

CHAPTER 2401-11 MARINE AND FRESH WATER QUALITY REGULATIONS

GENERAL PROVISIONS	
2401-11-01	Authority
2401-11-02	Applicability
2401-11-03	Policy
2401-11-04	Definitions
WATER USE CLASSIFICATION	
2401-11-05	Classification of Coastal Water Uses
2401-11-06	Classification of Fresh Water Uses
2401-11-07	Classification of Groundwater
2401-11-08	Classification of Groundwater Areas
WATER QUALITY STANDARDS	
2401-11-09	Basic Criteria Applicable to All Waters
2401-11-10	Microbiological Standards
2401-11-11	pH Standards
2401-11-12	Nutrient Standards
2401-11-13	Dissolved Oxygen
2401-11-14	Total Dissolved Solids, Salinity, Currents
2401-11-15	Temperature
2401-11-16	Turbidity
2401-11-17	Radioactive Materials
2401-11-18	Oil and Petroleum Products
2401-11-19	Toxic Substances
2401-11-20	General Conditions
IMPLEMENTATION MEASURES	
2401-11-21	Approval Required for New or Increased Pollutants
2401-11-22	Discharge Permit Required
2401-11-23	Written Approval for Hazardous Substances
2401-11-24	Response to Spills
TRANSITION UNDER COMPACT	
2401-11-25	Definitions
2401-11-26	Continuation of NPDES Permits
2401-11-27	Palau Discharge Permit Application Required
2401-11-28	Continuation of Permitted Conduct
2401-11-29	Compliance With Law Required
MIXING ZONES	
2401-11-30	Applicability and Limits
2401-11-31	Permit Required
2401-11-32	Mixing Zone Application
2401-11-33	Existing Discharges
2401-11-34	False or Misleading Information Prohibited
2401-11-35	Mixing Zone Application Review
2401-11-36	Mixing Zone Certification Determination
MARINE SANITATION DEVICES	
2401-11-37	Definitions
2401-11-38	Marine Sanitation Device Requirements
SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC)	
2401-11-39	Applicability
2401-11-40	Definitions
2401-11-41	SPCC Requirements
WATER USE AREAS: CLASSIFICATION AND ESTABLISHMENT	
2401-11-42	Surface Waters
2401-11-43	Groundwater Areas
WATER QUALITY CERTIFICATION	
2401-11-44	Permits/Licenses Subject to Certification
2401-11-45	Scope of Work
2401-11-46	Approval Criteria
2401-11-47	Conditioning of the Certification
2401-11-48	Contents of Certification
2401-11-49	Standard For Certification
2401-11-50	Certification Modification
2401-11-51	Contents of Application
2401-11-52	Notice and Hearing
2401-11-53	Waiver
2401-11-54	Effect of New Standards on Permitted Activity
ENFORCEMENT	
2401-11-55	Enforcement

MISCELLANEOUS PROVISIONS	
2401-11-56	Severability Clause
2401-11-57	Repealer

GENERAL PROVISIONS

2401-11-01 Authority

These regulations are promulgated by the Republic of Palau Environmental Quality Protection Board pursuant to the authority granted it by Title 24 of the Palau National Code. These regulations shall have the force and effect of law and shall be binding on all persons and other entities subject to the jurisdiction of the Republic of Palau. The Board shall apply these regulations to all marine and fresh water bodies in the Republic of Palau.

(Effective May 26, 1996)

2401-11-02 Purpose

It is the purpose of these regulations to:

(A) Identify the uses for which the various waters of the Republic of Palau shall be maintained and protected.

(B) Specify the water quality standards required to maintain the designated uses.

(C) Prescribe regulations necessary for implementing, achieving, and maintaining the specified water quality, and to protect health, welfare and property, and to assure that no pollutants are discharged into these waters without being given the degree of treatment or control necessary to prevent pollution.

(Effective May 26, 1996)

2401-11-03 Policy

It is the policy of the Republic of Palau that:

(A) The maintenance of water quality that will provide for the propagation of aquatic life and for recreation in and on the water is an historical and legitimate right of the people of the Republic of Palau.

(B) The achievement of the water quality goals of the Republic of Palau is in the public interest and that achievement of these goals should not represent an unreasonable barrier to economic or social development.

(C) Existing water uses and the level of water quality necessary to protect existing uses shall be

maintained and protected. No further water quality degradation which would interfere with or become injurious to these existing uses is allowable. Existing uses are those actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards.

(D) Waters whose existing quality is less than the quality specified by these standards shall be improved to comply with these standards.

(E) Waters whose existing quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water shall be maintained and protected unless and until the Board finds, after full opportunity for public participation and intergovernmental coordination, that allowing lower water quality is necessary to accommodate an important economic or social development in the area in which the waters are located. In no event, however, may degradation of water quality interfere with or become injurious to existing uses. Implementation of this policy shall be in accordance with Title 24 of the Palau National Code and the rules and regulations promulgated thereunder. [See also: Sections 2401-11-09(B)(6) and 2401-11-20(C)]

(F) Before any new point source of pollution is allowed to lower the quality of water, the source shall be required to meet and maintain the highest statutory and regulatory requirements. Before a non-point source is allowed to lower the water quality, the source shall establish and use the best, cost effective, and reasonable management practices.

(G) To the extent practicable, all new point sources of pollution shall not discharge into near-shore or fresh surface waters.

(H) There shall be no direct or indirect discharge of sewage or other waste into any planned or intended ground or surface source of drinking water.

(I) All sewage and waste shall receive the degree of treatment necessary to protect the beneficial uses of waters of the Republic of Palau before discharge.

(J) In no event shall there be a degradation of water quality which shall cause the water quality to fall below that necessary to protect the uses of the water for the propagation of aquatic life and for recreation in and on the water.

(K) Outstanding national resource waters be protected in a pristine state.

Effective May 26, 1996

2401-11-04 Definitions

(A) "Board" or "EQPB" means the Republic of Palau Environmental Quality Protection Board or its authorized representative.

(B) "Chairman" means the Chairman of the

Republic of Palau Environmental Quality Protection Board personally or his authorized representative.

(C) "Coastal Waters" means "near-shore waters", "off-shore waters" and those brackish, fresh, and salt waters that are subject to ebb and flow of the tide.

(D) "Dilution Ratio" as used in Section 2401-11-32(A)(6) is the ratio of entrained water to quantity of discharged water at the plume centerline after initial dilution.

(E) "Groundwater" means any and all water found beneath the earth whether in confined or unconfined areas.

(F) "Initial Dilution" means the dilution that the wastewater has achieved with the receiving water at the centerline of the mixing zone as defined in Division I below where the mixture surfaces or the density of the mixture becomes equal to the density of the surrounding receiving water. The "initial dilution" may be calculated by using the procedure in *Users Guide and Documentation for Outfall Plume Model* (D.J. Baumgartner, D.S. Trent and K.V. Byram, Working Paper #80, EPA, Pacific Northwest Water Laboratory May 1971. (Available by writing National Technical Information Service 5285 Port Royal Road, Springfield, Virginia 22151, Order Number NTISPB 204-557).

(G) "License" or "Permit" means any license or permit granted by an agency of the National Government to conduct any activity which may result in any discharge into the waters of the Republic of Palau.

(H) "Licensing or Permitting Agency" means any agency of the National Government to which application is made for a license or permit and which has the authority to issue a license or permit

(I) "Mixing Zone" means a defined area around a point source in which specific water quality criteria may be revised in accordance with Sections 2401-11-30 through 2401-11-36, inclusive of these regulations. A zone of mixing is the volume of water near the point of discharge within which the waste immediately mixes with ocean water due to the momentum of the waste discharge and the difference in density between the waste and the receiving

(J) "Natural" means free of substances or conditions or a combination of both attributable to human activities.

(K) "Natural Condition" or "Naturally Occurring" means that state of water quality that would exist at a specified time and place in the absence of human activities.

(L) "Near-Shore Waters" means those salt waters lying within a defined reef area, or those salt waters up to 1,000 feet off-shore where there is no defined reef area.

(M) "Non-Point Source" means any origin from

which pollutants emanate in an unconfined and unchanneled manner including but not limited to surface runoff and leachate seeps.

(N) "Off-Shore Waters" means all coastal waters beyond the limit defined for "near-shore" waters.

(O) "Outstanding National Resource Waters" means the waters of national spawning grounds, preserves, and waters of exceptional recreational or ecological significance.

(P) "Person" means the Republic of Palau, a state, a political subdivision, a public or private institution, corporation, partnership, joint venture, association, firm or company organized or existing under the Laws of Palau or of any state or country, a lessee or other occupant of property, or any individual, acting singly or as a group.

(Q) "Point Source" means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, vessel or other floating craft from which pollutants are or may be discharged.

(R) "Pollutant" means but is not limited to dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical waste, biological material, radioactive materials, heat, wrecked or discarded equipment, rock, sand, and industrial, municipal and agricultural waste.

(S) "Pollutant Discharge" means either a point source or non-point source of pollutant discharge.

(T) "Pollutant Discharge Permit" means any Republic of Palau Environmental Quality Protection Board Pollutant Discharge Permit issued pursuant to Sections 2401-11-21 through 2401-11-36, inclusive, of the Republic of Palau Environmental Quality Protection Board Marine and Fresh Water Quality Regulations.

(U) "Surface Water" means any water as found on the surface of the earth or under the influence of run off or other water.

(V) "Water Quality Certification" means a statement which asserts that a proposed discharge activity will not violate applicable water quality standards.

(W) "Water Quality Standards" means standards established for any and all waters located within the Republic of Palau.

(X) "Wetlands" means those areas that are inundated or saturated with surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include saltwater swamps, freshwater/marshes, and cultivated wetlands. These waters shall be classified as surface water.

(Effective May 26, 1996)

WATER USE CLASSIFICATION

2401-11-05 Classification of Coastal Water Uses

Coastal waters are classified in accordance with uses to be protected in each class as follows:

(A) Class AA Waters.

(1) The uses to be protected in this class of water are oceanographic research, the support and propagation of shellfish and other marine life, conservation of coral reefs and wilderness areas, compatible recreation and other aesthetic enjoyment.

(2) It is the objective that this class of waters remain as near to their natural state as possible with an absolute minimum of pollution from any source.

(3) To the extent possible, the wilderness character of such areas shall be protected. No point source discharge will be permitted in these waters, nor will destruction of reefs, aquatic habitats or other resources be permitted.

(4) The classification of any water areas as Class AA shall not preclude other uses of such waters compatible with these objectives and in conformance with the standards applicable to them.

(B) Class A Waters.

(1) The uses to be protected in this class of waters are recreational (including fishing, swimming, bathing, and other water contact sports), aesthetic enjoyment, and the support and propagation of aquatic life.

(2) It is the objective that in this class of waters, use for recreational purposes and aesthetic enjoyment shall not be limited in any way.

(3) Class A waters shall be kept clear of any trash, solid materials and oil, and shall not act as receiving waters for any effluent which has not received the highest degree of treatment or control practicable under existing technological and economic conditions and shall be compatible with the standards established for this class.

(C) Class B Waters.

(1) The uses to be protected in this class of waters are small boat harbors, commercial and industrial shipping, bait fishing, compatible recreation, the support and propagation of aquatic life, and aesthetic enjoyment.

(2) It is the objective for this class of waters that discharge of any pollutant be controlled to the maximum extent possible and that sewage and industrial effluent receive the highest degree of treatment practicable under existing technological and economic conditions, and shall be compatible with the standards established for this class.

(3) The Class B designation should apply only to a limited area next to boat docking facilities in bays and harbors.

(4) The rest of the water area in such bay or harbor not falling within the area identified in the previous paragraph shall be Class A unless given some other specific designation.

(Effective May 26, 1996)

2401-11-06 Classification of Fresh Water Uses

Fresh waters are classified in accordance with the uses to be protected as follows:

(A) Class 1 Waters.

(1) The uses to be protected in this class of waters are drinking water supply, food processing, the support and propagation of aquatic life, and compatible recreation.

(2) It is the objective that this class of waters remain in as near their natural state as possible with an absolute minimum of pollution from any source. To the extent possible, the wilderness character of such areas shall be protected. Waste discharge into these waters is prohibited.

(B) Class 2 Waters.

(1) The uses to be protected in this class of waters are bathing, swimming, the support and propagation of aquatic life, compatible recreation, and agricultural water supply.

(2) It is the objective for 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. Such waters shall be kept clean of trash, solid waste materials and oils and shall not act as receiving waters for any effluent which has not received the highest degree of treatment or control practicable under existing technological and economic conditions, and shall be compatible with the standards established for this class.

(Effective May 26, 1996)

2401-11-07 Classification of Groundwater

(A) Class I: Special Groundwater are those that are highly vulnerable to contamination because of the hydrological characteristics of the areas under which they occur and that are also characterized by either of the following two factors:

(1) Irreplaceable, in that no reasonable alternative source of drinking water is available to substantial populations; or

(2) Ecologically Vital, in that the aquifer provides the base flow for a particularly sensitive ecological system that, if polluted, would destroy a unique habitat.

(B) Class II: Current and potential sources of drinking water and waters having other beneficial uses and all other groundwater that are currently used

or are potentially available for drinking water or other beneficial use.

(C) Class III: Groundwater not considered potential sources of drinking water and of limited beneficial uses are groundwater that are heavily saline, with total dissolved solids levels over 10,000 mg/l or are otherwise contaminated beyond levels that allow cleanup using methods reasonably employed in public water system treatment. These groundwater also must not migrate to Class I or II groundwater or have a discharge to surface water that could cause degradation.

(Effective May 26, 1996)

2401-11-08 Classification of Groundwater Areas

(A) Class I Groundwater Areas: All sources of fresh groundwater on all islands whether publicly or privately owned, used or potentially used, for domestic, culinary or food processing purposes.

(B) Class II Groundwater Areas: All fresh groundwater not included in Class I or Class III.

(C) Class III Groundwater Areas: All groundwater not considered potential sources of drinking water and of limited beneficial use which are heavily saline, with total dissolved solids levels over 10,000 mg/l, or which are otherwise contaminated beyond levels that allow cleanup using methods reasonably employed in public water system treatment.

(Effective May 26, 1996)

WATER QUALITY STANDARDS

2401-11-09 Basic Criteria Applicable to All Waters

(A) All waters shall be capable of supporting desirable aquatic life and shall be suitable for recreation in and on the water.

(B) In furtherance of the goal set forth in Division A of this Section, all waters shall be:

(1) Free of visible floating materials, oils, greases, scum and other floating matter attributable to human activities;

(2) Free from materials attributable to sewage, industrial waste or other human activities that produce visible turbidity or settle out to form deposits;

(3) Free from materials attributable to sewage, industrial waste or other human activities that produce objectionable color, odor or taste directly or by chemical or biological action with the water or the life forms in the water;

(4) Free from substances attributable to human activities that induce undesirable aquatic life or degrade the indigenous biota;

(5) Maintained free of toxic substances in concentrations that are toxic to or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analysis of species diversity, population density, growth anomalies, bioassay of appropriate duration or other appropriate methods as specified by the Board. The survival of aquatic life in waters subjected to waste discharge or other controllable water quality factors shall not be less than that for the same water body in areas unaffected by the waste discharge, or when necessary for other control water that is consistent with the requirements for "experimental water" as described in *Standard Methods for the Examination of Water and Wastewater*, latest edition. As a minimum, compliance with this objective as stated in the previous sentence shall be evaluated with a ninety-six (96) hour bioassay; and,

(6) The Board shall apply natural background levels in place of specified water quality criteria standards if natural background water quality is better than that specified in other provisions of the standards in order to preserve the water quality found in the natural state to prevent the degradation of natural conditions and implement the anti-degradation provisions in Section 2401-11-03. [See: Section 2401-11-20(C)].

(Effective May 26, 1996)

2401-11-10 Microbiological Standards

<u>STANDARD</u>	<u>APPLICABLE CLASSES</u>
(A) The median total or fecal coliform bacteria count shall not exceed 70/100ml for any 10 consecutive samples nor shall any single sample exceed 230/100 ml.	AA and 1
(B) Fecal Coliform count shall not exceed a geometric mean of 200/100ml for any 10 consecutive samples nor shall any single sample exceed 400/100 ml.	A, B and 2
(C) Enterococci count shall not exceed a geometric mean of 33/100ml for any 5 samples in a given 30 day period nor shall any single sample shall exceed 60/100ml.	AA and A
(D) In areas where shellfish are harvested for human consumption, the micro-biological standards for Class AA and 1 Waters shall apply.	A, B and 2

(Effective May 26, 1996)

2401-11-11 pH Standards

<u>STANDARD</u>	<u>APPLICABLE CLASSES</u>
(A) pH variation shall be within 7.7 and 8.5 pH units.	AA, A and B
(B) pH variation shall not be greater than 0.2 pH units from natural conditions; but not lower than a pH of 6.5 or higher than a pH of 8.5 from other than natural causes.	1
(C) pH variation shall not be greater than 0.5 pH units from natural conditions; but not lower than a pH of 6.5 or higher than a pH of 8.5 from other than natural causes.	2

(Effective May 26, 1996)

2401-11-12 Nutrient Material

<u>STANDARD</u>	<u>APPLICABLE CLASSES</u>
(A) The ratio of total nitrogen to total phosphorus concentration shall be within:	
(1) 11.1 - 27.1	AA and A
(2) 6.1 - 18.1	B
(3) 10% variation of the naturally occurring ratio	1 and 2
(B) The concentration of total nitrogen and total phosphorus shall not vary by more than 10% from the natural conditions.	All Waters
(C) Except for concentrations attributable to natural causes nutrient concentration shall not exceed:	
(1) Total Phosphorus	
(a) 0.025 mg/l as P	AA and A
(b) 0.500 mg/l as P	B
(c) 0.200 mg/l as P	1 and 2
(d) 0.050 mg/l as P	Fresh Waters entering lakes or reservoirs (at a point of entry) and lakes and reservoirs
(2) Total Nitrogen	
(a) 0.400 mg/l as N	AA and A
(b) 0.800 mg/l as N	B
(c) 0.750 mg/l as N	1
(d) 0.500 mg/l as N	2

(Effective May 26, 1996)

2401-11-13 Dissolved Oxygen

<u>STANDARD</u>	<u>APPLICABLE CLASSES</u>
(A) Dissolved oxygen concentrations shall not vary by more than	

25% from natural conditions. All Waters
 (B) Except for concentrations attributable to natural causes dissolved oxygen concentration shall not be less than:

- (1) The greater of 6.0 mg/l, 75% or Saturation AA and 1
- (2) 5.0 mg/l A and 2
- (3) 4.5 mg/l B

(Effective May 26, 1996)

2401-11-14 Total Dissolved Solids, Salinity, Currents

STANDARD

APPLICABLE CLASSES

No change in channels, basin geometry or water influx shall be made which would cause permanent changes in isohaline patterns of more than 10% from natural conditions or change in salinity outside the range of 29-35 parts per thousand or which would otherwise adversely affect the indigenous biota and natural sedimentary patterns. All Waters

(Effective May 26, 1996)

2401-11-15 Temperature

STANDARD

APPLICABLE CLASSES

Temperature shall not vary by more than 1.5 degree Fahrenheit (0.9 degree Celsius) from the natural conditions in marine and fresh waters. All Waters

(Effective May 26, 1996)

2401-11-16 Turbidity

STANDARD

APPLICABLE CLASSES

Turbidity as measured by Nephelometric Turbidity Units (NTU) shall not be:

- (A) Greater than 1 NTU AA and A
- (B) Greater than 2 NTU B
- (C) Greater than 5% above natural conditions 1
- (D) Greater than 10% above natural conditions 2

2401-11-17 Radioactive Materials

STANDARD

APPLICABLE CLASSES

(A) The concentration of radio-

active materials in water shall not exceed 1/30th of the maximum permissible limits established for continuous occupational exposure given in the latest edition of the *U.S. National Bureau of Standards Handbook No. 69*. All Waters

(B) No radionuclides shall be present in amounts that would exceed the maximum permissible levels established in the Republic of Palau Public Water Supply Regulations All Waters

(C) The concentration of radioactive materials in water shall not result in the accumulation of radioactivity in plants or animals that would result in a hazard to humans or aquatic life. All Waters

(Effective May 26, 1996)

2401-11-18 Oil and Petroleum Products

STANDARD

APPLICABLE CLASSES

The concentration of oil and petroleum products shall not:
 (A) Be detectable as a visible film sheen or discoloration of the surface or cause an objectionable odor. All Waters

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

(C) Form an oil deposit on beaches or shorelines or on the bottom of a body of water. All Waters

(Effective May 26, 1996)

2401-11-19 Toxic Substances

Marine and fresh water standards for toxic substances are set forth in Appendix A to the these Marine and Fresh Water Quality Regulations. The Board may amend Appendix A from time to time to add additional substances or modify the standards for particular substances as the Board deems appropriate. (Effective May 26, 1996)

2401-11-20 General Conditions

(A) All methods of sample collection, preservation, and analysis used to determine compliance with these standards shall be in accordance with those

specified in the latest edition of *Standard Methods for the Examination of Water and Wastewater*, by the American Public Health Association or methods specified by the United States Environmental Protection Agency in 40 CFR Section 136 et. seq., as appropriate. Samples should be collected at approximately equal intervals and under those conditions of tide, rainfall, and time of day when pollution is most likely to be the greatest or at a maximum level.

(B) Whenever water quality standards are exceeded, samples shall be taken at frequent intervals to be determined by the Board according to the severity of the violation.

(C) Whenever natural conditions are of a better quality than an assigned water quality criteria, the natural conditions shall constitute the water quality criteria. [See also: Sections 2401-11-03(E) and 2401-11-09(B)(6)].

(D) Whenever two numeric criteria are in conflict, the more stringent criteria shall constitute the water quality criteria.

(E) Pollutant discharge to either surface or ground waters shall be controlled so as to protect not only the receiving water but also those waters into which the receiving waters may flow.

(Effective May 26, 1996)

IMPLEMENTATION MEASURES

2401-11-21 Approval Required for New or Increased Pollutants

(A) It shall be a violation of these regulations for any person to initiate any project which may represent a new or increased source of pollution, either point source or non-point source, without first obtaining written approval of the EQPB.

(B) It is incumbent upon the person initiating the project to demonstrate to the EQPB that the project will not directly or indirectly impair any beneficial uses of the affected waters.

(C) The EQPB may place conditions of the construction and/or operation of the project as necessary to mitigate or eliminate any adverse water quality impacts associated with the project.

(D) The EQPB may withhold approval for any project until the project has received all necessary permits and clearances or has demonstrated that such clearances will be obtained at the appropriate time.

(Effective May 26, 1996)

2401-11-22 Discharge Permit Required

Any point source of discharge shall be in violation of these regulations unless the discharge operator has received a Pollutant Discharge Permit from the EQPB.

(Effective May 26, 1996)

2401-11-23 Written Approval for Hazardous Substances

It shall be in violation of these regulations for any person to store, dispose of or allow to accumulate any hazardous substance in such a manner that the substance may enter the surface or ground waters of the Republic of Palau without first obtaining written approval of the EQPB. Such substances include, but are not limited to petroleum products, pesticides, radioactive substances, and toxic chemicals. The EQPB may require persons handling hazardous substances to implement measures to reduce the possibility of contaminating the surface or ground waters of the Republic of Palau.

(Effective May 26, 1996)

2401-11-24 Response to Spills

(A) In the event of an accidental spill or discharge of hazardous substances, the responsible person shall immediately notify the EQPB and take all reasonable measures to contain the material so that it will not contaminate the surface or ground waters of the Republic of Palau.

(B) Failure to notify the EQPB within 24 hours and take reasonable mitigation measures shall also constitute a violation of these regulations.

(Effective May 26, 1996)

TRANSITION UNDER COMPACT

2401-11-25 Definitions

Unless specifically indicated otherwise, or unless the context clearly requires a different meaning, for the purposes of Sections 2401-11-25 through 2401-11-29, inclusive:

(A) "NPDES Permit" means any USEPA National Pollutant Discharge Elimination System Permit issued by the USEPA under the authority of the U.S. Federal Water Pollution Control Act Amendments of 1972, 82 Stat. 886, 33 U.S.C. 1251, et seq., as amended by the Clean Water Act of 1977, 91 Stat. 1566, 33 U.S.C. 1251, et seq., and the Water Quality Act of 1987, 101 Stat. 7, 33 U.S.C. 1251, et seq.

(B) "USEPA" means the United States Environmental Protection Agency.

(Effective May 26, 1996)

2401-11-26 Continuation of NPDES Permits

(A) All NPDES Permits, and the terms and conditions thereof, in effect on September 29, 1994 for discharges within the territory of the Republic of Palau shall continue in effect after the implementation of the Compact of Free Association between the

Republic of Palau and the United States of America and are hereby adopted as EQPB Pollutant Discharge Permits.

(B) All holders of NPDES Permits and those that discharge pollutants, whether directly or indirectly, whether from point-sources or non-point-sources must continue to abide by the terms and conditions of the NPDES permits (as adopted as EQPB Pollutant Discharge Permits) until they are replaced by a subsequent EQPB Pollutant Discharge Permit.

(Effective May 26, 1996)

2401-11-27 Palau Discharge Permit Application Required

All holders of NPDES Permits and those that discharge pollutants, whether directly or indirectly, whether from point-sources or non-point-sources shall, within 90 days of the implementation of the Compact of Free Association, apply to the EQPB for a new or revised Pollutant Discharge Permit.

(Effective May 26, 1996)

2401-11-28 Continuation of Permitted Conduct

During the time period when such a permit application is pending before the EQPB, the discharges authorized by the NPDES Permit (as adopted as an EQPB Pollutant Discharge Permit) may continue, notwithstanding any expiration date on the permit. Once, however, the EQPB issues a new Pollutant Discharge Permit as a result of the application required by Section 2401-11-27, all authorizations to discharge pollutants under the NPDES Permit (as adopted as an EQPB Pollutant Discharge Permit) shall cease.

(Effective May 26, 1996)

2401-11-29 Compliance With Law Required

Nothing in these regulations shall be construed to allow any person to avoid the requirements of the Environmental Quality Protection Act, and the Regulations promulgated thereunder, including but not limited to the Sections 2401-11-21 and 2401-11-22 of the Marine and Fresh Water Quality Regulations requirement that prior written authorization and appropriate permits be obtained from the EQPB prior to the initiation of any project that may represent a new or increased source of either point-source or non-point source pollution.

(Effective May 26, 1996)

MIXING ZONES

2401-11-30 Applicability and Limits

(A) The water quality standards and criteria set

forth in Sections 2401-11-9 through 2401-11-19 may apply within a mixing zone unless specific alternative criteria have been approved by the Board.

(B) 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.

(Effective May 26, 1996)

2401-11-31 Permit Required

(A) All new point source discharges beginning after December 1, 1990 shall apply for an EQPB Pollutant Discharge Permit. This permit shall be required even if it can be demonstrated that the discharge will meet the applicable water quality standards at the point of discharge.

(B) It shall be a violation of these regulations for any person to commence discharging from a new point or non-point source without first obtaining all required permits

(Effective May 26, 1996)

2401-11-32 Mixing Zone Application

(A) Any application for a zone of mixing must contain the following:

(1) Evidence that the EQPB Pollutant Discharge Permit has been applied for and will be obtained;

(2) A description of the waste to be discharged including flow rate and pollutant types and quantities;

(3) The location of the discharge and a description of the disposal methods (e.g. outfall size, number and type of diffusers, etc.);

(4) Evidence that the concentration of toxic substances present in the discharge will not violate water quality standards for toxic substances;

(5) Identification of those substances for which the mixing zone is required;

(6) A certification for each substance identified in these regulations that after initial mixing the concentration of the substance will not exceed the applicable water quality standard. The following equation shall be used to calculate concentration after initial dilution:

$$C_m = \frac{C_e - C_b(D_1)}{(D_1 + 1)}$$

C_m = Concentration after mixing

C_e = Effluent concentration (instantaneous maximum)

C_b = Background concentration

D_1 = Dilution ratio

(7) Evidence that the basic water quality standards (Section 2401-11-9 through 2401-11-19, inclusive) will not be violated within the mixing zone;

(8) A proposed schedule of effluent and receiving water monitoring to determine compliance with the proposed mixing zone;

(9) A technical justification why a mixing zone should be permitted; and,

(10) Any other information required by the Board.

(B) The mixing zone shall be defined under those conditions of tide, wind, runoff, density stratification and discharge that would result in the minimum dilution.

Effective May 26, 1996

2401-11-33 Existing Discharges

All existing point source discharges must apply to the Board for a mixing zone or demonstrate that one is not required not later than June 1, 1992. The application procedure is identical to the one for new sources.

Effective May 26, 1996

2401-11-34 False or Misleading Information Prohibited

It shall be in violation of these standards for any person to knowingly present false or misleading information to the Board in an application for a mixing zone.

Effective May 26, 1996

2401-11-35 Mixing Zone Application Review

(A) In reviewing a mixing zone application the Board will consider:

(1) Present and anticipated uses of the water body.

(2) Whether an adequate zone of passage will exist for the movement of aquatic life.

(3) The proximity of other mixing zones.

(4) Whether the granting of a mixing zone is in the public interest.

(B) The Board may request additional information from the applicant that is deemed relevant to the Board's determination.

Effective May 26, 1996

2401-11-36 Mixing Zone Certification Determination

(A) The Board may either approve, conditionally approve or disapprove a mixing zone application after conducting a public hearing on the application. The Board will notify the applicant in writing of its determination. The notification will include, but is not limited to:

(1) The duration of the mixing zone; and,

(2) Any conditions placed upon the Board's

approval of the application. Conditions may include, but are not limited to:

(a) Effluent and receiving water monitoring and reporting requirements;

(b) A timetable for the reduction or elimination of the discharge; and,

(c) The parameters for which the mixing zone is being granted and the alternative criteria that will apply within the mixing zone.

(B) If the Board disapproves a mixing zone application, it will notify the applicant, in writing, of the reasons for the disapproval.

Effective May 26, 1996

MARINE SANITATION DEVICES

2401-11-37 Definitions

Unless specifically indicated otherwise, or unless the context clearly requires a different meaning, for the purposes of Sections 2401-11-37 and 2401-11-38:

(A) "Discharge" includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping.

(B) "Federal Water Pollution Control Act" means the U.S. Federal Water Pollution Control Act Amendments of 1972, 82 Stat. 886, 33 U.S.C. 1251, et seq., as amended by the Clean Water Act of 1977, 91 Stat. 1566, 33 U.S.C. 1251, et seq., and the Water Quality Act of 1987, 101 Stat. 7, 33 U.S.C. 1251, et seq.

(C) "Marine Sanitation Device" includes any equipment for installation on board a vessel and which is designed to receive, retain, treat, or discharge sewage and any process to treat such sewage.

(D) "Sewage" means human body wastes and the wastes from toilets and other receptacles intended to receive or retain body wastes.

(E) "Vessel" includes every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on any waters of or within the Republic of Palau.

(F) Other terms shall have the Definitions set forth in 40 CFR Section 140.1 and 33 CFR Section 159.3.

Effective May 26, 1996

2401-11-38 Marine Sanitation Device Requirements

All Marine Sanitation Device requirements in effect within the Republic of Palau on September 29, 1994, as set forth in 33 CFR Part 159 and 40 CFR Part 140 shall continue in effect after the implementa-

tion of the Compact of Free Association between the Republic of Palau and the United States of America and are hereby adopted by reference and no discharge of sewage pertaining to vessels shall occur within the Republic of Palau in violation of said Marine Sanitation Device Requirements.

(Effective May 26, 1996)

SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC)

2401-11-39 Applicability

Sections 2401-11-39 through 2401-11-41 apply but are not limited to all facilities that, on September 29, 1994, were subject to the SPCC requirements of USEPA. This includes, but is not limited to all bulk petroleum product storage facilities within the Republic of Palau.

(Effective May 26, 1996)

2401-11-40 Definitions

Unless specifically indicated otherwise, or unless the context clearly requires a different meaning, for the purposes of this Section,

(A) "Owner or Operator" means any person owning or operating an on-shore facility or an off-shore facility, and, in the case of an abandoned facility, any person that owned or operated the facility immediately prior to abandonment.

(B) "SPCC Plan" means the Spill Prevention Control and Countermeasure Plan required pursuant to 40 CFR Part 112.

(Effective May 26, 1996)

2401-11-41 SPCC Requirements

(A) The SPCC Plan and oil spill requirements of 40 CFR Parts 110, 111 and 112 are hereby adopted by reference, except that the Board shall have the authority to take any action or impose any requirement that said Parts of the CFR authorize the Administrator to take or impose.

(B) Any person that owns or operates any facility, whether off-shore or on-shore, shall complete, maintain, and, as either necessary or as required by the EQPB, revise the SPCC plan for that facility to the same extent required by 40 CFR Parts 110, 111 and 112.

(Effective May 26, 1996)

WATER USE AREAS: CLASSIFICATION AND ESTABLISHMENT

2401-11-42 Surface Waters

The following classification of water uses shall apply to the following areas:

(A) Babeldaob
(1) Class AA: All areas not otherwise classified and those coastal waters not having a specific water use classification are considered Class AA Waters.

(2) Class B: Village Docks

(B) Koror

(1) Class AA: All areas (not otherwise classified)

(2) Class A:

(a) Meyuns

(b) Echang

(c) Cholebdechal (Oleblechol)

(d) Ngiritang

(e) M-Dock (Singhatoba) Point

(f) Ngetmeduch

(g) Mechang

(3) Class B:

(a) Malakal (Ngemelachel) Harbor

(b) M-Dock (Singhatoba) including S.E. of Ngerbeched Shore

(c) Kemangel Toachel, excluding T-Dock (Ngerkemais)

(d) Metukerademul to E. side of old Japanese Dock (Derromel)

(e) Ngereksong

(C) Peleliu

(1) Class AA: All areas (not otherwise classified)

(2) Class A:

(a) Ngebad to Ngarekeiukel point

(b) Southern side of island

(3) Class B: Akalakul (Elochel) Dock

(D) Angaur

(1) Class AA: All areas (not otherwise classified)

(2) Class A:

(a) Pkulamekaep (Bkutamekaek) point to Medorm

(b) Beach south of Pkulagelul (Bkulengelul) point

(c) Beach between Ngedeloch point and Medorm

(3) Class B: Angaur (Ngeaur) Harbor

(E) Sonsorol

Class AA: All areas (not otherwise classified)

(F) Tobi

Class AA: All areas (not otherwise classified)

(G) Merir

Class AA: All areas (not otherwise classified)

(H) Pulo Anna

Class AA: All areas (not otherwise classified)

(Effective May 26, 1996)

2401-11-43 Groundwater Areas

The following classification of water uses shall apply to the following areas:

(A) Class I Groundwater: All sources of fresh groundwater on all islands, whether publicly or

privately owned, used or potentially used, for domestic, culinary or food processing purposes.

(B) Class II Groundwater: All fresh groundwater not included in Class I and Class III.

(C) Class III Groundwater: All groundwater not considered potential sources of drinking water and of limited beneficial use which are heavily saline, with total dissolved solids levels over 10,000 mg/l or which are otherwise contaminated beyond levels that allow cleanup using methods reasonably employed in public water system treatment.

(Effective May 26, 1996)

WATER QUALITY CERTIFICATION

2401-11-44 Permits/Licenses Subject to Certification

(A) Water quality certification must be provided by the Board prior to the issuance of any EQPB Permits or any permits required by Sections 402 and 404 of the United States Clean Water Act (33 U.S.C. Sections 1342 and 1344) and section 10 of the United States Rivers and Harbors Act, approved March 3, 1899, (33 U.S.C. 403).

(B) A Republic of Palau Foreign Investment Board license may also be required in order to receive water quality certification.

(Effective May 26, 1996)

2401-11-45 Scope of Work

The scope of review of applications for certification shall be sufficient to determine that no permit would violate water quality standards or become a source of pollution in the future. Such review shall include an examination of but not limited to the following:

(A) Impact on water quality at the proposed project site;

(B) Impacts on water quality of any or all waters influenced by the project, including groundwater, downstream and upstream waters, tidal influenced water or other fresh, marine, or brackish water influenced by the project as a result of topography, percolation, recharge currents or other hydrologic and geologic conditions;

(C) Impacts of operation of the project on water quality at site and influenced waters as described in Division B; and

(D) All criteria and standards included in these regulations shall be considered.

(Effective May 26, 1996)

2401-11-46 Approval Criteria

(A) No certification shall be issued in violation of

the national policy set forth in Section 2401-11-03 of these regulations.

(B) Certification of projects which are not water dependent shall be denied.

(C) Certification of non-water dependent projects for which there is a viable alternative shall be denied.

(D) Certification is denied if the project will prevent or interfere in the maintenance of applicable water quality standards.

(E) Certification is denied if impacts to water quality can not be made acceptable through conditioning of the certification and/or permit for which certification is sought.

(Effective May 26, 1996)

2401-11-47 Conditioning of the Certification

(A) The Board shall place any conditions on a water quality certification that are necessary to assure the applicant will comply with water quality standards, effluent limitations, and with any applicable Republic of Palau or its State's Laws or Regulations.

(B) Conditions shall include, but are not limited to:

(1) structural and nonstructural mitigation measures;

(2) appropriate effluent treatment systems;

(3) appropriate operations and maintenance plans;

(4) compensation to the fullest extent possible for functional losses to the local ecosystem by the unavoidably lost wetlands; and,

(5) compensation for the loss of certain areas with the permanent preservation of other similar ecosystems.

(Effective May 26, 1996)

2401-11-48 Contents of Certification

A certification made by the Board shall include the following:

(A) The name and address of the applicant;

(B) A statement that the Chairman has either:

(1) Examined the application made by the applicant to the licensing or permitting agency (specifically identifying the number or code affixed to such application) and bases the certification upon an evaluation of the information contained in such application which is relevant to water quality considerations; or,

(2) Examined other information furnished by the applicant sufficient to permit the Chairman to make the statement described in Subdivision 1 above;

(C) A statement that there is a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water

quality standards;

(D) A statement of any conditions which the Chairman deems necessary or desirable with respect to the discharge of the activity; and,

(E) Such other information as the Chairman may determine to be appropriate.

(Effective May 26, 1996)

2401-11-49 Standard For Certification

If, after considering the complete application, comments received during the public comment period, the record of any public hearing held pursuant to 24 PNC Section 162 and other information and data as the Chairman deems relevant, should the Chairman determine that there is a reasonable assurance that applicable water quality standards will not be violated and the best practicable 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 Chairman shall so certify.

(Effective May 26, 1996)

2401-11-50 Certification Modification

The Chairman may modify the certification prior to the issuance of any applicable license or permit, after consideration of information presented by the applicant, licensing or permitting agency or other government agencies or interested parties.

(Effective May 26, 1996)

2401-11-51 Contents of Application

(A) An applicant for certification shall submit a complete description of the discharge involved in the activity for which certification is sought, with a request for certification signed by the applicant. Such description shall include the following:

(1) The name and address of the applicant;

(2) A description of the facility or activity, and of any discharge into the Republic of Palau waters which may result from the conduct of any activity including, but not limited to the construction or operation of the facility, including characteristics of the discharge, and the location or locations at which such discharge may enter waters of the Republic;

(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 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 discharges;

(B) The Chairman may require the submission of additional information after a certification application has been filed, and shall insure that, if the 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 Chairman shall notify the applicant, in writing, within thirty (30) days of the submission of an application, 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 will be informed, in writing, by the Chairman, when a certification application is considered to be complete. The Chairman shall act on a request for certification within a period which shall not exceed three (3) months;

(D) The applicant is required to notify the Board immediately, in writing, of changes which may effect the application and certification process;

(E) Fees shall be made payable to the National Treasury. The Republic and its State governments and agencies are exempt from paying filing fees.

(Effective May 26, 1996)

2401-11-52 Notice and Hearing

(A) The Chairman may, upon request, provide the opportunity for a public hearing(s) to consider the issuance of a water quality certification. A notice shall be published in accordance with 24 PNC Section 162.

(B) The Chairman shall inform the applicant, in writing, that such action has been taken.

(C) All publication costs related to public hearing(s) notification(s) shall be paid by the applicant to the necessary and appropriate newspaper agency(ies) prior to publication date. Failure to do so may result in a delay in the certification process beyond three (3) months.

(Effective May 26, 1996)

2401-11-53 Waiver

If the discharge in question is the result of activities which receive a nationwide permit for the discharge of dredge and fill materials, thereby fulfilling specific conditions of that permit pursuant to 24 PNC Section 162, then the Chairman will

determine, on a case-by-case basis, which projects are considered to be minor, with a negligible impact and non-controversial. Certification requirements of this section shall be waived for minor projects which have a negligible impact, and are non-controversial activities within three (3) months of the receipt of a completed application.

(Effective May 26, 1996)

2401-11-54 Effect of New Standards on Permitted Activity

The Board shall review any project or activity wherever:

(A) A license or permit was issued without certification due to the absence of applicable water quality standards;

(B) Water quality standards applicable to the waters into which the licensed or permitted activity may discharge are subsequently established before the activity is completed; and,

(C) The Board determines that such uncertified activity is violating water quality standards.

(Effective May 26, 1996)

ENFORCEMENT

2401-11-55 Enforcement

Any person in violation of any of the provisions of

these regulations shall be subject to enforcement and court action under 24 PNC Sections 161 through 172, inclusive.

(Effective May 26, 1996)

MISCELLANEOUS PROVISIONS

2401-11-56 Severability Clause

If any provisions of these regulations or the application of any provision of these regulations to any person or circumstances is held invalid, the application of such provision to other persons or circumstances and the remainder of these regulations shall not be effected thereby.

(Effective May 26, 1996)

2401-11-57 Repealer

The regulations contained herein shall replace the Republic of Palau EQPB Marine and Fresh Water Quality Standards Regulations in effect upon the effective date of these regulations.

(Effective May 26, 1996)

APPENDIX A
TOXIC SUBSTANCE CRITERIA
 (Concentrations in ug/L unless otherwise stated)

	CHEMICAL NAME	CHRONIC AQUATIC LIFE CRITERIA (Instantaneous maximum)		HUMAN HEALTH CRITERIA (30 Day Average)	
		FRESH WATERS	MARINE WATERS	FRESH WATERS	MARINE WATERS
1.	ACENAPHTHENE			20 ^o	
2.	ACROLEIN			320	780
3.	ACRYLONITRILE			.06 [*]	.65 [*]
4.	BENZENE			.66 [*]	40 [*]
5.	BENZIDINE			.12ng/L [*]	.53ng/L [*]
6.	CARBON TETRACHLORIDE			0.4 [*]	.6.9 [*]
7.	CHLOROBENZENE			20 ^o	488
8.	1,2,4-TRICHLOROBENZENE*				
9.	HEXACHLOROBENZENE			0.72ng/L [*]	0.74ng/L [*]
10.	1,2-DICHLOROETHANE			0.94 [*]	.243 [*]
11.	1,1,1-TRICHLOROETHANE			18.4mg/L [*]	.17g/L [*]
12.	HEXACHLOROETHANE			1.9 [*]	8.7 [*]
13.	1,1-DICHLOROETHANE*				
14.	1,1,2-TRICHLOROETHANE			0.6 [*]	41.8 [*]
15.	1,1,2,2-TETRACHLOROETHANE			0.17 [*]	10.7 [*]
16.	CHLOROETHANE*				
17.	BIS(2-CHLOROETHYL)ETHER			.03	1.36 [*]
18.	2-CHLOROETHYL VINYL ETHER*				
19.	2-CHLORONAPHTHALENE*				
20.	2,4,6-TRICHLOROPHENOL			1.2 [*]	3.6 [*]
21.	4-CHLORO-3-METHYLPHENOL			3mg/L	
22.	CHLOROPHORM			.19 [*]	15.7 [*]
23.	2-CHLOROPHENOL			.1	
24.	1,2-DICHLOROBENZENE			400	2600
25.	1,3-DICHLOROBENZENE			400	2600
26.	1,4-DICHLOROBENZENE			400	2600
27.	3,3-DICHLOROBENZIDINE			.01 [*]	.02 [*]
28.	1,1-DICHLORORETHYLENE			.03 [*]	1.85 [*]
29.	1,2-TRANS-DICHLOROETHYLENE*				
30.	2,4-DICHLOROPHENOL			.3 ^o	
31.	1,2-DICHLOROPROPANE*				
32.	1,3-DICHLOROPROPENE			87	14.1mg/L
33.	2,4-DIMETHYLPHENOL			400 ^o	
34.	2,4-DINITROTOLUENE			11 [*]	9.1 [*]
35.	2,6-DINITROTOLUENE*				
36.	1,2-DIPHENYLDRAZINE			.04 [*]	.56 [*]
37.	ETHYLBENZENE			1400	3280
38.	FLOURANTHENE			42	54
39.	4-CHLOROPHENYLPHENYLETHER*				
40.	4-BROMOPHENYLPHENYL ETHER*				
41.	BIS (2-CHLOROISOPROPYL) ETHER			34.7	4360
42.	BIS (2-CHLOROETHOXY) METHANE*				
43.	METHYLENE CHLORIDE			.19 [*]	15.7 [*]
44.	METHYL CHLORIDE			.19 [*]	15.7 [*]
45.	METHYL BROMIDE			.19 [*]	15.7 [*]
46.	BROMOFORM			.19 [*]	15.7 [*]
47.	DICHLORODIBROMOMETHANE			.19 [*]	15.7 [*]
48.	CHLORODIBROMOMETHANE			.19 [*]	15.7 [*]
49.	HEXACHLOROBUTADIENE			.45 [*]	50 [*]

CHEMICAL NAME	CHRONIC AQUATIC LIFE CRITERIA (Instantaneous maximus)		HUMAN HEALTH CRITERIA (30 Day Average)	
	FRESH WATERS	MARINE WATERS	FRESH WATERS	MARINE WATERS
50. HEXACHLOROCYCLOPENTADIENE			1.0 ^p	
51. ISOPHORONE			5.2mg/l	520mg/l
52. NAPHTHALENE*				
53. NITROBENZENE			30 ^p	
54. 2-NITROPHENOL*				
55. 4-NITROBENZENE*				
56. 2,4-DINITROPHENOL			70	14.3mg/l
57. 4,6-DINITRO-2-METHYLPHENOL			13.4	765
58. N-NITROSODIMETHYLAMINE			1.4ng/l	16
59. N-NITROSODIPHENYLAMINE			4.9	16
60. N-NITROSODI-N-PROPYLAMINE*				
61. PENTACHLOROPHENOL	13 ^t	7.9 ^t	30 ^p	
62. PHENOL			300 ^p	
63. BIS (2-ETHYLHEXYL) PHTHALATE			15mg/L	50mg/L
64. BUTYL BENZYL PHTHALATE*				
65. DI-N-BUTYL PHTHALATE			34mg/L	154mg/L
66. DI-N-OCTYL-PHTHALATE*				
67. DIETHYL PHTHALATE			350mg/L	1800mg/L
68. DIMETHYL PHTHALATE			313ng/L	2900ng/L
69. BENZO (A) ANTHRACENE			2.8ng/L	31ng/L
70. BENZO (A) PYRENE			2.8ng/L	31ng/L
71. 3,4-BENZOFLOURANTHENE			2.8ng/L	31ng/L
72. BENZO (K) FLOURANTHENE			2.8ng/L	31ng/L
73. CHRYSENE			2.8ng/L	31ng/L
74. ACENAPHTHYLENE			2.8ng/L	31ng/L
75. ANTHRACENE			2.8ng/L	31ng/L
76. BENZO (CH) PERYLENE			2.8ng/L	31ng/L
77. FLOURENE			2.8ng/L	31ng/L
78. PHENANTHRENE			2.8ng/L	31ng/L
79. DIBENZO (AH) ANTHRACENE			2.8ng/L	31ng/L
80. INDENO (1,2,3-CD) PYRENE			2.8ng/L	31ng/L
81. PYRENE			2.8ng/L	31ng/L
82. TETRACHLOROETHYLENE			0.8	8.8
83. TOLUENE			14.3mg/l	424mg/L
84. TRICHLOROETHYLENE			2.7	80.7
85. VINYL CHLORIDE			2.0	525
86. ALDRIN	3.0(acute)	1.3(acute)	.074ng/L	.079ng/L
87. DIELDRIN	1.9ng/L	1.9ng/L	.071ng/L	.076ng/L
88. CHLORDANE	4.3ng/L	4.0ng/L	.46ng/L	.48ng/L
89. 4,4'-DDT	.001	.001	.024ng/L	.024ng/L
90. 4,4'-DDE	.001	.001	.024ng/L	.024ng/L
91. 4,4'-DDD	.001	.001	.024ng/L	.024ng/L
92. A-ENDOSULFANALPHA	.056	.0087	74	159
93. B-ENDOSULFANBETA	.056	.0087	74	159
94. ENDOSULFANSULFATE	.056	.0087	74	159
95. ENDRIN	2.3ng/L	2.3ng/L	1.0	
96. ENDRIN ALDEHYDE	2.3ng/L	2.3ng/L	1.0	
97. HEPTACHLOR	3.8ng/L	3.6ng/L	0.2ng/L	0.2ng/L
98. HEPTACHLOR EPOXIDE	3.8ng/L	3.6ng/L	0.2ng/L	0.2ng/L
99. A-BHC-ALPHA			9.2ng/L	31ng/L
100. B-BHC-BETA			16.3ng/L	54.7ng/L
101. G-BHC-GAMMA(LINDANE)	0.08	0.16	18.6ng/L	62.5ng/L

CHEMICAL NAME	CHRONIC AQUATIC LIFE CRITERIA (Instantaneous maximus)		HUMAN HEALTH CRITERIA (30 Day Average)	
	FRESH WATERS	MARINE WATERS	FRESH WATERS	MARINE WATERS
102. G-BHC-DELTA				
103. PCB-1242 (ARACHLOR 1242)	.014	.03	.079ng/L*	.079ng/L*
104. PCB-1254 (ARACHLOR 1254)	.014	.03	.079ng/L*	.079ng/L*
105. PCB-1221 (ARACHLOR 1221)	.014	.03	.079ng/L*	.079ng/L*
106. PCB-1232 (ARACHLOR 1232)	.014	.03	.079ng/L*	.079ng/L*
107. PCB-1248 (ARACHLOR 1248)	.014	.03	.079ng/L*	.079ng/L*
108. PCB-1260 (ARACHLOR 1260)	.014	.03	.079ng/L*	.079ng/L*
109. PCB-1016 (ARACHLOR 1016)	.014	.03	.079ng/L*	.079ng/L*
110. TOXAPHENE	0.2ng/L	0.2ng/L	0.7ng/L*	0.7ng/L*
111. ANTIMONY			146	45mg/L
112. ARSENIC	190	36	2.2ng/L*	17.5ng/L*
113. ASBESTOS			30000/L*	
114. BERYLLIUM			6.8ng/L*	117ng/L*
115. CADMIUM	1.1 [†]	9.3 [†]	10	
116. CHROMIUM	11	50	50	
117. COPPER	12 [†]	2.9 [†]	1mg/L [□]	
118. CYANIDES	5.2	1.0(acute)	200	
119. LEAD	3.2 [†]	5.6 [†]	50	
120. MERCURY	0.012	0.025	0.14	0.15
121. NICKEL	160 [†]	8.3 [†]	13.4	100
122. SELENIUM	5.0	71	10	
123. SILVER	0.12 [†]	2.3	50	
124. THALLIUM			13	48
125. ZINC	110 [†]	86 [†]	5mg/L [□]	
126. DIOXIN (2,3,7,8-TCDD)			.000013ng/L*	.000014ng/L*

mg/L = milligrams per liter

ng/L = nanograms per liter

ug/L = micrograms per liter

* = criteria based on one in a million health risk

□ = criteria based on a organoleptic data

† = toxicity hardness dependent, based on a hardness of 100 mg/L calcium carbonate

‡ = toxicity pH dependent, based on a pH of 7.0

• = no criteria promulgated at this time