

Draft Revised

Water Quality Standards

for the
Fort Peck Indian Reservation
Fort Peck Assiniboine and Sioux Tribes
Poplar, Montana

Office of Environmental Protection

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April 15th, 2010

Commented [JB1]: Revisions are shown in tracked changes.

Revisions are throughout, but mostly in the following sections:

VI
IX
XII
Appendix C
Replaced Appendix B with Laurie's revisions

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I. PURPOSE AND AUTHORITY

1) Purpose

A water quality standard defines the water quality goals for a water body, or portion thereof, by designating the use or uses to be made of the water, by setting criteria necessary to protect the uses, and by protecting water quality through antidegradation provisions. The Fort Peck Assiniboine & Sioux Tribes are adopting these standards to protect public health and welfare, enhance the quality of water, and serve the purposes of the Clean Water Act. It is also the intent of the Tribes that these standards will be sufficient to protect any federally listed threatened or endangered species occurring on the reservation. The purposes of the Clean Water Act are to:

- a) wherever attainable, achieve a level of water quality that provides for the protection and propagation of fish, shellfish, and wildlife, and recreation in and on the water, and take into consideration the use and value of public water supplies, and agricultural, industrial, and other purposes, including navigation (sections 101(a)(2) and 303(c) of the Act); and
- b) restore and maintain the chemical, physical, and biological integrity of the Nation's waters (section 101(a)).

These standards will specifically serve the dual functions of:

- c) Assessment. A primary purpose of these water quality standards is to guide and inform efforts to monitor and assess surface water quality within the Reservation. These water quality standards play a central role in the Tribe's water quality protection program, and have broad application and use in evaluating potential impacts on water quality from a broad range of causes and sources.
- d) Regulatory Controls. Any regulatory pollution controls established by the Tribe or the Federal Government must be developed to ensure a level of water quality that will satisfy these water quality standards. Regulatory pollution controls established for pollution sources shall be consistent with applicable portions of the Federal Clean Water Act.

2) Authority

These water quality standards are adopted by the Fort Peck Tribal Executive Board under authority established by the Fort Peck Tribes' Constitution, Title II of which provides that "the jurisdiction of the Tribes shall extend to the territory within the original confines of the Fort Peck Reservation as defined in the agreement of December 28 and 31, 1886, confirmed by the Act of May 1, 1888, (25 Stat. Sec. 113, ch. 212).

... ." This Reservation contains lands owned by both Indian and non-Indians. Title IV of the Constitution provides for a tribal governing body to be known as the Tribal Executive Board. Title VII enumerates the powers of this governing body. The enumerated powers include the power "to make and enforce ordinances covering the Tribes' right to levy taxes and license fees on persons or organizations doing business on the reservation, except that ordinances or regulations affecting non-members trading or residing within the jurisdiction of the tribes shall be subject to the approval of the Secretary of the Interior." (Sec. 3). They also include the powers "to promote public health, education, security, [and] charity . . .

(Sec 4.), "to provide . . . for the maintenance of law and order and the administration of justice by establishing law and order and the administration of justice by establishing tribal courts and police force .

... and to promulgate criminal and civil code or ordinances governing the conduct of the members of the tribes and non-member Indians residing within the jurisdiction of the tribes," (Sec.5) and "to protect and

preserve the wildlife and natural resources of the Reservation and to regulate hunting and fishing on the reservation" (Sec. 5(c)). Thus, the Constitution confirms that tribal law extends to all lands, natural resources, public health and security and persons doing business on the reservation, as authorized by federal law.

Additionally, Indian tribes have the authority under the Federal Water Pollution Control Act to set water standards for waters within reservation boundaries, based on EPA's August 29, 1996 approval of the Tribes' program application.

II TRIENNIAL REVIEW

The Tribes 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 standards. 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 Tribes shall revise the 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.

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III. DEFINITIONS

- a) Act refers to the Clean Water Act (Public Law 92-500, as amended (33USC 1251, et seq.)(40 CFR 131.3)
- b) Acute refers to a stimulus severe enough to rapidly induce an effect; in aquatic toxicity tests, an effect observed in 96 hours or less is typically considered acute. When referring to aquatic toxicology or human health, an acute affect is not always measured in terms of lethality.
- c) Acute-chronic ratio is the ratio of the acute toxicity of an effluent or a toxicant to its chronic toxicity. It is used as a factor for estimating chronic toxicity on the basis of acute toxicity data, or for estimating acute toxicity on the basis of chronic toxicity data.
- d) Acutely toxic conditions are those acutely toxic to aquatic organisms following their short-term exposure within an affected area.
- e) Additivity is the characteristic property of a mixture of toxicants that exhibit a total toxic effect equal to the arithmetic sum of the effects of the individual toxicants.
- f) Ambient toxicity is measured by a toxicity test on a sample collected from a water body.
- g) Antidegradation Review is the process by which the tribes determine that antidegradation requirements are satisfied for a given regulated activity that may have some effect on surface water quality.
- h) Antagonism is the characteristic property of a mixture of toxicants that exhibit a less-than-additive total toxic effect.

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- i) Aquatic Community is an association of interacting populations of aquatic organisms in a given water body or habitat.
- j) Assimilative capacity is the increment of water quality (in terms of concentration), during the appropriate critical condition(s), that is better than the applicable numeric criterion.
- k) Averaging period is the period of time over which the receiving water concentration is averaged for comparison with criteria concentrations. This specification limits the duration of concentrations above the criteria.
- l) Bioaccumulation is the process by which a compound is taken up by an aquatic organism, both from water and through food.
- m) Bioaccumulation factor (BAF) is the ratio of a substance's concentration in tissue versus its concentration in ambient water, in situations where the organism and the food chain are exposed.
- n) Bioaccumulative toxic substances are defined as substances with bioconcentration factors (BCFs) of greater than 250
- o) Bioconcentration Factor (BCF) is the ration of a substance's concentration in tissue versus its concentration in water, in situations where the food chain is not exposed or contaminated. For nonmetabolized substances, it represents equilibrium partitioning between water and organisms.
- p) Bioassay is a test used to evaluate the relative potency of a chemical or a mixture of chemicals by comparing its effect on a living organism with the effect of a standard preparation on the same type of organism. Bioassays are frequently used in the pharmaceutical industry to evaluate the potency of vitamins and drugs.
- q) Bioavailability is a measure of the physiochemical access that a toxicant has to the biological processes of an organism. The less the bioavailability of a toxicant, the less its toxic effect on an organism.
- r) Bioconcentration is the process by which a compound is absorbed from water through gills or epithelial tissues and is concentrated in the body.
- s) Biological criteria are narrative expressions or numeric values of the biological characteristics of aquatic communities based on appropriate reference conditions. As such, biological criteria serve as an index of aquatic community health. They are also known as biocriteria.
- t) Biological integrity is the condition of the aquatic community inhabiting unimpaired water bodies of a specified habitat as measured by community structure and function.
- u) Biological monitoring is the use of living organisms in water quality surveillance to indicate compliance with water quality standards or effluent limits and to document water quality trends. Methods of biological monitoring may include, but are not limited to, toxicity testing and biological surveys. It is also known as biomonitoring.
- v) Biological survey or biosurvey is collecting, processing, and analyzing a representative portion of the resident aquatic community to determine its structural and/or functional characteristics.

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w) Biomagnification is the process by which the concentration of a compound increases in species occupying successive trophic levels.

x) Cancer potency factor (q_1^*) is an indication of a chemical's human cancer causing potential derived using animal studies or epidemiological data on human exposure; based on extrapolation of high-dose levels over short periods of time to low-dose levels and a lifetime exposure period through the use of a linear model.

y) Certification means a determination by the Fort Peck Tribes pursuant to CWA §401 that the project or activity for which a federal license or permit is required is not expected to cause a violation of the tribal water quality standards.

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

aa) Community component is a general term that may pertain to the biotic guild (fish, invertebrates, algae), the taxonomic category (order, family, genus, species), the feeding strategy (herbivore, omnivore, predator), or the organizational level (individual, population, assemblage) of a biological entity within the aquatic community.

ab) Completely mixed condition is defined as no measurable difference in the concentration of a pollutant exists across a transect of the water body.

ac) Constructed Wetlands are those wetlands intentionally designed, constructed and operated on upland, non-wetland sites for the primary purpose of wastewater or stormwater treatment or environmental remediation. Constructed wetlands are not "waters of the Tribes."

ad) Criteria are elements of water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use. When criteria are met, water quality will generally protect the designated use.

ae) Criteria continuous concentration (CCC) is the EPA national water quality criteria recommendation for the highest instream concentration of a toxicant or an effluent to which organisms can be exposed for [an extended](#) period of time without causing a chronic effect (usually expressed as a 4-day average that can be exceeded no more than once in three years, or the average).

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af) Criteria maximum concentration (CMC) is the EPA national water quality criteria recommendation for the highest instream concentration of a toxicant or an effluent to which organisms can be exposed for a brief period of time without causing an acute effect (usually expressed as a 1-hour average that can be exceeded no more than once in three years on the average).

ag) Critical life stage is the period of time in an organism's lifespan in which it is the most susceptible to adverse effects caused by exposure to a toxicant, usually during early development (egg, embryo, larvae). Chronic toxicity tests are often run on critical life stages to replace longer duration, life cycle tests since the most toxic effect usually occurs during the critical life stage.

ah) Design flow is the flow used for steady-state waste load allocation modeling.

ai) Designated uses are those uses specified in water quality standards for each water body or segment whether or not they are being attained.

- aj) Discharge length scale is the square root of the cross-sectional area of any discharge outlet.
- ak) Diversity is the number and abundance of biological taxa in a specified location.
- al) Effective concentration (EC) is a point estimate of the toxicant concentration that would cause an observable adverse effect (such as death, immobilization, or serious incapacitation) in a given percentage of the test organisms.
- am) Existing uses are those uses actually attained in the water body on or after November 28, 1975, whether or not they are designated in the water quality standards.
- an) Federal Indian Reservation, Indian Reservation, or Reservation is defined as all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation.
- ao) Final acute value (FAV) is an estimate of the concentration of the toxicant corresponding to a cumulative probability of 00.05 in the acute toxicity values for all genera for which acceptable acute tests have been conducted on the toxicant.
- ap) Frequency is how often criteria can be exceeded without unacceptably affecting the community.
- aq) Harmonic mean flow is the number of daily flow measurements divided by the sum of the reciprocals of the flows. That is it is the reciprocal of the mean of reciprocals.
- ar) High quality water means a waterbody that meets the Tribes' test of "high quality," as determined according Section IV.4.a.ii. In general, waters whose existing quality is better than necessary to support fishable/swimmable uses will be considered "high quality".
- as) Inhibition concentration (IC) is a point estimate of the toxicant concentration that would cause a given percent reduction (e.g. IC25) in a non-lethal biological measurement of the test organisms, such as reproduction or growth.
- at) Lethal concentration is the point estimate of the toxicant concentration that would be lethal to a given percentage of the test organisms during a specified period.
- au) Lipophilic is a high affinity for lipids (fats).
- av) Load allocations (LA) are the portion of a receiving water TMDL that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources.
- aw) Lowest-observed-adverse-effect-level (LOAEL) is the lowest concentration of an effluent or toxicant that results in statistically significant adverse health effects as observed in chronic or subchronic human epidemiology studies or animal exposure.
- ax) Magnitude is how much of a pollutant (or pollutant parameter such as toxicity), expressed as a concentration or toxic unit is allowable.
- ay) Minimum level (ML) refers to the level at which the entire analytical system gives recognizable mass spectra and acceptable calibrations points when analyzing for pollutants of concern. This level corresponds to the lowest point at which the calibration curve is determined.

az) A mixing zone is an allocated impact zone where numeric water quality criteria can be exceeded as provided by the Tribes' mixing zone and dilution policy.

ba) Navigable waters refer to the waters of the United States, including the territorial seas.

bb) No-observed-adverse-effect-level (NOAEL) is a tested dose of an effluent or a toxicant below which no adverse biological effects are observed, as identified from chronic or subchronic human epidemiology studies or animal exposure studies.

bc) No-observed-effect-concentration (NOEC) is the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation. Determined using hypothesis testing.

bd) Nonthreshold effects are associated with exposure to chemicals that have no safe exposure levels.

be) Office of Environmental Protection (OEP) is the office which will administer the water quality standards for the Fort Peck Tribes.

bf) Outstanding National Resource Water (ONRW) is a waterbody that has been identified as possessing outstanding ecological or recreational attributes, and has been designated an ONRW in the Tribal Water Quality Standards.

bg) Persistent pollutant is not subject to decay, degradation, transformation, volatilization, hydrolysis, or photolysis.

bh) Pollution is defined as the man-made or man-induced alteration of the chemical, physical, biological and radiological integrity of water.

bi) Priority pollutant are those pollutants listed by the Administrator of EPA under section 307(a) of the Clean Water Act.

bj) Reasonable Alternatives shall be identified based on case specific information. Generally speaking, non-degrading or less degrading pollution-control alternatives shall be considered reasonable where the costs of such alternatives are less than 110% of the costs of the pollution control measures associated with proposed activity.

bk) Reference conditions describe the characteristics of water body segments least impaired by human activities. As such, reference conditions can be used to describe attainable biological or habitat conditions for water body segments with common watershed/catchment characteristics within defined geographical regions.

bl) Reference tissue concentration (RTC) is the concentration of a chemical in edible fish or shellfish tissue which will not cause adverse impacts to human health when ingested. RTC is expressed in units of mg/kg.

bm) Reference dose (RfD) is an estimate of the daily exposure to human population that is likely to be without appreciable risk of deleterious effect during a lifetime; derived from NOAEL or LOAEL.

bn) Regulated Activity includes activities that require a permit or a water quality certification pursuant to federal law (e.g. CWA §402 NPDES permits, CWA §404 dredge and fill permits, FERC licenses, any activity requiring a CWA §401 certification), and any other activities (which may include nonpoint sources of pollution) where tribal regulations specify that an antidegradation review is required.

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bo) Section 304(a) criteria are developed by EPA under authority of section 304(a) of the Act based on the latest scientific information on the relationship that the effect of a constituent concentration has on particular aquatic species and/or human health. This information is issued periodically to the states as guidance for use in developing criteria.

bp) State is the State of Montana.

bq) Steady state model is a fate and transport model that uses constant values of input variables to predict constant values of receiving water quality concentrations.

br) STORET is EPA's computerized water quality database that includes physical, chemical, and biological data measured in water bodies throughout the United States.

bs) Sublethal refers to a stimulus below the level that causes death.

bt) Synergism is the characteristic property of a mixture of toxicants that exhibits a greater-than-additive total toxic effect.

bu) Trading means establishing upstream controls to compensate for new or increased downstream sources, resulting in maintained or improved water quality at all points, at all times, and for all parameters. Trading may involve point sources, nonpoint sources, or a combination of point and nonpoint sources.

bv) Threshold effects result from chemicals that have a safe level (i.e. acute, subacute, or chronic human health effects).

bw) Total maximum daily load (TMDL) is the maximum amount of pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL is the sum of the individual wasteload allocations (WLA) for point sources and load allocations (LA) for nonpoint sources and background. An explicit or implicit margin of safety is included.

bx) Toxicity test is a procedure to determine the toxicity of a chemical or an effluent using living organisms. A toxicity test measures the degree of effect on exposed test organisms of a specific chemical or effluent.

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

bz) Toxic units (TUs) are a measure of toxicity in an effluent as determined by the acute toxicity units (TUa) or chronic toxicity units (TUc) measured.

ca) Toxic unit acute (TUa) is the reciprocal of the effluent concentration that causes 50 percent of the organisms to die by the end of the acute exposure period.

cb) Toxic unit chronic (TUc) is the reciprocal of the effluent concentration that causes no observable effect on the test organisms by the end of the chronic exposure period.

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cc) Use attainability analysis (UAA) is a structured scientific assessment of the factors affecting the attainment of the use which may include physical, chemical, biological, and economic factors as described in section 131.10(g)(40CFR 131.3).

cd) Waste Load allocation (WLA) is the portion of receiving water's TMDL that is allocated to one of its existing or future point sources of pollution.

ce) Water quality assessment is an evaluation of the condition of a water body using biological surveys, chemical specific analyses of pollutants in water bodies, and toxicity tests.

cf) Water quality limited segment refers to any segment where it is known that water quality does not meet applicable water quality standards and/or is not expected to meet applicable water quality standards even after application of technology-based effluent limitations required by sections 301(b)(1)(A) and (B) and 306 of the Act (40CFR 131.3).

cg) Water quality standards (WQS) are provisions of Tribal or Federal law which consist of a designated use or uses for the waters of the United States, water quality criteria for such waters based upon such uses, an antidegradation policy, and other general policies affecting application and implementation. Water quality standards are to protect public health or welfare, enhance the quality of the water and serve the purposes of the Act.

ch) Waters of the Tribes refer to:

- 1) all waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tribe;
- 2) all interstate waters, including interstate wetlands;
- 3) all other waters such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use or degradation of which would affect or could affect interstate or foreign commerce, including any such waters:
 - i) which are or could be used by interstate or foreign travelers for recreational or other purposes;
 - ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce;
or
 - iii) which are or could be used for industrial purposes by industries in interstate commerce.
- 4) all impoundments of water otherwise defined as waters of the Tribes under this definition;
- 5) tributaries of waters in paragraphs (1) through (4) of this definition;
- 6) the territorial sea; and
- 7) wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (1) through (6) of this definition. Wetlands are defined as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal

circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the Act (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria for this definition are not waters of the Tribes.

ci) Whole-effluent toxicity is the total toxic effect of an effluent measured directly with a toxicity test.

IV. ANTIDegradation POLICY AND REVIEW PROCESS

1) Antidegradation Policy

The antidegradation policy applicable to all waters of the Tribes is as follows:

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

b) Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the Tribes find, after appropriate intergovernmental coordination and public participation, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the Tribes shall assure water quality adequate to protect existing uses fully. Further, the Tribes shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

c) Where high quality waters constitute an outstanding National resource, such as waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

d) In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with section 316 of the Act.

2) Antidegradation Review Process

a) Introduction

These antidegradation procedures provide detailed methods and guidance to be followed by the Office of Environmental Protection and the Natural Resources Department in implementing the tribal antidegradation policy found at Section 4.0. In all cases, applicable technology and water quality-based requirements are to be implemented in combination with the antidegradation requirements described in this document.

Implementation of tribal antidegradation requirements serves to promote the maintenance and protection of existing surface water quality. Under this program, all “waters of the Tribe” are provided one of three different levels of protection. The level of protection that is provided to a specific segment depends upon a number of factors discussed below. At a minimum, all waters are subject to a base level of protection (known as tier 1 or existing use protection); some waters may qualify only for this level of protection. Antidegradation requirements are triggered whenever a *regulated activity* is proposed that may have some effect on surface water quality. Such activities are reviewed to determine, based on the level of antidegradation protection afforded to the affected waterbody segment, whether the proposed activity should be authorized.

b) Scope

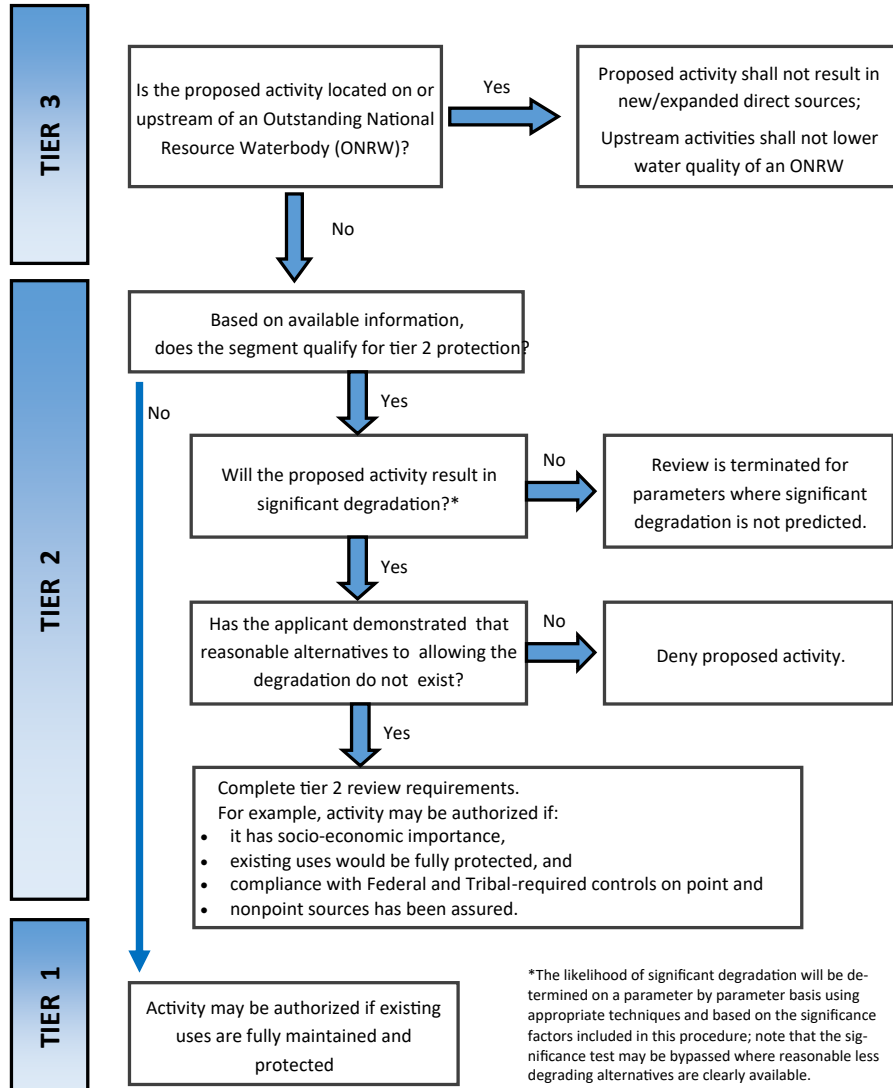
The OEP will conduct some level of antidegradation review for all “regulated activities” (see definition in Section III) that have the potential to affect existing water quality. The specifics of the review will depend upon the water body segment that would be affected, the tier of antidegradation applicable to that waterbody segment, and the extent to which existing water quality would be degraded.

The sequence of steps to be completed by the OEP in conducting an antidegradation review is presented in Figure 1. Only major antidegradation program requirements are represented in Figure 1. In conducting an antidegradation review, the first task that will be addressed by the OEP is to determine which tier of antidegradation applies. This is accomplished, as described in detail below, based on whether an ONRW designation has been assigned to the segment, or on whether the existing quality of the segment is better than necessary to support “fishable/swimmable” uses.

Once the correct tier of requirements is identified, the OEP determines whether authorizing the proposed activity would be consistent with tribal antidegradation requirements. The major conclusions of the OEP’s review are documented using an antidegradation worksheet, located in Appendix E. Based upon the review findings, a preliminary decision is made by the OEP and subjected to intergovernmental coordination and public participation. Public participation occurs regardless of the outcome of the preliminary decision (i.e., whether the proposed activity would be authorized or denied).

OEP then considers public comments and reaches a final decision regarding whether to authorize the proposed activity pursuant to the tribal antidegradation requirements. The substance and basis of the final decision by the OEP are documented in the administrative record. Following are the procedures to be followed by the OEP in reaching a preliminary decision under each tier of antidegradation.

Figure 1
Antidegradation Implementation Flow Chart



3) TIER 3 PROCEDURES

a) Waters Qualifying for ONRW Protection

i) Qualification Criteria

Segments will be subject to tier 3 protection requirements only where an Outstanding National Resource Water (ONRW) designation has been adopted as a revision to the water quality standards for the segment, consistent with Tribal procedures and EPA requirements. In adopting such a designation, all applicable public participation requirements will be addressed. The factors to be considered in determining whether to assign an ONRW designation may include the following: a) location (e.g. on federal lands such as national parks, national wilderness areas, or national wildlife refuges), b) previous special designations (e.g. wild and scenic river), c) existing water quality (e.g., pristine or naturally-occurring), d) ecological value (e.g. presence of threatened or endangered species during one or more life stages, reference sites for ecoregions), e) recreational or aesthetic value (e.g., presence of an outstanding recreational fishery), and f) other factors that indicate outstanding ecological, cultural or recreation value (e.g., rare or valuable wildlife habitat, critical ceremonial value). Where determined appropriate, the ONRW designation may be applied to an entire category of waters (e.g., a wilderness area or areas).

ii) Water Quality Requirements

Outstanding water quality is not a prerequisite for ONRW designation. The only requirement is that the segment have outstanding value as an aquatic resource, which may derive from the presence of exceptional scenic or recreational attributes, or from the presence of unique or sensitive ecosystems that have naturally low water quality as measured by conventional parameters.

iii) Public Nomination

The public may nominate any tribal water for ONRW protection at any time by sending a written request to the following address: OEP, P.O. Box 1027, Poplar, MT 59255. The written request should explain why an ONRW designation is warranted based on one or more of the factors identified above.

b). Direct Sources to ONRWs

i). Prohibition on New or Expanded Sources

Any proposed activity that would result in a permanent new or expanded direct source of pollutants to any segment which has been designated as an ONRW is prohibited. This prohibition applies to new sources, expansion of existing sources in which treatment levels are maintained, and expansion of existing sources in which treatment levels are increased to maintain existing pollutant loading levels. Regardless of effluent quality, any new or expanded direct source is prohibited.

c). Sources Upstream of ONRWs

i). No Change in Water Quality Allowed

Any proposed activity that would result in a permanent new or expanded indirect source of pollutants (i.e., an upstream source) to an ONRW segment is prohibited except where such source would have no effect on the existing quality of the ONRW segment. Effects on ONRW water quality resulting from upstream sources will be determined based on appropriate techniques and best professional judgement. Factors that may be considered in judging whether ONRW quality would be affected include: a) percent change in ambient

Commented [JB5]: Changed language in the figure above: Tier 3 after Yes: changed "activity may not" to "activity shall not". Otherwise, Figure 1 was unchanged, except for format.

concentrations predicted at the appropriate critical condition(s), b) percent change in loadings (i.e., the new or expanded loadings compared to total existing loadings to the segment), c) percent reduction in available assimilative capacity, d) nature, persistence, and potential effects of the parameter, e) potential for cumulative effects, and f) degree of confidence in the various components of any modeling technique utilized (e.g., associated with the predicted effluent variability).

ii) Trading

A proposed activity that will result in a new or expanded upstream source may be allowed where the applicant agrees to implement or finance upstream controls of point or nonpoint sources sufficient to offset the water quality effects of the proposed activity. Where such trading occurs upstream of an ONRW segment, tier 3 requirements will be considered satisfied where the applicant can show that water quality at all points within the study area will be either maintained or improved. The OEP, with assistance from the Environmental Protection Agency, will document the technical rationale for the trade. In some cases, this may be addressed as one element of a Total Maximum Daily Load (TMDL) analysis.

iii) Information Requirements

The applicant may be required to provide information sufficient to evaluate the potential effects of the proposed activity on downstream ONRWs. The information that will be required in a given situation will be identified on a case-by-case basis by the OEP.

d. Temporary and Limited Effects

i) Guidelines

A direct or upstream source that would result in a temporary and limited effect on ONRW water quality may be authorized. The decision regarding whether effects will be temporary and limited will be handled on a case-by-case basis. As a non-binding rule of thumb, activities with durations less than one month and resulting in less than a 5% change in ambient concentration will be deemed to have temporary and limited effects. Decisions on individual proposed activities may be based on the following factors: a) length of time during which water quality will be lowered, b) percent change in ambient concentrations, c) parameters affected, d) likelihood for long term water quality benefits to the segment (e.g. as may result from dredging of contaminated sediments), e) degree to which achieving applicable water quality standards during the proposed activity may be at risk, and f) potential for any residual long term influences on existing uses.

4) TIER 2 PROCEDURES

a) Waters Qualifying for Tier 2 Protection

i) Qualification Criteria

OEP will determine whether a segment qualifies for Tier 2 protection during the antidegradation review of a proposed activity. Such decisions will be based on all relevant information including any ambient water quality (i.e., physical, chemical, biological) data submitted by the applicant. The criteria that will be used in identifying high quality tier 2 waters are described in Section IV.4.a.ii. Unlike the ONRW protection program described above, a revision to water quality standards is not necessary in order for the OEP to apply Tier 2 requirements to a segment during the course of an antidegradation review.

ii) Qualification Factors

Decisions regarding whether a waterbody is high quality and subject to tier 2 protection requirements will be based on a best professional judgement of the overall quality and value of the segment. In general, waters with existing quality that is better than necessary to support fishable/swimmable uses will be considered high quality and subject to tier 2 requirements. The factors that may be considered in determining whether a segment satisfies the high quality test include the following: a) existing aquatic life uses, b) existing recreational, cultural or aesthetic uses, c) existing water quality for all parameters (i.e., subject to the availability of monitoring data or other information for the segment, upstream segments, or for comparable segments), and d) the overall value of the segment from an ecological and public use perspective. Note that attainment of both aquatic life (fishable) and recreational (swimmable) uses is not required in order to qualify as a high quality segment.

iii) Presumptive Applicability

In general, it is presumed that a majority of tribal waters qualify for tier 2 protection. However, there are some waters on the Reservation where neither of the Clean Water Act fishable/swimmable goal uses are attained. It is the intent of these procedures to apply only existing use (tier 1) protection to such waters. There also may be waters on the Reservation where one or both of the fishable/swimmable uses are attained, but existing water quality is not “better than necessary” to support the goal uses (i.e. assimilative capacity does not exist for a number of parameters). It is the intent of these procedures to apply only existing use (tier 1) protection to such waters provided that there is no assimilative capacity for each of the parameters to be affected by the proposed activity.

iv) Criteria Exceedences

Occasional exceedences of one or more narrative or numeric water quality criteria may constitute nonattainment sufficient to preclude tier 2 protection. In waters where exceedences have occurred and continue to occur for one or more parameters, a judgment will be made based on the factors identified above and in consideration of information submitted by the applicant and by the public. As a general operating rule, tier 2 protection will be applied even where the criteria for some parameters are not always satisfied.

v) Information Requirements

The applicant may be required to provide monitoring data or other information about the affected waterbody to help determine the applicability of tier 2 requirements based on the high quality test. The information that will be required in a given situation will be identified on a case-by-case basis. Because these procedures presume that tier 2 protection requirements will be applied, such information will typically be required of the applicant only where this presumption is in dispute. Such information may include recent ambient chemical, physical, and biological monitoring data sufficient to characterize, during the appropriate critical condition(s), the existing uses and the spatial and temporal variability of existing quality of the segment for the parameters that would be affected by the proposed activity.

vi) Characterizing Existing Quality

The OEP will use available water quality data collected by the OEP or other sister agencies. This water quality data should be no more than 6 years in age. OEP routinely collects water column data as well as physical and biological data on the primary streams for the triennial review of the Tribes' Water Quality Standards. The Missouri River has many other agencies besides OEP collecting water quality chemistry, physical and biological data. OEP has developed relationships with those other Federal and State agencies, which will allow access to those data. Characterization of existing quality will appropriately consider spatial and temporal variability. Assimilative capacity will be identified for the appropriate critical condition which, depending on the situation, may be at high or low flow.

b) Significant Degradation

i) Overview

Once it is determined that tier 2 protection applies to a waterbody, the next step in the review process is to determine whether the degradation that will result from the proposed activity is significant enough to warrant further review (such as evaluation of alternatives). The factors to be addressed in judging the significance of the proposed activity are identified in paragraph (ii) of this section. Where the significance of the degradation associated with a proposed activity is in dispute, the factors identified in paragraph (ii) should also be the focal point of opposing views by the applicant or the public.

ii) Significance Factors

The likelihood that a proposed activity will pose significant degradation will be judged by the OEP for all water quality parameters that would be affected by the proposed activity. Such significance judgments will be made on a parameter-by-parameter basis. The OEP will identify and eliminate from further review only those proposed activities that present insignificant threats to water quality. Proposed activities will be considered significant and subject to tier 2 requirements where significant degradation is projected for one or more water quality parameters. Because determinations of significant degradation are most appropriately made based on case-specific information, these procedures do not provide rigid decision criteria for judging significant changes in water quality. Rather, significant degradation may be demonstrated with respect to any one (or a combination) of the following factors: a) percent change in ambient concentrations predicted at the appropriate critical condition(s), b) the difference, if any, between existing ambient quality and ambient quality that would exist if all point sources were discharging at permitted loading rates, c) percent change in loadings (i.e., the new or expanded loadings compared to total existing loadings to the segment or, for existing facilities only, the proposed permitted loadings compared to the existing permitted loadings), d) percent reduction in available assimilative capacity, e) nature, persistence, and potential effects of the parameter, f) potential for cumulative effects, g) predicted impacts to aquatic biota, h) degree of confidence in any modeling techniques utilized, i) the difference, if any, between permitted and existing effluent quality, and j) the duration of the proposed activity or the expected water quality changes.

1. Required Analyses. Based on one or more of the significance factors identified above, the OEP may make determinations of significant degradation based on appropriate modeling techniques coupled with detailed characterization of the existing background water quality. However, determinations of significance need not be complicated, data-intensive, or resource intensive. It is not the intent of these procedures to require detailed analyses to address each of the factors identified above. Where appropriate, determinations of significance may be based on simple analyses. For example, proposed activities may be judged as insignificant where: a) available dilution exceeds 100:1, b) the proposed activity would not result in a significant increase of loadings for any parameter, c) there is substantial potential for the proposed activity to result in a net long-term water quality benefit to the segment, or d) the projected water quality changes are temporary and limited. Likewise, a significant increase in loading for any given parameter may be the basis for concluding that significant degradation will occur.

2. Persistent Toxics. The significance of proposed new or expanded sources of bioaccumulative or other persistent toxic substances will be judged depending upon, for example, existing loadings of the substances to the segment from all sources. The OEP's interpretation of monitoring data or other information indicating fish tissue or sediment accumulation in the watershed will be considered with respect to judging the significance of new or expanded sources of persistent toxic substances.

iii) General Guidelines

As a non-binding rule of thumb, proposed activities that would lower ambient quality of any parameter by more than 5%, reduce the available assimilative capacity by more than 5%, or increase pollutant loadings to a segment by more than 5% will be presumed to pose significant degradation. The intent of this guideline is to establish a de minimis test of significance and to eliminate from further review only those proposed activities that will result in truly minor changes in water quality.

iv) By-passing the Significance Test

Where available information clearly indicates that reasonable non-degrading or less-degrading alternatives to lowering existing water quality exist, the OEP may by-pass the significant degradation requirements and direct the applicant to demonstrate the necessity of the degradation pursuant to section vi(c) below.

v) Trading

The OEP may also conclude that a proposed activity will not pose significant degradation based upon the specifics of any upstream/downstream trading that has been agreed to by the project applicant. The OEP, with assistance from the Environmental Protection Agency, will document the technical rationale for the trade. In some cases, this may be addressed as one element of a Total Maximum Daily Load (TMDL) analysis.

vi) Information Requirements

The applicant may be required to provide monitoring data or other information about the affected waterbody and/or proposed activity to help determine the significance of the proposed degradation for specific parameters. The information that will be required in a given situation will be identified on a case-by-case basis. Because these procedures establish a fairly low threshold of significance, in many cases a large data base will not be necessary to determine that a proposed activity will result in significant degradation. The information required may include recent ambient chemical, physical, or biological monitoring data sufficient to characterize, during the appropriate critical condition(s), the spatial and temporal variability of existing background quality of the segment for the parameters that would be affected by the proposed activity, as well as the water quality that would result if the proposed activity were authorized. Federal TMDL procedures for characterizing existing water quality and projecting future water quality will be the basis for identifying needed information and interpreting available data.

vii) Determine Significance of Proposed Activity

Proposed regulated activities determined to be significant by OEP shall be subject to the tier 2 review requirements described below. If OEP determines that an activity will not pose significant degradation for any parameter, no further antidegradation tier 2 requirements shall apply; however, such activities must still meet all technology and/or water quality based control requirements or conditions of the permit or the water quality certification.

c) Evaluation of Alternatives to Lower Water Quality

i) Role of OEP

The primary emphasis of OEP's tier 2 antidegradation reviews will be to determine whether reasonable non-degrading or less-degrading alternatives to allowing the proposed degradation are available. The OEP will first evaluate any alternatives analysis submitted by the applicant for consistency with the

minimum requirements described below. If an acceptable analysis of alternatives was completed and submitted to the OEP as part of the initial project proposal, no further evaluation of alternatives will be required of the applicant. If an acceptable alternatives analysis has not been completed, the OEP will work with the project applicant to ensure that an acceptable alternatives analysis is developed.

ii) Role of the Applicant

The applicant of any proposed activity that would significantly lower water quality in a high quality segment is required to prepare an evaluation of alternatives. The evaluation is required, at a minimum, to provide substantive information pertaining to the costs and environmental impacts associated with the following alternatives: a) pollution prevention measures; b) reduction in scale of the project, c) water recycle or reuse, d) process changes, e) innovative treatment technology, f) advanced treatment technology, g) seasonal or controlled discharge options to avoid critical water quality periods, h) improved operation and maintenance of existing treatment system, and i) alternative discharge locations.

iii) Preliminary Determination

Once the OEP has determined that feasible alternatives to allowing the degradation have been adequately evaluated, the OEP shall make a preliminary determination regarding whether reasonable non-degrading or less-degrading alternatives are available. This determination will be based primarily on the alternatives analysis developed by the project applicant, but may be supplemented with other information or data. As a *non-binding* rule of thumb, non degrading or less-degrading pollution control alternatives with costs that are less than 110% of the costs of the pollution control measures associated with the proposed activity shall be considered reasonable. If the OEP determines that reasonable alternatives to allowing the degradation do not exist, the OEP shall continue with the tier 2 review and document the substance and basis for that preliminary determination using the antidegradation review worksheet.

iv) If Reasonable Alternatives Exist

If the OEP makes a preliminary determination that one or more reasonable alternatives to allowing the degradation exist, the OEP will work with the project applicant to revise the project design. If a mutually-acceptable resolution cannot be reached, the OEP will document the alternatives analysis findings and public notice a preliminary decision, based on antidegradation tier 2 requirements, to deny the activity.

v) Role of Public

Based upon comments and information received during the public comment period, the OEP may reverse its preliminary determination regarding the availability of reasonable alternatives to allowing the degradation.

d) Determination of Socio-Economic Importance

i) Role of the Applicant

The applicant is required to demonstrate the social and economic importance of the proposed activity. The factors to be addressed in such a demonstration may include, but are not limited to, the following: a) employment (i.e., increasing, maintaining, or avoiding a reduction in employment), b) increased production, c) improved community tax base, d) housing, and e) correction of environmental or public health concern.

ii) Role of OEP

Prior to authorizing any proposed activity that would significantly lower the water quality of tier 2 water, the OEP shall ensure that the proposed activity will provide important social or economic development

in the area in which the waters are located. In making a preliminary determination, the OEP will rely primarily on the demonstration made by the applicant. However, the OEP may weigh the applicant's demonstration against counterbalancing socio-economic costs associated with proposed activity, such as projected negative socio-economic effects on the community and projected environmental effects (i.e., those determined in the significance and/or alternatives analysis decision processes).

iii) Additional Information Requirements

If information available to the OEP is not sufficient to make a preliminary determination regarding the socio-economic costs or benefits associated with the proposed activity, the OEP may require the project applicant to submit specific items of information needed to support a determination of importance. The types of information required of the applicant will be determined on a case-by-case basis, but may include: a) information pertaining to current aquatic life, recreational, or other waterbody uses, b) information necessary to determine the environmental impacts that may result from the proposed activity, c) facts pertaining to the current state of economic development in the area (e.g., population, area employment, area income, major employers, types of businesses), d) government fiscal base, and e) and land use in the areas surrounding the proposed activity.

iv) Mitigation

The applicant may voluntarily submit a proposal to mitigate the adverse environmental effects of the proposed activity (e.g., in-stream habitat improvement, bank stabilization/upgraded riparian vegetation). Such mitigation plans should describe the proposed mitigation measures and the costs of such mitigation. Such a mitigation plan will not release the OEP from its obligation to require any reasonable non-degrading or less-degrading alternative under Part C(vi) of this procedure, nor will such plans have any effect on the effluent limitations to be included in any NPDES permit (except possibly where a previously-completed mitigation project has resulted in an improvement in background water quality that affects the water quality-based limit). Such mitigation plans will be developed and implemented by the applicant as a means to further minimize the environmental effects of the proposed activity and to increase its socio-economic importance. It is anticipated that an effective mitigation plan may, in some cases, allow the Tribe to conclude "importance" and to authorize proposed activities that could otherwise not be authorized pursuant to Tribal antidegradation requirements. Mitigation plans should include criteria for determining success of the mitigation, legal commitment for follow-up monitoring and additional work if necessary, and where practicable, a commitment to implement the mitigation before the project and water quality degradation are allowed.

v) Preliminary Determination

Once the OEP has reviewed available information pertaining to the socio-economic importance of the proposed activity, the OEP shall make a preliminary determination regarding importance. If the OEP determines that the proposed activity has social or economic importance in the area in which the affected waters are located, the OEP shall continue with the tier 2 review and document the substance and basis for that preliminary determination using the antidegradation review worksheet.

vi) If Importance is Found Lacking

If the OEP make a preliminary determination that the proposed activity does not have social or economic importance in the area in which the affected water are located, the OEP will document that antidegradation review finding and public notice a preliminary decision, based upon antidegradation tier 2 requirements, to deny the proposed activity.

vii) Role of Public

Because the socio-economic importance of a proposed activity is a question best addressed by local interests, the OEP will give particular weight to the comments submitted by local governments, land use planning authorities, and other local interests in determining whether the balancing of benefits and costs that was the basis for the OEP's preliminary decision was appropriate. Based upon comments and information received during the public comment period, the OEP may reverse its preliminary determination regarding the social or economic importance of a proposed activity.

e) Ensure Full Protection of Existing Uses

i) See Part vii Tier 1 Procedures

Prior to authorizing any proposed activity that would significantly degrade a tier 2 water, the OEP shall ensure that existing uses will be fully protected consistent with the tier 1 implementation procedures provided below.

f) Ensure Implementation of Tribal-Required Point and Nonpoint Source Controls

i) Role of OEP

Prior to authorizing a regulated activity that would significantly degrade a tier 2 water, the OEP shall determine that compliance with required controls on all point and nonpoint sources in the zone of influence has been assured. This requirement is intended to ensure that regulated activities that will result in water quality degradation for a particular parameter will not be authorized where there are existing unresolved compliance problems involving the same parameter in the zone of influence of the proposed activity. The "zone of influence" is determined as appropriate for the parameter of concern, the characteristics of the receiving waterbody (e.g., lake versus river, etc.), and other relevant factors. Where available, a Total Maximum Daily Load analysis or other watershed-scale plan will be the basis for identifying the appropriate zone of influence. The OEP may conclude that such compliance has not been assured where facilities are in noncompliance with their NPDES permit limits. However, the existence of schedules of compliance for purposes of NPDES permit requirements will be taken into consideration in such cases. Where there are nonpoint sources that are regulated activities, the OEP shall determine that any tribal-required controls or best management practices have been achieved or that a plan that assures such compliance has been developed. In other words, required controls on existing regulated sources in the area need not be finally achieved prior to authorizing a proposed activity provided there is reasonable assurance of future compliance.

ii) Preliminary Determination

Based upon available data or other information, the OEP will make a preliminary determination regarding whether compliance with required controls on point and nonpoint sources in the zone of influence has been assured. If the preliminary determination is that such compliance has been assured, the OEP shall continue with the tier 2 review and document the substance and basis for that preliminary determination using the antidegradation review worksheet.

iii) Controls have not been Assured

If the OEP makes a preliminary determination that compliance with required point and nonpoint source controls has not been assured, the OEP shall document that antidegradation review finding and public notice a preliminary decision based upon tier 2 requirements, to deny the proposed activity.

iv) Role of Public

Based upon comments and information received during the public comment period, the OEP may reverse its preliminary finding regarding the degree to which compliance with required point and nonpoint source controls has been assured.

5) TIER 1 PROCEDURES

a) Water Qualifying for Tier 1 Protection

i) Waters Subject to Tier 1 Requirements

All waters are subject to tier 1 protection. Those which are *only* subject to tier 1 protection are those waters that have not been assigned an ONRW designation, and that do not currently possess the overall water quality or value necessary to meet the high quality test. In general, tier 1-only waters are those segments where fishable/swimmable goal uses are not attained, or where assimilative capacity does not exist for any of the parameters that would be affected by the proposed activity.

b) Two-Part Requirement

i) Protect Water Quality and Uses

The tribal antidegradation policy requires that existing uses, and the water quality necessary to protect existing uses, shall be maintained and protected. This requirement contains two parts: 1) protection of existing uses, 2) protection of the water quality necessary to maintain and protect existing uses.

c) Ensure Water Quality Necessary to Maintain and Protect Existing Uses

i) Confirm that Designated Uses Address Existing Uses

Prior to authorizing any proposed activity, the OEP shall ensure that water quality sufficient to protect existing uses fully will be achieved. An important decision that must be made by the OEP is whether the waterbody currently supports, or has supported since November 28, 1975, an existing use that has more stringent water quality requirements than the currently designated uses. In making this decision, the OEP will focus on whether a higher designated use (i.e., based on the Tribal use designations) should be assigned to the waterbody to reflect an existing use. Where the OEP determines that the currently designated uses appropriately reflect the existing waterbody uses, the OEP shall document that preliminary determination using the antidegradation review worksheet. In such cases, the water quality control requirements necessary to protect designated uses will be presumed to also fully protect existing uses.

Where the designated uses are found to be appropriate, but there is clear and convincing evidence that the numeric criteria adopted is for the protection of designated uses would not adequately protect existing uses, the Tribes may either apply more stringent numeric criteria that will protect existing uses (where defensible criteria are readily available), or pursue development of criteria that will protect existing uses. The applicant may be required to assist with any needed studies. The OEP will apply appropriate, defensible criteria as necessary to protect existing uses, and propose any needed revisions to the water quality standards for the affected segments at the earliest rulemaking opportunity.

ii) Where Designated Uses do not Address Existing Uses

The procedure outlined in paragraph (i) above will ensure that designated uses appropriately address existing uses pursuant to tribal and federal requirements. Where this is not the case, a revision to tribal standards may be needed because, pursuant to the tribal and federal water quality standards regulations, designated uses

are required to reflect, at a minimum, all attainable (including currently attained, or existing) uses. Where existing uses with more stringent protection requirements than currently designated uses are identified, the OEP will ensure levels of water quality necessary to protect existing uses fully and, at the earliest opportunity, propose that appropriate revisions to the designated uses be adopted into the tribal water quality standards. However, the OEP will not delay tier 1 protection pending the reclassification action.

iii) Require Water Quality Necessary to Protect Existing Uses

Where OEP determines that the waterbody currently supports, or has supported since November 28, 1975, an existing use that has more stringent water quality requirements than the currently designated uses, the OEP shall identify the level of water quality necessary to protect existing uses fully for the parameters in question. The OEP's estimate of the level of water quality required will be based on numeric tribal water quality criteria, narrative tribal criteria, and/or federal criteria guidance. In general, water quality sufficient to maintain and protect existing uses for the parameters in question will be assured using the same procedures that would have been followed had the water quality standards (i.e., uses and criteria) been appropriately assigned to begin with. The preliminary finding regarding existing uses and the level of water quality necessary to protect existing uses will be documented using the antidegradation review worksheet.

iv) Trading

The procedures outlined above describe one way in which a new or expanded discharge can be allowed consistent with Tier 1 requirements. If, for example, existing water quality for a given parameter exceeds the criteria determined appropriate for the protection of existing uses (as determined above), one option to meet Tier 1 requirements would be to require a new or expanded discharge to meet those criteria at the end of pipe, or some other effluent requirement that is specified in a Total Maximum Daily Load. As an alternative, a proposed activity that will result in a new or expanded source could also be allowed where the applicant agrees to implement or finance upstream controls of point or nonpoint sources sufficient to protect existing uses fully. Under such a trading arrangement, the effluent limits for the new or expanded source may be less stringent than criteria at end of pipe, provided that the net effect of the trade is that the level of water quality necessary to protect existing uses will be achieved. The OEP, with assistance from the Environmental Protection Agency, will document the technical rationale for the trade. In some cases, this may be addressed as one element of a Total Maximum Daily Load (TMDL) analysis.

v) Additional Information Requirements

The applicant may be required to provide monitoring data or other information about the affected waterbody to help determine whether designated uses also reflect existing water body uses. The applicant may also be required to provide information that will assist in determining the level of water quality necessary to protect existing uses fully. The information that will be required in a given situation will be identified on a case-by-case basis. Because these procedures presume that designated uses reflect existing uses, such information will typically be required only where this presumption is in doubt, based on the information available to the OEP. Where this presumption is in doubt, the applicant may be required to provide physical, chemical, or biological monitoring data or other information needed by the OEP to identify and protect existing uses.

d) Ensure Full Protection of Existing Uses

i) Presume that Applicable Criteria Will Protect Existing Uses

The procedure just discussed presumes that implementation of the water quality criteria established to protect designated uses will also incidentally protect existing uses. However, situations may arise where a

proposed (regulated) activity will impair or eliminate an existing use in a manner that cannot readily be predicted with the water quality criteria established to protect designated uses. Examples include situations where appropriate and specific water quality criteria are not yet in place. (e.g., impacts to aquatic life habitat that may result from the discharge of “clean” sediment).

ii) Where Applicable Criteria Will Not Protect Existing Uses

Where the OEP concludes that existing uses will be impaired by a regulated activity, the OEP will work with the project applicant to revise the project design such that existing uses will be maintained and protected. If a mutually-acceptable resolution cannot be achieved, the OEP will document the basis for its preliminary determination regarding the loss or impairment of existing uses that will occur using the antidegradation review worksheet, identify appropriate control requirements, up to and including denial of the proposed activity, and public notice its preliminary decision. Where possible, such effects will be predicted based upon quantitative methods. In predicting effects, the OEP will use all information submitted by the applicant, available modeling techniques, and best professional judgement based upon experience with similar types of projects, as appropriate.

iii) Where Loss or Impairment of Existing Uses Is Not Predicted

Where the OEP determines that implementation of the applicable water quality criteria will fully protect the existing uses, that finding will be documented using the antidegradation review worksheet.

6) DOCUMENTATION, PUBLIC REVIEW, AND INTERGOVERNMENTAL COORDINATION PROCEDURES

a) Documentation of Antidegradation Review Findings

i) Antidegradation Worksheet

The OEP will complete an antidegradation review for all proposed regulated activities that may have some effect on surface water quality. The findings of all antidegradation reviews will be documented using an antidegradation worksheet, a copy of which is in Appendix E.

b) Public Review Procedures

i) Public Notice Requirements

Generally, the regulated activities triggering an antidegradation review will be generated by other federal agencies including but not limited to the US Environmental Protection Agency, the US Army Corps of Engineers, the Bureau of Indian Affairs, and the Bureau of Reclamation. As part of the public notice requirements for these agencies, the OEP will provide a copy of the antidegradation worksheet which may be incorporated into the public notice issued by these cooperating agencies. Where an antidegradation review results in the identification of water quality protection requirements that may affect activities other than the proposed activity under review (e.g., the review identifies an existing use that is not currently designated or a numeric criterion that is not stringent enough to protect an existing use), the Tribes will make a reasonable effort to inform potentially affected entities located on and off the reservation so that they have an opportunity to review and comment on the basis for the OEP’s antidegradation review.

ii) Content of Public Notice

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If the Tribes take an action without a federal partner, a public notice will be prepared and noticed in the Tribal Newspaper, the [Journal](#), for two weeks with comments taken for two weeks after the public notice is run the newspaper. In preparing the public notice, the OEP will at a minimum: a) outline the substance and basis of the Tribes' antidegradation review conclusions, including the preliminary finding regarding whether to authorize the proposed activity, b) request public input on particular aspects of the antidegradation review that might be improved based on public input (e.g. existing uses of the waterbody by the public, the preliminary determination on socio-economic importance), c) provide notice of the availability of the antidegradation review worksheet, d) provide notice of the availability of any introductory public information regarding the state antidegradation program, and e) include a reference to the Tribes' antidegradation policy.

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c) Intergovernmental Coordination Procedures

i) Minimum Process

At a minimum, the OEP will provide copies of the completed antidegradation review worksheet and/or the public notice to appropriate tribal, state, and federal government agencies along with a written request to provide comments by the public comment deadline.

V. NARRATIVE WATER QUALITY CRITERIA

1) Criterion:

All surface water on the reservation shall be free from substances attributable to wastewater discharges or other pollutant sources that:

- a) settle to form objectionable deposits,
- b) float as debris, scum, oil, or other matter forming nuisances,
- c) produce objectionable color, odor, taste, or turbidity,
- d) cause injury to, or are toxic to, or produce adverse physiological responses in humans, animals, or plants; or
- e) produce undesirable or nuisance aquatic life.

2) Implementation.

The narrative water quality criteria shall be implemented taking into consideration appropriate EPA technical guidance concerning development of water quality-based controls, such as methods described in the [Technical Support Document for Water Quality Based Toxics Control](#), EPA, 1991. For substances for which numeric water quality criteria have not been adopted, these narrative water quality criteria shall be implemented considering appropriate information, including any criteria guidance issued by EPA under CWA § 304(a) and/or information in EPA's toxicity databases. For substances where numeric criteria have not been adopted for the public water supply use, these narrative water quality criteria shall be implemented considering any drinking water standards or health advisories issued by EPA under the Safe Drinking Water Act.

Implementation of (1)(d) for purposes of NPDES permits shall result in appropriate acute and chronic chemical-specific and whole effluent toxicity effluent quality limitations consistent with the federal water quality based permitting requirements found at 40 CFR 122.44(d). Whole effluent toxicity (WET) limitations shall be established where appropriate as required in the latest edition of the EPA region VIII NPDES Whole Effluent Toxics Control Program document.

VI. NARRATIVE BIOLOGICAL CRITERIA

The Fort Peck Tribes have used biological monitoring as an assessment tool on the streams within the exterior boundaries of the Reservation excluding the Missouri River. In addition to identifying water quality problems, biological monitoring data has been used and will continue to be used to prioritize abatement projects for point and non point source activities on the Reservation.

A reference condition is defined using characteristics of the biological communities observed in sites with minimal human disturbance. The reference condition is compared to the biological condition observed in the stream. This comparison is related to the biological condition category of the stream. The biological condition categories are: full support and non-support. To prioritize mitigations, the non-support category is further divided into categories of moderately impacted, and severely impacted.

1) Criterion

Reservation waters shall be free from substances in concentrations or combinations that would adversely alter the structure and function of aquatic communities, as defined by the reference condition.

For the Missouri River, water quality shall be maintained sufficient to fully support all designated uses, including the aquatic life designated use. No adverse changes in aquatic community composition may occur.

2) Implementation

Quantitative biological assessments may be used to evaluate whether the narrative criteria in Section VI.1 are supported. The Fort Peck Tribes have calibrated multimetric indices for assessing benthic macroinvertebrate conditions in streams as a basis for numeric translators of the narrative criterion. Application of the indices for determining biological conditions for streams shall be in accordance with methods documented by the Office of Environmental Protection (see OEP: Determination of Biological Conditions for Rivers and Streams). The methods shall be subjected to technical review and shall produce consistent and objective results. The results of the quantitative biological assessments may be used for purposes of water quality assessment, including, but not limited to, prioritizing abatement projects for activities on the Reservation resulting in point and nonpoint sources of pollution. If biological assessments indicate a biologically impacted water body, an evaluation of potential causes, including nonchemical stressors (e.g., habitat degradation or hydrological modification), will be conducted to determine associations with potential pollutants. Physical parameters shall be sampled using methods approved by the Office of Environmental Protection.

The principal intent of the Tribes in adopting a narrative biological criterion is to provide an assessment method for the identification of impacted waters. Such assessments will be used, for example, to prioritize abatement projects for activities on the Reservation resulting in nonpoint sources of pollution. The Tribes recognize that a major difference between narrative biological criteria and numeric chemical-specific criteria is the manner in which the two types of criteria can be applied effectively in determining

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water quality-based effluent limits for point source discharges. Chemical-specific criteria typically are expressed as a concentration of a given parameter, with provisions that describe an averaging period and an allowable frequency of exceedence. Biological criteria describe a desired biological condition, and are expressed and interpreted using information about aquatic organisms. Biological criteria, therefore, are not suited for directly calculating effluent limits for point source discharges. The biological criteria are useful and important because they can indicate biological changes in aquatic ecosystems that may impact a water's health and that are not always indicated through measurement of numeric chemical-specific criteria. Biological criteria also allow the Tribes to evaluate the adequacy of predictive chemical-specific criteria on a site-specific basis.

Although the Tribes do not envision that it will always be necessary to establish effluent limits for point source discharges based on the biological criterion, the Tribes nevertheless intend that the biological criterion will be used as required by Section 301(b)(1)(C) of the Clean Water Act and 40 CFR Section 122.44(d) in determining appropriate effluent limits for point source discharges. For example, where the biological criterion is affected, that information can be used by the permitting authority to reevaluate any NPDES permits for upstream discharges to determine if all appropriate chemical-specific and whole effluent toxicity limits are included in the permits. Permits for any upstream discharges would need to be revised as needed to include appropriate effluent limits on whatever pollutants or pollutant parameters are or may be discharged that cause, have the reasonable potential to cause, or contribute to any exceedence of the biological criterion. This may involve examining whether the relevant permits contain limits for all substances present in the discharges.

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Deleted: In addition, the scope of how interpretation of the Tribes' narrative biological criterion is made possible through technical documentation of numeric biological indicators that have been developed through the Tribes' used may change in the future as the Tribes become more experienced and confident in their biological assessment program. Implementation shall be based on comparison of current biological conditions at a particular site to the conditions deemed attainable based on an appropriate reference site or condition. See section XII for guidelines on applying numeric indicators to interpret the narrative biological criteria for streams. In all cases appropriate sampling and analysis techniques shall be used, consistent with recommended EPA methods and the Tribes' Quality Assurance Project Plan (QAPP).

VII. WATER QUALITY STANDARDS FOR WETLANDS

The Office of Environmental Protection recognizes that the natural water quality of wetlands may differ from that of associated streams. Existing water quality, functions and values of wetlands will be protected.

a) Wetlands Not Specifically Listed in Appendix A. Wetlands not specifically listed in Appendix A that are not constructed wetlands are considered "waters of the Tribes" and shall be subject to narrative criteria and applicable antidegradation provisions. Such wetlands are generally assumed to provide habitat capable of supporting aquatic biota (e.g., fish, macroinvertebrates, amphibians, or hydrophytic vegetation) on a regular or periodic basis. It shall be a goal of the Tribes to maintain the water quality of wetlands at naturally occurring levels, within the natural range of variation for the individual wetland. For substances that are not naturally occurring, water quality requirements shall be based on protecting existing uses of the wetland consistent with criteria, criteria assigned to hydrologically-connected surface waters, or appropriate criteria guidance issued by the U. S. Environmental Protection Agency. Wetlands shall not be considered as repositories or treatment systems for wastes from human sources.

b) Wetlands listed in Appendix A. For wetlands specifically listed in Appendix A, the designated uses (e.g., the Wetlands or other designated use) and numeric criteria assigned to such wetlands shall apply. In addition, such wetlands shall be subject to narrative criteria and applicable antidegradation provisions.

VIII. DESIGNATED USES

Section 131.10 of 40 CFR requires that the Tribes consider assigning aquatic life, recreation, and other designated user to all surface waters of the reservation in order to achieve national "fishable and swimmable" goals. Therefore, the Tribes shall use the following designated use classifications for the reservation.

(1) Designated Uses

The following designated uses may be applied to reservation surface waters:

- a) Public Water Supply - These surface waters are suitable or intended to become suitable for potable water supplies.
- b) Primary Contact Recreation - These surface waters are suitable or intended to become suitable for recreational activities in or on the water when the ingestion of small quantities of water is likely to occur. Such waters include but are not limited to those used for swimming, cultural uses, and wading.
- c) Secondary Contact Recreation - These surface waters are suitable or intended to become suitable for recreational activities on or about the water which are not included in the primary contact category, including but not limited to fishing and other streamside or lakeside recreation.
- d) Cultural Uses - The ceremonial and religious use of waters include but are not limited to activities such as medicine lodges, sweat lodges, and sundance ceremonies by members of the Assiniboine-Sioux that requires protection of valuable aquatic and riparian habitat. This use may also cause the human body to come into primary contact (direct) to the point of complete submergence and secondary contact with the water. Direct contact may expose sensitive body organs such as eyes, ears, nose and cause accidental and/or intentional ingestion and inhalation. Secondary contact includes the use of medicinal plants and/or other vegetation associated with the riparian zones and wetland areas along the creeks/streams/and rivers of the Fort Peck Reservation that are used in traditional and spiritual activities.
- e) Class 1 Cool Water Aquatic Life - provides for protection and propagation of nonsalmonid fishes, marginal growth of salmonid fishes, growth and propagation of aquatic life normally found in water where the summer temperature does not often exceed 23° Celsius.
- f) Class 1 Warm Water Aquatic Life – provides for the protection and propagation of nonsalmonid fishes and aquatic life normally found in water where the summer temperature frequently exceeds 23° Celsius.
- g) Class 2 Cool or Warm Water Aquatic Life - These are waters that are not capable of sustaining a wide variety of cool or warm water biota, including sensitive species, due to physical habitat, water flows or levels, or uncorrectable water quality conditions that result in substantial impairment of the abundance and diversity of species.
- h) Industrial Water Supply. These are waters that are suitable for industrial processes and cooling water.

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- i) Agriculture - These surface waters are suitable or intended to become suitable for crops usually grown on the reservation and which are not hazardous as drinking water for livestock.
- j) Navigation - These surface water are suitable for the commercial shipping of goods.
- k) Wetlands - To maintain and restore natural wetland characteristics and functions, within the natural range of variation of the affected wetland.

2) Qualifiers

The following qualifiers may be appended to a designated use: for example, "Class 1, Warm Water Aquatic Life (Goal)".

- a) Goal - A qualifier which indicates that the waters are presently not fully suitable but are intended to become fully suitable for the designated use.
- b) Intermittent Waterbody - A qualifier which indicates that the water may not be present in the segment due to natural conditions during certain periods of the year. During those periods when water is no present in the stream, the designated use shall continue to be applicable in order to ensure that protective water quality requirements are in place should sources of pollution occur. However, for assessment purposes (e.g., nonpoint source assessment reports pursuant to CWA§319), absence of flow due to natural conditions shall not be considered as a cause for concluding the designated use is not supported.

3) Segmentation Criteria

- a) For purposes of adopting site-specific designated uses and water quality criteria, the streams and other surface water bodies shall be divided into specific water segments.
- b) Segments may constitute a specific stretch of a river mainstem, a specific tributary or segment thereof, a specific lake or reservoir, or a generally defined grouping of waters within a basin (e.g. a specific mainstem segment and all tributaries flowing into that mainstem segment).
- c) Segments shall generally be delineated according to the points at which the use, physical characteristics or water quality characteristics of a watercourse are determined to change significantly enough to require a change in use classifications and/or water quality criteria. In many cases, such transition points can be specifically identified from available water quality data. In other cases, however, the delineation of segments shall be based upon best judgements of where instream changes in uses, physical characteristics or water quality occur, based upon upstream and downstream data.

4) Process for Assigning Designated Uses

The Tribes are responsible for assigning designated uses to all waters within the reservation boundaries. All reservation surface waters may be assigned one or more of the beneficial use designations listed above in Section VIII.1.

Waters shall be designated for present and future beneficial uses for which the water is suitable. Beneficial uses may also be established as reasonably expected goals.

When assigning designated uses to waters of a given area, the Tribes will consider the goals, objectives, and requirements of the Federal and Tribal statutes and regulations, and the goals and objectives of the local affected community.

- a) Designated uses should be directed towards the realization of the water quality goals as set forth in the Clean Water Act.
- b) Designated uses must be protective of water quality for current and future uses consistent with the Tribes' antidegradation policy.
- c) Upstream designated uses must not jeopardize downstream designated uses or actual uses.
- d) Designated uses should be for the highest water quality attainable. Attainability is to be judged by whether or not the use designation can be attained in twenty years by reasonable control techniques that are determined during public hearings. At a minimum, uses are deemed attainable if they can be achieved by the imposition of effluent limits required under the Federal Act for point sources and cost-effective and reasonable best management practices for nonpoint source control, in accordance with duly adopted regulations.
- e) Relevant physical, chemical and biological characteristics are valid water quality concerns that may be taken into account in the use designation process.

5) CHANGING USE DESIGNATIONS

The Office of Environmental Protection may recommend changes in use designations. All such recommendations shall be consistent with federal requirements found at 40 CFR 131.10. Use attainability analyses shall be performed considering guidance and methods recommended by the EPA. Where such changes to designated uses are sought by any person, a Use Attainability Analysis may be required to show that current designated uses are not achievable.

6) RESERVATION SURFACE WATER BENEFICIAL USE DESIGNATIONS

Use designations for reservation surface waters are listed in Table [A-1](#) in Appendix A.

IX NUMERICAL CRITERIA

Numeric criteria will include values for physical, chemical and biological parameters. Chemical water quality criteria are listed in Fort Peck Reservation Water Quality Criteria Table (FPRWQCT), Appendix B. Sources used to compile the FPRWQCT are the EPA Region VIII's Clean Water Action Section 304(a) Criteria Chart dated 07/01/93, and Standards established as drinking water maximum contaminant levels (MCL's). It is anticipated that the FPRWQCT will be added to, modified, and/or updated as additional or new information becomes available. Care should be exercised to ensure that the most recent version (by date) is used as a reference.

Physical and biological criteria are listed in the Physical and Biological Criteria Table for the Fort Peck Indian Reservation, Appendix C. Implementation procedures for numeric translators for the narrative biological criteria for streams are recommended in Section VI.2.

Fort Peck Reservation Water Quality Criteria Table is a complex document. Close attention must be paid to the frequent use of detailed 'notes of explanation'. They are used in both the table headings and individual line items, many times both. Detailed notes of explanation follow the table portion of Fort Peck Reservation Water Quality Criteria Table and are found in the format of (n) where n is a number.

Fort Peck Reservation Water Quality Criteria Table uses the more restrictive value of either the 304(a) or the drinking water MCL for Human Health Standards, whenever required, in order to fully protect the reservation's waters. For instance, if the human-health Standard for a particular pollutant has been established at 1,200 µg/L (micro-grams per Liter) and the same pollutant has an organoleptic (taste and/or odor) Standard established at 20 µg/L, then Fort Peck Reservation Water Quality Criteria Table would have the Standard set at the more limiting value of 20µg/L. In similar manner, whenever both Aquatic Life Standards and Human Health Standards exist for the same analyte, the more restrictive of these values will be used as the numeric Surface Water Quality Standard. Human Health Criteria apply to all waters with a public water supply and/or an aquatic life use.

Fort Peck Reservation Water Quality Criteria Table sets Standards for surface waters. In addition, FPRWQCT lists values which will be used in conjunction with the antidegradation implementation procedures being developed in order to determine and evaluate degradation. Standards for 'Harmful' parameters will be used as antidegradation criteria for surface waters. Except where noted, the surface water analysis method is always 'total-recoverable'.

Special attention should be paid to the pollutants/conditions such as ammonia, hardness, and oxygen as the standards are set over a range of values, or are computed using a complex formula, or depend upon special circumstances.

Alkalinity, chloride, hardness, sediment, sulfate, odor, and total dissolved solids have 'Narrative Standards' and are referenced to the Narrative Criteria section of this standards document for further details and explanation.

The Standards for fecal coliform, dissolved gases, pH and temperature are listed in the Physical and Biological Criteria Table C-1 in Appendix C.

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X. MIXING ZONE AND DILUTION POLICY

Mixing zones are regions surrounding or downstream of a point source discharge in which the discharge is progressively diluted by the receiving water and numerical water quality criteria may not apply. This policy describes how dilution and mixing of point source discharges within receiving waters will be addressed in developing discharge limitations for point source discharges.

1) Mixing Zones

a) Where justified based on site-specific considerations and where the discharge does not mix at a near instantaneous and complete rate, mixing zones may be designated. Mixing zones are not authorized for discharges to lakes, reservoirs and wetlands. Each mixing zone will be developed on a case-by-case basis to protect the most sensitive designated use, consistent with the latest EPA guidance. Individual mixing zones may be limited or denied when the following concerns in the area affected by the discharge have been considered:

- i) bioaccumulation in fish tissues or wildlife;
- ii) biologically important areas such as fish spawning/nursery areas or segments with occurrences of federally listed threatened or endangered species;
- iii) low acute to chronic ratio;
- iv) potential human exposure to pollutants resulting from drinking water or recreational activities;
- v) attraction of aquatic life to effluent plume;
- vi) toxicity/persistence of the substance discharged;
- vii) zone of passage for migrating fish or other species (including access to tributaries), and
- vii) cumulative effects of multiple discharges and mixing zones (e.g., on a watershed scale, mixing zones should not total more than 10% of all river/stream miles).

b) Effluent limits will be assigned consistent with mixing zone size limits determined by field study, an appropriate mixing model, or other defensible method.

c) Chronic mixing zones shall not exceed one-half of the cross-sectional area or a length ten times the stream width at critical low flow, whichever is more limiting. Mixing zones for chemical-specific acute criteria, or zones of initial dilution, may not exceed 10% of the chronic mixing zone volume or flow. Mixing zones for purposes of developing acute whole effluent toxicity effluent limitations are not authorized.

d) Narrative Water quality Criteria defined in Section V(1) are applicable within mixing zones.

2) Dilution Allowances

a) For discharges to rivers and stream where it is reasonable to conclude that the discharge mixes in a near instantaneous and complete manner, a dilution allowance equal to or less than the critical low flows identified in Section XI(7) may be provided for purposes of developing acute and chronic chemical-specific and whole effluent toxicity effluent limitations. For minor POTW's where the discharge does not mix in a near instantaneous and complete manner, such dilution allowances may also be provided for purposes of developing acute whole effluent toxicity effluent limitations. For intermittent discharges, such as lagoon facilities that discharge during high ambient flow, the stream flow to be used in the mixing zone analysis should be the lowest flow expected to occur during the period of discharge.

b) Near instantaneous and complete mixing may be assumed where the mean daily flow of the

discharge exceeds the critical low flow of the receiving water, or where an effluent diffuser has been installed. In all other cases where instantaneous and complete mixing is assumed, a defensible basis will be included in the statement of basis for the permit. For purposes of field mixing studies, near instantaneous and complete mixing is defined as no more than 10% difference in bank-to-bank concentrations within a longitudinal distance not greater than 2 stream/river widths.

3) Other Considerations

a) Where dilution flow is not available at critical conditions, the discharge limits will be based on achieving applicable water quality criteria at the end-of-pipe, and neither a mixing zone nor an allowance for dilution will be provided.

b) All mixing zone dilution assumptions are subject to review and revisions as information on the nature and impacts of the discharge becomes available (e.g., chemical or biological monitoring in the mixing zone boundary). Where justified, the discharger may be required to conduct in-stream monitoring to verify that mixing zone restrictions are being achieved. At a minimum, mixing zone and dilution decisions are subject to review and revision along with all other aspects of the discharge permit upon expiration of the permit.

c) For certain pollutants (e.g., ammonia, dissolved oxygen, metals) that may exhibit increased toxicity or other effect on water quality after dilution and complete mixing with receiving waters is achieved, the wasteload allocation shall address such toxicity or other effect on water quality as necessary to fully protect beneficial uses (i.e., the point of compliance may be something other than the mixing zone boundary or the point where complete mixing is achieved).

Dilution allowances shall be developed considering guidance issued by EPA, including the *EPA Region VIII Mixing Zone and Dilution Policy*. Critical low flows for use in developing dilution allowances are specified in the Tribes' critical conditions policy.

XI STANDARDS IMPLEMENTATION

1) All discharges from point sources, all instream activities, and all activities that generate nonpoint source pollution are to be conducted so as to achieve these water quality standards. The Tribes' anticipate that both regulatory and voluntary pollution control programs will be needed to address all current and future water quality problems on the Fort Peck Reservation.

2) All federal licenses and permits, such as permits for wastewater discharges issued under the National Pollutant Discharge Elimination System (NPDES), shall be conditioned in such a manner as to authorize only activities that will not cause violations of these water quality standards. For new standards, revised standards that have become more stringent, or new interpretations of existing standards, schedules of compliance may be included in such permits where appropriate. Compliance schedules will be developed considering guidance issued by EPA.

[The Tribes authorize the use of compliance schedules, on a case-by-case basis, for water quality-based effluent limits in National Pollutant Discharge Elimination System \(NPDES\) permits, when appropriate, and consistent with 40 CFR 122.47, for new, recommencing, or existing dischargers to require compliance as soon as possible with water quality-based effluent limitations calculated to meet water quality standards. An application for a compliance schedule must be submitted to Laurie Shafer, Fort Peck Tribes OEP, and approved by Deb Madison, Fort Peck Tribes OEP.](#)

3) Until such time as the Tribes receive eligibility to implement Section 402 of the Clean Water Act, discharge permits will be issued by the EPA to comply with the Tribes' water quality standards. All discharge permit applications will be reviewed by both the Tribes and the EPA. The Tribes have the authority to deny certification of any discharge into reservation waters as described in paragraph E) of this section if they determine that the proposed discharge would cause violation of the Tribes' water quality standards.

The Tribes will conduct compliance inspection of all permitted facilities on the reservation. Inspection results will be submitted to the EPA for review for compliance. The EPA will also have the responsibility of enforcing NPDES permit violations. However, under the Act the Tribes' may initiate citizen suits pursuant to section 505 against EPA or the permittee to correct permit violations.

4) The Tribes reserve the right to identify, in a water quality certification, specific water quality standards implementation methods to be used in developing water quality-based point and nonpoint source control requirements. All controls shall be developed using technically-defensible methods such as those described in EPA guidance documents. These water quality standards will serve as the basis for any § 303(d) total maximum daily loads (TMDLs) developed for tribal waters.

5) All activities which require a federal license or permit on the reservation are subject to certification by the Fort Peck Tribes consistent with § 401 of the Clean Water Act. In implementing this authority, and depending upon specific facts, the Tribes may decide to certify unconditionally, deny certification, or certify with conditions. Conditional certifications shall specify water quality protective conditions, best management practices, or monitoring requirements that must be implemented by the applicant. Where the Tribes determine that the conditions specified in a certification are not being implemented, or that an activity for which a certification was previously issued is causing a violation or contributing to a violation of the tribal water quality standards, the Tribes may suspend or revoke a certification pending corrective actions by the applicant, deny certification upon expiration and reissuance of the permit, or initiate a citizen suit consistent with CWA § 505.

6) These water quality standards apply to all waters affected by nonpoint sources of pollution. At this time, the Tribes intend to rely on voluntary compliance for activities which result in nonpoint sources of pollution but do not require a federal license or permit. All appropriate combinations of individual best management practices should be applied to avoid violation of water quality standards.

7) Critical Conditions Policy

a) For purposes of determining water quality based control requirements for point source discharges, critical conditions shall be determined consistent with the policy and procedure described below, where a steady state modeling approach is used. Where seasonal controls are appropriate, critical conditions shall be determined based on seasonal characteristics of the receiving water and pollution source. Other exceptions may be granted where a technically sound reason to use an alternative method is developed and approved by the Office of Environmental Protection (e.g. where a dynamic or continuous simulation modeling method is used). Critical conditions shall be representative of conditions upstream from the point where the discharge exists.

i) Stream Flow ¹	
Aquatic life, chronic	4-day, 3-year flow (biologically based)
Aquatic life, acute	1-day, 3-year flow (biologically based)
Human health (carcinogens)	harmonic mean flow
Human health (non-carcinogens) ²	4-day, 3-year flow (biologically based) or
Human health (non-carcinogens)	1-day, 3-year flow (biologically based)

i) Effluent Flows

Aquatic life, chronic	Mean daily flow
Aquatic life, acute	Maximum daily flow
Human Health (all)	Mean daily flow

ii) Temperatures and pH (for effluent and receiving waters)
80th percentile of all samples that are representative of the site

iii) Hardness (for effluents and receiving waters).
20th percentile of all samples that are representative of the site.

iv) Ambient Quality.
Dissolved Oxygen - the 20th percentile of all samples that are representative of the site
Fecal Coliform - the geometric mean of available data.
Others - the 80th percentile of all samples that are representative of the site.

XII ANALYTICAL METHODS

All methods of analysis used in measuring the chemical water quality of surface waters for purposes of determining compliance with these standards shall be in accordance with procedures prescribed in the current Code of Federal Regulations, Title 40, part 136.

[Biological samples used to evaluate whether the narrative criteria in Section VI are supported shall be collected in accordance with Standard Operating Procedures and Quality Assurance Project Plans documented by the Office of Environmental Protection \(see OEP: Determination of Biological Conditions for Rivers and Streams\).](#)

¹ Application of these low flows in determining dilution assumptions is subject to application of the Tribe's mixing zone and dilution policy.

² For human health non-carcinogens, a distinction is made between parameters that typically have an effect after prolonged exposures (e.g. copper) and those that have more of an immediate effect (e.g. nitrate). The chronic aquatic life flow shall be used for the longer-lasting parameters and the acute aquatic life flow for the shorter-acting parameters.

Moved up [1]: Quantitative biological assessments may be used to evaluate whether the narrative criteria in Section VI are supported. The Fort Peck Tribes have calibrated multimetric indices for assessing benthic macroinvertebrate conditions in streams as a basis for numeric translators of the narrative criterion. This updated approach is reflected in the removal of the Tribes numeric biocriteria for streams. Application of the indices for determining biological conditions for streams shall be in accordance with methods documented by the Office of Environmental Protection (see OEP Assessment Methodology Document). The methods shall be subjected to technical review and shall produce consistent and objective results. The results of the quantitative biological assessments may be used for purposes of water quality assessment, including, but not limited to, prioritizing abatement projects for activities on the Reservation resulting in point and nonpoint sources of pollution. If biological assessments indicate a biologically impacted water body, an evaluation of potential causes, including nonchemical stressors (e.g., habitat degradation or hydrological modification), will be conducted to determine associations with potential pollutants. Physical parameters shall be sampled using methods approved by the Office of Environmental Protection.

Deleted: The Fort Peck Tribes have adopted rapid bioassessment techniques from the EPA manual Rapid Bioassessment Protocols for use in Streams and Rivers, Benthic Macroinvertebrates and Fish, May 1989. Physical parameters shall be sampled using methods approved by the Office of Environmental Protection.

Appendix A
**Stream Beneficial Use for the Fort Peck Indian
Reservation**

Table A-1
FORT PECK ASSINIBOINE & SIOUX INDIAN RESERVATION, MONTANA
STREAM BENEFICIAL USE DESIGNATION

STREAM SEGMENT DESCRIPTION	BENEFICIAL USE DESIGNATION	MODIFICATIONS AND QUALIFIERS
Big Porcupine Creek		
1. North Border of Reservation to Middle Fork	Primary Contact Recreation	Intermittent waterbody
	Class 1 Warm Water Aquatic Life	Intermittent waterbody
	Agricultural	
	Cultural	
2. Middle Fork to East Fork	Primary Contact Recreation	Intermittent Waterbody
	Class 1 Warm Water Aquatic Life	Intermittent Waterbody
	Agriculture	
	Cultural	
3. East Fork to Missouri	Primary Contact Recreation	Intermittent Waterbody
	Class 1 Warm Water Aquatic Life	Intermittent Waterbody
	Agriculture	
	Cultural	
Little Porcupine Creek		
1. North Border of Reservation to Tomato Can Creek	Secondary Contact Recreation	Intermittent Waterbody
	Class 1 Warm Water Aquatic Life	Goal
	Agriculture	
	Cultural	

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Table A-1 (continued)
FORT PECK ASSINIBOINE & SIOUX INDIAN RESERVATION, MONTANA
STREAM BENEFICIAL USE DESIGNATION

STREAM SEGMENT DESCRIPTION	BENEFICIAL USE DESIGNATION	MODIFICATIONS AND QUALIFIERS
2. Tomato Can Creek to Missouri River	Secondary Contact Recreation	Intermittent Waterbody
	Class 1 Warm Water Aquatic Life	Intermittent Waterbody
	Agriculture	
	Cultural	
Wolf Creek		
1. Headwaters downstream to Boudary of Section 29 & 31, T29N, R46E	Primary Contact Recreation	
	Class 1 Cool Water Aquatic Life	Goal
	Agriculture	
	Cultural	
2. Top of Section 32, T29N, S46E to Missouri River	Primary Contact Recreation	
	Class 1 Cool Water Aquatic Life	Goal/Intermittent Waterbody
	Agriculture	
	Cultural	
Missouri River		
1. Southern border of Reservation to center of River	Public Water Supply	Goal
	Class 1 Cool Water Aquatic Life	
	Primary Contact Recreation	

Table A-1 (continued)
FORT PECK ASSINIBOINE & SIOUX INDIAN RESERVATION, MONTANA
STREAM BENEFICIAL USE DESIGNATION

STREAM SEGMENT DESCRIPTION	BENEFICIAL USE DESIGNATION	MODIFICATIONS AND QUALIFIERS
	Industrial	
	Navigation	
	Agriculture	
	Cultural	
Tule Creek		
1. Headwaters downstream to Missouri River	Secondary Contact Recreation	Intermittent Waterbody
	Class 2 Cool Water Aquatic Life	Intermittent Waterbody
	Agriculture	Intermittent Waterbody
	Cultural	
Poplar River		
1. North Border of Reservation to Highway 13 Crossing	Primary Contact Recreation	
	Class 1 Cool Water Aquatic Life	
	Agriculture	
	Cultural	
2. Highway 13 to Long Creek	Primary Contact Recreation	
	Class 1 Cool Water Aquatic Life	
	Agriculture	
	Cultural	

Table A-1 (continued)
FORT PECK ASSINIBOINE & SIOUX INDIAN RESERVATION, MONTANA
STREAM BENEFICIAL USE DESIGNATION

STREAM SEGMENT DESCRIPTION	BENEFICIAL USE DESIGNATION	MODIFICATIONS AND QUALIFIERS
3. Long Creek to O'Connor Crossing	Primary Contact Recreation	
	Class 1 Cool Water Aquatic Life	
	Agriculture	
	Cultural	
4.O'Connor Crossing to Missouri River	Primary Contact Recreation	
	Class 1 Warm Water Aquatic Life	Class 1 Cool Water Aquatic Life Goal
	Agriculture	
	Cultural	
Smoke Creek		
1.Headwaters downstream to Big Muddy Creek	Primary Contact Recreation	
Smoke Creek cont'd	Class 1 Warm Water Aquatic Life	
	Agriculture	
	Cultural	
Big Muddy Creek		
1. Reservation border to Wolf Creek	Primary Contact Recreation	
	Class 2 Warm Water Aquatic Life	Goal
	Agriculture	

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Table A-1
FORT PECK ASSINIBOINE & SIOUX INDIAN RESERVATION, MONTANA
STREAM BENEFICIAL USE DESIGNATION

STREAM SEGMENT DESCRIPTION	BENEFICIAL USE DESIGNATION	MODIFICATIONS AND QUALIFIERS
	Cultural	
2. Wolf Creek to Smoke Creek Confluence	Primary Contact Recreation	
	Class 2 Warm Water Aquatic Life	Goal
	Agriculture	
	Cultural	
3. Smoke Creek to Missouri River	Primary Contact Recreation	
	Class 2 Warm Water Aquatic Life	Goal
	Agriculture	
	Cultural	

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Appendix B: FPWQCT
DETAILED NOTES OF EXPLANATION

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Appendix C

**Physical and Biological Criteria table for the Fort
Peck Indian Reservation**

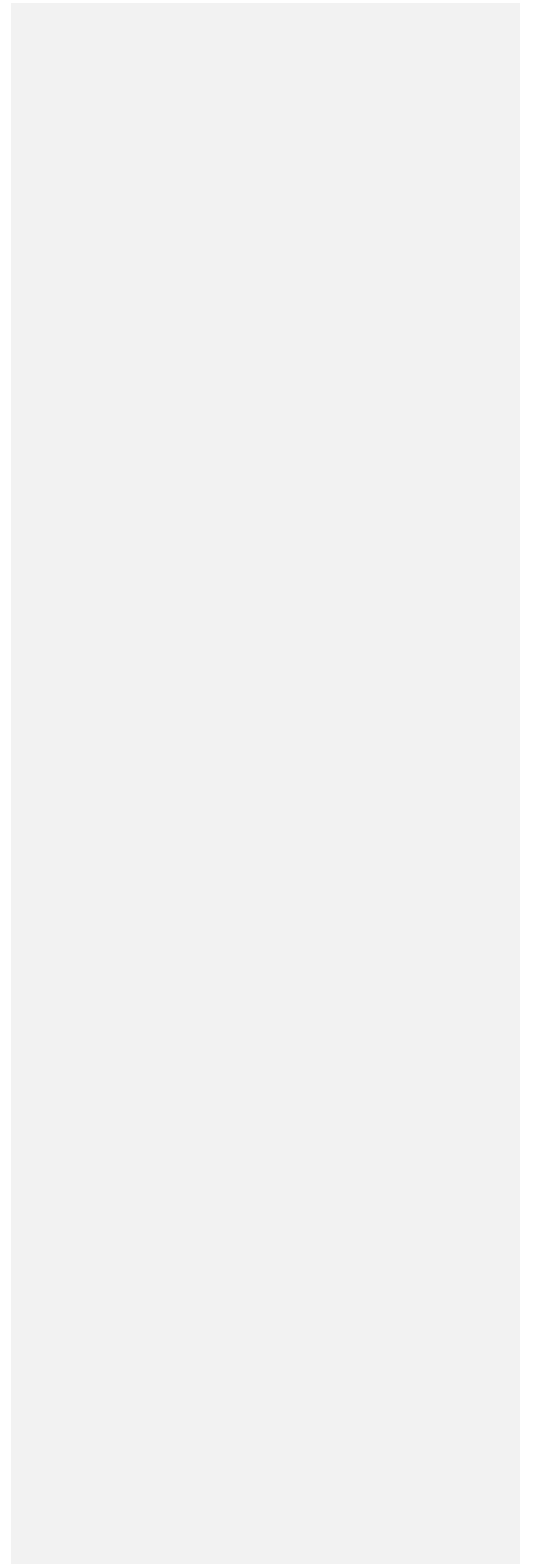


Table C-1.
FORT PECK ASSINIBOINE-SIOUX INDIAN RESERVATION
PHYSICAL AND BIOLOGICAL CRITERIA

Parameter	Recreational		Aquatic Life				Domestic Water Supply
	Primary	Secondary	Class 1	Class 1	Class 2	Class 2	
			Cool Water	Warm Water	Cool Water	Warm Water	
	Contact	Contact	Biota	Biota	Biota	Biota	
PHYSICAL							
pH ^{1**} (standard units)	6.5-9.0	6.5-9.0	6.5-9.0	6.5-9.0	6.5-9.0	6.5-9.0	6.5-9.0
Dissolved Oxygen ²	Refer to FPWQCT in Append. B						
Temperature (maximum values)			23°C	27°C	23°C	27°C	
Solids	See Narr. Criteria Section 5						
BIOLOGICAL ^{***}							
Fecal Coliforms ³ #/100 mls	200	200					200
E.Coli ⁴	Reference 4	Reference 4					

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Commented [JB6]: Note that macroinvertebrate metrics were removed, including Taxa Richness, FBI, and EPT Index..

**All numerical references are listed in the "REFERENCES FOR TABLE C-1: PHYSICAL AND BIOLOGICAL CRITERIA" in Appendix C on page C-3 of this document

*** Biological Criteria do not apply to the Missouri River at this time

March, 2017

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REFERENCES FOR TABLE C-1: PHYSICAL AND BIOLOGICAL CRITERIA

1. Induced variation of hydrogen ion concentration (pH) within the range of 6.5 to 9.0 must be less than 0.5 pH unit. Natural pH outside this range must be maintained without change. Natural pH above 7.0 must be maintained above 7.0.

2. For those streams designated as Class 1 & Class 2 Cool Water, a 0.5° C increase above naturally occurring water temperature is allowed within the range of 0°C to 18.9°C; within the naturally occurring range of 18.9°C to 19.2°C, no discharge is allowed which will cause the water temperature to exceed 19.4°C; and where the naturally occurring water temperature is 19.2°C or greater, the maximum allowable increase in water temperature is 0.3°C. A 1.1°C-per-hour maximum decrease below naturally occurring water temperature is allowed when the water temperature is above 12.8°C, and a 1.1°C maximum decrease below naturally occurring water temperature is allowed within the range of 12.8°C to 0°C.

For those streams designated as Class 1 & Class 2 Warm Water, a 1.7°C maximum increase above naturally occurring water temperature is allowed within the range of 0°C to 25°C; within the naturally occurring range of 25°C to 26.4°C, no thermal discharge is allowed which will cause the water temperature to exceed 26.7°C; and where the naturally occurring water temperature is 26.4°C or greater, the maximum allowable increase in water temperature is 0.3°C. A 1.1°C-per-hour maximum decrease below naturally occurring water temperature is allowed when the water temperature is above 12.8°C, and 1.1°C maximum decrease below naturally occurring water temperature is allowed within the range of 12.8°C to 0°C.

3. During periods when the daily maximum water temperature is greater than 15.5°C, the geometric mean number of organisms in the fecal coliform group must not exceed 200 per 100 milliliters, nor are 10% of the total samples during any 30-day period to exceed 400 fecal coliforms per 100 milliliters.

4. Criteria for the Primary and Secondary Contact Recreation Use:

Based on a statistically sufficient number of samples (not less than 5 samples equally spaced over a 30-day period), the geometric mean of the E.Coli densities shall not exceed 126 per 100 ml. In addition, no single sample shall exceed 235 per 100 ml in water designated for Primary Contact Recreation or 406 per 100 ml in waters designated for Secondary Contact Recreation.

Where exceedences of the geometric mean or single sample E.Coli criteria occur, the Tribes Department of Environmental Quality will take appropriate action to eliminate the source of the contamination. Where necessary, a sanitary survey procedure will be used to determine the source of the contamination.

Commented [JB8]: Note that comments were removed that no longer apply (Regrading macroinvertebrate metrics).

Deleted: 2

Appendix D
Agricultural Uses Water Quality Standards

TABLE 3
 NUMERIC CRITERIA TO SUPPORT AGRICULTURAL USES (1)
 (Except where indicated, all concentrations are ug/l)

Parameter	Agricultural Use	
	Livestock	Irrigation
Arsenic	-	100 (2)
Beryllium	-	100 (2)
Boron	-	750 (2)
Cadmium	50 (3)	-
Chromium	1000 (3)	-
Copper	500 (3)	-
Lead	100 (3)	-
Nitrate (as N)	100000 (3)	-
Nitrite (as N)	10000 (3)	-
Selenium	50 (3)	-
Zinc	25000 (3)	-

- (1) Implementation of these criteria shall include case-by-case decisions regarding averaging period and allowable frequency of exceedence, and shall take into consideration the use to be protected and the available toxicological data for the substance, including whether the effects are acute or chronic.
- (2) Criteria based on recommendations included in *Quality Criteria for Water*, 1976, U.S. EPA; U.S. Government Printing Office: 1977 (0-222-904).
- (3) Criteria based on recommendations included in *Water Quality Criteria*, 1972, National Academy of Sciences, March, 1973, EP A-R3-73-033.

Appendix E
Antidegradation Review Worksheet

ANTIDEGRADATION REVIEW SHEET

1. Name of Reviewer:

Name of Receiving Water: _____

Watershed: _____

Segment Location (Land Descrip): _____

Stream Classification: _____

Other: _____

2. Brief Description of Proposed

Activity: ID Number if any:

3. Which tier(s) of antidegradation apply?

_____ Tier 3 - go to question 4

_____ Tier 2 - go to question 7

_____ Tier 1- go to question 13

Tier 3 Questions

4. Will the proposed activity result in a permanent new or expanded source of pollutants directly to an ONRW segment?

_____ yes - recommend denial of a proposed

activity _____ no

5. If the proposed activity will result in a permanent new or expanded source of pollutants to a segment upstream from an ONRW segment, will the proposed activity affect ONRW water quality (see IV.3.a of the implementation procedure).

_____ yes - recommend denial of proposed activity

_____ no

Basis for conclusion

6. If the proposed activity will result in a non-permanent new or expanded source of pollutants to ONRW segment or a segment upstream from an ONRW segment, will the proposed activity result in “temporary and limited” effects on ONRW water quality (see IV.3.b of the implementation procedure)?

_____ yes

_____ no - recommend denial of proposed activity

Basis for conclusion:

Tier 2 Questions

7. Does the segment qualify for tier 2 protection based on the applicable criteria (see IV.4.a of the implementation procedure)?

_____ yes

_____ no

Basis for conclusion:

8. Will the proposed activity result in significant degradation (see IV.4.b of the implementation procedure)?

_____ yes

no - recommend approval of the activity

significance test by-passed due to availability of a reasonable less degrading alternative

If significance test not by-passed, basis for conclusion:

9. Has the applicant completed an adequate evaluation of alternatives and demonstrated that there are not reasonable alternatives to allowing the degradation (see IV.4.c of the implementation procedure)?

yes

no - recommend denial of the proposed activity

If no, basis for conclusion:

10. Has the applicant demonstrated that the proposed activity will provide important socio-economic development in the area in which the affected waters are located (see IV.4.d of the implementation procedure)?

yes

no - recommend denial of the proposed activity

If no, basis for conclusion:

11. Will existing uses be fully protected consistent with the Tier 1 procedures outlined by questions 14-16 below (questions 14-16 must be completed)?

yes

no- recommend denial of proposed activity

12. Has compliance with required controls on point and nonpoint sources in the zone of influence been assured (see IV.4.f of the implementation procedures)?

_____ yes

_____ no - recommend denial of the proposed

activity Basis for conclusion:

Tier 1 Questions

13. The basis for concluding that tier 2 requirements do not apply is as follows (see IV.5.a of the implementation procedure):

14. Are there uses that exist or have existed since November 28th, 1975 that have more stringent water quality protection requirements than the currently designated uses (see IV.5.c of the implementation procedures)?

_____ yes

_____ no

If yes, basis for conclusion:

15. If the answer to question 14 was yes, what water quality criteria requirements will ensure protection of such existing uses (see IV.5.d.i of the implementation procedure)? (Indicate parameters and applicable water quality criteria.)

16. Will existing uses be fully maintained and protected (see IV.5.d.ii of the implementation procedure)?

_____ yes

_____ no - recommend denial of the proposed activity

If no, basis for conclusion:

Preliminary Decision

17. Based on the above, can the proposed activity be authorized pursuant to the Tribes' antidegradation policy?

_____ yes

_____ no

Basis for conclusion:

Signature:

Date