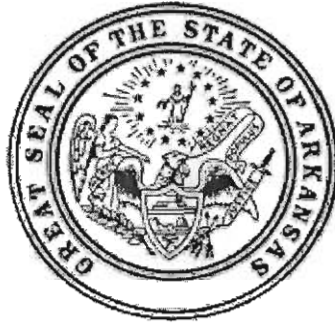


ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION



REGULATION NO. 2

REGULATION ESTABLISHING WATER QUALITY STANDARDS FOR SURFACE WATERS OF THE STATE OF ARKANSAS

Proposed Changes – Triennial Review 2006, Phase 1

Submitted to APC&E Commission – September 2006

Arkansas Pollution Control and Ecology Commission
Regulation No. 2, As Amended

**Regulation Establishing
Water Quality Standards for Surface Waters
of the State of Arkansas**

TABLE OF CONTENTS

Reg. 2.101	Authority	1-1
Reg. 2.102	Purpose.....	1-1
Reg. 2.103	Commission Review	1-2
Reg. 2.104	Policy for Compliance	1-2
Reg. 2.105	Environmental Improvement Projects	1-2
Reg. 2.106	Definitions.....	1-2
Reg. 2.201	Existing Uses	2-1
Reg. 2.202	High Quality Waters	2-1
Reg. 2.203	Outstanding Resource Waters.....	2-1
Reg. 2.204	Thermal Discharges	2-1
Reg. 2.301	Introduction.....	3-1
Reg. 2.302	Designated Uses.....	3-1
Reg. 2.303	Use Attainability Analysis	3-6
Reg. 2.304	Physical Alteration of Habitat.....	3-6
Reg. 2.305	Short Term Activity Authorization.....	3-7
Reg. 2.306	Procedures for Removal of Any Designated Use Except Fishable/Swimmable, Extraordinary Resource Water, Ecologically Sensitive Waterbody, or Natural and Scenic Waterway, and Modification of Water Quality Criteria not Related to Fishable/Swimmable These Uses	3-8
Reg. 2.307	Use Subcategories	3-9
Reg. 2.308	Site Specific Criteria	3-10
Reg. 2.309	Temporary Variance	3-10
Reg. 2.310	<u>Procedure for Removal of the Designated Use of Extraordinary Resource Water, Ecologically Sensitive Waterbody, and Natural and Scenic Waterway for the Purpose of Constructing a Reservoir on a Free Flowing Waterbody to Provide a Domestic Water Supply.....</u>	<u>3-10</u>
Reg. 2.311	<u>Procedure for the Addition of the Designated Use of Extraordinary Resource Water, Ecologically Sensitive Waterbody, or Natural and Scenic Waterway to a Waterbody or Segment of a Waterbody.....</u>	<u>3-12</u>
Reg. 2.401	Applicability	4-1
Reg. 2.402	Nuisance Species	4-1
Reg. 2.403	Methods.....	4-1
Reg. 2.404	Mixing Zones	4-1
Reg. 2.406	Color	4-2
Reg. 2.407	Taste and Odor.....	4-2

Reg. 2.408	Solids, Floating Material and Deposits	4-2
Reg. 2.409	Toxic Substances	4-2
Reg. 2.410	Oil and Grease.....	4-3
Reg. 2.501	Applicability	5-1
Reg. 2.502	Temperature	5-1
Reg. 2.503	Turbidity	5-2
Reg. 2.504	pH.....	5-2
Reg. 2.505	Dissolved Oxygen.....	5-2
Reg. 2.506	Radioactivity	5-4
Reg. 2.507	Bacteria	5-4
Reg. 2.508	Toxic Substances	5-5
Reg. 2.509	Nutrients.....	5-7
Reg. 2.510	Oil and Grease.....	5-8
Reg. 2.511	Mineral Quality.....	5-8
Reg. 2.512	Ammonia.....	5-12
	DESIGNATED USES: OZARK HIGHLANDS ECOREGION	A-6
	SPECIFIC STANDARDS: OZARK HIGHLANDS ECOREGION	A-7
	DESIGNATED USES: BOSTON MOUNTAINS ECOREGION	A-14
	SPECIFIC STANDARDS: BOSTON MOUNTAINS ECOREGION	A-15
	DESIGNATED USES: ARKANSAS RIVER VALLEY ECOREGION	A-20
	SPECIFIC STANDARDS: ARKANSAS RIVER VALLEY ECOREGION	A-21
	DESIGNATED USES: OUACHITA MOUNTAIN ECOREGION.....	A-26
	SPECIFIC STANDARDS: OUACHITA MOUNTAIN ECOREGION.....	A-27
	DESIGNATED USES: GULF COASTAL ECOREGION.....	A-32
	SPECIFIC STANDARDS: GULF COASTAL ECOREGION.....	A-33
	DESIGNATED USES: DELTA ECOREGION	A-40
	SPECIFIC STANDARDS: DELTA ECOREGION	A-41

Reg. 2.103 Commission Review

The water quality standards herein established will be reviewed by the Commission at least once each three-year period beginning as of October 18, 1972, and revisions may be made to take into account changing technology of waste production, treatment and removal, advances in knowledge of water quality requirements, and other relevant factors.

Reg. 2.104 Policy for Compliance

It shall be the policy of the Department to provide, on a case-by-case basis, a reasonable time for an existing facility to comply with new or revised water quality based effluent limits. Consequently, compliance schedules may be included in NPDES permits at the time of renewal to require compliance with new water quality standards at the earliest practicable time; but not to exceed three years from effective date of permit.

Reg. 2.105 Environmental Improvement Projects

The Commission may, after consideration of the information provided pursuant to Appendix B, grant modifications to the General and Specific Standards (Chapters 4 and 5, herein) or establish a subcategory(ies) of use(s) (Reg. 2.307, herein) for completion of long-term Environmental Improvement Projects (EIP), as provided by Act 401 of 1997, codified at A.C.A. § 8-5-901 et seq.

Reg. 2.106 Definitions

304(a) Guidance: Refers to Section 304(a) of the Clean Water Act which requires the Environmental Protection Agency to publish and periodically update ambient water quality criteria which will be protective of human health and the environment.

Abatement: The reduction in degree or intensity of pollution.

Act: Clean Water Act, as amended (33 U.S.C. 1251, et. seq.)

Acute toxicity: A statistically significant difference (at the 95 percent confidence level) in mortality or immobilization between test organisms and a control measured during a specified period of time which is normally less than 96 hours.

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

Aquatic biota: All those life forms which inhabit the aquatic environment.

Chronic Toxicity: A statistically significant difference (at the 95 percent confidence level) in mortality or immobilization, reduced reproduction or limited growth between test organisms and a control measured during a substantial segment of the life span of the test organism.

Commission: The Arkansas Pollution Control and Ecology Commission.

Continuing Planning Process (CPP): A document which describes the principal processes of the State's water quality management programs. The CPP is not a regulation.

Critical flows: The flow volume used as background dilution flows in calculating concentrations of pollutants from permitted discharges. These flows may be adjusted for mixing zones. The following critical flows are applicable:

For a seasonal fishery - 1 cfs minus the design flow of any point source discharge (may not be less than zero).

For human health criteria - harmonic mean flow or long term average flow.

For minerals criteria - harmonic mean flow or 4 cfs, except in those waters listed in Reg. 2.511. Those waters in Reg. 2.511 which are noted with an asterisk will have a critical flow of 4 cfs. (Also see minerals implementation procedure in CPP)

For all others - the critical flow will be Q7-10.

Critical season: That period of the year when water temperatures exceed 22°C. This is normally the hot, dry season and after the majority of the fish spawning activities have ceased. This season occurs during a different time frame in different parts of the state, but normally exists from about mid-May to mid-September.

Cumulative: Increasing by successive additions.

Department: The Arkansas Department of Environmental Quality (ADEQ).

Degradation: The act or process of causing any decrease in quality.

Design Flow: A facility discharge flow of process wastewater that is authorized in a NPDES permit

Designated Uses: Those uses specified in the water quality standards for each waterbody or stream segment whether or not they are being attained.

Discharge: A discrete point source of waste or wastewater entering into waters of the State.

Dissolved oxygen (DO): A measure of the concentration of oxygen in solution in a liquid.

Ecoregion: A large area of landscape with relatively homogenous physical, chemical and biological characteristics.

Endemic: Native to and confined to a specific region.

Existing Uses: Those uses listed in Section 303 (C) (2) of the Act (i.e., public water supplies, propagation of fish and wildlife, recreational uses, agricultural and industrial water supplies and navigation) which were actually attained in the waterbody on or after November 28, 1975, whether or not they are included in the water quality standards.

- (A) A use attainability analysis must be conducted to justify the following conditions:
 - (1) Removing a fishable/swimmable designated use, which is not an existing use, from a waterbody; or
 - (2) To identify a subcategory of a fishable/swimmable use which requires less stringent criteria.
- (B) In order to remove a designated fishable/swimmable use which is not an existing use, or identify subcategories of a fishable/swimmable use which require less stringent criteria, it must be demonstrated that the designated use is not attainable because:
 - (1) naturally occurring pollutant concentrations prevent the attainment of the use; or
 - (2) natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or
 - (3) human caused conditions or sources of pollution prevent attainment of the use and cannot be remedied or would cause more environmental damage to correct than leave in place; or
 - (4) dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; or
 - (5) physical conditions related to the natural features of a water body, such as lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or
 - (6) controls more stringent than those required by Section 301(b) and 306 of the Act would result in substantial and widespread economic and social impact.

The scope of a use attainability analysis shall be in direct proportion to the project involved and the resource value of the receiving stream. Methods for conducting a use attainability analysis may be found in the November 1983 EPA publication entitled Technical Support Manual: Waterbody Surveys and Assessments for Conducting Use Attainability Analyses. Other scientific methods, including the use of existing technical data, may be used for justifying the removal of a designated use; provided the methods are agreed upon prior to the study. Such other methods may include the use of information previously gathered through technical studies and/or use attainability analysis. Use attainability analysis procedures may be found in the State of Arkansas Continuing Planning Process document (CPP). Any waterbody on which a use attainability analysis is approved shall be so listed in Appendix A with appropriate criteria.

Reg. 2.304 Physical Alteration of Habitat

(A) Significant physical alterations of the habitat within extraordinary resource waters, ecologically sensitive waterbodies or natural and scenic waterways are not allowed. For the purposes of this subsection, the Director may determine that a proposed physical alteration of the habitat is not significant if it is demonstrated that:

- (1) the proposed physical alteration of habitat (a) will not impair water quality; (b) will not impair the natural flow regime; and (c) will not impair the habitat of fish, shellfish or other forms of aquatic life; and.
- (2) there is no feasible alternative to the proposed project.

A request under this subsection for a determination that a proposed physical alteration of habitat is not significant shall be submitted to the Director in accordance with the procedures set forth in Appendix D.

(B) In other waters, where significant physical alterations of the habitat are proposed, the Department must be assured that no significant degradation of any existing use or water quality necessary to protect that use will occur. In order to make such determinations, the Department may require an evaluation of all practicable alternatives to the project including: an environmental assessment of the impacts of each alternative, an engineering and economic analysis, and a socio-economic evaluation of the project in the local area.

Reg. 2.305 Short Term Activity Authorization

The Director may authorize, with whatever conditions deemed necessary and without public notice, short term activities which might cause a violation of the Arkansas Water Quality Standards. This authorization is subject to the provisions that such activity is essential to the protection or promotion of the public interest and that no permanent or long-term impairment of beneficial uses is likely to result from such activity. Nothing herein shall be intended to supersede existing state and federal permitting processes or requirements.

Activities eligible for authorization include, but are not limited to:

- (A) wastewater treatment facility maintenance;

- (B) fish eradication projects;
- (C) mosquito abatement projects;
- (D) algae and weed control projects;
- (E) dredge and fill projects;
- (F) construction activities;
- (G) tracers used in hydrological studies; or
- (H) activities which result in overall enhancement or maintenance of beneficial uses.

The Director shall specify the degree of variance from the standards, the time limit of activity and restoration procedures where applicable.

Such authorization shall not be granted for activities which result in the adverse impact on any federally threatened or endangered species or on critical habitat of such species.

**Reg. 2.306 Procedures for Removal of Any Designated Use Except
Fishable/Swimmable, Extraordinary Resource Water, Ecologically Sensitive
Waterbody, or Natural and Scenic Waterway, and Modification of Water
Quality Criteria not Related to ~~Fishable/Swimmable~~ These Uses**

This procedure is applicable in those cases where the Commission chooses to establish less stringent water quality criteria without affecting a fishable/swimmable use or the designated use of Extraordinary Resource Water or Ecologically Sensitive Waterbody or Natural and Scenic Waterway, or when the Commission chooses to remove a use which is not an existing use other than fishable/swimmable, Extraordinary Resource Water, Ecologically Sensitive Waterbody, or Natural and Scenic Waterway ~~which is not an existing use~~.

The Commission may allow a modification of the water quality criteria or the removal of a use which is not a fishable/swimmable use or designated use of Extraordinary Resource Water or Ecologically Sensitive Waterbody or Natural and Scenic Waterway to accommodate important economic or social development in a local area, if existing uses are maintained and protected fully and the requirements for public participation in the Continuing Planning Process are met. As a minimum, the following information shall be submitted to the ~~Department~~ Director before initiation of the public participation process:

- (A) Technological or economic limits of treatability.
- (B) Economic analysis of the impact on the local area.
- (C) Documentation that the use being removed is not an existing use and that all other designated uses will be protected.

Modifications made pursuant to this section may be required to be rejustified for continued support. As community water needs change, or technological advancement, including long-term environmental improvement projects, make treatment options more practicable, the Commission

may reevaluate the need for the reestablishment of the more stringent water quality criteria or the removed use.

Any waterbody on which such alterations are approved will be so listed in Appendix A with the applicable changes noted.

Reg. 2.307 Use Subcategories

The Commission may adopt sub-categories of a use and set the appropriate criteria to reflect varying needs of such sub-categories of uses, for instance, to differentiate between cold and warm water fisheries or agricultural and domestic water supply.

Reg. 2.308 Site Specific Criteria

In establishing criteria:

- (A) Establish numerical criteria values based on:
 - (1) 304(a) Guidance; or
 - (2) 304(a) Guidance modified to reflect site conditions [WER] or
 - (3) other scientifically defensible methods;
- (B) Establish narrative criteria or criteria based upon biomonitoring methods where numerical criteria cannot be established or to supplement numerical criteria.

Reg. 2.309 Temporary Variance

A temporary variance to the water quality standards may be allowed for an existing permitted discharge facility. The variance will be for specified constituents and shall be no longer than a three year period. A variance must be approved by the Arkansas Pollution Control and Ecology Commission and the U.S. Environmental Protection Agency. A variance will be considered when it is determined that a standard, including designated use, can ultimately be attained or when preliminary evidence indicates that a site specific amendment of the standards may be appropriate. A variance may be granted only to the applicant and will not apply to other discharges into the specified waterbody.

Reg. 2.310. Procedure for the Removal of the Designated Use of Extraordinary Resource Water or Ecologically Sensitive Waterbody, or Natural and Scenic Waterway for the Purpose of Constructing a Reservoir on a Free Flowing Waterbody to Provide A Domestic Water Supply.

(A) An extraordinary resource water, ecologically sensitive waterbody, or natural and scenic waterway designated use may be removed from a free flowing waterbody for the purpose of constructing a reservoir to provide a domestic water supply, if it can be demonstrated that:

- (1) the reservoir to be constructed shall be used primarily for the purpose of providing a domestic water supply; and
- (2) no feasible alternative water supply is available to meet the domestic water needs of the citizens of the State of Arkansas.

(B) A petition to initiate rulemaking to remove an Extraordinary Resource Water, Ecologically Sensitive Waterbody, or Natural and Scenic Waterway designated use from a free flowing waterbody in order to construct a reservoir to provide a domestic water supply may be submitted to the Commission by a regional water distribution district, public facilities board, public water authority, or other public entity engaged in providing water to the public. Such petition, at a minimum, shall include:

- (1) A map depicting the location of the proposed project and the area to be impounded;

- (2) A description of the proposed project, including detailed design plans;
- (3) A certification that the proposed structure to impound the free flowing stream shall be constructed primarily for the purpose of providing a domestic water supply;
- (4) An evaluation of all feasible alternatives to the proposed project, including:
 - (i) an environmental assessment of the impacts of each alternative on the instream and downstream water quality, the instream habitat, and the habitat and plant and animal life in the area upstream, downstream, and to be inundated by the proposed project;
 - (ii) the costs associated with, and an economic analysis for, each alternative;
 - (iii) an engineering analysis for each alternative; and
 - (iv) a socio-economic evaluation of the project to the local area and to the State as a whole; and
- (5) information and supporting documentation which address the criteria set forth in Appendix E;
- (6) A recommendation to the Commission from the Director on whether or not the designated use should be maintained based upon a review of the information and supporting documentation required to be considered in Appendix E. The Director shall provide the petitioner with the Director's recommendation within 180 days of the Department's receipt of the petitioner's Appendix E submittal. If the Director does not deliver a recommendation to the petitioner within the 180 day time period, the petitioner may file its petition under this section without including a recommendation from the Director. The Director may submit a recommendation to the Commission at any time not less than 30 days prior to the Commission's final decision on the petition.
- (7) A description of any proposed mechanisms for protecting the domestic water supply, including but not limited to prohibitions to be placed on commercial and residential development along the proposed shoreline of the impoundment, the controls to be placed on public access to the water supply, and the legal authority for establishing and maintaining these domestic water supply protections; and
- (8) Any other submittals required by Regulation No. 8 for a petition to initiate rulemaking.

(C) The Commission, as part of its rulemaking decision, shall determine whether or not a feasible alternative water supply is available to meet the domestic water needs of the citizens of the State of Arkansas. The Commission shall set forth the reasons for its determination in writing. The designated use of Extraordinary Resource Water, Ecologically Sensitive Waterbody, or Natural and Scenic Waterway shall not be removed by the Commission if a feasible alternative water supply is available to meet the domestic water needs of the citizens of the State of Arkansas.

(D) The Commission, as part of its rulemaking, shall determine whether or not the reservoir to be constructed shall be used primarily for the purpose of providing a domestic water supply. The Commission shall set forth the reasons for its determination in writing. The designated use of Extraordinary Resource Water, Ecologically Sensitive Waterbody, or Natural and Scenic Waterway shall not be removed by the Commission if the proposed reservoir is not used primarily for the purpose of providing a domestic water supply. In no circumstance, shall the designated use of Extraordinary Resource Water, Ecologically Sensitive Waterbody, or Natural

and Scenic Waterway be removed by the Commission from a free flowing waterbody in order to construct a reservoir which may be used primarily for recreational, flood control, or other economic purposes than providing a domestic drinking water supply.

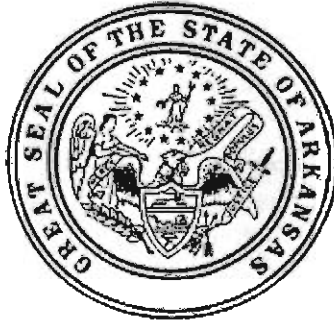
Reg. 2.311. Procedure for the Addition of the Designated Use of Extraordinary Resource Water or Ecologically Sensitive Waterbody or Natural and Scenic Waterway to a Waterbody or Segment of a Waterbody.

(A) Any waters of the State may be nominated for designation as an Extraordinary Resource Water, Ecologically Sensitive Waterbody, or Natural and Scenic Waterway by submitting a petition to initiate rulemaking to the Arkansas Pollution Control and Ecology Commission. Such petition shall include, at a minimum, the following:

- (1) Name of petitioner;
- (2) Petitioner's mailing address and telephone number;
- (3) Name and location description of the waterbody or segment proposed for designation;
- (4) A map depicting the waterbody or segment proposed for designation;
- (5) Petitioner's interest in the proposed action;
- (6) Statement of potential benefits and impacts of the proposed action;
- (7) Evidence of requests for resolution(s) by appropriate local government(s) regarding the nomination of the waterbody as an Extraordinary Resource Water, Ecologically Sensitive Waterbody, or Natural and Scenic Waterway;
- (8) Supporting documentation for the designation, including information which addresses the factors listed in Appendix F, I (A) through (P);
- (9) Recommended language change necessary to affect this proposed change to any Commission regulation; and
- (10) Any other submittals required by Regulation No. 8 for a petition to initiate rulemaking.

(B) The Commission, as part of its rulemaking, shall set forth in writing the reasons for its final decision.

ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION



REGULATION NO. 2.

APPENDIX D

PROCEDURES FOR OBTAINING DIRECTOR'S
DETERMINATION ON THE PROPOSED PHYSICAL
ALTERATION OF AN EXTRAORDINARY RESOURCE
WATERS, ECOLOGICALLY SENSITIVE WATERBODY,
OR NATURAL AND SCENIC WATERWAY

I. CONTENTS OF REQUEST FOR DETERMINATION

Any person may submit a written request to the Department seeking a determination on whether or not a proposed project will constitute a significant physical alteration of the habitat of an extraordinary resource water, ecologically sensitive waterbody, or natural and scenic waterbody. Such request shall include, at a minimum:

- (A) A map depicting the location of the proposed project and the area to be altered by the project;
- (B) A description of the project, including detailed design plans;
- (C) An analysis of alternatives to the proposed project, including: an environmental assessment of the impacts of each alternative, the costs associated with each alternative, an engineering and economic analysis, and a socio-economic evaluation of the project to the local area; and
- (D) A technical report containing supporting documentation to demonstrate that the proposed project:
 - (1) will not impair water quality;
 - (2) will not impair the natural flow regime; and
 - (3) will not impair the habitat of fish, shellfish, or other forms of aquatic life

II. DEPARTMENT REVIEW OF REQUEST

(A) Upon receipt of the request and supporting documentation identified above, the Department shall review the alternatives analysis referenced in Appendix D, I (C). The Department may consult with professionals, as necessary, in reviewing the report. The Department shall review the alternatives analysis in order to:

- (1) ensure that the alternatives analysis is complete;
- (2) evaluate whether the analysis adequately addresses the environmental, social, and economic costs and impacts of each alternative; and
- (3) determine whether any feasible alternatives exist for the proposed project.

(B) Following review of the alternatives analysis, the Department will review the technical report referenced in Appendix D, I (D). The Department may consult with professionals, as necessary, in reviewing the report. The Department shall review the technical report to evaluate the impacts of the proposed project on water quality, instream flow, and aquatic habitat. The Department will develop guidelines for drafting the technical report and identifying issues to be addressed.

III. DIRECTOR'S DETERMINATION

(a) Upon completing its review of the written request and supporting information, the Director shall issue a draft determination. The Director's draft determination shall include a written statement setting out the reasons for the determination and provide a draft decision on the proposed project which shall either:

1) authorize, with conditions as necessary, the alteration of the habitat because the proposed project does not constitute a significant alteration of the habitat and no feasible alternatives exist to the proposed project; or

2) deny the request to alter the habitat because:

(i) the proposed project constitutes a significant alteration of the habitat which is prohibited by Reg. 2.304(a); or

(ii) feasible alternatives to the proposed project exist.

(b) Public notice, notice of a public comment period, and notice of any public hearing on the Director's draft determination shall be provided in the same manner as that provided for a draft permit decision in Regulation No. 8. Thereafter, the Director shall issue a final determination. The final determination shall be issued and notice provided in the same manner as that provided for the issuance and notice of a final permitting decision in Regulation No. 8. The Director's determination may be appealed to the Commission in the same manner as permit appeals are provided for in Regulation No. 8.

IV. REQUIREMENT FOR SHORT TERM ACTIVITY AUTHORIZATION

If the Director authorizes the alteration of the habitat of an extraordinary resource water, ecologically sensitive waterbody, or natural and scenic waterway, then the party requesting the Director's Determination shall submit to the Department a request for a short term activity authorization in accordance with the requirements of Reg. 2.305.

V. OTHER REQUIRED PERMITS NOT WAIVED

Nothing contained herein shall be construed to relieve the petitioner of the requirements to obtain any other permit for the proposed project required by state or federal law.

ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION



REGULATION NO. 2.

APPENDIX E

Criteria to be Considered in Determining
Whether the Designated Use of Extraordinary
Resource Water, Ecologically Sensitive
Waterbody, or Natural and Scenic Waterway
Should be Maintained

The determination of whether a designated use of Extraordinary Resource Water, Ecologically Sensitive Waterbody, or Natural and Scenic Waterway should be maintained in a given waterbody must be made on a case by case basis. Prior to filing any petition to initiate rulemaking with the Commission which seeks to remove the designated use of Extraordinary Resource Water, Ecologically Sensitive Waterbody, or Natural and Scenic Waterway from a free flowing waterbody for the purpose of constructing a reservoir to provide a domestic water supply, the petitioner shall submit to the Department information and supporting documentation which address each of the following:

- (A) Describe generally and specifically the state of the existing water quality;
- (B) Identify the presence of key and indicator species of fish adapted to flowing water systems and state the extent to which these species are present in the waterbody;
- (C) Describe the extent to which water quality and physical habitat, including wetlands, support other plant or animal life and identify the species;
- (D) Identify the presence of, and state the extent to which, other wildlife uses are dependent upon the waterbody;
- (E) State the extent to which water quality and physical habitat support threatened, endangered, or endemic aquatic or semi-aquatic species and identify those species;
- (F) Specify the extent to which the waterbody supports a high diversity of aquatic species and identify the presence and frequency of the species;
- (G) Describe and identify the extent to which physical or chemical characteristics of the waterbody provide an unusual or uncommon aquatic habitat;
- (H) Describe the extent to which physical or chemical characteristics give the waterbody unusual or unique aesthetic attributes;
- (I) Specify the extent of the use of the waterbody for recreation in or on the water, such as fishing, swimming, and boating (including but not limited to canoeing, kayaking, or rafting), or use of the waterbody for commercial activity, including tourism;
- (J) Identify and describe the intangible social values associated with the free flowing characteristics of the waterbody;
- (K) Identify the presence and location of gorges, rapids, waterfalls, or other significant geologic features;
- (L) Identify the presence and location of scenic areas and sites potentially impacted by the reservoir;
- (M) Identify the presence and location of rare and/or irreplaceable natural areas potentially impacted by the reservoir;
- (N) Identify the presence and location of known archeological sites potentially impacted by the reservoir;
- (O) Identify the presence and location of historic resources potentially impacted by the reservoir;
- (P) Delineate the extent to which the waterbody is located within the boundaries of, flows through, or is adjacent to state or federal forest land, parks, natural areas, nature preserves, refuges, or wildlife management areas;
- (Q) Describe the extent to which the waterbody is used for educational, scientific, or research purposes;
- (R) Identify the waterbody's use or potential use as an ecoregion reference stream;
- (S) Describe the land uses, and the geographical extent of each, occurring within the

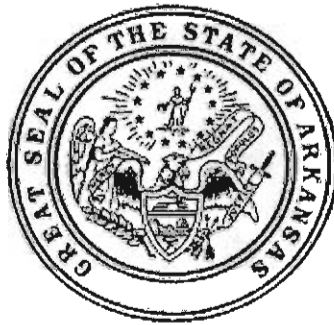
watershed;

(T) Identify the presence and location of all permitted point sources discharging to the waterbody;

(U) Identify the presence and location of existing alterations, diversions or man- made impoundments; and

(V) Provide the frequency of occasions when there is no natural flow in the waterbody, and the 7Q10 flow values for the waterbody.

ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION



REGULATION NO. 2.

APPENDIX F

Factors Considered In Adding the Designated Use of Extraordinary Resource Water, Ecologically Sensitive Waterbody, or Natural and Scenic Waterway to a Waterbody or Waterbody Segment

In determining eligibility for listing the waterbody as an Extraordinary Resource Water, Ecologically Sensitive Waterbody, or Natural and Scenic Waterway, the Commission shall consider the factors:

- (A) Location – The waterbody is within the boundaries of or flows through or is adjacent to state or federal forest land, parks, natural areas, nature preserves, refuges, or wildlife management areas, or the watershed may include remote, primitive, or relatively undeveloped areas;
- (B) Existing water quality – pristine, naturally-occurring, or unique;
- (C) Ecological value – The presence of water quality and physical habitat that supports threatened, endangered, or sensitive species, the presence of any threatened, endangered, or sensitive species, and/or water quality that supports an exceptional high diversity of aquatic species (fish or benthic macroinvertebrates) as categorized by an appropriate index of biological integrity (IBI) protocol;
- (D) Presence of physical or chemical characteristics that provide an unusual or uncommon aquatic habitat;
- (E) Special attributes of the waterbody that make it an outstanding resource, including but not limited to the presence of archeological sites, historical sites, or rare or valuable wildlife habitat;
- (F) Aesthetic Value- the presence of scenic areas or sites or scenic beauty resulting from natural features of the basin such as flow, topography, geology, ecology, physiography (i.e., waterfalls, gorges, rapids, or other special features), or the presence of characteristics giving the waterbody unique or unusual attributes;
- (G) Recreational Value- Use of the waterbody for:
 - (1) Fishing, rafting, kayaking, camping, family outings, backpacking, bird watching, etc.,
 - (2) Presence of hiking trails or scenic road or highway alongside, and
 - (3) Attracting tourism;
- (H) Use of the waterbody for educational, scientific, or research purposes;
- (I) Presence of rare and/or irreplaceable natural areas; and
- (J) Impacts the designation may have on current uses, upstream users, downstream users, and potential future uses of the waterbody or waterbody segment.