

**BISHOP PAIUTE TRIBE WATER  
QUALITY CONTROL PLAN**

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# **BISHOP PAIUTE TRIBE WATER QUALITY CONTROL PLAN**

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## **1.0 INTRODUCTION**

The Bishop Paiute Indian Reservation (Reservation) is located in the Owens Valley in east central California (Figure 1). It is located west of and adjacent to the city limits of Bishop, California, approximately 208 miles south of Reno, Nevada, and 275 north of the City of Los Angeles. The Reservation's total land base is 875 acres with a resident population of approximately 1,572, representing 1,350 tribal members and 222 non-tribal residents and a combined total of 552 residential and commercial units. The Reservation is situated immediately west of the City of Bishop adjoining the west boundary of the city limits. All lands adjacent to the Reservation are privately owned with the Los Angeles Department of Water and Power (LADWP) being the largest landowner. Substantial residential subdivisions, commercial businesses and ranch lands (leased from the LADWP) border the Reservation's exterior boundaries. U.S. Highway 395 runs along the northern boundary of the Reservation for approximately 1 mile and State Highway 168 (West Line Street) dissects the southern portion of the Reservation for approximately ½ mile. Both highways are main traffic arteries of the Bishop area (Figure 1).

The Act of Congress of April 20, 1937 (Public Law No. 43, 75th Congress) authorized the exchange of certain lands between the Federal Government (on behalf of the Owens Valley Paiute Indians) and the City of Los Angeles Department of Water and Power (LADWP), which resulted in the Land Exchange Agreement of June 24, 1939, and established the Bishop, Big Pine and Lone Pine Indian Reservations. The Bishop Paiute Tribe (Tribe) is a federally recognized tribe listed in the federal register as the "Paiute-Shoshone Indians of the Bishop Community of the Bishop Colony, California" (U.S. Federal Register/Vol. 63, No. 250).

The Tribe relies on ground water produced from three wells on the Reservation. The Tribe intends to protect the ground water resources for municipal (domestic/drinking water) and industrial use, and the surface water resources for agricultural, industrial, ground water recharge, water contact recreation, non-contact water recreation, commercial and sportfishing, cold freshwater habitat, wildlife habitat, spawning, reproduction and development, and cultural (including religious) uses. The Tribe has initiated a complete assessment of the waters of the Reservation.

The Tribe is beginning to develop and expand its water resources management and protection capabilities. Critical to this development is the continuing federal assistance, financial and technical, support from the U.S. Environmental Protection Agency under the General Assistance Program and the Clean Water Act, Section 106 grants.

### **1.1 Function and Objectives of the Bishop Paiute Tribe Water Quality Control Plan**

The Bishop Paiute Tribe Water Quality Control Plan (Plan) is comprehensive in scope. The United States Code of Federal Regulations (40 CFR 122.2) requires states and tribes to protect the waters of the United States. This Plan describes and outlines the Bishop Paiute Tribe Reservation waters (Table 1), the quality and quantity problems, and the water quality standards (existing, potential and historical beneficial uses of the Reservation's waters as well as criteria for the protection of the Reservation waters). It also includes plans and policies which describe the basis for the control of water quality on the Reservation.

### **1.2 Legal Basis and Authority**

The Tribe is a self-governing and possesses and exercises full control over resources within the exterior boundaries of the Reservation through the actions of its inherent sovereign powers. While the Tribe does not have a formal Constitution, it effectively governs by "General Council Rule" (all tribal members). The General Council has, by custom and use, delegated authority and various duties to the duly elected Bishop Indian Tribal Council. The Tribal Council is comprised of five (5) tribal members elected by the General Council. Elections are held annually. The term of office for Council members is two-years and staggered. The Tribal Council elects from among themselves the Tribal Chairperson and Vice-Chairperson. The Chairperson is the Executive Officer.

### **1.3 Triennial Review**

The Tribe shall from time to time, but at least once every three years, hold public hearings for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting new standards (Clean Water Act (CWA), Section 303 (c)(1); 40 CFR 131.20(a)). For example, any water body segment with water quality standards that do not include the goal uses specified in CWA 101(a)(2) shall be re-examined every three years to determine if any new information has become available. If such new information indicates the CWA goal uses are attainable, the Tribe shall revise its standards accordingly. Public hearings shall be held in accordance with tribal law and US Environmental Protection Agency regulations. The proposed water quality standards revisions and supporting analyses shall be made available to the public prior to the hearing. The Tribe shall submit the revised standards and any supporting analyses to the EPA Regional Administrator for review and approval within 30 days following the final action to adopt revised standards. The tribal submission shall be consistent with EPA requirements found at 40 CFR 131.6.

## **1.4 Reservation Setting**

### **1.4.1 Climate**

The climate of the Reservation is warm and arid. The average annual temperature at the Reservation is 56°F, but temperatures of -6°F and 109°F have been recorded. Daily variations of 40°F are not uncommon (Black and Roether, 1994).

### **1.4.2 Geology**

The Reservation is situated in Owens Valley, a late Tertiary tectonically created valley on the westernmost edge of the Basin and Range Province of North America. The valley runs North-North west by South-Southeast and separates the Mesozoic age Sierra granodiorite of the Sierra Nevada to the West from the Paleozoic age metamorphic and plutonic bodies of the White Mountains to the West. The valley is roughly 6,000 feet deep measured from the peaks to the valley floor. The region is seismically active with a major earthquake recorded on the Owens Valley Fault Zone in 1872. A network of North-South trending earthquakes has left their mark as fault scarps dissecting the rhyolite tuffs of the volcanic tableland just to the north of the northern exterior boundary of the tribe. It is likely that several of these fault segments extend through the Reservation and are to some extent responsible for the distribution of ground water on the Reservation.

### **1.4.3 Hydrologic Setting**

The Reservation is situated on the distal end of an alluvial fan, which emanates from Bishop Creek canyon in the Sierra Mountains. The headwaters of Bishop Creek are in the Mountains west of the Reservation. After flowing into the valley floor of Owens Valley, Bishop Creek divides into two channels which both flow in an easterly direction through the Reservation ultimately reaching the Owens River which is a source of drinking water for the City of Los Angeles. The flow of Bishop Creek is regulated mainly by snowmelt runoff and upstream dams and diversions. The reaches of both forks of Bishop Creek that traverse the Reservation are thought to be losing water and can thus be thought of as a source of ground water recharge. None of the surface water resource is used for drinking water.

## 2.0 PRESENT AND POTENTIAL DESIGNATED USES

An effective water quality control plan requires determination of the designated water uses, which are to be designated and maintained. This section identifies designated uses and probable future uses on the Reservation. Section 303 of the federal Clean Water Act (Public Law 92-500, as amended) defines a Water Quality Control Plan as both the uses of the waters involved and the water quality criteria applied to protect those uses. Designated uses and water quality criteria to protect those designated uses are to be established for all waters of the Reservation, both surface (including wetlands) and ground waters. Twenty-four designated uses and their definitions are set forth by the Tribe. References to beneficial uses such as AQUA and MIGR and REC-2 are included for consistency with California State Standards.

### 2.1 Definitions of Designated Uses

- AGR Agricultural Supply** Designated uses of waters used for farming, horticulture, or ranching, including, but not limited to, irrigation, stock watering, and support of vegetation for range grazing.
- AQUA Aquaculture** Designated uses of waters used for aquaculture or mariculture operations including, but not limited to, propagation, cultivation, maintenance, and harvesting of aquatic plants and animals for human consumption or bait purposes.
- BIOL Preservation of Biological Habitats of Special Significance** Designated uses of waters that support designated areas or habitats, such as established refuges, parks, sanctuaries, ecological reserves, and Areas of Special Biological Significance (ASBS), where the preservation and enhancement of natural resources requires special protection.
- CULT Cultural** Designated uses of waters that have religious, ceremonial, or subsistence provides a role in Bishop Paiute Tribal culture. In specific cases this term can include dependence on locally caught fish or other aquatic organisms as a source of food.
- COLD Cold Freshwater Habitat** Designated uses of waters that support cold water ecosystems including, but not limited to, preservation and enhancement of aquatic habitats, vegetation, fish, and wildlife, including invertebrates.
- COMM Commercial and Sportfishing** Designated uses of waters used for commercial or recreational collection of fish or other organisms including, but not limited to, uses involving organisms intended for human consumption.
- FLD Flood Peak Attenuation/Flood Water Storage** Designated uses of riparian wetlands in flood plain areas and other wetlands that receive natural surface drainage and buffer its passage to receiving waters.
- FRSH Freshwater Replenishment** Designated uses of waters used for natural or artificial maintenance of surface water quantity or quality (e.g., salinity).
- GWR Ground Water Recharge** Designated uses of waters used for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater.
- IND Industrial Service Supply** Designated uses of waters used for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, geothermal energy production, hydraulic conveyance, gravel washing, fire protection, and oil well re-pressurization.

- MIGR Migration of Aquatic Organisms** Designated uses of waters that support habitats necessary for migration, acclimatization between fresh and salt water, or temporary activities by aquatic organisms, such as anadromous fish.
- MUN Municipal and Domestic Supply** Designated uses of waters used for community, military, or individual water supply systems including, but not limited to, drinking water supply.
- MAR Marketing** Designated uses of waters used for the marketing of water.
- NAV Navigation** Designated uses of waters used for shipping, travel, or other transportation by private, military, or commercial vessels.
- POW Hydropower Generation** Designated uses of waters used for hydroelectric power generation.
- PRO Industrial Process Supply** Designated uses of waters used for industrial activities that depend primarily on water quality.
- RARE Rare, Threatened, or Endangered Species** Designated uses of waters that support habitat necessary for the survival and successful maintenance of plant or animal species established under state and/or federal law as rare, threatened or endangered.
- REC-1 Water Contact Recreation** Designated uses of waters used for recreational activities involving body contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, and use of natural hot springs.
- REC-2 Non-contact Water Recreation** Designated uses of waters used for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to picnicking, sun bathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, and aesthetic enjoyment in conjunction with the above activities.
- SAL Inland Saline Water Habitat** Designated uses of waters that support inland saline water ecosystems including, but not limited to, preservation and enhancement of aquatic saline habitats, vegetation, fish, and wildlife, including invertebrates.
- SPWN Spawning, Reproduction, and Development** Designated uses of waters that support high quality aquatic habitat necessary for reproduction and early development of fish and wildlife.
- WARM Warm Freshwater Habitat** Designated uses of waters that support warm water ecosystems including, but not limited to, preservation and enhancement of aquatic habitats, vegetation, fish, and wildlife, including invertebrates.
- WILD Wildlife Habitat** Designated uses of waters that support wildlife habitats including, but not limited to, the preservation and enhancement of vegetation and prey species used by wildlife, such as waterfowl.
- WQE Water Quality Enhancement** Designated uses of waters that support natural enhancement or improvement of water quality in or downstream of a water body including, but not limited to, erosion control, filtration and purification of naturally occurring water pollutants, stream bank stabilization, maintenance of channel integrity, and siltation control.

## 2.2 Existing and Potential Designated Uses

Designated Uses: those uses specified in water quality standards for each water body or segment whether or not they are being attained (40 CFR 131.3(f)).

Existing Uses: Those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards (40 CFR 131.3(e)).

Potential Uses: Those uses that could potentially exist for each water body or segment whether or not they are being attained (Defined for these standards-language borrowed from CFR).

Water quality criteria are established (Section 3) to be sufficiently stringent to protect the most sensitive use. The Tribe reserves the right to resolve any conflicts among designated uses, based on the facts in a given case. It should be noted that the assimilation of waste is **not** a designated use.

In the tables of designated uses (Tables 1 and 2), an “X” indicates an existing or potential use. Surface waters may have potential uses established because: (1) plans already exist to put the water to those uses, (2) conditions (location, demand) make such future use likely, (3) the water has been identified as a potential source of drinking water based on the quality and quantity available and/or (4) existing water quality does not support these uses, but remedial measures may lead to attainment in the future. The establishment of a potential use can have different purposes such as: (1) establishing a water quality goal which must be achieved through control actions in order to re-establish a designated use as in No. (4), see above, or (2) serving to protect the existing quality of a water source for eventual use.

The water body listings in Tables 1 and 2 name all significant surface waters, ground water basins and wetlands. Maps of the water bodies and the ground water basins are included as part of the Water Quality Control Plan (Figure 1). Unless otherwise specified, designated uses also apply to all tributaries of surface waters identified in Table 1 (i.e., specific surface waters which are not listed have the same designated uses as the streams, lakes, wetlands, or reservoirs to which they are tributary). Note that anti-degradation policies (Sections 3.4 and 3.7.1) would supersede in the instances where the tributary is of higher quality than its receiving water. Other minor surface waters, including wetlands, springs, streams, lakes, and ponds, are included under one heading for each water body. These minor surface waters have an “X” to designate each potential or existing use. Certain surface waters may have varying water quality due to changes in natural conditions (e.g., change in water volume). The designation of multiple designated uses in Table 1, which may appear conflicting for particular surface water, indicates existing or potential uses that may occur only temporarily.

Some ground water basins contain multiple aquifers or a single aquifer with varying water quality that may support different designated uses. The placing of an “X” in Table 2 does not indicate that all of the ground waters in that particular location are suitable (without treatment) for a designated use. However, all ground waters are designated as MUN unless they have been specifically exempted by the Tribe through adoption of a Water Quality Control Plan amendment after consideration of substantial evidence to exempt such waters.

In most cases, removing a designated use designation from Table 1 will require a Use Attainability Analysis (UAA) to be conducted (using USEPA methodology outlined in 40 CFR 131.10(g)). If there is substantial evidence to remove a use designation from a specific water body, the Tribe will consider adoption of a Water Quality Control Plan amendment to remove a designated use. However, there are many designated uses which are not intended to apply to the entire length of a stream or surface water during certain temporal conditions (see above). The designated use designations that may be considered temporary or site specific designations are: IND, PRO, GWR, FRSH, NAV, POW, WARM, COLD, SAL, MIGR, SPWN, and WQE. For these situations, Tribal staff, in order to make a recommendation to the Tribe, will rely on site-specific documentation which may include: water quality data, field data, professional opinions (from Tribal staff or federal agencies, also universities), and other evidence

collected. The most sensitive existing or probable future use will be protected. Uses that did not exist, do not exist, and will not exist in the foreseeable future, will not be required to be protected. The MUN designation will not be considered for a site-specific designation since it is designated for all ground waters, unless specifically exempted by the Tribe.

“Spawning, Reproduction and Development” (SPWN) is designated for streams and lakes where there is evidence (an historic or presently self-sustaining population) that spawning and reproduction regularly occurs. The designated use “Migration of Aquatic Organisms” (MIGR) is designated for streams and lakes through which migrations of fish or other aquatic organisms occur or could occur. MIGR and SPWN are designated for the stream or lake in its entirety, although, in most cases they are intended to be applied to only portions of the water body. The Tribe may apply more stringent protection requirements (such as prohibiting culvert installations which result in detrimental increased stream velocities, or requiring the maintenance of colder stream temperatures for spawning, etc.) along portions of streams where spawning or migration occurs or may occur (Section 3, temperature criteria). Conversely, if there is no evidence of, or potential for, spawning, reproduction and/or migration in a specific portion of a water body, a specific Water Quality Control Plan for spawning, reproduction, and/or migration may not be required. The Tribe will evaluate appropriate use designations on a case-by-case basis if a conflict arises.

### 2.3 Historical Designated Uses

Historical existing uses are those uses actually attained in the water body on or before November 28, 1975, whether or not they are included in the water quality standards. Historical designated uses have been incorporated into Tables 1 and 2 as potential uses. Removal of a use designation requires a “Use Attainability Analysis,” using U.S. Environmental Protection Agency methodology, to show that the use does not occur and cannot reasonably be attained.

### 2.4 Use Attainability Analyses (UAA)

A Use Attainability Analysis must be conducted when the Tribe is involved with:

1. Designating Uses that do not include CWA 101(a)(2) Goals
2. Removing CWA 101(a)(2) Goal Uses
3. Adopting subcategories with less stringent Criteria

A Use Attainability Analysis (UAA) is a multifaceted assessment of environmental and economic factors (Per 40 CFR 131.3(g)) that includes the following parts:

- Water Body Survey and Assessment to identify and define existing and current uses, to determine if Tribal designated uses are appropriate, to identify causes of impairment, and to project potential uses by examining water bodies physical, chemical, and biological characteristics.
- Waste Load Allocation/TMDL to determine contributions from various pollution sources.
- Economic Analysis-per 40. CFR 131.10(g)(6) under certain conditions, a designated use may be changed if attaining that use would result in substantial and widespread economic and social impact.

### 2.5 Removal of Uses

Per 40 CFR 131.10(g-h)

(g) States may remove a designated use which is not an existing use, as defined in Sec. 131.3, or establish sub-categories of a use if the State can demonstrate that attaining the designated use is not feasible because:

- (1) Naturally occurring pollutant concentrations prevent the attainment of the use; or
  - (2) Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or
  - (3) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or
  - (4) Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; or
  - (5) Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or
  - (6) Controls more stringent than those required by sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact.
- (h) States may not remove designated uses if:
- (1) They are existing uses, as defined in Section 131.3, unless a use requiring more stringent criteria is added; or
  - (2) Such uses will be attained by implementing effluent limits required under sections 301(b) and 306 of the Act and by implementing cost-effective and reasonable best management practices for nonpoint source control.

### **3.0 WATER QUALITY CRITERIA**

The term “water quality criteria” is equivalent to the state of California term “water quality objectives.” “Water quality criteria” are the allowable “limits or levels of water quality constituents or characteristics which are established for the reasonable protection of designated uses of water or the prevention of nuisance condition within a specific area.” Thus, water quality criteria are intended to protect the public health and welfare, and to maintain or enhance water quality in relation to the existing and/or potential uses of the water. The criteria, when compared to future water quality data, will also provide the basis for detecting any future trend toward degradation or enhancement of basin waters.

Water quality criteria apply to “waters of the Tribe” and “waters of the United States.” Some of the waters of the Tribe are interstate waters, flowing into the State of California (State). The Tribe has a responsibility to ensure that waters leaving the Reservation meet the water quality standards of the receiving State just as the State has the responsibility to ensure that water leaving the State, and flowing onto the Reservation meet the water quality standards of the Tribe.

#### **3.1 Water Quality Standards**

The federal Clean Water Act defines “water quality standards” to include both “designated uses” and “water quality criteria.” Thus, the designated uses outlined in Section 2 of this Plan and the water quality criteria (including the anti-degradation objective of this Section) are the Tribe's water quality standards for purposes of the Clean Water Act.

#### **3.2 Water Quality Criteria and Effluent Limits**

It is important to recognize the distinction between ambient water quality criteria and “effluent limitations” or “discharge standards” which are conditions in Tribal and federal waste discharge permits. Effluent limitations are established in permits both to protect water for designated uses within the area of the discharge, and to meet or achieve water quality criteria.

#### **3.3 Methodology for Establishing Water Quality Criteria**

Water quality criteria are numerical or narrative. Narrative and numerical water quality criteria define the upper concentration or other limits that the Tribe considers protective of designated uses.

The general methodology used in establishing water quality criteria involves, first, designating uses; and second, selecting and quantifying the water quality parameters necessary to protect the most vulnerable (sensitive) designated uses. To comply with the Anti-degradation Objective (see below), water quality criteria may be established at levels better than that necessary to protect the most vulnerable designated use.

In establishing water quality criteria, factors in addition to designated uses and the Anti-degradation Objective are considered. These factors include environmental and economic considerations specific to each water body, the need to develop and use recycled water, as well as the level of water quality which could be achieved through coordinated control of all factors which affect water quality in an area. Controllable water quality factors are those actions, conditions, or circumstances resulting from human activities that may influence the quality of the waters of the Tribe, and that may be reasonably controlled.

Water quality criteria can be reviewed and, if appropriate, revised by the Tribe. Revised water quality criteria would then be adopted as part of this Plan by amendment. Opportunities for formal public review of water quality criteria will be available at a minimum of once every three years following the adoption of this Plan to determine the need for further review and revision.

As a component of the Tribe's continuing planning process, data may be collected and numerical water quality criteria may be developed for additional water bodies and/or constituents where sufficient information is presently not available for the establishment of such criteria. If appropriate, these criteria may be adopted by the Tribe and amended to this Plan.

### **3.3.1 Establishment of Numerical Criteria for Specific Water Bodies**

Where available data are sufficient to define existing ambient levels of constituents, these levels are used in developing the numerical criteria for specific water bodies. By utilizing annual mean, 90th percentile values and flow-weighted values, the criteria are intended to be realistic within the variable conditions imposed by nature. This approach provides an opportunity to detect changes in water quality as a function of time through comparison of annual means, while still accommodating variations in the measured constituents.

### **3.3.2 Prohibited Discharges**

Discharges which cause violation of the Anti-degradation Objective, or any narrative or numerical water quality criteria, are prohibited. After application of reasonable control measures, ambient water quality shall conform to the narrative and numerical water quality criteria included in this Plan. When other factors result in the degradation of water quality beyond the limits established by these water quality criteria, controllable human activities shall not cause further degradation of water quality in either surface or ground waters.

### **3.3.3 Compliance with Water Quality Criteria**

*The analytical methods used as the basis for determining compliance shall be 40 CFR 136 and EPA publication "Methods for the Analysis of Water and Wastewater."*

The purpose of text, in italics, following certain water quality criteria is to provide specific direction on compliance with the objective. It is not feasible to cover all circumstances and conditions that could be created by all discharges. Therefore, it is within the discretion of the Tribe to establish other, or additional, direction on compliance with criteria of this Plan. The purpose of the italic text is to provide direction only, and **not** to specify method of compliance.

### **3.3.4 Clean Water Act 303d/305b Listing Policy**

Listing policies will be developed under a separate document.

## **3.4 Anti-Degradation Objective**

This objective applies to **all** waters of the Tribe (including surface waters, wetlands, and ground waters.) This policy, referred to in this Plan as the Anti-degradation Objective, requires continued maintenance of existing high quality waters. Whenever the existing quality of water is better than the quality of water established in this Plan as criteria (both narrative and numerical), such existing quality shall be maintained unless appropriate findings are made under the policy. The USEPA, Region IX, has also issued detailed guidelines for implementation of federal anti-degradation regulations for surface waters (40 CFR § 131.12). For more information, see the discussion on "General Direction Regarding Compliance with Criteria" at the end of this section.

## **3.5 Water Quality Criteria for Surface Waters**

Water quality criteria for surface waters are divided into the three categories:

- Water quality criteria which apply to all surface waters
- Water quality criteria for certain water bodies
- Water quality criteria for fisheries management activities using the fish toxicant Rotenone

### 3.5.1 Water Quality Criteria Which Apply to All Surface Waters

Listed below are the narrative and numerical water quality criteria that apply to all surface waters (including wetlands) within the Reservation:

#### Ammonia

The neutral, unionized ammonia species ( $\text{NH}_3^\circ$ ) is highly toxic to freshwater fish. The fraction of toxic  $\text{NH}_3^\circ$  to total ammonia species ( $\text{NH}_4 + \text{NH}_3^\circ$ ) is a function of temperature and pH. Tables 4, 5, and 6, were derived from USEPA ammonia criteria for freshwater. Ammonia concentrations shall not exceed the values listed for the corresponding conditions in these tables. For temperature and pH values not explicitly in these tables, the most conservative value neighboring the actual value may be used or criteria can be calculated from numerical formulas developed by the USEPA. For one-hour (1h- $\text{NH}_3$ ) and four-day (4d- $\text{NH}_3$ ) unionized ammonia criteria, the following equations apply:

$$1\text{h-NH}_3 = 0.052 \div (\text{FT} \times \text{FPH} \times 2)$$

$$4\text{d-NH}_3 = 0.80 \div (\text{FT} \times \text{FPH} \times \text{RATIO})$$

where:

$$\text{FT} = 10 [0.03(20-\text{TCAP})]$$

for:  $\text{TCAP} \leq T \leq 30$

$$\text{FT} = 10 [0.03(20-T)]$$

for:  $0 \leq T \leq \text{TCAP}$

$$\text{FPH} = (1 + 10^{(7.4-\text{pH})}) \div 1.25$$

for:  $6.5 \leq \text{pH} \leq 8.0$

$$\text{FPH} = 1$$

for:  $8.0 \leq \text{pH} \leq 9.0$

$$\text{RATIO} = 20.25 \times (10^{(7.7-\text{pH})}) \div (1 + 10^{(7.4-\text{pH})})$$

for:  $6.5 \leq \text{pH} \leq 7.7$

$$\text{RATIO} = 13.5$$

for:  $7.7 \leq \text{pH} \leq 9.0$

and:

T = temperature in °C

TCAP = temperature cap in °C

For 1h- $\text{NH}_3$ , TCAP is 20°C with salmonids present and 25°C with salmonids absent. For 4d- $\text{NH}_3$ , TCAP is 15°C with salmonids present and 20°C with salmonids absent.

For interpolation of total ammonia ( $\text{NH}_4 + \text{NH}_3^\circ$ ) criteria, the following equations can be used:

$$n_{1h} = 1h-NH_3 \div f, \text{ or } n_{4d} = 4d-NH_3 \div f$$

where:

n<sub>1h</sub> is the one-hour criteria for total ammonia species (NH<sub>4</sub><sup>+</sup> + NH<sub>3</sub>)

n<sub>4d</sub> is the four-day criteria for total ammonia species (NH<sub>4</sub><sup>+</sup> + NH<sub>3</sub>)

$$f = 1 \div (10^{(pKa-pH)} + 1)$$

$$pKa = 0.0901821 + [2729.92 \div (T+273.15)]$$

and:

pKa is the negative log of the equilibrium constant for the NH<sub>4</sub><sup>+</sup> ⇌ NH<sub>3</sub> + H<sup>+</sup> reaction

f is the fraction of unionized ammonia to total ammonia species:  $[NH_3 \div (NH_4^+ + NH_3)]$

Values outside of the ranges 0-30°C or pH 6 cannot be extrapolated from these relationships. Site-FPH specific criteria must be developed for these conditions. “A microcomputer spreadsheet based on the above calculations is kept with the staff of the Tribal Environmental Management Office (EMO).” An example of output from this program is given in Table 6. Contact the EMO if a copy is desired.

**Bacteria, Coliform**

Waters shall not contain elevated concentrations of coliform organisms attributable to anthropogenic sources, including human and livestock wastes. Specifically, E.coli coliform concentrations during any 30-day period shall not exceed the values indicated in the table below. *The log mean shall ideally be based on a minimum of not less than five samples collected as evenly spaced as practicable during any 30-day period. However, a log mean concentration exceeding the applicable criteria for any 30-day period shall indicate violation of this objective even if fewer than five samples were collected.*

**Criteria for Bacteriological Densities**

	<b>Acceptable Swimming Associated Gastroenteritis Rate per 1000 swimmers</b>	<b>Steady State Geometric Mean Indicator Density</b>	<b>Designed Beach Area</b>	<b>Moderate Full Body Contact Recreation</b>	<b>Lightly Used Full Body Contact Recreation</b>	<b>Infrequently Used Full Body Contact Recreation</b>
<i>Freshwater</i>	8	126	235	298	406	576
<u>E.Coli*</u>						

*Source: U.S. Environmental Protection Agency. 1986, Ambient Water Quality Criteria for Bacteria - 1986. U.S. Environmental Protection Agency, Washington D.C.*

*\*E.Coli densities analyzed via Colilert Quanti-Tray/2000 – approved for E.coli enumeration in the US EPA’s proposed Ambient Water Guidelines.*

**Nutrients**

Waters shall not contain nutrients in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect designated uses. Numeric criteria for nitrates and phosphorus for Bishop Creek are presented in Table 3.

**Chemical Constituents**

Waters designated as MUN shall not contain concentrations of chemical constituents in excess of the maximum contaminant level (MCL) specified in the California Department of Health Services (DHS) MCLs. Waters designated as AGR shall not contain concentrations of chemical constituents in amounts that adversely affect designated uses (i.e., agricultural purposes). Waters shall not contain concentrations of chemical constituents in amounts that adversely affect designated uses.

**Color**

Waters shall be free of coloration that causes nuisance or adversely affects designated uses.

**Dissolved Oxygen**

The dissolved oxygen concentration, as percent saturation, shall not be depressed by more than 10 percent, nor shall the minimum dissolved oxygen concentration be less than 80 percent of saturation. For waters with designated uses of COLD, COLD with SPWN, WARM, and WARM with SPWN, the minimum dissolved oxygen concentration shall not be less than that specified in Table 7.

**Floating Materials**

Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect designated uses. For natural high quality waters, the concentrations of floating material shall not be altered to the extent that such alterations are discernable at the 10 percent significance level.

**Methylmercury**

Water Column: The methylmercury criteria for human health is contained within the National Recommended Water Quality Criteria 2002 (EPA 822-R-02-0470) as amended in the 2003 Federal Register (Federal Register: December 31, 2003 (Volume 68, Number 250)).

Fish Tissue: Methylmercury shall not be present in concentrations in fish tissue in excess of the maximum contaminant level (MCL) of 0.3 methyl mercury/kg fish (EPA 823-R-01-001). This is based upon the following equation:

**BW x (RfD - RSC)**

$$TRC = \frac{BW \times (RfD - RSC)}{\sum_{i=2}^4 FI_i}$$

Where:

- TRC = Fish tissue residue criterion (mg methylmercury/kg fish) for freshwater and estuarine fish
- RfD = Reference dose (based on non-cancer human health effects) of 0.0001 mg methylmercury/kg body weight-day
- RSC = Relative source contribution (subtracted from the RfD to account for marine fish consumption) estimated to be  $2.7 \times 10^{-5}$  mg methylmercury/kg body weight-day
- BW = Human body weight default value of 70 kg (for adults)

FI = Fish intake at trophic level (TL) I (I = 2,3,4); total default intake is 0.0175 kg fish/day for general adult population. Trophic level breakouts for the general population are: TL2 = 0.0038 kg fish/day; TL3= 0.0080 kg fish/day; and TL4 = 0.0057 kg fish/day.

### **Oil and Grease**

Waters shall not contain oils, greases, waxes or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect designated uses. For natural high quality waters, the concentration of oils, greases, or other film or coat generating substances shall not be altered.

### **Anti-Degradation of Aquatic Communities and Populations**

All wetlands shall be free from substances attributable to wastewater or other discharges that produce adverse physiological responses in humans, animals, or plants; or which lead to the presence of undesirable or nuisance aquatic life. All wetlands shall be free from activities that would substantially impair the biological community as it naturally occurs due to physical, chemical and hydrologic processes.

### **Pesticides**

For the purposes of this Plan, pesticides are defined to include insecticides, herbicides, rodenticides, fungicides, pesticides and all other economic poisons. An economic poison is any substance intended to prevent, repel, destroy, or mitigate the damage from insects, rodents, predatory animals, bacteria, fungi or weeds capable of infesting or harming vegetation, humans, or animals (CA Agriculture Code § 12753). Pesticide concentrations, individually or collectively, shall not exceed the lowest detectable level, using the most recent detection procedures available. There shall not be an increase in pesticide concentrations found in bottom sediments. There shall be no detectable increase in bioaccumulation of pesticides in aquatic life. Waters designated as MUN shall not contain concentrations of pesticides or herbicides in excess of the limiting concentrations specified in the National Primary Drinking Water Regulations of 1996 which is incorporated-by-reference into this plan. This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

### **pH**

In fresh waters with designated uses of COLD or WARM, changes in normal ambient pH levels shall not exceed 0.5 pH units. For all other waters of the Region, the pH shall not be depressed below 6.5 nor raised above 8.5. *The Tribe recognizes that some waters of the Region may have natural pH levels outside of the 6.5 to 8.5 range. Compliance with the pH objective for these waters will be determined on a case-by-case basis.*

### **Radioactivity**

Radionuclides shall not be present in concentrations which are deleterious to human, plant, animal, or aquatic life, nor which result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal, or aquatic life. Waters designated as MUN shall not contain concentrations of radionuclides in excess of the limits specified in the National Primary Drinking Water Regulations, 1996.

### **Sediment**

The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect the water for designated uses.

### **Settleable Materials**

Waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or that adversely affects designated uses. For natural high quality waters, the concentration of settleable materials shall not be raised by more than 0.1ml/L.

### **Suspended Materials**

Waters shall not contain suspended materials in concentrations that cause nuisance or that adversely affect designated uses. For natural high quality waters, the concentration of total suspended materials shall not be altered to the extent that such alterations are discernible at the 10 percent significance level.

### **Taste and Odor**

Waters shall not contain taste or odor-producing substances in concentrations that impart undesirable tastes or odors to fish or other edible products of aquatic origin, that cause nuisance, or that adversely affect designated uses. For naturally high quality waters, the taste and odor shall not be altered.

### **Temperature**

The natural receiving water temperature of all waters shall not be altered unless it can be demonstrated to the satisfaction of the Tribe that such an alteration in temperature does not adversely affect designated uses. For waters designated WARM, water temperature shall not be altered by more than five degrees Fahrenheit (5°F) above or below the natural temperature. For waters designated COLD, the temperature shall not be altered.

### **Total Residual Chlorine**

Total residual chlorine in any ambient water shall not exceed 0.002 mg/L median and 0.003 mg/L maximum.

### **Toxic Substances**

The concentration of toxic pollutants for all surface waters shall not exceed the more stringent of the aquatic life criteria for freshwater or the human health concentration criteria for consumption of water and organisms or for consumption of organisms only in the priority toxic pollutant table of the USEPA National Recommended Water Quality Criteria, 2002, or the most recent version.

Subject to USEPA approval, the Tribe may from time to time adopt site-specific toxic pollutant criteria. Any such adoption shall involve public participation and be based upon site-specific data and studies demonstrating that the alternate criteria will support the propagation of aquatic life and protect the public health.

### **Toxicity Requirements—Acute and Chronic**

All effluents containing materials attributable to the activities of man shall be considered harmful unless acceptable bioassay tests have shown otherwise. In its discretion the Tribe may require the person responsible for the discharge of the effluent to perform bioassay tests on the effluent in question.

Compliance with these standards will be determined using indicator organisms, analysis of species diversity, population density, growth anomalies, bioassays, or other appropriate methods as specified by the Tribe.

The chronic affect on test organisms outside a zone of mixing, if one exists, in the water body receiving the effluent in question shall not be more than that for waters of the same water body that are unaffected by the discharge of pollutant, or, when necessary for other control water meeting the criteria described in the latest edition of "Standard Methods for the Examination of Water and Wastewater."

Compliance with the above standards shall be evaluated with a 96-hour bioassay or short-term method for estimating chronic toxicity using methods described in the most recently updated version of the following documents:

(A) EPA 821-R-02-013 Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, 2002.

(B) EPA 600-4-90-027F Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Cincinnati, Ohio, EMSL, Fourth Edition, 1993.

The following additional toxic standards shall apply:

(1) Arsenic: The human health numeric criteria for arsenic in the EPA 2002 publication are excluded from the Water Quality Standards and instead, the human health criteria for arsenic for freshwaters is 10 µg/L (Federal Register: January 22, 2001 (Volume 66, Number 14)).

(2) Total Mercury: In addition to the methylmercury criteria for human health from the EPA 2002 publication, the water column concentration of mercury shall not exceed 0.05 µg/L.

(3) Total Residual Chlorine: Total residual chlorine in any ambient water shall not exceed 0.002 mg/L median, 0.003 mg/L maximum)

### **Turbidity**

Waters shall be free of changes in turbidity that cause nuisance or adversely affect the designated uses. Increases in turbidity shall not exceed natural levels by more than 10 percent.

### **3.5.2 Water Quality Criteria for Certain Water Bodies**

Some narrative and numerical water quality criteria are directed toward protection of surface waters (including wetlands) in specific areas. To the extent of overlap, these site-specific water quality criteria supersede the “Water Quality Criteria Which Apply to All Surface Waters” described above. The water bodies for which site-specific criteria have been adopted are listed in Table 3.

### **3.5.3 Water Quality Criteria for Fisheries Management Activities Using the Fish Toxicant Rotenone**

Rotenone is a fish toxicant used by the California Department of Fish and Game (DFG) for fishery management purposes (See Section 4 for a more complete discussion of this topic). The application of rotenone solutions and the detoxification agent potassium permanganate can cause several water quality criteria to be temporarily exceeded, both inside and outside of project boundaries (Project boundaries are defined as encompassing the treatment area, the detoxification area, and the area downstream of the detoxification station up to a thirty-minute travel time). Additional narrative water quality criteria applicable to rotenone treatments are: color, pesticides, toxicity, and species composition. Conditional variances to these criteria may be granted by the Tribe's Environmental Manager for rotenone applications by the DFG, provided that such projects comply with the conditions described below and with the conditions described in Section 4 (Implementation) under the Section entitled “Rotenone Use in Fisheries Management.”

### **Color**

The characteristic purple discoloration resulting from the discharge of potassium permanganate shall not be discernible more than two miles downstream of project boundaries at any time. 24 hours after shutdown of the detoxification operation, no color alteration(s) resulting from the discharge of potassium permanganate shall be discernible within or downstream of project boundaries.

### **Pesticides**

Chemical residues resulting from rotenone treatment must not exceed the following limitations:

1. The concentration of naphthalene outside of project boundaries shall not exceed 25 µg/L (ppb) at any time. 2. The concentration of rotenone, rotenone, trichloroethylene (TCE), xylene, or acetone (or potential trace contaminants such as benzene or ethylbenzene) outside of project boundaries shall not exceed the detection levels for these respective compounds at any time. “Detection level” is

defined as the minimum level that can be reasonably detected using state-of-the-art equipment and methodology. 3. After a two-week period has elapsed from the date that rotenone application was completed, no chemical residues resulting from the treatment shall be present at detectable levels within or downstream of project boundaries. 4. No chemical residues resulting from rotenone treatments shall exceed detection levels in ground water at any time.

### **Species Composition**

The reduction in fish diversity associated with the elimination of non-native game fish or exotic species may be part of the project goal, and may therefore be unavoidable. However, non-target aquatic populations (e.g. invertebrates, amphibians) that are reduced by rotenone treatments are expected to repopulate project areas within one year. Where species composition criteria are established for specific water bodies or water bodys, the established objective(s) shall be met for all non-target aquatic organisms within one year following rotenone treatment. For multi-year treatments (i.e., when rotenone is applied to the same water body during two or more consecutive years), the established objective(s) shall be met for all non-target aquatic organisms within one year following the final rotenone application to a given water body.

Threatened or endangered aquatic populations (e.g. invertebrates, amphibians) shall not be adversely affected. As determined by the Tribe, the DFG may conduct pre-project monitoring to prevent rotenone application where threatened or endangered species may be adversely impacted.

### **Toxicity**

Chemical residues resulting from rotenone treatment must not exceed the limitations listed above for pesticides.

## **3.6 Water Quality Criteria Which Apply to Ground Water**

Listed below are the narrative and numerical water quality criteria that apply to **all** ground waters within the Bishop Reservation:

Arsenic  
Bacteria, Coliform  
Chemical Constituents  
Radioactivity  
Taste and Odor

### **Arsenic**

The human health numeric criteria for arsenic in the EPA 2002 publication are excluded from the water quality standards and instead, the human health criteria for arsenic for freshwaters are 10 µg/L (Federal Register: January 22, 2001 (Volume 66, Number14).

### **Bacteria, Coliform**

Ground waters designated as MUN, the median concentration of coliform organisms over any seven-day period shall be less than 1.1/100 ml.

### **Chemical Constituents**

Ground waters designated as MUN shall not contain concentrations of chemical constituents in excess of the maximum contaminant level (MCL) or based upon drinking water standards specified in the National Primary Drinking Water Regulations, 1996. Waters designated as AGR shall not contain concentrations of chemical constituents in amounts that adversely affect the water for designated uses (i.e., agricultural purposes). Ground waters shall not contain concentrations of chemical constituents that adversely affect designated uses.

**Radioactivity**

Ground waters designated as MUN shall not contain concentrations of radionuclides in excess of the limits specified in the National Primary Drinking Water Regulation, 1996.

**Taste and Odor**

Ground waters shall not contain taste or odor-producing substances in concentrations that cause nuisance or that adversely affect designated uses.

**3.7 General Direction Regarding Compliance with Criteria**

This section includes general direction on determining compliance with the anti-degradation, narrative and numerical criteria described in this Section (specific direction on compliance with certain criteria is included, in italics, following the text of the criteria). It is not feasible to cover all circumstances and conditions that could be created by all discharges. Therefore, it is within the discretion of the Tribe to establish other, or additional, direction on compliance with criteria of this Plan. Where more than one objective is applicable, the stricter objective shall apply. Where criteria are not specifically designated, downstream criteria apply to upstream tributaries.

**3.7.1 Anti-Degradation Objective**

The Tribe's procedures for implementation of Tribal and Federal anti-degradation policies are summarized below. It is important to note that the Federal policy applies only to surface waters, while the Tribe's policy applies to both surface and ground waters.

Under the Tribal Anti-Degradation Objective, whenever the existing quality of water is better than that needed to protect all Existing and probable future designated uses, the existing high quality shall be maintained until or unless it has been demonstrated to the Tribe that any change in water quality will be consistent with the maximum benefit to the people of the Tribe, and will not unreasonably affect present and probable future designated uses of such water. Therefore, unless these conditions are met, background water quality concentrations (the concentrations of substances in natural waters which are unaffected by waste management practices or contamination incidents) are appropriate water quality goals to be maintained. If it is determined that some degradation will unavoidably occur as a result of actions taken by the Tribe in its own best interest, some increase in pollutant level may be appropriate. However, in no case may such increases cause adverse impacts to Existing or probable future designated uses of waters of the Tribe.

Where the Federal anti-degradation policy applies, it does not absolutely prohibit any changes in water quality. The policy requires that any reductions in water quality be consistent with the three-part test established by the policy, as described below:

**Part One—In Stream Uses** [40 CFR § 131.12(a)(1)]

The first part of the test establishes that “existing in stream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.” Reductions in water quality should not be permitted if the change in water quality would seriously harm any species found in the water (other than an aberrational species). Waters of this type are generally referred to as “Tier I” waters.

**Part Two—Public Interest Balancing** [40 CFR § 131.12(a)(2)]

The second part of the test applies where water quality is higher than necessary to protect existing uses. This part of the test allows reductions in water quality if the Tribe finds “that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located” **and** existing uses are protected. Waters of this type are generally referred to as “Tier II” waters.

**Part Three—Outstanding National Resource Waters (ONRW) [40 CFR § 131.12(a)(3)]**

The third part of the test established by the federal policy requires that the water quality of the waters that constitute an outstanding national resource be maintained and protected. No permanent or long-term reduction in water quality is allowable in areas given special protection as Outstanding National Resource Waters (48 Fed. Reg. 51402). Waters which potentially could qualify for ONRW designation are generally classified as “Tier III” waters. Examples of such waters include, but are not limited to, waters of National and State Parks and wildlife refuges, waters of exceptional recreational or ecological significance, and state and federally designated wild and scenic rivers. ONRW may be designated as part of adoption or amendment of water quality control plans. It is important to note that even if no formal designation has been made, lowering of water quality should not be allowed for waters which, because of their exceptional recreational and/or ecological significance, should be given the special protection assigned to ONRW.

**3.7.2 Narrative and Numerical Criteria**

The sections below provide additional direction on determining compliance with the narrative and numerical criteria of this Plan.

**Pollution and/or Nuisance**

In determining compliance with narrative criteria that include the terms “pollution” and or “nuisance,” the Tribe considers the following definitions:

**Pollution** -- an alteration of the waters of the Tribe by waste to the degree which unreasonably affects either of the following:

- such waters for designated uses
- facilities which serve these designated uses

“Pollution” may include “contamination.” Contamination means an impairment of the quality of the waters of the Tribe by waste to a degree that creates a hazard to the public health through poisoning or through the spread of disease. Contamination includes any equivalent effect resulting from the disposal of waste, whether or not waters of the Tribe are affected.

**Nuisance** -- Anything which meets all of the following requirements:

- Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
- Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
- Occurs during or as a result of the treatment or disposal of wastes.

**References to Taste and Odor, Human Health and Toxicity (also see “acute toxicity” and “chronic toxicity,” below):**

In determining compliance with criteria including references to Taste and Odor, Human Health or Toxicity, the Tribe will consider as evidence relevant and scientifically valid water quality goals from sources such as: the National Interim Drinking Water Standards, Proposition 65 Lawful Levels, National Ambient Water Quality Criteria (USEPA's “Quality Criteria for Water” for the years 1986, 1976 and 1972; “Ambient Water Quality Criteria,” volumes 1980, 1984, 1986, 1987 and 1989), the National Academy of Sciences' Suggested No-Adverse-Response Levels (SNARL), USEPA's Health and Water Quality Advisories, as well as other relevant and scientifically valid evidence.

**References to Agriculture or AGR designations:**

In determining compliance with criteria including references to the AGR Designated Use, the Tribe will refer to water quality goals and recommendations from sources such as Natural Resources Conservation

Service Irrigation - Handbooks and Manuals - National Engineering Handbook Part 652 - Irrigation Guide (210-vi-NEH, September 1997) and Water Quality for Agriculture, R.S. Ayers and D.W. Wescott, 1989.

### References to “Natural High Quality Waters”:

The Tribe generally considers “natural high quality water(s)” to be those waters with ambient water quality equal to, or better than, current drinking water standards. However, the Tribe also recognizes that some waters with poor chemical quality may support important ecosystems.

### References to “10 percent significance level”:

A statistical hypothesis is a statement about a random variable's probability distribution, and a decision-making procedure about such a statement is a hypothesis test. In testing a hypothesis concerning the value of a population mean, the null hypothesis is often used. The null hypothesis is that there is no difference between the population means (e.g., the mean value of a water quality parameter after the discharge is no different than before the discharge). First a level of significance to be used in the test is specified, and then the regions of acceptance and rejection for evaluating the obtained sample mean are determined. At the **10 percent significance level**, assuming normal distribution, the acceptance region (where one would correctly accept the null hypothesis) is the interval that lies under 90 percent of the area of the standard normal curve. Thus, a level of **significance of 10 percent** signifies that when the population mean is correct as specified, the sample mean will fall in the areas of rejection only 10 percent of the time. If the hypothesis is rejected when it should be accepted, a Type I error has been made. In choosing a **10 percent level of significance**, there are 10 chances in 100 that a Type I error was made, or the hypothesis was rejected when it should have been accepted (i.e., one is 90 percent confident that the right decision was made). The **10 percent significance level** is often incorrectly referred to as the 90 percent significance level. As explained above, the significance level of a test should be low, and the confidence level of a confidence interval should be high.

**References to “Means” (e.g., annual mean,) “Medians” and “90th percentile values”:** “Mean” is the arithmetic mean of all data. “Annual mean” is the arithmetic mean of all data collected in a one-year period. The **median** is the value that half of the values of the population exceed and half do not. The **average value** is the arithmetic mean of all data. For a **90th percentile value**, only 10% of data exceed this value. Compliance determinations shall be based on available analyses for the time interval associated with the discharge. If only one sample is collected during the time period associated with the water quality objective, (e.g., monthly mean), that sample shall serve to characterize the discharge for the entire interval. Compliance based upon multiple samples shall be determined through the application of appropriate statistical methods.

### Standard Analytical Methods to Determine Compliance with Criteria

Analytical methods to be used are usually specified in the monitoring requirements of the waste discharge permits. Suitable analytical methods are:

- those specified in 40 CFR Part 136, and/or
- those methods determined by the Tribe and approved by the USEPA to be equally or more sensitive than 40 CFR Part 136 methods and appropriate for the sample matrix, and/or
- where methods are not specified in 40 CFR Part 136, those methods determined by the Tribe to be appropriate for the sample matrix

All analytical data shall be reported uncensored with method detection limits and either practical quantitation levels or limits of quantitation identified. Acceptance of data should be based on demonstrated laboratory performance.

For **bacterial analyses**, sample dilutions should be performed so the range of values extends from 2 to 16,000. The detection method used for each analysis shall be reported with the results of the analysis. Detection methods used for coliforms (total and fecal) shall be those presented in Standard Methods for

the Examination of Water and Wastewater (American Public Health Association et al. 1998), or any alternative method determined by the EMO to be appropriate.

For **acute toxicity**, compliance shall be determined by short-term toxicity tests on undiluted effluent using an established protocol (e.g., American Society for Testing and Materials [ASTM], American Public Health Association, USEPA).

For **chronic toxicity**, compliance shall be determined using the critical life stage (CLS) toxicity tests. At least three approved species shall be used to measure compliance with the toxicity objective. If possible, test species shall include a vertebrate, an invertebrate, and an aquatic plant. After an initial screening period, monitoring may be reduced to the most sensitive species. Dilution and control waters should be obtained from an unaffected area of the receiving waters. For rivers and streams, dilution water should be obtained immediately upstream of the discharge. Standard dilution water can be used if the above sources exhibit toxicity greater than 1.0 Chronic Toxicity Units.

#### **Application of Narrative and Numerical Water Quality Criteria to Wetlands**

Although not developed specifically for wetlands, many surface water **narrative criteria** are generally applicable to most wetland types. However, the Tribe recognizes, as with other types of surface waters such as saline or alkaline lakes, that natural water quality characteristics of some wetlands may not be within the range for which the narrative criteria were developed. The Tribe will consider site-specific adjustments to the criteria for wetlands (bacteria, pH, hardness, salinity, temperature, or other parameters) as necessary on a case-by-case basis.

The **numerical criteria** to protect one or more designated uses of surface waters, where appropriate, may directly apply to wetlands. For example, wetlands which actually are, or which recharge, municipal water supplies should meet human health criteria. The USEPA numeric criteria for protection of freshwater aquatic life, as listed in *Quality Criteria for Water—1986*, although not developed specifically for wetlands, are generally applicable to most wetland types. As with other types of surface waters, such as saline or alkaline lakes, natural water quality characteristics of some wetlands may not be within the range for which the criteria were developed. Adjustments for pH, hardness, salinity, temperature, or other parameters may be necessary. The Tribe will consider developing site-specific criteria for wetlands on a case-by-case basis.

## **4.0 IMPLEMENTATION**

A program of implementation to protect designated uses and to achieve water quality criteria is an integral component of this Plan.

This Section includes discussions of general control actions and related issues and a description of the Tribe's non-point source program.

### **4.1 General Control Actions and Related Issues**

The Tribe regulates the sources of water quality related problems that could result in actual, or potential, impairments of designated uses or degradations of water quality. The Tribe regulates both point and non-point source discharge activities broadly under existing tribal ordinances: (Water Law, (Bishop Paiute Tribe, 1998), Tribal Environmental Policy, Ordinance No 98-02 (Bishop Paiute Tribe, 1998), and Prohibiting the Discharge of any Pollutant Into the Waters of the Bishop Paiute Reservation, Tribal Ordinance No. 98-02, Bishop Paiute Tribe, 1997 (Appendix A)). A point source discharge generally originates from a single, identifiable source, while a non-point source discharge comes from diffuse sources. To regulate the point and non-point sources, control actions are required for effective water quality protection and management. The Tribe sets forth these control actions for implementation.

To prevent water quality problems, waste discharge restrictions are often used. The waste discharge restrictions can be implemented through Water Quality Certification, National Pollutant Discharge Elimination System (NPDES) permits, Waste Discharge Requirements/permits (WDR), discharge prohibitions, enforcement actions, special designations, and/or “Best Management Practices” (BMP). Generally, WDR and NPDES permits are used to regulate point sources of waste, with BMP used to control non-point sources of waste.

#### **4.2 National Pollutant Discharge Elimination System (NPDES)**

As the Tribe does not currently have authority to grant NPDES permits these are issued by the USEPA Region 9 to regulate discharges of waste to “waters of the nation” including discharges of storm water from urban separate storm sewer systems and certain categories of industrial activity. Waters of the nation are surface waters such as rivers, lakes, bays, estuaries, oceans, etc. The permits are authorized by Section 402 of the federal Clean Water Act. The permit content and the issuance process are contained in the Code of Federal Regulations (40 CFR Part 122) and are authorized to take a variety of enforcement actions to obtain compliance with a NPDES permit. Enforcement may be only a simple order requiring the discharger to take corrective action to comply with the terms of its permit or may be an order prescribing civil monetary penalties.

NPDES permits are required to prescribe conditions of discharge that will ensure protection of designated uses of the receiving water as described in this Plan. In addition to regulating discharges of wastewater to surface waters, NPDES permits also require municipal sewage treatment systems to conduct pretreatment programs if their design capacity is greater than 5 million gallons per day. Smaller municipal treatment systems may be required to conduct pretreatment programs if there are significant industrial users of their systems. The pretreatment programs must comply with the federal regulations 40 CFR Part 403.

#### **4.3 Prohibitions and Exceptions to Prohibitions**

The Tribe can prohibit specific types of discharges to certain areas and grant exceptions to prohibition. Exceptions to prohibition of discharge to surface waters include stormwater discharges that are being controlled by appropriate management practices. Another exception is for stream or watershed restoration projects that are being implemented via appropriate management practices. These discharge prohibitions or exceptions may be revised, rescinded, or adopted as necessary by the Tribal Council.

#### **4.4 Enforcement Actions**

To facilitate remediation of water quality problems, or in instances where waste discharge restrictions or other provisions of these Standards are violated, the Tribal Environmental Protection Agency (TEPA) can use different types of enforcement measures under Tribal Environmental Policy, Ordinance No 98-02 Bishop Paiute Tribe, 1998, and Prohibiting the Discharge of any Pollutant Into the Waters of the Bishop Paiute Reservation, Tribal Ordinance No. 97-11, Bishop Paiute Tribe, 1997, (Appendix A).

Examples of measures that may be used are as follows:

- A **Emergency Restraining Order** is a written order by the Chairman of the TEPA formally advising a person engaged in any on reservation activity regulated by the TEPO ordinance (98-02) or any other federal law, regulation, code or permit, including but not limited to solid waste management activities, and that the activity may endanger or cause damage to the public health, safety or welfare of the environmental to restrain from engaging in the activity.
- A **Preliminary or Permanent Injunction** is a written injunction by the TEPA to restrain any person from engaging in any activity regulated by the TEPO ordinance (98-02) or any other Tribal law, Federal law, order or permit, which may endanger or cause damage to public health, safety or welfare

of the environment. A valid injunction must meet certain criteria outlined in the TEPO including Notice to the adverse party and a hearing.

Under Ordinance 98-02 the TEPA has the authority to set up a system of civil fines, sanctions and penalties for violations of Tribal environmental laws and regulations. Procedure for monetary liabilities or fines may also be imposed administratively by the TEPA. Ordinance 97-11 specifically specifies maximum daily monetary penalties for the unregulated discharge of pollutants.

#### **4.5 Special Designations**

Some water bodies may have special designations and related narrative discharge restrictions. Examples of special designations are Outstanding National Resource Water, Sole-source Aquifer, Wild and Scenic River, and Water Quality Limited Segment. Applicable special designations and discharge restrictions are described the “Resources Management and Restoration” part of this section.

#### **4.6 Compliance Schedules**

The TEPA periodically reviews available information on attainment of criteria and support of designated uses as part of the Water Quality Assessment (ongoing), Section 305(b) reporting (every two years), and Triennial Review (every three years) processes. These reviews may result in Plan amendments and/or the issuance of new or revised discharge permits which will include specific compliance schedules for particular dischargers or for all discharges affecting particular water bodies. The TEPA is also required to prioritize impaired water bodies listed as “Water Quality Limited” under Section 303(d) of the Clean Water Act for the development of “Total Maximum Daily Loads” (TMDL) of pollutants to be used in setting waste load allocations for dischargers, in order to ensure attainment of standards.

#### **4.7 Interjurisdictional Issues**

The entire exterior boundary of the Reservation is bordered by the State of California. Two forks of Bishop Creek flow through the external boundary of the Reservation (Figure 1). Both forks flow from the State of California onto the Reservation across the western boundary. Further downstream both forks flow off the Reservation and back into the State of California with the North Fork exiting across the Reservation's northern boundary and the South Fork exiting across the Reservation's eastern boundary. There is approximately 1.2 creeks miles of the North Fork and 2.0 miles of the South Fork within the exterior boundaries of the Reservation.

In both planning and regulatory activities for interstate waters, TEPA staff considers the applicable Water Quality Standards/Quality Control Plan of the State of California. TEPA staff requests the opportunity to review and comment on revisions of the water quality plans of states for waters shared with the Tribe. The Tribe similarly provides states with similar opportunities to comment on Plan revisions. If the Plan amendments or waste discharge permits appear to create a possibility of conflict with another state's standards, TEPA staff will consult with water quality staff of the other state to attempt to resolve the conflict. Because most water quality criteria for Tribal waters are based on historical water quality and anti-degradation considerations, water quality permits which ensure compliance with the Tribe's standards generally should be adequate to prevent violation of the standards of the state of California.

#### **4.8 Non-Point Source Program**

Non-point sources of pollution are generally defined as sources that are diffuse and/or not subject to regulation under the federal National Pollutant Discharge Elimination System (NPDES) (for surface water discharges). Non-point sources include agriculture, grazing, silviculture, abandoned mines, construction, storm water runoff, etc.

The federal Clean Water Act (CWA) is the principal federal water quality protection statute. For point source discharges to surface waters, the CWA establishes a permit system. However, non-point sources

are exempt from federal permitting requirements, as are discharges to ground water. The CWA was amended in 1987 to include a new Section 319 entitled “Non-point Source Management Programs.” Section 319 requires states/tribes to develop Assessment Reports and Management Programs describing the ss' non-point source problems. The Tribe's Non-Point Source Management Plan relies on a voluntary implementation of Best Management Practices (BMP) whereby reservation residents or governmental representatives may voluntarily implement BMP. Implementation could occur for economic reasons and/or through awareness of environmental benefits.

#### 4.9 Best Management Practices

Property owners, managers or other dischargers may implement “Best Management Practices” to protect water quality. The term “Best Management Practices” used in reference to control measures for non-point source water pollutants is analogous to the terms “Best Available Technology/Best Control Technology” (BAT/BCT) used for control of point source pollutants. The USEPA (40 CFR § 103.2[m]) defines BMP as follows:

*“Methods, measures, or practices selected by an agency to meet its non-point source control needs. BMP include, but are not limited to structural and nonstructural controls and operation and maintenance procedures. BMP can be applied before, during and after pollution producing activities to reduce or eliminate the introduction of pollutants into receiving waters.”*

USEPA regulations (40 CFR § 130.6 [b][4][i]) provide that water quality control plans:

*“shall describe the regulatory and non-regulatory programs, activities, and BMP which the agency has selected as the means to control non-point source pollution where necessary to protect or achieve approved water uses. Economic, institutional, and technical factors shall be considered in a continuing process of identifying control needs and evaluating and modifying the BMP as necessary to achieve water quality goals.”*

BMP fall into two general categories:

- **Source controls** which prevent a discharge or threatened discharge. These may include measures such as recycling of used motor oil, fencing stream banks to prevent livestock entry, fertilizer management, street cleaning, re-vegetation and other erosion controls, and limits on total impervious surface coverage. Because the effectiveness of treatment BMP is often uncertain, source control is generally preferable to treatment. It is also often less expensive.
- **Treatment controls** which remove pollutants from storm water before it reaches surface or ground waters. These include infiltration facilities, oil/water separators, and constructed wetlands.

BMP for development projects can be applied both to new project construction, and, through “retrofitting,” to existing structures, roads, parking lots, and similar facilities. It may be possible to carry out an area wide retrofit program as part of a local government redevelopment project. The use of BMP is now mandatory under certain types of storm water NPDES permits.

Non-certified BMP may be proposed as alternative management practices, which will be evaluated by the EMO on a case-by-case basis. The use of BMP does **not** necessarily ensure compliance with effluent limitations or with receiving water criteria.

Because non-point source control has been a priority only since the 1970s, the long-term effectiveness of some BMP has not yet been documented. Some source control BMP (e.g., waste motor oil recycling) may be 100 percent effective if implemented properly. Information to date indicates that treatment control BMP are **not** 100 percent effective, even if maintained and operated properly. Not all BMP are applicable at every location. High ground-water levels may preclude the use of runoff infiltration

facilities, while steep slopes may limit the use of wet ponds. To be effective, most BMP must be implemented on a long-term basis. Structural BMP (e.g., wet ponds and infiltration trenches) require periodic maintenance, and may eventually require replacement. The “state-of-the-art” for BMP design and implementation is expected to change over time. The TEPA planning process will include periodic review and update of BMP certifications.

Monitoring and evaluation of BMP effectiveness is an important part of non-point source control programs. The selection of individual BMP must take into account specific site conditions (e.g. depth to ground-water, quality of runoff, infiltration rates). Potential future BMP may be erosion and storm water control in connection with construction projects and urban runoff.

## 5.0 DEFINITIONS

**"ACUTE TOXICITY"** Toxicity that exerts short-term lethal impacts on representative organisms with a duration of exposure generally less than or equal to 48 hours. Acute toxicity shall be determined in accordance with procedures specified in "Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, 5<sup>th</sup> Edition (USEPA October 2002)." Other methods may be used as appropriate to determine acute effects other than lethality such as, but not limited to, behavioral changes and immobilization.

**"ALGAE"** Simple rootless plants that grow in sunlit waters in relative proportion to the amounts of nutrients available, and which can affect adversely water quality by lowering the dissolved oxygen in the water.

**"ANTI-DEGRADATION"** The policy set forth in Section 3.4 and 3.7.1 of this Plan whereby existing uses, the level of water quality necessary to protect those uses, and general aquatic and riparian ecosystem health is maintained and protected.

**"AQUATIC LIFE CRITERIA"** Pollutant concentrations, levels, or narrative statements, representing a quality of water that is protective of aquatic life.

**"BEST MANAGEMENT PRACTICES"** Practices undertaken to control, restrict, and diminish non-point sources of pollution which are determined to be the most effective and practical means of preventing or reducing pollution of water bodies from non-point sources.

**"CARCINOGENIC"** Cancer causing.

**"CHRONIC TOXICITY"** Toxicity which exerts sub-lethal effects, such as impairment of growth or reproduction, or which becomes lethal after long term exposure. Generally measured in a seven day test on representative organisms. Chronic toxicity shall be determined in accordance with procedures specified in "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, 4<sup>th</sup> Edition (USEPA October 2002)."

**"COLDWATER ECOSYSTEMS"** A stream reach, lake, or impoundment where the water temperature and other characteristics are suitable for the support of coldwater fish such as trout.

**"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.

**"DESIGNATED USES"** Those uses specified in water quality standards for each water body or segment whether or not they are being attained (40 CFR 131.3(f)).

**"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 in order to be usable for drinking or cooking.

**"DRINKING WATER"** Water that does not require any treatment in order to be usable for drinking or cooking.

**"EFFLUENT"** Discharge into surface waters from other than natural sources.

**"EXISTING USES"** Those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards (40 CFR 131.3(e)).

**"FISHERY"** A balanced, diverse community of fishes controlled by the water quality, quantity, and habitat of a water body.

**"FLOW"** Natural discharge of a stream, spring or artesian well, and may include artificial discharge of effluent.

**"HISTORICAL EXISTING USES"** Those uses actually attained in the water body on or before November 28, 1975, whether or not they are included in the water quality standards.

**"GEOMETRIC MEAN"** A mean calculated by converting all values to logarithms; averaging the logarithms; and determining the antilogarithm of that average.

**"GROUNDWATER"** Subsurface water that occurs beneath the water table (level of water in a well) in soils and geological formations that are fully saturated.

**"GROUNDWATER RECHARGE"** The replenishment of aquifers by seepage of surface runoff through sediments and rock formations.

**"HUMAN HEALTH CRITERIA"** Criteria guidance published under section 304 (a) of the Clean Water Act and periodically updated based on the latest scientific information on the effect a pollutant concentration has on human health from consumption of fish and/or ingestion of water.

**"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.

**"NARRATIVE STANDARDS"** A standard or criterion expressed in words rather than numerically.

**"NON-POINT SOURCE"** Pollution that is not from a discernible, single source (e.g. sediment runoff from land).

**"NUISANCE"** Anything which meets all of the following requirements:

- Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property
- Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal
- Occurs during or as a result of the treatment or disposal of wastes

**"NUISANCE CONDITION"** A condition involving uncontrolled growth of aquatic plants, usually caused by excessive nutrients in water.

**"NUTRIENT"** A chemical element or inorganic compound taken in by green plants and used in organic synthesis (e.g. phosphorous and nitrogen).

**"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.

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

**"POINT SOURCE"** A discernible, confined and discrete pollutant source but *not* including return flows from irrigated agriculture.

**"POLLUTION"** An alteration of the waters of the Tribe by waste to the degree which unreasonably affects either of the following:

- such waters for designated uses
- facilities which serve these designated uses

"Pollution" may include "contamination." Contamination means an impairment of the quality of the waters of the Tribe by waste to a degree that creates a hazard to the public health through poisoning or through the spread of disease. Contamination includes any equivalent effect resulting from the disposal of waste, whether or not waters of the Tribe are affected.

**"POTENTIAL USES"** Those uses are those uses specified in water quality standards that could potentially exist for each water body or segment whether or not they are being attained (Defined for these standards-language borrowed from CFR).

**"SEGMENT"** A surface water body that 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.

**"RELIGIOUS USES"** Water bodies that are exceptionally significant as features in the spiritual landscape of tribal members and require special protections as a result of that status.

**"TDS"** Total dissolved solids.

**"TOXIC SUBSTANCES"** Those pollutants or combinations of pollutants, which after discharge and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including but not limited to malfunctions in reproduction), or physical deformations in such organisms or their offspring.

**"TOXICITY"** The degree of danger posed by a substance to animal or plant life (See "Acute Toxicity" and "Chronic Toxicity").

**"TURBIDITY"** The degree to which water is cloudy or muddy in physical appearance due to suspended silt or organic mater.

**"USE ATTAINABILITY ANALYSIS"(UAA)** A structured scientific assessment of the factors affecting attainment of a use for a body of water, which may include physical, chemical, biological and economic factors as referred to in 40 C.F.R. Section 131.10(g).

**"WETLAND"** Any area that is inundated or saturated by surface or groundwater 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, such as swamps, marshes, bogs, and similar areas. This includes wetlands created, restored or enhanced as part of a mitigation procedure. This does not include constructed wetlands intentionally constructed from non-wetland sites outside waters of the Reservation.

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TABLES

Table 1. Designated Uses for Surface Waters of the Bishop Paiute Tribe

#	WATER BODY/ SUBUNIT/ DRAINAGE FEATURE	WATERBODY CLASS MODIFIER	DESIGNATED USES																			RECEIVING WATER				
			MUN	AGR	PRO	IND	GWR	FRSH	NAV	POW	REC-1	REC-2	COMM	AQUA	WARM	COLD	SAL	WILD	BIOL	RARE	MIGR		SPWN	WQE	FLD	MAR
1	North Fork Bishop Creek	Perennial Stream	X	X		X	X				X	X	X			X		X		X		X		X	X	Owens River
2	South Fork Bishop Creek	Perennial Stream	X	X		X	X				X	X	X			X		X		X		X		X	X	Owens River
3	Commercial Park Wetland	Emergent Wetlands/Wet Meadow		X			X				X	X			X				X			X			X	---
4	Tom Key Ditch	Ditch	X	X		X	X				X	X						X							X	Owens River
5	Harry Matlick Ditch	Ditch	X	X		X	X				X	X						X							X	Owens River
6	Dairy Ditch	Ditch	X	X		X	X				X	X						X							X	Owens River
7	West Line Ditch	Ditch	X	X		X	X				X	X						X							X	Owens River
8	Giraud Ditch	Ditch	X	X		X	X				X	X						X							X	Owens River
9	Unnamed Ditch S. of W. Line Street	Ditch	X	X		X	X				X	X						X							X	Owens River
10	Indian Ditch	Ditch	X	X		X	X				X	X						X							X	Owens River
11	All other perennial streams within tribal jurisdiction not named above		X	X		X	X				X	X	X			X		X		X		X		X	X	Owens River
12	All other emergent wetlands/wet meadows within tribal jurisdiction not named above			X			X				X	X			X			X		X		X			X	---

“Water body/Subunit/Drainage Feature” This column contains (in bold type) the names of surface waterbodies, including streams, wetlands and ditches. Many wetlands have no “official” names identifiable on USGS topographic maps. For these wetlands, names were assigned by the Tribal E.P.A, based on the location and/or nearby landmarks.

“Waterbody Class Modifier” This column includes descriptive information on each waterbody in the preceding column. It distinguishes perennial from ephemeral streams, and indicates the type of wetlands. The following are definitions of wetland types potentially occurring on the Bishop Reservation (Mitsch and Gosselink 1986):

Marsh—A frequently or continually inundated wetland characterized by emergent herbaceous vegetation adapted to saturated soil conditions.

Emergent Wetlands—Wetlands dominated by erect, rooted, herbaceous aquatic plants such as cattails, which extend above the standing water level.

Marshes are a type of emergent wetland.

Wet Meadow—Grassland with waterlogged soil near the surface but without standing water for most of the year. Playa lakes/wetlands—Shallow marshes or intermittent lakes formed in nearly level areas at the bottom of desert basins. Slough—A slowly flowing shallow marsh.

Vernal Pool—A shallow pond which temporarily holds water from spring precipitation and runoff, but which is dry during the summer.

“Designated Uses” The subheadings under this heading are abbreviations of designated uses which are defined at the beginning of Section 2. An “X” in a column beneath one of these designates an existing or potential designated use for a given waterbody.

“Receiving Water” This column names the waterbody to which a “drainage feature” named at the far left of the table is tributary.

**Table 2. Designated Uses for Ground Waters of the Bishop Paiute Tribe**

BASIN NAME	DESIGNATED USES						
	MUN	AGR	IND	FRSH	AQUA	WILD	CULT
OWENS VALLEY	X	X	X				X

**Table 3. Water Quality Criteria for Certain Water Bodies**

#	Surface Waters	Criteria (mg/L) <sup>1,2</sup>							
		TDS	Cl	SO <sub>4</sub>	F	B	NO <sub>3</sub> -N	Total N	PO <sub>4</sub>
1	N. Fork Bishop Creek	<u>59</u>	<u>2.4</u>	<u>7.2</u>	<u>0.12</u>	<u>0.04</u>	<u>0.5</u>	<u>0.7</u>	<u>0.09</u>
		105	6.0	12.0	0.30	0.10	0.9	1.0	0.18
2	S. Fork Bishop Creek	<u>59</u>	<u>2.4</u>	<u>7.2</u>	<u>0.12</u>	<u>0.04</u>	<u>0.5</u>	<u>0.7</u>	<u>0.09</u>
		105	6.0	12.0	0.30	0.10	0.9	1.0	0.18
<p><sup>1</sup> Annual average value/90th Percentile Value.</p> <p><sup>2</sup> Criteria are as mg/L and are defined as follows:</p> <p><b>B</b> Boron                      <b>NO<sub>3</sub>-N</b> Nitrogen as Nitrate  <b>Cl</b> Chloride                <b>SO<sub>4</sub></b> Sulfate  <b>F</b> Fluoride                 <b>PO<sub>4</sub></b> Dissolved Orthophosphate  <b>N</b> Nitrogen, Total        <b>TDS</b> Total dissolved Solids (Total Filterable Residue)</p>									

**Table 4. One-Hour Average Concentration for Ammonia**

Waters Designated as COLD, COLD with SPWN, COLD with MIGR (Salmonids or other sensitive coldwater species present)<sup>1,2</sup>

pH	Temperature, °C						
	0	5	10	15	20	25	30
Un-ionized Ammonia (mg/liter NH <sub>3</sub> )							
6.50	0.0091	0.0129	0.0182	0.026	0.036	0.036	0.036
6.75	0.0149	0.021	0.030	0.042	0.059	0.059	0.059
7.00	0.023	0.033	0.046	0.066	0.093	0.093	0.093
7.25	0.034	0.048	0.068	0.095	0.135	0.135	0.135
7.50	0.045	0.064	0.091	0.128	0.181	0.181	0.181
7.75	0.056	0.080	0.113	0.159	0.22	0.22	0.22
8.00	0.065	0.092	0.130	0.184	0.26	0.26	0.26
8.25	0.065	0.092	0.130	0.184	0.26	0.26	0.26
8.50	0.065	0.092	0.130	0.184	0.26	0.26	0.26
8.75	0.065	0.092	0.130	0.184	0.26	0.26	0.26
9.00	0.065	0.092	0.130	0.184	0.26	0.26	0.26
Total Ammonia (mg/liter NH <sub>3</sub> )							
6.50	35	33	31	30	29	20	14.3
6.75	32	30	28	27	27	18.6	13.2
7.00	28	26	25	24	23	16.4	11.6
7.25	23	22	20	19.7	19.2	13.4	9.5
7.50	17.4	16.3	15.5	14.9	14.6	10.2	7.3
7.75	12.2	11.4	10.9	10.5	10.3	7.2	5.2
8.00	8.0	7.5	7.1	6.9	6.8	4.8	3.5
8.25	4.5	4.2	4.1	4.0	3.9	2.8	2.1
8.50	2.6	2.4	2.3	2.3	2.3	1.71	1.28
8.75	1.47	1.40	1.37	1.38	1.42	1.07	0.83
9.00	0.86	0.83	0.83	0.86	0.91	0.72	0.58

1 To convert these values to mg/liter N, multiply by 0.822

2 Source: U. S. Environmental Protection Agency. 1986. Quality criteria for water, 1986. EPA 440/5-86-001.

**Table 5. Four-Day Average Concentration for Ammonia**

Waters Designated as COLD, COLD with SPWN, COLD with MIGR (Salmonids or other sensitive coldwater species present)<sup>1,2</sup>

pH	Temperature, °C						
	0	5	10	15	20	25	30
Un-ionized Ammonia (mg/liter NH <sub>3</sub> )							
6.50	0.0008	0.0011	0.0016	0.0022	0.0022	0.0022	0.0022
6.75	0.0014	0.0020	0.0028	0.0039	0.0039	0.0039	0.0039
7.00	0.0025	0.0035	0.0049	0.0070	0.0070	0.0070	0.0070
7.25	0.0044	0.0062	0.0088	0.0124	0.0124	0.0124	0.0124
7.50	0.0078	0.0111	0.0156	0.022	0.022	0.022	0.022
7.75	0.0129	0.0182	0.026	0.036	0.036	0.036	0.036
8.00	0.0149	0.021	0.030	0.042	0.042	0.042	0.042
8.25	0.0149	0.021	0.030	0.042	0.042	0.042	0.042
8.50	0.0149	0.021	0.030	0.042	0.042	0.042	0.042
8.75	0.0149	0.021	0.030	0.042	0.042	0.042	0.042
9.00	0.0149	0.021	0.030	0.042	0.042	0.042	0.042
Total Ammonia (mg/liter NH <sub>3</sub> )							
6.50	3.0	2.8	2.7	2.5	1.76	1.23	0.87
6.75	3.0	2.8	2.7	2.6	1.76	1.23	0.87
7.00	3.0	2.8	2.7	2.6	1.76	1.23	0.87
7.25	3.0	2.8	2.7	2.6	1.77	1.24	0.88
7.50	3.0	2.8	2.7	2.6	1.78	1.25	0.89
7.75	2.8	2.6	2.5	2.4	1.66	1.17	0.84
8.00	1.82	1.70	1.62	1.57	1.10	0.78	0.56
8.25	1.03	0.97	0.93	0.90	0.64	0.46	0.33
8.50	0.58	0.55	0.53	0.53	0.38	0.28	0.21
8.75	0.34	0.32	0.31	0.31	0.23	0.173	0.135
9.00	0.195	0.189	0.189	0.195	0.148	0.116	0.094

1 To convert these values to mg/liter N, multiply by 0.822

2 Source: U. S. Environmental Protection Agency. 1992. Revised tables for determining average freshwater ammonia concentrations.

**Table 6. Example Ammonia Spreadsheet Output**

(USEPA AMMONIA CRITERIA CALCULATOR\*)

Required user inputs: 1-h Temp. Cap = 20°; 4-d Temp. Cap = 15°; Temp., °C = 10; pH = 7.0

One-hour criteria not to exceed, mg/L as NH<sub>3</sub>

Parameter	0<T<TCAP			TCAP<T<30		
	6.5<pH<7.7	7.7<pH<8.0	8.0<pH<9.0	6.5<pH<7.7	7.7<pH<8.0	8.0<pH<9.0
FT	1.995	1.995	1.995	1.000	1.000	1.000
FPH	2.810	2.810	1.000	2.810	2.810	1.000
Unionized NH <sub>3</sub>	0.0464	0.0464	0.1303	0.0925	0.0925	0.2600
Total NH <sub>3</sub> +NH <sub>4</sub>	25.0369	25.0369	70.3414	49.9552	49.9552	140.3495

Four-day criteria not to exceed, mg/L as NH<sub>3</sub>

Parameter	0<T<TCAP			TCAP<T<30		
	6.5<pH<7.7	7.7<pH<8.0	8.0<pH<9.0	6.5<pH<7.7	7.7<pH<8.0	8.0<pH<9.0
FT	1.995	1.995	1.995	1.413	1.413	1.413
FPH	2.810	2.810	1.000	2.810	2.810	1.000
RATIO	28.899	13.500	13.500	28.899	13.500	13.500
Unionized NH <sub>3</sub>	0.0049	0.0106	0.0297	0.0070	0.0149	0.0420
Total NH <sub>3</sub> +NH <sub>4</sub>	2.6657	5.7064	16.0322	3.7654	8.0605	22.6461

Chemical thermodynamic constants\*\*

pKa = 9.731432321

f = 0.001852518

\* A Microsoft Excel spreadsheet  
 Use only that temperature and pH column which applies to the input data  
 T = Temperature, °C; TCAP = Temperature Cap, °C

\*\* pKa: -log K; K is equilibrium constant for ammonium  
 f is the fraction of unionized NH<sub>3</sub>/(Total NH<sub>3</sub>+NH<sub>4</sub>)

**Table 7. Water Quality Criteria for Ambient Dissolved Oxygen Concentration**

	Beneficial Use Class <sup>1,2</sup>	
	COLD & SPWN <sup>3</sup>	COLD
30 Day Mean	NA <sup>4</sup>	6.5
7 Day Mean	9.5 (6.5)	NA
7 Day Mean Minimum	NA	5.0
1 Day Minimum <sup>5,6</sup>	8.0 (5.0)	4.0

<sup>1</sup> From: USEPA. 1986. Ambient water quality criteria for dissolved oxygen. Values are in mg/L.

<sup>2</sup> These are water column concentrations recommended to achieve the required intergravel dissolved oxygen concentrations shown in parentheses. For species that have early life stages exposed directly to the water column (SPWN), the figures in parentheses apply.

<sup>3</sup> Includes all embryonic and larval stages and all juvenile forms to 30-days following hatching (SPWN).

<sup>4</sup> NA (Not Applicable).

<sup>5</sup> For highly manipulative discharges, further restrictions apply.

<sup>6</sup> All minima should be considered as instantaneous concentrations to be achieved at all times.

FIGURES

Figure 1. Surface Waters of the Bishop Paiute Tribe Reservation

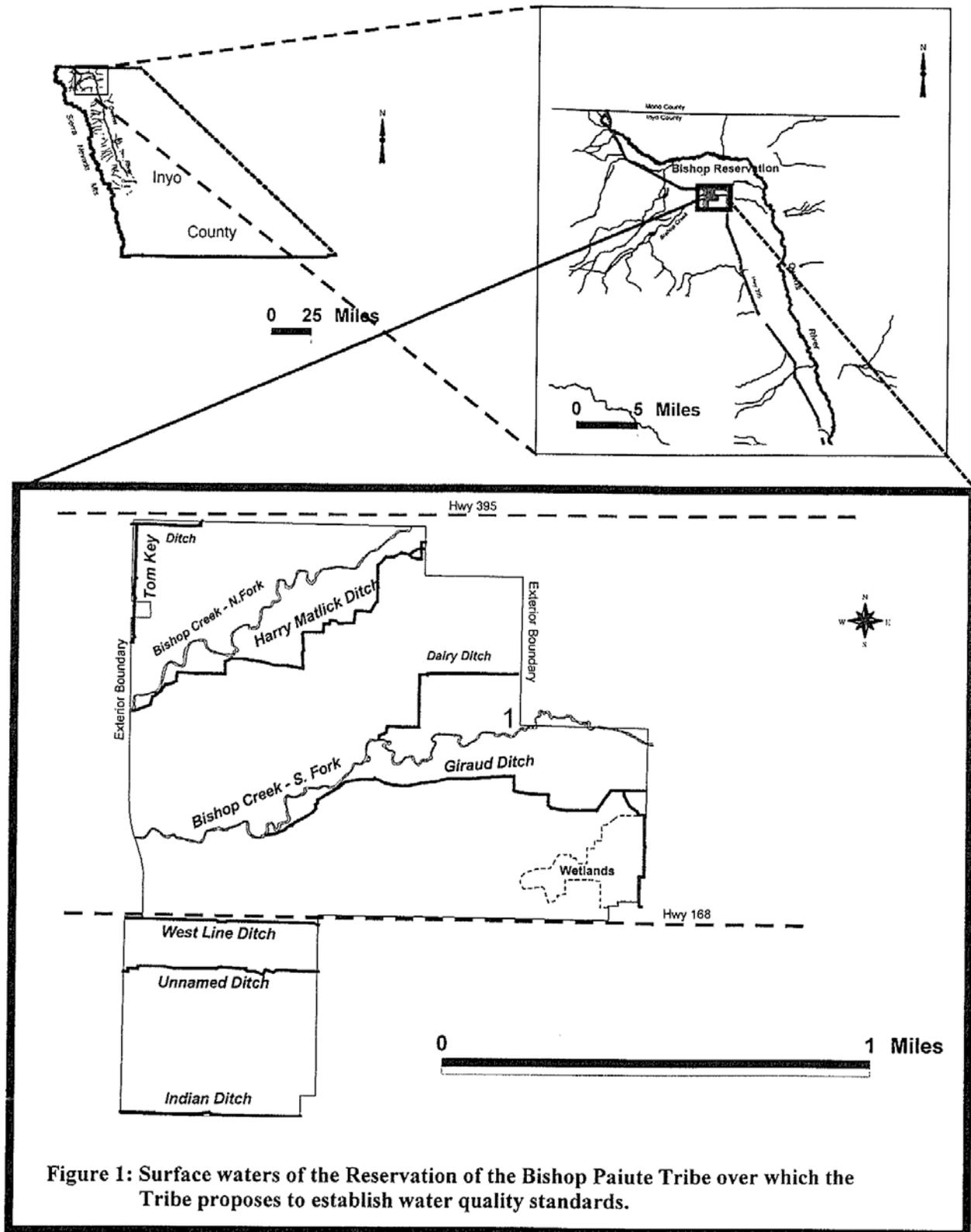


Figure 1: Surface waters of the Reservation of the Bishop Paiute Tribe over which the Tribe proposes to establish water quality standards.

## APPENDIX A

### Copies of Tribal Policies that are used in Plan Implementation

- Ordinance No. 98-11 Prohibiting the Discharge of any Pollutant into the Waters of the Bishop Paiute Reservation
- Ordinance No. 98-02 Tribal Environmental Policy
- Water Law

**ORDINANCE NO. 97-11 PROHIBITING THE DISCHARGE OF ANY POLLUTANT INTO THE WATERS  
OF THE BISHOP PAIUTE RESERVATION**

BISHOP PAIUTE TRIBE  
BISHOP PAIUTE RESERVATION

**ORDINANCE NO. 97-11  
PROHIBITING THE DISCHARGE OF ANY  
POLLUTANT INTO THE  
WATERS OF THE BISHOP PAIUTE INDIAN  
RESERVATION**

ADOPTED APRIL 2, 1997

## ORDINANCE NO. 97-11

AN ORDINANCE OF THE ~~OF~~ BISHOP PAIUTE INDIAN TRIBE  
PROHIBITING THE DISCHARGE OF ANY POLLUTANT INTO THE WATERS  
OF THE BISHOP PAIUTE INDIAN RESERVATION

The Bishop Indian Tribal Council of the Bishop Paiute Indian Reservation does hereby ordain as follows:

**Section 1. Findings and Declaration.** The Bishop Indian Tribal Council of the Bishop Paiute Indian Tribe finds and declares that:

1. It desires to eliminate all discharge of pollutants into the waters of the Bishop Paiute Indian Reservation.
2. Elimination of all discharges of pollutants into the waters of the Reservation is necessary at this time in order to maintain water quality for consumption and other domestic purposes by residences of the Reservation.
3. This ordinance is being enacted at this time as an emergency measure to maintain the quality of Reservation waters until such time as the Tribal Council can enact a new water ordinance comprehensively regulating water quality and the discharge of pollutants on the Reservation.

**Section 2. Definitions.** For the purposes of this ordinance, the following words shall have the following meanings:

- A. "Council" means the Bishop Tribal Council of the Bishop Paiute Indian Tribe.
- B. "Person" means any individual, corporation, firm, partnership, joint venture, association, social club, estate, trust, the United States, Tribe, State, County, City, district or other political subdivision of any state or any other group or combination acting as a unit.
- C. "Pollutant" means any substance that will alter the quality of the waters of reservation.
- D. "Quality of the water or waters" means any chemical, physical, biological, bacteriological, radiological, and other properties and characteristics of water which affect its use.

- E. "Reservation" means all land, air, and water located within the exterior boundaries of the Bishop Paiute Indian Reservation.
- F. "water or waters" means any water, surface or underground located on or running through the Reservation.

**Section 3. Prohibited Discharges.** No person shall discharge any pollutant into the waters of the Reservation.

**Section 4. Civil Penalty.** Any person discharging any pollutant into the waters of the Reservation shall pay a civil fine in an amount not to exceed five thousand dollars (\$5,000) for each day in which the violation occurs. The civil fine required by this Section shall be imposed by any court of competent jurisdiction in accordance with Sections 5 and 6 of this ordinance.

**Section 5. Clean-up and Abatement.** Any person that discharges any pollutant into the waters of the Reservation shall immediately, but in any case not less than twenty-four (24) hours from the time of the discharge, notify the Council of said discharge and shall fully disclose to the Council any and all information regarding the discharge, including but not limited to the type of pollutant discharged, the amount of pollutant discharged, the location of the discharge and any other information required by the Council. Any person who discharges any pollutant into the waters of the Reservation shall be liable for all costs associated with or necessary to cleaning up, abate, and/or remove said pollutants from the waters of the Reservation and restore the quality of the waters of the Reservation to their condition as they existed immediately prior to the discharge.

**Section 6. Court Action and Injunctions.** Upon failure of any person to comply with any of the provisions of this Ordinance, the Council, by and through its attorney, shall petition a court of competent jurisdiction for the issuance of an injunction requiring such person to comply therewith. In any such suit, the court shall have jurisdiction to grant a prohibitory or mandatory injunction, either preliminary or permanent, and to levy such fines in accordance with Section 4 of this ordinance, as the facts may warrant.

Section 7. Effective Date. This ordinance shall take effect immediately upon the date of passage by the Bishop Indian Tribal Council.

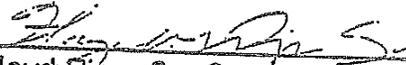
The foregoing ordinance was passed at a special meeting of the Bishop Indian Tribal Council held on April 2, 1997, by the following vote: 4 YEAS, 0 NOES, 0 ABSTAINING, AND 0 ABSENT.

BISHOP INDIAN TRIBAL COUNCIL:

  
Mervin E. Hess, Chairperson

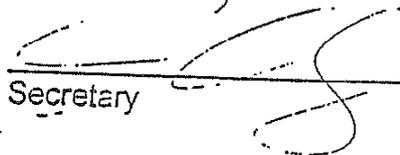
  
Yvonne Deming, Vice-Chairperson

  
Allen Summers, Councilperson

  
Floyd Piper Sr., Councilperson

  
William Vega, Councilperson

ATTEST:

  
Secretary 4/2/97  
Date

**ORDINANCE NO. 98-02 TRIBAL ENVIRONMENTAL POLICY**

**BISHOP PAIUTE TRIBE  
BISHOP PAIUTE RESERVATION**

**TRIBAL ENVIRONMENTAL PROTECTION ORDINANCE  
NO. 98-02**

**Adopted: May 22, 1998**

BISHOP PAIUTE TRIBE  
TRIBAL ENVIRONMENTAL POLICY ORDINANCE

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## BISHOP PAIUTE TRIBE

TRIBAL ENVIRONMENTAL POLICY ORDINANCE

## TITLE I

## FINDINGS; DECLARATIONS OF POLICY

101. Tribal Council Findings. The Bishop Tribal Council (the "Tribal Council"), after careful review of the quality of the natural environment of Bishop Paiute Reservation (the "Reservation") and the federal laws and policies relating to environmental regulation, finds and declares as follows:

(a) The federal government, through its various agencies and departments, cannot provide adequate protection for the land, air, water and other natural resources of the Bishop Paiute Tribe (the "Tribe").

(b) Current, past, and proposed future uses of the natural resources of the Reservation have created, or may create, a threat to the environment and to the health, safety, and welfare of the residents of the Reservation.

(c) The Tribal Council, pursuant to its inherent sovereignty and federal law, possesses the authority to provide for the comprehensive regulation of environmental quality within the exterior boundaries of the Reservation.

102. Declarations of Policy. It is the policy of the Tribal Environmental Policy Ordinance ("TEPO") to promote the general health, safety, and welfare of all residents of the Reservation and, in furtherance of the sovereign right of self-governance of the Tribe, the Tribal Council declares its commitment to the establishment and maintenance of the highest attainable standards of environmental quality within the exterior boundaries of the Reservation. The provisions of TEPO and of regulations promulgated under TEPO shall apply to all persons residing or doing business on the Reservation and to all property located within the Reservation. To the fullest extent possible, all tribal laws, regulations, and policies shall be interpreted and administered in accordance with TEPO.

## TITLE II

## TRIBAL ENVIRONMENTAL PROTECTION AGENCY

201. Establishment of Agency. There is hereby established the Tribal Environmental Protection Agency ("TEPA") charged with the responsibility of implementing the goals and objectives of the Tribal Environmental Policy Ordinance.

202. Governing Body; Appointment; Terms; Vacancies. TEPA shall be governed by a Board of Commissioners (the "Board"), which shall be composed of three (3) Commissioners, all of whom shall be resident members of the Bishop Paiute Tribe. The Commissioners shall be appointed by the Chairman of the Bishop Tribal Council with the advice and consent of the Tribal Council. Each Commissioner shall serve for a term of four (4) years, provided that, in order to stagger the terms of office, one of the original Commissioners shall be appointed for a term of two (2) years, one for a term of three (3) years, and one for a term of four (4) years. Commissioners may be re-appointed for consecutive terms. A vacancy on the Board, however caused, will be filled by the appointment procedure set forth in this section, provided that any appointment that does not begin coincident with the staggered terms will be shortened as necessary to maintain the staggered terms. Any member of the Board may be removed for cause by a majority vote of Tribal Council Members at a meeting regularly called and after sufficient notice to the Board of such meeting.

203. Chairman; Quorum; Meetings. The Commissioners shall elect a Chairman from among themselves. The business of the Board will be conducted at meetings of the Board duly called and noticed and at which a quorum is present. A quorum shall consist of two (2) Commissioners. Any substantive action of the Board must be taken by the affirmative votes of at least two (2) Commissioners and must be recorded in a written resolution of the Board. The Chairman shall be a voting member. The Board shall meet at such places and times as may be necessary for the discharge of its duties. Meetings of the Board may be called by the Chairman or by two (2) of the Commissioners. Meetings of the Board shall be preceded by at least five (5) days notice to the Commissioners. An emergency meeting may be called with less than five (5) days notice provided that all reasonable efforts are made to notify each Commissioner of the emergency meeting.

204. Duties and Powers of the Board. The Board is hereby authorized and empowered to:

(a) develop environmental policy through the drafting of ordinances, regulations and procedures to protect the environment and promote the quality of the land, air, water, and other natural resources of the Reservation; to encourage use of Tribal lands in ways that are compatible with Tribal cultural values; to provide a mechanism by which to establish and carry out a Tribal land use and development policy; and, to propose such ordinances, regulations, and procedures for adoption by the Tribal Council where appropriate.

(b) establish a system and guidelines for development and enforcement of programs and activities for mitigation of environmental impacts as required by Environmental Assessments or Environmental Impact Statements issued pursuant to the provisions of NEPA, and TEPO.

(c) serve as the lead Tribal agency for purposes of federal environmental compliance and, with the approval of the Tribal Council, assume primary enforcement responsibility under such laws.

(d) participate as a cooperating agency in the preparation of Environmental Impact Statements pursuant to the National Environmental Policy Act, 42 U. S.C. 884321-370a ("NEPA").

(e) establish rules and procedures to ensure maximum public participation in the decisions of the Board, consistent with applicable Tribal and federal laws.

(f) issue, modify, and revoke permits and establish terms and conditions for any discharge into or upon the land, air, water, or other natural resources of the Reservation.

(g) establish and assess fees and conditions for the issuance, continuance, modification, and revocation of any permit.

(h) subject to the approval of the Tribal Council, establish a system of civil fines, sanctions, and penalties for violations of Tribal environmental laws and regulations, provided however, that no fine or penalty shall exceed the maximum permitted under applicable law, and provided further, that no fine or penalty shall be imposed without notice and an opportunity for a hearing before TEPA.

(i) conduct investigations and hearings and receive testimony and documentary evidence in any form relating to the quality of the environment on the Reservation, and in connection therewith, compel the attendance of witnesses and the production of records.

(j) appoint, as needed, one or more hearing officers and other experts to assist the Board in the resolution of disputes and the acquisition of information.

(k) hire such staff and enter into such contract for services as may be necessary and appropriate for maintaining and enforcing Tribal environmental laws and regulations and for the furtherance of the work of TEPA.

(l) establish rules and procedures for the conduct of the business of the Board.

(m) establish rules and procedures to protect the confidentiality of information that is proprietary in nature.

(n) with the approval of the Tribal Council, apply for and receive financial assistance for the purpose of promoting and protecting the quality of the environment.

(o) prepare an annual budget for the operation of TEPA to be submitted to the Tribal Council for approval.

(p) exercise regulatory jurisdiction over all prior tribal environmental laws.

205. Environmental Management Office. The day to day administrative functions of TEPA shall be under the direction of Tribal Environmental Management Office which shall be

responsible to and shall report directly to the TEPA Board of Commissioners. Unless otherwise provided for, funding for the Environmental Management Office shall be the responsibility of the Bishop Tribal Council.

206. Emergency Abatement of Pollution.

(a) Issuance of Emergency Restraining Orders.

(1) Authority of the Chairman of the TEPA Board of Commissioners: Upon receiving evidence that a person is engaged in any on-reservation activity regulated by this Ordinance or any other Tribal ordinance or Federal law, regulation, code, or permit, including but not limited to solid waste management activities, and that the activity may endanger or cause damage to the public health, safety or welfare or the environment, the Chairman of the Board (the "Chairman") may issue an Emergency Restraining Order to restrain any person from engaging in such activity,

(2) Procedures for Issuance of Emergency Temporary Restraining Order:

(A) The emergency temporary restraining order may be issued without prior notice to the owner, operator, agency or other person with apparent or actual authority at the site of the activity ("Adverse Party").

(B) Every emergency temporary restraining order shall:

(i) be written, endorsed with the date and hour of issuance, and filed with the Board of Commissioners within three (3) days of its issuance and entered on record,

(ii) define the injury; shall be specific in terms; and shall describe in clear language the act or acts sought to be enjoined, and

(iii) expire within such time as is specified therein, but not to exceed ten (10) days, unless within that time the Chairman for good cause shown moves the Board for a preliminary or permanent injunction. For good cause shown, the Board may extend the emergency restraining order until a hearing is held on the Chairman's motion for an injunction.

(C) The motion for a preliminary or permanent injunction shall be set for hearing by the Board at the earliest possible time, but no later than fifteen (15) days after the issuance of the temporary restraining order and shall take precedence over all matters except older matters of the same character.

(D) When the motion is heard, the Chairman, or the Adverse Party, may move for the dissolution or modification of the emergency temporary restraining order and, in that event, the Board shall proceed to hear and determine such motion as expeditiously as the ends of justice require.

(b) Board Issuance of Preliminary and Permanent Injunction.

(1) Authority. The Board may issue a preliminary or permanent injunction to restrain any person from engaging in any activity regulated by this Ordinance or any other Tribal law, Federal law, order, or permit, which may endanger or cause damage to public health, safety, or welfare or the environment.

(2) Procedures for Issuance of Preliminary or Permanent Injunction:

(A) No preliminary or permanent injunction shall be issued without notice to the Adverse Party and a hearing.

(B) Every order granting an injunction shall be specific in terms, shall describe in reasonable language, and not by reference to the complaint or other document, the act or acts sought to be enjoined; and is binding only upon the parties to the action, their officers, agents, servants, employees, attorney, and advocates, and upon those persons in active consent or participation with them who receive actual notice of the order by personal service or otherwise.

(C) A preliminary or permanent injunction may be granted on the following grounds:

(i) When an emergency temporary restraining order has been issued pursuant to this section, and the Chairman has set a hearing within fifteen (15) days after issuance of a temporary restraining order for a permanent or temporary injunction, and it appears by the pleadings or affidavits on file that the Chairman is entitled to the relief requested and a hearing on these issues has been held after notice to the adverse party;

(ii) When it appears by the pleadings or affidavits on file that the commission or continuance of some act would produce great or irreparable injury to the public health, safety, or welfare or the environment;

(iii) When it appears that the Adverse Party is doing, threatens, or is about to do, or is procuring or suffering to be done, some act in violation of a tribal or federal law, regulation, code, ordinance, order, or permit; or

(iv) In all cases where an injunction would be proper in equity.

(D) Injunctions issued pursuant to this Ordinance may be either mandatory, prohibitive or a combination of both.

### TITLE III

#### MISCELLANEOUS PROVISIONS

301. Review of Commission Actions.

(a) Bishop Tribal Council Review. The Bishop Tribal Council shall hear appeals from final actions and decisions of the Board in accordance with such rules and procedures as TEPA may establish by regulation and as approved by the Bishop Tribal Council. Any affected party may seek review of any final action or decision of the Board by filing an appeal with the Bishop Tribal Council within thirty (30) days of entry of the final action or decision from which the appeal is taken. The Bishop Tribal Council shall hear appeals from the final actions or decisions only after exhaustion of all administrative remedies provided by TEPA.

(b) The Bishop Tribal Council shall, upon the petition of an affected party, conduct a review of the record of the proceeding of TEPA, but shall not take new evidence unless the evidence has first been presented to TEPA for its consideration and action, if any. The Tribal Council may modify or reverse a decision or action of TEPA only where such action or decision is not supported by law or is arbitrary and capricious. TEPA, upon request of the Tribal Council, shall provide to the Tribal Council a certified copy of all documents, records, transcripts, or other information that formed the basis for any action or decision which an affected party seeks review. The action of the Bishop Tribal Council on appeal shall be final.

302. Limited Waiver of Immunity. The Tribal Council hereby waives the sovereign immunity of TEPA for the express and sole purpose of allowing reviews of TEPA actions by the Bishop Tribal Council under §301, provided that any such appeal must be timely and properly filed, and provided further that such waiver is made only to the extent necessary to subject TEPA to suit for the sole purpose of declaring and adjudging rights and obligations under the environmental laws and regulations of the Bishop Paiute Tribe. This waiver is strictly limited, specifically does not waive TEPA's immunity from suit for monetary damages, and specifically does not waive the sovereign immunity of the Bishop Paiute Tribe, Bishop Tribal Council, or any officer, employee, or agent thereof.

303. Unlawful Act.

(a) It is prohibited for any person:

(1) to forcibly, or by bribe, threat, or other corrupt practice, to obstruct or impede the activities of TEPA and the Board;

(2) to commit fraud, or knowingly to assist another in the commission of fraud, with the intent to evade or defeat Tribal environmental laws or regulations; or

(3) with knowledge and intent, to falsely verify by written declaration any report, application for permit, or any other document submitted to or requested by TEPA.

(b) Any person who commits any of the above prohibited acts may be subject to certain penalties and also be liable for any civil damage caused by the commission of such acts and may be excluded from the Reservation.

(c) Any person who commits any of the above prohibited acts, or whose employees or agents in the course of their employment or agency commit any of the above prohibited acts, may have its rights to engage in activities on the Reservation suspended or terminated.

(d) The damages and sanctions for violation of this Section may be enforced by TEPA or the Bishop Tribal Council under such rules and procedures as TEPA may establish by regulation and approved by the Bishop Tribal Council.

304. Severability. If any provision of this Ordinance, or its application to any person or circumstance is held invalid, the remainder of the Ordinance, or the application of the provision to other persons or circumstances, shall remain unaffected.

305. Amendments. This Ordinance and the procedures promulgated hereunder may be amended or rescinded by the Tribal Council at a duly called regular or special called meeting.

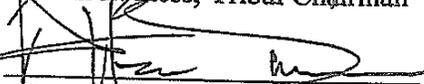
306. Effective Date. This Ordinance shall be effective from the date of its approval by the Tribal Council.

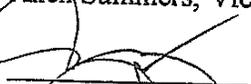
CERTIFICATION

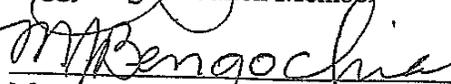
The foregoing Ordinance was passed at a duly called meeting of the Bishop Tribal Council held on the 22 day of May, 1998, with a quorum present and voting 4 AYES, 0 NAYS, 0 ABSTAINING, and 0 ABSENT.

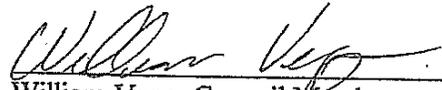
BISHOP INDIAN TRIBAL COUNCIL:

  
Mervin E. Hess, Tribal Chairman

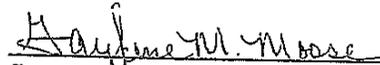
  
Allen Summers, Vice-Chairman

  
Peggy Vega, Council Member

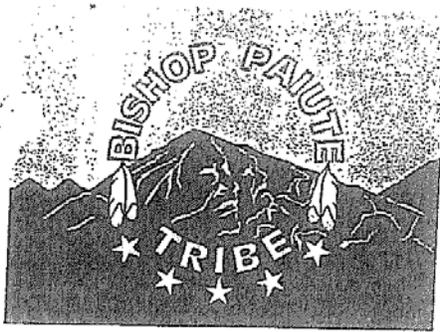
  
Monty Bengochia, Council Member

  
William Vega, Council Member

ATTEST:

  
Secretary

May 22, 1998  
Date



# BISHOP TRIBAL COUNCIL

## RESOLUTION NO 98-20

**SUBJECT:** Establishment of the Tribal Environmental Protection Agency, Interim Board of Commissioners.

**WHEREAS:** the Bishop Indian Tribal Council (the "Tribal Council") is the duly elected governing body of the Bishop Paiute Tribe (the "Tribe"); and,

**WHEREAS:** in furtherance of the sovereign right of self-governance of the Tribe, the Tribal Council declares its commitment to the establishment and maintenance of the highest attainable standards of environmental quality within the exterior boundaries of the Reservation; and

**WHEREAS:** the Tribal Council has adopted the Tribal Environmental Policy Ordinance No. 98-02 ("TEPO") to promote the general health, safety, and welfare of all residents of the Reservation; and,

**WHEREAS:** pursuant to the TEPO, the Tribal Environmental Protection Agency (TEPA) has been established for the purpose of implementing the goals and objectives of the TEPO and said Agency shall be governed by a Board of Commissioners; and

**WHEREAS:** acting in best interest of the Tribe and its environment, the Tribal Council has determined the need to immediately implement the TEPO and in doing so will require that the Tribal Council act as the TEPA, Interim Board of Commissioners, until such time as regular commissioners are appointed.

**THEREFORE, BE IT RESOLVED** that the Bishop Indian Tribal Council shall act as the Bishop Tribal Environmental Protection Agency, Interim Board of Commissioners, with all duties and powers as authorized and empowered under the Tribal Environmental Protection Ordinance.

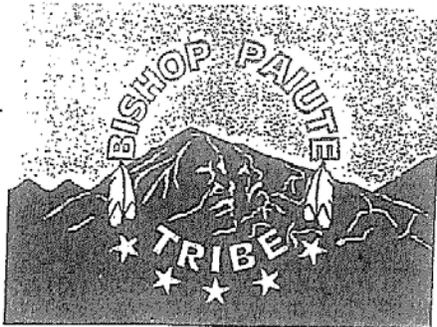
**BE IT FURTHER RESOLVED** that this Resolution shall remain in effect until such time as the regular Board of Commissioners are duly appointed to office.

### CERTIFICATION

The foregoing Resolution No. 98-20 was adopted at a duly called meeting of the Bishop Indian Tribal Council held on the 22 day of May, 1998, with a quorum present and voting 4 AYES, 0 NAYS, 0 ABSTAINING, and 0 ABSENT.

  
Mervin E. Hess, Tribal Chairman

June 23, 1998 / May 22, 1998  
Date



# BISHOP TRIBAL COUNCIL

TRIBAL ENVIRONMENTAL PROTECTION AGENCY

## OFFICIAL AUTHORIZATION

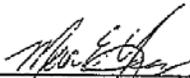
The Bishop Paiute Tribe has in effect *Tribal Environmental Policy Ordinance No. 98-02* ("TEPO") to promote the general health, safety, and welfare of all residents of the Bishop Indian Reservation and to establish and maintain the highest attainable standards of environmental quality within the exterior boundaries of the Reservation.

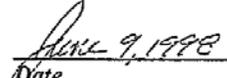
Under the TEPO, it is unlawful for any person(s) to engage in any on-reservation activity that may endanger or cause damage to the public health, safety, or welfare, or the environment. Any person(s) found to be in violation of the TEPO is subject to issuance of an Emergency Temporary Restraining Order and/or a Preliminary and Permanent Injunction to restrain such person(s) from engaging in such activity, and/or fines and penalties.

The Bishop Indian Tribal Council, as the Interim Tribal Environmental Protection Agency, hereby authorizes the following tribal personnel to conduct investigations, issue notices and permits, deliver orders and injunctions, and perform such other lawful acts necessary to insure compliance with the TEPO:

1. Alan Spoonhunter, Environmental Planner/Manager
2. Lucinda Yandell, Environmental Program Secretary
3. Cal Stafford, Tribal Administrator

**APPROVED:**

  
 \_\_\_\_\_  
 Meryn E. Hess, Chairman  
 Interim Tribal Environmental Protection Agency

  
 \_\_\_\_\_  
 Alan Spoonhunter  
 Date

**NOTICE:** Those individuals whose names appear on this Authorization are acting in official capacity as agents of the Tribal Environmental Protection Agency and, as such, are protected under all applicable tribal and federal laws. It is unlawful for any person to interfere with, threaten, or cause bodily harm to said agents while in the performance of their lawful duties.

## WATER LAW

### PREAMBLE

In the belief of the Paiute people, the tribe has been on Mother Earth since the beginning of time.

The vast reaches of the Owens Valley and the surrounding area is the homeland of our people where we once were independent and self-reliant. This land area, inhabited by the Paiute people from time immemorial, has been dramatically reduced to the point where without additional land we will never be able to grow and prosper. In recent decades the ability of our people to remain self-sufficient has been severely tested. The ability of the Tribe to formulate plans and strategies to provide jobs and security for the residents of the reservation paramount.

All future development essential to well-being, cultural development, economic development and social development depends upon the Bishop Paiute people having access to a reliable source of clean water. A restrictive land base coupled with limitations on water rights is tantamount to physical and cultural genocide. Preserving the sovereign authority of the Tribe stands as an important aspect of enhancing and maintaining growth and progress. It is the sincere desire of the Tribal Council to increase self-reliance while decreasing dependence upon other governments.

Water, the most important natural resource, inter-connects with all that will be done in the future for the health, safety, well being and economic security of the Bishop Paiute people. Neither Federal law nor state law can protect water rights in a manner consistent with Tribal belief and custom. The Tribe and its members hold unique cultural attachment to the water, other resources of the reservation and aboriginal homeland, thus making it crucial for the implementation of laws and codes which take into consideration these factors and provide orderly development for the Tribe.

The Tribal Council must develop standards and regulations necessary to encourage sound development for the benefit of the entire region. Water is a natural resource all-important in every aspect of development. Constituents require and deserve the basic infrastructure programs and services provided by all governments. The development of physical and governmental infrastructure increases the capability of Tribal government to meet the needs and demands of the twenty-first century.

Within the boundaries of the Bishop Paiute Reservation and aboriginal homelands, the Tribal Council must be the primary authority regarding management and enforcement of tribal policy and law. This is especially critical in the area of water rights and environmental protection. This law is the first step in that direction. The Tribal Council will always recognize the presence of all residents and strive to allow all voices to be heard throughout the exercise of tribal legislative authority.

## BISHOP PAIUTE TRIBE

WATER LAW

## TITLE I

## GENERAL PROVISIONS

101. Water Policy

The Bishop Paiute Tribe recognizes that its lands are endowed with water resources of excellent quality and quantity and that it is necessary to promote the conservation, development and beneficial use of Bishop Paiute water resources to secure maximum economic and social prosperity for the Bishop Paiute people. Because of the Tribal concern and interest in protecting the quality, integrity and use of Bishop Paiute Water resources so as to effect full utilization, conservation, and protection of those resources, consistent with Bishop Paiute Cultural values, for present and future generations, the Tribe finds it necessary to have the ability to call persons who so impact those resources to account for their acts or omissions in Tribal Court. The Tribe therefore intends the following ordinance to provide the means by which the Tribe may exercise Tribal Court jurisdiction over such persons.

The following general policies shall guide the use and management of water on the Reservation:

(a) Existing uses, established duties of water, and relative priorities concerning the use of Reservation water are to be protected and preserved, subject to the Tribes' public trust obligations to protect tribal, allotted and aboriginal water.

(b) Surface water use will be adjusted for the varying water conditions each year, and overall water use allocation decisions will be guided by the declaration of drought, normal, and surplus hydrologic conditions that require different water management strategies. Water development decisions will recognize hydrologic variability and will consider alternative sources of supply, should dry conditions prevail.

(c) Ground water use will be guided by overall condition of each aquifer system, the expected long term yields, and the cumulative impacts of existing and proposed uses on ground and surface water supply and quality.

(d) The planning and development of water and land resources will safeguard against surface and ground water degradation.

(e) Drainage strategies will be developed with due consideration for the conjunctive or integrated use of surface and ground water.

(f) All land, water, or other resources strategies, decisions, or regulations shall consider the potential affect on all Reservation natural resources.

(g) Allocation decisions are subject to periodic consideration and review for their net effect on aboriginal and trust resources and values and may require adjustments of existing uses to protect trust purposes where appropriate.

#### 102. Findings

In accordance with the beliefs of the Bishop Paiute people with respect to water, the Bishop Paiute Tribal Council makes the following findings:

- (a) The Bishop Paiute people recognize that water is central to life.
- (b) Water is life supporting and provides Tribal members with subsistence, vegetation, fish and wildlife, safety and well-being.
- (c) Water breathes life into Tribal lands, plants, fish, birds, animals and the people.
- (c) Water gives the Bishop Paiute people fish, berries, seeds, wild vegetables and willow and the ability to be self-reliant.

#### 103. Purposes

The purposes of the Water Law shall include but not be limited to:

- (a) To provide an orderly system for the use and management of all Bishop Paiute tribal, allottee and aboriginal water.
- (b) To provide effective guidelines and a mechanism for the administration and protection of aboriginal water and tribal and allottee reserved rights, and State-held water rights to Reservation water.
- (c) To ensure that Reservation residents have sufficient water for cultural, domestic, agricultural, stock, instream, and other uses, and that the tribe has sufficient water for Reservation economic development.
- (d) To conserve, manage and protect reservation water for future uses by generations to come.
- (e) To protect reservation water from over-appropriation, degradation, contamination, exploitation, and any acts injurious to the quantity, quality or integrity of the water.
- (f) Within the limits of the Tribes' public trust obligations, to encourage optimal development and multiple use of the water resource, to promote stability of investment in water use and delivery systems. and to permit all reasonable uses.
- (g) To maintain minimum perennial stream flows and to promote optimal recharge of aquifers to supply beneficial uses.
- (h) To protect the health and welfare of Reservation residents, the political integrity of the Tribes, and the economic security of the Reservation through the effective management and protection of the Reservation's water supply and water quality.

3. "Beneficial Uses" of Bishop Paiute water resources shall include but not be limited to domestic and personal household uses, municipal use, stock watering, instream flows for the protection of fish, fauna and wildlife, agricultural uses, religious and cultural uses, commercial uses such as industrial and power production, aquifer and ground water recharge by the Tribe, storage, transfer of use, hydropower generation, pollution control and commercial leasing.

4. "Indian Country" shall mean formal and informal reservations, dependent Indian communities, and Indian allotments, whether restricted or held in trust by the United States.

5. "Law" shall mean the Water Resources Law of the Bishop Paiute Tribe.

6. "Board", shall refer to the Water Resources Control Board of the Bishop Paiute Tribe.

7. "Personal jurisdiction" shall mean those persons who are subject to the authority of the Bishop Paiute Tribal Court.

8. "Subject matter jurisdiction" shall mean the authority to decide certain types of civil cases granted to the Tribal Court by Tribal legislation.

9. "Tribe" shall mean the Bishop Paiute Tribe.

10. "Tribal lands" shall mean all lands in trust for the benefit of the Bishop Paiute Tribe or lands held in fee status owned by the Bishop Paiute Tribe, including those lands obtained for or by the Tribe hereafter.

#### 106. Jurisdiction

##### (a) Subject Matter Jurisdiction

The Bishop Paiute Tribal Court shall have subject matter jurisdiction over all civil water matters, regardless of the amount in controversy.

##### (b) Personal Jurisdiction

The Bishop Tribal Court shall have personal jurisdiction over any person who enters the territory of the Tribe and over any person or entity for claims related to water disputes on Tribal lands or effecting the health, safety and welfare of Tribal members on Tribal lands.

#### 107. Water Resources Control Board

##### (a) Creation of the Board

1. The Bishop Paiute Tribe Water Resources Control Board shall be composed of five (5) members appointed by the Council, with appointments made to ensure all segments of the community are represented.

(b) Terms of Board Members

1. For the first appointments to the Board, two will serve for three years, two for two years and one for one year in order to initiate staggered terms.
2. After the first appointments, all new appointees shall serve four (4) year terms.
3. The Water Resources Control Board shall meet on a monthly basis, to be held on the second Tuesday of each month.

(b) Duties of the Board

1. Approve and disapprove water use permits in accordance with the provisions of the Code.
2. Conduct informal hearings on water use decisions which are protested.
3. Conduct formal hearings on water use decisions which are protested.
4. Approve permit forms and/or materials prepared for the regulation of water and the implementation of this law.
5. Ensure optimal water quantity and quality in creeks, rivers and hot springs as required for fish and wildlife habitat, agriculture, recreational use, domestic use, and cultural and religious use of water.
6. Enact amendments to this Law as becomes necessary to best implement the water policies of the Bishop Paiute Tribe.
7. Promulgate regulations necessary to carry out the provisions of this Code.
8. Negotiate and enter into Inter-Governmental Agreements with other jurisdictions to best implement the water policies of the Bishop Paiute Tribe.
9. Take further actions as provided or required by the provisions of this Code.

**108. Water Master**

(a) Appointment

The Bishop Paiute Water Resources Control Board shall appoint a Water Master to administer the provisions of this Law in conjunction with the Board. For one (1) year from the date of this Law, the Water Master shall be \_\_\_\_\_. After the expiration of the first year, the Board shall appoint a qualified person as the Water Master for terms of four (4) years.

(b) Qualifications

The Water Master shall meet the following employment criteria:

1. The Water Master shall be sensitive to the historical, cultural and religious importance of water to the Bishop Paiute people.
2. The Water Master shall have either a bachelor's degree or graduate degree in hydrology, natural resources management or hydrologic engineering.
3. The Water Master shall have at least one (1) year experience as a manager in natural resources or hydrology resources management.

(c) Duties of the Water Master

The Water Master shall:

1. Insure compliance with the provisions of this Law and with permits issued;
2. Promulgate regulations with the approval of the Board governing basin and groundwater quality standards, to be codified herein;
3. Prepare permit applications and permit forms;
4. Make decisions as to whether an applicant's proposed use is permitted by this Code and if so, issue permits;
5. Collect permit and application fees and account such fees to the Finance Department of the Bishop Paiute Tribal Council;
6. Make recommendations to the Board as to policy changes or amendments to this Law;
7. Make recommendations to the Bishop Paiute Tribal Council as to changes in other Tribal programs for the enhancement and protection of Bishop Paiute water resources.

109. Water Permits

(a) Permit Application Process

1. A prospective water user shall submit a permit application to the Water Master on the Bishop Paiute Water Permit Application Form. The permit shall list the point of diversion the method of diversion, the desired place of use, the type of use, the method of application, the quantity and quality of expected return flows and the dates of use. The permit shall also state whether the proposed use impacts a historical, cultural or religious site of the Bishop Paiute Tribe.
2. The Water Master shall post a notice in the Tribal Offices of a water permit application as soon as the application is received. The public shall have the right to submit written comments regarding the proposed water use permit. The Water Master shall

consider these written comments when making a determination as to the feasibility of a water permit.

3. The Water Master shall either deny the permit, grant the permit or request further information from the applicant within thirty (30) days from the date the application was submitted. The applicant shall receive written notice of the Water Master's decision.

(b) Duration of Permits

1. Bishop Paiute water use permits shall be valid and effective for one (1) year from the date of issuance. Upon proof that a longer period of time is warranted, the Water Master may approve permits for longer than one (1) year.

2. A permit may be issued for a shorter period of time if the Water Master determines this is in the best interests of the water resource.

3. The date of expiration shall be stated on the permit in bold letters.

(c) Renewal of Permits

1. An applicant may submit a renewal application to the Water Master three months or less before the expiration of the permit.

2. The Water Master, may renew the permit for another year or for as long is deemed advisable.

3. There is not a limitation on the number of renewals for a water use permit so long as the Water Master continues to determine the issuance of the permit is in the best interest of the Bishop Paiute Water resource.

(d) Protests

1. Any applicant that objects to a final decision of the Water Master on his application for a water use permit may file a written request for a review hearing within thirty (30) days of receiving notice of the final decision.

2. The written request shall include a statement explaining why the decision should be reconsidered. The written request shall be submitted to the Bishop Paiute Water Resources Control Board.

(e) Review Hearings

1. The Water Master shall transmit a copy of the request for a review hearing to the Water Commission within five (5) days following receipt.

2. The Board shall review the request at its next regularly scheduled meeting.

3. No review hearing shall be held with less than four (4) Board members present.

4. At that time, the applicant may present whatever testimony or other evidence he or she feels is relevant to the application for water use.

5. The Water Board shall issue a final decision on the water use application within thirty (30) days from the review hearing. This decision shall be final and is not subject to Tribal Court or Tribal Council review.

(f) Water Quality: Basin Standards

To be promulgated by the Water Master and the Water Board.

(g) Water Quality: Ground water standards

To be promulgated by the Water Master and the Water Board

110. Violations of Law

(a) Procedures

1. Any entity or person who diverts water without a water use permit or in violation of a water use permit shall receive a written notice from the Water Master to cease and desist the violation or be subject to cancellation of the water use permit.

2. If the entity or person refuses to stop the violation, the Water Master may file a complaint seeking injunctive relief and civil damages in Tribal Court.

111. Water Leasing

(a) Procedures

1. Any person or entity seeking to lease water from the Bishop Paiute Tribe shall file a written application for the leasing of water.

2. The application shall state the amount of water to be leased, the point of diversion, the method of diversion, the desired place of use, the type of use, the method of application, the quantity and quality of expected return flows and dates of use.

3. The Board, during the water year, shall promulgate policies regarding price, quantities and quality to be maintained, which shall be codified herein.

4. The same procedures for water use permits regarding decisions on applications and review hearings apply to water leasing. Nothing herein is intended to authorize a sale of water rights.

112. Emergency Powers

Notwithstanding any other provision of the Tribal Law, in the event of an imminent or current danger to the health, safety and welfare of the Bishop Paiute Tribe, Tribal and allotment lands, Tribal members or occupants of Tribal and allotment lands, the Water Master may take any immediate legal action he or she determines is necessary to prevent or mitigate the potential danger. If possible, the Water Master shall consult with members of the Board prior to taking emergency action. Following the emergency action, the Water Master shall report to the Board and the Tribal Council.

113. Severability

If any provision of this Law, or its application to any person or circumstance is held invalid, the remainder of the Law, or the application of the provision to other persons or circumstances, shall remain unaffected.

114. Amendments

This Law and the procedures promulgated hereunder may be amended or rescinded by the Tribal Council at a duly called regular or special called meeting.

115. Effective Date

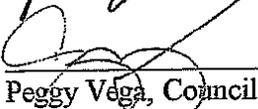
This Law shall be effective from the date of its approval by the Tribal Council.

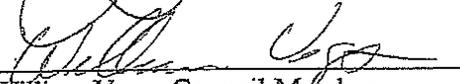
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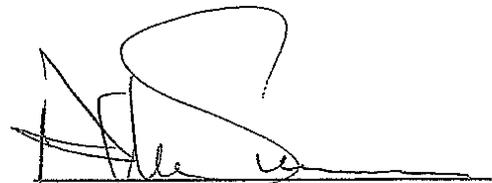
The foregoing Law was passed at a duly called meeting of the Bishop Indian Tribal Council held on the 22nd day of May 1998, with a quorum present and voting 4 AYES, 0 NAYS, 0 ABSTAINING, and 0 ABSENT.

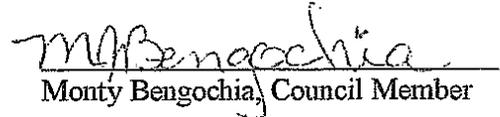
BISHOP INDIAN TRIBAL COUNCIL

  
Mervin E. Hess, Chairman

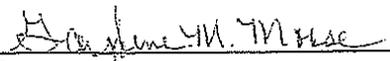
  
Peggy Vega, Council Member

  
William Vega, Council Member

  
Allen Summers, Vice-Chairman

  
Monty Bengochia, Council Member

ATTEST:

  
Secretary

7/3/98  
Date