Port Gamble S'Klallam Tribe
Water Quality Standards
for Surface Waters

Adopted 8/13/02

Resolution No. 02-A-088

TABLE OF CONTENTS

1. INTRODUCTION 1
2. DEFINITIONS 1
3. GENERAL CONDITIONS 7
4. SITE-SPECIFIC CRITERIA 8
5. NARRATIVE CRITERIA 9
6. ANTIDEGRADATION POLICY 10
7. TOXIC SUBSTANCES 10
8. RADIOACTIVE SUBSTANCES 22
9. BIOLOGICAL CRITERIA 22
10. WILDLIFE CRITERIA 22
11. WETLANDS 22
12. MIXING ZONES 23
13. IMPLEMENTATION 23
14. ENFORCEMENT 24
15. ALLOWANCE FOR COMPLIANCE SCHEDULES 24
16. SHORT-TERM MODIFICATIONS 25
17. PUBLIC INVOLVEMENT 26
18. DESIGNATED USES 26
19. SPECIFIC WATER QUALITY CRITERIA FOR USE CLASSIFICATIONS 27
20. GENERAL CLASSIFICATIONS 31

1. INTRODUCTION

(1) The Port Gamble S'Klallam Tribal Council hereby establishes these water quality standards covering the surface waters of the Port Gamble S'Klallam Reservation. These standards shall provide a mechanism for managing and regulating the quality and use of said waters by establishing the water quality goals for specific waterbodies, and providing a legal basis for regulatory controls.

(2) These standards have been adopted pursuant to Sections 303 and 518 of the Clean Water Act and the Port Gamble Tribal Constitution as adopted on September 7, 1939. These standards shall serve to protect the public health and welfare, enhance the quality of waters of the Port Gamble S'Klallam Reservation, and serve the purposes of the Clean Water Act.

(3) The purposes of these water quality standards are to restore, maintain and protect the chemical, physical, biological, and cultural integrity of the surface waters of the Port Gamble S'Klallam Reservation; to promote the health, social welfare, and economic well-being of the Port Gamble S'Klallam Tribe, its people, and all the residents of the Port Gamble S'Klallam Reservation; to achieve a level of water quality that provides for all cultural uses of the water, the protection and propagation of fish and wildlife, for recreation in and on the water, and all existing and designated uses of the water; to promote the holistic watershed approach to management of tribal waters; and to provide for protection of threatened and endangered species.

(4) These standards are designed to establish the uses for which the surface waters of the Port Gamble S'Klallam Reservation shall be protected, to prescribe water quality standards (narrative and numeric) to sustain the designated uses, and to protect existing water quality.

(5) The water use and quality criteria set forth herein are established in conformance with water uses of the surface waters of the Port Gamble S'Klallam Reservation and in consideration of the natural water quality potential and limitations of the same.

2. DEFINITIONS

The following definitions are intended to facilitate the use of these Standards.

"Acute toxicity" is a relatively short-term lethal or other adverse effect to an organism caused by pollutants, and usually defined as occurring within 4 days for fish and large invertebrates and shorter times for smaller organisms.

"Appropriate reference site or region" means a site on the same waterbody or within the same basin or eco-region that has similar habitat conditions and which is expected to represent the water quality and biological community attainable within the area(s) of concern.

"Aquatic species" means any plant or animal which lives at least part of their life cycle in water.

"Background conditions" means the biological, chemical, and physical conditions of a water body, outside and up-gradient of the area of influence of the point source discharge, nonpoint source, or instream activity under consideration. For example, in rivers and streams background sampling locations would be upstream from the source or activity, but not upstream from other inflows. If several sources to any water body exist, background sampling would be undertaken immediately upstream from each source.

"Best management practices (BMP)" means physical, structural, and/or managerial practices that, when used singularly or in combination, prevent or reduce pollution.

"Bioaccumulation" means the process by which a compound is taken up by and accumulates in an aquatic organism, from water, food, and sediments.

"Biological assessment" is an evaluation of the biological condition of a water body using surveys of aquatic community structure, function, diversity, presence or absence, or other direct measurements of resident biota in surface waters.

"Biological criteria" means numerical values or narrative expressions that describe the biological integrity or aquatic communities inhabiting waters of a given designated aquatic life use. Biological criteria serve as an index of aquatic community health.

"Carcinogen" means any substance or agent that produces or tends to produce cancer in humans. For implementation of these Standards, the term carcinogen will apply to substances on the EPA lists of A (known human), B (probable human), and C (possible human) carcinogens.

"Ceremonial and spiritual water use" means activities involving Native American spiritual and cultural practices which may involve primary and secondary contact with water and consumption of water. This shall include uses of a waterbody to fulfill cultural, traditional, spiritual, or religious needs of the Port Gamble S'Klallam Tribe, as approved by the Port Gamble S'Klallam Tribal Council.

"Chronic toxicity" means a fairly long-term adverse effect to an organism (when compared to the life span of the organism) caused by or related to changes in feeding, growth, metabolism, reproduction, a pollutant, genetic mutation, etc. Short-term test methods for detecting chronic toxicity may be used.

"Constructed wetlands" means those wetlands intentionally created from non-wetland sites for the sole purpose of wastewater or stormwater treatment.

"Created wetlands" means those wetlands intentionally created from non-wetland sites to produce or replace natural wetland habitat.

"Critical conditions" means the physical, chemical, and biological characteristics of the receiving water and point source discharge, nonpoint source, or instream activity that interact

to produce the greatest potential adverse impact on aquatic biota and existing or designated water uses.

"Cultural water use" means those water uses necessary to support and maintain the way of life of the Port Gamble S'Klallam including, but not limited to: use for instream flow, habitat for fisheries and wildlife, and preservation of habitat for berries, roots, medicines and other vegetation significant to the values of the Port Gamble S'Klallam Tribe.

"CWA" means the federal Clean Water Act (33 USC 1251 et seq.), as amended.

"Damage to the ecosystem" means any demonstrated or predicted stress to aquatic or terrestrial organisms or communities of organisms which the Department of Natural Resources concludes may interfere with the health or survival success or natural structure and functioning of such populations. This stress may be due to alteration in habitat or changes in water temperature, chemistry, or turbidity, or other causes. In making a determination regarding ecosystem damage, the Department shall consider the cumulative effects of pollutants or incremental changes in habitat which may create stress over the long term.

"Designated use" means a use that is specified in water quality standards as a goal for a waterbody segment, whether or not it is currently being attained.

"Department" means the Port Gamble S'Klallam Tribe's Department of Natural Resources.

"EPA" means the United States Environmental Protection Agency.

"Existing uses" means all uses actually attained in the water body on or after November 28, 1975, whether or not they are explicitly stated as designated uses in the water quality standards or presently exist.

"Fecal coliform" means that portion of the coliform group which is present in the intestinal tracts and feces of warm-blooded animals as detected by the product of acid or gas from lactose in a suitable culture medium within twenty-four hours at 44.5 plus or minus 0.2 degrees Celsius.

"Geometric mean" means either the nth root of a product of n factors, or the antilogarithm of the arithmetic mean of the logarithms of the individual sample values.

"Hardness" means a measure of the calcium and magnesium salts present in water. For the purpose of these Standards, hardness is measured in milligrams per liter and expressed as calcium carbonate ($CaCO_3$).

"Intermittent stream" means a waterway which flows only at certain times of the year or does not flow continuously.

"Mean detention time" is the mean amount of time that water remains in a basin. The time is computed by dividing a reservoir's mean annual minimum total storage by the thirty-day, ten-year, low flow from the reservoir.

"µg/L" means micrograms per liter.

"mg/L" means milligrams per liter.

"Migration or translocation" means any natural movement of an organism or community of organisms from one locality to another locality.

"Mixing zone" means that portion of water body adjacent to a point source discharge where mixing results in the dilution of the effluent with the receiving water.

"Natural conditions" means surface water quality that was present before human-caused pollution. When assessing natural background conditions in the headwaters of a disturbed watershed it may be necessary to use the natural background conditions of a neighboring or similar watershed as a reference condition.

"Near Instantaneous and Complete Mix" means no more than a 10 percent difference in bank-to-bank concentrations within a longitudinal distance not greater than 2 stream/river widths.

"Nonpoint source" means pollution that enters any waters from any dispersed land-based or water-based activities, including but not limited to, atmospheric deposition; surface water runoff from agricultural lands, urban areas or forest lands; subsurface or underground sources; or discharges from boats or marine vessels not otherwise regulated under the National Pollutant Discharge Elimination System program.

"NPDES" means National Pollutant Discharge Elimination System, the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the CWA.

"ppm" means parts per million.

"Permit" means a document issued pursuant to tribal code or federal laws (such as NPDES, CWA, Section 401; CWA, Section 404) specifying the waste treatment and control requirements and waste discharge conditions.

"Persistent pollutant" means a pollutant which is slow to or does not decay, degrade, transform, volatilize, hydrolyze, or photolyze.

"Person" means any individual or group or combination thereof acting as a unit, however associated; any organization of any kind, whether organized for profit or not, and regardless of the form in which it does business, whether as a sole proprietorship, partnership, joint venture, trust, unincorporated association, corporation, government, including any part, subdivision, or

agency of any of the foregoing, or otherwise; and any combination of individuals or organizations in whatever form, and the plural as well as the singular number.

"pH" means the negative logarithm of the hydrogen ion concentration.

"Point source" means any discernible, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, sewer, tunnel, conduit, well, discrete fissure, container, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.

"Pollutant" includes dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.

"Pollution" includes such contamination, or other alteration of the physical, chemical or biological properties, of any waters of the Community, including change in temperature, taste, color, turbidity, or odor of the waters, or such discharge of any liquid, gaseous, solid, radioactive, or other substance into any waters of the Community as will or is likely to create a nuisance or impair any beneficial use of such waters.

"Port Gamble S'Klallam Reservation" means all lands and tidelands acquired for the use and benefit of the Port Gamble S'Klallam Tribe, as set forth by Secretary of Interior Proclamation on June 16, 1938 and such other lands as are now or may be designated in the future as Port Gamble S'Klallam reservation land by the United States.

"Primary contact recreation" means activities where a person would have direct contact with water to the point of complete submergence, including but not limited to skin diving, swimming and water skiing.

"Receiving waters" means any water course or water body that receives treated or untreated wastewater.

"Resident aquatic community" means aquatic life expected to exist in a particular habitat when water quality standards for a specific eco-region, basin, or water body are met. This shall be established by accepted biomonitoring techniques.

"Secondary contact recreation" means activities where a person's water contact would be limited (wading or fishing) to the extent that bacterial infections of eyes, ears, respiratory, or digestive systems or urogenital areas would normally be avoided.

"Standards" means the Water Quality Standards for Surface Waters of the Port Gamble S'Klallam Reservation as set forth within this regulation.

"Stormwater" means that portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a stormwater drainage system into a defined surface waterbody, or a constructed infiltration facility.

"Surface waters of the Port Gamble S'Klallam Reservation" includes lakes, rivers, ponds, streams (including intermittent and ephemeral streams), wetlands, and all other surface waters and water courses, including marine waters, of the Port Gamble S'Klallam Reservation.

"Temperature" means water temperature expressed in degrees Celsius (° C).

"Threatened or endangered species (listed species)" means any species of fish, wildlife, or plant which has been determined to be endangered or threatened under section 4 of the Endangered Species Act. Listed species are found in 50 CFR 17.11.-17.12.

"Toxicity" means acute or chronic toxicity.

"Toxicity test" means a test using selected organisms to determine the acute or chronic effects of a chemical pollutant or whole effluent.

"Toxic pollutant" means those pollutants, or combinations of pollutants, 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 EPA or the Department of Natural Resources , cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring.

"Tribal Council" means the governing body of the Port Gamble S'Klallam Tribe.

"Tribe" means the Port Gamble S'Klallam Tribe.

"Turbidity" means the clarity of water expressed as nephelometric turbidity units (NTU) and measured with a calibrated turbidimeter.

"Wastes" include sewage, industrial wastes, and all other liquid, gaseous, solid, radioactive, or other substances which will or may cause pollution or tend to cause pollution of any water body.

"Water quality" means the chemical, physical, biological, and cultural characteristics of a waterbody.

"Wetland" means any area that is inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

"Wildlife habitat" means the waters of the Port Gamble S'Klallam Reservation used by, or that directly or indirectly provide food support to, fish, other aquatic life, and wildlife for any life history stage or activity.

"Zone of initial dilution" means the region of initial mixing surrounding or adjacent to the outfall pipe or diffuser port, in which dilution is caused by the momentum and buoyancy of the discharge.

3. GENERAL CONDITIONS

The following conditions shall apply to the water quality criteria and classifications set forth herein.

(1) All surface waters of the Port Gamble S'Klallam Reservation shall be free from pollutants in concentrations or combinations that do not protect the most sensitive use of the water body.

(2) Whenever the natural conditions of surface waters of the Port Gamble S'Klallam Reservation are of a lower quality than the criteria assigned, the Department may determine that the natural conditions shall constitute the water quality criteria, following the procedures set forth in Section 4.

(3) At the boundary between waters of different classifications, the more stringent water quality criteria shall prevail. When a distinction cannot be made among surface water, wetlands, groundwater, or sediments, the applicable standards shall depend on which existing or designated use is, or could be, adversely affected. If existing or beneficial uses of more than one resource are affected, the most protective criteria shall apply.

(4) In brackish water of estuaries, where the fresh and marine water quality criteria differ for the same designated uses, the aquatic life criteria apply as follows:

(a) For waters in which the salinity is equal to or less than one part per thousand 95 percent or more of the time, the applicable criteria are the fresh water criteria.

(b) For waters in which the salinity is equal to or less than ten parts per thousand 95 percent or more of the time, the applicable criteria are the marine water criteria.

(c) For waters in which the salinity is between one and ten parts per thousand, the applicable criteria are the more stringent of the fresh water or marine water criteria.

(5) The Department may revise criteria on a Reservation-wide or waterbody-specific basis as needed to protect aquatic life and human health and other existing and designated uses and to increase the technical accuracy of the criteria being applied. The Department shall formally adopt any revised criteria following public review and comment.

4. SITE-SPECIFIC CRITERIA

(1) The Department will, in its discretion, establish a site-specific water quality criterion that modifies a water quality criterion set out in Section 19:

(a) In a permit, certification, or approval as described in (b) of this section; or

(b) In regulation as described in (3) of this section.

(2) If the Department finds that a natural condition of a waterbody is demonstrated to be of lower quality than a water quality criterion for the use classes in Section 18 and that the natural condition will fully protect designated uses in Sections 19 and 20, the natural condition constitutes the applicable water quality criterion. Upon application or on its own initiative, the Department will determine whether a natural condition of a waterbody should be approved as a site-specific water quality criterion in a permit, certification, or approval issued by the Department. Before making the determination, the Department will issue public notice of a proposed approval under this subsection and provide opportunity for public comment. If a natural condition of a waterbody varies with time, the natural condition will be determined to be the prevailing highest quality natural condition of the waterbody measured during an annual, seasonal, or shorter time period before discharge or operation, or as the actual natural condition of the waterbody measured concurrent with discharge or operation. The Department will, in its discretion:

(a) Determine a natural condition for one or more seasonal or shorter time periods to reflect variable ambient conditions; and

(b) Require additional or continuing monitoring of natural conditions.

(3) Upon application, or on its own initiative, the Department will, in its discretion, set site-specific criteria in regulation if the Department finds that the evidence reasonably demonstrates that the site-specific criterion will fully protect designated uses in Section 18 and that:

(a) For reasons specific to a certain site, a criterion in Section 19 is more stringent or less stringent than necessary to ensure full protection of the corresponding use class; or

(b) A criterion would be better expressed in terms different from those used in Section 19.

(4) The Department will set a site-specific criterion under (3) of this section for the aquatic life use classes only if the Department finds that the evidence is sufficient to reasonably demonstrate that:

(a) The species or habitats present, or expected to be present under natural conditions, are more sensitive or less sensitive to a substance than indicated by the criterion, and a site-specific criterion is required to prevent adverse effects or to alleviate an unnecessarily restrictive general criterion; or

(b) The natural characteristics of the receiving environment would increase or reduce the biological availability or the toxicity of a substance, or otherwise alter the substance, and a site-specific criterion is required to prevent adverse effects or to alleviate unnecessarily restrictive general criterion.

(5) An applicant seeking a site-specific criterion under this section shall provide all information that the Department determines is necessary to modify an existing criterion. The Department will, in a timely manner, request and review for completeness, information submitted under this subsection. In all cases, the burden of proof is on the applicant seeking a site-specific criterion.

5. NARRATIVE CRITERIA

All surface waters of the Port Gamble S'Klallam Reservation shall be free from substances attributable to point source discharges, nonpoint sources, or instream activities in accordance with the following:

(1) Floating Solids, Oil and Grease: All waters shall be free from visible oils, scum, foam, grease, and other floating materials and suspended substances of a persistent nature resulting from other than natural causes.

(2) Color: True color-producing materials resulting from other than natural causes shall not create an aesthetically undesirable condition; nor should color inhibit photosynthesis or otherwise impair the existing and designated uses of the water.

(3) Odor and Taste: Water contaminants from other than natural causes shall be limited to concentrations that will not impart unpalatable flavor to fish, or result in offensive odor or taste arising from the water, or otherwise interfere with the existing and designated uses of the water.

(4) Nuisance Conditions: Nutrients or other substances from anthropogenic causes shall not be present in concentrations which will produce objectionable algal densities or nuisance aquatic vegetation, result in a dominance of nuisance species, or otherwise cause nuisance conditions.

(5) Turbidity: Turbidity shall not be at a level to potentially impair designated uses or aquatic biota.

(6) Bottom Deposits: All surface waters of the Port Gamble S'Klallam Reservation shall be free from anthropogenic contaminants that may settle and have a deleterious effect on the aquatic biota or that will significantly alter the physical and chemical properties of the water or the bottom sediments.

6. ANTIDEGRADATION POLICY

(1) Existing uses and the level of water quality necessary to protect the existing uses shall be maintained and protected. Where designated uses of the water body are impaired, there shall be no lowering of water quality with respect to the pollutant or pollutants which are causing or contributing to the impairment.

(2) Where the quality of the waters exceeds levels necessary to support propagation of fish and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the Tribe finds, after the Tribe's intergovernmental coordination and public participation provisions have been met, that allowing 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 or lower water quality, the Tribe shall assure water quality adequate to fully protect existing uses. Further, the Tribe shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all approved, cost-effective, and reasonable best management practices for nonpoint source control.

(3) Outstanding resource waters. Waters meeting one or more of the following criteria shall be considered for outstanding resource water designation:

(a) Outstanding national or Tribal resource;

(b) Documented critical habitat for populations of culturally significant, threatened or endangered species;

(c) Waters of exceptional recreational, ceremonial, cultural, or ecological significance; or

(d) Waters supporting priority species as determined by the Tribe.

(4) Where waters constitute an outstanding resource water, the water quality and uses shall be maintained and protected and pollutants that will reduce the existing quality thereof shall not be allowed to enter such waters. To accomplish this the Department may require water quality controls, maintenance of natural flow regimes, protection of instream habitats, and pursuit of land use practices protective of the watershed.

(5) In those cases where potential water quality impairments associated with thermal discharge are involved, the Antidegradation Policy and implementing methods shall be consistent with Section 316 of the Clean Water Act, as amended.

7. TOXIC SUBSTANCES

(1) Toxic substances shall not be introduced into waters of the Port Gamble S'Klallam Reservation in concentrations which have the potential either singularly or cumulatively to adversely affect existing and designated water uses, cause acute or chronic toxicity to the most sensitive biota dependent upon those waters, or adversely affect public health, as determined by the Department.

(2) The Department shall employ or require chemical testing, acute and/or chronic toxicity testing, and biological assessments, as appropriate, to evaluate compliance with subsection (1) of this section. Where necessary the Department shall establish controls to ensure that aquatic communities and the existing and designated beneficial uses of waters are being fully protected.

(3) Criteria for toxic, and other substances not listed shall be determined with consideration of *USEPA Quality Criteria for Water, 1986*, and other relevant information as appropriate.

(4) Risk-based criteria for carcinogenic substances shall be applied such that the upper-bound excess cancer risk is less than or equal to one in one million, which means the probability of one excess cancer per one million people exposed.

(5) The aquatic organism consumption rate utilized in determining the human health criteria shall be 142.4 grams per day. A more accurate rate may be substituted following the completion of a statistical survey of Tribal members.

(6) Criteria for metals shall be applied as dissolved values.

(7) The criteria in the following table shall be applied to surface waters of the Port Gamble S'Klallam Reservation for the protection of aquatic life and human health. Aquatic life criteria (chronic and acute) and human health criteria based on consumption of organisms only shall apply to all surface waters. In addition to these criteria, human health criteria based on consumption of both water and organisms shall apply to all surface waters whose designated uses include domestic water supply.

Water Quality Criteria for Toxic Pollutants

The concentration for each compound listed in this table is a criterion for aquatic life or human health protection. Selecting values for regulatory purposes will depend on the most sensitive beneficial use to be protected and the level of protection necessary for aquatic life and human health as specified within this table. All concentrations, except asbestos, are micrograms per liter (µg/L).

Compound Name (or Class)	Carcinogen	Freshwater		Saltwater		Human Health Criteria	
		Acute[a] Criteria	Chronic[b] Criteria	Acute[a] Criteria	Chronic[b] Criteria	Water &[c] Organisms	Organisms Only[d]
Acenaphthene	NO					115	122
Acrolein	NO					33	36
Acrylonitrile	YES					0.02	0.03
Aldrin	YES	3.0e		1.3e		0.000006	0.000006
Aluminum (pH 6.5 - 9.0 only)	NO	750	87				
Ammonia, total	NO	f	g	233	35		
Anthracene	NO					3,350	4,920
Antimony	NO					13	197
Arsenic	YES	340h	150h	69h	36h	0.005h	0.006h
Asbestos	YES					7 MFLi	
Benzene	YES					0.88	3.3
Benzidine	YES					0.00002	0.00002
Benz(a)Anthracene	YES					0.0015	0.0022
Benzo(a)Pyrene	YES					0.0015	0.0022
Benzo(b)Fluoranthene,	YES					0.0015	0.0022
Benzo(k)Fluoranthene	YES					0.0015	0.0022
BHC-Alpha Lindane	YES					0.0005	0.0006
BHC-Beta Lindane	YES					0.0018	0.0021
BHC-Gamma Lindane	YES	0.95e		0.16e		0.0026	0.0029
Bis-2-ethylhexyl phthalate	YES					0.24	0.27
Bromoform	YES					3.5	17
Butylbenzyl Phthalate	NO					230	240
Cadmium	NO	2.0j	0.25j	40	8.8		
Carbon Tetrachloride	YES					0.12	0.20

Compound Name (or Class)	Carcinogen	Freshwater		Saltwater		Human Health Criteria	
		Acute[a] Criteria	Chronic[b] Criteria	Acute[a] Criteria	Chronic[b] Criteria	Water &[c] Organisms	Organisms Only[d]
Chlordane	YES	2.4e	0.0043	0.09e	0.004	0.0001	0.0001
Chloride	NO	860,000	230,000				

Compound Name (or Class)	Carcinogen	Freshwater		Saltwater		Human Health Criteria	
		Acute[a] Criteria	Chronic[b] Criteria	Acute[a] Criteria	Chronic[b] Criteria	Water &[c] Organisms	Organisms Only[d]
Chlorine	NO	19	11	13	7.5		
Chlorobenzene	NO					400	950
Chlorodibromomethane	YES					0.33	1.6
Chloroform	YES					4.5	21
Chloroisopropyl Ether (Bis 2)	NO					1,200	8,000
Chloromethyl Ether (Bis)	YES					0.00015	0.0035
Chloronaphthalene, 2-	NO					180	190
Chlorophenol, 2-	NO					17	18
Chlorpyrifos	NO	0.083	0.041	0.011	0.0056		
Chromium (Hex)	NO	16	11	1100	50		
Chromium (Tri)	NO	570j	74j				
Chrysene	YES					0.0015	0.0022
Copper	NO	13j	9j	4.8	3.1		
Cyanide	NO	22	5.2	1.0	1.0	650	9,800
DDT, 4,4'-	YES	1.1e	0.001	0.13e	0.001	0.000027	0.000027
DDT Metabolite (DDE, 4,4'-)	YES					0.000027	0.000027
DDT Metabolite (DDD, 4,4'-)	YES					0.000038	0.000038
Demeton	NO		0.1		0.1		
Dibenzo(a,h)Anthracene	YES					0.0015	0.0022
Dibutyl Phthalate	NO					480	550
Dichlorobenzene, 1,2- (o)	NO					640	800
Dichlorobenzene, 1,3- (m)	NO					95	120
Dichlorobenzene, 1,4- (p)	NO					95	120
Dichlorobenzidine, 3,3-	YES					0.0034	0.0035
Dichlorobromomethane	YES					0.45	2.1
Dichlorodifluoromethane	NO					5,500	26,000
Dichloroethane, 1,2-	YES					0.35	4.5

Compound Name (or Class)	Carcinogen	Freshwater		Saltwater		Human Health Criteria	
		Acute[a] Criteria	Chronic[b] Criteria	Acute[a] Criteria	Chronic[b] Criteria	Water &[c] Organisms	Organisms Only[d]
Dichloroethylene, 1,2-trans-	NO					630	6,200
Dichloroethylene, 1,1-	YES					0.042	0.15
Dichlorophenol, 2,4-	NO					27	36
Dichloropropane, 1,2-	NO					0.41	1.8
Dichloropropylene, 1,3-	NO					9.2	77
Dieldrin	YES	0.24e	0.056	0.71e	0.0019	0.0000066	0.0000066
Diethyl Phthalate	NO					4,500	5,400
Dimethyl Phenol, 2,4-	NO					91	105
Dimethyl Phthalate	NO					98,000	140,000
Dinitrophenol, 2,4-	NO					63	660
Dinitrophenol, 2-, Methyl 4,6-	NO					9.8	35
Dinitrotoluene, 2,4-	YES					0.088	0.41
Dioxin (2,3,7,8-TCDD)	YES					.0000000006	.0000000006
Diphenylhydrazine, 1,2-	YES					0.016	0.025
Endosulfan-Alpha	NO	0.22e	0.056	0.034e	0.0087	10	11
Endosulfan-Beta	NO	0.22e	0.056	0.034e	0.0087	10	11
Endosulfan Sulfate	NO					10	11
Endrin	NO	0.086e	0.036	0.037e	0.0023	0.037	0.037
Endrin Aldehyde	NO					0.037	0.037
Ethylbenzene	NO					950	1,300
Fluoranthene	NO					17	17
Fluorene	NO					450	660
Guthion	NO		0.01		0.01		
Heptachlor	YES	0.52e	0.0038	0.053e	0.0036	0.0000097	0.0000098
Heptachlor Epoxide	YES	0.52e	0.0038	0.053e	0.0036	0.0000048	0.0000048
Hexachlorobenzene	YES					0.000035	0.000035
Hexachlorobutadiene	YES					0.38	2.3
Hexachlorocyclopentadiene	NO					190	790
Hexachloroethane	YES					0.35	0.40

Compound Name (or Class)	Carcinogen	Freshwater		Saltwater		Human Health Criteria	
		Acute[a] Criteria	Chronic[b] Criteria	Acute[a] Criteria	Chronic[b] Criteria	Water &[c] Organisms	Organisms Only[d]
Indeno (1,2,3-cd) Pyrene	YES					0.0015	0.0022
Iron	NO		1,000			300	
Isophorone	YES					28	120
Lead	NO	65j	2.5j	210	8.1		
Malathion	NO		0.1		0.1		
Manganese	NO					50	100
Mercury	NO	1.4	0.77m	1.8	0.94m	0.002	0.002
Methoxychlor	NO		0.03		0.03	40	
Methyl Bromide	NO					39	185
Methylene Chloride	YES					4.4	73
Mirex	NO		0.001		0.001		
Nickel	NO	470j	52j	74	8.2	160	210
Nitrates	NO					10,000	
Nitrobenzene	NO					15	85
Nitrosodimethylamine, N-	YES					0.00069	0.37
Nitrosodi-n-Propylamine, N-	NO					0.0046	0.062
Nitrosodiphenylamine, N-	YES					0.67	0.74
Nitrosopyrrolidine, N-	YES					0.016	4.3
Parathion	NO	0.065	0.013				
PCB-1016	YES		0.014		0.03	0.000008	0.000008
PCB-1221	YES		0.014		0.03	0.000008	0.000008
PCB-1232	YES		0.014		0.03	0.000008	0.000008
PCB-1242	YES		0.014		0.03	0.000008	0.000008
PCB-1248	YES		0.014		0.03	0.000008	0.000008
PCB-1254	YES		0.014		0.03	0.000008	0.000008
PCB-1260	YES		0.014		0.03	0.000008	0.000008
Pentachlorobenzene	NO					0.18	0.19
Pentachlorophenol	YES	19n	15n	13	7.9	0.16	0.37
Phenol	NO					19,000	210,000
Phosphorus Elemental	NO				0.1		
Pyrene	NO					330	490

Compound Name (or Class)	Carcinogen	Freshwater		Saltwater		Human Health Criteria	
		Acute[a] Criteria	Chronic[b] Criteria	Acute[a] Criteria	Chronic[b] Criteria	Water &[c] Organisms	Organisms Only[d]
Selenium	NO		5.0	290	71		

Compound Name (or Class)	Carcinogen	Freshwater		Saltwater		Human Health Criteria	
		Acute[a] Criteria	Chronic[b] Criteria	Acute[a] Criteria	Chronic[b] Criteria	Water &[c] Organisms	Organisms Only[d]
Silver	NO	3.4j		1.9			
Sulfide - Hydrogen Sulfide	NO		2.0		2.0		
Tetrachloroethane, 1,1,2,2,-	YES					0.13	0.49
Tetrachloroethylene	YES					0.28	0.40
Thallium	NO					0.25	0.28
Toluene	NO					4,000	9,200
Toxaphene	YES	0.73	0.0002	0.21	0.0002	0.000034	0.000034
Trichlorobenzene, 1,2,4-	NO					38	43
Trichloroethane, 1,1,2-	YES					0.47	1.9
Trichloroethylene	YES					1.6	3.7
Trichlorophenol, 2,4,6-	YES					0.27	0.30
Vinyl Chloride	YES					1.9	24
Zinc	NO	120	120j	90	81		

Footnotes for Table

a. Acute criteria: EPA CWA § 304(a) Criteria Maximum Concentration (CMC). The threshold value at or below which there should be no unacceptable effects to freshwater or marine aquatic organisms and their uses if the one-hour average concentration does not exceed that CMC value more than once every three years on average.

b. Chronic criteria: EPA CWA § 304(a) Criteria Continuous Concentration (CCC). The threshold value at or below which there should be no unacceptable effects to freshwater or marine aquatic organisms and their uses if the four-day average concentration does not exceed that CCC value more than once every three years on the average.

c. Water and Organisms: Values represent the maximum ambient water concentration for consumption of both contaminated water and fish or other aquatic organisms.

d. Organisms Only: Values represent the maximum ambient water concentration for consumption of fish or other aquatic organisms.

e. The acute values shown are final acute values (FAV) which by the 1980 Guidelines are instantaneous values, as contrasted with a CMC which is a one-hour average.

f. Acute Criterion: The one-hour average concentration of total ammonia nitrogen (in mg N/L) does not exceed, more than once every three years on the average, the CMC (acute criterion) calculated using the following equations.

Where salmonid fish are present:

$$CMC = \frac{0.275}{1+10^{7.204-pH}} + \frac{39.0}{1+10^{pH-7.204}}$$

Or where salmonid fish are not present:

$$CMC = \frac{0.411}{1+10^{7.204-pH}} + \frac{58.4}{1+10^{pH-7.204}}$$

g. Chronic Criterion: The thirty-day average concentration of total ammonia nitrogen (in mg N/L) does not exceed, more than once every three years on the average, the CCC (chronic criterion) calculated using the following equations.

When fish early life stages are present:

$$CCC = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) \bullet MIN\left(2.85, 1.45 \bullet 10^{0.028(25-T)}\right)$$

When fish early life stages are absent:

$$CCC = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) \bullet 1.45 \bullet 10^{0.028 \bullet (25-MAX(T,7))}$$

In addition, the highest four-day average within the 30-day period should not exceed 2.5 times the CCC.

h. The aquatic life criteria refer to the trivalent form only. The human health criteria refer to the inorganic form only.

i. MFL = Million fibers per liter, with fiber length >10 microns.

j. Freshwater aquatic life criteria for these metals are expressed as a function of total hardness (mg/l $CaCO_3$) according to the following equations. The factors for the equations are

provided in the following matrix. Values in the above table correspond to a hardness of 100 mg/l.

Acute criterion = $\exp\{m_A[\ln(\text{hardness})]+b_A\}$
Chronic criterion = $\exp\{m_C[\ln(\text{hardness})]+b_C\}$

Metal	Factors for Calculating Metals Criteria					
	m_A	b_A	m_C	b_C	Conversion Factors	
					Acute	Chronic
Cadmium	1.0166	-3.924	0.7409	-4.719	0.944*	0.909*
Chromium (III)	0.8190	3.7256	0.8190	0.6848	0.316	0.860
Copper	0.9422	-1.700	0.8545	-1.702	0.960	0.960
Lead	1.273	-1.460	1.273	-4.705	0.791*	0.791*
Nickel	0.8460	2.255	0.8460	0.0584	0.998	0.997
Silver	1.72	-6.52	N/A	N/A	0.85	N/A
Zinc	0.8473	0.884	0.8473	0.884	0.978	0.986

Note to the table: The term "exp" represents the base e exponential function.

* The conversion factors (CF) for cadmium and lead are hardness dependent and can be calculated for any hardness [see limitations in 40 CFR 131.36(c)(4)] using the following equations:

Cadmium Acute CF = 1.136672-[(ln hardness) (0.041838)]
Cadmium Chronic CF = 1.101672-[(ln hardness) (0.041838)]
Lead (Acute and Chronic) CF = 1.46203-[(ln hardness) (0.145712)]

k. This letter is not used as a footnote.

l. This letter is not used as a footnote.

m. If the ambient concentration of total mercury exceeds 0.012 µg/l more than once in a 3-year period in the ambient water, the edible portion of aquatic species of concern must be analyzed to determine whether the concentration of methyl mercury exceeds the FDA action level (1.0 mg/kg). If the FDA action level is exceeded, the Tribe must notify the EPA Region 10 Regional Administrator, initiate a site specific criterion or a revision of its mercury criterion so as to protect designated uses, and take other appropriate action, such as issuance of a fish consumption advisory for the affected area.

n. Freshwater aquatic life criteria for pentachlorophenol are expressed as a function of pH, and are calculated as follows (Values in the table correspond to a pH of 7.8):

Acute criterion = exp(1.005(pH)-4.830)
Chronic criterion = exp(1.005(pH)-5.290)

8. RADIOACTIVE SUBSTANCES

(1) Radioisotope concentrations in all waters shall not exceed concentrations which result in a significant hazard to humans or harm to aquatic life.

(2) Concentrations of radioactive materials for all waters shall not exceed the following:

(a) Gross Alpha Particle Activity - 15 pCi/L
(b) Gross Beta Particle Activity - 50 pCi/L
(c) Tritium - 20,000 pCi/L
(d) Strontium 90 - 8 pCi/L
(e) Radium 226 & 228 - 5 pCi/L
(f) Radium 226 - 3 pCi/L
(g) Radon - 300 pCi/L

9. BIOLOGICAL CRITERIA

(1) Surface waters of the Port Gamble S'Klallam Reservation shall be of sufficient quality to support aquatic biota without detrimental changes in the resident aquatic communities.

(2) Surface waters of the Port Gamble S'Klallam Reservation shall be free from substances, whether attributable to point source discharges, nonpoint sources, or instream activities, in concentrations or combinations which would impair the structure or limit the function of the resident aquatic community as it naturally occurs.

(3) The structure and function of the resident aquatic community shall be measured by biological assessment methods approved by the Department.

(4) Determination of impairment or limitation of the resident aquatic community shall be based on a comparison with the aquatic community found at an appropriate reference site or region.

10. WILDLIFE CRITERIA

Surface waters of the Port Gamble S'Klallam Reservation shall be of sufficient quality to protect and support all life stages of resident and/or migratory wildlife species which live in, on, or near the waters of the Port Gamble S'Klallam Reservation.

11. WETLANDS

(1) All wetlands within the boundaries of the Port Gamble S'Klallam Reservation which are not constructed wetlands shall be subject to the Narrative Criteria (section 5), Antidegradation (section 6), and Narrative Toxic Substances Criteria (section 7(1)) provisions within these Standards.

(2) Wetlands shall not be used in lieu of stormwater treatment, except as specified by number 5 below. Stormwater shall be treated before discharge to a wetland.

(3) Point and nonpoint sources of pollution shall not cause destruction or impairment of wetlands except where authorized under section 404 of the CWA.

(4) Wetlands shall not be used as repositories or treatment systems for wastes from human sources, except as specified by number 5, below.

(5) Wetlands intentionally created from non-wetland sites for the sole purpose of wastewater or stormwater treatment (constructed wetlands) are not considered "surface waters of the Port Gamble S'Klallam Reservation " and are not subject to the provisions of this section.

12. MIXING ZONES

Mixing zones are defined as limited areas or volumes of water where initial dilution of a point source discharge takes place, and where numeric water quality criteria can be exceeded. Mixing zones are not permitted in waters of the Port Gamble S'Klallam Reservation.

13. IMPLEMENTATION

(1) The requirements of these water quality standards shall be met for all waters of the Community. No person shall engage in any activity that violates or causes the violation of these standards. All discharges from point sources, all instream activities and all activities which generate nonpoint source pollution shall be conducted so as to comply with these Standards. Compliance shall be determined by the Department.

(2) All permits issued or reissued, and all activities undertaken by the Tribe, the U.S. Environmental Protection Agency, the Bureau of Indian Affairs, the U.S. Army Corps of Engineers, the Federal Energy Regulatory Commission (FERC), state agencies, or any other government agencies or commissions shall be conditioned in such a manner as to authorize only activities that will not cause violations of these Standards. Permits may be subject to modification by the permitting authority whenever it appears to the Department and/or the permitting authority that the activity violates water quality standards.

(3) Best management practices shall be applied so that when all appropriate combinations of individual best management practices are utilized, violation of water quality criteria shall be prevented. If a person is applying all best management practices appropriate or required by

the Department and a violation of water quality criteria occurs, the person shall modify existing practices or apply further water pollution control measures, selected or approved by the Department, to achieve compliance with water quality criteria. Best management practices established in permits, orders, rules or directives shall be reviewed and modified by the Department, as appropriate, to achieve compliance with water quality criteria.

(4) Activities which cause pollution of stormwater shall be conducted so as to comply with the water quality standards. The primary means to be used for requiring compliance with the standards shall be through best management practices required in waste discharge permits, rules, orders, and directives issued by the Department for activities which generate stormwater pollution.

(5) Sample collection, preservation, and analytical procedures to determine compliance with these standards shall conform to the guidelines of 40 CFR, Part 136. If guidance does not exist, procedures shall conform with other methods accepted by the scientific community and deemed appropriate by the Department.

14. ENFORCEMENT

These Standards shall be enforced through all methods available to the Department including, but not limited to: issuance of permits; regulatory orders; court actions; review and approval of plans and specifications; evaluation of compliance with best management practices and all reasonable methods of prevention, control, and treatment of wastes prior to discharge; and coordination with other departments and regulatory agencies.

15. ALLOWANCE FOR COMPLIANCE SCHEDULES

(1) NPDES permits, and orders and directives of the Department issued under tribal authority, for existing discharges or activities may include a schedule for achieving compliance with water quality criteria contained in these Standards. Such schedules of compliance shall be developed to ensure final compliance with all water quality criteria in the shortest practicable time, but not to exceed five years. Decisions regarding whether to issue schedules of compliance will be made on a case-by-case basis by the permitting agency and must be approved by the Department. Schedules of compliance may not be issued for new discharges or activities. Schedules of compliance may be issued to allow for:

(a) Construction of necessary treatment capability;

(b) Implementation of necessary best management practices;

(c) Implementation of additional best management practices for sources determined not to meet water quality criteria following implementation of an initial set of best management practices; and

(d) Completion of necessary water quality studies.

(2) For the period of time during which compliance with water quality criteria is deferred, interim limitations and/or other conditions may be formally established, based on the best professional judgment of the permitting agency and the Department.

(3) Prior to establishing a schedule of compliance, the permitting agency shall require the permittee to evaluate the possibility of achieving water quality criteria via non-construction changes (e.g. facility operation, pollution prevention).

16. SHORT-TERM MODIFICATIONS

(1) The criteria established in these standards may be modified for a specific water body on a short-term basis in order to respond to emergencies, to accommodate essential activities, or to otherwise protect the public health and welfare, even though such activities may result in a temporary reduction of water quality conditions below those criteria established by this regulation. Such modifications shall be issued in writing by the Department, subject to such terms and conditions as may be prescribed.

(2) Short-term modifications shall be kept as short as feasible.

(3) In no case will any degradation of water quality or aquatic habitat be allowed if this degradation could interfere with, or becomes injurious to, existing water uses or causes long-term harm to the environment or cultural resources. No short-term modification may be issued where it could adversely impact threatened or endangered species or their critical habitat.

(4) A request for a short-term modification shall be made, in writing, to the Department. Such requests shall be made at least thirty days prior to the start of the activity impacting water quality, unless the modification is in response to an emergency requiring immediate attention in which case notification shall be provided within twenty-four hours of the response decision.

(5) Aquatic application of all pesticides shall require a short-term modification be granted prior to application. These modifications shall include, at a minimum, the following conditions:

(a) Such pesticide application shall be in accordance with all federal, tribal and local regulations; and

(b) Such application shall be in accordance with label provisions promulgated by EPA under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended (7 U.S.C. 136, et seq.); and

(c) Such application shall not result in conditions injurious to indigenous aquatic biota, wildlife, humans, cultural resources, or other existing or designated uses of the water body; and

(d) Public notice, including identification of the pesticide, applicator, location where the pesticide will be applied, proposed timing and method of application, and any water use restrictions shall be provided by the applicator; and

(e) The Department shall be notified at least three business days prior to pesticide application; and

(f) Any additional conditions required by the Department.

(6) In the event of any fish kills or other harm to indigenous aquatic dependent resources, the Department shall be notified within 24 hours.

17. PUBLIC INVOLVEMENT

From time to time, but at least once every three years, the Department shall hold public hearings for the purpose of reviewing the water quality standards and, as appropriate, modifying and adopting standards. The Department will issue public notice of proposed changes and provide opportunity for public comment. Public participation, including time periods for public notice and commenting, will follow federal regulations for public participation in programs under the Clean Water Act defined in 40 CFR Part 25.

18. DESIGNATED USES

Water quality standards regulations require the Port Gamble S'Klallam Tribe to specify appropriate water uses to be achieved and protected. Section 131.10 of 40 CFR requires that Tribe take into consideration the use and value of water for public water supplies; protection and propagation of fish, shellfish, and wildlife; recreation in and on the water; agricultural, industrial, and other purposes including navigation. The Tribe must also take into consideration the water quality standards of downstream waters, and ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters.

(1) The designated uses for which the fresh surface waters of the Port Gamble S'Klallam Reservation are to be protected include, but are not limited to, the following:

(a) Domestic Water Supply. Surface waters which are suitable or intended to become suitable for drinking water supplies.

(b) Agricultural Water Supply. Surface waters which are suitable or intended to become suitable for the irrigation of crops or as drinking water for livestock.

(c) Recreational and Cultural Use. Surface waters which are suitable or intended to become suitable for prolonged intimate contact by humans or for activities where

the ingestion of small quantities of water is likely to occur. Such waters include, but are not restricted to, those used for swimming, wading, fishing, boating, or for ceremonial or cultural purposes.

(d) Aquatic Life Uses.

(i) Salmon Spawning, Egg Incubation, and Fry Emergence. Surface waters used or naturally suitable as habitat for salmon spawning, egg incubation, and fry emergence.

(ii) Salmon Rearing. Surface waters used or naturally suitable as habitat for salmon rearing.

(iii) Cold Water Biota. Surface waters used or naturally suitable as habitat for all life cycles of naturally-occurring aquatic organisms which have optimal growing temperatures below 18° C.

(2) The designated uses for which the marine surface waters of the Port Gamble S'Klallam Reservation are to be protected include, but are not limited to, the following:

(a) Aquatic Life Uses.

(i) Salmonid and other fish migration, rearing, spawning, and harvesting.

(ii) Shellfish and crustacean spawning, rearing, and harvesting.

(b) Recreational and Cultural Use. Surface waters which are suitable or intended to become suitable for prolonged intimate contact by humans or for activities where the ingestion of small quantities of water is likely to occur. Such waters include, but are not restricted to, those used for swimming, wading, fishing, boating, or for ceremonial or cultural purposes.

19. SPECIFIC WATER QUALITY CRITERIA FOR USE CLASSIFICATIONS

(1) Domestic Water Supply. Waters designated for domestic water supply are subject to the following criteria:

(a) Turbidity. Turbidity shall not exceed 1 NTU (Nephelometric turbidity unit) over natural background levels when the natural background turbidity is 10 NTU or less, or have more than a 10 percent increase in turbidity when the natural background level is more than 10 NTU. Natural background turbidity for implementing this criteria is to represent the 90th percentile value of the annual average turbidity.

(b) pH. pH shall be within the range of 6.5 to 8.5, with a human caused variation within this range of less than 0.5 units over any 24 hour period.

(c) Alkalinity. Alkalinity should generally be maintained within the range of 50 to 120 mg/L. Variations outside this range are to be avoided where practical alternatives exist.

(d) Bacterial Waste. Livestock, pet, and human sewage are not allowed to drain or be discharged into surface waters of the Port Gamble S'Klallam Reservation unless controlled or treated with best management practices or waste treatment technology appropriate and approved by the Department or the U.S. Environmental Protection Agency.

(2) Agricultural Water Supply. Waters designated for agricultural water supply are subject to the following criteria:

(a) Electrical Conductivity. Electrical conductivity is not to exceed an arithmetic mean of 700 microsiemens per centimeter during periods when the surface water is used an agricultural water supply, based on a minimum of three samples.

(b) Total Suspended Solids. The concentration of total suspended solids is not to exceed an arithmetic mean of 75 mg/L during periods when the surface water is used an agricultural water supply, based on a minimum of three samples.

(c) pH. pH shall be within the range of 6.5 to 8.5, with a human caused variation within this range of less than 0.5 units over any 24 hour period.

(d) Bacterial Waste. Livestock, pet, and human sewage are not allowed to drain or be discharged into surface waters of the Port Gamble S'Klallam Reservation unless controlled or treated with best management practices or waste treatment technology appropriate and approved by the Department or the U.S. Environmental Protection Agency.

(3) Recreational and Cultural Use.

(a) Waters designated for recreational and cultural use shall not contain concentrations of *E. coli* bacteria exceeding a 30-day geometric mean of 126 per 100 ml, based on a minimum of 5 samples.

(4) Aquatic Life Uses. Waters designated for specific aquatic life uses are subject to the following criteria.

(a) Salmon Spawning, Egg Incubation, and Fry Emergence.

(i) pH. pH shall be within the range of 6.5 to 8.5, with a human caused variation within this range of less than 0.5 units over any 24 hour period.

(ii) Dissolved Oxygen. Dissolved oxygen shall exceed a 7-day average of 11 mg/L, and shall exceed 9.0 mg/L at all times during periods when salmon spawning, egg incubation, and fry emergence are occurring.

(iii) Temperature. The 7-day average of the daily maximum temperatures is not to exceed 13° C in streams designated for this use during periods when salmon spawning, egg incubation, and fry emergence are occurring. The 7-day mean temperature is not to exceed 10° C

(iv) Turbidity. Turbidity shall not exceed 5 NTU over natural background levels when the natural background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the natural background level is more than 50 NTU. Natural background turbidity for implementing this criteria is to represent the 90th percentile value of the annual average turbidity.

(b) Salmon Rearing.

(i) pH. pH shall be within the range of 6.5 to 8.5, with a human caused variation within this range of less than 0.5 units over any 24 hour period.

(ii) Dissolved Oxygen. Dissolved oxygen shall exceed a 7-day average of 8.5 mg/L, and shall exceed 7.0 mg/L at all times.

(iii) Temperature. The 7-day average of the daily maximum temperatures is not to exceed 16° C in streams designated for this use. The 7-day mean temperature is not to exceed 15° C

(iv) Turbidity. Turbidity shall not exceed 5 NTU over natural background levels when the natural background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the natural background level is more than 50 NTU. Natural background turbidity for implementing this criteria is to represent the 90th percentile value of the annual average turbidity.

(c) Cold Water Biota.

(i) pH. pH shall be within the range of 6.5 to 8.5, with a human caused variation within this range of less than 0.5 units over any 24 hour period.

(ii) Dissolved Oxygen. Dissolved oxygen shall exceed 8.0 mg/L at all times. When natural conditions prevent attainment of the numeric dissolved oxygen criterion, all human-caused conditions and activities considered cumulatively cannot lower dissolved oxygen levels by more than an additional 0.2 mg/L.

(iii) Temperature. The 7-day average of the daily maximum temperatures is not to exceed 16° C in streams designated for this use. The 7-day mean temperature is not to exceed 15° C

(iv) Turbidity. Turbidity shall not exceed 5 NTU over natural background levels when the natural background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the natural background level is more than 50 NTU. Natural background turbidity for implementing this criteria is to represent the 90th percentile value of the annual average turbidity.

(d) Salmonid and other fish migration, rearing, spawning, and harvesting (marine waters).

(i) pH. pH shall be within the range of 7.0 to 8.5, with a human caused variation within this range of less than 0.5 units over any 24 hour period.

(ii) Dissolved Oxygen. Dissolved oxygen shall exceed 6.0 mg/L. When natural conditions, such as upwelling, occur, causing the dissolved oxygen to be depressed near or below 6.0 mg/L, natural dissolved oxygen may be degraded by no more than 0.2 mg/L by human-caused activities.

(iii) Temperature. The 7-day average of the daily maximum temperatures is not to exceed 16° C.

(iv) Turbidity. Turbidity shall not exceed 5 NTU over natural background levels when the natural background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the natural background level is more than 50 NTU. Natural background turbidity for implementing this criteria is to represent the 90th percentile value of the annual average turbidity.

(e) Shellfish and crustacean spawning, rearing, and harvesting.

(i) pH. pH shall be within the range of 7.0 to 8.5, with a human caused variation within this range of less than 0.5 units over any 24 hour period.

(ii) Dissolved Oxygen. Dissolved oxygen shall exceed 6.0 mg/L. When natural conditions, such as upwelling, occur, causing the dissolved oxygen to be depressed near or below 6.0 mg/L, natural dissolved oxygen may be degraded by no more than 0.2 mg/L by human-caused activities.

(iii) Temperature. The 7-day average of the daily maximum temperatures is not to exceed 16° C.

(iv) Turbidity. Turbidity shall not exceed 5 NTU over natural background levels when the natural background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the natural background level is more

than 50 NTU. Natural background turbidity for implementing this criteria is to represent the 90th percentile value of the annual average turbidity.

(v) Fecal coliform organism levels shall both not exceed a geometric mean value of 14 colonies / 100 mL, and not have more than 10 percent of all samples obtained for calculating the geometric mean value exceeding 43 colonies / 100 mL.

20. GENERAL CLASSIFICATIONS

All surface waters of the Port Gamble S'Klallam Reservation shall be designated, at a minimum, for the protection of cold water biota and for recreational and cultural uses, unless a Use Attainability Analysis has first been performed in accordance with water quality standards regulations at 40 CFR 131.10(g). All fresh surface waters not specifically classified shall be designated for cold water biota and for recreational and cultural uses. All marine surface waters not specifically classified shall be designated for salmonid and other fish migration, rearing, spawning, and harvesting; shellfish and crustacean spawning, rearing, and harvesting; and recreational and cultural uses. All waters must be of sufficient quality to ensure that downstream uses are fully protected. All surface waters of the Port Gamble S'Klallam Reservation shall also be designated for the uses of aesthetics, and wildlife habitat. Water quality criteria for those uses will be generally satisfied by implementation of the General Conditions in Section 3, and the Narrative Criteria in Section 5.