

PORT GAMBLE S'KLALLAM TRIBE
WATER QUALITY STANDARDS
FOR SURFACE WATERS

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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 Tribe. These standards shall provide a mechanism for managing and regulating the quality and use of said waters by establishing the water quality goals for surface waters of the Port Gamble S’Klallam Tribe 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 Tribe, 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 Tribe; 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 Tribe 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 Tribe 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” refers to a stimulus severe enough to rapidly induce an effect; in aquatic toxicity tests, an effect observed in 96-hours or less is typically considered acute. When referring to aquatic toxicology or human health, an acute effect is not always measured in terms of lethality.

“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 community” is an association of interacting populations of aquatic organisms in a given water body or habitat.

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

“Averaging period” is the period of time over which the receiving water concentration is averaged for comparison with criteria concentrations. This specification limits the duration of concentrations above the criteria.

“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.

“Biological integrity” is the condition of the aquatic community inhabiting unimpaired water bodies of a specified habitat as measured by community structure and function.

“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” defines a stimulus that lingers or continues for a relatively long period of time, often one tenth of the life span or more. Chronic should be considered a relative term depending on the life span of an organism. The measurement of a chronic effect can be reduced growth, reduced reproduction, etc., in addition to lethality.

“Compliance schedule” means a schedule of remedial measures, including an enforceable sequence of actions or operations, leading to compliance with an effluent limitation or other limitation, prohibition or standard.

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

“Criteria continuous concentration” (CCC) is the highest instream concentration of a toxicant or an effluent to which organisms can be exposed indefinitely without causing unacceptable effect.

“Criteria maximum concentration” (CMC) is the highest instream concentration of a toxicant or an effluent to which organisms can be exposed for a brief period of time without causing an acute effect.

“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 U.S.C. §§ 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.

“Design flow” is the flow used for steady-state waste load allocation modeling.

“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.

“E. coli or Escherichia coli” is the name of a specific bacterium used as an indicator of fecal (pathogen) pollution in freshwater environments and is expressed as colony forming units (cfu) per 100 milliliters or most probable number (MPN) per 100 milliliters. Analytic procedures include multiple-tube fermentation and membrane filter techniques. Elevated levels can be an indicator of the presence of pathogens that can cause human health problems.

“Enterococci” is the name of a group of bacteria used as an indicator of fecal (pathogen) pollution in saline water environments and is expressed as colony forming units (cfu) per 100 milliliters or most

probable number (MPN) per 100 milliliters. Analytic procedures include multiple-tube fermentation and membrane filter techniques. Elevated levels can be an indicator of the presence of pathogens that can cause human health problems.

“EPA” means the United States Environmental Protection Agency.

“Ephemeral stream” means a waterway that has flowing water only during, and for a short duration after, precipitation events in a typical year.

“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.

“Frequency” is how often criteria can be exceeded without unacceptably affecting the community.

“Geometric mean” means either the n th 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.

“Magnitude” is how much of a pollutant (or pollutant parameter such as toxicity), expressed as a concentration or toxic unit is allowable.

“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.

“ $\mu\text{g/L}$ ” 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.

“Outstanding Tribal Resource Water” is a high quality water that constitutes an outstanding Tribal resource due to its extraordinary water quality or ecological values, or where special protection is needed to maintain critical habitat areas.

“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 Port Gamble S’Klallam Tribe, 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 Port Gamble S’Klallam Tribe 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.

“Practicable” means technologically possible, able to be put into practice, and economically viable.

“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.

“Site-specific criterion” is a water quality criterion that has been derived to be specifically appropriate to the water quality characteristics and/or species composition at a particular location.

“Standards” means the Water Quality Standards for Surface Waters of the Port Gamble S’Klallam Tribe as set forth within this regulation.

“Statistical threshold value” (STV) refers to the approximation of the 90th percentile of the water quality distribution and is intended to be a value that should not be exceeded by more than 10 percent of the samples taken.

“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 Tribe” includes lakes, rivers, ponds, streams (including intermittent and ephemeral streams), wetlands, and all other surface waters and water

courses, including marine waters, within the exterior boundaries of the Port Gamble S’Klallam Reservation, and within all other lands under the jurisdiction of the Port Gamble S’Klallam Tribe.

“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 C.F.R. §§ 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, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to 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.

“Use attainability analysis” (UAA) is a structured scientific assessment of the factors affecting the attainment of the use which may include physical, chemical, biological, and economic factors as described in 40 C.F.R. § 131.10(g).

“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 surface waters of the Port Gamble S’Klallam Tribe used by, or that directly or indirectly provide food support to, fish, other aquatic life, and wildlife for any life history stage or activity.

3. DESIGNATED USES

Water quality standards regulations require the Port Gamble S'Klallam Tribe to specify appropriate water uses to be achieved and protected. 40 C.F.R. § 131.10 requires that the 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 Tribe 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 Tribe 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.

(3) Nondesignated Surface Waters

(a) All surface waters of the Port Gamble S’Klallam Tribe 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 C.F.R. § 131.10(g).

(b) All fresh surface waters not specifically classified shall be designated for cold water biota and for recreational and cultural uses.

(c) 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.

(d) All waters must be of sufficient quality to ensure that downstream uses are fully protected.

(e) All surface waters of the Port Gamble S’Klallam Tribe 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 4, and the Narrative Criteria in Section 6.

4. 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 Tribe 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 Tribe 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 5.

(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 freshwater criteria.
 - (b) For waters in which the salinity is more 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 freshwater 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.

5. 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 8:
- (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 3 and that the natural condition will fully protect designated uses in Sections 3 and 8, 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 3 and that:
- (a) For reasons specific to a certain site, a criterion in Section 8 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 8.
- (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.

6. NARRATIVE CRITERIA

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

- (1) **General requirements.** All surface waters of the Port Gamble S’Klallam Tribe shall be free from toxic, radioactive, conventional, non-conventional, deleterious or other polluting substances in amounts that will prevent attainment of the designated uses.
- (2) **Floating Solids, Oil and Grease.** All surface waters of the Port Gamble S’Klallam Tribe 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.
- (3) **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.

- (4) 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.
- (5) 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.
- (6) Turbidity. Turbidity shall not be at a level to potentially impair designated uses or aquatic biota.
- (7) Bottom Deposits. All surface waters of the Port Gamble S'Klallam Tribe 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.
- (8) Downstream protection. All surface waters of the Port Gamble S'Klallam Tribe shall maintain a level of water quality that provides for the attainment and maintenance of the water quality standards of downstream waters, including the downstream waters of a state or another federally-recognized tribe.

7. TOXIC SUBSTANCES (NUMERIC CRITERIA)

- (1) Toxic substances shall not be introduced into waters of the Port Gamble S'Klallam Tribe 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 *US EPA Quality Criteria for Water, 1986*, as revised, US EPA's website, <https://www.epa.gov/wqc/national-recommended-water-quality-criteria-tables>, which contains the most current aquatic life and human health criteria, and other relevant information as appropriate. *US EPA Quality Criteria for Water, 1986*, as revised, shall also be used in the use and interpretation of the values listed in this subsection.
- (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) Except where noted, the human health criteria in Table 1 were calculated based on a fish consumption rate of 489 grams per day, a cancer risk level of 1 in 1,000,000 people (10^{-6}) for carcinogens, and a relative source contribution of 50 percent (0.5) for noncarcinogens..
- (6) Criteria for metals shall be applied as dissolved values.
- (7) The criteria in Tables 1 and 2 shall be applied to surface waters of the Port Gamble S'Klallam Tribe 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.

Table 1. Human Health Criteria

Pollutant	CAS Number	Water + Organism (µg/L)	Organism Only (µg/L)
1,1,1-Trichloroethane ^a	71556	12,000	20,000
1,1,2,2-Tetrachloroethane	79345	0.07	0.1
1,1,2-Trichloroethane ^a	79005	0.24	0.40
1,1-Dichloroethylene ^a	75354	600	1,800
1,2,4,5-Tetrachlorobenzene	95943	0.0024	0.0024
1,2,4-Trichlorobenzene ^a	120821	0.0031	0.0031
1,2-Dichlorobenzene ^a	95501	350	380
1,2-Dichloroethane ^a	107062	7.5	29
1,2-Dichloropropane	78875	0.55	1.4
1,2-Diphenylhydrazine	122667	0.0077	0.0094
1,2-Trans-Dichloroethylene ^a	156605	190	420
1,3-Dichlorobenzene	541731	1.6	1.7
1,3-Dichloropropene	542756	0.18	0.52
1,4-Dichlorobenzene ^a	106467	100	110
2,4,5-Trichlorophenol ^b	95954	63	65
2,4,6-Trichlorophenol ^b	88062	0.12	0.13
2,4-Dichlorophenol ^b	120832	5.7	6.4
2,4-Dimethylphenol ^{b,k}	105679	85	97
2,4-Dinitrophenol	51285	18	37

Pollutant	CAS Number	Water + Organism (µg/L)	Organism Only (µg/L)
2,4-Dinitrotoluene	121142	0.03	0.075
2-Chloronaphthalene	91587	34	35
2-Chlorophenol ^{b,k}	95578	15	17
2-Methyl-4,6-Dinitrophenol	534521	1.9	3.0
3,3'-Dichlorobenzidine ^k	91941	0.0031	0.0033
3-Methyl-4-Chlorophenol ^k	59507	36	36
4,4'-DDD	72548	0.0000058	0.0000058
4,4'-DDE	72559	6.9e-7	6.9e-7
4,4'-DDT	50293	0.000001	0.000001
Acenaphthene ^b	83329	9.5	9.6
Acrolein ^k	107028	1	1.1
Acrylonitrile ^k	107131	0.019	0.028
Aldrin	309002	3.4e-8	3.4e-8
alpha-BHC	319846	0.000016	0.000016
alpha-Endosulfan	959988	3.0	3.1
Anthracene	120127	40	40
Antimony ^{a,c,d}	7440360	5.5	33
Arsenic ^{c,j}	7440382	0.0019	0.0021
Asbestos ^{a,c,e}	1332214	7 million fibers/L	--
Barium ^{a,c,e,f}	7440393	1000	--

Pollutant	CAS Number	Water + Organism (µg/L)	Organism Only (µg/L)
Benzene ^a	71432	0.33	0.71
Benzidine ^k	92875	0.00002	0.000023
Benzo(a) Anthracene	56553	0.000057	0.000057
Benzo(a) Pyrene ^a	50328	0.0000057	0.0000057
Benzo(b) Fluoranthene	205992	0.000057	0.000057
Benzo(k) Fluoranthene	207089	0.00057	0.00057
beta-BHC (beta-HCH)	319857	0.00063	0.00065
beta-Endosulfan	33213659	4.6	4.9
Bis(2-Chloro-1-Methylethyl) Ether	108601	100	200
Bis(2-Chloroethyl) Ether ^k	111444	0.02	0.06
Bis(2-Ethylhexyl) Phthalate ^a	117817	0.016	0.016
Bis(Chlormethyl) Ether	542881	0.00013	0.00074
Bromoform ^a	75252	3	5.2
Butylbenzyl Phthalate	85687	0.0045	0.0045
Carbon Tetrachloride ^a	56235	0.14	0.21
Chlordane ^a	57749	0.000017	0.000017
Chlorobenzene ^{a,b}	108907	74	95
Chlorodibromomethane ^a	124481	0.44	0.94
Chloroform ^a	67663	100	250
Chlorophenoxy Herbicide (2,4,5-TP) [Silvex] ^a	93721	10	11

Pollutant	CAS Number	Water + Organism (µg/L)	Organism Only (µg/L)
Chlorophenoxy Herbicide (2,4-D) ^a	94757	960	1300
Chrysene ^a	218019	0.0057	0.0057
Copper ^{a,b,c,e}	7440508	1300	--
Cyanide ^a	57125	8.3	49
Di-n-Butyl Phthalate	84742	2.8	2.8
Dibenzo(a,h) Anthracene	53703	0.0000057	0.0000057
Dichlorobromomethane ^a	75274	0.54	1.2
Dichlorodifluoromethane ^m	75718	5,600	26,000
Dieldrin	60571	5.8e-8	5.8e-8
Diethyl Phthalate	84662	71	71
Dimethyl Phthalate	131113	200	200
Dinitrophenols	25550587	25	110
Dioxin ^c	1746016	2.1e-10	2.1e-10
Endosulfan Sulfate	1031078	4.3	4.5
Endrin	72208	0.001	0.001
Endrin Aldehyde ^{a,k}	7421934	0.034	0.035
Ethylbenzene ^a	100414	14	14
Fluoranthene	206440	2.2	2.2
Fluorene	86737	7.6	7.7
Gamma-BHC (HCH); Lindane ^a	58899	0.22	0.22

Pollutant	CAS Number	Water + Organism (µg/L)	Organism Only (µg/L)
Heptachlor ^a	76448	2.8e-7	2.8e-7
Heptachlor Epoxide ^a	1024573	0.0000017	0.0000017
Hexachlorobenzene ^a	118741	0.0000034	0.0000034
Hexachlorobutadiene ^a	87683	0.0003	0.0003
Hexachlorocyclohexane (HCH) - Technical	608731	0.00045	0.00046
Hexachlorocyclopentadiene ^{a,b}	77474	0.53	0.53
Hexachloroethane	67721	0.0043	0.0044
Indeno(1,2,3-cd) Pyrene	193395	0.000057	0.000057
Iron ^m		300	
Isophorone	78591	25	82
Manganese ^{b,c,e,g}	7439965	50	100
Mercury ^m	7439976	0.002	0.002
Methoxychlor ^a	72435	0.0006	0.00061
Methyl Bromide	74839	270	1300
Methylene Chloride ^{a,k}	75092	10	55
Methylmercury ^{c,h}	22967926	N/A	0.01 mg/kg
N-Nitrosodi-n-Propylamine ^c	621647	0.0039	0.021
N-Nitrosodimethylamine ^c	62759	0.00065	0.12
N-Nitrosodiphenylamine ^c	86306	0.24	0.25
Nickel ^{c,d}	7440020	32	35

Pollutant	CAS Number	Water + Organism (µg/L)	Organism Only (µg/L)
Nitrates ^{a,c,e}	14797558	10000	--
Nitrobenzene ^b	98953	22	62
Nitrosamines ^c	--	0.00074	0.019
Nitrosodibutylamine ^c	924163	0.0036	0.0089
Nitrosodiethylamine ^c	55185	0.00074	0.019
Nitrosopyrrolidine ^c	930552	0.015	1.4
Pentachlorobenzene	608935	0.01	0.01
Pentachlorophenol (PCP) ^{a,b}	87865	0.0017	0.0017
pH ^{c,e}	--	5-9	--
Phenol ^b	108952	7500	30000
Polychlorinated Biphenyls (PCBs) ^{a,c,i}	1336363	0.0000026	0.0000026
Pyrene	129000	2.8	2.9
Selenium ^{a,c}	7782492	42	85
Solids Dissolved and Salinity ^{c,e}	--	250000	--
Tetrachloroethylene ^a	127184	1.2	1.3
Thallium ^c	7440280	0.05	0.05
Toluene ^a	108883	43	58
Toxaphene ^{a, k}	8001352	0.000032	0.000032
Trichloroethylene ^a	79016	0.2	0.3
Vinyl Chloride ^a	75014	0.017	0.07

Pollutant	CAS Number	Water + Organism (µg/L)	Organism Only (µg/L)
Zinc ^{b,c}	7440666	470	520

Footnotes for Table 1

- a. EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to [EPA's National Primary Drinking Water Regulations](#).
- b. The criterion for organoleptic (taste and odor) effects may be more stringent. Refer to [National Recommended Water Quality Criteria - Organoleptic Effects](#).
- c. EPA did not update its National Recommended Human Health Water Quality Criteria for this pollutant in 2015. This table's criteria values are calculated using the 2015 revised inputs for body weight, drinking water intake rate, and a fish consumption rate of 489 g/day (refer to [2015 EPA Updated Ambient Water Quality Criteria for the Protection of Human Health](#)).
- d. This criterion was revised to reflect EPA's q1* or RfD as contained in the [Integrated Risk Information System \(IRIS\)](#) as of May 17, 2002. The fish tissue bioconcentration factor (BCF) is from the 1980 Ambient Water Quality Criteria document.
- e. Criteria for these pollutants are from the [National Recommended Water Quality Criteria - Human Health Criteria Table](#). They are not calculated based on this table's inputs for fish consumption rate and cancer risk level.
- f. This human health criterion is the same as originally published in the [Quality Criteria for Water, 1976 \("Red Book"\)](#) which predates the 1980 methodology and did not utilize the fish ingestion BCF approach. This same criterion value is published in the [Quality Criteria for Water, 1986 \("Gold Book"\)](#).
- g. The Human Health for the consumption of Water + Organism criterion for manganese is not based on toxic effects, but rather is intended to minimize objectionable qualities such as laundry stains and objectionable tastes in beverages.
- h. This fish tissue residue criterion for methylmercury is based on the total fish consumption rate.
- i. This criterion applies to total PCBs (*e.g.*, the sum of all congener or all isomer or homolog or Aroclor analyses).
- j. This criterion for arsenic refers to the inorganic form only.
- k. Criteria are based on more stringent Washington State human health criteria (WAC 173-201A-240 and 40 C.F.R. § 131.45).
- l. This letter not used as a footnote.
- m. Criteria for this pollutant have not been updated.

Table 2. Aquatic Life Criteria

Compound Name (or Class)	Freshwater		Saltwater	
	Acute ^a Criteria	Chronic ^b Criteria	Acute ^a Criteria	Chronic ^b Criteria
Aldrin	3.0e		1.3e	
Aluminum (pH 5.0 - 10.5)	750	87		
Ammonia, total	f	g	233	35
Arsenic	340h	150h	69h	36h
BHC-Gamma Lindane	0.95e		0.16e	
Cadmium	2.0j	0.25j	40	8.8
Chlordane	2.4e	0.0043e	0.09e	0.004e
Chloride	860,000	230,000		
Chlorine	19	11	13	7.5
Chlorpyrifos	0.083	0.041	0.011	0.0056
Chromium (Hex)	16	11	1100	50
Chromium (Tri)	570j	74j		
Copper	13j	9j	4.8	3.1
Cyanide	22p	5.2p	1.0p	1.0p
DDT 4,4'	1.1e	0.001e	0.13e	0.001e
Demeton		0.1		0.1
Dieldrin	0.24	0.056	0.71	0.0019e
Endosulfan-Alpha	0.22e	0.056e	0.034e	0.0087e
Endosulfan-Beta	0.22e	0.056e	0.034e	0.0087e
Endrin	0.086	0.036	0.037	0.0023e
Guthion		0.01		0.01
Heptachlor	0.52e	0.0038e	0.053e	0.0036e
Heptachlor Epoxide	0.52e	0.0038e	0.053e	0.0036e
Iron	-	1000	-	-
Lead	65j	2.5j	210	8.1
Malathion		0.1		0.1
Mercury	1.4		1.8	
Methoxychlor		0.03		0.03
Mirex		0.001		0.001
Nickel	470j	52j	74	8.2
Parathion	0.065	0.013		
PCBs		0.014		0.03
Pentachlorophenol	19n	15n	13	7.9
Phosphorus Elemental				0.1
Selenium			290	
Silver	3.4j,e		1.9e	-
Sulfide-Hydrogen		2.0		2.0

Sulfide				
Toxaphene	0.73	0.0002	0.21	0.0002
Zinc	120j	120j	90j	81j

Footnotes for Table 2

- 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. This criterion is based on the 304(a) aquatic life criterion issues in 1980. The Minimum Data Requirements and derivation procedures were different in the 1980 Guidelines than in the 1985 Guidelines. For example, a “CMC” derived using the 1980 Guidelines were derived to be used as an instantaneous maximum. If assessment is to be done using an averaging period, the values given should be divided by 2 to obtain a value that is more comparable to a CMC derived using the 1985 Guidelines.
- 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:

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

When fish early life stages are absent:

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

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

h. This water quality criterion was derived from data for arsenic (III), but is applied here to total arsenic, which might imply that arsenic (III) and arsenic (V) are equally toxic to aquatic life and that their toxicities are additive. In the arsenic criteria document (EPA 440/5-84-033, January 1985), Species Mean Acute Values are given for both arsenic (III) and Arsenic (V) for five species and the ratios of the SMAVs for each species range from 0.6 to 1.7. Chronic values are available for both arsenic (III) and arsenic (V) for one species; for the fathead minnow, the chronic value for arsenic (V) is 0.29 times the chronic value for arsenic (III). No data are known to be available concerning whether the toxicities of the forms of arsenic to aquatic organisms are additive.

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 CaCO₃) 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.

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

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:

$$\begin{aligned} \text{Cadmium Acute CF} &= 1.136672 - [(\ln \text{ hardness}) (0.041838)] \\ \text{Cadmium Chronic CF} &= 1.101672 - [(\ln \text{ hardness}) (0.041838)] \\ \text{Lead (Acute and Chronic) CF} &= 1.46203 - [(\ln \text{ hardness}) (0.145712)] \end{aligned}$$

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):

$$\begin{aligned} \text{CMC} &= \exp(1.005(\text{pH})-4.869); \\ \text{CCC} &= \exp(1.005(\text{pH})-5.134). \end{aligned}$$

o. This letter is not used as a footnote.

p. These criteria are expressed as µg free cyanide (as CN/L).

8. 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 Tribe 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. Electric 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 Tribe 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)

Criteria Elements	Estimated Illness Rate: 32 per 1,000 primary contact recreators	
	Magnitude	
Indicator	GM (cfu/100 mL) ^a	STV (cfu/100 mL)
Enterococci (marine and fresh water)	30	110
<i>E. coli</i> (fresh water)	100	320
^a <i>EPA Method 1600</i> , or another equivalent method, shall be used to measure culturable enterococci. <i>EPA Method 1603</i> (U.S. EPA, 2002b), or another equivalent method, shall be used to measure <i>E. coli</i> .		
Duration and Frequency: The water body GM should not be greater than the selected GM magnitude in any 30-day interval. There should not be greater than a ten percent excursion frequency of the selected STV magnitude in the same 30-day interval.		

(b) Additionally, the concentration of total microcystins shall not exceed 8 µg/L in more than three ten-day periods per recreational season, for more than one recreational season, over a five-year period and the concentration of total cylindrospermopsin shall not exceed 15 µg/L in more than three ten-day periods per recreational season, for more than one recreational season, over a five-year period.

(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.

9. 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) Uranium - 30 µg/L

10. BIOLOGICAL CRITERIA

- (1) Surface waters of the Port Gamble S’Klallam Tribe 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 Tribe 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.

11. WILDLIFE CRITERIA

Surface waters of the Port Gamble S’Klallam Tribe 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 Tribe.

12. WETLANDS

- (1) All wetlands within the exterior boundaries of the Port Gamble S’Klallam Reservation, and within all other lands under the jurisdiction of the Port Gamble S’Klallam Tribe which are not constructed wetlands shall be subject to the Narrative Criteria (section 6), Antidegradation (section 13), and Toxic Substances narrative provision (section 7(1)) 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 Tribe” and are not subject to the provisions of this section.

13. ANTIDegradation

(1) Antidegradation Policy

- (a) 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.
- (b) Where the quality of the waters exceeds levels necessary to support protection and propagation of fish, including shellfish, 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.
- (i) Identification of reservation waters for the protections described in the paragraph above will be made on a parameter-by-parameter basis.
- (ii) Before allowing any lowering of high quality water, the Tribe shall find, after an analysis of alternatives, that such a lowering is necessary to accommodate important economic or social development in the area in which the waters are located. The analysis of alternatives shall evaluate a range of practicable alternatives that would prevent or lessen the degradation associated with the proposed activity. When the analysis of alternatives identifies one or more practicable alternatives, the Tribe shall only find that a lowering is necessary if one such alternative is selected for implementation.
- (c) Outstanding Tribal resource waters. Waters meeting one or more of the following criteria shall be considered for outstanding Tribal resource water designation:
- (i) Outstanding national or Tribal resource;

- (ii) Documented critical habitat for populations of culturally significant, threatened or endangered species;
 - (iii) Waters of exceptional recreational, ceremonial, cultural, or ecological significance; or
 - (iv) Waters supporting priority species as determined by the Tribe.
- (d) Where waters constitute an outstanding Tribal 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.
- (e) In those cases where potential water quality impairments associated with thermal discharge are involved, the decision to allow such degradation shall be consistent with Section 316 of the Clean Water Act, as amended.

(2) **Antidegradation Implementation Methods**

- (a) **Applicability.** The antidegradation policy in Section 13, paragraph (1) and these antidegradation implementation methods shall be applied to all surface waters of the Port Gamble S’Klallam Tribe.
- (i) The antidegradation policy and implementation requirements shall be followed when considering all requests to authorize new or expanded regulated activities. Regulated activities include, but are not limited to, any activity that requires a permit, license, or water quality certification pursuant to sections 401, 402, and 404 of the CWA.
 - (ii) Antidegradation protections will be addressed in new or reissued general permits authorized, implemented, or administered by the permitting authority either at the time the permitting authority develops and issues the general permit or upon review of an applicant’s request to be covered by a general permit. The permitting authority will describe, in writing in the permit fact sheet, how the general permit is consistent with the antidegradation requirements of this paragraph and the antidegradation policy.
- (b) **Existing instream use protection.** For all waters, the Tribe shall ensure that the level of water quality necessary to protect existing uses is maintained. In order to achieve this requirement, the Tribe shall consider whether a regulated activity would lower the water quality to the extent that it would no longer be sufficient to protect and maintain the existing uses of that water body. If the lowering of water quality would not protect and maintain the existing uses of that water body, then the Tribe will not allow the lowering of water quality. Such consideration shall be based on all existing and readily available water quality-related data and information, as well as any additional water-quality related data and information submitted during the public comment period for the authorization.

(c) High Quality Water Protection. In determining which waters will receive high quality water protection, the Tribe will identify high quality water on a parameter-by-parameter basis. Each parameter that is determined to be high quality shall be considered and evaluated independently, at the time an applicant requests authorization to lower high water quality. A parameter is high quality if its water quality level exceeds its water quality criterion. The Tribe shall ensure that no regulated activity that results in a lowering of water quality occurs unless the components outlined below in paragraph (2)(c)(i) are available to the Tribe and the Tribe has made a finding that the lowering of water quality is necessary to accommodate important social and economic development in the area in which the water is located consistent with the below process in paragraph (2)(c)(ii). The entity seeking to lower water quality is responsible for preparing and submitting the components and information, and demonstrating the requirements have been met.

(i) When determining whether to authorize a lowering of water quality for one or more parameters that exceeds levels necessary to support the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water, the Tribe will consider the following components and information:

(1) Identifying Information. Name of the applicant, a description of the nature of the applicant's business and the pollutants to be discharged, location of the discharge, the name of and any water quality data for the receiving water body, daily maximum and average flow to be discharged, and effluent characterization.

(2) Analysis of alternatives. Identification and evaluation of a range of practicable alternatives that would prevent or lessen the degradation associated with the proposed activity to determine whether the degradation of water quality is necessary. When the analysis of alternatives identifies one or more practicable alternatives, the Tribe shall only find that a lowering of high water quality is necessary if one such alternative is selected for implementation.

(3) Socio-economic analysis. Identification and evaluation of the social and economic development benefits to the area in which the waters are located that will be foregone if the lowering of water quality is not allowed. Along with the analysis of alternatives, the socio-economic analysis is used to determine whether the lowering of high water quality will accommodate important economic and social development in the area in which the water is located. The "area in which the waters are located" shall be determined on a case-by-case basis and shall include all areas directly impacted by the proposed regulated activity. Factors that must be considered in the socio-economic analysis include, but are not limited to, the ecological and economic importance of the affected waters, the importance of the development to the affected community, and the socio-economic health of the affected community as determined by appropriate analytical methods.

(4) Any additional documentation requested by the Tribe which, in the judgment of the Tribe, is needed to decide whether to find that a lowering of water quality is necessary to accommodate important economic and social development in the area in which the water is located.

(ii) Once the Tribe has the components and information required in paragraph (2)(c)(i), the Tribe shall use that information to make a finding as to whether the lowering of water quality is necessary to accommodate important social and economic development in the area in which the water is located.

(1) If the proposed lowering of high water quality is either not necessary, or not important to accommodate social and economic development, the Tribe shall deny the request to lower water quality.

(2) If the lowering of high water quality is necessary to accommodate important social and economic development goals, the Tribe may allow a lowering to the high quality water as long as one of the practicable alternatives identified in paragraph (2)(c)(i)(2) is selected for implementation and incorporated into the authorization for the activity. If no practicable alternative was identified by the analysis of alternatives, but the lowering of high water quality will accommodate important social or economic development the Tribe may allow the lowering of high water quality. If a non-degrading practicable alternative is selected, no lowering of the high quality water will occur, and the Tribe does not need to allow the lowering.

(3) In no event will the Tribe allow water quality to be lowered below the level required to fully protect existing and designated uses.

(4) To ensure the opportunity for public involvement, the Tribe shall provide public notice and request public comment on the preliminary decision to allow a lowering of high water quality. The preliminary decision will provide relevant information regarding the lowering of high water quality, including the alternatives analysis, socio-economic analysis, the estimated amount of assimilative capacity available in the water body, and the estimated amount of assimilative capacity to be utilized by the proposed activity. To the extent possible, public notice regarding the finding to allow a lowering of water quality will be coordinated with other required notices for public review.

(5) To fulfill intergovernmental coordination, the Tribe shall notify local, state, and federal agencies that operate in the area impacted by the activity and request comment on the preliminary decision to allow a lowering of water quality in a high quality water based on whether it is necessary to accommodate important social and economic development in the area of the waters impacted by the activity.

(6) Before allowing any degradation of water quality, the Tribe shall identify point sources and tribal-regulated nonpoint sources that discharge to, or otherwise impact, the receiving water. The Tribe shall coordinate with other agencies, as necessary, to assure compliance with the highest statutory and regulatory requirements for all new and existing point sources and/or all tribal required cost-effective and reasonable best management practices for non-point source control. If compliance with the highest statutory and regulatory requirements for all new and existing point sources and all tribal-regulated cost-effective and reasonable best management practices for non-point sources cannot be assured, the Tribe will not allow a lowering of high water quality.

(d) Outstanding Tribal resource water protection. For reservation waters assigned as outstanding Tribal resource water, the Tribe shall ensure, through the application of appropriate controls on point and tribal regulated nonpoint pollutant sources, that water quality is maintained and protected. No new or expanded point source discharges will be allowed to an outstanding Tribal resource water unless it is on a short term and temporary basis.

(i) Any person or entity may nominate a specific reservation water to be assigned as an outstanding Tribal resource water. The person or entity may transmit a written nomination to the Tribe, at any time, including why the reservation water warrants outstanding resource water protection. The Tribe shall determine whether the nominated water qualifies as an outstanding Tribal resource water as described in paragraph (2)(d).

(ii) The Tribe shall issue a public notice regarding the decision to assign a water as an outstanding Tribal resource water. The Tribe will maintain a comprehensive list of the reservation waters that have been assigned as an outstanding Tribal resource water at the Natural Resources Department.

(iii) The Tribe may allow short-term, temporary water quality degradation in an outstanding Tribal resource water only if the short-term, temporary degradation is limited to the shortest possible time, does not impact existing uses, and does not alter the essential or special characteristics that make the reservation water an outstanding Tribal resource water. Short-term shall be considered any period that is measured in the context of weeks to months, not years.

14. 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 Tribe.

15. IMPLEMENTATION

- (1) The requirements of these water quality standards shall be met for all waters of the Port Gamble S'Klallam Tribe. 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 C.F.R., Part 136. If guidance does not exist, procedures shall conform with other methods accepted by the scientific community and deemed appropriate by the Department.

16. 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.
- (a) Interim dates: If a permit establishes a schedule of compliance which exceeds 1 year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement.
 - (b) The time between interim dates shall not exceed 1 year, except that in the case of a schedule for compliance with standards for sewage sludge use and disposal, the time between interim dates shall not exceed six months.
 - (c) If the time necessary for completion of any interim requirement (such as the construction of a control facility) is more than 1 year and is not readily divisible into stages for completion, the permit shall specify interim dates for the submission of reports of progress toward completion of the interim requirements and indicate a projected completion date.
- (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).

17. 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 to a limited duration, 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.

18. 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 C.F.R. Part 25.

19. ENFORCEMENT

These Standards shall be enforced through all methods available to the Department including, but not limited to:

- (1) Issuance of permits and certifications;
- (2) Coordination with other departments and regulatory agencies;
- (3) Issuances of notices of violation and regulatory orders;
- (4) Levying of civil penalties; and
- (5) Initiations of actions requesting injunctive or other appropriate relief in tribal or federal court.