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 Off-channel Habitat	**2. County:** Douglas
3. Sponsoring Organization: Elk Creek WSC	**4. Date:** 12 August 2007
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: Umpqua Basin (See attached map for more details)	
b. Sub Basin Name (4th Field Watershed; e.g. North Umpqua): Main Umpqua	
c. Watershed Name (5th Field Watershed; e.g. Little River): Elk Creek Basin	
d. Legal Location: Township 21S Range 4W Section(s) 33; 22S 4W Sec20; 21S 5W Sec 32	
e. BLM District: Roseburg	e. BLM Resource Area Swiftwater
f. State / Private / Other lands involved? ☒ Yes ☐ No	

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

The Elk Creek Off-channel Habitat Project will develop four (4) off-channel over-winter habitat areas for Coho juveniles on private lands on three (3) streams in the Elk Creek Watershed. Additional work at two of the sites, where the stream has been straightened and channelized, will restore sinuosity to the channel and reduce gradients. Logs and boulders will be placed in the new channel to provide complex habitat for juvenile Coho.

The Elk Creek watershed is an important spawning and rearing habitat for Coho salmon, as well as Steelhead and Cutthroat Trout. It was designated a Tier 1 Key Watershed by the Roseburg District BLM in the Northwest Forest Plan (1994), and was ranked number one by the Umpqua Basin Watershed Council when it prioritized the sub-watersheds of the Umpqua system using the Bradbury Process (1998). Virtually *all* the streams in the watershed have been designated as "Essential Fish Habitat" under the Magnuson-Stevens Act; *most* have been characterized as having "high intrinsic potential" by ODFW.

Past land use practices have degraded much of the habitat in the watershed, especially in the lower gradient reaches on private agricultural lands which contain the majority of the prime Coho habitat. Incised channels are widespread. Many have been reduced to bedrock by splash dams, by channel straightening, and by "stream cleaning," a required forest practice in the 1960s and '70s, which removed most of the large woody debris from the channel.

In 2006, the Elk Creek Watershed Council invited a group of fisheries biologists and restoration specialists from various natural resource agencies including BLM and ODFW to participate in a discussion of watershed assessment and limiting factors in the Elk Creek Watershed. (Elk Creek Limiting Factors Forum). The conclusion from this meeting was that the primary factors limiting salmonid populations in the Elk Creek Basin were:

1. Lack of large wood in the streams (stream complexity). Removal of large wood has increased water velocities and led to increased erosion and channel incision, and disconnection from the floodplain. Large wood slows water velocities and creates high quality rearing habitat for juveniles. Increased water velocities have also scoured out sand and gravels which can hold water and thereby help increase summer flows and lower summer water temperatures.
2. Lack of suitable over-wintering habitat for juvenile Coho. In channels already incised and cut off from the floodplain, increased water velocities during high winter flows literally wash juvenile fish out of the system.
3. Blockage of fish passage by undersized or improperly placed culverts.

ODFW has identified the lack of over-wintering habitat for juvenile Coho as *the* most significant factor limiting Coho populations in the Oregon Coastal Coho ESU. Recognizing that most of this habitat is on private lands, ODFW has made working with these private landowners a high priority. The Elk Creek Watershed Council has received agreements from four (4) private landowners to develop off-channel habitat on their properties.

Buck Creek: Two sites have been selected on Buck Creek:

1. The first site will connect a large farm pond (approximately 100' by 75') to the main channel of Buck Creek. The project will develop a diversion channel from Buck Creek to the pond. The inlet to the diversion will be designed so that as water levels rise during high flow events, fish will be able to enter the pond to find refuge.
2. The second site will expand an existing wetland pond and develop a channel to connect it to the creek. The existing pond is fed from a spring that flows year-round. The pond will be expanded and the surrounding area planted with native wetland plants. A new channel will be constructed between the pond and Buck Creek that will allow fish to access the pond during high winter flows. A bridge will be constructed, or a culvert placed, to allow the landowner access to land across the new channel.

Fitch Creek: An off-channel pond will be constructed in a large wetland area near the confluence of Fitch Creek and a small, unnamed tributary. Electroshocking has shown the presence of *numerous* Coho fry in both the tributary, and in the main channel of Fitch Creek. This wetland area, approximately $\frac{1}{4}$ acre, is currently dominated by sedges. An off-channel pond will be excavated in the wetland area, and connected to the Fitch Creek channel to allow fish to enter the pond during high flows. Water from the tributary will be allowed to flow through the pond to help prevent sediment from filling it in.

In addition to the off-channel habitat, the main channel of Fitch Creek will be moved back into its historical location. During the construction of the Upper Smith River Road, this section of Fitch Creek was straightened and channelized so that it is confined to a narrow path at the base of the road fill. It was further confined by a dike built up by earlier landowners to reduce flooding. The creek will be moved out of this confining channel, and a new channel constructed that will restore sinuosity, and reduce gradients and water velocities. Large wood and boulders will be added to the new channel to provide additional complex summer and winter habitat for juvenile fish.

After construction is complete, the riparian areas will all be planted with native trees and shrubs to provide shade, and to stabilize the streambanks. The final component of the project will remove the undersized culvert under the landowners driveway and replace it with a railroad car bridge. This will restore the creek to its natural bed and channel width, and provide for unlimited passage of all aquatic species.

Cox Creek: A pond, which is fed by a small, unnamed tributary, will be enlarged and connected to the Cox Creek channel so that juvenile fish, predominately Coho, will be able to access the pond during high winter flows. Though small, the tributary flows year-round, and will help keep sediment from filling in the pond.

In a nearby section of Cox Creek that was straightened, the channel will be restored to its historical channel. The new channel will increase sinuosity, and reduce gradients and water velocities. Reconnecting the creek to its floodplain will restore valuable over-winter habitat for juvenile Coho. The entire project area will be planted with native trees and shrubs to provide shade and to protect streambanks from erosion.

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

The Elk Creek Watershed Council will work with state and federal agency biologists and hydrologists to design the off-channel habitats. Design goals will be to allow juvenile fish access during high flow events, to preserve stream flow in the main channel during

the summer, and to avoid sedimentation. The Council will contract with a qualified engineer to design the bridge crossings so that they will be "fish friendly" and capable of passing a one hundred-year flow. ODFW and other agency fisheries biologists will help design the stream restoration components of the project, and the large wood and boulder placements.

The Council will be responsible for securing all required permits, and will develop and administer agreements with contractors to perform the work. The Council will also administer the funding grants for the project, and will be responsible for all financial accounting and reports.

A tracked excavator will be used for construction. It will excavate the new channels and the ponds to the engineer's specifications, and place large wood and boulders according to project designs. Construction will be consistent with the Best Management Practices contained in the SLOPES III Biological Opinion (NMFS), will conform to the Oregon Aquatic Habitat Restoration Guide, and will be supervised by ODFW Fisheries Biologists. In the winter following construction, the riparian area and the wetland will be planted with native trees and shrubs and wetland plants.

An additional benefit of this project will be its visibility to other landowners in the Elk Creek Watershed and the general public. All project areas are close to county roads. They will be highly visible to traffic, and will surely raise the interest of neighbors and passersby. The Elk Creek Watershed Council will try to keep the public informed through regular articles in the local newspaper which will highlight the Council's goals and objectives for the project, and educate the public on important aspects of watershed health.

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

This project will improve the cooperative relationships among the Roseburg District BLM, the Elk Creek Watershed Council, and private landowners in the Elk Creek Watershed. Agency personnel will be actively involved in the planning and designs, as well as the construction phase of the project.

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

This project will restore habitat and improve water quality in the Elk Creek Watershed. The project benefits the public in several ways:

- The project improves fish habitat in important Coho Salmon streams. Improved fish runs are a benefit to all segments of the public.
- The project benefits the local economy by maintaining infrastructure important to both the people of Douglas County and to the interests of landowners.
- The culvert replacement will improve water quality by reducing the risk of fine sediment being released into the stream and damaging spawning beds (Fitch Creek).
- The project will create jobs for local contractors who are expected to bid on construction.
- This project will build better working relationships among the Elk Creek Watershed Council, ODFW, local landowners, and the Roseburg District BLM. These relationships are important to the overall success of the voluntary watershed restoration approach of the Oregon Plan for Salmon and Watersheds.

12. Who will accomplish the project?

☒ Contractor	☐ Federal Workforce
☐ County Workforce	☐ Volunteers

☒ Other (specify):

The Elk Creek Watershed Council will:

- Secure funding.
- Apply for all required permits.
- Develop and enter into contracts for the design and construction of the project.
- Coordinate and manage the project, administer all grant funds, and prepare all documents and reports as required by funding agencies.

ODFW and BLM will:

- Conduct pre- and post-project monitoring.
- Supervise design and construction.

Participating landowners will:

- Permit access to their lands.
- Develop and implement a riparian planting plan utilizing native trees and shrubs.

13. Is this project coordinated with other related project(s) on adjacent lands?

a. ☒ Yes ☐ No (If yes, then describe)

Buck Creek: This project is part of extensive work in the Buck Creek watershed. The Elk Creek Watershed Council is currently implementing a project to replace four (4) undersized, failing culverts, at two stream crossings, with railroad car bridges; to rebuild a section of the creek which was straightened and has now eroded to bedrock; and to construct large wood log jams at twelve (12) sites along a $1\frac{1}{4}$ mile section of Buck Creek. Most of the funding for this project has been awarded, and construction will begin in 2007. The remainder of the funding has been applied for in another Title II application, and construction will be completed in the summer of 2008.

The Elk Creek Watershed Council has been awarded an OWEB Technical Assistance grant to do the designs and engineering for the off-channel habitats proposed in this application. Participation in this design process will be open to interested people involved in watershed restoration throughout the Umpqua Basin. These designs will form the basis for the designs of future projects.

The Elk Creek Watershed Council has applied for funds in a separate Title II application to improve fish passage through an area where the channel of Buck Creek was diverted during the construction of the I-5 freeway and the current County road. This project will improve the benefits to fish and wildlife from the other Elk Creek Watershed Council projects, and from the recent culvert replacements by Douglas County and BLM.

Fitch Creek: The Elk Creek Watershed Council has secured an OWEB small grant to place large logs and boulders into the tributary adjacent to the Fitch Creek project area. This project will slow water velocities, trap gravels, and provide improved, complex habitat for juvenile Coho rearing in this tributary. The project will use the log jams to force water out onto the floodplain during high winter flows to provide additional areas of refuge for juvenile fish during these storm events. Construction of this project will begin in 2007.

The landowner will help develop a riparian planting plan, and replace the existing grass with native trees and shrubs.

b. Are you seeking funds from other Resource Advisory Committees? ☐ Yes ☒ No (If yes, then describe)

14. If the project is on private land how does it benefit federal lands or resources?

Fish habitat and water quality improvements on private lands are important to the federal lands in the headwaters of the watershed. The improvements from this project will especially benefit Coho and Steelhead using the higher gradient stream reaches on the BLM lands above the project area.

15. Measure of Project Accomplishments	
a. Total Acres: **NA**	b. Total Miles: **1**.
c. Number of Structures: **4**	d. Estimated Number of People Reached (for environmental education and workforce training projects):**NA**
e. Number of Laborer Days: **NA**	
f. Other (specify):	
g. Describe how long will the benefits of the project last: **Indefinitely**	

16. Will the project generate merchantable materials?

☐ Yes ☒ No If yes, describe:

17. How does the proposed project meet purposes of the legislation? (Check at least one)

- ☒ Improves maintenance of existing infrastructure.
- ☒ Implements stewardship objectives that enhance forest ecosystems.
- ☒ Restores and improves land health.
- ☒ Restores water quality.

18. Project Type (Check at least one)

☐ Road Maintenance	☐ Trail Maintenance
☐ Road Decommission/Obliteration	☐ Trail Obliteration
☒ Other Infrastructure Maintenance (specify): Culvert Replacement	
☐ Soil Productivity Improvement	☐ Forest Health Improvement
☒ Watershed Restoration & Maintenance	☐ Wildlife Habitat Restoration
☒ Fish Habitat Restoration	☐ Control of Noxious Weeds
☒ Reestablish Native Species	
☐ Other Project Type (specify):	

19. Project Initiation and Estimated Completion Dates: (Describe the timing of the major phases of the project)

- Grants for additional funding: Fall 2007
- Pre-project monitoring: Fall 2007
- Project Designs: Winter 2007-2008
- Permit Applications: Winter 2007-2008
- Contract Preparation: Spring 2008
- Bid Solicitation: Spring 2008
- Construction: Summer 2008
- Post-project monitoring: Fall 2008-Spring 2009

20. Status of Project Planning:			
a. NEPA process complete:	☐ Yes	☒ No	☐ Not Applicable
b. Consultation complete:	☐ Yes	☒ No	☐ Not Applicable
c. DSL/ODFW* permits for in-stream work obtained:	☐ Yes	☒ No	☐ Not Applicable
d. DSL/COE* 404 fill/removal permit obtained:	☐ Yes	☒ No	☐ Not Applicable
e. SHPO* concurrence received:	☐ Yes	☐ No	☒ Not Applicable
f. Project design(s) completed:	☐ Yes	☒ No	☐ Not Applicable
g. If you answered yes to any of the questions above, please describe who will accomplish the work and when it will be complete:			
***** DSL = Dept. of State Lands, ODFW = Oregon Department of Fish and Wildlife, COE = Army Corps of Engineers, SHPO = State Historic Preservation Officer			

21. Anticipated Project Costs:

a. Total Title II funds requested: $ 81,240

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		$ 920	$ 6,840	$ 7,760
Design & Engineering		$ 8,600	$ 37,000	$ 45,600
Project/Contract Management		$ 3,800	$ 19,680	$ 23,480
Project/Contract Implementation[1]		$ 40,750	$ 164,000	$ 204,750
Materials & Supplies[2]		$ 19,062	$ 76,250	$ 95,312
Post-Project Monitoring		$ 720	$ 5,760	$ 6,480
Mileage:		$ 388	$ 2,813	$ 3,201
Grant Administration		$ 7,000	$ 28,000	$ 35,000
Total Cost Estimate		**$ 81,240**	**$ 340,343**	**$ 421,583**

[1]This could be either the cost of the labor for project implementation or the cost of a contract.
[2]If the project is implemented by contract, materials and supplies are likely included in the cost of the contract.

22. Provide a budget narrative, including a description of other source(s) of funding for the project identified above and/or a clarification of any other aspects of the budget:

"Other Contributions" in the budget include:

- OWEB: (Cash) $ 324,962
- ODFW: (In-kind) $ 10,827
- BLM: (In-kind) $ 2,754
- Landowner: (In-kind) $ 1,800

$ 340,343

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?

Pre-project Monitoring:

a. ODFW: Fish use; Spawning
b. ECWC: Photo documentation

Post-project Monitoring:

c. ODFW: Fish use; Spawning
d. ECWC: Photo documentation

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?

Local contractors are likely to bid on, and have the contract awarded to them. No further evaluation is planned.

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?

Not applicable.

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.)

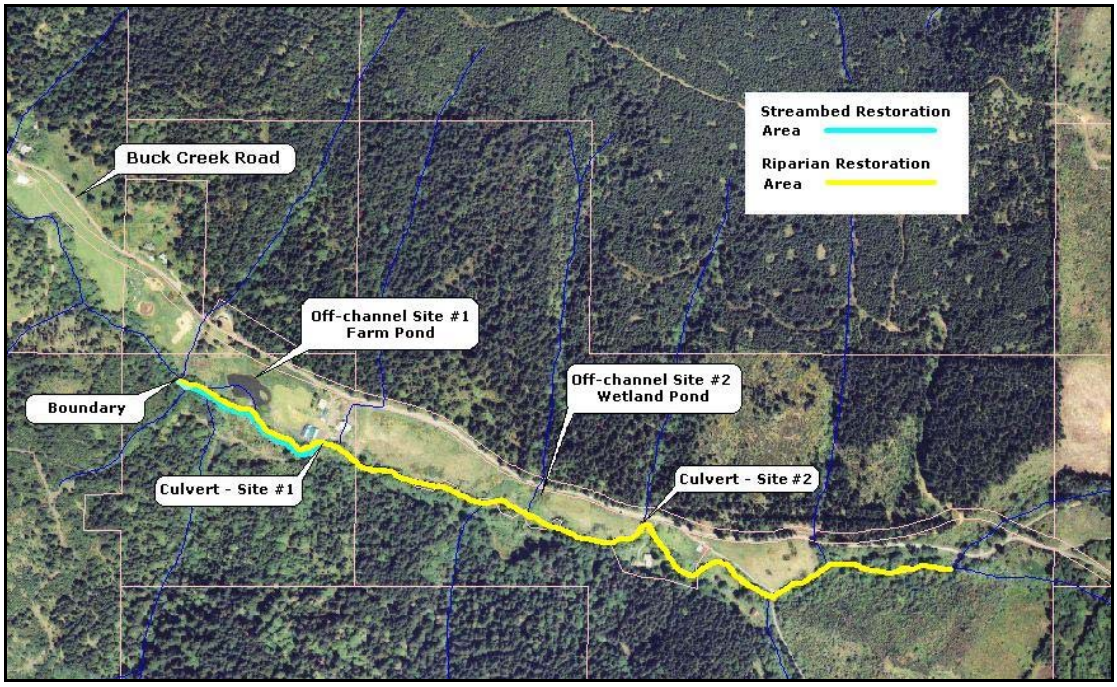
Elk Creek Watershed Analysis (BLM-2004)
Elk Creek Watershed Council Fisheries Summit (November 2006)
Oregon Plan for Salmon and Watersheds (OWEB)
Oregon Aquatic Habitat Restoration and Enhancement Guide (OWEB)
Umpqua Agricultural Water Quality Management Area Plan (ODA)
Umpqua Basin TMDL (DEQ)
Oregon Coast Coho Conservation Plan (State of Oregon - 2007)

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

Lee Russell – Elk Creek Watershed Council Coordinator
James Mast – Elk Creek Watershed Council Chairman
Jim Brick – ODFW Fisheries Biologist
Greg Huchko - ODFW Fisheries Biologist
Dan Jenkins - ODFW Fisheries Biologist
Don Porior – Engineer – Porior Engineering
Jake Winn – BLM Restoration Coordinator

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. **More than one photograph can be submitted, but they must all fit on one page. A digital photograph incorporated into this application is preferred; hard copies will be copied in black and white**.)

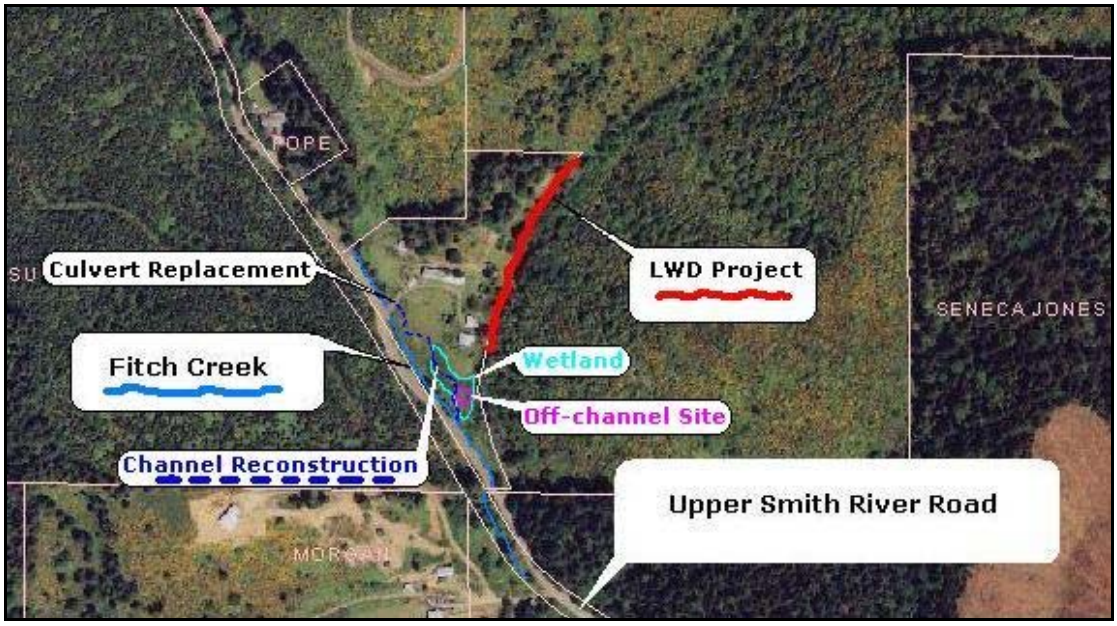
Buck Creek Off-channel Habitat Site Photo:



Buck Creek Farm Pond – Off-channel Site #1:

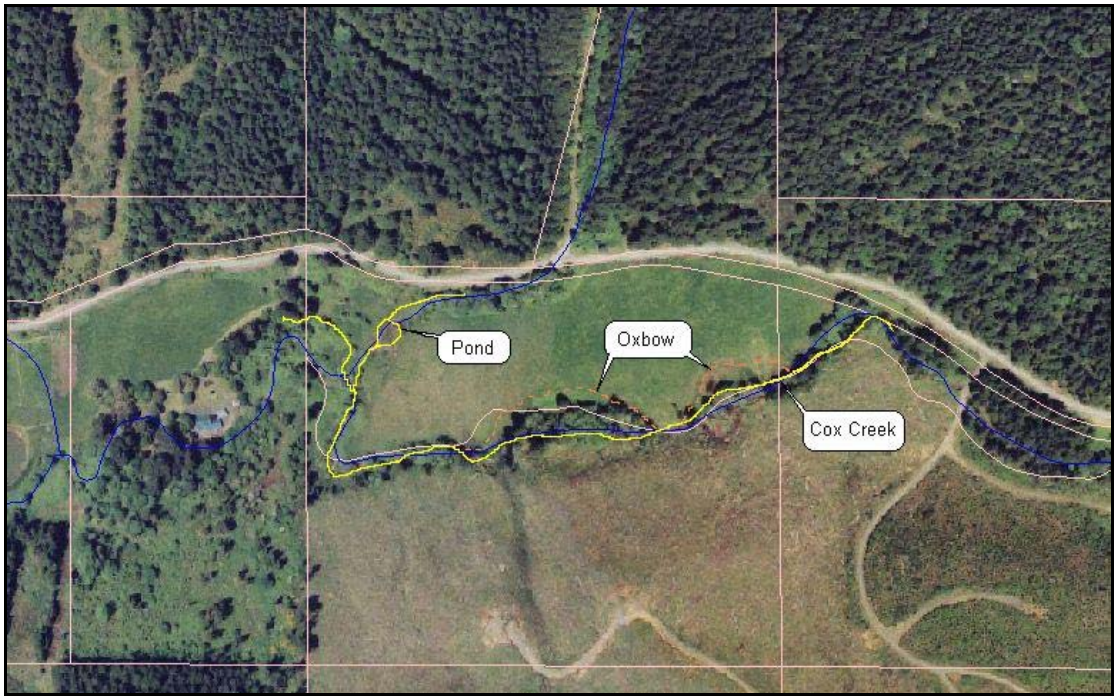
Buck Creek Wetland Pond – Site #2:

Fitch Creek Off-channel Habitat Site Photo:



Fitch Creek Wetland Area:

Cox Creek Off-Channel Site Photo:



Cox Creek –Pond Site:

Cox Creek Oxbow: