

Secure Rural Schools and Community Self-Determination Act of 2000
Public Law 106-393
Title II Project Application for 2007 Funds (Round #7)
Roseburg District Resource Advisory Committee

1. Project Name: Elk Creek Bacterial DNA Study	2. County: Douglas
3. Sponsoring Organization: Elk Creek WSC	4. Date: 31 Mar 2006
5. Sponsor's Phone Number: (541) 836-7206	
6. Sponsor's E-mail: Russell.leland@gmail.com	

7. Project Location (attach project area map)	
a. Description of Location: Various sites within the Elk Creek Watershed	
b. Sub Basin Name (4 th Field Watershed; e.g. North Umpqua): Umpqua River	
c. Watershed Name (5 th Field Watershed; e.g. Little River): Elk Creek	
d. Legal Location: Various	
e. BLM District: Roseburg	f. BLM Resource Area: Swiftwater
g. State / Private / Other lands involved? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

8. Project Goals and Objectives: (Describe the goals and objectives of the project. If applicable list species that will benefit from the project)

This project will provide additional funds to complete the Elk Creek Watershed Bacterial DNA Source Tracking Study. The Elk Creek Watershed Council has been trying to get funding for his project for the past two years. Grant applications to OWEB, the Sustainable Agriculture Research and Education Program, and to the Yoncalla Oil Spill Fund have been unsuccessful. In 2006, the Roseburg District BLM RAC awarded \$79,056 toward this project; the Oregon DEQ has awarded approximately \$20,000. This proposal will fill the funding shortfall, and allow the project to be completed.

The primary objective of this project is to determine the sources of coliform bacteria within the Elk Creek Watershed. This project is vitally important because the Oregon DEQ has listed Elk Creek as "water quality limited" for coliform bacteria, and is in the process of refining a draft Umpqua River Bacteria TMDL (ODEQ 2003). This plan proposes that non-point sources in the Elk Creek Watershed need to reduce bacteria loads by approximately 78%. Without credible scientific evidence to identify the sources of this bacterial pollution, any strategy to reduce these bacterial loads can only be based on assumptions. Implementation of any best management practices (BMPs) to reduce bacteria cannot succeed if the underlying assumptions as to the causes prove incorrect. Recognizing the importance of clearly establishing the sources of bacterial

Title II Project Application for 2007 Funds (Round #7)
Roseburg District Resource Advisory Committee

pollution, the Elk Creek Watershed Council is sponsoring this project so that truly effective and appropriate BMP's can be identified and implemented.

Goals of the project to meet this objective include:

1. Conduct additional bacteria monitoring and bacteria source tracking (BST) (via DNA fingerprinting) to identify non-point sources and runoff issues.
2. Identify and prioritize non-point BMPs as part of TMDL implementation.
3. Increase public awareness of non-point source water quality issues within the Elk Creek Watershed.
4. Demonstrate the use of bacteria source tracking technology as a technique that may be applied elsewhere in the region and in Oregon.

9. Project Description: (Describe how the project will be conducted and how its goals and objectives will be met.)

The Elk Creek Bacteria Source Tracking Project consists of five elements:

1. Collection of scat samples from local mammals and birds.
2. Collection of water samples.
3. Laboratory analysis and DNA fingerprinting.
4. Reporting.
5. Public education.

Collection of scat samples began in January of 2004 and is ongoing. Monthly water sampling at established sites will occur over the period of a year to determine average monthly levels. A winter synoptic water sampling will occur after a heavy rain event to catch the "flush" of overland flow, and to determine the highest levels and locations of fecal coliform. All water samples will be sent to Delta Analytical Laboratories (Eugene, Oregon) for bacteriological analysis. From there, samples will be sent to IEH (Seattle, Washington) to determine the bacteria fingerprint (via DNA analysis) of each water sample. Fingerprints include domesticated animals, as well as wildlife and fowl. These results will be combined with bacteria counts to estimate the levels of fecal coliform that are contributed by each species.

Reporting and public education events will also occur as results are determined. The attached work plan has a much more extensive discussion of each phase of the project.

Title II Project Application for 2007 Funds (Round #7)
Roseburg District Resource Advisory Committee

10. How will cooperative relationships among people that use federal lands be improved?

Because the Elk Creek Watershed is composed of both private and federal lands, this information will help local landowners and land managers better understand and control bacteria runoff into Elk Creek. The project will establish and strengthen existing relationships between the Elk Creek Watershed Council, federal agencies such as BLM, Douglas County, ODEQ, and other public and private groups.

This project is extremely important to the relationship between landowners in the Elk Creek Basin and federal and state natural resource agencies. Local landowners have been skeptical of the data that DEQ is using to establish TMDLs for the Elk Creek Basin. While individual samples have shown fecal coliform levels in excess of acceptable levels, overall, the samples have been scattered and conclusions are based on a limited number of samples. In addition, assumptions made in the TMDL are that contributions from forest lands, and from the four (4) waste water treatment facilities in the Basin, are negligible. By process of elimination, the TMDLs further assume that agriculture (specifically cattle and sheep ranching) is the source of the bacteria.

The draft TMDLs are recommending a 78% reduction in bacterial loads during heavy winter flows for the Elk Creek Basin. In order to achieve this reduction, it is expected that severe limitations, in the form of Best Management Practices (BMPs) will be placed on livestock producers. This will likely result in increased costs to producers which may put some out of business.

The current situation has led to widespread mistrust of the DEQ, and has severely strained the relationship between local landowners and natural resource agencies. This project proposes to definitively identify the actual, not the assumed, sources of the fecal coliform bacteria in Elk Creek. With this information, effective BMPs can be developed to deal with the problem. This impasse in the relationship between landowners (especially the livestock producers who manage most of the low-gradient Coho Salmon habitat in the basin), and the natural resource agencies, needs to be resolved if all groups are going to be able to work together to solve our water quality and fish and wildlife habitat issues.

11. How is this project in the best public interest and how will it benefit communities?

This project helps the public in a number of ways:

1. Perhaps the single most important benefit of this project is to break down

Title II Project Application for 2007 Funds (Round #7)
Roseburg District Resource Advisory Committee

the barrier which currently exists between local landowners and state and federal natural resource agencies trying to address water quality and fish habitat concerns in the Elk Creek Basin. It is certainly in the public interest to solve these problems, and the amount of public funding which has been allocated to this task is a reflection of just how important this is to the public. The Oregon Plan has shown that the best approach is to build relationships among the stakeholders, and to encourage voluntary measures to achieve our conservation goals. At this time, the question of what is causing the high bacterial levels in Elk Creek has polarized the two most important stakeholders in this process: the landowners who own and manage these lands, and the resource agencies responsible for reducing bacterial levels. This polarization has strained this important relationship, and has stalled the process. This is affecting not just efforts to address water quality problems, but also efforts to address fish and wildlife habitat issues as well. Considering that the majority of the low-gradient stream habitat essential to the survival of the Coho Salmon in the Elk Creek Basin is owned and managed by local livestock producers, any measures which can diminish this barrier is in the public interest.

2. The results of this project will help to prioritize the sources of bacterial pollution in the Elk Creek Basin. This will allow landowners and land managers to develop effective and appropriate strategies to improve water quality in the Elk Creek Basin, and to effect a much more efficient use of the limited public funding available for addressing water quality concerns.
3. The project builds public trust by establishing a credible, scientific basis for measures to reduce bacterial pollution in waters used by the public.
4. Implementation of this project through the Elk Creek Watershed Council will raise awareness of non-point source pollution concerns throughout the watershed.
5. The project includes volunteer efforts to assist with water collection.
6. Clean and healthy water systems benefit all dependent species and is clearly in the best interest of the local community.

12. Who will accomplish the project?

<input checked="" type="checkbox"/> Contractor	<input checked="" type="checkbox"/> Federal Workforce
<input type="checkbox"/> County Workforce	<input checked="" type="checkbox"/> Volunteers
<input type="checkbox"/> Other (specify):	

Title II Project Application for 2007 Funds (Round #7)
Roseburg District Resource Advisory Committee

13. Is this project coordinated with other related project(s) on adjacent lands?	
a. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If yes, then describe)	
Control of non-point source runoff is directly beneficial to instream water quality, which in turn helps support aquatic life. Numerous restoration activities throughout the watershed are aimed at restoring streams for fish communities.	
b. Are you seeking funds from other Resource Advisory Committees? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If yes, then describe)	
The Roseburg District BLM is the only RAC with lands in the Elk Creek Watershed.	

14. If the project is on private land how does it benefit federal lands or resources?
The project spans both private and federal lands. The goals of the project are to identify the primary sources of coliform bacterial pollution in the Elk Creek Basin, and to facilitate the development of strategies to improve water quality throughout the Elk Creek Watershed. This will benefit all landowners in the Basin, both public and private. Federal lands comprise a large portion of ownership within the watershed, and the beneficial impact of improved water quality would be distributed over a broad scale.

15. Measure of Project Accomplishments	
a. Total Acres: N/A	b. Total Miles: unknown
c. Number of Structures: N/A	d. Estimated Number of People Reached (for environmental education and workforce training projects): 100
e. Number of Laborer Days: 350	
f. Other (specify): N/A	
g. Describe how long will the benefits of the project last: This project would start an upward trend in improving water quality. The recovery process could take many years; however, the benefits would accumulate as water quality steadily improves.	

16. Will the project generate merchantable materials?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe:

Title II Project Application for 2007 Funds (Round #7)
Roseburg District Resource Advisory Committee

17. How does the proposed project meet purposes of the legislation? (Check at least one)	
<input checked="" type="checkbox"/>	Implements stewardship objectives that enhance forest ecosystems.
<input type="checkbox"/>	Restores and improves land health.
<input checked="" type="checkbox"/>	Restores water quality.

18. Project Type (Check at least one)	
<input type="checkbox"/> Road Maintenance	<input type="checkbox"/> Trail Maintenance
<input type="checkbox"/> Road Decommission/Obliteration	<input type="checkbox"/> Trail Obliteration
<input type="checkbox"/> Other Infrastructure Maintenance (specify):	
<input type="checkbox"/> Soil Productivity Improvement	<input type="checkbox"/> Forest Health Improvement
<input type="checkbox"/> Watershed Restoration & Maintenance	<input type="checkbox"/> Wildlife Habitat Restoration
<input type="checkbox"/> Fish Habitat Restoration	<input type="checkbox"/> Control of Noxious Weeds
<input type="checkbox"/> Reestablish Native Species	
<input checked="" type="checkbox"/> Other Project Type (specify): Water quality monitoring; education	

19. Project Initiation and Estimated Completion Dates: (Describe the timing of the major phases of the project)
<p>Scat sampling has been conducted since January 2004, and the water sampling phase is contingent on successful funding. Water sampling will be done over the course of one (1) year. It is expected that the project analyses and reports, as well as the public education component, will be completed six (6) to nine (9) months after.</p>

20. Status of Project Planning			
a. NEPA process complete:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> n/a
If no, give est. date of completion:			
d. Consultation complete:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> n/a
f. DSL/ODFW* permits for in-stream work obtained:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> n/a
g. DSL/COE* 404 fill/removal permit obtained:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> n/a
h. SHPO* concurrence received:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> n/a
i. Project design(s) completed:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> n/a
* DSL = Dept. of State Lands, ODFW = Oregon Department of Fish and Wildlife, COE = Army Corps of Engineers, SHPO = State Historic Preservation Officer			

Title II Project Application for 2007 Funds (Round #7)
Roseburg District Resource Advisory Committee

21. Anticipated Project Costs	
a.	Total fiscal year 2006 Title II funds requested (to be expended beginning in FY 2007): \$89,000
b.	Is this a multi-year project? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Display estimated expenditures by fiscal year below (The federal fiscal year begins October 1):
d.	FY 2007 expenditures:
e.	FY 2008 expenditures:

Table 1. Project Cost Analysis: (Includes all expenditures for the life of the project)

Item	Fed. Agency Appropriated Contribution	Requested County Title II Contribution	Other Contributions	Total Available Funds
Planning and Permits	\$0	\$0	\$9,500	\$9,500
Design & Engineering	\$0	\$0	\$0	\$0
Project/Contract Management	\$0	\$4,000	\$0	\$4,000
Project/Contract Implementation ¹	\$20,750	\$74,200	\$79,056	\$180,566
Materials & Supplies ²	\$0	\$5,800	\$0	\$5,800
Post-Project Monitoring	\$0	\$0	\$0	\$0
Mileage				
Grant Administration	\$0	\$5,000	\$0	\$0
Total Cost Estimate	\$20,750	\$89,000	\$88,556	\$198,306

¹This could be either the cost of the labor for project implementation or the cost of a contract.

²If the project is implemented by contract, materials and supplies are likely included in the cost of the contract.

22. Identify source(s) of additional funding for project identified above or clarify other aspects of the budget:
<p>The Federal Agency Appropriated Contributions reflect the EPA 319 program, which is administered by ODEQ. Other Contributions reflect in-kind volunteer match from the Elk Creek Watershed Council (as well as funds already spent by the council to develop the work plan and find project funding).</p>

Title II Project Application for 2007 Funds (Round #7)
Roseburg District Resource Advisory Committee

23. Monitoring Plan

- a. What measures or evaluations will be made to determine how well the proposed project meets the desired ecological conditions? Who will be responsible for this monitoring item?
This project is essentially a monitoring project. The Elk Creek Watershed Council will be responsible for this project. Final evaluation will occur once BMPs are implemented to meet the TMDL.
- b. How will the project be evaluated to determine how well it contributes to local employment and/or training opportunities, including summer youth jobs programs such as the Youth Conservation Corps? Who will be responsible for this monitoring item?
The Elk Creek Watershed Council has incorporated local training into the project proposal via in-kind volunteer match for sample collection.
- c. What methods will be established to determine how well the proposed project improves the use of, or added value to, any products removed from federal lands consistent with the purposes of this Act? Who will be responsible for this monitoring item?
No products will be removed from federal lands.

24. What are the analyses, plans, legislation, or other supporting documents that support and guide this application? (E.g. the Northwest Forest Plan, a watershed analysis, a late successional reserve assessment, or the Oregon Plan for Salmon.)

This project was developed directly from the findings of the draft TMDL proposed by ODEQ (2003). In addition, ODEQ has listed bacteria source tracking as a priority data gap for the Umpqua River watershed. Restoring water quality is a component of many other documents such as the Oregon Plan for Salmonids and the Northwest Forest Plan.

25. Who are the key people responsible for this project? (List their names and titles)

James Mast, Chairman - Elk Creek Watershed Council
Sherrill Doran, Project Design - CH2M HILL
Lee Russell, Watershed Council Coordinator - Elk Creek Watershed Council

Title II Project Application for 2007 Funds (Round #7)
Roseburg District Resource Advisory Committee

26. Attach a map and photograph(s) of the project. (At a minimum, the map should show the project location, roads, and streams, and private versus BLM ownership. The photograph should show the project site or a representative portion of it. A digital photograph incorporated into this application is preferred.)

Elk Creek Watershed Bacterial DNA Source Tracking Study:

