

COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS  
WATER QUALITY STANDARDS

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# COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS WATER QUALITY STANDARDS

## PART 1 AUTHORITY

These regulations have been promulgated by the Division of Environmental Quality in accordance with the *Commonwealth Environmental Protection Act, (CEPA)*, 1982, 2 CMC §§3101 to 3134, Public Law 3-23; the *Commonwealth Environmental Amendments Act, (CEAA)*, 1999, Public Law 11-103; and the *Commonwealth Groundwater Management and Protection Act (CGMPA)*, 1988, 2 CMC §§3311 to 3333, Public Law 6-12, of the Commonwealth of the Northern Mariana Islands, and under the provisions of the Clean Water Act, P.L. 92-500 (33 U.S.C. 1251 et. seq.) as force and effect of law and shall be binding on all persons and other legal entities subject to the jurisdiction of the Commonwealth of the Northern Mariana Islands. The Division of Environmental Quality shall apply these regulations and standards to all marine, fresh water bodies, and ground water in the Commonwealth.

## PART 2 PURPOSE

The purpose of these regulations is to establish standards for water quality for all Commonwealth waters and ground water in order to protect their use and value for propagation of fish and wildlife, recreational purpose, public water supply use, and taking into consideration their use and value for commerce.

## PART 3 ANTIDegradation POLICY

### 3.1 Antidegradation Policy

It shall be the public policy of the Commonwealth of the Northern Mariana Islands that:

(a) The protection, maintenance, conservation, and improvement of the quality of the waters for the growth and propagation of aquatic life, for marine research and for the conservation of coral reefs and wilderness areas, and for domestic (including drinking water), agricultural, commercial, industrial, recreational and other uses are an historic and legal right of the people of the Northern Mariana Islands.

(b) The achievement of the water quality standards of the Commonwealth of the Northern Mariana Islands is in the best interest of the protection of public health and the environment.

(c) The following three tiers of protection for water quality are hereby established:

(1) Tier 1: In all waters, the existing uses and the minimum level of water quality necessary to protect the existing uses shall be maintained and protected. In

no case shall any action be allowed which would lower water quality below that necessary to maintain and protect designated and existing uses. The minimum level of water quality necessary to protect a designated or existing use shall be the water quality criteria for the corresponding designated use classification. In water bodies or segments of water bodies where the existing level of water quality routinely falls below or just above the applicable water quality criteria for designated uses, actions that would further lower water quality are prohibited.

(2) Tier 2: Waters where the quality exceeds the levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water shall be maintained and protected, unless the Commonwealth determines that the lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation to occur the Commonwealth shall assure the following: 1) the lower water quality be fully protective of existing and designated uses, (2) that significant impacts on water quality and economic and social development be subject to detailed water quality and economic analyses, (3) the cumulative impacts of all previous and reasonably foreseeable future actions be considered, (4) that inter governmental coordination and public participation be included in any determination, (5) the highest statutory and regulatory requirements be achieved for all new and existing point sources, and (6) that all cost effective and reasonable Best Management Practices for non-point source control be employed.

(3) Tier 3: High quality waters which constitute an outstanding Commonwealth resource, such as waters of National Parks, marine sanctuaries, wildlife refuges and waters of exceptional recreational or ecological significance shall be maintained and protected. Actions which would lower water quality in such waters are prohibited, with the exception of temporary degradation deemed necessary for the construction of important Park infrastructure, pollution control devices, and best management practices designed to improve water quality.

(d) There shall be no point or non-point discharge of untreated sewage or other wastewater into any potential or existing ground or surface source of drinking water.

(e) All sewage, wastewater, and any other matter shall receive a degree of treatment necessary to protect the beneficial uses of the Commonwealth waters before discharging.

(f) The existing uses in wetlands and the level of water quality necessary to protect those uses shall be protected.

### 3.2 Requirements for Antidegradation Review

(a) Any action which may lower water quality is subject to review for consistency with the antidegradation policy. Existing permit programs requiring antidegradation review include, at a minimum: Section 401 Water Quality Certifications issued under Section 10

of these standards; and actions requiring a CNMI Coastal Resources Management (CRM) Major Siting Permit. The antidegradation policy does not create a separate permitting program. The Director of DEQ may also require antidegradation review for any other actions which have the potential to lower water quality, such as adoption or revision of regulations, land use plans, highway and drainage master plans, and draft/proposed legislation. However, the results of such review shall be in the form of a notification letter only, unless the action is required to obtain a permit, license, or approval from DEQ. The provision of detailed water quality and economic data and analysis, if determined to be necessary by the Director under the requirements above for Tier 2, shall be the responsibility of the party proposing the action.

(b) Reviews of all applicable actions shall consider all aspects of the proposed action that may affect water quality, including temporary, long term, and cumulative impacts.

(c) Reviews of all applicable actions shall be documented in writing, and shall include a determination by the Director of the following:

- (1) The existing level of water quality, and the appropriate tier of protection for the area affected by the proposed action;
  - (a) In areas of the Commonwealth where insufficient data exists to reasonably determine existing water quality, Tier 2 will be presumed to apply, unless sufficient evidence exists that could reasonably support a determination of Tier 1 or Tier 3.
- (2) The extent to which the proposed action is reasonably expected to lower water quality;
- (3) Statements detailing whether the proposed activity meets the requirements of the antidegradation policy appropriate to the applicable tier of protection. For actions which would lower water quality in a Tier 2 water, the statement must include a detailed determination addressing compliance with each of the Tier 2 requirements listed in Part 3(c)(2).

(d) In determining whether a discharge of dredged or fill material is consistent with the antidegradation policy, DEQ shall evaluate whether the proposed discharge constitutes the least environmentally damaging practicable alternative for achieving the project purpose, applying the regulatory criteria set forth at 40 CFR 230.10(a) and its subparts, and DEQ shall evaluate whether the proposed discharge will cause or contribute to significant degradation of Commonwealth waters, applying the criteria set forth in 40 CFR 230.10(c).

#### PART 4 DEFINITIONS

"Acute exposure value" - The threshold value at or below which there should be no unacceptable effects to aquatic organisms and their uses if the one-hour concentration does

not exceed that value more than once every three years on the average.

“Acute Toxicity” means the degree to which a pollutant, discharge, or water sample causes a rapid adverse impact to aquatic organisms.

"Ambient Conditions" means the existing water quality conditions at a specific location not influenced by anthropogenic sources.

"Brackish Waters" means waters with dissolved inorganic ions (salinity) greater than 500 ppm (parts per million), but less than 30,000 ppm.

"Chronic exposure value" - The threshold value at or below which there should be no unacceptable effects to aquatic organisms and their uses if the four-day concentration does not exceed that value more than once every three years on the average.

“Chronic Toxicity” means the degree to which a pollutant, discharge, or water sample causes a long-term adverse impact to aquatic organisms, such as an alteration in growth rate or reproduction.

"Coastal Waters" means all waters of a depth less than twenty (20) fathoms, or waters up to distance of 1,000 feet off-shore from the mean high water mark, whichever is the greater distance from the shoreline.

"Commonwealth" means Commonwealth of the Northern Mariana Islands.

"Commonwealth Waters" means all waters, fresh, brackish, or marine, including wetlands, surrounding or within the Commonwealth, as provided for by Federal and Commonwealth law.

"CWA" means the Clean Water Act, P.L. 92-500 as amended: 33 U.S.C. 1251 et seq.

"DEQ" means the Commonwealth Division of Environmental Quality.

"Director" means the Director of the Commonwealth Division of Environmental Quality.

"Discharger" means any person who emits any wastewater, substance, or material into the waters of the Commonwealth whether or not such substance causes pollution.

“Existing Use(s)” means those uses actually attained in a waterbody on or after November 28, 1975, whether or not they are included in the water quality standards (40 CFR 131.3.)

"Fresh Waters" means all waters with dissolved inorganic ions of less than 500 ppm.

"Mixing Zone" means the area or volume of a water body within which effluent(s) shall become physically mixed with the receiving waters through initial dilution. Initial dilution is the process through which the wastewater immediately mixes with the receiving water due to the momentum of the waste discharge and the difference in density between the discharge and the receiving water.

"Oceanic Waters" means all other marine waters outside of the twenty (20) fathom depth contour or greater than 1,000 feet off-shore from the mean high water mark, whichever is the greater distance from the shoreline.

"Pollutant" means any substance that causes pollution.

"Pollution" means the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.

"Receiving Water(s)" means Commonwealth water(s) into which pollutants, wastes, or wastewaters are, or may be, discharged.

"Toxic" means lethal, oncogenic, teratogenic or mutagenic, or otherwise damaging to man or other living organisms.

"Toxic pollutant" means those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Administrator, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring.

"Wastewater" means sewage, industrial waste, or other waste, or any combination of these, whether treated or untreated, plus any admixed land runoff.

"Wetlands" means an area which is inundated or saturated by surface or groundwater at a frequency and duration that is sufficient to support, and under normal circumstances does support, vegetation typically adapted for life in saturated soil conditions. Wetlands do not include those artificial wetlands intentionally created to provide treatment of wastewater or stormwater runoff.

"Zone of Passage" means a continuous water route of the volume, area, and quality necessary to allow passage of free-swimming and drifting organisms with no significant effects produced on their populations.

## PART 5 CLASSIFICATION OF WATER USES

### 5.1 Marine Waters

(a) CLASS AA - It is the objective of this class that these waters remain in their natural pristine state as nearly as possible with an absolute minimum of pollution or alteration of water quality from any human-related source or actions. To the extent practicable, the wilderness character of such areas shall be protected. Mixing zones for dredging and the discharge of dredged or fill material may be permitted as allowed under Part 9.6 these standards. Mixing zones for any other discharge shall not be permitted.

The uses to be protected in this class of waters are the support and propagation of shellfish and other marine life, conservation of coral reefs and wilderness areas, oceanographic research, and aesthetic enjoyment and compatible recreation with risk of water ingestion by either children or adults.

The classification of any water area as Class AA shall not preclude other uses of such waters compatible with these objectives and in conformance with the criteria applicable to them.

(b) CLASS A - It is the objective of this class of waters that their use for recreational purposes and aesthetic enjoyment be protected.

Any other use shall be allowed as long as it is compatible with the protection and propagation of fish, shellfish, and wildlife, and with compatible recreation with risk of water ingestion by either children or adults.. Such waters shall be kept clean of solid waste, oil and grease, and shall not act as receiving waters for any effluent which has not received the best degree of treatment of control practicable under existing technology and economic conditions and compatible with standards established for this class. A mixing zone is approvable in such waters.

### 5.2 Fresh Surface Waters

(a) Class 1 - It is the objective of this class that these waters remain in their natural state as nearly as possible with an absolute minimum of pollution from any human-caused source. To the extent possible, the wilderness character of such areas shall be protected. Wastewater discharges and zone of mixing into these waters are prohibited.

The uses to be protected in this class of water are for domestic water supplies, food processing, the support and propagation of aquatic life, groundwater recharge, compatible recreation and aesthetic enjoyment including water contact recreation with risk of water ingestion by either children or adults.

(b) Class 2 - It is the objective of this class of waters that their use for recreational purposes, propagation of fish and other aquatic life, and agricultural and industrial water

supply not be limited in any way. The uses to be protected in this class of waters are all uses compatible with the protection and propagation of fish and other aquatic life, groundwater recharge, and with recreation in and on these waters. Compatible recreation shall include limited body contact activities. Such waters shall not act as receiving waters for any discharge which has not received the best degree of treatment or control practical under technological and economic conditions and compatible with the standards established for this class. A zone of mixing is permissible in these waters.

### 5.3 Protection of Wetlands

Wetlands are waters of the Commonwealth and are subject to the provisions of this rule. Point or non-point sources of pollution shall not cause destruction or impairment of wetlands. All wetlands are to remain in as near their natural state as possible and shall be protected to support to propagation of aquatic and terrestrial life. All provisions of these regulations apply to all wetlands unless replaced by site specific standards adopted by the Commonwealth and approved by EPA.

### 5.4 Protection of Ground Water

Whereas the Commonwealth is almost entirely dependent on ground water for its drinking water supplies, these regulations set water quality standards for surface waters and land disposal activities to ensure the protection of this natural resource. Requirements for land disposal activities will be determined according to groundwater management zones promulgated under the CNMI Well Drilling and Well Operation Regulations for Saipan; for Tinian and Rota these requirements will be dependent on known geological and aquifer characteristics, lateral distances to nearby water wells, and general quality and vulnerability of existing ground water until specific groundwater quality management zones are developed.

## PART 6 CLASSIFICATION AND ESTABLISHMENT OF WATER USE AREAS

### 6.1 Rota

#### (a) CLASS AA

All coastal and oceanic waters surrounding Rota except for those waters delineated in CLASS A.

#### (b) CLASS A

The coastal waters known as East Harbor and West Harbor.

#### (c) CLASS 1

All natural (not man-made) fresh surface waters on Rota.

## 6.2 Tinian and Agiguan

### (a) CLASS AA

All coastal and oceanic waters surrounding Tinian and Agiguan except for those waters delineated in CLASS A.

### (b) CLASS A

The coastal waters known as San Jose Harbor.

### (c) CLASS 1

All fresh surface waters on Tinian and Agiguan.

## 6.3 Saipan

### (a) CLASS AA

All coastal and oceanic waters surrounding Saipan except for those waters delineated in CLASS A.

### (b) CLASS A

The waters up to 3,000 feet from the mean high water mark on the shoreline from the entrance to Smiling Cove marina to Saddok As Agatan, inclusive of the waters within Smiling Cove marina and its entrance channel.

The waters surrounding the Agingan Wastewater Treatment Plant, within a 1,000 foot radius of the outfall.

### (c) CLASS 1

All fresh surface waters on Saipan.

6.4 Northern Islands (Farallon de Medinilla, Anatahan, Sariguan, Guguan, Alamagan, Pagan, Agrihan, Asuncion, Maug, Farallon de Pajaros)

### (a) CLASS AA

All coastal and oceanic waters surrounding the Northern Islands except for those delineated in CLASS A.

### (b) CLASS A

The coastal and oceanic waters surrounding Farallon de Medinilla.

(c) CLASS 1

All fresh surface waters in the Northern Islands.

PART 7 BASIC WATER QUALITY CRITERIA APPLICABLE TO ALL WATERS

(a) All surface waters shall be free of substances attributable to domestic, industrial, or other controllable sources of pollutants and shall be capable of supporting desirable aquatic life and be suitable for recreation in and on the water.

This part will be subject to verification by monitoring as may be prescribed by the Director to assure freedom from any of the following conditions:

- (1) Materials that will settle to form objectionable sludge or bottom deposits.
- (2) Floating debris, oil, grease, scum, or other floating materials.
- (3) Substances in amounts sufficient to produce taste, odor, or detectable off flavor in the flesh of fish; or in amounts sufficient to produce odor or turbidity in the water, or other conditions that alter the naturally occurring characteristics of the water.
- (4) High temperatures; biocides; pathogenic organisms; toxic, corrosive, or other deleterious substances at levels or in combinations sufficient to be toxic or harmful to human health or aquatic life, or in amounts sufficient to interfere with any beneficial use of the water.
- (5) Soil particles resulting from erosion on land involved in earth work, such as construction of public works; highways; subdivisions; recreational; commercial, or industrial development; or the cultivation and management of agricultural lands that adversely affect beneficial use.
- (6) Substances or conditions or combinations thereof in concentration which produce undesirable aquatic life.

PART 8        SPECIFIC WATER QUALITY CRITERIA

8.1 Microbiological Requirements  
(a) Fecal Coliform

Applicable to:

The fecal coliform concentration shall not exceed a geometric mean of 200 CFU's per one hundred milliliter based on samples taken over a thirty-day period nor shall any single sample exceed 400 CFU's per one hundred milliliter at any time.

All Waters

(b) Enterococci

The Enterococci concentration shall not exceed a geometric mean of 35 per one hundred milliliters based on samples taken over a period of 30 days. No instantaneous reading shall exceed 104 enterococci / 100 ml.

AA

The Enterococci concentration shall not exceed a geometric mean of 33 per one hundred milliliters based on samples taken over a period of 30 days. No instantaneous reading shall exceed 61 enterococci / 100 ml.

1

The Enterococci concentration shall not exceed a geometric mean of 35 per one hundred milliliters based on samples taken over a period of 30 days. No instantaneous reading shall exceed 276 enterococci / 100 ml.

A

The Enterococci concentration shall not exceed a geometric mean of 33 per one hundred milliliters based on samples taken over a period of 30 days. No instantaneous reading shall exceed 108 enterococci / 100 ml.

2

(c) E.coli

The E. Coli concentration shall not exceed a geometric mean of 126 per one hundred milliliters based on samples taken over a period of 30 days. No instantaneous reading

1

shall exceed 235 CFU / 100 ml.

The E. Coli concentration shall not exceed a geometric mean of 126 per one hundred milliliters based on samples taken over a period of 30 days. No instantaneous reading shall exceed 406 CFU / 100 ml.

2

Fecal coliform and enterococci may originate from environmental sources as well as from human and animal fecal contamination. Where these microbiological standards are exceeded, a determination of the impact on public health and the environment may be based upon additional sampling, a sanitary survey of the drainage area contributing run-off to the contaminated water, or special studies of the environmental sources of fecal coliform and enterococci in the waters of the CNMI. Procedures for beach closures and public advisories can be found in the CNMI's annual Implementation Plan of the USEPA Beach Grant.

### 8.2 pH

Applicable  
To

pH shall not deviate more than 0.5 units from a value of 8.1.

A,AA

pH shall not deviate more than 0.5 from ambient conditions and shall not be lower than 6.5 nor higher than 8.5.

1,2

### 8.3 Nutrients

Parameter	Concentration Shall Not Exceed (mg/l)	Applicable To
Nitrate-Nitrogen	0.20	AA
	0.50	A
Total Nitrogen	0.4	AA
	0.75	A,1
	1.50	2
Orthophosphate	0.025	AA
	0.05	A
	0.10	1,2

Parameter	Concentration Shall Not Exceed (mg/l)	Applicable To
Total Phosphorus	0.025 0.05 0.10	AA A 1,2
Ammonia (un-ionized)	0.02	AA,A,1,2

#### 8.4 Dissolved Oxygen

Concentration of dissolved oxygen in all waters shall not be less than 75% saturation. Where natural conditions cause lower dissolved oxygen levels, controllable water quality factors shall not cause further reductions.

#### 8.5 Total Filterable Suspended Solids

Applicable  
To

Concentrations of suspended matter at any point shall not be increased from ambient conditions at any time, and should not exceed 5 mg/l except when due to natural conditions.

AA,1

Concentrations of suspended matter at any point shall not be increased from ambient conditions at any time, and should not exceed 40 mg/l except when due to natural conditions.

A,2

#### 8.6 Salinity

Marine Waters: No alterations of the marine environment shall occur that would alter the salinity of marine or estuarine waters more than 10% from ambient conditions or which would otherwise adversely affect the indigenous biota and sedimentary patterns, except when due to natural causes.

A,AA

Fresh water: The maximum allowable amount of chlorides and sulfates shall be 250 mg/l, and the Total Dissolved Solids shall not exceed 500 mg/l or 133% of the ambient condition. The salinity of fresh water sources and wetlands shall not be

1,2

increased more than 20% above ambient conditions.

### 8.7 Temperature

Water temperature shall not vary by more than 1.0°C from the ambient conditions. AA,A,1,2

### 8.8 Turbidity

Turbidity at any point, as measured by nephelometric turbidity units (NTU), shall not exceed 0.5 NTU over ambient conditions. AA,1

Turbidity values (NTU) at any point shall not exceed 1.0 NTU over ambient conditions. A,2

### 8.9 Radioactive Materials

Discharge of radioactive materials at any level into any waters of the Commonwealth is strictly prohibited.

### 8.10 Oil and Petroleum Products

The concentration of oil or petroleum products shall not:

(a) Be detectable as a visible film, sheen, or discoloration of the surface, or cause an objectionable odor.

(b) Cause tainting of fish or other aquatic life, be injurious to the indigenous biota, or cause objectionable taste in drinking water.

(c) Form an oil deposit on beaches or shoreline, or on the bottom of a body of water.

### 8.11 Toxic Pollutants

In order that the designated uses of Commonwealth waters be protected, all waters shall be free from toxic pollutants in concentrations that are lethal to, or produce detrimental physiological responses in human, plant, or animal life. Detrimental responses include, but are not limited to: decreased growth rate and decreased reproductive success of resident or indicator species; or significant alterations in population, community ecology, or receiving water biota.

Criteria for toxic pollutants are given as either a numeric criteria or for mixtures of pollutants with no recommended criteria, are determined by multiplying an appropriate

application factor by the concentration determined to be lethal to 50% of the most sensitive indigenous organism after 96 hours of exposure (96 LC 50). The 96 LC 50 values shall be determined by using bioassay procedures consistent with those described in the latest edition of Standard Methods for the Examination of Water and Wastewater (for ordering information, contact the American Public Health Association, 1015 Fifteenth Street NW, Washington, DC 20005-2605, or go to <http://www.apha.org> to order on-line).

In order to determine compliance with this section, the Director may require additional studies of indicator organisms which include, but are not limited to, analyses of species diversity, species abundance, reproductive success, population density, or growth anomalies. Additionally, effects on human health due to bio-concentration of toxic pollutants shall be considered.

Aquatic life and human health numeric criteria for the toxic pollutants included in the CWA Section 307(a) list of priority pollutants, or any subsequent revision are incorporated by reference into the CNMI Water Quality Standards, as Appendix I (National Recommended Water Quality Criteria: 2002, EPA-822-R-02-047, November 2002 (EPA 2002)).

- (1) Acute Toxicity Standards: All commonwealth waters shall be free from pollutants in concentrations which exceed the acute standards listed respectively for fresh and marine waters (EPA 2002), Appendix 1.
- (2) Chronic Toxicity Standards: All commonwealth waters shall be free from pollutants in concentrations which on average during any 24-hour period exceed the chronic standards listed respectively for fresh and marine waters (EPA 2002), Appendix 1.

Criteria are listed below for maximum levels of total residual chlorine allowable in Commonwealth Waters.

Pollutant	FRESH WATER		MARINE WATER	
	Acute	Chronic	Acute	Chronic
Chlorine (mg/L)	19	11	13	7.5

In waters designated for use as a source of public water supply, the human health numeric criteria shall be those listed in the EPA 2002 publication, Appendix 1, for water plus organism consumption and shall be at least as stringent as the maximum contaminant levels (MCL's) for drinking water established in the CNMI Drinking Water Regulations. In waters not designated as a source of public water supply, the human health numeric criteria shall be those listed in the EPA 2002 publication, Appendix 1, for organism consumption only. The human health numeric criteria for arsenic in the EPA 2002

publication are an exception. These arsenic criteria are excluded from the CNMI standards, and instead, the CNMI human health criterion for arsenic is 5 ug/L.

Site specific criteria shall be developed for toxic pollutants for which: numeric water quality criteria have not been established; a species inhabiting a given site may be more or less sensitive than those used in developing the established criteria; the water chemistry (e.g. pH, hardness, temperature, suspended solids, etc) appears to differ significantly from the laboratory water used in developing the criteria; or the residual toxicity or synergistic (combined) effect of pollutants requires analyses and development of site specific criteria.

Site specific criteria for aquatic life and human health shall be derived from the CWA, Section 304(a)(1) water quality criteria or by methods published by the U.S. Environmental Protection Agency as described in (45 Federal Register 79318), November 28, 1980.

In areas where site specific criteria are developed, DEQ shall regulate point source discharges by establishing effluent limits which are protective of the designated uses of the waters in the area.

#### 8.12 General Considerations

(a) Effects of high temperature, biocides, pathogenic organisms or other deleterious substances at levels or combinations sufficient to interfere with aquatic life or human health, or in amounts sufficient to interfere with the beneficial use of the water shall be evaluated, at a minimum, by use of a 96-hour bioassay as described in the most recent edition of Standard Methods for the Examination of Water and Wastewater (for ordering information, contact the American Public Health Association, 1015 Fifteenth Street NW, Washington, DC 20005-2605, or go to <http://www.apha.org> to order on-line). Survival of test organisms shall not be less than that in controls which utilize appropriate water. Failure to determine presence of toxic pollutants by this method shall not preclude determinations of excessive levels of toxic pollutants on the basis of other criteria or methods.

References for approved methods are: EPA 600/4-91/002 Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Second Edition, 1994; or EPA 600/4-90/027F Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Cincinnati, Ohio, EMSL, Fourth Edition, 1993; or EPA 600/4-600 R-95/136 Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine Estuarine Organisms, Cincinnati, Ohio, EMSL, May, 1995.

(b) Pollutant discharges shall be regulated so as to protect not only the receiving waters but also the surrounding Commonwealth waters and marine life which are affected indirectly through pollutant discharges.

(c) Part 7(a)(5) shall be met upon showing that the land upon which the erosion occurred or is occurring is being managed in accordance with the CNMI Earthmoving and Erosion Control Regulations, as amended, and that the discharge has received the best degree of treatment or control through the implementation of Best Management Practices (BMPs), or that a comprehensive conservation program is being actively pursued, and that the severity of impact of the residual soil reaching the receiving body of water is deemed by the Director to be acceptable.

(d) The health and life history characteristics of aquatic organisms in waters affected by controllable water quality factors shall not differ significantly from those for the same waters in areas unaffected by controllable water quality factors. Also, controllable water quality factors shall not cause a detrimental increase in concentrations of toxic pollutants found in bottom sediments or aquatic life.

## PART 9 MIXING ZONE IN RECEIVING WATERS

The water quality criteria in these regulations shall apply within a mixing zone unless specific alternative criteria have been approved by the Division of Environmental Quality. Mixing Zones will not be granted in lieu of reasonable control measures to reduce point source pollutant discharges but will be granted to complement the applicable controls. A limited mixing zone in the immediate area of a point source of pollution, may be allowed if the conditions set out in this part are met.

### 9.1 Establishment of Mixing Zone

No mixing zone shall be established unless the continuation of the function or operation involved in the discharge by the granting of the mixing zone is in the public interest, and the discharge occurring or proposed to occur does not substantially endanger public health and safety.

### 9.2 Prevention, Control, and Abatement

If the mixing zone is established on the grounds that there is no reasonable means known or available for the adequate prevention, control, or abatement of the discharge involved, it may be allowed until the necessary means for prevention, control or abatement become practicable, and subject to the taking of any substitute or alternative measures that the Director may prescribe. No renewal of a mixing zone shall be allowed without a thorough review of known and available means of preventing, controlling, or abating the discharge involved.

### 9.3 Time Limit for Mixing Zone

The Director may issue an approval for the establishment of a mixing zone for a period not to exceed five years.

#### 9.4 Mixing Zone Characteristics

An allowable mixing zone shall be defined by all or some of the following characteristics: receiving water; discharge location; volume of discharge; specific linear distance; area or volume; mixing velocities and other pertinent hydrologic, biological, chemical, and physical characteristics.

#### 9.5 Criteria for Mixing Zone

The following criteria shall be met in determining the location, size, shape, out-fall design and in-zone quality of mixing zones.

(a) Mixing zones shall not impact any area of the waters in such a manner that the maintenance of aquatic life in the body of water as a whole would be adversely affected.

(b) Mixing zones shall be as small as practicable: no greater than 300 feet in all directions from the point of discharge, or a distance equal to the zone of initial dilution as calculated using a DEQ-approved plume model.

(c) Where two or more mixing zones are in close proximity, they shall be so defined that a continuous zone of passage for aquatic life is available.

(d) Mixing zones shall be free from substances in concentrations or combinations that will cause acute lethality to aquatic life.

(e) The prohibition on acute lethality established in Part 9.5(g) shall be implemented by requiring that the concentrations of toxic pollutants in the pipe at the point of discharge shall not exceed the acute, aquatic life water quality criteria of Part 7.11 of these regulations.

(f) Mixing zones will not be allowed in standing bodies of water with no currents available for dispersion of pollutants.

(g) All discharges to marine waters will comply with the Ocean Discharge Criteria promulgated under Section 403 (c) of the CWA.

#### 9.6 Dredging and Discharge of Dredged or Fill Material

(a) Dredging and dredged spoil discharges generally result in short-term disruption and do not represent continuous discharge that will affect beneficial uses over a long term.

Other in-water, construction-related activities, such as discharge from the dewatering of excavations and shoreline stabilization projects, can also cause short-term suspension of sediments similar to that caused by dredge and fill discharges. Mixing zones may therefore be granted for dredging activities, other in-water construction-related activities,

and the discharge of dredged or fill material provided that: (1) all other requirements of this Part are met; and (2) the proposed activity satisfies the antidegradation requirements described in Part 3 of these standards.

(b) Dredging and the discharge of dredged or fill material can adversely affect colonies of reef building organisms by burying them, by releasing contaminants such as hydrocarbons into the water column, by reducing light penetration through the water, and by increasing the level of suspended particulates. Coral organisms are extremely sensitive to even slight reductions in light penetration or increases in suspended particulates (i.e., turbidity). These adverse effects will cause a loss of productive colonies which in turn provide habitat for many species of highly specialized aquatic organisms.

Dredging and the discharge of dredged or fill material can also adversely affect sea grass beds, by smothering vegetation and benthic organisms, and may also create unsuitable conditions for their continued vigor by: (1) changing water circulation patterns; (2) releasing nutrients that increase undesirable algal populations; (3) releasing chemicals that adversely affect plants and animals; (4) increasing turbidity levels, thereby reducing light penetration and hence photosynthesis; and (5) changing the capacity of a vegetated shallow to stabilize bottom materials and decrease channel shoaling. Dredging and the discharge of dredged or fill material may reduce the value of vegetated shallows as nesting, spawning, nursery, cover, and forage areas, as well as their value in protecting shorelines from erosion and wave actions. It may also encourage the growth of nuisance vegetation.

In granting mixing zones for dredging activities, the discharge of dredged or fill material, or other in-water, construction-related activities that cause the suspension of sediments in or near coral reef resources and sea grass beds, the Director shall assure that any disruption to beneficial uses is kept to an absolute minimum, and that all practicable measures are taken to prevent adverse impacts to resources of concern, taking into consideration the magnitude and duration of the proposed activity, and the proximity to resources of concern. This shall be satisfied by placing conditions within the applicable permit or water quality certification requiring the following,:

- (1) The use and maintenance of Best Management Practices (BMPs) including such measures as "silt curtains", closed ("environmental") buckets, hydraulic dredges, or other methods as appropriate to control the drift and extent of suspended sediment plumes beyond the location of the dredge or fill activity;
- (2) Water quality monitoring requirements for turbidity and other pollutants of concern that may be identified or expected in the dredge spoil or fill material. Periodic aquatic ecosystem monitoring may also be required for the purpose of assessing the effects of the activity on resources of concern and determining the necessity of additional mitigative measures;
- (3) For activities which have the potential to adversely affect coral

reproduction, a stoppage period of 21 days, starting 5 days after the late May or early June full moon (to be determined by DEQ), is required. The stoppage period, if determined to be applicable, shall be no less than twenty one (21) calendar days. In determining whether an activity has the potential to affect coral spawning, DEQ shall consider all of the following: 1) the magnitude of the sediment plume generated by the proposed activity; 2) the most likely extent and direction(s) of drift of the sediment plume; 3) the type of sediment and its composition; and 4) the proximity of broadcast spawning coral species to the proposed activity and expected sediment plume.

- (4) A specified distance up-current and down-current from the permitted activity at which applicable water quality criteria must be met (i.e., a mixing zone). Mixing zones for dredge and fill activities shall be kept as small as practicable, and shall not exceed 300 feet down-current and 150 feet up-current. Down-current distance may be increased to up to 600 feet where typical currents can be shown to make the use of BMPs ineffective;
- (5) Any additional protective measures, limitations, monitoring or mixing zone requirements that the Director identifies as being necessary to protect resources of concern.

(c) The Director may require an applicant for a water quality certification or permit for dredging, the discharge of dredged or fill material, or similar in-water, construction-related activities, to provide information necessary to support the development of monitoring plans, mitigation measures, or mixing zone requirements, such as surveys of existing currents, water quality data, and baseline aquatic ecosystem and indicator species surveys.

## PART 10 WATER QUALITY CERTIFICATION

A water quality certification is required by the CWA, Section 401 of any applicant for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, that may result in any discharge into waters of the United States. The Division of Environmental Quality shall issue a water quality certification for any proposed activity which: (1) complies with the applicable provisions of the CWA Sections 301, 302, 303, 306, and 307; (2) complies with applicable provisions of the CNMI Water Quality Standards; (3) will not interfere with the attainment or maintenance of the existing or designated use of the Commonwealth waters; and all appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on aquatic life and human health.

### 10.1 Application For Water Quality Certification

- (a) Applicants for water quality certification shall submit a completed, signed

application, which shall include the following:

- (1) The name and address of the applicant(s);
- (2) A description of the proposed facility or activity, and of any discharge into Commonwealth waters which may result from the conduct of any activity including, but not limited to, the construction or operation of the facility. This description shall include the characteristic of the discharge, and the location or locations at which such discharge may enter Commonwealth waters;
- (3) If applicable, a description of the function and operation of equipment or facilities to control discharges, including specification of the methods of control to be used;
- (4) The estimated date or dates on which the activity will begin and end and the date or dates on which the discharge(s) will take place;
- (5) If applicable, a description of the methods and means being used or proposed to monitor the quality and characteristics of the discharge and the operation of equipment or facilities employed in the control of the proposed discharge;

(b) The Director may require the submission of additional information after a certification application has been filed. If a certification application is incomplete or otherwise deficient, processing of the application shall not be completed until such time as the applicant has supplied the missing information or otherwise corrected the deficiency. The Director shall notify the applicant, in writing, within thirty (30) calendar days of the submission of an application, if an application is incomplete or otherwise deficient. For applications which are eligible for waiver of certification under part 10.3(g), the Director shall notify the applicant within fourteen (14) calendar days if an application is incomplete or otherwise deficient. A description of the type of additional information necessary to complete the application or correct the deficiency will be included with such a written notice. Failure to provide additional information or to correct a deficiency shall be sufficient grounds for denial of certification;

(c) The applicant is required to notify DEQ , in writing, of changes which may affect the application and certification process;

(d) The applicant will be informed, in writing, by the Director when a certification application is considered complete. The Director shall act on a request for certification within a period which shall not exceed six months; and

(e) Applicants for water quality certifications may be required to pay a filing fee. Filing fees for water quality certification are dependent on the type of federal permit, the scale of the proposed activity, and its potential to affect water quality:

- (1) Any commercial activity that will result in either the generation of an excess of 5000 gallons of wastewater per day, any clearing of 1000 square meters or filling exceeding 1000 cubic meters in waters of CNMI, or any other large scale development as determined by the Director shall pay a fee of \$5000.
- (2) Any commercial activity requiring a 401 Water Quality Certification that will result in either the generation of less than 5000 gallons of wastewater per day or any clearing less than 1000 square meters or filling in waters of the CNMI that is less than 1000 cubic meters shall pay a fee of \$1000.
- (3) Any small family residential activity requiring a 401 Water Quality Certification resulting in a clearing that does not exceed 1000 square meters is required to obtain a water quality certification and shall pay a fee of \$100. Any residential activity exceeding 1000 square meters must pay an additional fee of \$5 per 100 square meter or fraction thereof.
- (4) If the permit for which certification is sought is a “nationwide permit” issued under Section 404 of the Clean Water Act (for which certification may be waived as allowed under Part 10.3(g)), a filing fee is not required.

This filing fee shall be submitted prior to the issuance of a public notification and shall not be refunded nor applied to any subsequent water quality certification following final action or denial of a water quality certification. Any Federal or CNMI government agency shall be exempt from paying filing fees.

## 10.2 Public Notification and Public Hearing

(a) Within five (5) calendar days after determining an application to be complete, and after the appropriate filing fee has been received, DEQ shall transmit a draft public notification to the applicant for review. The notice shall include the name and address of the applicant, and a brief description of the activity and of the discharge involved in the activity for which certification is being sought.

(b) The applicant shall review the draft notice upon receipt, and within five (5) calendar days, provide comments to DEQ in writing regarding any changes the applicant believes to be necessary. If DEQ does not receive any written comments from the applicant after five (5) calendar days, the public notice shall be deemed final, and DEQ shall notify the applicant to publish the notice as specified below under Part 10.2(c). Otherwise, DEQ shall prepare the final public notice, taking into consideration comments received from the applicant, and transmit the final public notice to the applicant within five (5) calendar days for publication.

(c) Publication of the notice shall be the responsibility of the applicant. The notice shall be published once in a minimum of two newspapers, one of which has a daily circulation, and a second time in at least one newspaper prior to the completion of the public comment period.

(d) The public comment period shall be for at least 30 days from the date of the first publication of the notice. The Director may, upon request, provide the opportunity for public hearing(s) to consider issuance of a water quality certification. The Director shall inform the applicant, in writing, that such action has been taken.

### 10.3 Determination of Water Quality Certification

(a) The Director shall make a determination on a Water Quality Certification based upon evaluation of:

- (1) the application made by the applicant to the licensing or permitting agency and the information contained in such application which is relevant to water quality considerations,
- (2) the application materials submitted pursuant to part 10.1,
- (3) comments received during the public comment period,
- (4) the record of a public hearing held pursuant to part 10.2, and
- (5) any other information and data that the Director deems relevant.

(b) DEQ shall not grant a water quality certification for any activity unless the activity has been determined to be consistent with antidegradation policy through the satisfaction of all applicable provisions contained in Part 3 of these standards.

(c) The contents of the Water Quality Certification issued by DEQ shall include:

- (1) the name and address of the applicant
- (2) reference to the application materials which were evaluated in making the certification, identified by date received, and federal license and permit application number or code where applicable,

- (3) a statement that there is reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards,
- (4) a statement (or statements) detailing how the activity has been determined to be consistent with the antidegradation policy in accordance with Part 3.2 of these standards.
- (5) a statement of any conditions which the Director deems necessary with respect to the discharge or the activity, including the conditions specified under Part 9.6 of these standards for dredge and fill activities, and
- (6) any such other information as the Director may determine to be appropriate.

(d) If the Director, after considering the information submitted pursuant to 10.3(a), determines that there is reasonable assurance that applicable water quality standards will not be violated, and the proposed methods of control will be applied to a discharge which is the result of any activity including, but not limited to, the construction and operation of facilities, then the Director shall so certify.

(e) The Director may modify the certification prior to the issuance of the federal license or permit, after consideration of information presented by the applicant licensing or permitting agency or other government agencies or interested parties.

(f) If the Director fails to act on a completed application for certification within six months, then the certification requirements of this section shall be waived with respect to federal applications.

(g) If the discharge in question is the result of one of the activities which receives a nationwide permit for the discharge of dredge and fill materials, thereby fulfilling specific conditions of that permit pursuant to 33 CFR 330.5 and 330.6, then the Director will determine, on a case-by-case basis, which projects are considered to be minor and non-controversial. Certification requirements of this section shall be waived for minor and non-controversial activities within six months of the receipt of a completed application. The Director may elect to specify conditions under which any such waiver is valid.

(h) Storm water discharges associated with industrial and construction site activities, as described in 40 CFR Part 122.26, covered under a United States Environmental Protection Agency, National Pollutant Discharge Elimination System (NPDES) General Permit, may be allowed provided the following conditions are met:

- (1) A DEQ Section 401 Water Quality Certification has been issued to the United States Environmental Protection Agency for the particular NPDES General Permit associated with the

discharge;

- (2) All conditions and requirements set forth in the applicable United States Environmental Protection Agency, Final National Pollutant Discharge Elimination System (NPDES) General Permit are complied with;
- (3) A storm water pollution prevention plan for storm water discharges associated with industrial activities or from construction sites is approved by the Director of DEQ prior to submission of the Notice of Intent (NOI), EPA Form 3510-6. For facilities with current storm water discharges associated with industrial activities, a storm water plan is submitted within thirty (30) calendar days of adoption of this regulation;
- (4) A NOI to be covered by the general permit for discharges associated with industrial activities or for discharges from construction activities is submitted to DEQ and USEPA, Region IX, accompanied by a pollution prevention plan approval letter from DEQ;
- (5) The NOI is postmarked seven (7) calendar days prior to any storm water discharges and a copy is submitted to the Director of DEQ no later than seven (7) calendar days prior to any storm water discharges; and
- (6) All monitoring reports required by the respective general storm water permits are submitted to DEQ.

Based on a review of the NOI and/or other information made available to the Director, the Director may deny coverage under the general permit and require submittal of an application for an individual NPDES permit to EPA. An individual water quality certification from DEQ will be required for this individual permit.

#### 10.4 Water Quality Certification-General Provisions

(a) Where any facility or activity has received certification pursuant to section 10.3 in connection with the issuance of a license or permit for construction, and where such facility or activity is not required to obtain an operating license or permit, the Director, prior to the operation of such facility or activity, shall be afforded the opportunity to perform an initial inspection of such facility or activity for the purpose of determining if the manner in which such facility or activity will be operated or conducted will violate applicable water quality standards.

(b) If the Director, after the initial inspection pursuant to section 10.4 (a), determines that operation of the proposed facility or activity will violate applicable water

quality standards, the Director shall so notify the applicant and the licensing or permitting agency.

(c) Where a licensing or permitting agency suspends a license or permit after receiving the Director's notice and recommendation pursuant to section 10.3, the applicant may submit evidence to the Director, showing that the facility or activity has been modified so as not to violate applicable water quality standards. If the Director determines that the applicable water quality standards will not be violated, the Director shall so notify the licensing or permitting agency.

#### 10.5 Water Quality Certification-Adoption of New or Revised Water Quality Standards

To the extent permitted by applicable law, all water quality certifications issued by DEQ shall require the licensing or permitting authority to include a clause in the license or permit advising the licensee or permittee that the license or permit shall be subject to amendment or modification upon adoption or revision of water quality standards.

Upon adoption or revision of water quality standards, DEQ shall notify the licensing or permitting authority and the licensee or permittee of the revised or newly-enacted water quality standards and shall request the licensing or permitting authority to amend or modify the license or permit, if and to the extent permitted by applicable law, to reflect the applicable water quality standards.

### **PART 11 LAND DISPOSAL OF WASTEWATER**

#### 11.1 General Applicability

Any action or activity that results in the disposal of wastewater on land in excess of fifty-five (55) gallons per day requires the approval of the Director of DEQ. Types of wastewater and pollutants discharges that need approval prior to land disposal include but are not limited to reverse osmosis brine and oil/water separator discharges.

(a) The disposal of human or animal wastewater is excluded under these requirements as these activities are regulated under the CNMI Wastewater Treatment and Disposal Rules and Regulations.

(b) The disposal of wastewater through an injection well is excluded as this activity is regulated under the CNMI Underground Injection Control (UIC) regulations.

(c) Nothing in these requirements shall be construed as to supercede the wellhead protection area requirements under the CNMI Well Drilling and Well Operations Regulations, or to allow the construction of any facility or any activity within the setback distances contained therein.

## 11.2 Submission of Land Disposal Plans

Prior to the land disposal of any wastewater or other pollutants in excess of fifty-five (55) gallons per day, the Director of DEQ will review the plan for disposal and make a determination that coastal waters or ground water will not be adversely affected by such disposal.

(a) The plan for the land disposal shall include the following items:

- (1) Name, address, and phone number of applicant;
- (2) Description of the physical process that produces the wastewater, chemical make-up of wastewater, and average volume produced on a daily and annual basis;
- (3) Map of disposal site which identifies elevation, nearby landmarks, and proposed point of discharge;
- (4) Schematic of proposed land disposal method (e.g. percolation trench, ponding basin, leachfield, infiltrator) to be used;
- (5) In the event that a land disposal plan require seepage as a mechanism for the removal of fluids, the applicant must perform a percolation test on the proposed site and submit the results to the Director of DEQ.

(b) The applicant must pay a \$500 filing fee for all land disposal plans that are submitted to the Division of Environmental Quality for review.

- (1) This fee will be waived for projects that have applied for a Clean Water Act 401 Water Quality Certification.
- (2) All government agencies shall be exempt from paying this fee.

## 11.3 Land Disposal in Coastal Lands

Land disposal in coastal lands is defined as disposal of wastewaters within one hundred fifty (150) feet of the mean high water mark of the shoreline. Any wastewater to be land disposed on coastal lands must meet CNMI Water Quality Standards.

## 11.4 Land Disposal in Groundwater Recharge Areas

Land areas other than coastal lands are defined as groundwater recharge areas. The

applicant must provide a determination of the underlying geology, aquifer characteristics, groundwater quality, location and proximity of all nearby wells, and current and potential future use of the underlying groundwater for public water supply based on a review of available information including United States Geological Survey (USGS) maps and reports, Commonwealth Utilities Corporation (CUC) well field maps, and the nearby well drilling records. DEQ may assist the applicant in making such determinations where sufficient information exists. The applicant may provide a determination on the basis of a report from a professional hydrogeologist. Groundwater recharge areas are divided into three subcategories:

- (a) Primary groundwater recharge zones are defined as:
  - (1) Areas designated as Class I Groundwater Management Zones in the CNMI Well Drilling and Well Operations Regulations;
  - (2) Areas contributing surface infiltration to a geologic formation that is saturated with fresh ground water that is not in contact with seawater (i.e. “perched” groundwater) and is capable of transmitting quantities of fresh water in sufficient quantity to sustain a public water supply well;
  - (3) Areas that can reasonably be considered, on the basis of maps provided by USGS or CUC, to be within active or future public water supply well fields;
  - (4) Areas contributing surface infiltration to a geologic formation that discharges to a known spring or stream that currently is or is capable of transmitting quantities of fresh water in sufficient quantity to be used as a public water supply;
  - (5) Within four hundred (400) feet laterally upgradient from a public water supply well; or
  - (6) Within Two hundred (200) feet laterally downgradient from a public water supply well;

Areas which do not meet any of the criteria for definition as a primary groundwater recharge zone as described in 11.4(a) shall be classified as either a secondary groundwater recharge zone, or a brackish groundwater recharge zone:

- (b) Secondary groundwater recharge zones are defined as areas designated as Class II Groundwater Management Zones by the CNMI Well Drilling and Well Operations Regulations; areas contributing surface infiltration to a geologic formation that is saturated with ground water with less than 500 parts per million total dissolved solids, and currently or are capable of transmitting quantities of water in sufficient quantities to sustain a public

water supply well; or areas with groundwater surface elevations equal to or greater than 1 foot as mapped by USGS.

- (c) Brackish groundwater recharge zones are defined as areas designated as Class III Groundwater Management Zones by the CNMI Well Drilling and Well Operations Regulations; areas contributing surface infiltration to a geologic formation that is saturated with brackish ground water with greater than 500 parts per million total dissolved solids; or areas with groundwater surface elevations less than 1 foot as mapped by USGS.

#### 11.5 Discharge Limitations for Land Disposal of Wastewater

Discharge limitations for wastewater intended to be land disposed in groundwater recharge areas are dependent on the subcategory of groundwater recharge area and volume of wastewater to be disposed.

- (a) Wastewater that is to be land disposed in primary groundwater recharge zones must meet drinking water standards as set in CNMI Drinking Water Regulations.

- (b) Discharge limitations for water quality to be land disposed in secondary groundwater recharge zones and brackish groundwater recharge zones are dependent on volume of wastewater. Specific criteria for discharge limitations will be determined on a case-by-case basis and authorized in the permit.

### PART 12 INSPECTIONS AND RIGHT OF ENTRY

#### 12.1 Inspections and Right of Entry

In accordance with 2 CMC § 3132, the Director or his authorized representative may inspect any facility or records subject to the provisions of the Act and these regulations. The inspection may be conducted with or without advance notice, as authorized by § 3132.

PART 13 NOTICES OF VIOLATIONS, ADMINISTRATIVE ORDERS, AND PENALTIES

13.1 Power to Uphold Water Quality Standards

The Division is responsible for enforcement of these regulations in accordance with the applicable laws of the CNMI and the Clean Water Act and its amendments. Where Commonwealth waters designated for recreational use fall below the CNMI water quality standards as set forth in these regulations, the Director shall have the authority to suspend public use of Commonwealth waters or take other action which in the Director's discretion is necessary to protect the public health, safety and welfare.

13.2 Enforcement Actions

In accordance with 2 CMC § 3131, if the Director has reason to believe a violation of the provisions of the Act, these standards, and/or the terms of any water quality certification, waiver of water quality certification, or land disposal approval issued pursuant to the Act and these standards, has occurred or is occurring, the Director may issue any necessary order to enforce the aforementioned provisions and conditions. Such order shall be in the form of a written warning, Notice of Violation, Cease and Desist Order, or Administrative Order signed by the Director or his authorized representative and shall provide notice of the facts constituting the violation, penalties that may be imposed, and, where appropriate, provide a reasonable timeframe in which to take corrective action.

13.3 Administrative Orders

(a) If any person subject to an order issued pursuant to 13.2 fails to comply with the order, the Director may issue an Administrative Order or other such Order imposing penalties as provided by 2 CMC § 3131(c). The Order shall state the facts constituting the violation, the particular sections of the Act, standards, water quality certification, waiver of water quality certification, or land disposal approval involved, the proposed penalty including any proposed suspension, revocation, or modification of any water quality certification, waiver of water quality certification, or land disposal approval, and monetary penalties including any penalty for cost of corrective action taken by the Division, and the opportunity to request a hearing. Such Order shall be personally served or served by certified mail, return receipt, on persons subject to the penalties in the Order.

13.4 Hearings

(a) Any person subject to an Order imposing penalties pursuant to 13.3, may request, in writing, a hearing before the Director or his/her designee. Request for a hearing shall be served upon the Division within seven (7) calendar days from receipt of the Order. Failure to request a hearing within seven (7) calendar days shall constitute a waiver of the right to a hearing and the Division may take the necessary action to enforce the Order.

(b) Procedures for hearings shall be conducted in accordance with the Administrative Procedures Act (APA), 1 CMC § 9101, et seq.

### 13.5 Emergency Suspension Provisions

If the Director determines that a violation of a water quality certification, waiver of water quality certification, or land disposal approval issued pursuant to the Act and these standards has resulted in an imminent threat to public health, safety or welfare, the Director may summarily suspend a water quality certification, waiver of water quality certification, or land disposal approval. A hearing for revocation or other action shall be promptly instituted and determined pursuant to the procedures in 13.4.

### 13.6 Criminal Penalties

Any person who knowingly and willfully commits any act in violation of the Act, these standards, or any water quality certification, waiver of certification, or land disposal approval, may be subject to criminal penalties as set forth in 2 CMC § 3131(d).

## PART 14 SEVERABILITY

If any provision of these Regulations or their application is held to be invalid, such invalidity shall not affect any other provision or application that can be used without the invalid section, and to this end the provisions of these Regulations and their various applications are declared to be severable.

## APPENDIX 1 WATER QUALITY CRITERIA FOR PRIORITY TOXIC POLLUTANTS

Source: National Recommended Water Quality Criteria: 2002, EPA-822-R-02-047,  
November 2002 (EPA 2002)

**NATIONAL RECOMMENDED WATER QUALITY CRITERIA FOR PRIORITY TOXIC POLLUTANTS**

Priority Pollutant	CAS Number	Freshwater		Saltwater		Human Health For Consumption of:		FR Cite/ Source	
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	Water + Organism (µg/L)	Organism Only (µg/L)		
1	Antimony	7440360					5.6 B	640 B	65FR66443
2	Arsenic	7440382	340 A,D,K	150 A,D,K	69 A,D,bb	36 A,D,bb	0.018 C,M,S	0.14 C,M,S	65FR31682 57FR60848
3	Beryllium	7440417					Z		65FR31682
4	Cadmium	7440439	2.0 D,E,K,bb	0.25 D,E,K,bb	40 D,bb	8.8 D,bb	Z		EPA-822-R-01-001 65FR31682
5a	Chromium (III)	16065831	570 D,E,K	74 D,E,K			Z Total		EPA820/B-96-001 65FR31682
5b	Chromium (VI)	18540299	16 D,K	11 D,K	1,100 D,bb	50 D,bb	Z Total		65FR31682
6	Copper	7440508	13 D,E,K,cc	9.0 D,E,K,cc	4.8 D,cc,ff	3.1 D,cc,ff	1,300 U		65FR31682
7	Lead	7439921	65 D,E,bb,gg	2.5 D,E,bb,gg	210 D,bb	8.1 D,bb			65FR31682
8a	Mercury Methylmercury	7439976	1.4 D,K,hh	0.77 D,K,hh	1.8 D,ee,hh	0.94 D,ee,hh		0.3 mg/kg J	62FR42160 EPA823-R-01-001
8b		22967926							
9	Nickel	7440020	470 D,E,K	52 D,E,K	74 D,bb	8.2 D,bb	610 B	4,600 B	65FR31682
10	Selenium	7782492	L,R,T	5.0 T	290 D,bb,dd	71 D,bb,dd	170 Z	4200	62FR42160 65FR31682 65FR66443
11	Silver	7440224	3.2 D,E,G		1.9 D,G				65FR31682
12	Thallium	7440280					1.7 B	6.3 B	65FR31682

Priority Pollutant	CAS Number	Freshwater		Saltwater		Human Health For Consumption of: Water + Organism		FR Cite/ Source	
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	Water + Organism (µg/L)	Organism Only (µg/L)		
13	Zinc	7440666	120 D,E,K	120 D,E,K	90 D,bb	81 D,bb	7,400 U	26,000 U	65FR31682 65FR66443
14	Cyanide	57125	22 K,Q	5.2 K,Q	1 Q,bb	1 Q,bb	700 B	220,000 B,H	EPA820/B-96-001 57FR60848
15	Asbestos	1332214					7 million fibers/L I		57FR60848
16	2,3,7,8-TCDD (Dioxin)	1746016					5.0E-9 C	5.1E-9 C	65FR66443
17	Acrolein	107028					190	290	65FR66443
18	Acrylonitrile	107131					0.051 B,C	0.25 B,C	65FR66443
19	Benzene	71432					2.2 B,C	51 B,C	IRIS 01/19/00 &65FR66443
20	Bromoform	75252					4.3 B,C	140 B,C	65FR66443
21	Carbon Tetrachloride	56235					0.23 B,C	1.6 B,C	65FR66443
22	Chlorobenzene	108907					680 B,Z,U	21,000 B,H,U	65FR31682
23	Chlorodibromomethane	124481					0.40 B,C	13 B,C	65FR66443
24	Chloroethane	75003							
25	2-Chloroethylvinyl Ether	110758							
26	Chloroform	67663					5.7 C,P	470 C,P	62FR42160
27	Dichlorobromomethane	75274					0.55 B,C	17 B,C	65FR66443

Priority Pollutant	CAS Number	Freshwater		Saltwater		Human Health For Consumption of:		FR Cite/ Source
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	Water + Organism (µg/L)	Organism Only (µg/L)	
28	1,1-Dichloroethane	75343						
29	1,2-Dichloroethane	107062				0.38 <sub>B,C</sub>	37 <sub>B,C</sub>	65FR66443
30	1,1-Dichloroethylene	75354				0.057 <sub>C</sub>	3.2 <sub>C</sub>	65FR66443
31	1,2-Dichloropropane	78875				0.50 <sub>B,C</sub>	15 <sub>B,C</sub>	65FR66443
32	1,3-Dichloropropene	542756				10	1,700	57FR60848
33	Ethylbenzene	100414				3,100 <sub>B</sub>	29,000 <sub>B</sub>	65FR31682
34	Methyl Bromide	74839				47 <sub>B</sub>	1,500 <sub>B</sub>	65FR66443
35	Methyl Chloride	74873						65FR31682
36	Methylene Chloride	75092				4.6 <sub>B,C</sub>	590 <sub>B,C</sub>	65FR66443
37	1,1,2,2-Tetrachloroethane	79345				0.17 <sub>B,C</sub>	4.0 <sub>B,C</sub>	65FR66443
38	Tetrachloroethylene	127184				0.69 <sub>C</sub>	3.3 <sub>C</sub>	65FR66443
39	Toluene	108883				6,800 <sub>B,Z</sub>	200,000 <sub>B</sub>	65FR31682
40	1,2-Trans-Dichloroethylene	156605				700 <sub>B,Z</sub>	140,000 <sub>B</sub>	65FR31682
41	1,1,1-Trichloroethane	71556				<sub>Z</sub>		65FR31682
42	1,1,2-Trichloroethane	79005				0.59 <sub>B,C</sub>	16 <sub>B,C</sub>	65FR66443
43	Trichloroethylene	79016				2.5 <sub>C</sub>	30 <sub>C</sub>	65FR66443
44	Vinyl Chloride	75014				2.0 <sub>C</sub>	530 <sub>C</sub>	57FR60848

Priority Pollutant	CAS Number	Freshwater		Saltwater		Human Health For Consumption of: Water + Organism		FR Cite/Source	
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	Water + Organism (µg/L)	Organism Only (µg/L)		
45	2-Chlorophenol	95578					81 B,U	150 B,U	65FR66443
46	2,4-Dichlorophenol	120832					77 B,U	290 B,U	65FR66443
47	2,4-Dimethylphenol	105679					380 B	850 B,U	65FR66443
48	2-Methyl-4,6-Dinitrophenol	534521					13	280	65FR66443
49	2,4-Dinitrophenol	51285					69 B	5,300 B	65FR66443
50	2-Nitrophenol	88755							
51	4-Nitrophenol	100027							
52	3-Methyl-4-Chlorophenol	59507					U	U	
53	Pentachlorophenol	87865	19 F,K	15 F,K	13 bb	7.9 bb	0.27 B,C	3.0 B,C,H	65FR31682 65FR66443
54	Phenol	108952					21,000 B,U	1,700,000 B,U	65FR66443
55	2,4,6-Trichlorophenol	88062					1.4 B,C	2.4 B,C,U	65FR66443
56	Acenaphthene	83329					670 B,U	990 B,U	65FR66443
57	Acenaphthylene	208968							
58	Anthracene	120127					8,300 B	40,000 B	65FR66443
59	Benzidine	92875					0.000086 B,C	0.00020 B,C	65FR66443
60	Benzo(a)Anthracene	56553					0.0038 B,C	0.018 B,C	65FR66443
61	Benzo(a)Pyrene	50328					0.0038 B,C	0.018 B,C	65FR66443

Priority Pollutant	CAS Number	Freshwater		Saltwater		Human Health For Consumption of: Water + Organism		FR Cite/ Source	
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	Water + Organism (µg/L)	Organism Only (µg/L)		
62	Benzo(b)Fluoranthene	205992					0.0038 <sub>B,C</sub>	0.018 <sub>B,C</sub>	65FR66443
63	Benzo(ghi)Perylene	191242							
64	Benzo(k)Fluoranthene	207089					0.0038 <sub>B,C</sub>	0.018 <sub>B,C</sub>	65FR66443
65	Bis(2-Chloroethoxy)Methane	111911							
66	Bis(2-Chloroethyl)Ether	111444					0.030 <sub>B,C</sub>	0.53 <sub>B,C</sub>	65FR66443
67	Bis(2-Chloroisopropyl)Ether	108601					1,400 <sub>B</sub>	65,000 <sub>B</sub>	65FR66443
68	Bis(2-Ethylhexyl)Phthalate <sup>X</sup>	117817					1.2 <sub>B,C</sub>	2.2 <sub>B,C</sub>	65FR66443
69	4-Bromophenyl Phenyl Ether	101553							
70	Butylbenzyl Phthalate <sup>W</sup>	85687					1,500 <sub>B</sub>	1,900 <sub>B</sub>	65FR66443
71	2-Chloronaphthalene	91587					1,000 <sub>B</sub>	1,600 <sub>B</sub>	65FR66443
72	4-Chlorophenyl Phenyl Ether	7005723							
73	Chrysene	218019					0.0038 <sub>B,C</sub>	0.018 <sub>B,C</sub>	65FR66443
74	Dibenzo(a,h)Anthracene	53703					0.0038 <sub>B,C</sub>	0.018 <sub>B,C</sub>	65FR66443
75	1,2-Dichlorobenzene	95501					2,700 <sub>B</sub>	17,000 <sub>B</sub>	65FR31682
76	1,3-Dichlorobenzene	541731					320	960	65FR66443
77	1,4-Dichlorobenzene	106467					400 <sub>Z</sub>	2,600	65FR31682
78	3,3'-Dichlorobenzidine	91941					0.021 <sub>B,C</sub>	0.028 <sub>B,C</sub>	65FR66443

Priority Pollutant	CAS Number	Freshwater		Saltwater		Human Health For Consumption of: Water + Organism		FR Cite/Source
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	Water + Organism (µg/L)	Organism Only (µg/L)	
79	Diethyl Phthalate <sup>w</sup>	84662				17,000 B	44,000 B	65FR66443
80	Dimethyl Phthalate <sup>w</sup>	131113				270,000	1,100,000	65FR66443
81	Di-n-Butyl Phthalate <sup>w</sup>	84742				2,000 B	4,500 B	65FR66443
82	2,4-Dinitrotoluene	121142				0.11 c	3.4 c	65FR66443
83	2,6-Dinitrotoluene	606202						
84	Di-n-Octyl Phthalate	117840						
85	1,2-Diphenylhydrazine	122667				0.036 B,C	0.20 B,C	65FR66443
86	Fluoranthene	206440				130 B	140 B	65FR66443
87	Fluorene	86737				1,100 B	5,300 B	65FR66443
88	Hexachlorobenzene	118741				0.00028 B,C	0.00029 B,C	65FR66443
89	Hexachlorobutadiene	87683				0.44 B,C	18 B,C	65FR66443
90	Hexachlorocyclopentadiene	77474				240 U,Z	17,000 H,U	57FR60848
91	Hexachloroethane	67721				1.4 B,C	3.3 B,C	65FR66443
92	Ideno(1,2,3-cd)Pyrene	193395				0.0038 B,C	0.018 B,C	65FR66443
93	Isophorone	78591				35 B,C	960 B,C	65FR66443
94	Naphthalene	91203						
95	Nitrobenzene	98953				17 B	690 B,H,U	65FR66443

Priority Pollutant	CAS Number	Freshwater		Saltwater		Human Health For Consumption of: Water + Organism		FR Cite/ Source	
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	Water + Organism (µg/L)	Organism Only (µg/L)		
96	N-Nitrosodimethylamine	62759					0.00069 <sub>B,C</sub>	3.0 <sub>B,C</sub>	65FR66443
97	N-Nitrosodi-n-Propylamine	621647					0.0050 <sub>B,C</sub>	0.51 <sub>B,C</sub>	65FR66443
98	N-Nitrosodiphenylamine	86306					3.3 <sub>B,C</sub>	6.0 <sub>B,C</sub>	65FR66443
99	Phenanthrene	85018							
100	Pyrene	129000					830 <sub>B</sub>	4,000 <sub>B</sub>	65FR66443
101	1,2,4-Trichlorobenzene	120821					260	940	IRIS11/01/96
102	Aldrin	309002	3.0 <sub>G</sub>		1.3 <sub>G</sub>		0.000049 <sub>B,C</sub>	0.000050 <sub>B,C</sub>	65FR31682 65FR66443
103	alpha-BHC	319846					0.0026 <sub>B,C</sub>	0.0049 <sub>B,C</sub>	65FR66443
104	beta-BHC	319857					0.0091 <sub>B,C</sub>	0.017 <sub>B,C</sub>	65FR66443
105	gamma-BHC (Lindane)	58899	0.95 <sub>K</sub>		0.16 <sub>G</sub>		0.019 <sub>C</sub>	0.063 <sub>C</sub>	65FR31682 65FR66443
106	delta-BHC	319868							
107	Chlordane	57749	2.4 <sub>G</sub>	0.0043 <sub>G,aa</sub>	0.09 <sub>G</sub>	0.004 <sub>G,aa</sub>	0.00080 <sub>B,C</sub>	0.00081 <sub>B,C</sub>	65FR31682 65FR66443
108	4,4'-DDT	50293	1.1 <sub>G,ii</sub>	0.001 <sub>G,aa,ii</sub>	0.13 <sub>G,ii</sub>	0.001 <sub>G,aa,ii</sub>	0.00022 <sub>B,C</sub>	0.00022 <sub>B,C</sub>	65FR31682 65FR66443
109	4,4'-DDE	72559					0.00022 <sub>B,C</sub>	0.00022 <sub>B,C</sub>	65FR66443
110	4,4'-DDD	72548					0.00031 <sub>B,C</sub>	0.00031 <sub>B,C</sub>	65FR66443

Priority Pollutant	CAS Number	Freshwater		Saltwater		Human Health For Consumption of:		FR Cite/ Source	
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	Water + Organism (µg/L)	Organism Only (µg/L)		
111	Dieldrin	60571	0.24 K	0.056 K,O	0.71 G	0.0019 G,aa	0.000052 B,C	0.000054 B,C	65FR31682 65FR66443
112	alpha-Endosulfan	959988	0.22 G,Y	0.056 G,Y	0.034 G,Y	0.0087 G,Y	62 B	89 B	65FR31682 65FR66443
113	beta-Endosulfan	33213659	0.22 G,Y	0.056 G,Y	0.034 G,Y	0.0087 G,Y	62 B	89 B	65FR31682 65FR66443
114	Endosulfan Sulfate	1031078					62 B	89 B	65FR66443
115	Endrin	72208	0.086 K	0.036 K,O	0.037 G	0.0023 G,aa	0.76 B	0.81 B,H	65FR31682
116	Endrin Aldehyde	7421934					0.29 B	0.30 B,H	65FR66443
117	Heptachlor	76448	0.52 G	0.0038 G,aa	0.053 G	0.0036 G,aa	0.000079 B,C	0.000079 B,C	65FR31682 65FR66443
118	Heptachlor Epoxide	1024573	0.52 G,V	0.0038 G,V,aa	0.053 G,V	0.0036 G,V,aa	0.000039 B,C	0.000039 B,C	65FR31682 65FR66443
119	Polychlorinated Biphenyls PCBs:			0.014 N,aa		0.03 N,aa	0.000064 B,C,N	0.000064 B,C,N	65FR31682 65FR66443
120	Toxaphene	8001352	0.73	0.0002 aa	0.21	0.0002 aa	0.00028 B,C	0.00028 B,C	65FR31682 65FR66443

**Footnotes:**

- A This recommended water quality criterion was derived from data for arsenic (III), but is applied here to total arsenic, which might imply that arsenic (III) and arsenic (V) are equally toxic to aquatic life and that their toxicities are additive. In the arsenic criteria document (EPA 440/5-84-033, January 1985), Species Mean Acute Values are given for both arsenic (III) and arsenic (V) for five species and the ratios of the SMAVs for each species range from 0.6 to 1.7.

- Chronic values are available for both arsenic (III) and arsenic (V) for one species; for the fathead minnow, the chronic value for arsenic (V) is 0.29 times the chronic value for arsenic (III). No data are known to be available concerning whether the toxicities of the forms of arsenic to aquatic organisms are additive.
- B This criterion has been revised to reflect The Environmental Protection Agency's  $q_1^*$  or  $RfD$ , as contained in the Integrated Risk Information System (IRIS) as of May 17, 2002. The fish tissue bioconcentration factor (BCF) from the 1980 Ambient Water Quality Criteria document was retained in each case.
- C This criterion is based on carcinogenicity of  $10^{-6}$  risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of  $10^{-5}$ , move the decimal point in the recommended criterion one place to the right).
- D Freshwater and saltwater criteria for metals are expressed in terms of the dissolved metal in the water column. The recommended water quality criteria value was calculated by using the previous 304(a) aquatic life criteria expressed in terms of total recoverable metal, and multiplying it by a conversion factor (CF). The term "Conversion Factor" (CF) represents the recommended conversion factor for converting a metal criterion expressed as the total recoverable fraction in the water column to a criterion expressed as the dissolved fraction in the water column. (Conversion Factors for saltwater CCCs are not currently available. Conversion factors derived for saltwater CMCs have been used for both saltwater CMCs and CCCs). See "Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria," October 1, 1993, by Martha G. Prothro, Acting Assistant Administrator for Water, available from the Water Resource center, USEPA, 401 M St., SW, mail code RC4100, Washington, DC 20460; and 40CFR§131.36(b)(1). Conversion Factors applied in the table can be found in Appendix A to the Preamble- Conversion Factors for Dissolved Metals.
- E The freshwater criterion for this metal is expressed as a function of hardness (mg/L) in the water column. The value given here corresponds to a hardness of 100 mg/L. Criteria values for other hardness may be calculated from the following:  $CMC (dissolved) = \exp\{m_A [\ln(\text{hardness})] + b_A\}$  (CF), or  $CCC (dissolved) = \exp\{m_C [\ln(\text{hardness})] + b_C\}$  (CF) and the parameters specified in Appendix B- Parameters for Calculating Freshwater Dissolved Metals Criteria That Are Hardness-Dependent.
- F Freshwater aquatic life values for pentachlorophenol are expressed as a function of pH, and are calculated as follows:  $CMC = \exp(1.005(\text{pH}) - 4.869)$ ;  $CCC = \exp(1.005(\text{pH}) - 5.134)$ . Values displayed in table correspond to a pH of 7.8.
- G This Criterion is based on 304(a) aquatic life criterion issued in 1980, and was issued in one of the following documents: Aldrin/Dieldrin (EPA 440/5-80-019), Chlordane (EPA 440/5-80-027), DDT (EPA 440/5-80-038), Endosulfan (EPA 440/5-80-046), Endrin (EPA 440/5-80-047), Heptachlor (EPA 440/5-80-052), Hexachlorocyclohexane (EPA 440/5-80-054), Silver (EPA 440/5-80-071). The Minimum Data Requirements and derivation procedures were different in the 1980 Guidelines than in the 1985 Guidelines. For example, a "CMC" derived using the 1980 Guidelines was derived to be used as an instantaneous maximum. If assessment is to be done using an averaging period, the values given should be divided by 2 to obtain a value that is more comparable to a CMC derived using the 1985 Guidelines.
- H No criterion for protection of human health from consumption of aquatic organisms excluding water was presented in the 1980 criteria document or in the *1986 Quality Criteria for Water*. Nevertheless, sufficient information was presented in the 1980 document to allow the calculation of a criterion, even though the results of such a calculation were not shown in the document.
- I This criterion for asbestos is the Maximum Contaminant Level (MCL) developed under the Safe Drinking Water Act (SDWA).
- J This fish tissue residue criterion for methylmercury is based on a total fish consumption rate of 0.0175 kg/day.
- K This recommended criterion is based on a 304(a) aquatic life criterion that was issued in the *1995 Updates: Water Quality Criteria Documents for the Protection of Aquatic Life in Ambient Water*, (EPA-820-B-96-001, September 1996). This value was derived using the GLI Guidelines (60FR15393-15399, March 23, 1995; 40CFR132 Appendix A); the difference between the 1985 Guidelines and the GLI Guidelines are explained on page iv of the 1995 Updates. None of the decisions concerning the derivation of this criterion were affected by any considerations that are specific to the Great Lakes.

- cc When the concentration of dissolved organic carbon is elevated, copper is substantially less toxic and use of Water-Effect Ratios might be appropriate.
- dd The selenium criteria document (EPA 440/5-87-006, September 1987) provides that if selenium is as toxic to saltwater fishes in the field as it is to freshwater fishes in the field, the status of the fish community should be monitored whenever the concentration of selenium exceeds 5.0 µg/L in salt water because the saltwater CCC does not take into account uptake via the food chain.
- ee This recommended water quality criterion was derived on page 43 of the mercury criteria document (EPA 440/5-84-026, January 1985). The saltwater CCC of 0.025 ug/L given on page 23 of the criteria document is based on the Final Residue Value procedure in the 1985 Guidelines. Since the publication of the Great Lakes Aquatic Life Criteria Guidelines in 1995 (60FR15393-15399, March 23, 1995), the Agency no longer uses the Final Residue Value procedure for deriving CCCs for new or revised 304(a) aquatic life criteria.
- ff This recommended water quality criterion was derived in *Ambient Water Quality Criteria Saltwater Copper Addendum* (Draft, April 14, 1995) and was promulgated in the Interim final National Toxics Rule (60FR22228-222237, May 4, 1995).
- gg EPA is actively working on this criterion and so this recommended water quality criterion may change substantially in the near future.
- hh This recommended water quality criterion was derived from data for inorganic mercury (II), but is applied here to total mercury. If a substantial portion of the mercury in the water column is methylmercury, this criterion will probably be under protective. In addition, even though inorganic mercury is converted to methylmercury and methylmercury bioaccumulates to a great extent, this criterion does not account for uptake via the food chain because sufficient data were not available when the criterion was derived.
- ii This criterion applies to DDT and its metabolites (i.e., the total concentration of DDT and its metabolites should not exceed this value).