
APPENDIX A
MEMORANDA OF AGREEMENT

Memorandum of Agreement between US Bureau of Reclamation and US Fish and Wildlife Service Bitter Lake National Wildlife Refuge for the Pecos River Channel Restoration at Bitter Lake National Wildlife Refuge

I. Introduction

The Bureau of Reclamation (Reclamation) and the U.S. Fish and Wildlife Service's Bitter Lake National Wildlife Refuge (Refuge) have formed a partnership to implement habitat restoration on Refuge property. The habitat restoration project (project) will be designed to improve riparian and in-channel habitat at specific locations along approximately 12 miles of the Pecos River. Reclamation's work will be concentrated on Oxbow #4 while the Refuge has broader and more encompassing plans for restoration within a 12-mile reach. In July 2007, Reclamation and the Refuge entered into a Memorandum of Agreement that describes environmental compliance responsibilities of each agency. Since that time, the agencies have further defined project implementation details which are identified in this present Memorandum of Agreement (MOA).

II. Purpose

The purpose of this MOA is to further define Reclamation's and the Refuge's responsibilities before, during, and after construction of the project.

The purpose of the project is to improve riparian and in-channel habitat, extending the reach of connected good quality habitat for the benefit of native aquatic and riparian plant and animal communities. The project is a combination of restoration techniques which include removing vegetation, lowering banks, changing the channel morphology, restoring flow into historic oxbows and revegetation. The project is needed to correct or improve degraded ecological conditions within the Refuge section of the Pecos River caused by excavating straight channels, encroaching nonnative vegetation, and parts of the river to more natural flow conditions within the context of the modern hydrological regime, including reconnecting the river to the floodplain. The project would support the need of the US Fish and Wildlife Service to implement Bitter Lake National Wildlife Refuge comprehensive conservation plan goals and objectives and would support broad Service mandates to restore, preserve, and enhance riparian habitat and the overall mission of the national wildlife refuge system. In addition, restoration work in Oxbow #4 would partially fulfill a requirement of the May 18, 2006 Biological Opinion for the Bureau of Reclamation's Proposed Carlsbad Project Water Operations and Water Supply Conservation, 2006-2016. Reasonable and Prudent Measure #1 involves two habitat restoration projects and the proposed project would serve as one of those required projects.

III. Responsibilities

Reclamation will:

- a) Continue to carry out responsibilities (a) thru (i) specified in the July 2007 MOA
- b) Conduct hydraulic analysis
- c) Design and construct project
- d) Establish staging area for equipment used in bank stabilization
- e) Mobilize equipment
- f) Remove lower plug of Oxbow #4 lake
- g) Excavate sinuous channel in the existing oxbow to grade
- h) Place excavated material for the plug or otherwise distribute onsite

- i) Remove saltcedar and non-native vegetation at lower elevations and stack
- j) Install rock vanes to protect banks serving to protect adjacent wetlands and Pecos sunflower
- k) Remove fine grained anoxic sediment and associated detritus if necessary
- l) Plug existing channel
- m) Excavate opening at entrance to oxbow
- n) Reseed road/staging areas/old channel/rock vanes
- o) Contribute funding for FWS to conduct biological monitoring
- p) Develop and implement an Adaptive Management Plan
- q) Fund Oxbow #4 construction and restoration with the exception of services and rock to be provided by the Refuge

The Refuge will:

- a) Continue to carry out responsibilities (a) thru (h) specified in the July 2007 MOA
- b) Issue special use permit that would allow Reclamation to perform construction on Refuge property
- c) Determine soil composition
- d) Obtain the Corp of Engineers 404/401 permits
- e) Obtain ESA compliance via Intra-Service consultation
- f) Monitoring geomorphology/groundwater
- g) Monitor fish habitat and use by the fish community including Pecos bluntnose shiner
- h) Contribute existing stock of 8-12" rock for the rock vanes to be installed and assist with installation as needed using available resources
- i) Remove saltcedar and non-native vegetation at higher elevations and stack
- j) Burn all removed and stacked vegetation
- k) Coordinate the water quality and sedimentation study
- l) Coordinate with the New Mexico Environment Department
- m) Acquire color infrared imagery
- n) Allow Reclamation to use fuel storage tanks for Reclamation-purchased fuel
- o) Conduct revegetation as appropriate

IV. Agency Designee

Reclamation and the Refuge will designate points of contact and may change these designations at any time by informing the other agency.

V. Resolution of Disputes

The signatories agree to use all reasonable efforts to resolve any disputes arising among them and to do so at the level at which the dispute arose and in a collaborative and timely manner. Disputes that cannot be resolved at the lower level will be elevated within the agencies for resolution. Disputes that remain unresolved will be mediated or facilitated. The signatory agencies will document in the administrative record the nature of any dispute and the resolution process used.

VI. Implementation, Amendment, and Termination

This agreement will become effective on the date of the last signature, and may be subsequently amended through written agreement of all signatories. Either signatory agency may terminate this agreement by providing written notice of termination to the other party. If not terminated sooner, this agreement will end when the current biological opinion expires, in 2016.

May 9, 2008

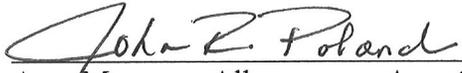
VII. Authority

The authority of the US Fish and Wildlife Service to participate in this agreement is provided by the Migratory Bird Conservation Act of 1929, Fish and Wildlife Act of 1956, and Endangered Species Act of 1973, as amended. Reclamation participates as part of its responsibilities under the Endangered Species Act of 1973 in combination with authority provided by Carlsbad Project authorizations and the Fish and Wildlife Coordination Act.

VIII. Signatures

The parties hereto have executed this memorandum of agreement as of the dates shown below:

Bureau of Reclamation

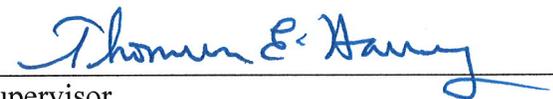


Area Manager, Albuquerque Area Office



Date

United States Fish and Wildlife Service, Bitter Lake NWR



Supervisor



Date

Memorandum of Agreement between US Bureau of Reclamation and US Fish and Wildlife Service (FWS) for the Pecos River Channel Restoration at Bitter Lakes National Wildlife Refuge Environmental Assessment

I. Introduction

The Bureau of Reclamation (Reclamation) is preparing an Environmental Assessment (EA) to analyze the effects of restoration techniques designed to improve riparian and in-channel habitat at specific locations along approximately 12 miles of the Pecos River. These efforts are referred to as the Project. Reclamation as lead agency, must assure the EA complies with the National Environmental Policy Act (NEPA) and other applicable statutes, regulations, and Executive Orders. Reclamation is the lead agency and FWS has agreed to serve as a joint lead agency under NEPA for full participation in the planning process for the Project.

II. Purpose

This environmental assessment addresses the effects of the proposed restoration of portions of the Pecos River channel at Bitter Lake National Wildlife Refuge in Chaves County, New Mexico. It analyzes the potential environmental and human effects of the Proposed Action and a No Action Alternative. The Proposed Action encompasses a variety of restoration techniques designed to improve riparian and in-channel habitat at specific locations along approximately 12 miles of the Pecos River. Some or all of these actions may be implemented, or work may be conducted in phases.

The purpose of the proposed action is to improve riparian and in-channel habitat, extending the reach of connected good quality habitat for the benefit of native aquatic and riparian plant and animal communities. This action meets a Biological Opinion requirement to do this restoration and fulfill RPM #1 of the 2006-2016 BiOp. This is needed to correct or improve degraded ecological conditions within the Bitter Lake National Wildlife Refuge (NWR) section of the Pecos River caused by excavating straight channels, encroaching nonnative vegetation, and parts of the river to more natural flow conditions within the context of the modern hydrological regime, including reconnecting the river to the floodplain. The proposed action would support the need of the US Fish and Wildlife Service (Service) to implement Bitter Lake NWR comprehensive conservation plan goals and objectives and would support broad Service mandates to restore, preserve, and enhance riparian habitat and the overall mission of the NWR system.

III. Federal Actions

a. Reclamation's action requiring NEPA compliance:

- Provide funding for oxbow 4 project
- Establish staging area for equipment used in bank stabilization
- Remove banks and reestablish oxbow in different location
- Removal of saltcedar and non-native vegetation
- Revegetation of cleared areas

b. Fish and Wildlife Service action requiring NEPA compliance:

- Construct a viewing platform

- Removal of saltcedar and non-native vegetation
- Revegetation of cleared areas
- Removal of bank levees
- Lower banks by removing material
- Re-connect small oxbows

IV. Agency Designee

Reclamation and FWS will designate a representative and a backup to act as the point of contact for the EA. An entity may change its point of contact at any time by providing written notice to Reclamation.

V. Authority

The authority of the lead agency (Reclamation) to participate in this agreement is provided by the National Environmental Policy Act, 42 USC 4321 *et seq.*

VI. Lead Agency Responsibilities

As lead agency, Reclamation will:

- a) Be responsible for the preparation of, quality of scope and content of the EA.
- b) Identify FWS in the EA as a joint lead agency and summarize its roles and responsibilities as a joint lead agency.
- c) Be available to discuss with FWS any questions or issues related to EA documents.
- d) Incorporate, as it deems useful and appropriate, the information provided by FWS into the appropriate EA documents.
- e) Provide FWS with copies of the various EA public reports as part of the public review process. These are expected to include a scoping report, newsletters, and a draft and final EA.
- f) Assure compliance with Federal environmental and other statutes including, but not limited to, NEPA, and the National Historic Preservation Act.
- g) Be responsible for identifying 1) the purpose and need for the proposal, 2) which alternatives are selected for evaluation, 3) scope of analysis, and 4) decisions to be made.
- h) Make the final decision on the content of all EA documents
- i) Make a final decision to be documented in a Reclamation decision document.

VII. Joint Lead Agency Responsibilities

As a joint lead agency, FWS will:

- a) Participate in the NEPA process at the earliest possible time.
- b) Participate in the scoping process.
- c) Assume responsibility for preparing the internal Section 7 documentation and the Section 401/404 permit application to the Corp of Engineers in a timely manner for completion with the environmental assessment timeframes (ESA and CWA compliance).
- d) Provide guidance and recommendations to the EA Team in those areas where FWS as special expertise.
- e) Facilitate access to the refuge for data collection, field work and possibly construction (if approved).

f) Be available to discuss with the EA team and stakeholders any documents or analyses provided by FWS.

g) Fund its own participation as a joint lead agency in the EA process and additional hydrological monitoring as required.

h) Prepare and sign a Fish and Wildlife Service decision document if needed.

VIII. Organizational Structure

Reclamation's EA Project Manager leads the EA Team, is responsible for day-to-day project management and is supervised by the Manager of the Environment Division. The EA Project Manager is supported in the areas of stakeholder and public participation by a NEPA specialist from Tetra Tech contractor.

IX. Resolution of Disputes

The joint lead agencies agree to use all reasonable efforts to resolve any disputes arising among them and to do so at the level at which the dispute arose and in a collaborative and timely manner. Disputes that cannot be resolved will be mediated or facilitated. The joint lead agencies will document in the administrative record the nature of any dispute and the resolution process used.

X. Implementation, Amendment, and Termination

This agreement will become effective on the date of the last signature, and may be subsequently amended through written agreement of all signatories. Either joint lead agency may terminate this agreement by providing written notice of termination to the other party. If not terminated sooner, this agreement will end when the decision documents are signed.

XI. Signatures

The parties hereto have executed this memorandum of agreement as of the dates shown below:

Bureau of Reclamation

Connie D. Rupp
Area Manager, Albuquerque Area Office

July 9, 2007
Date

United States Fish and Wildlife Service

Chris Sp...
Supervisor *Regional Refuge Chief*

7-31-07
Date