75.893486 -75.906105 -75.941284	(1) Southern-most point of Clay Island (2) Twiggs Pt. (3) Upper Thorofare, Deal Island side (4) Upper Thorofare at the mouth of Moores Gut (5) 1,100 feet west of the tip of Long Pt. (6) Nanticoke Pt. (Stump Point Marsh) (7) West of Waterview, north of Jones Creek (8) Sandy Island, NE of Frog Pt.

Use Waters	MCGS or Latitude/ Longitude	Limits
(j) Shellfish Harvest Subcategory. All estuarine portions of tributaries except:		
(i) Manokin River and tributaries	1165/125.3	Above confluence of tributaries Manokin River and Kings Creek
(ii) Big Annemessex River and tributaries	1160.8/95.2	Above River Road
(iii) Jenkins Creek From	1127/48 to 1127.3/45.7	Above mouth
(iv) Fair Island Canal From	1177.6/51 to 1187.7/50.1	
(v) Pocomoke River	1196/62	Above MD/VA line

(3) Use III: None.

(4) Use III-P: None.

(5) Use IV: None.

(6) Use IV-P: None.

E. Sub-Basin 02-13-03: Nanticoke River Area.

(1) Use I-P: None.

(2) Use II:

(a) Upper Nanticoke River Tidal Fresh (NANTF): from Maryland-Delaware state line to confluence with Plum Creek:

Designated Uses Present in Segment	Latitude (Decimal	Longitude (Decimal	Limits

	Degrees)	Degrees)	
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 0.5 meters NGZ Present Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §E(2)(f) of this regulation	38.538052 38.536259 38.642723	-75.745972 -75.744843 -75.606522	(1) 600 feet upstream of Molly Horn Branch (2) 375 feet upstream of Plum Creek (3) Seaford, DE just above Middleford Rd.
(b) Middle Nanticoke River Oligohaline (NANOH):			
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 0.5 meters Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §E(2)(f) of this regulation	38.387169 38.381268 38.536259 38.538052 38.553452	-75.859673 -75.839233 -75.744843 -75.745972 -75.774071	(1) 900 feet downstream of Wapremander Creek (2) 600 feet upstream of Quantico Creek (3) 375 feet upstream of Plum Creek (4) 600 feet upstream of Molly Horn Branch (5) Marshyhope Cr., 500 feet downstream of Big Indian Cr.
(c) Lower Nanticoke River Mesohaline (NANMH):			
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 0.5 meters Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §E(2)(f) of this regulation	38.24474 38.243217 38.381268 38.387169	-75.941284 -75.906105 -75.839233 -75.859673	(1) Sandy Island, NE of Frog Pt. (2) West of Waterview, North of Jones Creek (3) 600 feet upstream of Quantico Creek (4) 900 feet downstream of Wapremander Creek
(d) Wicomico River Mesohaline (WICMH):			
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 0.5 meters NGZ present Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §E(2)(f) of this regulation	38.227970 38.202679 38.361588	-75.893486 -75.890579 -75.583061	(1) Nanticoke Pt. (Stump Point Marsh) (2) 1,100 feet West of the tip of Long Pt. (3) Beaverdam Cr., 3,000 feet upstream of Rt. 12
(e) Fishing Bay Mesohaline (FSBMH):			
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 0.5 meters	38.216042 38.232738 38.404148 38.404133	-76.032051 -75.972618 -76.002716 -76.029968	(1) Bishops Head Pt. (2) Southern-most point of Clay Island (3) Transquaking River west of Thorofare Marsh (4) Backgarden Pond, SE shore

Open Water Fish and Shellfish Use:
January 1 to December 31, inclusive
Shellfish Harvest: See §E(2)(f) of this regulation

Use Waters	MCGS or Latitude/ Longitude	Limits
(f) Shellfish Harvest Subcategory. All estuarine portions of tributaries except:		
(i) Blackwater River and tributaries	From 1083.1/192 to 1084.2/191.6	Above mouth
(ii) Transquaking River and tributaries	From 1085.2/196.3 to 1088/197	Above mouth
(iii) Nanticoke River and tributaries	From 1126/194 to 1128.2/191.2	Above line from Runaway Pt. to Long Pt.
(iv) Wicomico River and tributaries	1147.9/160.5	Above ferry crossing at White Haven
(v) Monie Creek	1138.7/146.7	Above mouth

(3) Use III: None.

(4) Use III-P: None.

(5) Use IV: None.

(6) Use IV-P: None.

F. Sub-Basin 02-13-04: Choptank River Area.

(1) Use I-P: None.

(2) Use II:

(a) Upper Choptank River Tidal Fresh (CHOTF):

Designated Uses Present in Segment	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Limits
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 0.5 meters meters NGZ present Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §F(2)(g) of this regulation	38.810635 38.808270 38.980827	-75.902985 -75.900391 -75.792931	(1) 1,850 feet downstream from mouth of Tuckahoe Cr. (2) 1,000 feet downstream of Gilpin Pt. (3) 3,500 feet upstream of Rt. 313 bridge

(b) Middle Choptank River Oligohaline (CHOOH):

Migratory Spawning and Nursery Use:	38.653545	-75.959129	(1) 1.5 miles downstream of Bow Knee Pt.
February 1 to May 31, inclusive	38.647415	-75.952339	(2) 1.05 miles upstream of Cabin Creek
Shallow Water Submerged Aquatic	38.808270	-75.900391	(3) 1,000 feet downstream of Gilpin Pt.
Vegetation	38.810635	-75.902985	(4) 1850 feet downstream from mouth of Tuckahoe Cr.
Use: April 1 to October 30, inclusive			
Application Depth: 0.5 meters			
NGZ present			
Open Water Fish and Shellfish Use:			
January 1 to December 31, inclusive			
Shellfish Harvest: See §F(2)(g) of this regulation			

(c) Lower Choptank River Mesohaline (CHOMH2):

Migratory Spawning and Nursery Use:	38.649193	-76.153114	(1) 0.9 miles N. of Chlora Pt.
February 1 to May 31, inclusive	38.628571	-76.171051	(2) 400 feet west of Castle Haven Pt.
Shallow Water Submerged Aquatic	38.647415	-75.952339	(3) 1.05 miles upstream of Cabin Creek
Vegetation	38.653545	-75.959129	(4) 1.5 miles downstream of Bow Knee Pt.
Use: April 1 to October 30, inclusive			
Application Depth: 1.0 meters			
Open Water Fish and Shellfish Use:			
January 1 to December 31, inclusive			
Shellfish Harvest: See §F(2)(g) of this regulation			

(d) Mouth of the Choptank River Mesohaline (CHOMH1):

Migratory Spawning and Nursery Use:	38.672421	-76.340698	(1) 720 feet along shore NNW of Blackwalnut Pt.
February 1 to May 31, inclusive	38.573353	-76.306503	(2) Hills Pt.
Shallow Water Submerged Aquatic	38.571705	-76.336029	(3) 1.6 miles almost due west of Hills Pt.
Vegetation	38.628571	-76.171051	(4) 400 feet west of Castle Haven Pt.
Use: April 1 to October 30, inclusive	38.649193	-76.153114	(5) 0.9 miles N. of Chlora Pt.
Application Depth: 2.0 meters	38.719967	-76.333054	(6) North side Knapps Narrows, 150 feet west of Rt. 33
NGZ present	38.719185	-76.334084	(7) South side Knapps Narrows, 275 feet west of Rt. 33
Open Water Fish and Shellfish Use:			
January 1 to December 31, inclusive			
Shellfish Harvest: See §F(2)(g) of this regulation			

(e) Little Choptank River Mesohaline (LCHMH):

Shallow Water Submerged Aquatic	38.571705	-76.336029	(1) 1.6 miles almost due west of Hills Pt.
Vegetation Use: April 1 to October 30,	38.231964	-76.306503	(2) Hills Pt.
inclusive	38.527523	-76.333801	(3) East edge of tidal flat N of existing James Island
Application Depth: 2.0 meters	38.526997	-76.333771	(4) 190 feet South of LCHMH Point #3
Open Water Fish and Shellfish Use:	38.487057	-76.331779	(5) West side of Oyster Cove, Taylors Island
January 1 to December 31, inclusive	38.421944	-76.288742	(6) Southern tip of Taylors Island
Shellfish Harvest: See §F(2)(g) of this	38.421051	-76.288589	(7) Meekins Neck, across channel from Point #6
regulation	38.398201	-76.237053	(8) W shore Great Marsh Cr. 1,800 feet above Rt. 335
	38.398605	-76.237030	(9) E shore Great Marsh Cr. 1,800 feet above Rt. 335

(f) Honga River Mesohaline (HNGMH):

Shallow Water Submerged Aquatic	38.231964	-76.134285	(1) Lower Hooper I. between Nancys and Creek Pts.
Vegetation Use: April 1 to October 30,	38.215809	-76.032349	(2) Bishops Head Pt.
inclusive	38.398605	-76.237030	(3) Great Marsh Creek, north side, 1,900 feet above 335
Application Depth: 2.0 meters	38.398201	-76.237053	(4) Great Marsh Creek, south side, 1,900 feet above 335
Open Water Fish and Shellfish Use:	38.349953	-76.227982	(5) Drawbridge, southern Meekins Neck
January 1 to December 31, inclusive	38.348228	-76.227264	(6) Drawbridge, northern Upper Hooper Island
Shellfish Harvest: See §F(2)(g) of this	38.298965	-76.206718	(7) Ferry Pt.

regulation	38.295982	-76.204597	(8) NW tip of Middle Hooper I. across from Ferry Pt.
	38.248642	-76.154419	(9) Middle Hooper Island, NW end of The Thorofare
	38.248581	-76.153191	(10) Lower Hooper Island, NE end of The Thorofare

Use Waters	MCGS or Latitude/ Longitude	Limits
(g) Shellfish Harvest Subcategory. All estuarine portions of tributaries except:		
(i) Choptank River and tributaries	From 1099.3/308 to 1101/306.5	Above line from Bow Knee Pt. to Wright Wharf
(ii) Tred Avon River and tributaries	1057.6/341.6	Above Easton Pt.

(3) Use III: None.

(4) Use III-P: None.

(5) Use IV: None.

(6) Use IV-P: None.

G. Sub-Basin 02-13-05: Chester River Area.

(1) Use I-P: None.

(2) Use II:

(a) Upper Chester River Tidal Fresh (CHSTF):

Designated Uses Present in Segment	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Limits
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 0.5 meters Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §G(2)(e) of this regulation	39.246002 39.245350 39.254440	-75.986618 -75.985878 -75.839638	(1) Travilla Wharf (2) Marshy point across from Travilla Wharf (3) Andover Branch 900 feet above Rt. 313
(b) Middle Chester River Oligohaline (CHSOH):			
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 0.5 meters Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §G(2)(e) of this regulation	39.147564 39.146572 39.245350 39.246002	-76.086426 -76.075684 -75.985878 -75.986618	(1) 1,100 feet below Browns Creek (2) Northwest Pt., west of Riverview (3) Marshy point across from Travilla Wharf (4) Travilla Wharf
(c) Lower Chester River Mesohaline			

(CHSMH):

Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 1.0 meters Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Seasonal Deep Water Fish and Shellfish Use Upper pycnocline to lower pycnocline from June 1 to September 30, inclusive Seasonal Deep Channel Refuge Use Lower pycnocline boundary to bottom from June 1 to September 30, inclusive Shellfish Harvest: See §G(2)(e) of this regulation	39.029720 39.016422 38.970539 38.970455 39.146572 39.147564 39.056882 39.054563	-76.242516 -76.296959 -76.248413 -76.246330 -76.075684 -76.086426 -76.220903 -76.220229	(1) Wickes Beach, Eastern Neck Island (2) Kent Island, 1,600 feet N of Grollman Rd. (3) Rt. 50, west side of Kent Narrows (4) Rt. 50, east side of Kent Narrows (5) Northwest Pt., west of Riverview (6) 1,100 feet below Browns Creek (7) South end of Eastern Neck, east of Route 445 Bridge (8) Northern tip of Eastern Neck Island, east of Route 445 Bridge

(d) Eastern Bay Mesohaline (EASMH):

Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 2.0 meters NGZ present Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Seasonal Deep Water Fish and Shellfish Use Upper pycnocline to lower pycnocline from June 1 to September 30, inclusive Seasonal Deep Channel Refuge Use Lower pycnocline boundary to bottom from from June 1 to September 30, inclusive Shellfish Harvest: See §G(2)(e) of this regulation	38.836365 38.752529 38.970455 38.970539	-76.369392 -76.340332 -76.246330 -76.248413	(1) Kent Pt. (2) 1,500 feet NE of Green Marsh Pt. (3) Rt. 50, East side of Kent Narrows (4) Rt. 50, West side of Kent Narrows

Use Waters	MCGS or Latitude/ Longitude	Limits
(e) Shellfish Harvest Subcategory. All estuarine portions of tributaries except:		
(i) Chester River and tributaries	1066.5/502	Above Rt. 213
(ii) Corsica River	1060.4/448.4	Above Earl Cove
(iii) Piney Creek	From 1010.7/419.9 to 1012/418.8	Above Rt. 50
(iv) Winchester Creek	1026.5/416.1	Above mouth
(v) St. Michaels Harbor	1023/348.7	

(3) Use III: None.

(4) Use III-P: None.

(5) Use IV: None.

(6) Use IV-P: None.

H. Sub-Basin 02-13-06: Elk River Area.

(1) Use I-P:

(a) Big Elk Creek and all tributaries	1129.3/647.5	Above MD Route 213
(b) Northeast Creek and all tributaries	1096.6/643.1	Above confluence with Stoney Run
(c) Mill Creek and all tributaries	1065.9/636	Above U.S. Route 40

(2) Use II:

(a) Northeast River Tidal Fresh (NORTF):

Designated Uses Present in Segment	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Limits
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 0.5 meters NGZ present Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §H(2)(h)of this regulation	39.540794 39.529629 39.608879	-76.002899 -75.979271 -75.937988	(1) East side of Carpenter Pt. (2) Red Pt. (3) 750 feet above RR bridge, 1,500 feet below Rt. 40

(b) Chesapeake & Delaware (C&D) Canal Oligohaline (C&DOH):

Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 0.5 meters Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §H(2)(h) of this regulation	39.525536 39.523182 39.534616 39.536623	-75.874619 -75.871521 -75.779424 -75.779582	(1) East side of Welch Pt. (2) West of where the road north from Randalia ends (3) MD/DE State Line-southern shore (4) MD/DE State Line-northern shore

(c) Bohemia River Oligohaline (BOHOH):

Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 0.5 meters Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §H(2)(h) of this regulation	39.486473 39.474773 39.461319	-75.923767 -75.940498 -75.783554	(1) Town Pt. (2) East of Ford Landing on Veazey Neck (3) 600 feet below where Sandy Branch enters

(d) Elk River Oligohaline (ELKOH1):

Migratory Spawning and Nursery	39.449200	-76.007698	(1) Turkey Pt.
Use: February 1 to May 31, inclusive	39.429420	-75.997681	(2) 1,300 feet SW of Wroth Pt.
Shallow Water Submerged Aquatic	39.474773	-75.940498	(3) East of Ford Landing on Veazey Neck
Vegetation	39.486473	-75.923767	(4) Town Pt.
Use: April 1 to October 30, inclusive	39.523182	-75.871521	(5) West of where the road north from Randalia ends
Application Depth: 2.0 meters	39.525536	-75.874619	(6) East side of Welch Pt.
Open Water Fish and Shellfish Use:	39.544392	-75.855301	(7) Paddy Biddle Cove
January	39.545540	-75.876144	(8) 0.6 miles south of Elkmore
1 to December 31, inclusive			
Shellfish Harvest: See §H(2)(h) of this regulation			

(e) Elk River Oligohaline (ELKOH2):

Migratory Spawning and Nursery	39.545540	-75.876144	(1) 0.6 miles south of Elkmore
Use: February 1 to May 31, inclusive	39.544392	-75.855301	(2) Paddy Biddle Cove
Shallow Water Submerged Aquatic	39.607624	-75.822853	(3) Elkton-500 feet below Rt. 7
Vegetation			
Use: April 1 to October 30, inclusive			
Application Depth: 0.5 meters			
Open Water Fish and Shellfish Use:			
January 1 to December 31, inclusive			
Shellfish Harvest: See §H(2)(h) of this regulation			

(f) Sassafras River Oligohaline (SASOH1):

Migratory Spawning and Nursery	39.389511	-76.040848	(1) Grove Pt.
Use: February 1 to May 31, inclusive	39.372025	-76.101227	(2) 2,850 feet east of Howells Pt.
Shallow Water Submerged Aquatic	39.371868	-75.955750	(3) 0.66 miles NW of Freeman Creek
Vegetation	39.378330	-75.961472	(4) Cassidy Wharf
Use: April 1 to October 30, inclusive			
Application Depth: 2.0 meters			
NGZ present			
Open Water Fish and Shellfish Use:			
January 1 to December 31, inclusive			
Shellfish Harvest: See §H(2)(h) of this regulation			

(g) Sassafras River Oligohaline (SASOH2):

Migratory Spawning and Nursery	39.378330	-75.961472	(1) Cassidy Wharf
Use: February 1 to May 31, inclusive	39.371868	-75.955750	(2) 0.66 miles NW of Freeman Creek
Shallow Water Submerged Aquatic	39.376785	-75.806549	(3) 350 feet upstream of Rt. 301
Vegetation			
Use: April 1 to October 30, inclusive			
Application Depth: 0.5 meters			
Open Water Fish and Shellfish Use:			
January 1 to December 31, inclusive			
Shellfish Harvest: See §H(2)(h) of this regulation			

Use Waters	MCGS or Latitude/ Longitude	Limits
(h) Shellfish Harvest Subcategory. All estuarine portions of tributaries except:		
(i) Elk River and tributaries	From 1112.8/617 to 1114.8/613.9	Above line from Bull Minnow Pt. to Courthouse Pt.

(ii) Bohemia River and tributaries	From 1108/603.7 to 1109/600	Above line from Rich Pt. to Baltery Pt.
(iii) Sassafras River and tributaries	1088.6/561.5	Above Ordinary Pt.
(iv) Stillpond Creek and tributaries (Still Pond)	1044/547	Above Kinnaird Pt.
(v) Worton Creek	From 1031.4/532 to 1032.5/534.7	Above mouth
(vi) Fairlee Creek	From 1023.6/524 to 1026/527.5	Above mouth
(vii) Northeast River	From 1081.3/623.3 to 1087.6/619.1	Above mouth
(3) Use III:		
(a) Principio Creek and all tributaries	1073/634.5	
(b) Rock Run (Cecil County)	Confluence: 1045.9/649.4 Lat: 39°36'48.73" Long:76°07'36.99" Pond outlet: 1056.4/655.3 Lat: 39°37'45.41" Long: 76°05'21.49	Confluence with Susquehanna River to pond outlet at the headwaters
(4) Use III-P: None.		
(5) Use IV: None.		
(6) Use IV-P: None.		
I. Sub-Basin 02-13-07: Bush River Area.		
(1) Use I-P: Winters Run and all tributaries, including Atkisson Reservoir	995.5/585.5	From Otter Point Creek to upstream boundary of Atkisson Reservoir
(2) Use II:		
(a) Bush River Oligohaline (BSHOH):		

Designated Uses Present in Segment	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Limits
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 0.5 meters Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §I(2)(b) of this regulation	39.339172 39.351715 39.482510	-76.256592 -76.232986 -76.215805	(1) 800 feet upriver of Leges Pt. (2) Mouth of Abbey Creek (3) Church Creek, at the railroad tracks

Use Waters	MCGS or Latitude/ Longitude	Limits
(b) Shellfish Harvest Subcategory. All estuarine		

portions of tributaries except:

(i) Bush River and tributaries	From 1010.5/576 to 1014.1/574.1	Above line from Fairview Pt. to Chillbury Pt.
(ii) Romney Creek	1022.3/567.5	Above Briar Pt.
(iii) Swan Creek and tributaries	From 1050/603.5 to 1047.5/604.2	Above mouth
(3) Use III: Bynum Run and all tributaries	1008.9/597.4	
(4) Use III-P: None.		
(5) Use IV: None.		
(6) Use IV-P: Winters Run and all tributaries	982.2/604.8	Above Atkisson Reservoir
J. Sub-Basin 02-13-08: Gunpowder River Area.		
(1) Use I-P: Loch Raven Reservoir.		Above Loch Raven Dam
(2) Use II:		

(a) Gunpowder River Oligohaline (GUNOH2):

Designated Uses Present in Segment	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Limits
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 0.5 meters Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §J(2)(d) of this regulation	39.358330 39.356564 39.412685	-76.345024 -76.322929 -76.400780	(1) Cunninghill Cove, mouth of unnamed creek (2) Maxwell Pt. (3) Gunpowder Falls, 1,500 feet below Rt. 7

(b) Mouth of Gunpowder River Oligohaline (GUNOH1):

Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 2.0 meters Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §J(2)(d) of this regulation	39.316414 39.312862 39.312767 39.303204 39.356564 39.358330 39.326569 39.326477	-76.331039 -76.321449 -76.321190 -76.296249 -76.322929 -76.345024 -76.361801 -76.361130	(1) 170 feet S of east side of bridge to Carroll Island (2) Carroll Pt. (3) Carroll Pt. (4) Rickett Pt. at end of Ricketts Pt. Rd. (5) Maxwell Pt. (6) Cunninghill Cove, mouth of unnamed creek (7) 170 feet South of West side of bridge to Carroll Island (8) 170 feet S of east side of bridge to Carroll Island

(c) Middle River Oligohaline (MIDOH):

Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged	39.286442 39.309422 39.326477	-76.384102 -76.342964 -76.361130	(1) North shore of Holly Beach (2) Carroll Island, between Weir Pt. and Hawthorn Cove (3) 170 feet S of east side of bridge to Carroll Island

Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 2.0 meters Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §J(2)(d) of this regulation	39.326569 39.329792	-76.361801 -76.446922	(4) 170 feet South of west side of bridge to Carroll Island (5) 150 feet downstream of RR tracks, above Eastern Blvd

Use Waters	MCGS or Latitude/ Longitude	Limits
(d) Shellfish Harvest Subcategory. All estuarine portions of tributaries except:		
(i) Gunpowder River and all tributaries	From 987/561.5 to 991.2/555.5	Above line from Oliver Pt. to Maxwell Pt.
(ii) Middle River	From 972/536.1 to 970/532.5	Above line from Log Pt. to Turkey Pt.
(3) Use III:		
(a) Little Gunpowder Falls and all tributaries	976.8/578.8	Above B&O railroad bridge 3/4 mile south of Rt. 7 (Old Philadelphia Road)
(b) Long Green Run and all tributaries	950/584	
(c) Sweathouse Branch and all tributaries	950/584	
(4) Use III-P: Gunpowder Falls and all tributaries	930.8/578.9	Above Loch Raven Reservoir
(5) Use IV:		
(a) Whitemarsh Run and all tributaries	964/564	
(b) Big Gunpowder Falls	39.425580/-76.529258 to 39.415885/-76.409348	U.S. Route 95 upstream to Cromwell Bridge Road mainstem only
(6) Use IV-P: None.		
K. Sub-Basin 02-13-09: Patapsco River Area.		
(1) Use I-P:		
(a) Liberty Reservoir	830.9/562.1	Above Liberty Dam
(b) All tributaries to West Branch Patapsco River	828.8/621.4	
(c) All tributaries to North Branch Patapsco River except those designated below as Use III-P or Use IV-P	835.8/604.8	Above Liberty Reservoir
(2) Use II: Tidal Waters:		
(a) Back River Oligohaline (BACOH):		

Designated Uses Present in Segment	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Limits
Migratory Spawning and Nursery Use:	39.231178	-76.408920	(1) Swan Pt., in line with 11th St.
February 1 to May 31, inclusive	39.248951	-76.410530	(2) Rocky Pt. Park, between Claybank and Cedar Pts.
Shallow Water Submerged Aquatic Vegetation	39.307873	-76.520416	(3) Moores Run, 1.25 miles above I-695
Use: April 1 to October 30, inclusive			
Application Depth: 0.5 meters			
Open Water Fish and Shellfish Use:			
January 1 to December 31, inclusive			
Shellfish Harvest: None			
(b) Patapsco River Mesohaline (PATMH):			
Migratory Spawning and Nursery Use:	39.131855	-76.435081	(1) Bodkin Neck between Cedar and Bodkin Pts.
February 1 to May 31, inclusive	39.195377	-76.444511	(2) North Pt. south of Fort Howard
Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive	39.275375	-76.654480	(3) Gwynns Falls, upstream end of Carroll Park
Application Depth: 1.0 meters	Deep Channel	Use NAD 27	
NGZ present	Use:		
Open Water Fish and Shellfish Use:			
January 1 to December 31, inclusive	39.18378	-76.40383	(1) Patapsco River mainstem: Brewerton Channel, eastern extension at line connecting North Pt. and Bodkin Pt.
Seasonal Deep Water Fish and Shellfish Use Upper pycnocline to lower pycnocline from June 1 to September 30, inclusive	39.21990	-76.52578	(2) Patapsco River mainstem: Brewerton Channel at Key Bridge (I-695)
Seasonal Deep Channel Refuge. Lower pycnocline boundary to bottom from from June 1 to September 30, inclusive	39.21990	-76.52578	(3) Patapsco River mainstem: Fort McHenry Channel, at Key Bridge (I-695)
	39.26194	-76.57455	(4) Patapsco River mainstem: Fort McHenry Channel at Rt. 895 Tunnel
Shellfish Harvest: See §K(2)(c) of this regulation	39.18778	-76.57767	(5) Curtis Bay Channel at intersection with Fort McHenry Channel
	39.22219	-76.57513	(6) Curtis Bay Channel at intersection with Curtis Creek
	39.22430	-76.52908	(7) Curtis Bay Channel at channel terminus
	39.25417	-76.57176	(8) Middle Branch: Ferry Bar Channel at intersection with Fort McHenry Channel
	39.25306	-76.60763	(9) Middle Branch: Ferry Bar Channel, western terminus anchorages
	39.26194	-76.57455	(10) Northwest Branch: East Channel at intersection with Fort McHenry Channel
	39.27508	-76.57621	(11) Northwest Branch: East Channel at northern terminus
	39.27133	-76.57589	(12) Northwest Branch: Intersection of East and West Channels
	39.27731	-76.59934	(13) Northwest Branch: West Channel at northern terminus
			Note: Authorized federal and non-federal anchorages associated with the Brewerton, Fort McHenry, Curtis Bay, Ferry Bar, East, and West Channels shall be considered part of the navigation channel system for the purposes of application of designated uses and criteria pursuant to COMAR 26.08.02.02C(1)(f)(i)-(ii) and COMAR 26.08.02.03-3C(9)(e)(I).
(c) Shellfish Harvest Subcategory: Estuarine portions of Patapsco River mainstem except the Patapsco River and all tributaries above line from Rock Pt. to North Pt.			

Use Waters	MCGS or Latitude/ Longitude	Limits
(3) Use III:		
(a) Brice Run and all tributaries	850/540	
(b) Piney Run and all tributaries	From 828/554 to 815.8/563.6	From mouth to Slacks Road (on Springfield State Hospital grounds)
(c) Jones Falls and all tributaries	897.7/567.6	Above Lake Roland
(d) Red Run and all tributaries	863/572.4	
(e) Gwynns Falls and all tributaries	861.5/578.5	Above Reisterstown Road
(f) Gillis Falls and all tributaries	782/557	
(g) South Branch Patapsco and all tributaries	782/557	Above confluence with Gillis Falls tributaries
(h) Unnamed tributary to the South Branch Patapsco River at Henryton and all tributaries to this unnamed tributary	823.9/552.9	
(i) Roaring Run (Carroll County) Patapsco River	Confluence: 831.7/610.6 Lat: 39°30'35.60" Long: 76°53'13.86" Headwaters: 823.5/621.2 Lat: 39°32'20.66" Long: 76°54'58.51"	Confluence with the North Branch Patapsco River to headwaters
(4) Use III-P:		
(a) Piney Run and all tributaries	815.8/563.6	Above Slacks Road (on Springfield State Hospital grounds)
(b) Morgan Run and all tributaries	813.8/589.6	
(c) Norris Run and all tributaries	835.1/592.6	
(d) Cooks Branch and all tributaries	836.2/584.4	
(e) Keysers Run and all tributaries	833.8/596.8	
(f) Beaver Run and all tributaries	828.3/602.1	
(g) Snowdens Run and all tributaries	825/572	
(h) Stillwater Creek and all tributaries	824.8/570.9	
(i) Carroll Highlands Run and all tributaries	825.5/567.4	
(j) Autumn Run and all tributaries	825.7/567	
(k) Locust Run and all tributaries	839.1/572.9	
(l) Glen Falls Run and all tributaries	837.4/605.1	
(m) East Branch Patapsco River and all tributaries	830.1/620.4	
(5) Use IV:		

(a) South Branch Patapsco River	833.4/552.2	Mainstem only
(b) Jones Falls	From 908/538.5 to 901/563	From North Ave. to Lake Roland Dam
(c) Herring Run and all tributaries	929.5/537	Above Route I-95
(d) Stony Run and all tributaries	905/541	
(e) Dead Run and all tributaries	888/536.5	
(f) Stemmers Run and all tributaries	941.4/553.8	Above Route I-95
(g) Patapsco River	39.349903/ -76.882211 to 39.224440/ -76.640045	Mainstem. B&O viaduct to confluence of North Branch Patapsco and South Branch Patapsco.
(h) Gwynns Falls	39.420908/ -76.781783 to 39.319253/ -76.711336	Balt. City/County line upstream to Route 140 (Reisterstown Road)

(6) Use IV-P:

(a) North Branch Patapsco River	833.4/552.2	Mainstem only above Liberty Reservoir
(b) West Branch Patapsco River	830.1/620.3	Mainstem only
(c) Cranberry Branch and all tributaries	888.1/637.3	Above MD Route 852 (Old Manchester Road)

L. Sub-Basin 02-13-10: West Chesapeake Bay Area.

(1) Use I-P: None.

(2) Use II:

(a) Magothy River Mesohaline (MAGMH):

Designated Use Present in Segment	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Limits
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 1.0 meters NGZ present Seasonal Deep Water Fish and Shellfish Use Upper pycnocline to lower pycnocline from June 1 to Spetember 30, inclusive Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §L(2)(f) of this regulation	39.039185 39.074715 39.114807	-76.414330 -76.422539 -76.548195	(1) Between Beacon Hill and Tydings on the Bay (2) East side Gibson I. across from Hapenny Way (3) End of estuary below Catherine Ave.

(b) Severn River Mesohaline (SEVMH):

Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 1.0 meters Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Seasonal Deep Water Fish and Shellfish Use Upper pycnocline to lower pycnocline from June 1 to Spetember 30, inclusive Shellfish Harvest: See §L(2)(f) of this regulation	38.946095 38.976032 39.079697	-76.455879 -76.452377 -76.623398	(1) Bay Ridge, near Bainbridge Ave (2) Greenbury Pt., 800 feet up east side from the tip (3) Severn Run, 1,100 feet downstream of Veterans Hwy.
(c) South River Mesohaline (SOUMH):			
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 1.0 meters NGZ present Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Seasonal Deep Water Fish and Shellfish Use Upper pycnocline to lower pycnocline from June 1 to Spetember 30, inclusive	38.888672 38.886829 38.907860 38.983105	-76.489876 -76.475616 -76.466240 -76.606232	(1) Saunders Pt., south of Mayo Beach Park (2) 0.8 miles east of Saunders Pt. (3) Southern shore of Thomas Pt. Park (4) 700 feet upstream of Rt. 50
(d) Rhode River Mesohaline (RHDMH):			
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 0.5 meters NGZ present Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §L(2)(f) of this regulation	38.867775 38.864788 38.886829 38.888672 38.883629	-76.519608 -76.485870 -76.475616 -76.489876 -76.554649	(1) Salt Pond at the mouth of the Rhode River (2) 1.2 miles ESE of Dutchman Pt. (3) 0.8 miles east of Saunders Pt. (4) Saunders Pt., south of Mayo Beach Park (5) Muddy Creek, 1,200 feet below N and S Forks converge
(e) West River Mesohaline (WSTMH):			
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 0.5 meters NGZ present Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §L(2)(f) of this regulation	38.848892 38.864788 38.867775 38.822258	-76.493805 -76.485870 -76.519608 -76.551514	(1) Felicity Cove, 250 feet north of Bay Rd. (2) 1.2 miles ESE of Dutchman Pt. (3) Salt Pond at the mouth of the Rhode River (4) 2,400 feet downstream of Shady Side Rd.

Use Waters	MCGS or Latitude/ Longitude	Limits
(f) Shellfish Harvest Subcategory. All estuarine portions of tributaries except:		
(i) Magothy River and tributaries	936.9/455	Above Henderson Pt.
(ii) Severn River and tributaries	920.6/451	Above mouth of Forked Creek
(iii) South River and tributaries	918.8/410.1	Above Porter Pt.
(iv) Rockhold Creek and tributaries	925.7/345.8	Above Mason Beach Road
(v) Tracys Creek	924.5/344.2	Above Rt. 256
(3) Use III: Jabez Branch and all tributaries	905/455	
(4) Use III-P: None.		
(5) Use IV: Severn Run and all tributaries	907.3/454.1	Above Rt. 3
(6) Use IV-P: None.		
M. Sub-Basin 02-13-11: Patuxent River Area.		
(1) Use I-P:		
(a) Little Patuxent River and all tributaries	866.5/453.8	Above Old Forge Bridge (1 mile south of MD Route 198)
(b) Patuxent River and all tributaries except those designated below as Use III-P or Use IV-P	845.8/467.4	Above Rocky Gorge Dam
(2) Use II:		
(a) Upper Patuxent River Tidal Fresh (PAXTF):		

Designated Uses Present in Segment	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Limits
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 0.5 meters Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §M(2)(j) of this regulation	38.700325 38.700516 38.874958 38.785023 38.784637	-76.695824 -76.694160 -76.677834 -76.712456 -76.713326	(1) On Marshy Point 0.5 miles N of Hotschkins Branch (2) 0.8 miles north of Jones Pt. (3) Near unnamed stream south of Mt. Nebo Branch (4) Mouth of Western Branch, east side (5) Mouth of Western Branch, west side
(b) Western Branch Patuxent River Tidal Fresh (WBRTF):			
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 0.5 meters Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §M(2)(j) of	38.784637 38.785023 38.797241	-76.713326 -76.712456 -76.729507	(1) Mouth of Western Branch, west side (2) Mouth of Western Branch, east side (3) Where West. Branch narrows, N of sewage plant

this regulation			
(c) Middle Patuxent River Oligohaline (PAXOH):			
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 0.5 meters Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §M(2)(j) of this regulation	38.542320 38.540684 38.700516 38.700325	-76.678818 -76.668045 -76.694160 -76.695824	(1) Chalk Pt., eastern side (2) Gods Grace Pt. near end of Leitchs Wharf Rd. (3) 0.8 miles north of Jones Pt. (4) On marshy point 0.5 miles N of Hotschkins Branch
(d) Lower Patuxent River Mesohaline 1 (PAXMH1):			
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 2.0 meters Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Seasonal Deep Water Fish and Shellfish Use Upper pycnocline to lower pycnocline from June 1 to September 30, inclusive Shellfish Harvest: See §M(2)(j) of this regulation	38.304638 38.319176 38.322941 38.321041 38.386593 38.389153 38.412220 38.411896 38.481140 38.475594 38.342590 38.339634	-76.421448 -76.420990 -76.451630 -76.451965 -76.498840 -76.506416 -76.542747 -76.544487 -76.647560 -76.662788 -76.500587 -76.499550	(1) Fishing Pt. (2) Drum Pt. (3) Point of land S of Ship Pt. and E of Ma Leg I. (4) Eastern tip of Solomons (5) Mouth of St. Leonard Creek, east side (6) Petersons Pt. (7) Island Creek mouth, east Side (8) Island Creek mouth, Broomes Island Side (9) 0.64 miles south of the Sandy Pt. near Buzzard I. (10) Trent Hall Pt. (11) Mouth of Cuckold Creek, north side (12) Mouth of Cuckold Creek, south side
(e) Lower Patuxent River Mesohaline 2 (PAXMH2):			
Refer to designated uses applicable to Lower Patuxent River Mesohaline 1 (PAXMH1) Shallow Water Application Depth: 0.5 meters	38.475594 38.481140 38.540684 38.542320	-76.662788 -76.647560 -76.668045 -76.678818	(1) Trent Hall Pt. (2) 0.64 miles south of the Sandy Pt. near Buzzard I. (3) Gods Grace Pt. near end of Leitchs Wharf Rd. (4) Chalk Pt., eastern side
(f) Lower Patuxent River Mesohaline 3 (PAXMH3):			
Refer to designated uses applicable to Lower Patuxent River Mesohaline 1 (PAXMH1) Shallow Water Application Depth: 0.5 meters	38.321041 38.322941	-76.451965 -76.451630	(1) Eastern tip of Solomons (2) Point of land S of Ship Pt. and E of Ma Leg I.
(g) Lower Patuxent River Mesohaline 4 (PAXMH4):			
Refer to designated uses applicable to Lower Patuxent River Mesohaline 1 (PAXMH1) Shallow Water Application Depth: 0.5 meters	38.339634 38.342590	-76.499550 -76.500587	(1) Mouth of Cuckold Creek, south side (2) Mouth of Cuckold Creek, north side
(h) Lower Patuxent River Mesohaline 5 (PAXMH5):			
Refer to designated uses applicable to Lower Patuxent River Mesohaline 1	38.389153 38.386593	-76.506416 -76.498840	(1) Petersons Pt. (2) Mouth of St. Leonard Creek, east side

(PAXMH1) Shallow Water Application Depth: 0.5 meters	38.446831	-76.492088	(3) 0.25 miles downstream of Parran Road
(i) Lower Patuxent River Mesohaline 6 (PAXMH6):			
Refer to designated uses applicable to Lower Patuxent River Mesohaline 1 (PAXMH1) Shallow Water Application Depth: 0.5 meters	38.411896 38.412220 38.433407	-76.544487 -76.542747 -76.540894	(1) Island Creek mouth, Broomes Island Side (2) Island Creek mouth, east Side (3) 0.7 miles N of point where Marshall Rd. ends

Use Waters	MCGS or Latitude/ Longitude	Limits
(j) Shellfish Harvest Subcategory. All estuarine portions of tributaries except Patuxent River and tributaries	886.8/316.3	Above Ferry Landing
(3) Use III: None		
(4) Use III-P: Patuxent River and tributaries	787.2/510.7	Above Triadelphia Reservoir
(5) Use IV: None.		
(6) Use IV-P:		
(a) Patuxent River and tributaries	813.2/476.8	Between Rocky Gorge Reservoir and Triadelphia Reservoir, and including Triadelphia Reservoir
(b) Little Patuxent and Middle Patuxent	39.318485/ -76.934053 to 39.134120/ -76.816032	Little Patuxent and all tributaries upstream of U.S. Route 1 (Washington Boulevard)
N. Sub-Basin 02-14-01: Lower Potomac River Area.		
(1) Use I-P: Tilghman Lake Reservoir	817/260	
(2) Use II:		
(a) Lower Potomac River Tidal Fresh (POTTF):		

Designated Uses Present in Segment	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Limits
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive	38.524168	-77.284804	(1) MLW midway between Shipping Pt. and Quantico Pier (2) 1,000 feet SW of Moss Pt.
Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 2.0 meters	38.523266 38.554722 38.566856 38.702038	-77.256630 -77.220268 -77.209755 -77.044693	(3) Stump Neck, E of radio towers & W of Roach Rd. (4) Cornwallis Neck, 0.25 miles NW of Deep Pt. (5) Mockley Pt., 500 feet west of tip (6) West of Fort Washington
NGZ present	38.711002	-77.036736	(7) DC/MD State Line-northern shore of Oxon Creek
Open Water Fish and Shellfish Use: January 1 to December 31, inclusive	38.809449 38.805753	-77.016184 -77.020951	(8) DC/MD State Line-southern shore of Oxon Creek (9) DC/MD State Line-near Fox Ferry Pt.
Shellfish Harvest: See §N(2)(h) of this regulation	38.802464 38.791836	-77.025166 -77.038923	(10) DC/MD/VA State line, 200' east of Jones Point Park (11) Piscataway Creek Tidal Fresh (PISTF) (i) West of Ft. Washington
	38.711002	-77.036736	(ii) Mockley Pt., 500 west of tip
	38.702038	-77.044693	(iii) Piscataway Cr. Park, N of sewage disposal plant

38.697979	-76.996788	(12) Mattawoman Creek Tidal Fresh (MATTF)
		(i) Cornwallis Neck, 0.25 miles NW of Deep Pt.
38.566856	-77.209755	(ii) Stump Neck, E of radio towers and W of Roach Rd.
38.554722	-77.220268	(iii) 2,300 downstream of Rts. 224/225 (edge of 7.5
38.591194	-77.124672	quad sheet)

Following the mean low water (MLW) line which defines the Maryland/Virginia State boundary to the first point described above, except for the following Virginia embayments where the boundary is the confluence of the mouth of the embayment with the Potomac River; Hunting Creek, Little Hunting Creek, Dogue Creek, Gunston Cove, the unnamed embayment in Mason Neck NWR, Occoquan Bay, Powells Creek, and Quantico Creek.

(b) Lower Potomac River Oligohaline 1 (POTOH1):

Designated Uses Present in Segment	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Limits
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 2.0 meters NGZ present Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §N(2)(h) of this regulation	38.389680 38.407509 38.444935 38.444565 38.408894 38.408745 38.523266 38.524168	-77.029268 -76.997322 -77.016396 -77.040695 -77.110886 -77.124855 -77.256630 -77.284864	(1) MLW 1 mile SE of Mathias Pt., just north of 639 (2) 0.65 miles NW of the town of Popes Creek (3) 1.5 miles SE of Chapel Pt., due E of Windmill Pt. (4) Windmill Pt. (5) Blossom Pt. (6) 0.15 miles SW of Benny Gray Pt. (7) 1,000 feet SW of Moss Pt. (8) MLW midway between Shipping Pt. and Quantico Pier Following the Mean Low Water (MLW) line which defines the Maryland/Virginia State boundary to the first point described above, except for the following Virginia embayments where the boundary is the confluence of the mouth of the embayment with the Potomac River; Unnamed embayment (Chopawamsic Island), Unnamed embayment (near Arkendale Road), Aquia Creek, and Potomac Creek.

(c) Lower Potomac River Oligohaline 2 (POTOH2): Port Tobacco River

Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 1.0 meters NGZ present Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §N(2)(h) of this regulation	38.444565 38.444935 38.500164	-77.040695 -77.016396 -77.026306	(1) Windmill Pt. (2) 1.5 miles SE of Chapel Pt., due E of Windmill Pt. (3) Port Tobacco Marina (edge of 7.5 foot quad sheet)

(d) Lower Potomac River Oligohaline 3 (POTOH3): Nanjemoy Creek

Migratory Spawning and Nursery	38.408745	-77.124855	(1) 0.15 miles SW of Benny Gray Pt.

Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 1.0 meters NGZ present Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Shellfish Harvest: See §N(2)(h) of this regulation	38.408894 38.475391	-77.110886 -77.130676	(2) Blossom Pt. (3) Wards Run, 0.25 miles upstream of Hill Top Fork
(e) Lower Potomac River Mesohaline (POTMH):			
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: meters NGZ present	37.909777 38.038605 38.407509 38.389680	-76.263700 -76.321442 -76.997322 -77.029268	(1) MLW East of Ophelia, 300 feet NW of light (2) Point Lookout (3) 0.65 miles NW of the town of Popes Creek (4) MLW 1 mile SE of Mathias Pt., just north of 639
Open Water Fish and Shellfish Use: January 1 to December 31, inclusive Seasonal Deep Water Fish and Shellfish Use Upper pycnocline to lower pycnocline from June 1 to September 30, inclusive Seasonal Deep Channel Refuge Use Lower pycnocline boundary to bottom from from June 1 to September 30, inclusive Shellfish Harvest: See §N(2)(h) of this regulation			Following the mean low water (MLW) line which defines the Maryland/Virgnia State boundary to the first point described above, except for the following Virginia embayments where the boundary is the confluence of the mouth of the embayment with the Potomac River: Upper Machodoc Creek, Rosier Creek, Monroe Bay, Mattox Creek, Popes Creek, Nomini Bay, Lower Machodoc Creek, unnamed embayment (south of Ragged Pt.), Gardner Creek, Jackson Creek, Bonum Creek, Yeocomico River, Coan River, Presley Creek, Hull Creek, and Hock Creek.
(f) Piscataway Creek Tidal Fresh (PISTF):			
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 31, inclusive. Application depth: 2.0 meters. NGZ Absent Open Water Fish and Shellfish Use: January 1 to December 31, inclusive. Shellfish Harvest: See §N(2)(h) of this regulation	38.711002 38.702038 38.697979	-77.036736 -77.044693 -76.996788	(1) West of Ft. Washington (2) Mockley Point, 500 feet west of tip (3) Piscataway Creek Park, north of sewage disposal plant
(g) Mattawoman Creek Tidal Fresh (MATTF):			
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged	38.566856 38.554722	-77.209755 -77.220268	(1) Cornwallis Neck, 0.25 miles northwest of Deep Point (2) Stump Neck, east of radio towers and west of Roach Road (3) 2300 feet downstream of Routes 224/225

Aquatic Vegetation Use: April 1 to October 31, inclusive. Application depth: 1.0 meters. NGZ Absent Open Water Fish and Shellfish Use: January 1 to December 31, inclusive. Shellfish Harvest: See §N(2)(h) of this regulation	38.591194	-77.124672

Use Waters	MCGS or Latitude/ Longitude	Limits
(h) Shellfish Harvest Subcategory.		
All estuarine portions of tributaries except Potomac River and tributaries	From 723.8/211.8 to 710.9/205.3	Above line from Smith Pt. to Simms Pt.
(3) Use III: None.		
(4) Use III-P: None.		
(5) Use IV: None.		
(6) Use IV-P: None.		
O. Sub-Basin 02-14-02: Washington Metropolitan Area.		
(1) Use I-P: Potomac River and all tributaries except those designated below as Use III, Use III-P, Use IV, or Use IV-P	766/401	From MD/DC line to Frederick/Montgomery County line
(2) Use II:		
Anacostia River Tidal Fresh (ANATF)		

Designated Uses Present in Segment	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Limits
Migratory Spawning and Nursery Use: February 1 to May 31, inclusive Shallow Water Submerged Aquatic Vegetation Use: April 1 to October 30, inclusive Application Depth: 0.5 meters NGZ present Open Water Fish and Shellfish Use: January 1 to December 31, inclusive	38.938805 38.918850 38.918261	-76.942162 -76.941951 -76.941198	(1) DC/MD State Line-eastern side of Rt. 50 bridge (2) 100 feet below Bladensburg Road bridge (3) DC/MD State Line-western shore

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Use Waters	MCGS or Latitude/ Longitude	Limits
(3) Use III:		
(a) Paint Branch and all tributaries	815.2/433.2	Above Capital Beltway (I-495)

(b) Rock Creek and all tributaries	764/475	Above Muncaster Mill Road
(c) North Branch Rock Creek and all tributaries	771.5/468	Above Muncaster Mill Road
(4) Use III-P:		
(a) Little Seneca Creek and all tributaries	From 704/477.4 to 716/491.3	From the stream's confluence with Bucklodge Branch to the Baltimore and Ohio railroad bridge (see Regulation .03-3E(1) of this chapter)
(b) Wildcat Branch and all tributaries	740.5/504	
(5) Use IV:		
(a) Rock Creek and all tributaries	From 766.7/ 459.3 to 763.5/475	From Rt. 28 to Muncaster Mill Road
(b) Northwest Branch and all tributaries	809/413	Above East-West Highway (Rt. 410)
(6) Use IV-P:		
(a) Little Seneca Creek and all tributaries	719.2/497.4	
(b) Great Seneca Creek	39.166086/-77.228309 to 39.128285/-77.336026	Mainstem, Route 28 upstream to Route 355
P. Sub-Basin 02-14-03: Middle Potomac River Area		
(1) Use I-P: Potomac River and all tributaries except those designated below as Use III-P or Use IV-P	671/505.9	From Frederick/Montgomery County line to confluence with Shenandoah River
(2) Use II: None.		
(3) Use III: None.		
(4) Use III-P:		
(a) Tuscarora Creek and all tributaries	694/592	
(b) Carroll Creek and all tributaries	678.5/579.5	Above U.S. Route 15
(c) Rocky Fountain Run and all tributaries	681/546	
(d) Fishing Creek and all tributaries	689.2/609.2	
(e) Hunting Creek and all tributaries	698.5/625.5	
(f) Owens Creek and all tributaries	705.9/635.9	
(g) Friends Creek and all tributaries	697.2/689.1	
(h) Catoctin Creek and all tributaries	640.6/589.8	Above Alternate U.S. Route 40
(i) Little Bennett Creek and all tributaries	711/527	Above MD Rt. 355
(j) Furnace Branch and all tributaries	675/514	
(k) Ballenger Creek and all tributaries	557/683	
(l) Bear Branch and all tributaries	685.2/531.9	From confluence with Bennett Creek
(5) Use IV: None.		
(6) Use IV-P:		
(a) Monocacy River and tributaries except those designated above as Use III-P	696/570	Above U.S. Rt. 40

(b) Catoctin Creek	640.6/538	Mainstem only, below Alternate U.S. Rt. 40
(c) Israel Creek and all tributaries	607/545	
Q. Sub-Basin 02-14-05: Upper Potomac River Area.		
(1) Use I-P: Potomac River and all Maryland tributaries except those designated below as Use III-P or Use IV-P	543.3/594.4	From the confluence of Shenandoah River to the confluence of the North and South Branches of the Potomac River
(2) Use II: None.		
(3) Use III: None.		
(4) Use III-P:		
(a) Town Creek tributaries	365/618.8	
(b) Beaver Creek and all tributaries	599.9/620.3	In Antietam Creek Watershed
(c) Marsh Run and all tributaries	605.7/662.1	In Antietam Creek Watershed
(d) Little Antietam Creek and all tributaries	620/674	
(e) Camp Spring Run and all tributaries	536/653	
(5) Use IV: None.		
(6) Use IV-P:		
(a) Town Creek	365/618.8	
(b) Fifteen Mile Creek and all tributaries	410.1/655	
(c) Sideling Hill Creek and all tributaries	424.5/660	
(d) Tonoloway Creek and all tributaries	474.8/679.8	
(e) Licking Creek and all tributaries	504/663.5	
(f) Conococheague Creek and all tributaries	566.3/645.4	
(g) Antietam Creek and all tributaries, except those designated above as Use III-P	589.1/577.8	
(h) St. James Run	39.619544/-77.746772 to 39.537282/-77.763520	Confluence with Marsh Run upstream to headwaters
R. Sub-Basin 02-14-10: North Branch Potomac River Area.		
(1) Use I-P:		
(a) North Branch Potomac River mainstem	352.3/621.1	From the confluence of the North and South Branches of the Potomac River to the MD/WV State line
(b) Mill Run and its tributaries in Allegany County	272.2/625.8	From confluence with N. Branch (near Rawlings and Rawlings Heights)
(c) An unnamed tributary near Pinto	281.7/636.5	Confluence of the unnamed tributary with the North Branch of the Potomac River
(2) Use II: None.		
(3) Use III: None.		
(4) Use III-P: All Maryland tributaries to the North Branch Potomac River except for:		

(a) Those designated below as Use IV-P waters		
(b) Those designated above as Use I-P	From 352.3/621.1 to MD/WV State line	From confluence of North and South Branches of the Potomac River to the MD/WV state line
(5) Use IV: None.		
(6) Use IV-P:		
(a) Wills Creek	303.3/665.5	Mainstem only
(b) Evitts Creek	310.2/656.8	Mainstem only
(c) Georges Creek	39.645609/ -78.915845 to 39.483475/ -79.046383	Mainstem only
S. Sub-Basin 05-02-02: Youghiogheny River Area		
(1) Use I-P:		
(a) Broad Ford Run and all tributaries	130/579	Above Dam
(b) Piney Creek and all tributaries	232/687	Upstream from confluence with Church Creek
(2) Use II: None.		
(3) Use III:		
(a) South Branch, Casselman River	187.7/674.0	Confluence of North and South Branches
(b) Piney Creek and all tributaries in Maryland, including Church Creek	223.9/693.9	From MD/PA State line to confluence of Church Creek
(4) Use III-P Youghiogheny River and all tributaries joining the mainstem of the Youghiogheny River in Maryland	126.8/696.2	Upstream from MD/PA State line
(5) Use IV: Casselman River	205.5/694.8	Mainstem only, confluence of South Branch and North Branch to Pennsylvania line
(6) Use IV-P: None.		
T. Sub-Basin 02-05-03: Conewago Creek		
(1) Use I-P: None.		
(2) Use II: None.		
(3) Use III: None.		
(4) Use III-P: None.		
(5) Use IV: None.		
(6) Use IV-P: None.		
U. Sub-Basin 02-13-99: Chesapeake Bay (Mainstem).		
(1) Use I-P: None.		
(2) Use II:		
(a) Northern Chesapeake Bay (CB1TF1): See Sub-Basin 02-12-02: Lower Susquehanna River Area.		
(b) Northern Chesapeake Bay (CB1TF2): See Sub-		

Basin 02-12-02: Lower Susquehanna River Area.

(c) Upper Chesapeake Bay (CB2OH): Upper Chesapeake Bay Oligohaline

Designated Uses Present in Segment	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Limits
Migratory Spawning and Nursery	39.225143	-76.408775	(1) North Pt. SP, Black Marsh, 1200' NE of sm. creek
Use: February 1 to May 31, inclusive	39.207447	-76.246994	(2) 3,000 feet S of Rt. 21 (Tolchester Beach Rd.)
Shallow Water Submerged Aquatic	39.372025	-76.101227	(3) 2,850 feet east of Howells Pt.
Vegetation Use: April 1 to October	39.389511	-76.040848	(4) Grove Pt.
30, inclusive	39.401688	-76.035194	(5) North of Chesapeake Haven, Grove Neck
Application Depth: 0.5 meters	39.420143	-76.123344	(6) 1,000 feet SW of Cherry Tree Pt., APG
NGZ present	39.351715	-76.232986	(7) North Pt. south of Fort Howard
Open Water Fish and Shellfish Use:	39.339172	-76.256592	(8) 800 feet upriver of Leges Pt.
January 1 to December 31, inclusive	39.303204	-76.296249	(9) Rickett Pt. at end of Ricketts Pt. Rd.
Shellfish Harvest: See §U(2)(g) of	39.312767	-76.321190	(10) Carroll Pt.
this regulation	39.312862	-76.321449	(11) Carroll Pt.
	39.316414	-76.331039	(12) Carroll I., midway betw.White Oak and Carroll Pts.
	39.309422	-76.342964	(13) Carroll Island, between Weir Pt.and Hawthorn Cove
	39.286442	-76.384102	(14) North shore of Holly Beach
	39.248951	-76.410530	(15) Rocky Pt. Park, between Claybank and Cedar Pts.
	39.231178	-76.408920	(16) Swan Pt., in line with 11th St.

(d) Upper Central Chesapeake Bay (CB3MH): Upper Chesapeake Bay Mesohaline

Designated Uses Present in Segment	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Limits
Migratory Spawning and Nursery	38.995991	-76.413185	(1) 500 feet SE of Moss Pond
Use: February 1 to May 31, inclusive	38.989105	-76.330185	(2) 0.6 miles NE of where Rt. 50 W meets the Bay
Shallow Water Submerged Aquatic	39.016422	-76.296959	(3) Kent Island, 1,600 N of Grollman Rd.
Vegetation	39.029720	-76.242516	(4) Wickes Beach, Eastern Neck Island
Use: April 1 to October 30, inclusive	39.054563	-76.220229	(5) Northern tip of Eastern Neck Island, east of Route 445 Bridge
Application Depth: 0.5 meters			
NGZ present	39.056882	-76.220903	(6) Southern End of Eastern Neck, east of Route 445 Bridge
Open Water Fish and Shellfish Use:			
January 1 to December 31, inclusive	39.207447	-76.246994	(7) 3,000 S of Rt. 21 (Tolchester Beach Rd.)
Seasonal Deep Water Fish and	39.225143	-76.408775	(8) North Pt. SP, Black Marsh, 1,200 feet NE of sm.
Shellfish Use	39.195377	-76.444511	creek
Upper pycnocline to lower pycnocline	39.131855	-76.435081	(9) North Pt. south of Fort Howard
from June 1 to September 30,	39.074715	-76.422539	(10) Bodkin Neck between Cedar and Bodkin Pts.
inclusive	39.039185	-76.414330	(11) East side Gibson I. across from Hapenny Way
Seasonal Deep Channel Refuge Use			(12) Between Beacon Hill and Tydings on the Bay
Lower pycnocline boundary to bottom			
from June 1 to September 30,			
inclusive Shellfish Harvest:			
See§U(2)(g) of this regulation			

(e) Middle Central Chesapeake Bay (CB4MH):

Shallow Water Submerged Aquatic	38.384819	-76.381432	(1) Cove Pt.
Vegetation Use: April 1 to October	38.393951	-76.282532	(2) Meekins Neck, 800 feet north of Cattail Island
30, inclusive	38.421051	-76.288589	(3) Meekins Neck, across channel from Point #4
Application Depth: 2.0 meters.	38.421944	-76.288742	(4) Southern tip of Taylors Island
NGZ present	38.487057	-76.331779	(5) West side of Oyster Cove, Taylors Island

Open Water Fish and Shellfish Use:	38.526997	-76.333771	(6) 190 feet south of LCHMH Point #3
January 1 to December 31, inclusive	38.527523	-76.333801	(7) East edge of tidal flat N of existing James Island
Seasonal Deep Water Fish and	38.672421	-76.340698	(8) 720 feet along shore NNW of Blackwalnut Pt.
Shellfish Use	38.719185	-76.334084	(9) South side Knapps Narrows, 275 feet west of Rt. 33
Upper pycnocline to lower pycnocline	38.719967	-76.333054	(10) North side Knapps Narrows, 150 feet west of Rt. 33
from June 1 to September 30,	38.752529	-76.340332	(11) 1,500 feet NE of Green Marsh Pt.
inclusive	38.836365	-76.369392	(12) Kent Pt.
Seasonal Deep Channel Refuge Use.	38.989105	-76.330185	(13) 0.6 mile NE of where Rt. 50 W meets the Bay
Lower pycnocline boundary to bottom	38.995991	-76.413185	(14) 500 feet SE of Moss Pond
from from June 1 to September 30,	38.976032	-76.452377	(15) Greenbury Pt., 800 feet up east side from the tip
inclusive	38.946095	-76.455879	(16) Bay Ridge, near Bainbridge Ave
Shellfish Harvest: See §U(2)(g) of	38.907860	-76.466240	(17) Southern shore of Thomas Pt. Park
this regulation	38.848892	-76.493805	(18) Felicity Cove, 250 feet north of Bay Rd.
(f) Lower Central Chesapeake Bay (CB5MH):			
Shallow Water Submerged Aquatic	37.889451	-76.236198	(1) Smith Pt.
Vegetation Use: April 1 to October	37.885680	-76.229038	(2) MD/VA State Line-2500' SW of Smith Pt.
30, inclusive	37.941404	-76.083908	(3) MD/VA State Line-2.25 miles west of Smith Gut Pt.
Application Depth: 2.0 meters	38.051910	-76.128838	(4) 7,000 feet N and 2,500 feet W of Fog Pt., Smith
NGZ present	38.231445	-76.135773	Island
Open Water Fish and Shellfish Use:	38.248581	-76.153191	(5) Lower Hooper I. between Nancys and Creek Pts.
January 1 to December 31, inclusive	38.248642	-76.154419	(6) Lower Hooper Island, NE end of The Thorofare
Seasonal Deep Water Fish and	38.295982	-76.204597	(7) Middle Hooper Island, NW end of The Thorofare
Shellfish Use	38.298965	-76.206718	(8) NW tip of Middle Hooper I. across from Ferry Pt.
Upper pycnocline to lower pycnocline	38.348228	-76.227264	(9) Ferry Pt.
from June 1 to September 30,	38.349953	-76.227982	(10) Drawbridge, northern Upper Hooper Island
inclusive	38.393951	-76.282532	(11) Drawbridge, southern Meekins Neck
Seasonal Deep Channel Refuge Use	38.384819	-76.381432	(12) Meekins Neck, 800 feet north of Cattail Island
Lower pycnocline boundary to bottom	38.319176	-76.420990	(13) Cove Pt.
from June 1 to September 30,	38.304638	-76.421448	(14) Drum Pt.
inclusive	38.038605	-76.321442	(15) Fishing Pt.
Shellfish Harvest: See §U(2)(g) of	37.909725	-76.263702	(16) Point Lookout
this regulation			(17) East of Ophelia, 300 feet NW of light

Use Waters	MCGS or Latitude/ Longitude	Limits
(g) Shellfish Harvest Subcategory. All waters of the Chesapeake Bay Proper From the Susquehanna River mouth to the Virginia State line, including the tidal waters of the Chesapeake Bay bounded generally by the shoreline of the Bay and by "zero river mile" lines of estuaries and tributaries to the Bay, as designated by the Department of the Environment, and any peripheral waters designated as part of the Chesapeake Bay Proper by the Department of the Environment after consultation with the Tidewater Administration and the Forest, Park and Wildlife Service.		
(3) Use III: None.		
(4) Use III-P: None.		
(5) Use IV: None.		
(6) Use IV-P: None.		

.09 Ground Water Quality Standards.

A. Discharge Approval Required.

(1) Any discharge or disposal of waters or wastewaters into the underground waters of the State requires the approval of the Department. The approval, if granted, will contain limitations and requirements deemed necessary by the Department to protect the public health and welfare and to prevent pollution of ground and surface waters.

(2) A separate State discharge permit is required for:

(a) Wastewater effluents disposed of by means of spray or other land treatment or application systems;

(b) Ground water recharge systems;

(c) Discharge of leachate from a landfill to surface or ground waters except as specified in §A(3)(a); and

(d) Other subsurface disposal systems not specifically exempted in this regulation.

(Agency note: A separate State discharge permit is a discharge permit issued to an individual discharger or point source. A general permit is a State discharge permit issued to a class of dischargers pursuant to COMAR 26.08.04.08.)

(3) A separate State discharge permit is not required for:

(a) Landfills designed to achieve natural attenuation of leachate and permitted under Environment Article, §9-204 or 9-224, unless there is a discharge of leachate to surface waters of the State;

(b) Subsurface sewage disposal systems using soil absorption and permitted by the Department under Environment Article, Title 9, Subtitle 5, Annotated Code of Maryland, and COMAR 26.04.02;

(c) Sewage sludge composting or disposal operations permitted by the Department under Environment Article, Title 9, Subtitle 2, Part III, Annotated Code of Maryland, unless there is a direct discharge of wastewater to surface waters of the State; and

(d) Other subsurface disposal systems permitted by the Department under the provisions of COMAR 26.08.04.08.

(4) An Underground Injection Permit issued under COMAR 26.08.07 also constitutes a discharge permit under this regulation.

B. Aquifer Types Identified. For the purpose of controlling the pollution of the ground waters of the State, the Department of the Environment has identified three aquifer types and has established standards for ground water quality, as follows:

(1) Type I aquifer means an aquifer having a transmissivity greater than 1,000 gallons/day/foot and a permeability greater than 100 gallons/day/square foot. In addition, the total dissolved solids concentration for natural water in each aquifer shall be less than 500 milligrams/liter.

(2) Type II aquifer means an aquifer having either:

(a) A transmissivity greater than 10,000 gallons/day/foot, a permeability greater than 100 gallons/day/square foot and natural water with a total dissolved solids concentration of between 500 and 6,000 milligrams/liter; or

(b) A transmissivity between 1,000 and 10,000 gallons/day/foot, a permeability greater than 100 gallons/day/square foot and natural water with a total dissolved solids concentration of between 500 and 1,500 milligrams/liter.

(3) Type III aquifer means all aquifers other than Type I and Type II aquifers.

C. Discharge Quality Criteria. The following criteria apply outside of designated mixing zones (for the purpose of this section, the term "mixing zone" means an area or volume established by the Department for the mixing of ambient ground water with waters or wastewaters, or both, discharged as authorized by the Department):

(1) For Type I Aquifers. The characteristics or constituents of waters may not exceed primary or secondary standards for drinking water as adopted by the Department of the Environment in COMAR 26.04.01.

(2) For Type II Aquifers. The characteristics or constituents of waters after treatment by commercially available home water treatment or softening systems may not exceed primary or secondary standards for drinking water, except for total dissolved solids, as adopted by the Department of the Environment in COMAR 26.04.01 and §B(2) of this regulation.

(3) For Type III Aquifers. The characteristics or constituents of waters shall be such that they do not meet Type I or Type II quality criteria.

D. Guidelines for Discharge to Ground Waters.

(1) Land disposal of municipal or similar wastes shall follow the Department of the Environment's "Guidelines for Land Treatment of Municipal Wastewaters" MDR-WMA-001-07/03, which is incorporated by reference.

(2) Discharges to a ground water aquifer of specific classification may not result in pollution of an aquifer possessing higher quality criteria.

(3) Discharges to ground water may not result in degradation of ground waters below the criteria established in §C, outside a mixing zone specified in a State discharge permit, general permit, or other permit issued by the Department of the Environment.

(4) Dischargers or potential dischargers to ground waters may be required to monitor ground or surface waters, or both, in a manner and frequency and at locations specified by the Department of the Environment and to periodically submit the results of these activities.

(5) As provided in COMAR 26.13.05.18, the underground injection of hazardous wastes is prohibited.

.10 Water Quality Certification.

A. General.

(1) The Federal Act prohibits the issuance of a federal permit or license to conduct any activity which may result in any discharge to navigable waters unless the applicant provides a certification from this State that the activity does not violate State water quality standards or limitations. This regulation establishes the procedures under which this certification will be issued.

(2) Discharges permitted by the Department under the National Pollutant Discharge Elimination System are certified by the Department.

B. Application for a Water Quality Certification.

(1) An applicant for certification shall submit to the Department an application which includes:

(a) Name and address of the applicant.

(b) A description of the facility or activity.

(c) A description of any discharge which may result from the conduct of any activity including:

(i) Biological, chemical, thermal or other characteristics of the potential discharge; and

(ii) The location or locations at which any discharge may enter navigable waters.

(d) A description, if applicable, of the function and operation of any equipment or facilities to treat any discharge and the degree of treatment to be attained.

(e) The date on which the activity will begin or end, if known, and the date or dates on which any discharge may occur.

(f) A description, if applicable, of the methods proposed or employed to monitor the quality and characteristics of any discharge.

(g) Any other information the Department determines is necessary for evaluation of the impact of the activity on water quality. This may include quantitative analysis to demonstrate that the proposed activity may not violate State water quality standards.

(2) Discharges to Outstanding National Resource Waters (ONRW) will be certified only if:

(a) There is minimal adverse environmental impact;

(b) The discharges will not impair the water quality necessary to maintain the exceptional biological resource of the ONRW; and

(c) All practical actions have been taken to avoid impacts.

(3) By agreement with either federal or State agencies in order to facilitate the certification process, the Department may develop a joint application for a federal license or permit and State water quality certification.

C. Public Notice.

(1) The Department shall provide public notice of each application for certification.

(2) The public notice shall:

(a) Give a brief description of the proposed activity;

(b) Provide instructions for submission of written comments; and

(c) Specify the expiration date for the opportunity to comment.

(3) The public notice may be given by:

(a) Joint notice with the federal permitting agency;

(b) Joint notice with other State agencies; or

(c) Selected mailings to State, county, or municipal authorities and other parties known to be interested in the matter.

D. Determination of Need for Public Hearing. The Department may hold a public hearing before issuing any water quality certification if:

(1) The Department determines the activity requiring certification is of broad, general interest; or

(2) The application for certification generated substantial public interest as indicated by written comments concerning water quality issues.

E. Issuance of Certification.

(1) Certification Issuance. If the Department determines the proposed activities will not cause a violation of applicable State water quality standards, the Department shall issue the water quality certification.

(2) Applicant Responsibilities.

(a) Issuance of water quality certification does not relieve the applicant of his responsibility to comply at all times with federal and State law.

(b) The applicant shall:

(i) Obtain the State water quality certification before the conduct of any activity requiring the federal permit;

(ii) Comply with all conditions of the State water quality certification to assure achievement of State water quality standards.

(3) Emergency Procedures. The Department:

(a) May issue an emergency water quality certification in those cases when the Department determines that an unacceptable threat to human life, water quality, or aquatic resources may occur or in those cases when a severe loss of property may result before a certification can be issued in accordance with procedures specified in § C;

(b) Shall issue a notice stating its action and the reasons for the action in accordance with the requirements of § C not later than 10 days following the issuance of the emergency certification;

(c) Shall incorporate in the emergency certification all standards and criteria normally applied to the specific type of project authorized by the emergency certification.

F. Procedures for Public Hearing.

(1) Notice of Public Hearing. The notice of public hearing shall:

(a) Include a brief description of the project;

(b) Include information concerning the date, time, and location of the public hearing;

(c) Include a brief description of the nature of the written comments received; and

(d) Be published in the Maryland Register at least 45 days before the hearing.

(2) Public Hearing.

(a) An interested person shall be given an opportunity to present evidence for or against the granting of water quality certification at the public hearing.

(b) Written comments shall be received by the Department by the date of the public hearing, unless the comment period is specifically extended at the hearing.

(3) Final Determination. After the closing date for receipt of written comments and after any public hearing the Department shall:

(a) Consider the testimony and other information presented;

(b) Prepare a written decision; and

(c) Publish the decision in the Maryland Register.

(4) Appeal of Final Decision.

(a) A person aggrieved by the Department's decision concerning a water quality certification may appeal the decision of the Department. The appeal shall:

(i) Be filed within 30 days of the publication of the final decision with the hearing office; and

(ii) Specify, in writing, the reason why the final determination should be reconsidered.

(b) A further appeal shall be in accordance with the applicable provisions of State Government Article, § 10-201 et seq., Annotated Code of Maryland.

G. General Certification.

(1) The Department may issue a general water quality certification for a class of activities requiring any federal license or permit.

(2) A general certification shall authorize all activities that meet the class description.

(3) In unique circumstances not considered in the issuance of the general certification, the Department may require issuance of an individual water quality certification for an activity that could be regulated under a general certification.

H. General Certification Issuance and Renewal.

(1) If the Department determines to adopt a general certification for a specific class of activities, the Department shall prepare a fact sheet:

(a) Describing the class of activities to be included; and

(b) Outlining the proposed conditions and limitations of the general certification.

(2) Notice of Intent to Adopt General Certification.

(a) The Department shall prepare a public notice which includes:

(i) A brief description of the general and special conditions which are proposed to be included in the general certification.

(ii) Provisions for examination by interested parties of the draft permit and other information related to the preliminary determination made by the Department.

(iii) A request for written comments concerning the general permit and a statement that a public hearing may be held if significant written public comment concerning the application is received by the Department.

(iv) Instructions for submission of written comments.

(v) The deadline specified for the submission of written comments. The deadline shall be at least 30 days from the date of publication of notice in the Maryland Register.

(b) The Department shall publish the notice in the Maryland Register. A copy of the notice shall be sent to:

(i) Local health officers;

(ii) Other interested State and local agencies; and

(iii) Any person requesting to be notified.

(3) Public Hearings.

(a) A public hearing shall be held and a notice of the public hearing shall be prepared and distributed if:

(i) There is significant public comment concerning the tentative determination to issue a general certification; or

(ii) The Department determines that a public hearing is necessary.

(b) The notice of public hearing shall be prepared and published in accordance with § F.

(c) The public hearing shall be conducted in accordance with the procedure outlined in § F of this regulation.

(4) Appeal of Final Decision. A person aggrieved by the Department's decision concerning a general water quality certification may appeal the decision of the Department. The appeal shall be in accordance with § F(4) of this regulation.

I. Applicant's Responsibility. General certification of any activity does not relieve the applicant of his responsibility to comply at all times with federal and State laws.

.11 General Water Quality Certifications.

A. General Water Quality Certification (GWQC) for Marsh Creation Projects.

(1) Scope of Activity.

(a) Definition. Marsh creation projects are defined as the vegetative stabilization of tidal shorelines and nontidal stream banks that are subject to erosion.

(b) Exception. The projects certified by this GWQC do not include marshes created for storm water management purposes.

(c) Marsh Creation. The creation of marshes includes the following activities:

(i) The placement of fill material such as earth or sand;

(ii) The construction of stone containment structures;

(iii) The grading of banks; and

(iv) The planting of Spartina alterniflora, Spartina patens, or other species acceptable to the Department.

(2) Certification. A federally permitted marsh creation project which meets the conditions of this GWQC is authorized under § 401 of the Clean Water Act (33 U.S.C. 1341 (1987)), provided that other applicable federal, State, and local laws and regulations are satisfied.

(3) Design Specifications.

(a) The stabilization activity shall be determined to be necessary for the prevention of erosion on tidal shorelines or nontidal stream banks.

(b) The placement of fill material authorized by this GWQC shall be limited to less than an average of 2 cubic yards of material per running foot placed within waters of the State.

(c) The project is a single and complete project.

(d) The applicant, in planning the project, shall comply with seasonal limitations applied to the construction phase for the protection of important aquatic species.

(4) Construction Specifications.

(a) Material may not be placed in excess of the minimum needed for erosion protection. All temporary fills shall be removed in their entirety on or before the completion of construction.

(b) Material may not be placed in any location or in any manner so as to impair surface or subsurface water flow into or out of any wetland area.

(c) Placement of fill material in existing vegetated wetlands shall be minimized to the greatest extent possible.

(d) Only clean material free of waste metal products, organic material, unsightly debris, toxic substances in toxic amounts, or any other deleterious substance shall be placed. The fill material to be placed shall include clean earth fill, sand, and stone only.

(e) Discharges in spawning areas during spawning seasons of important aquatic species shall be avoided.

(f) Placement of fill material may not restrict or impede the movement of aquatic species indigenous to the waters or cause the relocation of the water.

(g) Placement of fill material into breeding areas for migratory waterfowl shall be avoided.

(h) Heavy equipment working in wetlands shall be placed on mats, or suitably designed to prevent damage to the wetlands.

(5) Applicant's Responsibility.

(a) This GWQC does not relieve the applicant of the responsibility for obtaining any other approvals, licenses, or permits in accordance with federal and State laws or regulations, or local ordinances.

(b) This GWQC does not authorize the beginning of any proposed work in the absence of necessary approvals, licenses, or permits.

(c) The applicant is required to comply with all conditions of this general certification.

(6) Right of Inspection.

(a) Reliance on this GWQC by the applicant or his agent constitutes permission to inspect at any time the operations and records for any project conducted under the authority of this GWQC.

(b) Failure to comply with the conditions of this GWQC shall constitute reason for suspension or revocation of the applicant's use of this GWQC.

(c) Legal proceedings may be instituted against the alleged violator in accordance with Health-General Article, § 2-207, and State Government Article, § 10-201 et seq., Annotated Code of Maryland.

B. General Water Quality Certification (GWQC) for the Installation of Utility Lines.

(1) Scope of Activity.

(a) Definition. Utility lines are defined as any pipe, cable, or wire for the conveyance of public water or public sewer, natural gas, or the transmission of electrical, radio, or telecommunications service.

(b) Exceptions.

(i) Utility lines do not include intake and outfall structures or any pipe and pipeline used to transport any gaseous, liquid, or slurry substance except as associated with natural gas, water, and sewage lines.

(ii) Blasting, as a construction method, is not authorized by this GWQC.

(iii) Installation of gas pipe lines larger than 12 inches in diameter is not authorized by this GWQC.

(c) Installation. The installation of utility lines includes the following activities:

(i) The trenching, jetting, jackhammering, or plowing of wetlands or waterways;

(ii) The laying of a pipe, cable, or wire;

(iii) The backfilling of the excavated trench containing the pipe, cable, or wire;

(iv) The placement of riprap; and

(v) The vegetative stabilization of wetland areas which have been disturbed.

(2) Certification. A federally permitted utility line installation which meets the conditions of this GWQC is authorized under § 401 of the Clean Water Act (33 U.S.C. 1341 (1987)), provided that other applicable federal, State and local laws and regulations are satisfied.

(3) Design Specifications.

(a) The applicant, in planning the project, shall comply with seasonal limitations applied to the construction phase for the protection of important aquatic species.

(b) The post-construction bottom contours of waters and elevations of wetlands shall be the same as original contours and elevations.

(c) Disturbances of wetlands and waterways shall be avoided or minimized through the use of other practical alternatives such as designing the utility line in a proposed or existing roadway or using an existing right-of-way.

(4) Construction Specifications.

(a) Excess material shall be removed to an upland disposal area identified on the plan submitted for approval.

(b) Temporary fill materials shall be removed in their entirety on or before the completion of construction.

(c) Material may not be placed in any location or in any manner so as to impair surface or subsurface water flow into or out of any wetland area.

(d) If backfill material is obtained from sources other than the originally excavated material, it shall be clean material, free of waste metal products, organic material, unsightly debris, toxic substances in toxic amounts, or any other deleterious substance.

(e) Permanent work may not:

(i) Restrict or impede the movement of aquatic species indigenous to the waters;

(ii) Restrict or impede the passage of normal or expected high flows;

(iii) Cause the relocation of the water; or

(iv) Cause the impoundment of water.

(f) To protect important aquatic species, in-stream work is prohibited as determined by the use designation of the stream, as follows:

(i) Use I and Use I-P Waters. In-stream work may not be conducted during the period March 1 through June 15, inclusive, during any year.

(ii) Use II Waters. In-stream work may not be conducted during the period June 1 through September 30 or December 16 through March 14, inclusive, during any year.

(iii) Use III and Use III-P Waters. In-stream work may not be conducted during the period October 1 through April 30, inclusive, during any year.

(iv) Use IV and Use IV-P Waters. In-stream work may not be conducted during the period March 1 through May 31, inclusive, during any year.

(g) Disturbances in breeding areas for migratory waterfowl shall be avoided.

(h) Heavy equipment working in wetlands shall be placed on mats or suitably designed to prevent damage to the wetland.

(i) The applicant shall obtain and comply with a State or locally approved sediment control plan. The following apply:

(i) This plan shall be on site during all phases of construction;

(ii) Sediment bearing waters may not be discharged to the receiving waterway except as provided in the approved sediment control plan;

(iii) Discharges of sediment bearing water may not cause violations of the applicable State water quality standards.

(5) Applicant's Responsibility.

(a) This GWQC does not relieve the applicant of the responsibility for obtaining any other approvals, licenses, or permits in accordance with federal and State law or regulation, or local ordinance.

(b) This GWQC does not authorize the beginning of any proposed work in the absence of necessary approvals, licenses, or permits.

(c) The applicant is required to comply with all conditions of the GWQC.

(d) The applicant is required to maintain all utility installations constructed under the authority of this GWQC. All utility maintenance is subject to the conditions of this GWQC.

(6) Right of Inspection.

(a) Reliance on this GWQC by the applicant or his agent constitutes permission to inspect at any time the operations and records for any project conducted under the authority of this GWQC.

(b) Failure to comply with the conditions of this GWQC shall constitute reason for suspension or revocation of the applicant's use of this GWQC.

(c) Legal proceedings may be instituted against the alleged violator in accordance with Health-General Article, § 2-207, and State Government Article, § 10-201 et seq., Annotated Code of Maryland.

.12 General Water Quality Certification (GWQC) for the Construction of Bulkheads.

A. Scope of Activity.

(1) Definition. "Bulkheads" means the structural stabilization of tidal and nontidal shorelines that are subject to erosion.

(2) Exceptions.

(a) Bulkheads authorized by this GWQC do not include structures which allow passage of a discharge pipe of any kind, such as storm water outfalls and those outfalls regulated under State discharge permits.

(b) Riprap revetments are not authorized by this GWQC.

(3) Bulkhead Construction. The construction of bulkheads includes the following activities:

(a) Driving of piles;

(b) Placement of a timber, aluminum, or steel vertical shoreline erosion control structure;

(c) Placement of a gabion wall;

(d) Placement of backfill behind the structure; and

(e) Placement of riprap at the channelward toe of the structure.

B. Certification. A federally permitted bulkhead project which meets the conditions of the GWQC is authorized under § 401 of the Federal Act provided that other applicable federal, State, and local laws and regulations are satisfied.

C. Design Specifications.

(1) The stabilization activity shall be necessary for the prevention of erosion on tidal shorelines or nontidal stream banks.

(2) The placement of fill material authorized by this GWQC shall be limited to an average of 1 cubic yard of material per running foot placed within waters of the State.

(3) The project shall be a single and complete project.

(4) The project shall be limited to 500 feet in length.

D. Construction Specifications.

(1) The vertical structure shall be constructed in its entirety before the discharge of backfill material.

(2) Material may not be placed in excess of the minimum needed for erosion protection.

(3) Excess material shall be removed to an upland site identified on the plan submitted for the federal permit.

(4) Temporary fills shall be removed in their entirety on or before the completion of construction.

(5) Material may not be placed in any location or in any manner so as to impair surface or subsurface water flow into or out of any wetland area.

(6) Placement of fill material in existing vegetated wetlands shall be minimized to the greatest extent possible. Bulkheads shall be placed landward of existing marsh vegetation. An area which contains more than 10 percent vegetated wetlands may not be filled.

(7) Where the vertical structure is inundated by 2 feet or greater depths of water at the mean high water tide, stone riprap shall be placed at the toe of the structure to protect the structure from wave and tide action and to prevent the disturbance and transport of sediment to waters of the State, which may occur as a result of the scouring actions of wave and tide. Gabion walls are exempted from this requirement.

(8) Only clean material free of waste metal products, organic material, unsightly debris, toxic material, or any other deleterious substance shall be placed as backfill.

(9) The applicant shall obtain and comply with a State or locally approved sediment control plan when disturbing or placing greater than 100 cubic yards of earth or backfill.

(10) Work in the waterway in spawning areas during spawning seasons of important aquatic species is prohibited.

(11) Placement of fill material may not restrict or impede the movement of aquatic species indigenous to the waters, or cause the relocation of the waters.

(12) Disturbances in breeding areas for migratory waterfowl shall be avoided.

(13) Heavy equipment working in wetlands shall be placed on mats, or suitably designed to prevent damage to the wetlands.

E. Applicant's Responsibility.

(1) This GWQC does not:

(a) Relieve the applicant of the responsibility for obtaining any other approvals, licenses, or permits in accordance with federal and State laws or regulation, or local ordinances;

(b) Authorize the beginning of any proposed work in the absence of necessary approvals, licenses, or permits.

(2) The applicant shall comply with all conditions of this general certification.

F. Right of Inspection and Department Enforcement.

(1) Reliance on this GWQC by the applicant or the applicant's agent constitutes permission to the Department to inspect at any time the operations and records for any project constructed under the authority of this GWQC.

(2) An activity is authorized by the GWQC as long as compliance with the conditions of the GWQC is maintained. Upon failure to comply with the conditions of this GWQC, the applicant is required to apply for an individual water quality certification.

(3) Legal proceedings may be instituted against an alleged violator in accordance with the provisions of the Environment Article and State Government Article, Annotated Code of Maryland.

.13 General Water Quality Certification (GWQC) for the Placement of Riprap for Shore Protection.

A. Scope of Activity.

(1) Definition. Riprap revetments are defined as:

(a) A facing of loose stone, brick, or masonry placed for the purpose of stabilizing tidal and nontidal shorelines that are subject to erosion; and

(b) Being constructed with materials of suitable size and weight to prevent their transport into the waterway.

(2) Exceptions.

(a) Riprap revetments authorized by the GWQC do not include structures which allow passage of a discharge pipe of any kind, such as storm water outfalls and those outfalls regulated under State discharge permits.

(b) Materials authorized for placement may not include asphalt, waste metal products, organic materials, unsightly debris, toxic material, or any other deleterious substance.

(c) Revetments may not be constructed to create fastland.

(3) Construction of Revetments. The construction of revetments includes the following activities:

(a) Excavation;

(b) Placement of filter cloth or other base;

(c) Stabilization of disturbed slopes by seeding or planting;

(d) Placement of loose or broken stone;

(e) Placement of aggregate or concrete mix;

(f) Placement of concrete and block;

(g) Pouring of concrete; and

(h) Placement of backfill.

B. Certification. A federally permitted placement of riprap which meets the conditions of the GWQC is authorized under § 401 of the Federal Act, provided that other applicable federal, State, and local laws and regulations are satisfied.

C. Design Specifications.

(1) The stabilization activity shall be necessary for the prevention of erosion on tidal or nontidal shorelines.

(2) The placement of fill material authorized by the GWQC shall be limited to the minimum needed for erosion protection.

(3) The project shall be a single and complete project.

D. Construction Specifications.

(1) Material may not be placed in excess of the minimum needed for erosion protection.

(2) Excess material shall be removed to an upland site identified on the plan submitted for the federal permit.

(3) Temporary fills shall be removed in their entirety on or before the completion of construction.

(4) Material may not be placed in any location or in any manner so as to impair surface water flow into or out of any wetland area.

(5) Placement of fill material in existing vegetated wetlands shall be minimized to the greatest extent possible. Riprap revetments shall be placed landward of existing marsh vegetation. An area which contains more than 10 percent vegetated wetlands may not be filled.

(6) The maximum slope of riprap revetments may not exceed 2:1.

(7) The maximum encroachment of riprap revetments may not extend more than 10 feet channelward of the mean high water shoreline.

(8) Riprap revetments shall be constructed on a base of filter cloth.

(9) The applicant shall obtain and comply with a State or locally approved sediment control plan when disturbing or placing greater than 100 cubic yards of earth or backfill.

(10) Work in the waterway in spawning areas during spawning seasons of important aquatic species is prohibited.

(11) Placement of fill material may not restrict or impede the movement of aquatic species indigenous to the waters or cause the relocation of the waters.

(12) Disturbances in breeding areas for migratory waterfowl shall be avoided.

(13) Heavy equipment working in wetlands shall be placed on mats, or suitably designed to prevent damage to the wetlands.

E. Applicant's Responsibility.

(1) This GWQC does not relieve the applicant of the responsibility for obtaining any other approvals, licenses, or permits in accordance with federal and State laws or regulation, or local ordinances.

(2) This GWQC does not authorize the beginning of any proposed work in the absence of necessary approvals, licenses, or permits.

(3) The applicant shall comply with all conditions of this general certification.

F. Right of Inspection and Department Enforcement.

(1) Reliance on this GWQC by the applicant or the applicant's agent constitutes permission to the Department to inspect at any time the operations and records for any project constructed under the authority of this GWQC.

(2) An activity is authorized by the GWQC as long as compliance with the conditions of the GWQC is maintained. Upon failure to comply with the conditions of this GWQC, the applicant is required to apply for an individual water quality certification.

(3) Legal proceedings may be instituted against the alleged violator in accordance with the provisions of the Environment Article and State Government Article, Annotated Code of Maryland.

Administrative History

Effective date: September 1, 1974 (1:1 Md. R. 33)

COMAR 10.50.01.02, .04, and .03 recodified to COMAR 26.08.02.01, .03, and.04, respectively

Stream Segment Classification Tables codified as Regulation .02

Regulation .01 amended effective April 21, 1978 (5:8 Md. R. 593); July 11, 1980 (7:14 Md. R. 1348); December 3, 1984 (11:24 Md. R. 2070)

Regulation .01D amended effective May 24, 1982 (9:10 Md. R. 1022)

Regulation .01I amended effective June 6, 1983 (10:11 Md. R. 976); December 19, 1983 (10:25 Md. R. 2269)

Regulation .03 amended effective August 3, 1981 (8:15 Md. R. 1308)

Regulation .03A and D amended effective December 19, 1983 (10:25 Md. R. 2269)

Regulation .04B—E amended effective July 28, 1978 (5:15 Md. R. 1187)

Regulation .04 repealed effective July 11, 1980 (7:14 Md. R. 1348)

Regulation .04 adopted effective November 18, 1985 (12:23 Md. R. 2220)

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Chapter revised effective June 27, 1988 (15:13 Md. R. 1556)

Regulation .02B amended effective May 1, 1989 (16:8 Md. R. 911); October 30, 1989 (16:21 Md. R. 2263)

Regulation .05A amended effective May 1, 1989 (16:8 Md. R. 911)

Regulation .07A amended effective May 1, 1989 (16:8 Md. R. 911)

Regulation .07G amended effective October 30, 1989 (16:21 Md. R. 2263)

Regulation .08A amended effective May 1, 1989 (16:8 Md. R. 911)

Regulation .08O amended effective October 30, 1989 (16:21 Md. R. 2263)

Regulation .08Q amended effective May 1, 1989 (16:8 Md. R. 911)

Regulation .09D amended effective October 30, 1989 (16:21 Md. R. 2263)

Regulation .10E amended effective February 19, 1990 (17:3 Md. R. 303)

Regulation .11B amended effective February 19, 1990 (17:3 Md. R. 303)

Regulation .12 adopted effective February 19, 1990 (17:3 Md. R. 303)

Regulation .13 adopted effective February 19, 1990 (17:3 Md. R. 303)

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Chapter revised effective April 16, 1990 (17:7 Md. R. 854)

Regulation .01B amended effective April 26, 2001 (28:2 Md. R. 101)

Regulation .02A amended effective April 26, 2001 (28:2 Md. R. 101)

Regulation .02B amended effective August 29, 2005 (32:17 Md. R. 1440)

Regulation .02-1 adopted effective August 29, 2005 (32:17 Md. R. 1440)

Regulation .03A amended effective January 2, 1995 (21:26 Md. R. 2195)

Regulation .03B amended effective June 7, 1993 (20:11 Md. R. 917); July 5, 2004 (31:13 Md. R. 995)

Regulation .03-2 amended effective January 7, 1991 (17:26 Md. R. 2978); June 7, 1993 (20:11 Md. R. 917); March 25, 1996 (23:6 Md. R. 477); April 26, 2001 (28:2 Md. R. 101)

Regulation .03-2C amended effective July 5, 2004 (31:13 Md. R. 995)

Regulation .03-2G amended effective July 19, 2004 (31:14 Md. R. 1080)

Regulation .03-3 amended effective July 5, 2004 (31:13 Md. R. 995); August 29, 2005 (32:17 Md. R. 1440)

Regulation .03-3E amended effective October 28, 1991 (18:21 Md. R. 2311)

Regulation .03-4 adopted effective July 19, 2004 (31:14 Md. R. 1081)

Regulation .04 amended effective April 26, 2001 (28:2 Md. R. 101)

Regulation .04C amended effective January 7, 1991 (17:26 Md. R. 2978)

Regulation .04-1 adopted effective February 5, 2001 (28:2 Md. R. 104)

Regulation .04-1 recodified to be Regulation .04-2 and new Regulation .04-1 adopted effective July 19, 2004 (31:14 Md. R. 1081)

Regulation .05 amended effective June 7, 1993 (20:11 Md. R. 917)

Regulation .05A amended effective July 5, 2004 (31:13 Md. R. 995)

Regulation .05B recodified to Regulation .05-1 effective June 7, 1993 (20:11 Md. R. 917)

Regulation .05D amended effective January 17, 1994 (21:1 Md. R. 34)

Regulation .07 amended effective August 29, 2005 (32:17 Md. R. 1441)

Regulation .08 repealed and new Regulation .08 adopted effective August 29, 2005 (32:17 Md. R. 1442)

Regulation .08H and J amended effective April 13, 1992 (19:7 Md. R. 747)

Regulation .08J amended effective January 17, 1994 (21:1 Md. R. 34); October 24, 1994 (21:21 Md. R. 1815); May 22, 1995 (22:10 Md. R. 708); July 5, 2004 (31:13 Md. R. 995)

Regulation .08N amended effective October 28, 1991 (18:21 Md. R. 2311); January 17, 1994 (21:1 Md. R. 34); October 24, 1994 (21:21 Md. R. 1815)

Regulation .08O amended effective January 17, 1994 (21:1 Md. R. 34); May 22, 1995 (22:10 Md. R. 708)

Regulation .08Q amended effective January 17, 1994 (21:1 Md. R. 34); May 22, 1995 (22:10 Md. R. 708)

Regulation .09A amended effective October 20, 1997 (24:21 Md. R. 1453)

Regulation .09D amended effective January 19, 2004 (31:1 Md. R. 32)

Regulation .10B amended effective February 5, 2001 (28:2 Md. R. 104)