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MICCOSUKEE ENVIRONMENTAL PROTECTION CODE
SUBTITLE B:

WATER QUALITY STANDARDS FOR SURFACE WATERS OF THE MICCOSUKEE TRIBE OF INDIANS OF FLORIDA

SECTION 1. Introduction

Pursuant to Section 518 of the 1987 Amendments to the Clean Water Act, the US Government's Federal Indian Policy, dated January 24, 1983, and the Environmental Protection Agency's Indian Policy, the Business Council of the MICCOSUKEE TRIBE OF INDIANS OF FLORIDA and its inherent governmental power as an Indian Tribe, a federally-recognized Tribe of Indians, hereby enacts the MICCOSUKEE TRIBE OF INDIANS WATER QUALITY STANDARDS.

A. PURPOSES: The purposes of the Miccosukee Tribe's Water Quality Standards are as follows:

1. To establish water body goals for specific water bodies of the Miccosukee Tribe's Federal Reservation;

2. To designate the uses for which the surface waters of the Miccosukee Tribe shall be protected;

3. To prescribe water quality criteria (narrative, numeric, biological and sediment) imposed in order to sustain the existing designated uses;

4. To assure that degradation of existing water quality does not occur;

5. To provide a legal basis for regulatory controls;

6. To provide for the protection of Tribal water quality for the benefit of threatened and endangered species listed by the U.S. Fish and Wildlife Service;

7. To promote the health, social welfare and economic well-being of the Miccosukee Tribe of Indians of Florida.

8. To provide a basis for Clean Water Act Section 401 certification.

These purposes shall be accomplished by incorporating the standards set forth in the Miccosukee Tribe Water Quality Standards into the permitting and management process for point source and non-point source discharges, by using those standards to determine when a designated use is threatened, and by using current treatment technologies to control point sources and best management practices for non-point sources of pollution. In accordance with 40 CFR 122.44(d), U.S. EPA retains NPDES permitting authorization.

B. APPLICABILITY: The Miccosukee Tribe's Water Quality Standards apply to all Tribal Reservation Surface Waters, i.e., all waters within the exterior boundaries of the Miccosukee Tribe's Federal Reservation and Miccosukee Reserved Area, including water situated wholly or partly within, or bordering upon Tribal Reservation Lands and the Miccosukee Reserved Area, whether public, private, or Federally protected lands, e.g., National Parks or Preserves. The Miccosukee Water Quality Standards shall be the basis for regulatory enforcement against discharges outside the boundaries of the Federal Reservation and Miccosukee Reserved Area pursuant to all applicable federal enforcement procedures as may be necessary to protect the quality of the water within the Federal Reservation.

C. AUTHORITY: The Miccosukee Tribe's Water Quality Standards are consistent with Section 101(a)(2) of the Federal Water Pollution Control Act, as amended, [33 U.S.C. Section 1251 (a)(2)], which declares that "it is the national goal that, wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983..." The Clean Water Act indicates, in Section 101(a)(3), that it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited. The Miccosukee Tribe also recognizes water supply, agricultural, industrial, religious, ecological preservation, and navigation as other beneficial uses for water on Tribal Lands. These water quality standards were adopted by the Miccosukee Business Council on December 19, 1997 and Amended March 4, 1998. These water quality standards were approved by the United States Environmental Protection Agency on May 25, 1999. These water quality standards are to be used for all purposes of water quality standards under the Federal Clean Water Act consistent with CWA sections 518(e) and 303(c).

D. POLICY: The Miccosukee Tribe's Water Quality Standards provide that contamination that may result from the use of water shall not lower the quality of the water below that which is required for recreation and protection and propagation of fish, shellfish, wildlife, and native aquatic plants consistent with preservation of the Everglades Ecosystem within Water Conservation Area 3-A and Everglades National Park. The Tribe, recognizing the complexity of water quality management and the necessity to temper regulatory actions with technological progress and social and economic well-being of Tribal members, vows that there will be no compromise with respect to discharges of pollutants which constitute a valid hazard to human health or the preservation of the Everglades ecosystem contained within the Water Conservation Area 3-A and Everglades National Park. Furthermore, the Tribe will seek to use the best environmental information available when making decisions on the effects of

chronically and acutely toxic substances and carcinogenic, mutagenic, and teratogenic substances. The Miccosukee Tribe of Indians of Florida finds that excessive nutrients (including total Phosphorus) constitute one of the most severe water quality problems threatening the Everglades Ecosystem. It shall be the Tribe's policy to limit the introduction of nutrients from anthropogenic sources into waters of the Tribe. Particular consideration shall be given to the protection from further nutrient enrichment of waters which are presently high in nutrient concentrations or sensitive to further nutrient concentrations and to further nutrient loadings. It is the intent of the Miccosukee Tribe to prevent adjacent water users from using Tribal waters or vegetative communities within Tribal jurisdiction as a biological filter with respect to nutrient removal. These water quality standards take into consideration the water quality standards of downstream waters and provide for the attainment and maintenance of downstream waters. The Miccosukee Tribe's waters in the areas of the North Grass, South Grass, Gap (WCA-3A) and Miccosukee Reserved Area shall have a nutrient standard consistent with natural oligotrophic levels (including a total phosphorus limitation of 10 parts per billion of water). The most stringent nutrient standards will be applied to the most upstream reaches of the Tribal waters.

E. WATER QUALITY CONTROL OFFICER: The Water Quality Control Officer (WQCO) shall operate under the direction of the Miccosukee Environmental Protection Agency (MEPA). The Tribal WQCO shall work in cooperation with the U.S. Environmental Protection Agency and other agencies of the federal government and will ensure that all applicable federal and state agencies are provided a copy of the Tribal Water Quality Standards. The Tribal WQCO is the Director of Tribe's Water Resources Department.

F. ANTIDEGRADATION: The antidegradation policy for Tribal waters and the procedures for implementing it are set forth in Section 2, herein.

G. TRIENNIAL REVIEW: Pursuant to Section 303(c) of the Clean Water Act [40 CFR 131.20(a) and 40 CFR 25], the Miccosukee Tribe of Indians of Florida shall hold public hearings at least once each three year period for the purpose of reviewing and, as appropriate, amending the Miccosukee Tribe's Water Quality Standards. Public hearings shall be held in accordance with Tribal custom and law and U.S. Environmental Protection Agency regulations. The proposed water quality standards revisions shall be made available to the public prior to the hearing. The Tribe shall submit the revised standards and any supporting analysis 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.

H. WATER QUALITY CRITERIA TO PROTECT USES: Criteria particular to a use shall be maintained at all times and at all flow ra tes. For standing water bodies, criteria particular to a use shall be maintained whenever the water body is present. The General Standards Section, Section 3, shall be maintained at all times and shall apply to the Water Conservation Areas, Flowage Easements, Canals, Ditches, Ponds, and Wetlands. The criteria assigned to a body of water shall be the most stringent criteria required to protect all existing and designated uses for that body of water and shall be used for calculation of permit limits.

I. STANDARDS TO MANAGE DISCHARGES: Water Quality Standards shall be the basis for managing discharges attributable to point and non-point sources of pollution. Water quality standards are not used to control natural background phenomena or acts of God.

J. MODIFICATION OF UNATTAINABLE STANDARDS: In the event that monitoring of water quality identifies areas of Tribal waters where attainable water quality is less than what is required by the Miccosukee Tribe's Water Quality Standards, then the Miccosukee Tribe of Indians of Florida, may modify the Water Quality Standards to reflect attainability. Modification shall be within the sole discretion of the Miccosukee Tribe, but shall be compatible with EPA's use-attainability procedures. 40 CFR 131 specifies the requirements which must be followed in modifying tribal water quality standards t o address changes in designated uses.

K. UPGRADING STANDARDS: The Miccosukee Tribe's Water Quality Standards may be revised as the need arises, or as the result of updated scientific information. Adoption of the upgraded standards shall be conducted in accordance with procedures set forth for triennial review.

L. ERRORS: Errors resulting from inadequate and erroneous data or human or clerical oversight will be subject to correction by the Miccosukee Tribe of Indians of Florida. The discovery of such errors does not render the remaining and unaffected standards invalid. If any provision or the application of any provision of these Water Quality Standards to any person or circumstance, should be held to be invalid, the application of such provision to other persons and circumstances and the remainder of the Water Quality Standards shall not be affected thereby. In the event that EPA discovers some error which would cause the Miccosukee Water Quality Standards to not meet "minimum federal requirements." The EPA will notify the Tribe of such error and provide the Tribe the opportunity to evaluate and modify the error, in accordance with 40 CFR 131.4, 131.5 and 131.22.

SECTION 2. Antidegradation Policy and Implementation Plan

A. ANTIDEGRADATION POLICY:

I. Tribal policy, as it relates to antidegradation, is to conserve the waters of the Tribe, to protect, maintain, and improve the quality and quantity thereof for public water supplies, for the propagation of wildlife, fish and other aquatic life, native Everglades plant and animal communities, and for domestic, agricultural, industrial, recreational, religious, and other beneficial uses. It also prohibits the discharge of pollutants into Tribal waters without treatment necessary to protect those beneficial uses of the waters. To that end the Miccosukee Tribe hereby adopts there following tiers of protection:

A. Tier 1: Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected. Pollution which causes or contributes to violations of water quality standards are considered harmful to the waters of the Tribe and shall not be allowed. Waters having quality below the criteria established for them

shall be protected and enhanced. If the Tribe finds that a new or existing discharge will reduce the quality of the receiving waters below the classification established for them or violate any Tribal rule or standard, it shall refuse to permit the discharge.

B. Tier 2: Where existing quality exceeds the level of protection 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 Tribe finds, after full satisfaction of inter-governmental and public participation requirements, that allowing lower water quality is necessary to accommodate important economic and social development in the area in which the waters are located. In allowing such degradation or lower water quality the Tribe shall assure water quality which is adequate to protect existing uses fully. Further, the Tribe shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost effective and reasonable best management practices for non-point source control.

C. Tier 2 ¾ Outstanding Miccosukee Waters (OMW): The Miccosukee Tribe recognizes that the waters of its Federal Reservation which are contained within Water Conservation Area 3-A and the Miccosukee Reserved Area constitute the Tribe's highest quality waters and must be preserved in as pristine a condition as possible while at the same time allowing for the activities of man. These ecologically important waters are essential to the survival of the Miccosukee Tribe, therefore: The Miccosukee Tribe hereby designates the waters of its Federal Reservation which are contained within Water Conservation Area 3-A (North Grass, South Grass, Gap) and Miccosukee Reserved Area as Class III-A and Outstanding Miccosukee waters (OMW)."

D. Tier 3: Outstanding Natural Resource Waters (ONRW): Where high quality waters constitute an Outstanding Tribal resource such as waters of parks and wildlife refuges and waters of exceptional ecological and recreational significance, that water quality shall be maintained and protected. These waters shall be designated as Outstanding Natural Resource Waters (ONRW). Currently, no Tribal waters are designated as ONRW.

B. THERMAL PROTECTION FOR ALL TIERS OF TRIBAL WATER:

In those cases where potential water quality impairment associated with a thermal discharge involved, the antidegradation policy and implementation method is consistent with section 316 of the Clean Water Act. 40 CFR 131.12 (a)(4)

C. IMPLEMENTATION PLAN:

Acting under authority delegated by the Miccosukee Environmental Protection Agency and the Miccosukee Business Council, the Water Quality Control Officer shall implement the Miccosukee Tribe's Water Quality Standards including the antidegradation policy, by establishing and maintaining controls on the introduction of pollutants into surface waters. More particularly, the Tribal Water Quality Control Officer shall do the following:

1. Monitor water quality to assess the effectiveness of pollution controls and to determine whether water quality standards are being attained.

2. Obtain information as to the impact of effluents on receiving waters.

3. Advise prospective dischargers of applicable standards.

4. Review the adequacy of the existing data base and obtain additional data when required.

5. Assess the probable impact of effluents on receiving waters in light of designated uses and numeric standards, narrative standards, biological criteria and sediment criteria.

6. Require the highest and best degree of wastewater treatment practicable and commensurate with protecting and maintaining designated uses and existing water quality.

7. Require development of water quality based effluent limitations and comment on technology-based effluent limitations, as appropriate, for inclusion in any federally issued permit to a discharger pursuant to Section 402 of the Clean Water Act [33 U.S.C. Section 1342].

8. Require that these effluent limitations and other appropriate measures be included in any such permit as a condition for Tribal certification pursuant to Section 401 of the Clean Water Act, [33 U.S.C. Section 1341].

9. Coordinate water pollution control activities with other constituent agencies and other local, tribal, state, and federal agencies, as appropriate.

10. Develop and pursue inspection and enforcement programs for non-point sources in order to ensure that dischargers comply with requirements of the Miccosukee Tribe of Indians of Florida Water Quality Standards and Certification Program and any requirements promulgated thereunder, and in order to support the enforcement of federal NPDES permits by the U.S. Environmental Protection Agency.

11. Require implementation of best management practices to control non-point sources of pollutants to achieve compliance with the Miccosukee Tribe's Water Quality Standards.

SECTION 3. Tribal Water Quality Standards

The following minimum water quality criteria shall apply to all surface waters of the Miccosukee Tribe of Indians of Florida unless those water bodies are designated with higher or stricter water quality standards. Stricter standards for a given water body shall supersede these

general Water Quality Standards. These standards shall provide a legal basis for including whole effluent toxicity requirements in all federally issued permits.

A. SEDIMENT DEPOSITS: All Tribal surface waters shall be free from water contaminants, from other than natural causes, that may settle and have a deleterious effect on the aquatic biota or that will significantly alter the physical, chemical and biological properties of the water or the bottom sediments.

B. FLOATING SOLIDS, OIL AND GREASE: All Tribal surface waters shall be free from objectionable oils, scum, foam, grease, and other floating materials and suspended substances of a persistent nature resulting from other than natural causes (including visible films of oil, globules of oil, grease, or solids in or on the water, or coatings on stream banks or vegetation). Oil and grease discharged into surface waters shall not exceed 5.0 mg/liter.

C. COLOR: All Tribal surface waters shall be free from true color producing materials, from other than natural causes, that create an aesthetically undesirable condition. Neither true color nor apparent color shall impair the designated and other attainable uses of a water body. Apparent color producing substances from other than natural sources are limited to concentrations equivalent to 70 color units (CU) on the Platinum - Cobalt Scale for domestic wastewater discharges.

D. ODOR AND TASTE: All Tribal surface waters shall be free from contaminants, from other than natural causes, are limited to concentrations that do not impart unpalatable flavor to fish, and that do not result in offensive odor or taste arising from the water, and that do not otherwise interfere with the designated and other attainable uses of a water body. Taste and odor-producing substances from other than natural origins shall not interfere with the production of a potable water supply by modern treatment methods. The Tribe hereby adopts the Organoleptic Criteria in Table 2.

E. NUISANCE CONDITIONS: Plant nutrients or other substances stimulating algal growth, from other than natural causes, shall not be present in concentrations that produce objectionable algal densities or nuisance aquatic vegetation, or that result in a dominance of nuisance species instream, or that cause nuisance conditions in any other fashion. Phosphorus and nitrogen concentrations shall not be permitted to reach levels which result in man-induced eutrophication problems. Total phosphorus shall not exceed 10 parts per billion in Class III-A waters. In Class III-B waters, total phosphorous discharges shall not be made which result in undesirable aquatic life effects or which result in chronic or acute toxicity to aquatic life.

F. PATHOGENS: All tribal surface waters shall be virtually free from pathogens. Waters used for irrigation shall be virtually free of Salmonella and Shigella species.

G. TURBIDITY: Turbidity in Class I and III-A waters shall not reduce light transmission to a point where aquatic biota are inhibited or alter color or natural appearance of the water, and in no instance shall the turbidity exceed 29 NTU above natural background conditions at any place or at any time. Turbidity shall not reduce light transmission to a point where aquatic biota

are inhibited or alter color or natural appearance of the water. In Class III-B waters, turbidity shall not be discharged which result in undesirable aquatic life effects or which result in chronic or acute toxicity to aquatic life.

H. TEMPERATURE: All surface waters of the Tribe shall at all places and at all times be free from domestic, industrial, agricultural or other man-induced non-thermal components of discharges which, alone or in combination with other components of discharges produce conditions so as to create a nuisance or cause the introduction of heat [by other than natural causes] and shall not increase the temperature in a canal, outside a mixing zone, by more than 2.7 degrees C (5 degrees F), based upon the monthly average of the maximum daily temperatures measured at mid-depth or three feet (whichever is less) outside the mixing zone. The normal daily and seasonal variations that were present before the addition of heat from other than natural sources shall be maintained. In no case shall man-induced heat be permitted when the maximum temperature specified for the water body would thereby be exceeded. The measurement of the thermal discharge shall be made at that point at which the effluent physically leaves its carrying conduit and discharges into waters of the Tribe, or, in the event it is not practicable to measure temperature at the end of the discharge conduit, a specific point designated by the Tribal WQCO. At all times and under all conditions of flow, the discharge temperature shall be controlled so that at least two-thirds (2/3) of the width of the canal's surface remains at ambient (natural) temperature. Further, no more than one-fourth (1/4) of the cross-section of the canal at a traverse perpendicular to the flow shall be heated by the discharge. High water temperatures caused by unusually high ambient air temperatures are not violations of these standards.

I. SALINITY / DISSOLVED SOLIDS / CHLORIDES: Existing mineral quality shall not be altered by municipal, industrial, agricultural, or other waste activities so as to interfere with the attainable uses for a water body. An increase of more than 10% over naturally occurring levels shall not be permitted. Normal daily & seasonal fluctuations shall be maintained.

J. PH: The pH of all Tribal surface waters shall not be permitted to fluctuate in excess of 1.0 unit over a period of 24 hours for other than natural causes. pH shall not be less than 6.5 nor greater than 9.0 in order to fully protect aquatic life.

K. DISSOLVED OXYGEN: The Dissolved Oxygen standard for Class I and Class III-A waters is a minimum of 5.0 mg/liter. In waters which are designated as Class III-B, dissolved oxygen must be maintained at levels which will support indigenous aquatic life. Dissolved Oxygen levels that are attributable to natural background conditions may be established as alternative dissolved oxygen criteria for a water body or portion of a water body. Daily and seasonal fluctuations in dissolved oxygen levels shall be maintained. Normal diurnal fluctuations in dissolved oxygen which are attributable to the natural processes of photosynthesis shall not be deemed a violation of this standard. Man-induced nutrient eutrophication occurring in Class I and III-A surface waters contributing to increased algal growth and resulting in less than 5.0 mg/liter of dissolved oxygen in the water is a violation of this standard.

L. BACTERIOLOGICAL QUALITY: The density of Escherichia coli colony forming units (cfu) shall not exceed a geometric mean density of 126 cfu per 100 milliliters, nor exceed the single sample maximum allowable density of 576 cfu per 100 milliliters which is based on the infrequent use of all Tribal surface waters for bathing. The geometric mean density shall be calculated based on samples collected approximately equally spaced over a 30 day period and used in conjunction with the single sample maximum allowable density to determine attainment of the numeric water quality criteria.

M. BIOLOGICAL INTEGRITY: The "Shannon-Weaver Diversity Index of Benthic Macroinvertebrates" shall not be reduced to less than 75% of background levels as measured [procedure to be supplied by US EPA].

N. NUTRIENTS: In no case shall nutrient concentrations of Tribal Class I or Class III-A surface waters be altered so as to cause an imbalance in natural populations of aquatic flora or fauna. Total phosphorus concentrations shall not exceed 10 parts per billion in Class III-A waters. In Class III-B waters, nutrients shall not be discharged which result in undesirable aquatic life effects or which result in chronic or acute toxicity to aquatic life.

O. TOXIC SUBSTANCES: All Tribal surface waters shall be free from the presence of toxic substances in quantities that are toxic to human, animal, plant, or aquatic life, or in quantities that interfere with the normal propagation, growth, and survival of sensitive aquatic biota. All surface waters of the Tribe shall at all places be free from any substance, in any concentration, which is carcinogenic, mutagenic, or teratogenic to human beings or to significant, locally occurring, wildlife or aquatic species. Within the mixing zone, there shall be no acute toxicity. There shall be no chronic toxicity at the edge of the mixing zone. For toxic substances lacking EPA published criteria, bioassay data for sensitive indigenous test species / life stages may be used to determine compliance with this narrative standard. Guidance as to the appropriate bioassay test methods will be obtained from: U.S. Environmental Protection Agency, "Quality Criteria for Water, 1986". There shall be no toxicants in Tribal waters that are known to be persistent, bio-accumulative, carcinogenic, and/or synergistic with other stream components. Whole effluent toxicity testing shall be required from all dischargers who wish to discharge into tribal waters. Whole effluent toxicity testing shall comply with EPA's methods and procedures as included in 40 CFR 136 or other tribally approved methodology.

P. CLASS I WATER CRITERIA: Table 1 contains the criteria for Class I (Potable waters). In addition to the criteria in Table 1, Class I surface waters must also meet the criteria in Tables 2.

(INSERT TABLE 1 HERE)

NOTE: In addition to these water quality criteria, other narrative standards may also apply.

Miccosukee Tribe of Indians of Florida

Water Quality Standards for Class I Waterbodies

TABLE 1

Drinking Water Standards

(Including Tribal Public Health Goals)

Table 1
Miccosukee Tribe of Indians of Florida
Water Quality Standards for Class I Waterbodies

Chemicals	CAS Number	Tribal Public Health Goal (mg/l)	Standards MCL (mg/l)
Acenaphthene	83-32-9	.020	_
Acifluorfen (sodium)	62476-59-9	0.4	_
Acrylamide	79-06-1	Zero	TT
Acrylonitrile	107-13-1	0.000051	_
Alachlor	15972-60-8	Zero	0.002
Aldicarb (Two or more of these three chemicals should not exceed 0.007 mg/L)	116-06-3	0.007	0.003
Aldicarb sulfone (Two or more of these three chemicals should not exceed 0.007 mg/L)	1646-88-4	0.007	0.002
Aldicarb sulfoxide (Two or more of these three chemicals should not exceed 0.007 mg/L)	1646-87-3	0.007	0.004
Aldrin	309-00-2	4.9 E-8	_
Ametryn	834-12-8	0.06	_
Ammonium sulfamate	7773-06-0	2.0	_
Anthracene (PAH)	120-12-7	8.3	_
Atrazine	1912-24-9	0.003	0.003
Baygon	114-26-1	0.003	_
Bentazon	25057-89-0	0.2	_
Benz[a]anthracene (PAH)	56-55-3	_	_

Chemicals	CAS Number	Tribal Public Health Goal (mg/l)	Standards MCL (mg/l)
Benzene	71-43-2	Zero	0.005
Benzo[a]pyrene (PAH)	50-32-8	Zero	0.0002
Benzo[b]fluoranthene (PAH)	205-99-2	0.0000028	–
Benzo[g,h,i]perylene (PAH)	191-24-2	–	–
Benzo[k]fluoranthene (PAH)	207-08-9	0.0000028	–
bis-2-Chloroisopropyl ether	39638-32-9	0.3	–
Bromacil	314-40-9	0.07	–
Bromobenzene	108-86-1	0.07	–
Bromochloromethane	74-97-5	0.09	–
Bromodichloromethane (THM) The total for trihalomethanes is 0.08 mg/L	75-27-4	Zero	0.08
Bromoform (THM) The total for trihalomethanes is 0.08 mg/L	75-25-2	Zero	0.08
Bromomethane	74-83-9	0.01	–
Butyl benzyl phthalate	85-68-7	7.0	–
Butylate	2008-41-5	0.4	–
Carbaryl	63-25-2	0.4	–

Chemicals	CAS Number	Tribal Public Health Goal (mg/l)	Standards MCL (mg/l)
Carbofuran	1563-66-2	0.04	0.04
Carbon tetrachloride	56-23-5	Zero	0.005
Carboxin	5234-68-4	0.7	_
Chloramben	133-90-4	0.1	_
Chlordane	57-74-9	Zero	0.002
Chloroform (THM) The total for trihalomethanes is 0.08 mg/L	67-66-3	0.0057	0.08
Chloromethane	74-87-3	0.03	_
Chlorophenol (2-)	95-57-8	0.0001	_
Chlorothalonil	1897-45-6	0.5	_
Chlorotoluene o-	95-49-8	0.1	_
Chlorotoluene p-	106-43-4	0.1	_
Chlorpyrifos	2921-88-2	0.002	_
Chrysene (PAH)	218-01-9	_	_
Cyanazine	21725-46-2	0.001	_
Cyanogen chloride1	506-77-4	2.0	_
2,4-D(2,4-dichlorophenoxyacetic acid)	94-75-7	0.07	0.07

Chemicals	CAS Number	Tribal Public Health Goal (mg/l)	Standards MCL (mg/l)
DCPA (Dacthal)	1861-32-1	0.07	_
Dalapon (sodium salt)	75-99-0	0.2	0.2
Di(2-ethylhexyl)adipate	103-23-1	0.4	0.4
Di(2-ethylhexyl)phthalate	117-81-7	Zero	0.006
Diazinon	333-41-5	0.00017	_
Dibromochloromethane (THM) The total for trihalomethanes is 0.08 mg/L	124-48-1	0.06	0.08
Dibromochloropropane (DBCP)	96-12-8	Zero	0.0002
Dibutyl phthalate	84-74-2	4.0	_
Dicamba	1918-00-9	4.0	_
Dichloroacetic acid	76-43-6	Zero	0.06
Dichlorobenzene o-	95-50-1	0.420	0.6
Dichlorobenzene —	541-73-1	0.320	_
Dichlorobenzene p-	106-46-7	0.063	0.075
Dichlorodifluoromethane	75-71-8	1.0	_

Chemicals	CAS Number	Tribal Public Health Goal (mg/l)	Standards MCL (mg/l)
Dichloroethane (1,2-)	107-06-2	Zero	0.005
Dichloroethylene (1,1-)	75-35-4	0.007	0.007
Dichloroethylene (cis-1,2-)	156-59-2	0.07	0.07
Dichloroethylene (trans-1,2-)	156-60-5	0.1	0.1
Dichloromethane	75-09-2	Zero	0.005
Dichlorophenol (2,4-)	120-83-2	0.02	–
Dichloropropane (1,2-)	78-87-5	Zero	0.005
Dichloropropene (1,3-)	542-75-6	0.00034	–
Dieldrin	60-57-1	5.2 E-8	–
Diethyl phthalate	84-66-2	30	–
Diisopropyl methylphosphonate	1445-75-6	0.6	–
Dimethrin	70-38-2	2.0	–
Dimethyl methylphosphonate	756-79-6	0.1	–
Dimethyl phthalate	131-11-3	270	–
Dinitrobenzene (1,3-)	99-65-0	0.001	–

Chemicals	CAS Number	Tribal Public Health Goal (mg/l)	Standards MCL (mg/l)
Dinitrotoluene (2,4-)	121-14-2	0.00011	–
Dinitrotoluene (2,6-)	606-20-2	0.04	–
Dinitrotoluene (2,6 & 2,4)	----------	0.005	–
Dinoseb	88-85-7	0.007	0.007
Dioxane p	123-91-1	0.3	–
Diphenamid	957-51-7	0.2	–
Diquat	85-00-7	0.02	0.02
Disulfoton	298-04-4	0.0007	–
Dithiane (1,4-)	505-29-3	0.08	–
Diuron	330-54-1	0.1	–
Endothall	145-73-3	0.1	0.1
Endrin	72-20-8	0.00059	0.002
Epichlorohydrin	106-89-8	Zero	TT
Ethylbenzene	100-41-4	0.530	0.7
Ethylene dibromide (EDB) = 1,2-dibromoethane.	106-93-4	Zero	0.00005

Chemicals	CAS Number	Tribal Public Health Goal (mg/l)	Standards MCL (mg/l)
Ethylene glycol	107-21-1	14.0	–
Ethylene Thiourea (ETU)	96-45-7	0.007	–
Fenamiphos	22224-92-6	0.0007	–
Fluometuron	2164-17-2	0.09	–
Fluorene (PAH)	86-73-7	1.0	–
Fonofos	944-22-9	0.01	–
Formaldehyde	50-00-0	1.0	–
Glyphosate	1071-83-6	0.7	0.7
Heptachlor	76-44-8	Zero	0.0004
Heptachlor epoxide	1024-57-3	Zero	0.0002
Hexachlorobenzene	118-74-1	Zero	0.001
Hexachlorobutadiene	87-68-3	0.00044	–
Hexachlorocyclopentadiene	77-47-4	0.05	0.05
Hexachloroethane	67-72-1	0.001	–
Hexane (n-)	110-54-3	–	–

Chemicals	CAS Number	Tribal Public Health Goal (mg/l)	Standards MCL (mg/l)
Hexazinone	51235-04-2	0.4	–
HMX = octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	2691-41-0	0.4	–
Indeno[1,2,3,-c,d]pyrene (PAH)	193-39-5	–	–
Isophorone	78-59-1	0.0084	–
Isopropyl methylphosphonate	1832-54-8	0.7	–
Isopropylbenzene (cumene)	98-82-8	4.0	–
Lindane = γ – hexachlorocyclohexane	58-89-9	0.0002	0.0002
Malathion	121-75-5	0.0001	–
Maleic hydrazide	123-33-1	4.0	–
MCPA = 4 (chloro-2-methoxyphenoxy) acetic acid	94-74-6	0.03	–
Methomyl	16752-77-5	0.2	–
Methoxychlor	72-43-5	0.04	0.04
Methyl ethyl ketone	78-93-3	4.0	-
Methyl parathion	298-00-0	0.001	–
Metolachlor	51218-45-2	0.7	–

Chemicals	CAS Number	Tribal Public Health Goal (mg/l)	Standards MCL (mg/l)
Metribuzin	21087-64-9	0.07	–
Monochloroacetic acid The total for the 5 haloacedic acids is 0.06 mg/L	79-11-8	0.03	0.06
Monochlorobenzene	108-90-7	0.1	0.1
Naphthalene	91-20-3	0.1	–
Nitrocellulose	9004-70-0	–	–
Nitroguanidine	556-88-7	0.7	–
Nitrophenol p-	100-02-7	0.06	–
N-nitrosodimethylamine	62-75-9	0.7	–
Oxamyl (Vydate)	23135-22-0	0.2	0.2
Paraquat	1910-42-5	0.03	–
Pentachlorophenol	87-86-5	Zero	0.001
PFOA = Perfluorooctanoic Acid	335-67-1	–	–
PFOS = Perfluorooctane Sulfonate	1763-23-1	–	–
Phenanthrene (PAH)	85-01-8	–	–
Phenol	108-95-2	0.300	–

Chemicals	CAS Number	Tribal Public Health Goal (mg/l)	Standards MCL (mg/l)
Picloram	1918-02-1	0.5	0.5
Polychlorinated biphenyls (PCBs)	1336-36-3	Zero	0.0005
Prometon	1610-18-0	0.4	–
Pronamide	23950-58-5	0.1	–
Propachlor	1918-16-7	0.1	–
Propazine	139-40-2	0.01	–
Propham	122-42-9	0.1	–
Pyrene (PAH)	129-00-0	0.03	-
RDX = hexahydro -1,3,5-trinitro-1,3,5-triazine	121-82-4	0.002	–
Simazine	122-34-9	0.004	0.004
Styrene	100-42-5	0.1	0.1
2,4,5-T (Trichlorophenoxy-acetic acid)	93-76-5	0.07	–
2,3,7,8-TCDD (Dioxin)	1746-01-6	Zero	0.00000003
Tebuthiuron	34014-18-1	0.5	–

Chemicals	CAS Number	Tribal Public Health Goal (mg/l)	Standards MCL (mg/l)
Terbacil	5902-51-2	0.09	–
Terbufos	13071-79-9	0.0004	–
Tetrachloroethane (1,1,1,2-)	630-20-6	0.07	–
Tetrachloroethane (1,1,2,2-)	79-34-5	0.00017	–
Tetrachloroethylene	127-18-4	Zero	0.005
Tetrachloroterephthalic acid	236-79-0	–	–
Trichlorofluoromethane	75-69-4	2.0	–
Toluene	108-88-3	1.0	1.0
Toxaphene	8001-35-2	Zero	0.003
2,4,5-TP (Silvex)	93-72-1	0.010	0.05
Trichloroacetic acid The total for the 5 haloacedic acids is 0.06 mg/L	76-03-9	0.02	0.06
Trichlorobenzene (1,2,4-)	120-82-1	0.07	0.07
Trichlorobenzene (1,3,5-)	108-70-3	0.04	–
Trichloroethane (1,1,1-)	71-55-6	0.2	0.2
Trichloroethane (1,1,2-)	79-00-5	0.00059	0.005

Chemicals	CAS Number	Tribal Public Health Goal (mg/l)	Standards MCL (mg/l)
Trichloroethylene	79-01-6	Zero	0.005
Trichlorophenol (2,4,6-)	88-06-2	0.01	–
Trichloropropane (1,2,3-)	96-18-4	0.1	–
Trifluralin	1582-09-8	0.01	–
Trimethylbenzene (1,2,4-)	95-63-6	–	–
Trimethylbenzene (1,3,5-)	108-67-8	10.0	–
Trinitroglycerol	55-63-0	0.005	–
Trinitrotoluene (2,4,6-)	118-96-7	0.002	–
Vinyl chloride	75-01-4	Zero	0.002
Xylenes	1330-20-7	10.0	10.0
Methyl tertiary butyl ether (MtBE)	1634-04-4	Zero	20 µg/L

Chemicals	CAS Number	Tribal Public Health Goal (mg/l)	Standards MCL (mg/l)
Ammonia	7664-41-7	30.0	–
Antimony	7440-36-0	0.0056	0.006
Arsenic	7440-38-2	Zero	0.010
Asbestos (fibers/l >10□m length)	1332-21-4	7 million fibers per liter	7 million fibers per liter
Barium	7440-39-3	2.0	2.0
Beryllium	7440-41-7	0.004	0.004
Boron	7440-42-8	6.0	–
Bromate	7789-38-0	Zero	0.010
Cadmium	7440-43-9	0.005	0.005
Chloramine = Monochloramine (free chlorine)	10599-90-3	4.0	4.0
Chlorine	7782-50-5	4.0	4.0
Chlorine dioxide	10049-04-4	0.8	0.8
Chlorite	7758-19-2	0.8	1.0
Chromium (total)	7440-47-3	0.1	0.1
Copper (at tap)	7440-50-8	1.3	TT = 1.3 If more than 10% of tap samples exceed the MCL

Chemicals	CAS Number	Tribal Public Health Goal (mg/l)	Standards MCL (mg/l)
Cyanide	143-33-9	0.140	0.2
Fluoride	7681-49-4	4.0	2.0
Lead (at tap)	7439-92-1	Zero	TT = 0.015
Manganese	7439-96-5	0.3	–
Mercury (inorganic)	7487-94-7	0.002	0.002
Molybdenum	7439-98-7	0.04	–
Nickel	7440-02-0	0.1	0.1
Nitrate (as N)	14797-55-8	10.0	10.0
Nitrite (as N)	14797-65-0	1.0	1.0
Nitrate + Nitrite (both as N)	_____	10.0	10.0
Perchlorate	14797-73-0	0.015	–
Selenium	7782-49-2	0.05	0.05
Silver	7440-22-4	0.0032	–
Strontium	7440-24-6	4.0	8 pCi/L
Thallium	7440-28-0	0.00024	0.002

Chemicals	CAS Number	Tribal Public Health Goal (mg/l)	Standards MCL (mg/l)
White phosphorous	7723-14-0	0.0001	–
Zinc	7440-66-6	2.0	–
Beta particle and photon activity	_____	Zero	4.0 mrem/yr.
Gross alpha particle activity	_____	Zero	15 pCi/L
Combined Radium 226 & 228	7440-14-4	Zero	5 pCi/L
Radioactivity (2 or more years)		Zero	4 mrem/year
Radon	10043-92-2	Zero	300 pCi/L
Tritium	10028-17-8	Zero	20,000 pCi/L
Uranium	7440-61-1	Zero	0.02

Chemicals	CAS Number	Tribal Public Health Goal (mg/l)	Standards MCL (mg/l)
Aluminum	7429-90-5	0.05 to 0.2 mg/L	
Chloride	7647-14-5	250 mg/L	See Section 3.I.
Color	_____	15 color units	See Section 3.C.
Copper	7440-50-8	1.0 mg/L	
Corrosivity	_____	non-corrosive	
Foaming agents	_____	0.5 mg/L	See Section 3.B.
Iron	7439-89-6	0.3 mg/L	
Odor	_____	3 threshold odor numbers	See Section 3.D. and Organoleptic Criteria
pH	_____	6.5 – 8.5	See Section 3.J.
Sulfate	7757-82-6	250 mg/L	250 mg/L
Total dissolved solids (TDS)	_____	500 mg/L	See Section 3.I
Sodium		20 mg/L (for individuals on a 500 mg/day restricted sodium diet).	

Chemicals	CAS Number	Tribal Public Health Goal (mg/l)	Standards MCL (mg/l)
Cryptosporidium		Zero	TT = Systems must filter to remove 99% of *Cryptosporidium*
Giardia lamblia		Zero	TT = 99.9% of *Giardia lamblia* killed or inactivated
Legionella		Zero	TT = EPA believes that if *Giardia* and viruses are inactivated, *Legionella* will also be controlled
Heterotrophic Plate Count (HPC)		Zero	See Section 3.L.
Total Coliforms		Zero	No more than 5.0% samples total coliform-positive in a month. Every sample that has total coliforms must be analyzed for fecal coliforms; no fecal coliforms are allowed.
Turbidity			See Section 3.G and 5.0 NTU in Drinking Water
Viruses & Pathogens (e.g., *Salmonella ,Shigella and Mycobacterium*)		Zero	99.99% killed/inactivated

Footnotes:

Tribal Public Health Goals are an estimate of acceptable drinking water levels for chemical substances based on health effects information provided by EPA in the October 2009 Edition of the "Drinking Water Standards and Health Advisories", EPA 822-R-09-011. Tribal Public Health Goals are not legally enforceable Water Quality Standards but are included to serve as guidance to Tribal officials. Chemical substances were included as Tribal Public Health Goals if there were <u>any</u> known risk of carcinogenic effects. They generally equate to the concentration of a chemical in drinking water that is NOT expected to cause any adverse non-carcinogenic effects for a lifetime of exposure. This concentration is generally based on an exposure of a 70 kg adult consuming 2 liters of water per day for their entire lifetime.

MCL's are Maximum Contaminant Levels and are legally enforceable water quality standards. They represent the highest level of a contaminant that is allowed in drinking water and are set as close to the level at which no known or anticipated adverse effect on health of persons occurs and which allow for an adequate margin of safety. MCL's use the best available analytical and treatment technologies and take cost into consideration.

Table 2
Miccosukee Tribe of Indians of Florida

Class III-A and Class III-B Water Quality Criteria

Priority Pollutants

			Freshwater		Human Health for the consumption of	
	Priority Pollutant	CAS Number	CMC[1] (acute) (µg/L)	CCC[1] (chronic) (µg/L)	Water + Organism (µg/L)	Organism Only (µg/L)
1	Antimony	7440360			5.6	640
2	Arsenic	7440382	340	150	0.018	0.14
3	Beryllium	7440417				
4	Cadmium	7440439	2.13	0.27		
5a	Chromium (III)	16065831	1803	86.2	100	
5b	Chromium (VI)	18540299	16	11	100	
6	Copper	7440508	14	9.33	1,300	
7	Lead	7439921	81.64	3.18		
8a	Mercury	7439976	1.4	0.012		
8b	Methylmercury	22967926				0.3 mg/kg
9	Nickel	7440020	469.17	52.16	610	4,600
10	Selenium	7782492		5.0	170	4200
11	Silver	7440224	3.78			
12	Thallium	7440280			0.24	0.47
13	Zinc	7440666	119.82	119.82	7,400	26,000
14	Cyanide	57125	22	5.2	140	140
15	Asbestos	1332214			7 million fibers/L	
16	2,3,7,8-TCDD (Dioxin)	1746016			5.0E-9	5.1E-9
17	Acrolein	107028	3	3	6	9
18	Acrylonitrile	107131			0.051	0.25
19	Benzene	71432			1.2	51
20	Bromoform	75252			4.3	140
21	Carbon Tetrachloride	56235			0.23	1.6
22	Chlorobenzene	108907			130	1,600
23	Chlorodibromomethane	124481			0.40	13
24	Chloroethane	75003				
25	2-Chloroethylvinyl Ether	110758				
26	Chloroform	67663			5.7	470
27	Dichlorobromomethane	75274			0.27	17

28	1,1-Dichloroethane	75343				
29	1,2-Dichloroethane	107062			0.38	37
30	1,1-Dichloroethylene	75354			0.057	3.2
31	1,2-Dichloropropane	78875			0.50	15
32	1,3-Dichloropropene	542756			0.34	21
33	Ethylbenzene	100414			530	2,100
34	Methyl Bromide	74839			47	1,500
35	Methyl Chloride	74873				
36	Methylene Chloride	75092			4.6	590
37	1,1,2,2-Tetrachloroethane	79345			0.17	4.0
38	Tetrachloroethylene	127184			0.69	3.3
39	Toluene	108883			1,300	15,000
40	1,2-Trans-Dichloroethylene	156605			140	10,000
41	1,1,1-Trichloroethane	71556				
42	1,1,2-Trichloroethane	79005			0.59	16
43	Trichloroethylene	79016			2.5	30
44	Vinyl Chloride	75014			0.025	2.4
45	2-Chlorophenol	95578			81	150
46	2,4-Dichlorophenol	120832			77	290
47	2,4-Dimethylphenol	105679			380	850
48	2-Methyl-4,6-Dinitrophenol	534521			13	280
49	2,4-Dinitrophenol	51285			69	5,300
50	2-Nitrophenol	88755				
51	4-Nitrophenol	100027				
52	3-Methyl-4-Chlorophenol	59507				
53	Pentachlorophenol	87865	19	15	0.27	3.0
54	Phenol	108952			300	300
55	2,4,6-Trichlorophenol	88062			1.4	2.4
56	Acenaphthene	83329			20	20
57	Acenaphthylene	208968				
58	Anthracene	120127			8,300	40,000
59	Benzidine	92875			0.000086	0.00020
60	Benzo(a) Anthracene	56553			0.0028	0.018
61	Benzo(a) Pyrene	50328			0.0028	0.018
62	Benzo(b) Fluoranthene	205992			0.0028	0.018
63	Benzo(ghi) Perylene	191242				
64	Benzo(k) Fluoranthene	207089			0.0028	0.018
65	Bis(2-Chloroethoxy) Methane	111911				
66	Bis(2-Chloroethyl) Ether	111444			0.030	0.53
67	Bis(2-Chloroisopropyl) Ether	108601			1,400	65,000
68	Bis(2-Ethylhexyl) Phthalate[X]	117817			1.2	2.2
69	4-Bromophenyl Phenyl Ether	101553				
70	Butylbenzyl Phthalate[W]	85687			1,500	1,900
71	2-Chloronaphthalene	91587			1,000	1,600
72	4-Chlorophenyl Phenyl Ether	7005723				

73	Chrysene	218019			0.0028	0.018
74	Dibenzo(a,h)Anthracene	53703			0.0028	0.018
75	1,2-Dichlorobenzene	95501			420	1,300
76	1,3-Dichlorobenzene	541731			320	960
77	1,4-Dichlorobenzene	106467			63	190
78	3,3'-Dichlorobenzidine	91941			0.021	0.028
79	Diethyl Phthalate[W]	84662			17,000	44,000
80	Dimethyl Phthalate[W]	131113			270,000	1,100,000
81	Di-n-Butyl Phthalate[W]	84742			2,000	4,500
82	2,4-Dinitrotoluene	121142			0.11	3.4
83	2,6-Dinitrotoluene	606202				
84	Di-n-Octyl Phthalate	117840				
85	1,2-Diphenylhydrazine	122667			0.036	0.20
86	Fluoranthene	206440			130	140
87	Fluorene	86737			1,100	5,300
88	Hexachlorobenzene	118741			0.00028	0.00029
89	Hexachlorobutadiene	87683			0.44	18
90	Hexachlorocyclopentadiene	77474			40	1,100
91	Hexachloroethane	67721			1.4	3.3
92	Ideno(1,2,3-cd)Pyrene	193395			0.0028	0.018
93	Isophorone	78591			8.4	600
94	Naphthalene	91203				
95	Nitrobenzene	98953			17	690
96	N-Nitrosodimethylamine	62759			0.00069	3.0
97	N-Nitrosodi-n-Propylamine	621647			0.0050	0.51
98	N-Nitrosodiphenylamine	86306			3.3	6.0
99	Phenanthrene	85018				
100	Pyrene	129000			830	4,000
101	1,2,4-Trichlorobenzene	120821			35	70
102	Aldrin	309002	3.0		0.000049	0.000050
103	alpha-BHC	319846			0.0026	0.0049
104	beta-BHC	319857			0.0091	0.017
105	gamma-BHC (Lindane)	58899	0.95 K	0.08	0.019	0.063
106	delta-BHC	319868				
107	Chlordane	57749	2.4	0.0043	0.00057	0.00059
108	4,4'-DDT	50293	1.1	0.001	0.00022	0.00022
109	4,4'-DDE	72559			0.00022	0.00022
110	4,4'-DDD	72548			0.00031	0.00031
111	Dieldrin	60571	0.24	0.0019	0.000052	0.000054
112	alpha-Endosulfan	959988	0.22	0.056	62	89
113	beta-Endosulfan	33213659	0.22	0.056	62	89
114	Endosulfan Sulfate	1031078			62	89
115	Endrin	72208	0.086	0.0023	0.059	0.060
116	Endrin Aldehyde	7421934			0.29	0.30
117	Heptachlor	76448	0.52	0.0038	0.000079	0.000079

118	Heptachlor Epoxide	1024573	0.52	0.0038	0.000039	0.000039
119	Polychlorinated Biphenyls (PCBs)			0.014	0.000064	0.000064
120	Toxaphene	8001352	0.73	0.0002	0.00028	0.00028
121	Dichlorodifluromethane	75718			6900	570000

Footnotes:

Arsenic Criteria: For Freshwater CMC and CCC, the recommended water quality criterion for Arsenic was derived from data for arsenic (III), but is applied here to total arsenic, which might imply that arsenic (III) and arsenic (V) are equally toxic to aquatic life and that their toxicities are additive. For Human Health Consumption of Water & Organisms, the water quality criterion for arsenic refers to the inorganic form only.

Metals Criteria: All metals are measured as total recoverable unless specifically authorized by the Miccosukee Environmental Protection Agency to use dissolved. Conversion Factors applied in the table are found in Appendix A.

Cadmium, Chromium (III), Lead, Nickel, Copper, Silver and Zinc Criteria: The freshwater criterion for these metals are expressed as a function of hardness (mg/L) in the water column. The values given here correspond to a hardness of 100 mg/L. Criteria values for other hardness may be calculated from the following: CMC = $\exp\{m_A [\ln(\text{hardness})] + b_A\}$, or CCC= $\exp\{m_C [\ln(\text{hardness})] + b_C\}$ and the parameters specified in Appendix B- Parameters for Calculating Freshwater Metals Criteria That Are Hardness-Dependent.

Pentachlorophenol: Freshwater aquatic life values for the criteria are expressed as a function of pH, and are calculated as follows: CMC = exp(1.005(pH)-4.869); CCC = exp(1.005(pH)-5.134). Values displayed in table correspond to a pH of 7.8.

Asbestos Criteria: The criterion for asbestos is the Maximum Contaminant Level (MCL) developed under the Safe Drinking Water Act (SDWA).

Methylmercury Criterion: The fish tissue residue criterion for methylmercury is based on a total fish consumption rate of 0.0175 kg/day.

Selenium Criteria: The CMC = 1/[(f1/CMC1) + (f2/CMC2)] where f1 and f2 are the fractions of total selenium that are treated as selenite and selenate, respectively, and CMC1 and CMC2 are 185.9 g/l and 12.82 g/l, respectively.

PCB's: This criterion applies to total pcbs. (e.g., the sum of all congener or all isomer or homolog or Aroclor analyses.)

Endrin Criteria: The derivation of the CCC for Endrin did not consider exposure through the diet, which is probably important for aquatic life occupying upper trophic levels.

Cyanide Criterion: The water quality criterion is expressed as g free cyanide (as CN)/L.

Endosulfan Criteria: The value for endosulfan is most appropriately applied to the sum of alpha-endosulfan and beta-endosulfan.

Mercury Criteria: The water quality criteria was derived from data for inorganic mercury (II), but is applied here to total mercury. If a substantial portion of the mercury in the water column is methylmercury, this criterion will probably be under protective. In addition, even though inorganic mercury is converted to methylmercury and methylmercury bioaccumulates to a great extent, this criterion does not account for uptake via the food chain because sufficient data were not available when the criterion was derived.

DDT Criteria: This criterion applies to DDT and its metabolites (i.e., the total concentration of DDT and its metabolites should not exceed this value).

NRWQC: The Miccosukee Tribe derived most of these criteria from EPA's "National Recommended Water Quality Criteria" (NRWQC) list. The NRWQC is a compilation of water quality criteria for the protection of aquatic life and human health in surface waters and is required by Section 307(a)(1) of the federal Clean Water Act. However, the NRWQC does not contain criteria for each and every pollutant on the list. All pollutants were included in the Miccosukee Water Quality Standards to maintain consistence with the NRWQC.

Non Priority Pollutants

			Freshwater		Human Health for the consumption of	
Non Priority Pollutai		CAS Number	CMC (acute) (µg/L)	CCC (chronic) (µg/L)	Water + Organism (µg/L)	Organism Only (µg/L)
1	Alkalinity	—		20000		
2	Aluminum pH 6.5 – 9.0	7429905	750	87		
3	Ammonia	7664417	*See Appendix c*			
4	Aesthetic Qualities	—	NARRATIVE STATEMENT—See Section 3 of the Miccosukee Water Quality Standards for the Narrative Criteria			
5	Bacteria	—	FOR PRIMARY RECREATION AND SHELLFISH USES— NARRATIVE STATEMENT—See Section 3 of the Miccosukee Water Quality Standards for the Narrative Criteria			
6	Barium	7440393			1,000	
7	Boron	—	NARRATIVE STATEMENT—See Section 3 of the Miccosukee Water Quality Standards for the Narrative Criteria			
8	Chloride	16887006	860000	230000		
9	Chlorine	7782505	19	11		
10	Chlorophenoxy Herbicide (2,4,5,-TP)	93721			10	
11	Chlorophenoxy Herbicide (2,4-D)	94757			100	

12	Chloropyrifos	2921882	0.083	0.041		
13	Color	—	NARRATIVE STATEMENT—See Section 3 of the Miccosukee Water Quality Standards for the Narrative Criteria			
14	Demeton	8065483		0.1		
15	Ether, Bis(Chloromethyl)	542881			0.00010	0.00029
16	Gases, Total Dissolved	—	Freshwater MCL = 110% SAT			
17	Guthion	86500		0.01		
18	Hardness	—	NARRATIVE STATEMENT— See Section 3 of the Miccosukee Water Quality Standards for the Narrative Criteria			
19	Hexachlorocyclo -hexane-Technical	608731			0.0123	0.0414
20	Iron	7439896		1000	300	
21	Malathion	121755		0.1		
22	Manganese	7439965			50	100
23	Methoxychlor	72435		0.03	40	
24	Mirex	2385855		0.001		
25	Nitrates	14797558			10,000	
26	Nitrosamines	—			0.0008	1.24
27	Dinitrophenols	25550587			69	5300
28	Nonylphenol	84852153	28	28		
29	Nitrosodibutylamine	924163			0.0063	0.22
30	Nitrosodiethylamine	55185			0.0008	1.24
31	Nitrosopyrrolidine	930552			0.016	34
32	Oil and Grease	—	NARRATIVE STATEMENT— See Section 3 of the Miccosukee Water Quality Standards for the Narrative Criteria			
33	Oxygen, Dissolved Freshwater	7782447	NARRATIVE STATEMENT - See Section 3 of the Miccosukee Water Quality Standards for the Narrative Criteria			
34	Diazinon	333415	0.17	0.17		
35	Parathion	56382	0.065	0.013		
36	Pentachlorobenzene	608935			1.4	1.5
37	pH	—		6.5 – 9 F	5 – 9	
38	Phosphorus Elemental	7723140				
39	Nutrients	—	NARRATIVE STATEMENT— See Section 3 of the Miccosukee Water Quality Standards for the Narrative Criteria			
40	Solids Dissolved and Salinity	—			250,000	
41	Solids	—	NARRATIVE STATEMENT— See Section 3 of the Miccosukee Water Quality			

	Suspended and Turbidity		Standards for the Narrative Criteria			
42	Sulfide-Hydrogen Sulfide	7783064		2.0		
43	Tainting Substances	—	NARRATIVE STATEMENT— See Section 3 of the Miccosukee Water Quality Standards for the Narrative Criteria			
44	Temperature	—	SPECIES DEPENDENT CRITERIA— See Section 3 of the Miccosukee Water Quality Standards for the Narrative Criteria			
45	Tetrachlorobenzene,1,2,4,5	95943			0.97	1.1
46	Tributyltin (TBT)	—	0.46	0.072		
47	Trichlorophenol, 2,4,5-	95954			1	3,600

Organoleptic Effects (e.g., taste and odor)

	Pollutant	CAS Number	Organoleptic Effect Criteria (µg/L)
1	Acenaphthene	83329	20
2	Monochlorobenzene	108907	20
3	3-Chlorophenol	108-43-0	0.1
4	4-Chlorophenol	106489	0.1
5	2,3-Dichlorophenol	579-24-9	0.04
6	2,5-Dichlorophenol	583-78-0	0.5
7	2,6-Dichlorophenol	87-65-8	0.2
8	3,4-Dichlorophenol	95-77-2	0.3
9	2,4,5-Trichlorophenol	95954	1
10	2,4,6-Trichlorophenol	88062	2
11	2,3,4,6-Tetrachlorophenol	58-90-2	1
12	2-Methyl-4-Chlorophenol	1570-64-5	1800
13	3-Methyl-4-Chlorophenol	59507	3000
14	3-Methyl-6-Chlorophenol	615-74-7	20
15	2-Chlorophenol	95578	0.1
16	Copper	7440508	1000
17	2,4-Dichlorophenol	120832	0.3
18	2,4-Dimethylphenol	105679	400
19	Hexachlorocyclopentadiene	77474	1
20	Nitrobenzene	98953	30
21	Pentachlorophenol	87865	30
22	Phenol	108952	300

23	Zinc	7440666	5000

Appendix A—Conversion Factors for Dissolved Metals

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

Note: All metals will be measured as total recoverable unless specifically authorized by the Miccosukee Environmental Protection Agency to use dissolved.

Appendix B—Parameters for Calculating Freshwater Metals Criteria That Are Hardness-Dependent

Chemical	m_A	b_A	m_C	b_C
Cadmium	1.0166	-3.924	0.7409	-4.719
Chromium III	0.8190	3.7256	0.8190	0.6848
Copper	0.9422	-1.700	0.8545	-1.702
Lead	1.273	-1.460	1.273	-4.705
Nickel	0.8460	2.255	0.8460	0.0584
Silver	1.72	-6.59	—	—
Zinc	0.8473	0.884	0.8473	0.884

Hardness-dependant metals' criteria may be calculated from the following:

$$CMC = \exp\{m_A [\ln(\text{hardness})] + b_A\}$$

$$CCC = \exp\{m_C [\ln(\text{hardness})] + b_C\}$$

Appendix C - Calculation of Freshwater Ammonia Criterion

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

   - Where salmonid fish are present:
     - $CMC = (0.275/(1 + 10^{7.204-pH})) + (39.0/(1 + 10^{pH-7.204}))$
   - Or where salmonid fish are not present:
     - $CMC = (0.411/(1 + 10^{7.204-pH})) + (58.4/(1 + 10^{pH-7.204}))$

2.

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

   - When fish early life stages are present:
     - $CCC = ((0.0577/(1 + 10^{7.688-pH})) + (2.487/(1 + 10^{pH-7.688}))) \times MIN(2.85, 1.45 \cdot 10^{0.028 \cdot (25-T)})$
   - When fish early life stages are absent:
     - $CCC = ((0.0577/(1 + 10^{7.688-pH})) + (2.487/(1 + 10^{pH-7.688}))) \times 1.45 \cdot 10^{0.028 \cdot (25-MAX(T,7))}$

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

Q: CLASS II WATER CRITERIA: Reserved (No waters yet designated. Criteria will be developed when Class II waters are designated)

R: CLASS III-A AND CLASS III-B CRITERIA: are contained in Tables 2,3 and 4.

(INSERT TABLE 2 HERE)

NOTE: In addition to these water quality criteria, other narrative standards may also apply.

Section 4. Classification of Tribal Water Bodies:

The Miccosukee Tribe hereby adopts the following Water Body Classifications:

A. CLASS I WATERS: Those Tribal water bodies which are used to supply potable water.

B. CLASS II WATERS: Those Tribal water bodies which are used for the propagation or harvesting of shellfish or other invertebrates used for food sources to humans. Currently, no Class II waters are identified; however, this class is reserved for future designation.

C. CLASS III-A WATERS: Those Tribal water bodies which are used for fishing, frogging, recreation (including airboating), and the propagation and maintenance of a healthy, well-balanced population of fish and other aquatic life and wildlife. These waters have been primarily designated for preservation of native plants and animals of the natural Everglades ecosystem.

D. CLASS III-B WATERS: Those Tribal water bodies which are used for agricultural or livestock water supply or other beneficial uses. These waters are designated as "fishable and swimmable" but nutrient specific criteria do not apply to these waters. Class III-A and Class III-B criteria are contained in Tables 2,3 and 4. Class III-B criteria are the same as Class III-A criteria except that total phosphorus, turbidity, dissolved oxygen, ammonia, biological integrity, nuisance species and nutrient criter ia shall not apply. Discharges of the above mentioned substances into Class III-B waters shall not be made which result in undesirable aquatic life effects or which result in chronic or acute toxicity to aquatic life. In waters which are designated as Class III-B, dissolved oxygen must be maintained at levels which will support indigenous aquatic life.

Section 5. Tribal Water Body Uses and Standards Specific to the Uses

A. NORTH GRASS: The uses, classification and standards for the surface waters that pass through the Miccosukee Indian Federal Reservation, within the exterior boundaries of the area

known as the "North Grass". The North Grass is defined as that area bounded by the northern boundary of the reservation, the eastern edge of the L-28 levee (which is east of the L-28 canal), the southern edge of the C-60 Canal, and the eastern boundary of the reservation. [REF: Map, Appendix 1(A)]

1. Designated Uses:

a. * Preservation of natural populations of Native Plant and Animal Communities specific to the Everglades Ecosystem
b. * Propagation of Fish and Wildlife and aquatic life
c. * Hunting, Fishing, Frogging, and Airboating
d. * Traditional Agriculture, i.e., Growing Corn without the addition of fertilizers or other chemicals
e. * Hunting camp leases (previously existing hunting camps only)

[Asterisk (*) indicates an existing use at the time these standards were adopted.]

2. Classification: The Miccosukee Tribe hereby adopts the surface waters of the North Grass as a Class III-A water body and an Outstanding Miccosukee Water (OMW). In addition to any other narrative, numeric or sediment standards contained herein, the Total Phosphorus level should not exceed 10 parts per billion maximum for the surface waters of the North Grass.

B. SOUTH GRASS: The uses, classification and standards for the surface waters that pass through the Miccosukee Indian Federal Reservation, within the exterior boundaries of the area known as the "South Grass". The South Grass is defined as the area bounded by southern edge of the C-60 canal, the eastern boundary of the reservation, the southern boundary of the reservation, the eastern edge of the L-28 canal (which is south of the L-28 Tieback Canal), a line running north from the L-28 Canal (where the L-28 Canal turns northwest to become the L-28 Tieback Canal) until this line intersects the oil pipeline, the center of the oil pipeline until the oil pipeline intercepts the L-28 Interceptor Canal, and the eastern edge of the L-28 levee (which is east of the L-28 Canal). [REF : Map, Appendix 1(B)]

1. Designated Uses:

a. * Preservation of natural populations of Native Plant and Animal Communities Specific to the Everglades Ecosystem
b. * Propagation of Fish and Wildlife and aquatic life
c. * Hunting, Fishing, Frogging, and Airboating
d. * Traditional Agriculture, i.e., Growing Corn without the addition of fertilizers or other chemicals
e. * Hunting camp leases (previously existing hunting camps only)

[Asterisk (*) indicates an existing use at the time these standards were adopted]

2. Classification: The Miccosukee Tribe hereby adopts the surface waters of the South Grass as a Class III-A waterbody and Outstanding Miccosukee Water (OMW). In addition to any other narrative, numeric, biological or sediment standards contained herein, the Total Phosphorus level should not exceed 10 parts per billion maximum for the surface waters of the South Grass.

C. GAP: The uses, classification and standards for the surface waters that pass through the Miccosukee Indian Federal Reservation, within the exterior boundaries of the area known as the "GAP". The Gap is defined as that area which is bounded by the southern boundary of the reservation, the western boundary of the reservation, the northeastern edge of the L-28 Interceptor Canal, the oil pipeline which runs generally south from the L-28 Interceptor Canal until the pipeline intercepts a line running north from the L-28 Canal where the L-28 canal turns northwest to become the L-28 Tieback Canal, and the eastern edge of the L-28 canal (which is south of the L-28 Tieback Canal). [REF : Map, Appendix 1 (C)]

1. Designated Uses:

a. * Preservation of natural populations of Native Plant and Animal Communities Specific to the Everglades Ecosystem
b. * Propagation of Fish and Wildlife
c. * Hunting, Fishing, Frogging and Airboating
d. * Traditional Agricultu re, i.e., Growing Corn without the use of fertilizers or other chemicals
e. * Hunting camp leases (previously existing hunting camps only)

[Asterisk (*) indicates an existing use at the time these standards were adopted.]

2. Classification: The Miccosukee Tribe hereby adopts the surface waters of the Gap as a Class III-A waterbody and Outstanding Miccosukee Water (OMW). In addition to any other narrative, numeric, biological or sediment standards contained herein, the Total Phosphorus level should not exceed 10 parts per billion maximum for the surface waters of the Gap.

D. TRIANGLE: The uses, classification and standards for the surface waters that pass through the Miccosukee Indian Federal Reservation, within the exterior boundaries of the area known as the "Triangle". The Triangle is defined as the area bounded by the centerline of US Highway I-75, the eastern edge of the L-28 levee (which is east of the L-28 Canal), the northeastern edge of the L-28 Interceptor Canal, and the western boundary of the reservation. [REF : Appendix 1(D)]

1. Designated Uses:

a. Light Industrial or Commercial Enterprises
b. Small Community Development (Residential)
c. Agricultural activities
d. * Tourism Related Activities (including Campgrounds and theme parks)

e. * Cattle Grazing (Native Range only)
f. Retention/Detention Reservoirs

[Asterisk (*) indicates an existing use at the time these standards were adopted.]

2. Classification: The Miccosukee Tribe hereby adopts the surface waters of the Triangle as a Class III-B waterbody.

E. RECTANGLE: The uses and standards for the surface waters that pass through the Miccosukee Indian Federal Reservation, within the exterior boundaries of the area known as the "Rectangle". The Rectangle is the area bounded by the centerline of US Highway I-75, the western boundary of the reservation, the northern boundary of the reservation, and the eastern edge of the L-28 levee (which is east of the L-28 Canal). [REF : Map Appendix 1(E)]

1. Designated Uses:

a. * Industrial or Commercial Enterprises
b. * Cattle Grazing
c. * Small Community Development (Residential)
d. * Agricultural, e.g., Citrus, Row Crops, forestry, etc.
e. * Tourism Related Activities (including campgrounds and theme parks)
f. * Retention/Detention Reservoirs

[Asterisk (*) indicates an existing use at the time these standards were adopted.]

2. Classification: The Miccosukee Tribe hereby adopts the surface waters of the Rectangle as a Class III-B waterbody.

F. TAMIAMI TRAIL RESERVATION, KROME AVENUE RESERVATION, AND DADE CORNERS RESERVATION: The uses, classification and standards for the surface waters that pass through the area known as the "Tamiami Trail Reservations" and the surface waters that pass through the Miccosukee Indian Federal Reservation, in the area known as the "Krome Avenue Reservation" and the surface waters that pass through the Miccosukee Indian Federal Reservation, in the area known as the "Dade Corners Reservation". The Tamiami Trail Reservation, Krome Avenue Reservation and Dade Corners Reservation are defined as those areas in the vicinity of Krome Avenue and Tamiami Trail which were designated as federal trust lands by action of the Secretary of the Interior in 1989, 1993 and 1995; and those three parcels (approximately 1 ½ acres in size) located along the northern edge of Tamiami Trail (US Highway 41) west of S-12C and east of S-343B, which are held in federal trust as Indian Reservation. [REF: Map Appendix 1(F)]

1. Designated Uses:

a. * Residential Community Development
b. * Light Industrial or Commercial Enterprises

c. * Hunting, Fishing, Frogging and Commercial Airboating
d. * Tourism Related Activities
e. Tribal Administrative and Governmental Headquarters Complex

[Asterisk (*) indicates an existing use at the time these standards were adopted]

2. Classification: The Miccosukee Tribe hereby adopts the surface waters of the Tamiami Trail Reservations, the Krome Avenue Reservation and the Dade Corners Reservation, as Class III-A waterbodies.

G. MICCOSUKEE RESERVED AREA: The uses, classification and standards for the surface waters that pass through the area known as the Miccosukee Reserved Area. The Miccosukee Reserved Area is defined as that area in the vicinity of the northern boundary of Everglades National Park, which are designated as federal indian reservation, by action of the United States Congress in Public Law 105-313, dated October 30, 1998. [REF: Map Appendix 1(G)]

1. Designated Uses:

a. * Residential Community Development
b. * Light Industrial or Commercial Enterprises
c. * Hunting, Fishing, Frogging
d. * Tourism Related Activities
e. Tribal Administrative and Governmental Headquarters Complex

[Asterisk (*) indicates an existing use at the time these standards were adopted]

2. Classification: The Miccosukee Tribe hereby adopts the surface waters of the Miccosukee Reserved Area as Class III-A waterbodies.

SECTION 6. Sampling and Analysis

A. Sample collection, preservation, and analysis used to determine water quality and to maintain the standards set forth in the Water Quality Standards shall be performed in accordance with procedures prescribed by the latest editions of any of the following authorities:

1. American Health Association, "Standard Methods for the Examination of Water and Wastewater".

2. "Methods for Chemical Analysis of Water and Wastes"; "EPA Guidelines Establishing Test Procedures for the Analysis of Pollutants".

3. It is required that all methods of analysis must be conducted in accordance with 40 CFR Part 136. Also, the Tribal approval of sampling and analysis methods is required to insure that the appropriate method is used.

B. Bacteriological Surveys: The monthly geometric mean is used in assessing attainment of standards when a minimum of five samples are collected in a 30 day period. When less than 5 samples are collected in a 30 day period, no single sample shall exceed the applicable upper limit for bacteria density set forth in section 3.

C. Sampling Procedures:

1. Canals: Canal monitoring stations will be located a minimum distance of 200 feet from any pump stations to ensure adequate vertical and lateral mixing.

2. Water Conservation Areas: Sampling stations in the Everglades marsh interior (North Grass, South Grass and Gap) shall be located at least 50 feet towards the interior of the marsh, measured from the banks on any canal which discharges into the Water Conservation Area, to ensure that the sample is, in fact, a marsh sample and not a canal sample. D.O. Levels will be analyzed to obtain the DO volume for each site. In shallow waters (1 ft. or less) a smaller DO measurement may by obtained. In canal samples, Dissolved Oxygen measurements will be made 3 to 5 feet below the surface of the water.

SECTION 7. General Policies on Variances and Mixing Zones

This section contains Tribal policies on Variances and Mixing Zones.

A. VARIANCE POLICY

1. Variances may be granted by the Tribal Government to dischargers for pollutant specific criteria. Variances may be granted to allow additional time to attain the standard by implementing corrective procedures and BMP's when the Tribe believes the standard can ultimately be attained. This process shall be allowed with the goal of meeting the criteria rather than removing the designated use of the water body. All variances granted in accordance with the above procedures are subject to final EPA approval."

2. All variances will be reviewed by the Tribal Council and EPA at least once in every three years. As part of the review process, the variance will be subject to public notice, an opportunity for the public to comment, and a public hea ring. The public notice shall contain a clear description of the impact of the variance upon achieving water quality standards in the affected stream segment.

3. Variances shall be granted based upon the following guidelines:

a. The discharger shall demonstrate that meeting the standard is currently unattainable based on one or more of the grounds outlined in 40 CFR 131.10 (g) for removing a designated use.

b. Granting of the variance shall not result in an unreasonable risk to human health, aquatic biota or the wildlife habitat.

c. All downstream uses shall be attained and maintained, and the discharger is making reasonable progress toward meeting the standard.

4. The variance request shall include the following information:

a. The nature and duration of the request.

b. The relevant results of the water quality analysis and evidence indicating if designated uses are being met which may include but not limited to biological assessments.

c. Explanation and evidence of pollution control strategies and BMP's for compliance with standards.

d. Economic and legal factors which are directly relevant to the applicant's ability to achieve compliance.

e. Proposed compliance schedule including the date each step toward compliance will be achieved, and the final compliance date.

f. A plan of provision for safety should there be an excessive rise in the contaminant level for which the variance is requested.

g. A plan for interim control measures during the effective period the variance.

h. Perform monitoring and other reasonable requirements prescribed by the variance.

i. Review of alternative pollution control strategies.

j. Information believed to be pertinent by the applicant or required by the variance.

5. The Variance request shall be considered and processed as follows:

a. The Tribal Council shall act upon the variance request within 90 days of receipt of the request. Consideration shall be given to the extent of the economic and social impacts of requiring compliance with existing instream criteria.

b. Should the Tribal Council decide to deny the request the applicant shall be notified of the intent for denial. Such notice shall state the reason for denial within 30 days after the receipt of the such notice, the applicant may request a hearing. If no hearing is requested by the applicant within the 30 day period, the applicant shall be denied.

c. If the variance is granted, the applicant shall be notified in writing. This notice shall identify the variance, the facility covered and the period of time for which the variance

shall be effective. The variance shall be effective for a period of three years before rejustification.

d. Variance termination may occur if and when the discharge complies with the standards criteria or may be terminated if the discharger fails to comply with monitoring and other prescribed requirements.

e. The discharger must either meet the standard upon the expiration of the time period or make a new demonstration of "unattainability" and show that reasonable progress is being made toward meeting the standard.

f. The compliance schedule for a variance shall include increments of progress of each contaminant level covered by the variance and implementation of control measures required for each contaminant. All variances granted shall be subject to a public hearing. The hearing shall be designed to promote public knowledge of the variance and hear any grievance or objection.

B. MIXING ZONES

All Tribal surface waters, which have effluent being discharged into them, shall have a continuous zone maintained in which the water is of adequate quality to allow the migration of aquatic life with no significant effect on their population. The cross-sectional area of wastewater mixing zones shall be less than 1/4 of the cross-sectional area or flow volume of the receiving canal.

The following is the Tribal mixing zone policy that deals with size, shape, location, outfall design and in-zone quality.

1. Mixing Zone Location:

a. Where a mixing zone is allowed, water quality standards are met at the edge of that regulatory mixing zone during design flow conditions and generally provide:

b. A continuous zone of passage that meets water quality criteria for free swimming and drifting organisms; and prevention of impairment of critical resource areas.

c. Location of the mixing zone should be such that it should allow the passage of free-swimming and drifting organisms without any significant effects on their populations. Also it should allow (I) food is carried to the sessile filter feeders and other nonmotile organisms (II) spatial distribution of organisms and reinforcement of weakened populations are enhanced (III) embryos and larvae of some fish species develop while drifting. Also, the mixing zone location should allow for anadromous and catadromous species must be able to reach suitable spawning areas. Their young must be assured a return route to their growing and living areas. Mixing zone should not create water with inadequate chemical or physical quality which might create

barriers or blocks that prevent or interfere with these types of essential transport and movement of the above mentioned fish species.

2. Mixing Zone Size:

a. The area or volume of an individual zone or group of zones must be limited to an area or volume as small as practicable that will not interfere with the designated uses or with the established community of aquatic life in the segment for which the uses are designated. The size of the mixing zone should not cause lethality to passing organisms and that, considering likely pathways of exposure no significant human health risks exist.

b. In the zone immediately surrounding the outfall, the acute criteria should be met at the edge of the zone. In the next mixing zone, chronic criteria should be met at the edge of that mixing zone.

c. The cross-sectional area of the mixing zones shall be less than 1/4 of the cross-sectional area or volume of the receiving water body. The acute mixing zone should be sized to prevent lethality to passing organisms and the chronic mixing zone should be sized to protect the ecology of the receiving waterbody.

3. Mixing Zone Outfall Design:

The Tribal mixing zone policy requires that the best practicable engineering design is used and that the location of the existing or proposed outfall will avoid significant adverse aquatic resource and water quality impacts of the wastewater discharge.

4. Mixing Zone In-Zone Quality:

The Tribal mixing zone policy requires that the In-Zone water be free from:

a. Materials in concentrations that will cause acutely toxic conditions to aquatic life.

b. Materials in concentrations that settle to form objectionable deposits.

c. Floating debris, oil, scum and other material in concentrations that form nuisances.

d. Substances in concentrations that produce objectionable color, odor, taste, or turbidity, and substances in concentrations that produce undesirable aquatic life or result in a dominance of nuisance species.

5. Mixing Zone Shape:

The Tribal mixing zone policy requires that the shape of a mixing zone should be a simple configuration that is easy to locate in a body of water and that avoids impingement on biologically important areas. No shore-hugging plumes are allowed in any Tribal water bodies.

SECTION 8. Definitions:

Acute Toxicity. A concurrent and delayed adverse effect(s) that results from an acute exposure and occurs within any short observation period which begins when the exposure begins, may be extended beyond the exposure period, and usually does not constitute a substantial portion of the life span of the organism.

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

Antidegradation. 40 CFR Section 131.6 requires each State/Tribe to include an antidegradation policy consistent with 40 CFR Section 131.12 when submitting water quality standards to EPA. These policies are designed to protect water quality and provide a method of assessing activities that may impact the integrity of the water body. (The policy set forth in U.S. Environmental Protection Agency Water Quality Standards Regulations under the Clean Water Act whereby existing uses and the level of water quality necessary to maintain those uses is maintained and protected.)

Aquatic Biota. A biological association consisting of all interacting populations of aquatic flora and fauna inhabiting a given water body for the whole or a portion of their life cycles.

Attainable Use. At a minimum, uses are deemed attainable if they can be achieved by the imposition of effluent limits required under sections 301(b) and 306 of the Act (33 USC 1311 & 1316) and cost effective and reasonable best management practices for nonpoint source control.

Background. The condition of a water body in the absence of the activity or discharge under consideration, based on the best scientific information available to the Water Resources Department.

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

Carcinogenic. Cancer producing.

Chronic Toxicity. Any harmful effect sustained by either resident aquatic populations or indicator species used as test organisms in a controlled toxicity test due to long term exposure (relative to the life cycle of the organism) or exposure during a substantial portion of the duration of a sensitive period of the life cycle to a specific chemical substance or mixture of

chemicals (as in an effluent). In the absence of extended periods of exposure, early life stages or reproductive toxicity tests may be used to define chronic impacts.

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

Cumulative. Increasing by successive additions.

Designated Uses. The present and future most beneficial use of a body of water as designated by the Miccosukee Environmental Protection Agency by means of the classification system contained in this document whether or not they are being attained.

Dissolved Oxygen. The amount of oxygen dissolved in water or the amount of oxygen available for biochemical activity in water, commonly expressed as a concentration in milligrams per liter.

Drinking Water. Water that meets the general criteria set forth in Section 3 above and that meet all applicable treatment requirements in order to be usable for drinking or cooking.

Effluent Limitation. Any restriction established by the permitting authority or suggested for inclusion as permit conditions by the Miccosukee Tribe on quantities, rates or concentrations of chemical, physical, biological or other constituents which are discharged from sources into Tribal waters.

Eutrophication. Abundance of or production of algae and macrophytes resulting from inputs of silt, nutrients, and organic matter which would result in increased concentrations of nutrients or seasonal oxygen deficiency. These inputs may be derived from either human induced or natural processes or both.

Existing Uses. Those uses actually attained in a surface water body on or after November 28, 1975, whether or not they are referred to in this document.

Fecal Coliform. Gram negative, non spore-forming rod-shaped bacteria which are present in the gut or the feces of warm blooded animals. Fecal coliform bacteria generally includes organisms which are capable of producing gas from lactose broth in a suitable culture medium within 24 hours at 44.5+/-0.2 degree Centigrade.

Geometric Mean. Antilog of the mean of the logs of a set of numbers.

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

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

Mixing Zone. A volume of surface water containing the point or area of discharge and within which an opportunity for the mixture of wastes with receiving surface waters has been afforded.

Mutagenic. Any substance, in whole or in part, or combination of substances acting together, which might alter DNA (genetic component) in such a way as to cause a mutation.

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

Natural Background. The condition of the waters in the absence of man-induced alterations based on the best scientific information available to the Tribe. The establishment of natural background for an altered water body may be based upon a similar unaltered water body or on historical pre-alteration data.

Nonpoint Source. A source of pollution that is not a discernible, confined, and discrete conveyance; a diffuse source which flows across natural or manmade surfaces, such as run-off from agricultural, construction, or from urban areas.

NTU. Nephelometric Turbidity Units; a measure of turbidity in water.

Nuisance Condition. A condition involving uncontrolled growth of aquatic plants, usually caused by excessive nutrients in the water. Nuisance Species shall mean species of flora or fauna whose noxious characteristics or presence in sufficient number, biomass, or aerial extent may reasonably be expected to prevent, or unreasonably interfere with, a designated use of those waters.

Nutrient. A chemical element or inorganic compound taken in by green plants and used in organic synthesis such as Nitrogen and Phosphorus.

Pathogen. Any substance which (might cause) is capable of causing disease, especially micro-organisms such as bacterium or fungus.

Persistent. Existing for a long or longer than usual time or continuously.

pH. The negative logarithm of the effective hydrogen-ion concentration in gram equivalents per liter; a measure of the acidity or alkalinity of a solution, increasing with increasing alkalinity and decreasing with increasing acidity.

Point Source. Any discernible, confined, and discrete conveyance from which pollutants are or may be discharged into a water body, such as effluents from publicly owned treatment works (POTW), slaughter houses, paint industry etc.; does not include return flows from irrigated agriculture.

Pollution. Any man-made or man-induced alteration of the physical, chemical, biological or radiological integrity of water.

Shannon-Weaver Diversity Index. Negative summation (from i=1 to s) of (Ni/N) log2 (Ni/N) where s is the number of species in a sample, N is the total number of individuals in a sample, and Ni is the total number of individuals in species i.

Teratogenic. Any substance which causes fetal malformations (defects induced during development, between conception and birth).

Toxicity. State or degree of being toxic or poisonous; lethal or sublethal adverse effects on representative sensitive organisms, due to exposure to toxic materials or conditions.

Turbidity. The presence of sediment in water, making it unclear, murky, or opaque. (A measure of the amount of suspended material, particles, or sediment, which has the potential for adverse impacts on aquatic biota.)

Use Attainability Analysis. A structured scientific assessment of the factors affecting attainment of a use for a body of water, which assessment may include physical, chemical, biological, and economic factors, such as those referred to in 40 C.F.R. Section 131.10(g), and guidance for which may be found in U.S. Environmental Protection Agency, "Technical Support Manual: Waterbody Surveys and Assessments for Conducting Use-Attainability Analyses" (Volume 1 = Streams; Volume 2 = Estuarine; Volume 3 = Lake Systems).

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

Waters of United States. include:

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 tide.

2. All interstate waters, including interstate wetlands.

3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction 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 waters otherwise defined as waters of the United States 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.

NOTE: 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 United States. (40 CFR 232.2.)

Wetlands. Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that are 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.