

**Project:** 1 (Date Revision Approved Oct 2006)

**Agency:** Oklahoma Water Resources Board

**Title:** DEVELOPMENT OF A USE ATTAINABILITY ANALYSIS PROCEDURE FOR OKLAHOMA WETLANDS

**Justification and Background:**

Oklahoma's Water Quality Standards have always contained language that discriminates between "lakes" and "streams". Wetlands, as a separate waterbody type, are not currently addressed in any form in the OWQS and, as a result, are assumed to support the primary default Beneficial Uses of Warm Water Aquatic Community and Primary Body Contact Recreation among others. Criteria associated with these uses are frequently more stringent than natural conditions in many wetlands. As Water Quality Standards continue to evolve, wetlands will be need to be incorporated as a separate waterbody type with Beneficial Uses, criteria and anti-degradation language specific to that type of waterbody.

In order to determine which Beneficial Uses are appropriate for a particular wetland, a Use Attainability Analysis (UAA) protocol will need to be developed that addresses the peculiarities of wetlands. OWRB has employed a much-applauded stream UAA methodology for many years. Similar concepts will be incorporated into the wetland UAA that consider the physical, chemical and biological states of the system as well as any "existing" uses as defined in federal regulation.

This project will produce a preliminary version of a protocol specific to Beneficial Use assignments for wetlands in Oklahoma. This preliminary UAA will eventually become part of the Water Quality Standards standard operating procedures and will be formalized in the same fashion as UAA's for streams.

The Uses to be considered here will target those traditionally examined in water quality context but may also include those traditionally seen as "functions" (e.g. agricultural applications, groundwater recharge, water quality improvement). Oklahoma's Wetland Working Group will be included in determining these as well as other decision processes leading up to the development of the final methodology.

**Objectives:**

The objective of this project is to establish a preliminary Use Attainability Analysis (UAA) protocol that will determine, through examination of field and laboratory parameters and/or historic data, which of the traditional Clean Water Act §101(a)(2) uses may be appropriate and attainable for Oklahoma wetlands. This protocol will assess which wetland "functions" should be included for protection. Efforts will be made to locate and document as many wetlands of various types as possible. Reference wetlands from previous efforts will be incorporated as well as those reference types included in the Conservation Commission's reference wetland guide. Any new wetland locations will be determined with the assistance of other agencies and the Wetland Working Group. This draft UAA will be tested on as many sites as possible within the time allotted for this project. All efforts toward development of this UAA will include representatives of other agencies and Oklahoma's Wetland Working Group.

This protocol would be developed anticipating and supporting creation of a Water Quality Standard sub-category of Fish and Wildlife Propagation called "Wetland Aquatic Community". This sub-

category may need to be further subdivided potentially including sub-categories of that sub-category addressing the wetland types found in Oklahoma.

All assessed waterbodies and their designated beneficial uses have traditionally been promulgated into Appendix A of the Water Quality Standards so that all environmental agencies and other affected entities will be able to see which beneficial uses (and associated criteria) are expected to met on those waterbodies. Inclusion of wetlands in Appendix A should provide similar user-friendly information for wetland staff from environmental agencies or other similar external entities.

It is expected that successful completion of this project will promote more specificity through inclusion of this unique type of waterbody into the Water Quality Standards, better monitoring in terms of the integrated report (formerly 305(b)) and more appropriate protection for each wetland type from individual state environmental agencies.

**Methods:**

1. Begin consultation with Wetland Working Group and other agencies on Beneficial Use assignments. Compose draft QAPP for submittal.
2. Examine all available historical data on reference wetlands used in previous projects to determine appropriate test parameters and range of expected results.
3. Examine all available and pertinent examples of wetland assessments techniques from other states possessing wetland Beneficial Uses.
4. Determine possible Uses and compile draft protocol with WWG and relevant entities.
5. Field test draft protocol on several wetland types and revise as necessary.
6. Retest draft protocol with interested WWG personnel.
7. Complete draft UAA development and field trials. Finalize protocol with QA component and submit final report.

**Milestones:**

<b>Task</b>	<b>Task Description</b>	<b>Task lead</b>	<b>Schedule Start</b>	<b>Schedule End</b>
1	Coordinate with Oklahoma's Wetland Working Group	OWRB / OCC	On-going	
2	QAPP	OWRB	Mar 05	Jul 05
3	literature review	OWRB	Oct 04	Ongoing
4	Determination of potential Uses to be examined and compile draft UAA	OWRB / WWG	Jul 05	June 2007
5	Field test draft protocol	OWRB / OCC / others	Sept 05	Aug 07
6	Final report and methodology	OWRB	Aug 06	Dec 07
7	Quarterly Progress reports	OWRB	On-going	On-going

**Personnel**

2.2 man years

**Resource Allocation**

Environmental Protection Agency (75% of Total Cost)	\$127,928
State In-kind Matching Funds (25% of Total Cost)	\$42,643
<b>TOTAL PROJECT COST =</b>	<b>\$170,570</b>

***PROPOSED ITEMIZED BUDGET***

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<b>Personnel</b>		<b>Man Years</b>	<b>Expenditure</b>
Environmental Program Division Head		0.05	\$3,600
Environmental Program Manager		0.05	\$2,600
Environmental Program Specialist IV		0.6	\$26,400
Environmental Program Specialist III		0.25	\$8,750
Carl Albert intern/Temporary		1.25	\$30,000
GIS specialist		0.1	\$3,500
<b>Indirect and Fringe Costs</b>			
Indirect Costs	FY04	66.44% of Personnel Costs	\$49,730
Fringe Benefits	FY04	45.09% of Personnel Costs	\$33,750
<b>Travel</b>			
Per diem, hotel, gasoline etc. (as per State Travel Reimbursement Act)			\$4,500
<b>Supplies</b>			
sample bottles			\$540
coolers (sample storage and transport)			\$100
notebook PC			\$5,000
equipment calibration standards			\$200
preservatives			\$200
sampling equipment			\$1,200
<b>Report Completion</b>			
Final report and distribution			\$500
<b>TOTAL PROJECT COST</b>			<b>\$170,570</b>