

Julie DalSoglio, Manager
U.S. EPA
10 W. 15th Street, Suite 3200
Helena, MT 59626

RE: Wetlands Protection Grant CD998117-10 Final Project Report

November 14, 2006

Dear Julie,

Enclosed is the Final Project Report for EPA Wetlands Protection Grant CD998117-10. The Montana Department of Environmental Quality received a 104(b)3 Wetland Protection Development Grant from EPA for \$325,300 as stated in the Wetland Protection Assistance Agreement awarded May 21, 2002. A non-federal match of \$108,434 was required for this grant. This grant provided funding for five Montana wetland program development projects. All projects were completed by the grant end date of March 31, 2006. MDEQ submitted a final Financial Status Report (FSR) to the EPA Montana Office on May 12, 2006.

Thank you for providing Montana DEQ with Wetland Protection Development funds. I am pleased with the wetland program development that Montana has been able to accomplish with the assistance of this funding. Please contact me at (406) 444-6652 or lsaul@mt.gov if you have any questions about the project activities associated with this grant.

Sincerely,

Lynda A. Saul
Wetland Program Manager

Enclosures

c. Joe Meek
Susan McEachern

MDEQ Final Grant Project Report
EPA Wetland Protection Grant CD 998117-10
Federal Fiscal Year 2002 (6/1/02 – 3/31/06)

1) Title: **Developing a Wetland Monitoring and Assessment Program: Project Leadership and Implementing Wetland Protection in Montana.**

Agency: Montana Dept. of Environmental Quality
1520 East Sixth Avenue; P.O. Box 200901; Helena, Montana 59620-0901

Contact: Lynda Saul, Wetland Coordinator
406-444-6652; FAX 406-444-6836; e-mail: lsaul@mt.gov
Randy Apfelbeck, Environmental Specialist
406-444-2709; FAX 406-444-6838; e-mail rapfelbeck@mt.gov

Funding: Total Project \$ 133,334
EPA Funds \$ 100,000
Match \$ 33,334

Time line: July 1, 2002 - June 30, 2003.

Project Narrative

Montana DEQ will provide expertise and leadership in two wetland development areas:

1. Develop the first phase of a comprehensive wetland monitoring and assessment program that incorporates vulnerable wetland and aquatic resources and integrate into Montana's statewide water quality monitoring program.
2. Administer the wetland grant program and lead the Montana Wetlands Council.

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The following outputs were completed for first goal: comprehensive wetland monitoring and assessment.

1. Randy and Lynda met with contractors three times over the past 12 months in order to coordinate monitoring activities for developing wetland biocriteria and rapid assessment protocols.
2. A QAPP was written, submitted to EPA and updated. The QAPP includes assessment protocols, study design and describes the pilot watersheds.
3. Randy met with staff from EPA-Corvallis and developed a draft wetland assessment study design for implementation. The study design was presented to DEQ management and EPA Region 8. Project wetland assessment study designs were developed and subsequently refined.
4. Randy and Lynda coordinated and held the first Montana wetland monitoring and assessment workgroup meeting in September 2002 in Missoula involving 30 participants from 5 States and Montana representative from EPA, DEQ management, Tribes, universities, federal land management agencies, and the non-governmental sectors.
5. An intern was hired in February to assist our collaborators and further the wetland monitoring project. The intern researched rapid wetland assessment protocols and coordinated with DEQ. DEQ reviewed EPA's guidance for developing rapid assessment protocols and explored opportunities to develop landscape assessment tools using GIS and remote sensing.

The following outputs were completed for second goal: administering the grant program and leading the Montana Wetland Council:

1. Developed the request for proposals, recruited and led the wetland grant review team and commented on draft and final proposals. Negotiated and completed contracts with all contractors. Worked with contractors on their projects, providing expertise, project review, advice and problem solving to ensure useful outputs and products on all EPA grant funded DEQ contracts.
2. Organized, developed the agendas, worked with presenters and facilitated three Montana Wetland Council meetings. The September meeting focused on the ongoing grant project, contractors discussed the monitoring and assessment projects, information and education projects and statewide and local government projects. The December meeting investigated the proliferation of man-made ponds in Montana from wetlands/waterfowl, fisheries, amphibians, water rights, dam safety, farm and ranch real estate, water resource consultant, and education/outreach perspectives. A facilitated discussion aimed at problem identification and problem solving followed. The May meeting included our biennial Wetland Stewardship Award ceremony in the Capitol and also included discussions about West Nile Virus and wetlands. All Council meetings were well attended.
3. Other new opportunities for wetland protection were sought including working with the Montana Wetlands Legacy, outreach for wetlands protection in light of West Nile Virus concerns and increased emphasis on mosquito spraying, identifying man-made ponds as a significant issue affecting natural wetland protection, collaboratively developing an in-lieu fee program for 404 permit actions, and other wetland protection and management opportunities.

2) Title: **Developing Wetland Biological Assessment Criteria for Amphibians and Aquatic Reptiles.**
MDEQ Contract Number: 202062-3

Agency: The University of Montana
Montana Cooperative Wildlife Research Unit; University of Montana;
Missoula MT 59812

Contact: Bryce Maxell
(406) 777-0065; FAX (406) 243-4557; e-mail: nathist@selway.umt.edu

Funding: Total Project \$119,161
EPA Funds \$ 80,700
Match \$ 38,461

Time line: June 1, 2002 - June 30, 2005

Contract Modifications

#1 amended the contract to change the location of the second year of fieldwork from Upper Kootenai to South Western Montana. (Modified tasks # 4, 8, 10)

#2 extended the completion date from June 30, 2004 to October 31, 2004.

#3 Due to difficulties merging two GIS layers for watershed delineations and sampling scheme, extended the completion date from October 31, 2004 to June 30, 2005.

Project Narrative

The overall goal of this project is to develop bioassessment protocols for amphibian and aquatic reptiles as part of Montana's comprehensive wetland monitoring and assessment program. These protocols will be an integral component of the state's goal of determining the status and trends of Montana's water quality. Activities include:

1. Develop standard statewide survey protocols and a statewide database that can be used by federal, state, tribal, and local governments and volunteers to monitor amphibian and aquatic reptile occupancy and relative abundance at individual wetlands and entire watersheds with reference to water quality and a variety of other local and landscape variables.
2. Identify presence/non-detection and relative abundance of amphibian and aquatic reptiles in 6th field HUC watersheds in the Red Rocks and Upper Kootenai subbasins and the Northern Rocky Mountains ecoregion.
3. Determine and report on which local and landscape habitat variables recorded have the strongest correlation with species occupancy and relative abundance for the Red Rocks and Upper Kootenai pilot watersheds.

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1. Collaboratively developed a study design and standardized protocols and data sheets for monitoring amphibians and aquatic reptile within a comprehensive program to assess and monitor the health of streams and standing water bodies. The study design, sampling scheme, protocols and data sheets are documented in a report titled "A Statewide Scheme for Assessing and Monitoring the Status of Amphibians in Montana."
2. Developed a database compatible with standardized data collection and linked the database to a geographic information system housed at MTNHP, a central data clearinghouse.
3. Surveyed all standing water bodies in 9 randomly selected 6th code HUC watershed in the Red Rock subbasin, 9 HUC's in the southwest Montana and 20 HUC's in the Northern Rocky Mountains ecoregion, including subcontracting to conduct validation surveys in 20 validation watersheds. This data was documented in a report titled "Report on Amphibian and Aquatic Reptile Inventories Conducted On and Around the Beaverhead-Deerlodge National Forest."
4. Evaluated survey methodology and determined which local and landscape habitat variables recorded have the strongest correlation with species occupancy and relative abundance for the Red Rocks pilot watershed and 9 watersheds in southwest Montana. This information is summarized in the report titled "Evaluation of Lentic Breeding Amphibian Survey Methodology and Local and Landscape Variables Correlated with Species Occupancy."

On the ground impacts of this contract and collaborative funding from other contributors includes:

- Fencing off rare upland wetlands from cattle trampling on the Custer and Beaverhead-Deerlodge National Forests.

- Beaver reintroduction for lentic breeding site creation on Custer and Beaverhead-Deerlodge National Forest.
- Protection of amphibian populations from fish stocking on Bitterroot and Gallatin National Forests
- Identification of disturbance of amphibian diseases and use of decontaminations protocols by U.S. Forest Service and Montana Department of Fish, Wildlife and Parks biologists.
- Proactive management of lentic wetland in Forest Management Plans for Beaverhead-Deerlodge National Forest
- Heightened interest in and awareness of needs of amphibian and lentic wetlands by U.S. Forest Service and Bureau of Land Management personnel.

The level of collaborative funding involved with the statewide amphibian inventory project is a wonderful example of how EPA wetland grant funds can be used to leverage other funds as part of a larger project assessing the status of wetland habitats.

3) Title: **Critical Lands Project: Building Cooperation and Support to Protect Critical Lands in the Flathead Watershed.**

MDEQ Contract Number: 202063-1

Agency: Flathead Lakers; PO Box 70; Polson MT 59860

Contact: Constanza von der Phalen
406-883-1341 FAX (406) 883-1357; e-mail:
constanza@flatheadlakers.org

Funding: Total Project \$ 57,000
EPA Funds \$ 45,000
Match \$ 12,000

Time line: June 1, 2002 - April 30, 2004

Contract Modification

#1 extended the completion date to April 30, 2004.

Project Narrative

The Critical Lands Project is a science-based, cooperative project to identify and protect or restore lands and waters critical to the quality of Flathead Lake and its tributaries. The goals of the project are to address water quality threats at the watershed level, to increase collaboration with key resource managers and research professionals from state, federal and tribal government agencies and other nonprofit conservation organizations, and to inform the public about the importance of conserving lands critical to water quality.

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The Flathead Lakers have built collaborative partnerships to identify critical lands and conservation strategies and implement protection and restoration projects to protect water quality in Flathead Lake and its tributaries. The greater Flathead area is rich in wetlands with extensive floodplains and shallow unconfined aquifers. Much of lands identified as critical are wetlands and aquatic based. The accomplishments from this project are

exemplified by the successes of their collaborative Critical Lands Project in protecting and restoring lands critical to water quality. Such as: permanent protection of 1,500 acres of wetlands and farmland in Weaver and McWeneger Sloughs. Identification of other areas for protection include Flathead River islands, Egan, Sough, Foy's Bend and surrounding wetlands, the shallow alluvial aquifer, Church and Fennon Sloughs

The following outputs have been completed and detailed project reports were submitted.

1. Developed a Strategic Plan, with agreed upon strategies for action by project partners to protect or restore critical lands in the Flathead River corridor.
2. Produced and distributed Critical Lands Sensitive Analysis Maps to government agencies, nonprofit organizations and individuals to promote conservation work. Maps including the following GIS layers: land cover (including significant habitat such as wetlands and riparian vegetation cover) and land use change, depth to water table and floodplain boundaries; housing and road density; analysis of housing density on shallow groundwater areas; bald eagle and osprey nesting sites.
3. Implemented proposal activities and projects in the Strategic Action Plan.
4. Prepared a report on the status of priority critical lands and on-going protection and restoration.
5. Developed and used an e-mail network among project partners to improve communication.
6. Supported several ongoing conservation initiatives including Weaver and McWeneger Sough conservation projects. Provided local groups with technical and grant writing assistance.
7. Sponsored and held the fourth critical lands workshop.
8. Developed and updated a Critical Lands web page.
9. Produced and distributed a Flathead River educational map with information about wetlands, riparian corridors and floodplains and ways to protect water quality in the river.
10. Established and presented a critical lands stewardship award.
11. Organized and conducted educational tours of critical areas for decision makers.
12. Conducted additional outreach and education activities including providing project updates in the Flathead Lakers Newsletter and annual reports and held two public presentations about the critical lands project.

The Flathead Lakers Critical Lands Project produced exemplary collaboration and results based on sound science, useful products, strong communication and widespread outreach. Numerous collaborators and additional funding sources were involved in achieving these strong results as evidenced by the continuation of the goals and outcomes of the Critical Lands Project. Due to the strong collaboration, the Flathead Lakers were able to provide additional in-kind match towards this project. Project reports were well organized and through. This project is a model for other local efforts at wetland and aquatic protection and deserved further highlighting.

4) Title: **Developing Wetland Biological Assessment Criteria for Vegetation – Middle Milk.**

MDEQ Contract Number: 203025-1

Agency: Montana Natural Heritage Program (MNHP)

Montana State Library; 1515 East Sixth Avenue; Helena, Montana 59620

Contact: Marc Jones, Wetland Ecologist
406- 444-3488; FAX 406-444-0581; e-mail: marcj@state.mt.us

Funding: Total Project \$ 59,200
EPA Funds \$ 44,400
Match \$ 14,800

Time line: June 1, 2002 - February 28, 2004

Contract Modification

#1 extended the completion date to February 28, 2004.

Project Narrative

The overall goal of this project is to develop bioassessment protocols for wetland vegetation as part of Montana's comprehensive wetland monitoring and assessment program. These protocols will be an integral component of the state's goal of determining the status and trends of Montana's water quality. Activities include:

1. Collect vegetation and environmental data for 54 riverine and depressional wetlands in the Middle Milk HUC.
2. Analyze field data and develop bioassessment metrics.
3. Coordinate with the Montana interagency wetland monitoring and assessment work group.
4. Report and disseminate results.

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1. Contractor sampled 54 riverine and depressional wetlands in the Middle Milk 4th code watershed. These include 27 depressional and 29 riverine wetland sites. Because insufficient reference standard condition wetlands were initially sampled, an additional 11 sites were sampled in June (this work was done under another contract). This provided samples over a sufficient human disturbance gradient such that meaningful metrics can be developed. Soil chemistry analyses of 19 samples from 9 depressional wetlands have been completed.

2. Contractor created an Access database to store vegetation, soils, and land use data. Plot data from the 27 depressional has been entered and completed initial data analysis.

3. Contractor coordinated with the Montana interagency wetland monitoring and assessment work group including presenting at annual meetings.

4. Contractor prepared and published a final report titled "Using Vegetation to Assess Wetland Condition: a multimetric approach for temporarily and seasonally flooded depressional wetlands and herbaceous-dominated intermittent and ephemeral riverine wetlands in the northwestern glaciated plains ecoregion, Montana. Findings include vegetation metrics were able to correctly classify 73% of depressional and 86% of riverine wetlands sampled into three disturbance categories (reference condition, moderately disturbed and severely disturbed).

This project provides tremendous value to further develop a wetland monitoring and assessment program in Montana.

5) Title: **Developing Wetland Biological Assessment Criteria for Vegetation, Soils and Land Use - Red Rocks.**
MDEQ Contract Number: 202065-1

Agency: The University of Montana
Division of Biological Sciences, Univ of Montana; Missoula MT 59812

Contact: Brad Cook, Wetland Ecologist
406-243-5382; FAX 406-243-4184; e-mail: bjcook@selway.mt.edu

Funding: Total Project \$ 73,600
EPA Funds \$ 55,200
Match \$ 18,400

Time line: June 1, 2002 - December 31, 2003.

Contract Modification

#1 modified tasks and outputs according to Revised Attachment A dated 11/25/02.

Project Narrative

The overall goal of this project is to develop bioassessment protocols for wetland vegetation as part of Montana's comprehensive wetland monitoring and assessment program. These protocols will be an integral component of the state's goal of determining the status and trends of Montana's water quality. Activities include:

1. Collect vegetation and environmental data for 54 riverine and depressional wetlands in the Red Rock HUC. Modification #1 to data collection 14 sites and field reconnaissance 32 additional sites.
2. Analyze field data and develop bioassessment metrics.
3. Coordinate with the Montana interagency wetland monitoring and assessment work group.
4. Report and disseminate results.

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This contract has been fraught with challenges since its inception. Initially due to the lateness of the contracting (mid-June 2002) and the contractor unable to perform any map or site reconnaissance work or landowner contacts prior to contracting. In addition gearing up for the field season once the contract was in place took considerable time and effort. The contractor also had a difficult time locating depressional wetlands in the HUC and then getting access to sites. As a result, the contract was modified to reduce the amount of sample collection, add site reconnaissance and replaced sampling depressional wetlands with locating a viable sample population of slope wetlands along with other contract modifications.

Tasks 1, 2 and 8 of the modified contract have been completed. Mid-contract, the contractor accepted a new position out of state and discussions ensued regarding contractors ability and interest in completing this project. The contractor and DEQ expended considerable effort and good will negotiating quality of work product and outputs regarding Task 6 and 7 of the modified contract. Ultimately DEQ accepted these products. Information was never submitted for Task 3, data analysis and metric development or Task 5, semi-annual progress reports and task completion reports. Task

4 was partially completed. The remaining balance from incomplete or partially complete tasks was redirected to additional data collection and data input for metric analysis to further develop wetland monitoring and assessment program. This project has been closed and all parties have learned valuable lessons. DEQ has changed its contracting procedures as a result of this project.