Presented below are water quality standards that are in effect for Clean Water Act purposes.

EPA is posting these standards as a convenience to users and has made a reasonable effort to assure their accuracy. Additionally, EPA has made a reasonable effort to identify parts of the standards that are not approved, disapproved, or are otherwise not in effect for Clean Water Act purposes.

Pueblo of Nambé

WATER QUALITY CODE

November 2017

Photo by George Toya

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SECTION I. INTRODUCTION, AUTHORITY, AND APPLICABILITY

Pursuant to authority set forth in Section 518 of the Clean Water Act, enacted February 4, 1987 (33 U.S.C. § 1377), the Tribal Council of the Pueblo of Nambé, a federally-recognized Tribe of Indians, hereby enacts the Water Code for the Pueblo of Nambé (hereinafter: "this Code", "Water Quality Standards," or "Standards").

A. Purpose and Consistency

The purposes of these water quality standards are to:

Designate the existing and attainable uses for which the surface water of the Pueblo of Nambé (hereinafter: "the Pueblo"), shall be protected;

- prescribe water quality criteria (narrative and numeric) to sustain the designated uses;
- assure that degradation of existing water quality does not occur; and
- promote the social welfare and economic well-being of the Pueblo.

These Standards are consistent with Section 101(a)(2) of the Clean Water Act (33 U.S.C. § 1251(a)(2)) which declares that "it is the national goal that, wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983…" Agriculture, primary contact, industrial and municipal uses, recharge of domestic water supply via surface waters, and irrigation are other beneficial uses of Pueblo waters. Contamination that may result from such uses shall not lower the quality of the water below what is required for recreation and the protection and propagation of fish, shellfish, and wildlife.

The criteria, numeric and narrative, contained in this Code will be part of the permitting and management process for all dischargers who are subject to Federal, State, or Pueblo regulations. These criteria shall be used in existing procedures (or in any new procedure or process that may be created) to determine when a designated use is threatened. If criteria are not met, the permitting and management process may be expected to require advanced treatment technologies for point sources and to implement such best management practices as are applicable for nonpoint sources.

B. Applicability

The Code applies to all Tribal waters, that is, all waters within the exterior boundaries of the Nambé Pueblo Indian Reservation and Grant Lands (hereinafter: "Pueblo lands") including water situated wholly or partly within or bordering upon the Pueblo lands. Waters which do not combine with other surface or subsurface waters, such as stock tanks or treatment lagoons, are private waters and excluded from these Standards. The specified criteria apply to substances attributable to discharges, nonpoint sources, or instream activities. The criteria shall not apply to acts of God nor to natural phenomena.

C. General Standards

The General Standards in Section III of this Code shall be maintained at all times and apply to streams, lakes, reservoirs, canals, drains, ponds, springs, and wetlands, whether they are perennial, ephemeral, or intermittent waterbodies. The criteria assigned to a waterbody are the ones required

to sustain all designated uses of the waterbody. The water that is within reservoirs used for water treatment are exempt from these criteria, but the criteria apply to receiving bodies of water affected by the effluent from such reservoirs. The Pueblo shall issue and approve surface water designations for Tribal waters and shall determine the suitability of bodies of water for primary contact purposes.

D. Antidegradation Policy

The antidegradation policy for Tribal waters and the procedures for implementing it are in Section II of this Code.

E. Department of Environmental and Natural Resources

The Department of Environmental and Natural Resources ("DENR" or "Department") shall serve under the direction of the Governor and the Tribal Council of the Pueblo. The Department shall work in cooperation with the U.S. Environmental Protection Agency (EPA) and other agencies of Federal, Tribal, and State governments. The duties of the DENR are detailed in the Implementation Plan (Section II of this Code).

F. Revisions and Public Hearing

In accordance with section 303(c)(1) of the Clean Water Act (33 U.S.C. § 1313(c)), public hearings shall be held at least once each three-year period for the purpose of reviewing the Code and proposing amendments, as appropriate, or to incorporate by reference other regulations. Revisions shall include relevant scientific and engineering advances with respect to water quality and waste treatment. If water quality monitoring identifies reaches of a waterbody where attainable quality is less than existing water quality standards, the standards may be modified to reflect attainability. Modification shall be carried out in accordance with use attainability analysis procedures, development of a site-specific standard, or other appropriate methods. Errors resulting from inadequate and erroneous data or human or clerical oversight will be corrected by the Pueblo. The discovery of such errors does not render the unaffected standards invalid.

G. Compliance Schedules

It is the policy of the Pueblo to allow on a case-by-case basis the inclusion of a compliance schedule in a National Pollutant Discharge Elimination System (NPDES) permit issued to an existing facility. Such a schedule will provide a permittee with adequate time to make treatment modifications so that the resulting effluent meets final permit requirements. Compliance schedules may be included in NPDES permits at the time of permit reissuance or modification and shall require compliance at the earliest practicable time. Duration and schedule of activities shall also be specified to measure progress toward final project completion.

H. Variances

The Pueblo may allow variances from the Water Quality Standards on a case-by-case basis. A variance from the Pueblo's criteria may be allowed in certain cases where the appropriateness of the specific criteria is questionable. The variance provides a period of time during which issues concerning the appropriateness of the criteria may be resolved. A variance shall be valid for no more than three years. Variances are not renewable but may be reissued again upon adequate justification. A variance shall be granted only after appropriate public participation and EPA review and approval. Variance from criteria will be allowed for anticipated non-attainment of water quality standards due to one or more of the reasons listed in 40 CFR 131.10 (g). Variance

from criteria are for specific pollutants, time-limited, and shall not supersede the currently designated use. Variances are to be issued instead of removing a designated use for a waterbody where such use is not now attainable but can be expected with reasonable progress towards water quality.

I. Short-Term Exceedances

The Department with consent from the Tribal Council of the Pueblo may authorize short-term activities, which might cause a violation of the Pueblo's Water Quality Standards. Such authorization shall not be granted for activities which could result in the adverse impact on any federally listed or threatened species or on the critical habitat of such species or which could result in the irreversible degradation of the water quality. The Tribal Council and the Department shall specify the degree of exceedance, the time limit and restoration procedures where applicable. The Pueblo may include additional requirements for short-term exceedances in related environmental regulations such as a Water Quality Management Plan. These short-term activities will take place whenever necessary and without public notice. Such short-term activities are those which are necessary to accommodate legitimate uses, emergencies, or to protect public health and welfare and in which no permanent or long-term impairment of beneficial uses is likely to result. Such restricted activities that may be categorically excluded from the Water Quality Standards include but are not limited to bank stabilization, mosquito abatement, algae and weed control, tracers used in hydrological studies, or activities which result in overall enhancement or maintenance of beneficial uses. Short-Term Exceedances are not intended to supersede existing Tribal, Federal, or State permitting processes or requirements.

J. Dispute Resolution Mechanism

Disputes due to differing water quality standards between the Pueblo and a State or between the Pueblo and another Tribe shall be resolved using the Dispute Resolution Mechanism promulgated by the EPA in 40 CFR Section 131.7.

K. Implementation of Numeric Criteria

Numeric criteria specific to a use shall be maintained any time the flow equals or exceeds the four-day three-year low flow value (4Q3). When intermittent and ephemeral streams have a low flow value of zero, all discharges shall meet standards for the designated uses.

Human Health

For use in implementation of human health criteria, the harmonic mean flow will be used. The harmonic mean flow is the number of daily flow measurements divided by the sum of the reciprocals of the flows (i.e., the reciprocal of the mean of reciprocals). In ephemeral waters, the calculation shall be based upon the nonzero flow intervals and modified by including a factor to adjust for the proportion of intervals with zero flow. The equations are as follows:

Harmonic Mean = $\frac{n}{\sum 1/Q}$

Where: n = number of flow values
and Q = flow value (cfs)

Modified Harmonic Mean = $\left[\frac{\sum_{i=1}^{Nt-No} \frac{1}{Qi}}{Nt-No}\right]^{-1} x\left[\frac{Nt-No}{Nt}\right]$

Where: Qi = nonzero flow
N_t = total number of flow values
and N_0 = number of zero flow values

SECTION II. ANTIDEGRADATION POLICY AND IMPLEMENTATION PLAN

A. Antidegradation Policy

Existing water uses and the level of water quality necessary to protect existing uses shall be maintained and protected.

Where existing water quality exceeds levels necessary to support propagation of fish and wildlife and recreation in and on the water, the water quality shall be maintained and protected unless it is found by the Pueblo that a lower level of water quality is required in order to accommodate important economic or social development in the area in which the waters are located. Degradation of water quality may not occur without full satisfaction of governmental and public participation requirements. In permitting such degradation of water quality, the Pueblo shall require the highest statutory and regulatory requirements for all new and existing point sources and such best management practices as are applicable for nonpoint source control. Figure 1 shows the decision flow chart for antidegradation analysis.

Where high quality water constitutes an outstanding national or tribal resource, or the waters are of exceptional recreational or ecological significance, the water quality and uses shall be maintained and protected by water quality controls, maintenance of natural flow regimes, protection of instream habitats, and pursuit of land use practices protective of the watershed.

In those cases where thermal discharge may impair water quality, the antidegradation policy and implementing methods shall be consistent with Section 316 of the Clean Water Act, as amended [(33 U.S.C. § 1326 (1987)].

B. Implementation Plan and Duties of the Department of Environmental and Natural Resources

The Department acting under authority delegated by the Tribal Council shall implement the water quality standards and the antidegradation policy by establishing and maintaining controls on the discharge of pollutants to surface waters. The Department shall, subject to availability of funds:

- Work in conjunction with Federal, Tribal, and State agencies as appropriate;

- Establish and maintain controls on the discharge of pollutants to surface waters. Such controls shall be carried out in a stepwise process involving several interrelated programs;

- Recommend to the Tribal Council any permitting or management regulations which would be consistent with the Water Quality Standards. The Tribal Council may set permit requirements in addition to those of this Code when enacted;

- Obtain information pertinent to the effect of the effluent on the receiving waters and to advise the prospective discharger of requirements for obtaining a permit to discharge, including any permit requirements as the Pueblo itself may enact subsequent to the enactment of this Code;

- Assess the probable effects of effluent on receiving waters relative to the designated uses and numeric and narrative standards;

- Designate Pueblo streams as perennial, ephemeral or intermittent in accordance with the Pueblo Water Quality Standards and determine low flow numeric values;

- Conduct water quality surveillance of Pueblo waters to assess the effectiveness of pollution controls and prevention and to determine whether water quality standards are being attained. Include a review of existing database adequacy and obtain any needed data by conducting an intensive analytical survey of the receiving waters;

- Conduct biological monitoring of fish, invertebrate, plant bioassay, and sediment quality to assess the physical and chemical factors relative to heavy metals and toxic substance contamination;

- Require the highest level and best degree of wastewater treatment practicable to protect and maintain the designated uses and existing water quality of the receiving waters;

- Submit requirements of, or comments on, effluent limitations for inclusion in any Federal permit issued to a discharger pursuant to Section 402 or 404 of the Clean Water Act (33 U.S.C. § 1342). These effluent limitations shall be included in any such permit as a condition for Tribal certification pursuant to Section 401 of the Clean Water Act (33 U.S.C. § 1341);

- Develop and pursue inspection and enforcement programs to ensure that dischargers comply with requirements of these Water Quality Standards, satisfy the requirements of any later Pueblo permit regulations, and complement EPA's enforcement of Federal permits;

- Ensure that the provisions for public involvement required by the Water Code and the Clean Water Act are followed (40 CFR Part 25**)**;

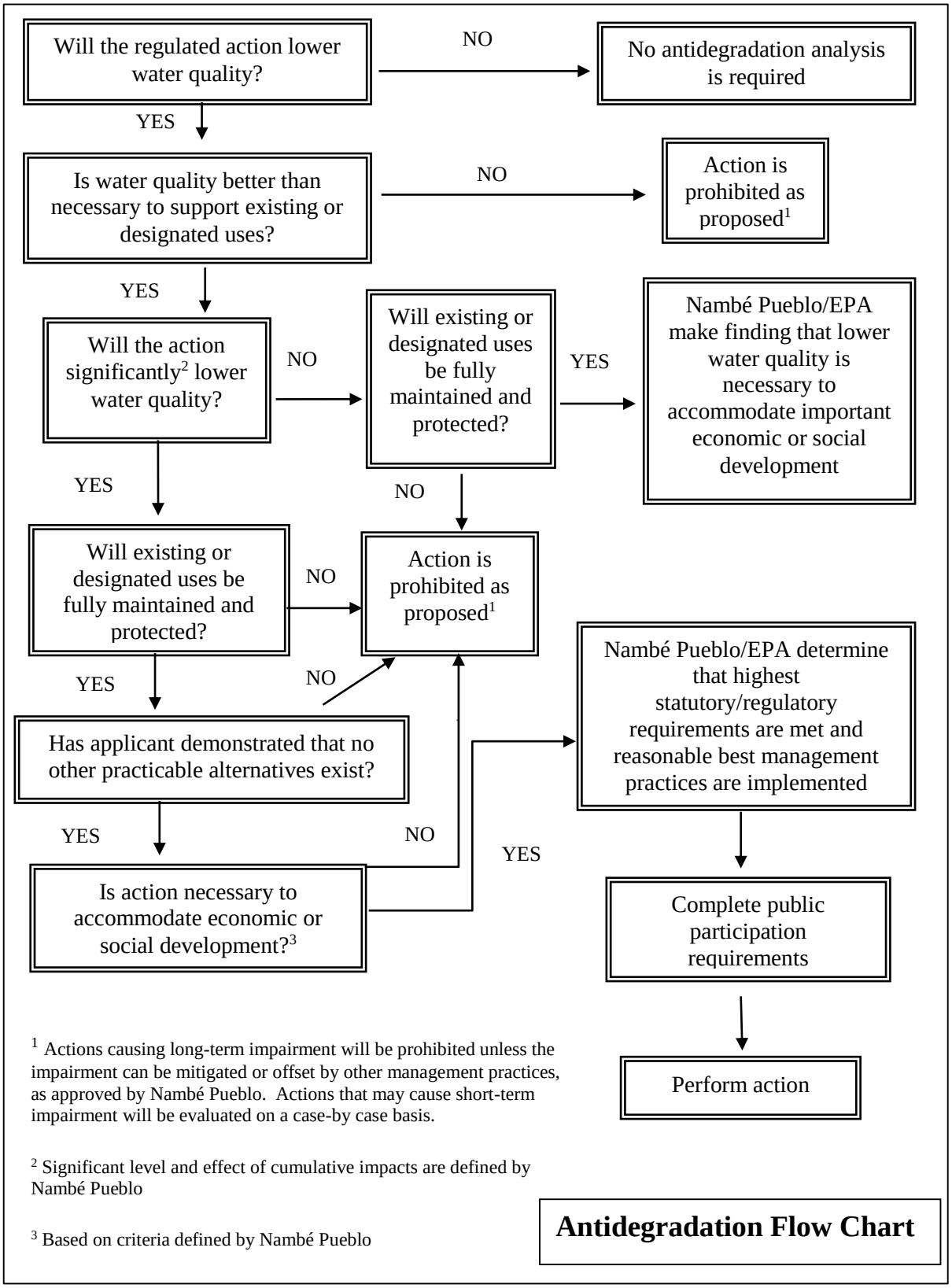
- Provide continuing technical training for waste water treatment facility operators through the utility operators training and certification programs;

- Seek funds to assist the construction of Pueblo owned wastewater treatment facilities, for example, through the construction grants program authorized by Section 201 of the Clean Water Act (33 U.S.C. § 1281);

- Encourage, in conjunction with other agencies, voluntary implementation of best management practices noted for controlling nonpoint source pollution, and to comply with the Water Quality Standards and with the Clean Water Act;

- Evaluate effectiveness of best management practices selected to prevent or abate nonpoint sources of water pollutants.

Figure 1. Antidegradation flow chart.



SECTION III. GENERAL STANDARDS

Watercourses shall be free of any water contaminant in such quantity and of such duration as may, with reasonable probability, injure human health, animal or plant life, or property, or unreasonably interfere with the public welfare or the use of property. In addition, the following narrative standards apply to all Pueblo waters, unless stricter standards are imposed in Section IV.

A. Stream Bottom Deposits.

The stream shall be free from water contaminants from other than natural causes that will settle and cause deleterious effects to the aquatic biota or significantly alter the physical or chemical properties of the bottom.

B. Floating Solids, Oil, and Grease

All waters shall be free from objectionable oils, scum, foam, grease, and other floating materials and suspended substances of a persistent nature resulting from other than natural causes (including visible films of oil, globules of oil, grease, or solids in or on the water, or coatings on stream banks or the stream bottom or that would damage or impair the normal growth, function or reproduction of wildlife, plant or aquatic life).

C. Color

Materials producing true color resulting from other than natural causes shall not create an aesthetically undesirable condition; nor should color impair the attainable uses of the water nor harm aquatic life.

D. 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 attainable uses of the water, nor shall taste and odor-producing substances of other than natural origin interfere with the production of a potable water supply by modern treatment methods.

E. Nuisance Conditions

Plant nutrients or other substances stimulating algal growth from other than natural causes shall not be present in concentrations which will produce objectionable algal densities, nuisance aquatic vegetation, result in a dominance of nuisance species instream, or otherwise cause nuisance conditions. When stricter requirements are not established elsewhere in this code, the dissolved oxygen shall be maintained at 2 mg/L in order to prevent nuisance conditions from other than natural causes. The phosphorus and nitrogen concentrations shall not be increased to levels which result in man-induced eutrophication problems. The Tribal Council may establish nutrient limitation for lakes, reservoirs, and streams, and shall incorporate such limitations into appropriate water quality management plans.

F. Pathogens

The stream shall be virtually free from pathogens which includes bacteria, viruses, or parasites. In particular, waters used for irrigation of table crops such as lettuce shall be virtually free of Salmonella and Shigella species.

G. Turbidity

Turbidity attributable to other than natural causes shall not reduce light transmission to the point that the aquatic biota is inhibited or that will cause an unaesthetic and substantial visible contrast with the natural appearance of the water. Turbidity attributable to natural causes is not subject to these standards. Specifically, turbidity shall not exceed 5 NTU over background when background turbidity is 50 NTU or less; there shall not be more than a 10% increase in turbidity when background turbidity is more than 50 NTU.

H. Mixing Zones

The size of mixing zones shall be less than 1/3 of the cross-sectional area at or above 4Q3 conditions, or 1/3 of the critical stream flow of the receiving stream. In intermittent or ephemeral streams, discharges shall meet all applicable numeric and narrative criteria at the point of discharge. There shall be no acute toxicity in the mixing zone. Numeric acute criteria shall be attained at the point of discharge. There shall be no chronic toxicity at the edge of the mixing zone. Numeric chronic criteria shall be attained at the edge of the mixing zone. Mixing zones are not allowed for discharges to publicly owned lakes or reservoirs; these effluents shall meet all applicable numeric and narrative criteria at the point of discharge. Mixing zones shall not overlap ceremonial or recreational sites. Requirements for mixing zones shall be consistent with those established in other regulations such as water quality management plans and implementation plans developed by the Pueblo or by the EPA. In any waters receiving a waste discharge, a continuous zone must be maintained where the water is of adequate quality to allow the migration of aquatic life with no significant effect on their population. This is known as a zone of passage.

I. Radioactivity

Unless otherwise provided in this Code, the radioactivity of surface water shall be maintained at concentrations which do not exceed the maximum natural background concentrations in surface waters of the Pueblo.

J. Temperature

The introduction of heat by other than natural causes shall not increase the temperature, outside the mixing zone, by more than 2.7° C (5° F) in a stream, based upon the monthly average of the maximum daily temperatures measured at mid-depth or three feet (whichever is less) outside the mixing zone. In lakes, the temperature of the water column or epilimnion (if thermal stratification exists) shall not be raised more than 1.7° C (3° F) above that which existed before the addition of heat of artificial origin, based upon the average of temperatures taken from the surface to the bottom or surface to the bottom of the epilimnion (if stratified). The normal daily and seasonal variations that were present before the addition of heat from other than natural sources shall be maintained. In no case shall man-introduced heat be permitted when the maximum temperature specified for the reach (20° C/68° F for cold water fisheries and 32.2° C/90° F for warm water fisheries) would thereby be exceeded. High water temperatures caused by unusually high ambient air temperatures are not violations of these standards.

K. Salinity/Mineral Quality (total dissolved solids, chlorides, and sulfates)

Existing mineral quality shall not be altered by municipal, industrial, and instream activities, or other wastes discharges so as to interfere with the designated uses. No increase exceeding 1/3 over naturally occurring levels may be permitted. Numeric criteria for chlorides at 230 mg/L, for sulfates at 250 mg/L, and for total dissolved solids at 500 mg/L shall not be exceeded.

L. pH

The pH of a stream or a lake shall not fluctuate in excess of 1.0 pH unit over a period of 24 hours for other than natural causes.

M. Dissolved Oxygen

If the stream is capable of supporting aquatic life, the dissolved oxygen standard shall not be less than 5 mg/L.

N. Dissolved Gases

Surface water shall be free of nitrogen and other dissolved gases at levels above 110% saturation when this supersaturation is attributable to municipal, industrial or other discharges.

O. Toxic Substances

Toxic substances such as, but not limited to, pesticides, herbicides, heavy metals, and organic solvents, shall not be present in receiving waters in such quantities as to be toxic to human, animal, plant, or aquatic life nor as to interfere with the normal propagation, growth, and survival of the sensitive indigenous aquatic biota. For lists of the applicable toxic substances, criteria published, and sensitive indigenous species/lifestages, reference should be made to the procedures implementing this toxic substances narrative contained in the rules, regulations, and guidelines of the EPA, or any rules, regulations and guidelines adopted by the Pueblo subsequent to adoption of these Standards. Within the mixing zone, there shall be no acute toxicity. There shall be no chronic toxicity at the edge of the mixing zone.

Biomonitoring testing following current EPA test methods shall be used to determine compliance with the narrative criteria. For substances lacking EPA published criteria, biomonitoring data may be used to determine compliance with this narrative standard in accordance with EPA standard acute and chronic biological test protocols. These protocols can be found in EPA ***Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*** (EPA/821/R-02/012: October 2002), Post Third Round NPDES Permit Implementation Strategy (adopted October 1, 1992), ***Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*** (EPA/821/R-02/013; October 2002), ***Technical Support Document For Water Quality-based Toxics Control,*** (EPA\505\2-90-001, March 1991), ***Quality Criteria for Water,*** 1986, or the most current version thereof. If the Pueblo needs to derive numeric criteria, without actually conducting toxicity tests, they shall use the AQUIRE (**A**quatic **T**oxicity **I**nformation **Re**trieval) database and EPA's Guidance, ***Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and their Uses***.

In the event that sufficient data is not available to derive a numeric criterion following the above guidance, the Pueblo may use the results of toxicological studies to calculate a criterion based on the following methods:

a) concentrations of non-persistent toxic materials shall not exceed concentrations which are chronically toxic (as determined from appropriate chronic toxicity data or calculated as 10% of LC50 values) to representative, sensitive aquatic organisms.

b) concentrations of persistent toxic materials that do not bioaccumulate shall not exceed concentrations which are chronically toxic (as determined from appropriate chronic toxicity data or calculated as 5% of LC50 values) to representative, sensitive aquatic organisms; and

c) concentrations of toxic materials that bioaccumulate shall not exceed concentrations which are chronically toxic (as determined from appropriate chronic toxicity data or calculated as 1% of LC50 values) to representative, sensitive aquatic organisms.

Toxicants in the receiving water known to be persistent, bioaccumulative, carcinogenic, synergistic with other waste stream components, or antagonistic with non-waste stream components will be addressed on a case by case basis.

The numerical water quality standards that apply for toxic substances for specific uses are listed in Appendix B of the Nambé WQS. Human Health standards for consumption of organisms only shall apply to those waters with a designated, existing, or attainable fishery use. The Human Health standards for persistent toxic pollutants, as identified in Appendix B shall also apply to all tributaries of waters with a designated, existing, or attainable fishery use.

Human Health standards for consumption of water and organisms shall apply to those waters with a designated, existing, or attainable Industrial and Municipal Water Supply use. The Human Health standards for persistent toxic pollutants, as identified in Appendix B shall also apply to all tributaries of waters with a designated, existing, or attainable Industrial and Municipal Water Supply use.

As new documents addressing criteria for toxic substances are published by EPA, these will become incorporated into and made a part of Appendix B of the Nambé WQS during triennial review. Numeric criteria for carcinogens will reflect a risk level of one in one million (10-6).

For specific segments where the above criteria may need to be recalculated using appropriate species or water quality factors, the Pueblo may, after public participation and EPA approval, adopt site-specific criteria modifications. Because pesticides and polychlorinated biphenyls (PCBs) can accumulate in bottom sediments and tissues of aquatic organisms, sediment and tissue analyses shall be used when appropriate to complement water analyses. Chemical concentration levels in tissues of aquatic organisms that exceed U.S. Food and Drug Administration (FDA) action levels or risk-based tissue criteria shall require investigation.

P. Narrative Biocriteria

The biological condition of any surface water body shall be assessed by comparison to the biological integrity of a "least impacted" or minimally impacted reference water to best represent the most natural condition for that surface water body type within a geographic region. The biological integrity of surface waters, as measured by multi-metric indices of benthic macroinvertebrates, fish, periphyton, or other appropriate indicators shall not significantly differ from reference waters, taking into account natural variability. Waters shall be compared with reference waters of similar size and hydrologic characteristics within the same geographic region. All wetlands on Pueblo lands which are not constructed wetlands are considered "waters within the jurisdiction of the Tribe". "Wetlands" shall be subject to narrative criteria and applicable antidegradation provisions, as well as site-specific numerical criteria if applicable. Created wetlands shall be subject only to narrative criteria.

Wetlands are generally assumed to provide habitat capable of supporting aquatic biota (e.g., fish, benthic macroinvertebrates, amphibians, or hydrophytic vegetation) on an ongoing or periodic

basis. It shall be a goal of the Tribe to maintain the water quality of wetlands at naturally occurring levels, within the natural range of variation for the individual wetland. For substances that are not naturally occurring, water quality requirements shall be based on protecting existing uses of the wetland consistent with antidegradation requirements, the Tribe's narrative water quality criteria, criteria assigned to hydrologically-connected surface waters, or appropriate criteria guidance issued by the EPA. Natural wetlands shall not be considered as repositories or treatment systems for wastes from human sources.

SECTION IV. WATER BODY USES AND SPECIFIC STANDARDS

A. Stream Use Designation

A.1. The following water body uses and the standards pertaining thereto shall apply to the Rio Nambé above the Nambé Falls Dam and Nambé Lake, perennial tributaries to these water bodies (e.g., Rio Capulin) and, wetlands along these waterbodies including tributaries associated with those wetlands. Standards shall also apply to any other perennial standing waters along the Rio Nambé above Nambé Falls and Nambé Lake: recharge of domestic water supply, fish culture, high quality cold-water fishery, irrigation, livestock watering and wildlife habitat, industrial and municipal water supply, and primary contact use.

A.2 The following water body uses and the standards pertaining thereto shall apply to the water bodies below Nambé Falls Dam. Such water bodies are: Rio Nambé and any other segment which is determined to be perennial, including any standing waters and wetlands associated with said streams: marginal cold-water fishery, warm water fishery, irrigation, livestock watering and wildlife habitat, primary contact use and recharge of domestic water supply.

A.3. The following water body uses and the standards pertaining thereto shall apply to all intermittent or ephemeral streams, including but not limited to the Rio en Medio, the Rio Chupadero, the named ephemeral streams, and any associated standing water and wetlands: warm water fishery, livestock watering and wildlife habitat, irrigation, recharge of domestic water supply and primary contact as shown in Table 1.

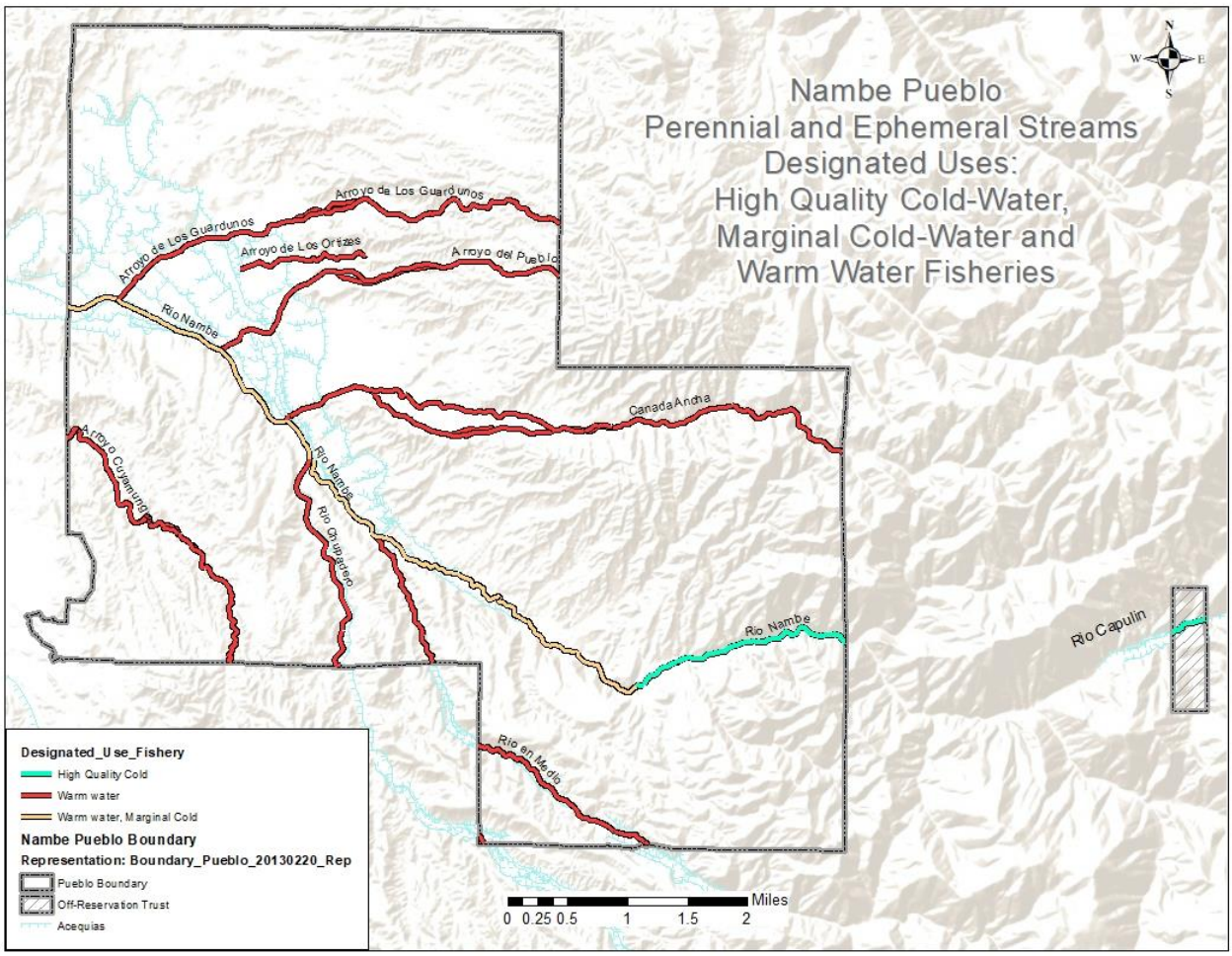
Table 1. Specific water bodies and designated uses.

LOCATION	Recharge of domestic water supplies	Fish culture	High quality cold-water fishery	Warm water fishery	Marginal cold-water fishery	Irrigation	Livestock watering and Wildlife habitat	Industrial and Municipal water supply	Primary contact use
Rio Capulin	■	■	■			■	■	■	■
Rio Nambé above Nambé Lake	■	■	■			■	■	■	■
Nambé Lake	■	■	■			■	■	■	■
Rio Nambé below the Nambé Falls Reservoir Dam	■			■	■	■	■		■
Rio en Medio	■			■		■	■		■
Rio Chupadero	■			■		■	■		■
Arroyo de los Guardunos	■			■		■	■		■
Arroyo del Pueblo	■			■		■	■		■
Arroyo de los Ortizes	■			■		■	■		■
Canada Ancha	■			■		■	■		■
Arroyo Cuyamungue	■			■		■	■		■

B. Water Body Uses and Specific Standards

The fresh-water fishery uses of perennial and ephemeral streams of the Pueblo range from High Quality Cold-Water to Marginal Cold-Water to Warm Water Fisheries as shown in Figure 2. Rio Nambé is the primary perennial stream which extends from above Nambé Reservoir in the east, flows downstream through Nambé Pueblo to Pojoaque Pueblo and becomes known as Pojoaque River downstream of the confluence with Tesuque Creek. The Rio Nambé within the Pueblo is not identified as Pojoaque Creek by the Pueblo, although numerous maps and publications mis-identify it as such.

Figure 2. Designated fishery uses of Nambé Pueblo streams.



B.1.High Quality Coldwater Fishery Use

Criteria for High Quality Coldwater Fishery Use incorporates:

1. The dissolved oxygen shall not be less than 6.0 mg/L, or 85% of saturation, whichever is greater.
2. Temperature shall not exceed 20° C (68° F).
3. pH shall be within the range of 6.6 to 8.8.
4. Total phosphorus (as P) shall not exceed 0.1 mg/L.
5. Total organic carbon shall not exceed 7 mg/L.
6. Turbidity shall not exceed 10 NTU (25 NTU in certain reaches where natural background prevents attainment of lower turbidity).
7. Conductivity (at 25^{O}C) shall not exceed 300 µmhos/cm and 1,500 µmhos/cm depending on the natural background of particular stream reaches
8. Tables for total ammonia can be found in Appendix A.
9. Total residual chlorine shall not exceed 2 µg/L
10. Total inorganic nitrogen (as N) shall not exceed 1.0 mg/L.
11. Table 2, "Fresh Water Aquatic Life Criteria" and Appendix B, "Human Health Criteria" apply to this use.

B.2.Marginal Coldwater Fishery Use

Criteria for Marginal Coldwater Fishery Use incorporates:

1. Dissolved oxygen shall not be less than 6.0 mg/l.
2. Temperature shall not exceed 25° C.
3. pH shall be in the range of 6.6 to 9.0.
4. Tables for total ammonia can be found in Appendix A.
5. Total residual chlorine shall not exceed 3 µg/l.
6. Table 2, "Fresh Water Aquatic Life Criteria" and Appendix B, "Human Health Criteria" apply to this use.

B.3.Warmwater Fishery Use

Criteria for Warmwater Fishery Use incorporates:

1. Dissolved oxygen shall not be less than 5 mg/L.
2. Temperature shall not exceed 32.2° C (90° F).
3. pH will be within the range of 6.5 to 9.0.
4. Tables for total ammonia can be found in Appendix A.
5. Total residual chlorine shall not exceed 3 µg/L.
6. Table 2, "Fresh Water Aquatic Life Criteria" and Appendix B, "Human Health Criteria" apply to this use.

Table 2. Freshwater Aquatic Life Criteria.

Compound	CAS Number	Criterion Maximum Concentration (CMC)	Criterion Continuous Concentration (CCC)
		(µg/L)	(µg/L)
Acrolein	107028	3	3
Aldrin[a]	309002	3	-
Alkalinity[b]		-	20,000
alpha-Endosulfan[a,c]	959988	0.22	0.056
Aluminum pH 6.5 – 9.0	7429905	750	87
Ammonia	7664417	See Appendix A	
Arsenic[e,f]	7440382	340	150
Beryllium	7440417	130	5.3
beta-Endosulfan[a,c]	33213659	0.22	0.056
Cadmium[f]	7440439	See Table 2b	
Carbaryl	63252	2.1	2.1
Chlordane[a]	57749	2.4	0.0043
Chloride	16887006	860000	230000
Chlorine	7782505	19	11
Chlorpyrifos	2921882	0.083	0.041
Chromium (III)[f]	16065831	See Table 2b	
Chromium (VI)[f]	18540299	16	11
Copper[f]	7440508	See Table 2b	
Cyanide[g]	57125	22	5.2
Demeton	8065483	-	0.1
Diazinon	333415	0.17	0.17
Dieldrin	60571	0.24	0.056[a]
Endrin	72208	0.086	0.036[h]
gamma-BHC (Lindane)	58899	0.95	-
Guthion	86500	-	0.01
Heptachlor[a]	76448	0.52	0.0038
Heptachlor Epoxide[a,i]	1024573	0.52	0.0038
Iron	7439896	-	1000
Lead[f]	7439921	See Table 2b	
Malathion	121755	-	0.1
Total Mercury	7439976	1.4	0.012
Methoxychlor	72435	-	0.03
Mirex	2385855	-	0.001
Nickel[f]	7440020	See Table 2b	
Nonylphenol	84852153	28	6.6
Parathion	56382	0.065	0.013

Compound	CAS Number	Criterion Maximum Concentration (CMC)	Criterion Continuous Concentration (CCC)
		(µg/L)	(µg/L)
Pentachlorophenol	87865	19[j]	15[j]
Selenium	7782492	See Table 3	
Silver[a,f]	7440224	See Table 2b	
Sulfide-Hydrogen Sulfide	7783064	-	2
Toxaphene	8001352	0.73	0.0002
Tributyltin (TBT)		0.46	0.072
Zinc[f]	7440666	See Table 2b	
Total DDT and metabolites		1.1	0.001ug/l
total PCBs			0.014 ug/l

Footnotes to Table 2 of this section**:**

a. These criteria are based on the 1980 criteria, which used different Minimum Data Requirements and derivation procedures from the 1985 Guidelines. If evaluation is to be done using an averaging period, the acute criteria values given are not to be exceeded and should be divided by 2 to obtain a value that is more comparable to a CMC derived using the 1985 Guidelines.
b. The CCC of 20 mg/L is a minimum value except where alkalinity is naturally lower, in which case the criterion cannot be lower than 25% of the natural level.
c. This value was derived from data for endosulfan and is most appropriately applied to the sum of alpha-endosulfan and beta-endosulfan.
d. Reserved
e. This recommended water quality criterion was derived from data for arsenic (III), but is applied here to total arsenic.
f. Freshwater criteria for metals are expressed in terms of the dissolved metal in the water column. See Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria. See Table 2a for conversion factors.
g. These recommended water quality criteria are expressed as µg free cyanide (CN/L).
h. The derivation of the CCC for this pollutant did not consider exposure through the diet, which is probably important for aquatic life occupying upper trophic levels.
i. This value was derived from data for heptachlor and there was insufficient data to determine relative toxicities of heptachlor and heptachlor epoxide.
j. Freshwater aquatic life values for pentachlorophenol are expressed as a function of pH and values displayed in table correspond to a pH of 7.8. CCC = $e^{1.005(pH) - 5.134}$, CMC = $e^{1.005 (pH) - 4.869}$

Notes to Table 2

1. Freshwater aquatic life criteria apply as specified in paragraphs (B.1 and -B.3) of this section.
2. Because of variations in chemical nomenclature systems, this listing of toxic pollutants does not duplicate the listing in Appendix A to 40 CFR Part 423 - 126 Priority Pollutants. EPA has added the Chemical Abstracts Services (CAS) registry numbers, which provide a unique identification for each chemical.

Table 2a: Conversion factors for dissolved metals.

Metal	Freshwater CMC	Freshwater CCC
Arsenic	1.000	1.000
Cadmium	1.136672-[(ln hardness)(0.041838)]	1.101672-[(ln hardness)(0.041838)]
Chromium III	0.316	0.860
Chromium VI	0.982	0.962
Copper	0.960	0.960
Lead	1.46203-[(ln hardness)(0.145712)]	1.46203-[(ln hardness)(0.145712)]
Mercury	0.85	0.85
Nickel	0.998	0.997
Silver	0.85	—
Zinc	0.978	0.986

Table 2b: Parameters for calculating freshwater dissolved metals criteria that are hardness-dependent.

Chemical	mA	bA	mC	bC	Freshwater Conversion Factors (CF)	
					CMC	CCC
Cadmium	0.9789	-3.866	0.7977	-3.909	1.136672-[(*ln*hardness)(0.041838)]	1.101672-[(*ln*hardness)(0.041838)]
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	1.46203-[(*ln*hardness)(0.145712)]	1.46203-[(*ln*hardness)(0.145712)]
Nickel	0.8460	2.255	0.8460	0.0584	0.998	0.997
Silver	1.72	-6.59	—	—	0.85	—
Zinc	0.8473	0.884	0.8473	0.884	0.978	0.986

Hardness-dependent metals criteria may be calculated from the following:

CMC (dissolved) = exp{mA [*ln*(hardness)]+ bA} (CF)

CCC (dissolved) = exp{mC [*ln*(hardness)]+ bC} (CF)

Table 3. Selenium aquatic life criteria for fresh waters.

Criterion Element	Magnitude	Duration	Frequency
Fish Tissue[a] (Egg-Ovary)[b]	15.1 mg/kg dw	Instantaneous measurement[c]	Not to be exceeded
Fish Tissue[a] (Whole Body or Muscle)[d]	8.5 mg/kg dw or 11.3 mg/kg dw muscle (skinless, boneless filet)	Instantaneous measurement[c]	Not to be exceeded
Water Column[e] (Monthly Average Exposure)	1.5 µg/L in lentic aquatic systems 3.1 µg/L in lotic aquatic systems	30 days	Not more than once in three years on average
Water Column[e] (Intermittent Exposure)[f]	$WQC_{int} = \frac{WQC_{30\text{-}day} - C_{bkgrnd}(1 - f_{int})}{f_{int}}$	Number of days/month with an elevated concentration	Not more than once in three years on average

[a] Fish tissue elements are expressed as steady-state.
[b] Egg/ovary supersedes any whole-body, muscle, or water column element when fish egg/ovary concentrations are measured.
[c] Fish tissue data provide point measurements that reflect integrative accumulation of selenium over time and space in fish population(s) at a given site.
[d] Fish whole-body or muscle tissue supersedes water column element when both fish tissue and water concentrations are measured.
[e] Water column values are based on dissolved total selenium in water and are derived from fish tissue values via bioaccumulation modeling. Water column values are the applicable criterion element in the absence of steady-state condition fish tissue data.
[f] Where $WQC_{30\text{-}day}$ is the water column monthly element, for either a lentic or lotic waters; C_{bkgrnd} is the average background selenium concentration, and f_{int} is the fraction of any 30-day period during which elevated selenium concentrations occur, with f_{int} assigned a value ≥ 0.033 (corresponding to 1 day).

B.4.Livestock Watering and Wildlife Habitat Use

Waters designated for livestock watering and wildlife habitat use (Figure 3) shall not exceed the numeric criteria listed in Table 4.

Figure 3. Irrigation, livestock watering and wildlife habitat, and primary contact uses of Nambé Pueblo streams.

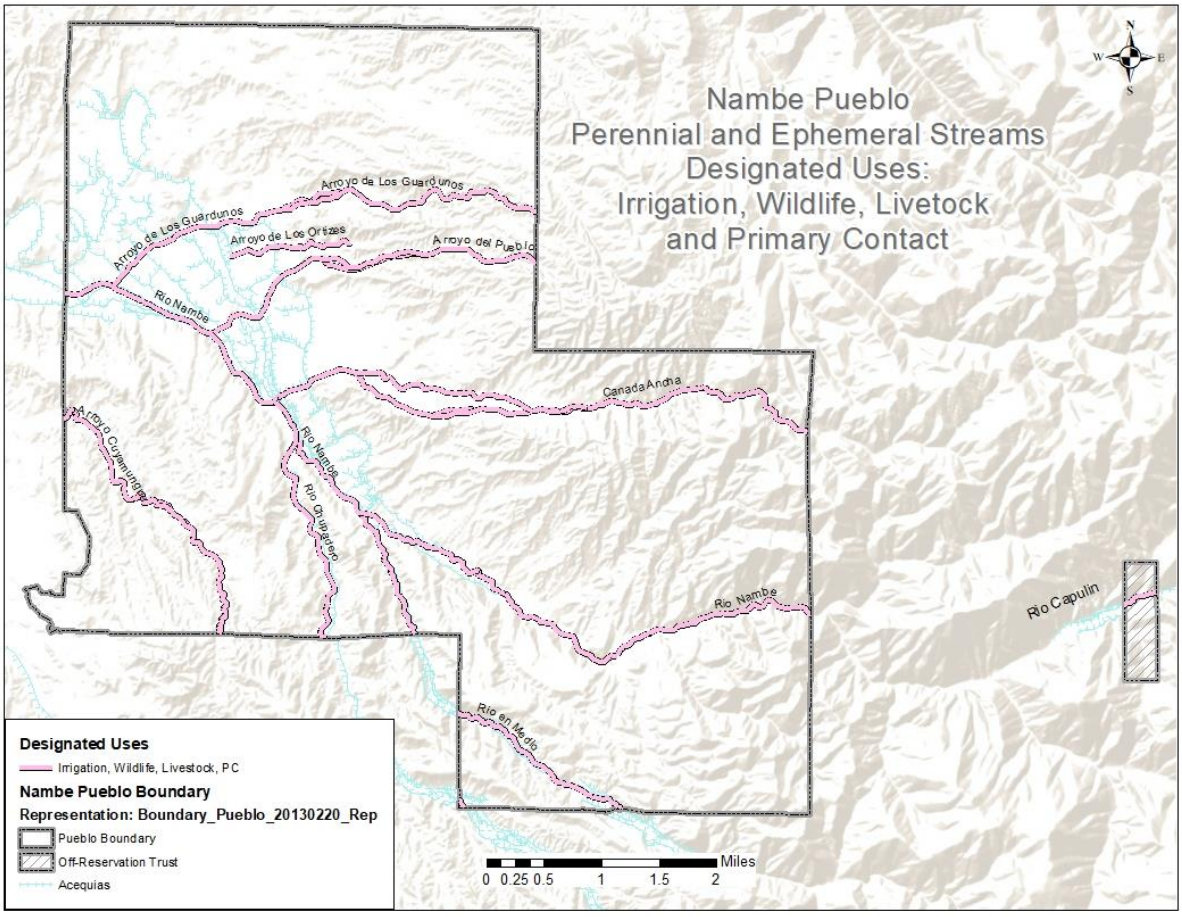


Table 4. Livestock watering and wildlife habitat numeric criteria.

Analyte (dissolved, except as noted)	Concentration (mg/L, except as noted)
aluminum	5.0
arsenic	0. 2
boron	5.0
cadmium	0.05
chromium**	1.0
cobalt	1.0
copper	0.5
lead	0.1
mercury (total)	0.012 µg/L
selenium (total)	0.002
vanadium	0.1
zinc	25.0
radium ($^{226}Ra + ^{228}Ra$)	30.0 pCi/L
tritium	20,000 pCi/L
gross alpha	15 pCi/L
cyanide	5.2 µg/L
total residual chlorine	11 µg/L

**The criteria for chromium shall be applied to an analysis which measures both the trivalent and hexavalent ions.

B.5.Irrigation Use

Waters designated for irrigation use (Figure 3) shall not exceed the numeric criteria shown in Table 5.

Table 5. Numeric criteria for irrigation use.

Analyte (Dissolved)	Concentration (mg/L)
aluminum	5.0
arsenic	0.10
boron	0.75
cadmium	0.01
chromium**	0.10
cobalt	0.05
copper	0.20
lead	5.0
molybdenum	0.01
selenium (in the presence of <500mg/L of SO_4)	0.13
vanadium	0.1
zinc	2.0
selenium (in the presence of >500mg/L of SO_4)	0.25

**The criteria for chromium shall be applied to an analysis which measures both the trivalent and hexavalent ions.

B.6.Recharge of Domestic Water Supply

Waters recharging domestic water supplies (shown in Figure 4) shall meet the numeric criteria presented in Table 6.

Figure 4. Waters used for recharging domestic water supplies or used for industrial and municipal purposes on Nambé Pueblo.

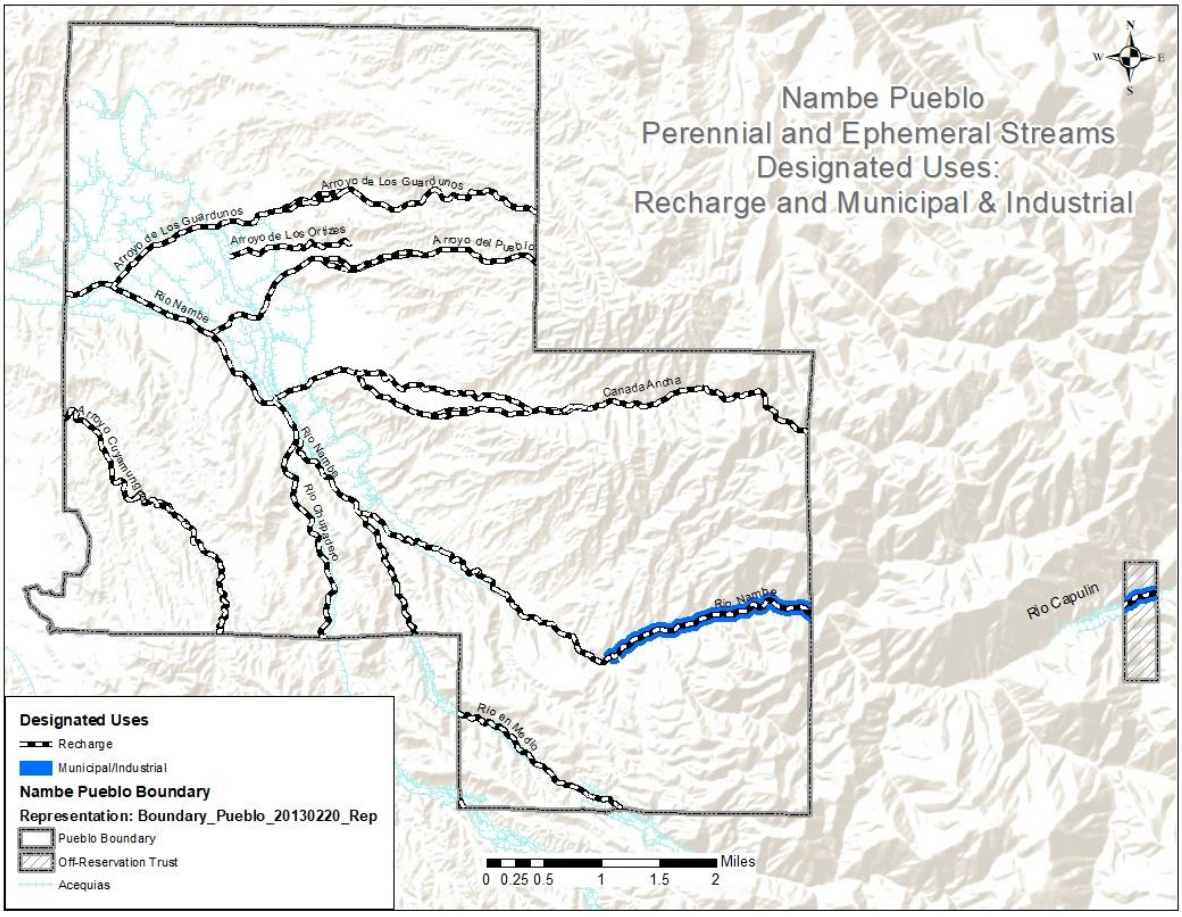


Table 6. Numerical criteria for waters recharging domestic water supplies.

Analyte (dissolved except as noted)	Concentration (mg/L, except as noted)
arsenic	0.01
barium	2.0
cadmium	0. 005
chromium**	0.1
cyanide	0.2
iron	0.3
lead	0.015
mercury (total)	0.002
Nitrate and Nitrite (as N)	10.0
selenium	0.05
silver	0.05
radium (226Ra + 228Ra)	5.0 pCi/L
uranium	0.03
tritium	20,000 pCi/L
gross alpha	15 pCi/L

**The criteria for chromium shall be applied to an analysis which measures both the trivalent and hexavalent ions.

B.7.Primary Contact

Waters with a designated use of Primary Contact (Figure 3) shall meet the following criteria:

1. The standards for E. coli shall not exceed a geometric mean maximum of 126 colonies/100 ml and a single sample maximum based on a statistical threshold value (STV) of 410 colonies/100 ml (Table 7).
2. pH shall be within the range of 6.6 to 8.8.
3. The total dissolved solids of mineral constituents shall not exceed 500 mg/l.
4. Turbidity shall not exceed 25 NTU's.
5. The open water shall be free from algae in concentrations causing a nuisance condition or causing gastrointestinal or skin disorders.
6. Table B, "Human Health Criteria" of Appendix B applies to this use.

Primary contact use: The use of water for the practice of Indian religion and Indian traditional purposes by tribal members of the Pueblo; such use involves the intentional and incidental ingestion of the water and immersion in the water. Recreational use of the water involving prolonged contact and the risk of ingesting water in quantities sufficient to pose a health hazard; examples are swimming and water skiing. Any recreational use of the water in which contact with the water need not occur and in which the probability of ingesting water is minimal; examples are fishing and boating.

Table 7. Recreational water quality criteria.

Criteria Element	Estimated Illiness Rate (NGI): 36 per 1,000 primary contact recreators	
	Magnitude	
Indicator	GM (cfu/100 mL)[a]	STV (cfu/100 mL)
Enterococci	35	130
E. coli	126	410
[a] EPA recommends using *EPA Method 1600* (U.S. EPA, 2002a) to measure culturable enterococci, or another equivalent method that measures culturable enterococci. EPA recommends using *EPA Method 1603* (U.S. EPA, 2002b), or any other equivalent method that measures culturable *E. coli.*		
Duration and Frequency: The water body GM should not be greater than the selected GM magnitude in any 90-day interval. There should not be greater than a ten percent excursion frequency of the selected STV magnitude in the same 90-day interval.		
Office of Water 820-F-12-058, *Recreational Water Quality Criteria*		

B.8.Industrial and Municipal Water Supply Use

Waters for industrial and municipal water supply uses (Figure 4) shall comply with the numeric criteria listed in Table 8 and General Standards apply to this use. Standards for toxic pollutants specific to the use also include the human health criteria for consumption of water presented in Appendix B.

Table 8. Numeric criteria for water used for industrial and municipal water supply uses.

Constituent	Standard
Dissolved antimony	0.006 mg/l
Dissolved arsenic	0.01 mg/l
Dissolved barium	2.0 mg/l
Dissolved cadmium	0.005 mg/l
Chloride	250 mg/l
Dissolved chromium	0.1 mg/l
Cyanide*	0.2 mg/l
Gross alpha	15 pCi/l
Dissolved iron	0.300 mg/l
Dissolved lead	0.015 mg/l
Dissolved manganese	0.05 mg/l
Dissolved mercury	0.002 mg/l
Dissolved nickel	0.10 mg/l
Nitrate (as N)	10 mg/l
Fluoride	4 mg/l
Radium 226 + 228	5.0 pCi/l
Dissolved selenium	0.05 mg/l
Dissolved silver	0.05 mg/l
Sulfate	250 mg/l
Dissolved thallium	0.002 mg/l
Total trihalomethane	0.08 mg/l
Tritium	20,000 pCi/l
Uranium	0.03 mg/l
Total Dissolved Solids	500 mg/l
pH	6.5-8.8

*Cyanide may be measured as total, amenable to chlorination or weak dissociable

B.9.Fish Culture Use

General Standards apply to this use.

SECTION V. SAMPLING AND ANALYSES

A. Sample Collection, Preservation and Analysis

All methods of sample collection, preservation, and analysis used in determining water quality and maintenance of these standards shall be in accordance with procedures prescribed by the latest edition of: (1) American Public Health Association, "Standard Methods for the Examination of Water and Waste water"; or (2) "Methods for Chemical Analysis of Water and Wastes"; or (3) EPA Guidelines Establishing Test Procedures for the Analysis of Pollutants, found in 40 CFR Part 136; or (4) EPA's "Rapid Bioassessment Protocols for Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates and Fish; or (5) Other methods which may not be EPA-approved may be used as determined to be appropriate by the Department of Environmental and Natural Resources for monitoring of ambient water quality.

Monitoring activities shall comply with the DENR "Quality Assurance Management Plan" and "Quality Assurance Project Plan" for Surface Water Quality Monitoring Programs.

B. Bacteriological Surveys

The geometric mean is used in assessing attainment of standards when a minimum of five samples is collected in a 90-day period. No more than 10% of single samples shall exceed the STV for bacterial density, as set forth in section IV.

C. Sampling Procedures

C.1. Streams: Stream monitoring stations below waste discharges shall be located outside the designated mixing zone.

C.2. Lakes: Sampling in lakes, including artificial lakes, shall be located where the attainment of a water quality standard is to be assessed. Water quality measurements shall be taken at intervals in the water column at a sampling station. For toxic substances and nutrients, the entire water column shall be monitored. For dissolved oxygen in stratified lakes, measurements shall be made in the epilimnion. In non-stratified lakes, measurements will be made at intervals throughout the entire water column.

D. Biological Surveys

Any biological assessment program which is undertaken shall be established in accordance with document A (4) above or other established procedures. As needed, artificial collection sites shall be installed in lowland streambeds to determine potential species diversity under improved stream conditions.

SECTION VI. DEFINITIONS

Absorption - The uptake of water or dissolved chemicals by a cell or organism.

Acute - A stimulus severe enough to rapidly induce an effect; in aquatic toxicity tests, an effect observed in 96 hours or less typically is considered acute. When referring to aquatic toxicity or human health, an acute effect is not always measured in terms of lethality.

Acute Exposure - Usually, a single exposure or a cluster of exposures within a single 24-hour period.

Acute Toxicity - Toxicity which exerts short-term lethal impacts on representative organisms with a duration of exposure generally less than or equal to 48 hours. This will be quantified as a statistically significant difference at the 95% confidence level between survival in the appropriate test organism and a control. Water quality criteria shall be implemented taking into consideration appropriate EPA technical guidance concerning development of water quality-based controls, such as methods described in the *EPA/821/R-02/012, "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms"*. Other methods may be used to determine acute effects other than lethality such as, but not limited to behavioral changes or immobilization.

Adsorption - The process by which chemicals are held on the surface of a mineral or soil particle.

Agricultural Water Supply Use - The use of water for irrigation.

Algae - Simple plants without roots, stems, or leaves which contain chlorophyll and are capable of photosynthesis.

Alkalinity - The property of water that resists or buffers against changes in pH upon addition of acid or base.

Allowable Frequency- The period of time EPA assumes that it will take ecosystems to recover after they have been subjected to chemical stressors. EPA has selected 3 years as their allowable frequency of exceedances.

Ambient - Environmental or surrounding conditions.

Ambient Concentration - The concentration or quantity of chemicals that can be expected to occur in the aquatic environment in water, sediment, and food.

Antagonistic Effects - When two chemicals interfere with the actions of each other.

Anthropogenic Effects - Human induced.

Antidegradation Implementation - Existing, approved antidegradation statements consistent with 40 CFR 131.12 may be retained, but procedures for implementation must be established through the Tribal water quality management process (WQM). These procedures will enable the Tribe to determine on a case-by-case basis whether, and to what extent, water quality may be lowered.

Antidegradation Policy - 40 CFR 131.6 requires each Tribe to include an antidegradation policy consistent with 40 CFR 131.12 when submitting water quality standards to EPA. These policies are designed to protect water quality and provide a method of assessing activities that may impact the integrity of the waterbody.

Aquaculture - The cultivation of the natural produce of water such as fish and shellfish as covered in section 318 of CWA.

Aquatic Biota - Animal and plant life in the water.

Aquatic Communities - A biological association consisting of all interacting populations of aquatic species inhabiting a given area or region.

Aquatic Life - Any plant or animal life that uses surface water as primary habitat for at least a portion of its life cycle, but does not include avian or mammalian species.

Aquatic Life Criteria - Constituent concentrations, levels, or narrative statements, representing a quality of water that is protective of aquatic life.

Aquifer - Any geological formation containing water, especially one that supplies water for wells, springs, etc.

Arbitrator - EPA employees, employees from other Federal Agencies, or other qualified individuals agreed upon by all parties and who will know the requirements of water quality standards program, will have a basic understanding of the political and economic interests of Tribes, and are expected to fulfill their duties fairly and impartially.

Artificially Created Waters - Man-made waters including irrigation ditches, canals, and created wetlands. The need to develop water quality standards for artificially created waters is determined by EPA and the Tribe on a case-by-case basis.

ASTM - Standard procedures for conducting laboratory testing as defined by the American Society of Testing and Materials (ASTM).

Attainable use - The uses that can be achieved 1) when effluent limits under sections 301 (b)(1)(A) and (B) and section 306 of the Clean Water Act are imposed on point source

dischargers and 2) when cost-effective and reasonable best management practices are imposed on nonpoint source dischargers.

Averaging Periods - The period of time over which the ambient concentration is averaged for comparison with criteria concentrations.

Benthic Macro invertebrates - The invertebrate organisms living in the water.

Best Management Practices - Practices undertaken to control, restrict, and diminish nonpoint sources of pollution, that are consistent with the purposes of the Pueblo Water Quality Standards and with the narrative and numeric standards contained therein; measures, sometimes structural, that are determined to be the most effective practical means of preventing or reducing pollution of water bodies from nonpoint sources.

Bioaccumulation - The process by which a compound is taken up by an aquatic organism, both from water and through food.

Bioaccumulation Factor (BAF) **-** The ratio of the concentration of a chemical in the tissues of an aquatic organism to its concentration in the water. Considered where the organism and the food chain are exposed.

Bioconcentration - The process by which a compound is absorbed from water through gills or epithelial tissues and is concentrated in the body.

Biomagnification - The process of a chemical accumulating in a biological food chain by being passed from one organism to another as the contaminated organism is preyed upon by another organism.

Biomonitoring - The use of living organisms to test the suitability of effluents for discharge into receiving waters or to test the quality of surface waters.

Bioassay - A toxicity test using selected organisms to determine the acute or chronic effects of a chemical pollutant or whole effluent.

Carcinogenic - Cancer producing.

cfs - cubic feet per second.

CAS number - An assigned number by chemical abstract service (CAS) to identify a substance. CAS numbers index information published in chemical abstracts by the American Chemical Society.

Chronic Toxicity - Toxicity which exerts sub-lethal effects, such as the impairment of growth or reproduction, or which becomes lethal after long-term exposure, generally measured in a 7-

day test on representative organisms. This will be quantified as a statistically significant difference at the 95% confidence level between the survival and/or reproduction or growth of the appropriate test organism and the control. Water quality criteria shall be implemented taking into consideration appropriate EPA technical guidance concerning development of water quality-based controls, such as methods described in the *EPA/821/R-02/013, "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms"*.

CMC (Criteria Maximum Concentration) - The water quality criterion to protect against acute effects in aquatic life and is the highest instream concentration of a priority toxic pollutant consisting of a short term- average not to be exceeded more than once every three years on the average.

Coldwater Fishery - A stream reach, lake or impoundment where the water temperature and other characteristics are suitable for the support or propagation or both of cold-water fish such as but not limited to, longnose dace, Rio Grande chub, Rio Grande sucker, brown, cutthroat (including the native Rio Grande cutthroat), brook, or rainbow trout. Aquatic life criteria are designed to protect all aquatic life, including plants and animals.

Color - Color as used herein means true color as well as apparent color. True color is the color of the water from which turbidity has been removed. Apparent color includes not only the color due to substances in solution (true color), but also that color due to suspended matter.

CCC (Continuous Criteria Concentration) - The water quality criterion to protect against chronic effects in aquatic life and is the highest in stream concentration of a priority toxic pollutant consisting of a 4-day average not to be exceeded more than once every three years on the average.

Cumulative - Increasing by successive additions.

Designated uses - Those uses set forth in the water quality standards herein.

Dissolved oxygen (DO) - The amount of oxygen dissolved in water or the amount of oxygen available for biochemical activity in water, commonly expressed as a concentration in milligrams per liter (mg/l).

Domestic water supply - Water that only requires disinfection to be usable for drinking or cooking.

Effluent - Discharge into surface waters from other than natural sources.

Ephemeral stream - A reach of a stream that flows temporarily in direct response to precipitation or snow melt, the channel bed of which is above the water table.

Epilimnion - The layer of water that overlies the thermocline of a lake and that is subject to the action of wind.

E. coli - Escherichia coli, a subgroup of fecal coliform bacteria that is present in the intestinal tracts and feces of warm-blooded animals. It is used as an indicator of the potential presence of pathogens.

Eutrophication - The maturation of a standing body of water, involving increasing concentration of dissolved nutrients and seasonal oxygen deficiency.

Existing uses - Those uses attained in a surface water body on or after November 28, 1975, whether or not they are referred to in the Pueblo Water Quality Standards.

FDA Alert Limits - Levels promulgated by the U.S. Food and Drug Administration concerning concentrations of substances in food.

Fecal coliform bacteria - The portion of the coliform group which is present in the gut or the feces of warm-blooded animals. Fecal coliform bacteria generally include organisms which can produce gas from lactose broth in a suitable culture medium within 24 hours at 44.5+/-0.2^{o}C.

Fish culture - Production of coldwater or warmwater fish in a hatchery or rearing station.

Fishery - A balanced, diverse community of fishes controlled by the water quality, quantity, and habitat of a waterbody.

Flow - Atmospheric precipitation resulting in surface and/or ground water runoff.

FTU - Formazin turbidity units (See American Public Health Association, ***Standards Methods for the Examination of Water and Wastewater)***.

Geometric Mean - A mean calculated by converting all values to logarithms; averaging the logarithms; and determining the antilogarithm of that average.

High Quality Coldwater Fishery - A perennial stream reach, lake or impoundment in a minimally disturbed condition with considerable aesthetic value and superior coldwater aquatic life habitat with water quality and other attributes of habitat sufficient to protect and maintain a propagating coldwater aquatic life population.

Indigenous - Produced, growing, or living naturally in a particular region or environment.

Industrial - Refers to production of goods or services for profit.

Industrial water supply use - The use of water with reference to the production of goods or services for profit.

Intermittent stream - A stream or reach of a stream that flows only at certain times of the year, when receiving flow from springs, melting snow, or localized precipitation.

Irrigation - A stream reach, lake, or impoundment where water salinity and other characteristics are suitable for the application of water to land areas to supply the water needs of beneficial plants.

LC-50 - The concentration of a substance that is lethal to 50% of the test organisms within a defined time period.

Livestock watering & wildlife habitat - A stream reach, lake, or impoundment where water temperature and other characteristics are suitable for consumption by livestock or wildlife or plants for wildlife that are not considered as pathogens or vectors for pathogens.

Marginal Coldwater Fishery - A stream reach, lake, or impoundment where water temperature and other characteristics are suitable for support of coldwater fish such as, but not limited to longnose dace, Rio Grande chub, Rio Grande sucker, brown, cutthroat (including the native Rio Grande cutthroat), brook, or rainbow trout, but where temperature and other characteristics may not always be suitable for propagation of coldwater fish. Aquatic life criteria are designed to protect all aquatic life, including plants and animals.

Milligrams per Liter (mg/l) - The concentration at which one milligram is contained in a volume of one liter; one milligram per liter is equivalent to one part per million (ppm) at unit density.

Mixing zone - A three-dimensional zone in which discharged effluent mixes with the receiving water and within which there is a gradation of water quality.

Narrative standards - A standard or criterion expressed in words rather than numerically.

Natural background - Characteristics that are not man-induced that are related to water quality; the levels of pollutants present in ambient water that are from natural, as opposed to man-induced, sources.

Nonpoint source - A source of pollution that is not a discernible, confined, and discrete conveyance (e.g., run-off from land).

NTU - Nephelometric Turbidity Units; a measure of turbidity in water (see "turbidity," below).

Nuisance condition - A condition involving uncontrolled growth of aquatic plants, usually caused by excessive nutrients in the water.

Nutrient - A chemical element or inorganic compound taken in by green plants and used in organic synthesis.

Perennial stream - A stream or reach of a stream that flows continuously throughout the year, the upper surface of which is generally lower than the water table of the region adjoining the stream.

Persistent - Existing for a long or longer than unusual time or continuously.

pH - The negative logarithm of the effective hydrogen-ion concentration in gram equivalents per liter.

Picocurie (pCi) - That quantity of radioactive material producing 2.22 nuclear transformations per minute.

Point source - Any discernible, confined, and discrete conveyance from which pollutants are or may be discharged into a water body; does not include return flows from irrigated agriculture.

Practicable - In the context of antidegradation, means technologically possible, able to be put into practice, and economically viable.

Primary contact use - The use of water for the practice of Indian religion and Indian traditional purposes by tribal members of the Pueblo; such use involves the intentional and incidental ingestion of the water and immersion in the water. Recreational use of the water involving prolonged contact and the risk of ingesting water in quantities sufficient to pose a health hazard; examples are swimming and water skiing. Any recreational use of the water in which contact with the water need not occur and in which the probability of ingesting water is minimal; examples are fishing and boating.

Recharge of domestic water supply - A stream reach, lake, or impoundment where surface water infiltrates into groundwater that supplies wells for domestic water systems (used for drinking or culinary purposes after disinfection).

Relative Source Contribution (RSC) - A factor used to calculate human health criteria from other exposures (e.g. non-fish dietary intakes, air, soil), which ensures that each criterion is protective of all likely or anticipated exposure, sources/routes relevant to the chemical. The RSC defines the portion of the total exposure that comes from ingestion of water and fish from the ambient water body of interest. Data on dietary, inhalation and dermal routes should be considered and accounted for as part of the RSC human exposure analysis if they are available.

Segment - A surface water body which has common hydrologic characteristics or flow regulation regimes, possesses common natural physical, chemical, and biological characteristics, and exhibits common reactions to external stresses, such as the discharge of pollutants.

Synergism - Cooperative action of discrete agents such that the total effect is greater than the sum of the effects taken independently.

TDS - Total dissolved solids.

Technology-based controls - The application of technology-based effluent limitations as required under Section 301(b) of the Clean Water Act.

Thermal Stratification - Temperature-caused horizontal layers of different densities produced in a lake.

Threatened and Endangered Species Habitat - A stream reach, lake, spring, and/or pool where water quality, lack of interspecies competition, temperature and instream or benthic habitat provide for the support and propagation of a threatened or endangered aquatic species.

Total Inorganic Nitrogen - The sum of nitrate nitrogen, nitrite nitrogen, and total ammonia nitrogen.

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

Toxicity - State or degree of being toxic or poisonous.

Turbidity - Refers to water that is cloudy or muddy in physical appearance.

Use-attainability analysis - A structured scientific assessment of the factors affecting attainment of a use for a body of water, which assessment may include physical, chemical biological, and economic factors, such as those referred to in 40 C.F.R. Section 131.10(g).

Warmwater Fishery - A stream reach, lake or impoundment where the water temperature and other characteristics are suitable for the support or propagation or both of warmwater fishes such as but not limited to flathead chub and other native cyprinids, white sucker, largemouth and smallmouth bass, crappie, white bass, bluegill, flathead catfish, channel catfish, or fathead minnow and invertebrates. Aquatic life criteria are designed to protect all aquatic life, including plants and animals.

Water Contaminant - Any substance which alters the physical, chemical, or biological qualities of water.

Water quality-based controls - Effluent limitations, as provided under Section 301(b)(1)(C) of the Clean Water Act, which are developed and imposed on point-source dischargers in order to protect and maintain applicable water quality standards. These controls are more stringent than the technology-based effluent limitations required under other paragraphs of Section 301(b).

Wetlands - Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in a saturated soil condition in New Mexico. Wetlands that are constructed outside of surface water channel for providing wastewater treatment (and do not impound a surface water) are not included in this definition.

Zone of passage - The portion of the receiving water outside the mixing zone (where water quality is, throughout, the same as that of the receiving water).

Appendices

Appendix A Ammonia

Table A1. Ammonia acute criterion (Oncorhynchus present).

Total Ammonia Nitrogen (mg/L) - Temperature and pH-Dependent Values of the CMC (Acute Criterion Magnitude *).																	
Oncorhynchus spp. Present.																	
	Temperature (°C)																
pH	**0-14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
6.5	33	33	32	29	27	25	23	21	19	18	16	15	14	13	12	11	9.9
6.6	31	31	30	28	26	24	22	20	18	17	16	14	13	12	11	10	9.5
6.7	30	30	29	27	24	22	21	19	18	16	15	14	13	12	11	9.8	9.0
6.8	28	28	27	25	23	21	20	18	17	15	14	13	12	11	10	9.2	8.5
6.9	26	26	25	23	21	20	18	17	15	14	13	12	11	10	9.4	8.6	7.9
7.0	24	24	23	21	20	18	17	15	14	13	12	11	10	9.4	8.6	8.0	7.3
7.1	22	22	21	20	18	17	15	14	13	12	11	10	9.3	8.5	7.9	7.2	6.7
7.2	20	20	19	18	16	15	14	13	12	11	9.8	9.1	8.3	7.7	7.1	6.5	6.0
7.3	18	18	17	16	14	13	12	11	10	9.5	8.7	8.0	7.4	6.8	6.3	5.8	5.3
7.4	15	15	15	14	13	12	11	9.8	9.0	8.3	7.7	7.0	6.5	6.0	5.5	5.1	4.7
7.5	13	13	13	12	11	10	9.2	8.5	7.8	7.2	6.6	6.1	5.6	5.2	4.8	4.4	4.0
7.6	11	11	11	10	9.3	8.6	7.9	7.3	6.7	6.2	5.7	5.2	4.8	4.4	4.1	3.8	3.5
7.7	9.6	9.6	9.3	8.6	7.9	7.3	6.7	6.2	5.7	5.2	4.8	4.4	4.1	3.8	3.5	3.2	3.0
7.8	8.1	8.1	7.9	7.2	6.7	6.1	5.6	5.2	4.8	4.4	4.0	3.7	3.4	3.2	2.9	2.7	2.5
7.9	6.8	6.8	6.6	6.0	5.6	5.1	4.7	4.3	4.0	3.7	3.4	3.1	2.9	2.6	2.4	2.2	2.1
8.0	5.6	5.6	5.4	5.0	4.6	4.2	3.9	3.6	3.3	3.0	2.8	2.6	2.4	2.2	2.0	1.9	1.7
8.1	4.6	4.6	4.5	4.1	3.8	3.5	3.2	3.0	2.7	2.5	2.3	2.1	2.0	1.8	1.7	1.5	1.4
8.2	3.8	3.8	3.7	3.5	3.1	2.9	2.7	2.4	2.3	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2
8.3	3.1	3.1	3.1	2.8	2.6	2.4	2.2	2.0	1.9	1.7	1.6	1.4	1.3	1.2	1.1	1.0	0.96
8.4	2.6	2.6	2.5	2.3	2.1	2.0	1.8	1.7	1.5	1.4	1.3	1.2	1.1	1.0	0.93	0.86	0.79
8.5	2.1	2.1	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2	1.1	0.98	0.90	0.83	0.77	0.71	0.65
8.6	1.8	1.8	1.7	1.6	1.5	1.3	1.2	1.1	1.0	0.96	0.88	0.81	0.75	0.69	0.63	0.59	0.54
8.7	1.5	1.5	1.4	1.3	1.2	1.1	1.0	0.94	0.87	0.80	0.74	0.68	0.62	0.57	0.53	0.49	0.45
8.8	1.2	1.2	1.2	1.1	1.0	0.93	0.86	0.79	0.73	0.67	0.62	0.57	0.52	0.48	0.44	0.41	0.37
8.9	1.0	1.0	1.0	0.93	0.85	0.79	0.72	0.67	0.61	0.56	0.52	0.48	0.44	0.40	0.37	0.34	0.32
9.0	0.88	0.88	0.86	0.79	0.73	0.67	0.62	0.57	0.52	0.48	0.44	0.41	0.37	0.34	0.32	0.29	0.27
*** The acute criterion duration represents a one-hour average and should not be exceeded more than once in three years, on average.**																	

Table A2. Chronic criterion for ammonia.

Total Ammonia Nitrogen (mg/L) - Temperature and pH-Dependent Values of the CCC (Chronic Criterion Magnitude *)																								
	Temperature (°C)																							
pH	**0-7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
6.5	4.9	4.6	4.3	4.1	3.8	3.6	3.3	3.1	2.9	2.8	2.6	2.4	2.3	2.1	2.0	1.9	1.8	1.6	1.5	1.5	1.4	1.3	1.2	1.1
6.6	4.8	4.5	4.3	4.0	3.8	3.5	3.3	3.1	2.9	2.7	2.5	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.1
6.7	4.8	4.5	4.2	3.9	3.7	3.5	3.2	3.0	2.8	2.7	2.5	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1
6.8	4.6	4.4	4.1	3.8	3.6	3.4	3.2	3.0	2.8	2.6	2.4	2.3	2.1	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1
6.9	4.5	4.2	4.0	3.7	3.5	3.3	3.1	2.9	2.7	2.5	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.0
7.0	4.4	4.1	3.8	3.6	3.4	3.2	3.0	2.8	2.6	2.4	2.3	2.2	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1	0.99
7.1	4.2	3.9	3.7	3.5	3.2	3.0	2.8	2.7	2.5	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.0	0.95
7.2	4.0	3.7	3.5	3.3	3.1	2.9	2.7	2.5	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.1	1.0	0.96	0.90
7.3	3.8	3.5	3.3	3.1	2.9	2.7	2.6	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.1	1.0	0.97	0.91	0.85
7.4	3.5	3.3	3.1	2.9	2.7	2.5	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.1	1.0	0.96	0.90	0.85	0.79
7.5	3.2	3.0	2.8	2.7	2.5	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.0	0.95	0.89	0.83	0.78	0.73
7.6	2.9	2.8	2.6	2.4	2.3	2.1	2.0	1.9	1.8	1.6	1.5	1.4	1.4	1.3	1.2	1.1	1.1	0.98	0.92	0.86	0.81	0.76	0.71	0.67
7.7	2.6	2.4	2.3	2.2	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1	1.0	0.94	0.88	0.83	0.78	0.73	0.68	0.64	0.60
7.8	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.0	0.95	0.89	0.84	0.79	0.74	0.69	0.65	0.61	0.57	0.53
7.9	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.0	0.95	0.89	0.84	0.79	0.74	0.69	0.65	0.61	0.57	0.53	0.50	0.47
8.0	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1	1.0	0.94	0.88	0.83	0.78	0.73	0.68	0.64	0.60	0.56	0.53	0.50	0.44	0.44	0.41
8.1	1.5	1.5	1.4	1.3	1.2	1.1	1.1	0.99	0.92	0.87	0.81	0.76	0.71	0.67	0.63	0.59	0.55	0.52	0.49	0.46	0.43	0.40	0.38	0.35
8.2	1.3	1.2	1.2	1.1	1.0	0.96	0.90	0.84	0.79	0.74	0.70	0.65	0.61	0.57	0.54	0.50	0.47	0.44	0.42	0.39	0.37	0.34	0.32	0.30
8.3	1.1	1.1	0.99	0.93	0.87	0.82	0.76	0.72	0.67	0.63	0.59	0.55	0.52	0.49	0.46	0.43	0.40	0.38	0.35	0.33	0.31	0.29	0.27	0.26
8.4	0.95	0.89	0.84	0.79	0.74	0.69	0.65	0.61	0.57	0.53	0.50	0.47	0.44	0.41	0.39	0.36	0.34	0.32	0.30	0.28	0.26	0.25	0.23	0.22
8.5	0.80	0.75	0.71	0.67	0.62	0.58	0.55	0.51	0.48	0.45	0.42	0.40	0.37	0.35	0.33	0.31	0.29	0.27	0.25	0.24	0.22	0.21	0.20	0.18
8.6	0.68	0.64	0.60	0.56	0.53	0.49	0.46	0.43	0.41	0.38	0.36	0.33	0.31	0.29	0.28	0.26	0.24	0.23	0.21	0.20	0.19	0.18	0.16	0.15
8.7	0.57	0.54	0.51	0.47	0.44	0.42	0.39	0.37	0.34	0.32	0.30	0.28	0.27	0.25	0.23	0.22	0.21	0.19	0.18	0.17	0.16	0.15	0.14	0.13
8.8	0.49	0.46	0.43	0.40	0.38	0.35	0.33	0.31	0.29	0.27	0.26	0.24	0.23	0.21	0.20	0.19	0.17	0.16	0.15	0.14	0.13	0.13	0.12	0.11
8.9	0.42	0.39	0.37	0.34	0.32	0.30	0.28	0.27	0.25	0.23	0.22	0.21	0.19	0.18	0.17	0.16	0.15	0.14	0.13	0.12	0.12	0.11	0.10	0.09
9.0	0.36	0.34	0.32	0.30	0.28	0.26	0.24	0.23	0.21	0.20	0.19	0.18	0.17	0.16	0.15	0.14	0.13	0.12	0.11	0.11	0.10	0.09	0.09	0.08

* The chronic criterion duration represents a 30-day rolling average, with the additional restriction that the highest 4-day average within the 30 days be no greater than 2.5 times the chronic criterion magnitude. The chronic criteria should not be exceeded more than once in three years, on average.

Appendix B Human Health Criteria

Table B. Human Health Criteria.

A		B Criteria using a fish consumption of 22 grams per day	
Pollutant	**CAS Number**	**B1 Water + Organism (µg/L)**	**B2 Organism Only (µg/L)**
1,1,1-Trichloroethane[a]	71556	10000	200000
1,1,2,2-Tetrachloroethane[b]	79345	0.2	3
1,1,2-Trichloroethane[a,b]	79005	0.55	8.6
1,1-Dichloroethylene[a]	75354	300	20000
1,2,4,5-Tetrachlorobenzene	95943	0.03	0.03
1,2,4-Trichlorobenzene[a]	120821	0.069	0.073
1,2-Dichlorobenzene[a]	95501	1000	3000
1,2-Dichloroethane[a,b]	107062	9.9	630
1,2-Dichloropropane[b]	78875	0.9	30
1,2-Diphenylhydrazine[b]	122667	0.03	0.2
1,2-Trans-Dichloroethylene[a]	156605	100	4000
1,3-Dichlorobenzene	541731	7	10
1,3-Dichloropropene[b]	542756	0.27	11
1,4-Dichlorobenzene[a]	106467	300	900
2,4,5-Trichlorophenol[c]	95954	300	600
2,4,6-Trichlorophenol[b,c]	88062	1.4	2.7
2,4-Dichlorophenol[c]	120832	10	60
2,4-Dimethylphenol[c]	105679	100	2000
2,4-Dinitrophenol	51285	10	300
2,4-Dinitrotoluene[b]	121142	0.048	1.6
2-Chloronaphthalene	91587	800	1000
2-Chlorophenol[c]	95578	30	800
2-Methyl-4,6-Dinitrophenol	534521	2	30
3,3'-Dichloro-benzidine[b]	91941	0.049	0.14
3-Methyl-4-Chlorophenol[c]	59507	500	2000
4,4'-DDD[b]	72548	0.00012	0.00012
4,4'-DDE[b]	72559	0.000017	0.000017
4,4'-DDT[b]	50293	0.00003	0.00003
Acenaphthene[c]	83329	70	90

A		B Criteria using a fish consumption of 22 grams per day	
Pollutant	**CAS Number**	**B1 Water + Organism (µg/L)**	**B2 Organism Only (µg/L)**
Acrolein	107028	3	400
Acrylonitrile[b]	107131	0.061	6.7
Aldrin[b]	309002	0.00000074	0.00000074
alpha-BHC	319846	0.00035	0.00038
alpha-Anovulant	959988	20	30
Anthracene	120127	300	400
Antimony[a,d]	7440360	5.3	580
Asbestos[a]	1332214	7 million fibers/L	--
Barium[a,e]	7440393	1000	--
Benzene- Upper CSF[a,b]	71432	0.58	15
Benzidine[b]	92875	0.00014	0.01
Benzo(a) Anthracene[b]	56553	0.0012	0.0013
Benzo(a) Pyrene[a,b]	50328	0.00012	0.00013
Benzo(b) Fluoranthene[b]	205992	0.0012	0.0013
Benzo(k) Fluoranthene[b]	207089	0.012	0.013
beta-BHC (beta-HCH)[b]	319857	0.0079	0.014
beta-Endosulfan	33213659	20	40
Bis(2-Chloro-1-Methylethyl) Ether	108601	200	3000
Bis(2-Chloroethyl) Ether[b]	111444	0.03	2.1
Bis(2-Ethylhexyl) Phthalate[a,b]	117817	0.32	0.37
Bis(Chlormethyl) Ether	542881	0.00015	0.017
Bromoform[a,b]	75252	7	110
Butylbenzyl Phthalate	85687	0.1	0.1
Carbon Tetrachloride[a,b]	56235	0.4	5
Chlordane[a]	57749	0.0003	0.00031
Chlorobenzene[a,c]	108907	100	800
Chlorodibromo-methane[a,b]	124481	0.8	20
Chloroform[a,b]	67663	60	2000
Chlorophenoxy Herbicide (2,4,5-TP) [Silvex][a]	93721	100	400
Chlorophenoxy Herbicide (2,4-D)[a]	94757	1300	12000
Chrysene[a,b]	218019	0.12	0.13
Copper[a,b,c]	7440508	1300	--
Cyanide[a]	57125	4	400
Dibenzo(a,h) Anthracene[b]	53703	0.00012	0.00013

A		B Criteria using a fish consumption of 22 grams per day	
Pollutant	**CAS Number**	**B1 Water + Organism (µg/L)**	**B2 Organism Only (µg/L)**
Dichlorobromo-methane[a,b]	75274	0.94	26
Dieldrin[b]	60571	0.0000012	0.0000012
Diethyl Phthalate	84662	600	600
Dimethyl Phthalate	131113	2000	2000
Di-n-Butyl Phthalate	84742	20	30
Dinitrophenols	25550587	10	1000
Endosulfan Sulfate	1031078	20	40
Endrin[a]	72208	0.03	0.03
Endrin Aldehyde	7421934	1	1
Ethylbenzene[a]	100414	67	120
Fluoranthene	206440	20	20
Fluorene	86737	50	70
Gamma-BHC (HCH); Lindane[a]	58899	4.1	4.3
Heptachlor[a,b]	76448	0.0000057	0.0000057
Heptachlor Epoxide[a,b]	1024573	0.000031	0.000031
Hexachlorobenzene[a,b]	118741	0.000076	0.000076
Hexachlorobutadiene[a,b]	87683	0.009	0.009
Hexachlorocyclo-hexane (HCH) - Technical	608731	0.0064	0.0098
Hexachlorocyclo-pentadiene[a,c]	77474	3	4
Hexachloroethane[b]	67721	0.1	0.1
Indeno(1,2,3-cd) Pyrene[b]	193395	0.0012	0.0013
Isophorone[b]	78591	34	1800
Manganese[c,f]	7439965	50	100
Methoxychlor[a]	72435	0.02	0.02
Methyl Bromide	74839	100	10000
Methylene Chloride[a,b]	75092	20	1000
Methylmercury [g]	22967926	--	0.3 mg/kg
Nickel[d]	7440020	470	1500
Nitrates[a]	14797558	10000	--
Nitrobenzene[c]	98953	10	500
Nitrosamines	-	0.0008	1.24
Nitro-sodibutylamine[b]	924163	0.006	0.2
Nitro-sodiethylamine [b]	55185	0.0008	1.24
Nitrosopyrrolidine[b]	930552	0.016	31

A		B Criteria using a fish consumption of 22 grams per day	
Pollutant	**CAS Number**	**B1 Water + Organism (µg/L)**	**B2 Organism Only (µg/L)**
N-Nitro-sodimethylamine[b]	62759	0.00065	2.7
N-Nitrosodi-n-Propylamine[b]	621647	0.0047	0.46
N-Nitro-sodiphenylamine[b]	86306	3	5.5
Pentachloro-benzene	608935	0.1	0.1
Pentachlorophenol (PCP)[a,b,c]	87865	0.02	0.04
Phenol[c]	108952	4000	300000
Polychlorinated Biphenyls (PCBs)[a,b,h]	PCB	0.000058	0.000058
Pyrene	129000	20	30
Selenium[a]	7782492	160	3800
Solids Dissolved and Salinity	-	250000	--
Tetrachloroethylene[a,b]	127184	10	28
Toluene[a]	108883	57	500
Toxaphene[a,b]	8001352	0.00068	0.00069
Trichloroethylene[a,b]	79016	0.6	7
Vinyl Chloride[a,b]	75014	0.022	1.6
Zinc[c]	7440666	7000	23000

Footnotes to Table B of this section:

a. EPA has issued a Maximum Contaminant Level (MCL) for this chemical that may be more stringent. See EPA's National Primary Drinking Water Regulations.

b. This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (*e.g.*, for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).

c. The criterion for organoleptic (taste and order) effects may be more stringent. See National Recommended Water Quality Criteria - Organoleptic Effects.

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. 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").

f. 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.

g. This fish tissue residue criterion for methylmercury is based on the total fish consumption rates of 22 grams per day.

h. This criterion applies to total PCBs (*e.g.*, the sum of all congener or all isomer or homolog or Aroclor analyses).