

**RIPARIAN BUFFER
PROJECT FOR THE PERIOD
APRIL 1, 2001 TO MARCH 31, 2002**

Annual Report



DOE/BP-00004935-1



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RIPARIAN BUFFER PROJECT
Contract No. 00004935
Project No. 2001-021-00

ANNUAL REPORT
FOR THE PERIOD APRIL 1, 2001 TO MARCH 31, 2002

Prepared for

Bonneville Power Administration

by

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**Riparian Buffer Project
BPA Contract 2001-021-00**

ABSTRACT

This project implements riparian buffer systems in the Mid-Columbia, addressing limiting factors identified in the Fifteenmile Subbasin Summary, June 30, 2000. The project is providing the technical planning support needed to implement at least 36 riparian buffer system contracts on approximately 872 acres covering an estimated 40 miles of anadromous fish streams over a three year period. In the first year of implementation, 26 buffer contracts were established on 25.26 miles of stream. This nearly doubled the annual goal. Buffer widths averaged 83 ft. on each side of the stream. Implementation included prescribed plantings, fencing, and related practices.

Actual implementation costs, lease payments, and maintenance costs are borne by existing USDA programs: Conservation Reserve and Conservation Reserve Enhancement Programs. The lease period of each contract may vary between 10 to 15 years. During this year the average was 14.5 years. The total value of contracts established this year is \$1,491,235 compared with \$64,756 in BPA contract costs to provide the technical support needed to get the contracts implemented.

This project provides technical staffing to conduct assessments and develop plans to help keep pace with the growing backlog of potential riparian buffer projects. Word of mouth from satisfied customers has brought in many new sign-ups during the year. More than half of the contracts this year have been done in the Hood and Fifteenmile sub-basins with additional contracts in adjacent sub-basins.

Introduction

Wasco County SWCD provides local leadership in implementation of several full-scale watershed enhancement projects focussed on improving watershed health. Working in close partnership with NRCS our team's strength is our ability to develop and implement scientifically sound, economically feasible resource management plans for private landowners.

This project to implement riparian buffer systems in the Mid-Columbia addresses limiting factors identified in the Fifteenmile Subbasin Summary, June 30, 2000. It provides for the technical planning support needed to implement at least 36 riparian buffer system contracts on approximately 872 acres covering an estimated 40 miles of anadromous fish streams. Buffer widths range between 35 and 180 ft. on each side of the stream. Implementation included prescribed plantings, fencing, off-stream livestock water developments and related practices. Actual implementation costs, lease payments, and maintenance costs are borne by existing USDA programs: Conservation Reserve and Conservation Reserve Enhancement Programs. Lease periods are for 10-15 years. This program meets a critical need in Fifteenmile Watershed in particular where existing ODFW riparian lease agreements have begun to expire. This project helps provide technical support to conduct assessments and develop plans enabling the growing backlog of potential projects to be addressed. More than half of the riparian buffers have been done in the Hood and Fifteenmile sub-basins with the remainder in adjacent sub-basins.

Description of Project and Project Area

Many mid-Columbia area streams, most notably Fifteenmile Creek are water quality limited due to high summer water temperatures. Most Fifteenmile Watershed streams are water quality limited due to sediment and habitat modification as well. The Fifteenmile Habitat Improvement Project has invested a great deal in riparian protection fencing under 10-15 year lease agreements with ODFW since inception in 1987. Early leases under that program have begun to expire. After the flash flood disaster in northern Wasco County in July 1995 and the regional flooding in February 1996 one problem with those leases became readily apparent. Landowners who entered into the leases did so on a voluntary basis with no monetary compensation for the loss of use of productive bottom land. Consequently, many were reluctant to give much room to the stream, resulting in very narrow corridors, with fences extremely vulnerable to flood damage.

The Conservation Reserve Enhancement Program (CREP) and Conservation Reserve Program (CRP) continuous sign-up has provided an opportunity and a tool to continue and expand upon work begun by ODFW. Details about these programs are available at local USDA Service Centers and in the Catalog of Federal Domestic Assistance (CFDA) #10.069, accessible on the internet at www.cfda.gov. Both programs offer 10-15 year leases to landowners to create 35-180 ft. buffers along both sides of the stream. In addition to cost sharing fencing and establishment of perennial vegetation, per-acre rental rates enable participating landowners to derive income from the buffers they establish under the programs, encouraging wider buffers.

This project to develop and implement CRP/CREP riparian buffer plans directly supports strategies and actions identified in the Fifteenmile Subbasin Summary: Strategy 2. Protect, enhance and restore aquatic and riparian habitat in the subbasin by (Action 2.3) Continue instream and riparian habitat restoration in the subbasin; Strategy 3. Protect, enhance and restore upland watershed habitat in the subbasin by (Action 3.4) Develop and/or implement other land and resource management plans that will result in improved water quality and stream habitat in the subbasin; and Strategy 4. Protect federal and state threatened and sensitive fish species in the subbasin by (Action 4.2) Provide protection for federal and state threatened and sensitive fish species in all resource management plans.

In addition to supporting actions identified above for fish, it supports the wildlife objective and associated strategies called out in the summary (pp.31-32) Strategy 1: Protect, enhance and restore wildlife habitat in the subbasin; Action 1.3 Implement wildlife habitat restoration projects in the subbasin; Action 1.4 Acquire or lease lands with priority habitats to permanently protect wildlife habitats in the subbasin; Action 1.5 More actively manage lands set aside for wildlife, such as CRP and CREP, to increase species diversity on those lands.

Buffers remove sediment and nutrients, stabilize stream banks, improve fish habitat, provide food sources, nesting cover and shelter for wildlife. More details on buffers and their effects can be found in a fact sheet at the Conservation Technology Information Center (CTIC) website: www.ctic.purdue.edu/Core4/news/annc/Bufferfact.html or at the Natural Resources Conservation Service (NRCS) web site: www.nhq.nrcs.usda.gov/CCS/Buffers.html.

This project to implement riparian buffer systems supports the NWPPC Fish and Wildlife Program Habitat Goal, Policies and Objectives described in Section 7.6, particularly 7.6B.1 helping private parties be proactive, 7.6B.3 integration of habitat work in broader watershed improvement efforts. Section 7.6B.4 provides for higher priority for actions that maximize effect

for the dollar, given that this proposal seeks only funding to make technical assistance available, with other entities picking up the implementation and lease costs, it shows outstanding leveraging of funds. The project supports the provisions of 7.6C for Coordinated Habitat Planning. Establishment of Riparian Buffers clearly supports actions identified in section 7.6D to reduce sediment, improve bank stability, and water quality. Tree establishment in riparian buffers is helping stabilize banks, and provide shade, reducing heating rates on hot summer days. Direct planning with private landowners supports the concepts discussed in Section 7.7.

The Tribes' Anadromous Fish Restoration Plan, Wy-Kan-Ush-Mi Wa-Kish-Wit, p.35 identifies 7 actions of which 2 are directly addressed by establishing riparian buffers: Action 6. Protect and enhance aquatic and riparian habitat; Action 9. Increase stream bank cover, decrease water temperatures during the summer and increase stream flow.

This project complements the ODFW Fifteenmile Fish Habitat Improvement Project's riparian protection work as well as the considerable body of work being implemented in the uplands.

Fifteenmile Watershed through a locally led process was designated as a Geographic Priority Area in Wasco County, Oregon under the USDA Environmental Quality Incentives Program (EQIP). EQIP has provided about \$1,250,000 over the past five years for long term contracts to implement resource management system plans with private landowners. A substantial portion of those funds have been used to assist private landowners in converting from conventional tillage systems of wheat - summer fallow to direct seeding / no-till systems. Soil quality tests of ground in no-till for ten years has shown a 256 times increase in water infiltration rates. That translates directly to reduced runoff and erosion. Following severe flooding in 1995 and 1996, the Wasco County SWCD coordinated a local effort to develop a Hazard Mitigation Plan for Fifteenmile. With a subsequent hazard mitigation grant from FEMA, another \$205,000 was brought to bear in implementing culvert upgrades and best management practices focussed on reducing runoff and erosion. In 1997 the SWCD recruited volunteers for a watershed council which was subsequently appointed by the Wasco County Court. By July 1997 the Fifteenmile Watershed Action Plan had been developed. A series of grants from the Oregon Watershed Enhancement Board and Department of Environmental Quality (EPA-319 funds) enabled conversion of about 6,000 acres to strip-cropping systems and no-till. Additionally a considerable number of sediment basins and terrace systems were built, all of which helped to further reduce runoff and erosion and to improve water quality. ODFW, Forest Service, Extension Service, Natural Resources Conservation Service, Oregon Department of Forestry, the SWCD, many private landowners, City of Dufur all participate on the Fifteenmile Watershed Council.

This project is providing the Fish and Wildlife Program a unique opportunity to significantly leverage funding and accelerate riparian habitat improvement.

Methods and Materials

These procedural tasks are listed logically in the sequence in which they occur for a development of CREP riparian buffer plan.

The objective of this project is to implement at least 36 new CREP/CRP riparian buffer system agreements with participating landowners covering 40 miles of anadromous fish streams and approximately 872 riparian acres.

Task a. Meet with interested landowners on site to assess eligibility of stream reach for program. Anadromous fish streams are eligible. Specific sites are eligible depending on the condition of the resources on site. Programmatic check lists are used for making the assessment.

Task b. Obtain landowner sign up for the program. Once the site is determined to be eligible and the landowner signs up for the program on a CRP2 form, the stage is set to develop the plan.

Task c. Develop CRP/CREP plan. Resource inventory and environmental checklist are completed early in the nine step planning process. Planting prescriptions are completed with input from Oregon Dept. of Forestry, livestock grazing management plans are developed as needed, with alternatives considered for water sources, pasture configuration, etc. Once the plan is completed and approved, a contract is made between Farm Services Agency and the landowner to implement the plan. The planning task is the focus of most of this project's effort.

Task d. Appropriate documentation in the producer file is completed by the planner, and progress reporting is done. That completes the planning/design process. Implementation is funded in part by state of Oregon (25%), in part by USDA (50%), and in part by the landowner (25%). The landowner portion may be in cash or in-kind.

During implementation the landowner may require some additional technical assistance which is provided under Objective 2, Task 2. "Provide technical assistance during implementation as necessary".

Operation and Maintenance are not required in this project. Actual operation and maintenance is a funded item in the CRP/CREP contracts whereby the landowner receives a small fee per acre to cover maintenance costs. The landowner is responsible under the contract for the maintenance.

Monitoring and Evaluation are not included as a cost item in this project, but records of stream miles, acreage and number of plans completed are being tracked for reporting purposes. Farm Service Agency has programmatic responsibility for spot checking contracts to ensure terms are being met. NRCS has responsibility for technical supervision.

While doing site assessments during the planning process our technicians use the USDA Natural Resources Conservation Service Stream Visual Assessment Protocol to evaluate riparian conditions. By doing so they establish documentation of baseline, pre-project conditions. Given the repeatability of that assessment, it may be prudent to consider repeating the stream visual assessment at some future time after the buffer system has been implemented and the riparian area has had a chance to respond. Establishment of a photo point and repeating the assessment would be a relatively inexpensive way to measure success in habitat improvement at least to Tier One levels and would add some measure of effectiveness.

We are coordinating with ODFW to determine if they will be conducting a similar level of M&E on fish and wildlife responses at these sites.

Results and Discussion

Progress in executing riparian buffer contracts has dramatically exceeded expectations. Goal for project was 36 contracts over three years or 12 contracts per year. During this first year 26 contracts were established for 216% of goal. Those 26 contracts for the project were expected to include about 40 miles of riparian buffers or about 13.3 miles per year. Miles of riparian buffer systems enrolled this year was 25.26 miles or 190% of goal. Average contract length was over 14.5 years.

An implicit goal was to reduce the backlog of sign-ups for the riparian buffer program. Despite exceeding our progress expectations, the number of sign-ups being processed (back log) increased from 38 at the beginning of the project year to 48 at the end of the year. Word of mouth promotion of the program by satisfied landowners was responsible for several of the new sign-ups.

The total cost-sharing amount to be contributed by the USDA programs for the three-year project was originally estimated at \$1,843,520 or about \$600,000 per year. The total contribution to this program by BPA is estimated at \$226,914 over a three-year period. Total actual cost sharing amount for the first year was \$1,491,235, which includes actual expenses and obligated amounts through the life of the buffer contracts established. That is about 250% of original estimate for the first year. Total BPA contribution for the first year was \$64,756 or about 89% of first year budget. In short, the leveraging of BPA funds has exceeded expectations.

The total exclusion of livestock grazing from riparian areas throughout the duration of the contracts differs somewhat from the model template used in the Buck Hollow Watershed for improving riparian zone management. In Buck Hollow, grazing management plans were developed with individual producers and included, in most cases, some riparian pastures. Proper timing of limited duration grazing in riparian areas enabled good vegetative recovery. Enabling ranchers to properly manage riparian grazing can lead to cultural changes. Eventually proper management will become viewed as "the way we have always done it."

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Summary and Conclusions

This project has been a resounding success to date. The NRCS Planning Course attended by the District technicians was time well spent during this year and is paying dividends already in terms of productivity.

The project would benefit by adding some level of effort for tier one monitoring using photo points and using the NRCS Stream Visual Assessment Protocol to determine changes in riparian conditions.

Summary of Expenditures

Personnel Salaries	\$ 36,241
Benefits & other Other pers. exp.	\$ 10,872
Vehicle lease costs	\$ 2,996
Vehicle operations costs	\$ 1,692
Office Space	\$ 2,161
Field Equipment	\$ 797
Office supplies and equipment	\$ 1,996
Travel	\$ 2,124
Administrative Overhead	<u>\$ 5,888</u>
Total contract Expenditures	\$ 64,767

Total USDA, State, Landowner Implementation and Contract Costs: \$1,491,235