

**EMBRACE-A-STREAM 2011
GRANT APPLICATION**

DEMSEY CREEK FISH SCREEN AND FISH PASSAGE PROJECT

Executive Summary

Dempsey Creek is located above the town of Lava Hot Springs. It is a small Yellowstone Cutthroat trout tributary to the Portneuf River. Currently there is an active diversion that is impassable for upstream migrating fish, and there is no fish screen to prevent fish from going down the ditch and being lost.

The purpose of this project is to rebuild the present diversion so that it is fish friendly to both upstream and downstream fish migration. Further, a new fish screen will be installed to eliminate fish entrainment (fish being lost down the ditch). The South East Idaho Fly Fishers Chapter of Trout Unlimited (TU) will work with TU national staff, the U.S. Fish and Wildlife Service, the Idaho Department of Fish and Game, the Idaho Association of Soil Conservation Districts, and the Dempsey Creek Water Association members, to bring this project to completion.

The **overall goal** of the project is to provide a reconnection of this tributary stream to its historic spawning headwaters for native Yellowstone Cutthroat trout (YCT). The **Conservation** goal of the project is to provide passage, get the stream reconnected with its upstream habitat, and eliminate fish entrainment down the outgoing ditch, with a new fish screen. Keeping those fish within the main channel will improve the overall resident population dynamics of Dempsey Creek and will also influence the fluvial population of YCT in the main stem Portneuf. The interest generated by this project will **strengthen TU** by getting local chapter members energized and involved and increase regional awareness of TU's conservation work in the community and surrounding region.

The South East Idaho Fly Fishers requests \$10,000 in Embrace-A-Stream (EAS) funds to execute the project. Our Partners on this project are listed below:

- U.S. Fish and Wildlife Service (USFWS)
- The Idaho Department of Fish and Game (IDFG)
- The Idaho Association of Soil Conservation Districts (IASCD)
- National Resource Conservation Service (NRCS)

Location: The Dempsey Creek project is located in Bannock County Idaho Township 09S, Range 38 East, Section 28 NWSE. See attached map included with the application. Dempsey Creek is a spawning tributary to the Portneuf River for Yellowstone Cutthroat trout. Other fish found in Dempsey Creek are rainbow trout and brown trout.

Species of Concern: Wild native populations of Yellowstone Cutthroat trout or YCT (*Oncorhynchus clarki bouvieri*) are found throughout the Dempsey Creek drainage and the main stem Portneuf River. YCT are currently listed as a species of concern by the Idaho Department of Fish and Game. A decision to place YCT on the Endangered Species List is currently under appeal. The best current estimates say that existing populations of YCT currently occupy less than 10% of their historic range nationwide. By eliminating fish loss due to entrainment in the ditch on Dempsey Creek population numbers in this stream and its main stem Portneuf will increase. More available spawning and rearing habitat will be made available with the removal of the fish barrier. Both resident and fluvial YCT will be able to access their historic spawning grounds.

Need for the Project / Regional Significance: Improving connectivity within this stream reach coupled with increased fish population numbers that are currently being lost due to irrigation withdrawal will improve salmonid populations, thereby increasing available fishing opportunities for local residents and the surrounding community. This project will also bolster declining YCT populations in Dempsey Creek and the Portneuf River System. YCT are primarily tributary spawners, solving this long standing barrier and entrainment issue will insure a viable and persistent population of YCT for years to come.

The South East Idaho Fly Fishers Chapter has a long history of quality “on the ground” restoration projects that have significant long term beneficial consequences for the watershed.

This project will be an opportunity to educate chapter members and teach them how conservation projects can improve declining populations of YCT in the region. Projects like this one can increase the chapter’s educational curriculum; help chapter members learn bioengineering techniques, and work with national TU staff, and other watershed professionals. It will be an opportunity to recruit new chapter members and give them a chance to interface with established chapter members. Most importantly, it will be a conduit to create a new generation of future conservationists to keep the mission moving forward.

National Conservation Agenda and Strategic Plan Issues:

The Dempsey Creek Project meets the National Conservation Agenda in three main areas: (1) Native Salmonid project, (2) Salmonid Conservation, (3) National goal of reconnecting native tributary spawning stream with its headwaters. It also meets the national goal of a wild salmonid project.

The Dempsey Creek Project will continue a long standing tradition of conservation projects by the South East Idaho Fly Fishers. It will continue to promote future conservation projects, increase educational awareness, and give chapter members and opportunity to work with federal, state and local agency personal on a one on one basis.

Goals and Objectives:

The overall goal of this project is to eliminate a bad upstream irrigation barrier and reconnect this stream with its headwaters so that fluvial and resident native salmonids have access to their historic spawning grounds. The accompanying goal will be to eliminate fish entrainment and loss by installing a fish screen on the outgoing diversion.

The local water users have visually observed a lot of stranded fish that ultimately die in the outgoing ditch. Other important goals will be to use this project to help promote chapter public education and outreach, put Trout Unlimited's name and face on a quality fisheries based conservation project that will have measurable success. It will give chapter members an opportunity to work with agency conservation professionals and TU staff to help each member and new recruited members have a clear understanding of what fisheries conservation is and how they can play a key role in how that gets shaped. It will also provide a role model of for good projects going forward for the chapter to follow.

Conservation Goals and Objectives:

- Reconnect this stream with its headwaters for improved upstream spawning and rearing for native salmonids.
- Eliminate fish loss and entrainment in the out going diversion
- Work with the local water users association on a long term plan to place the ditch into a pipe to further conserve water withdrawal, and improve instream flow through water being lost to seepage and evaporation.
- Work with agency personnel on a population assessment and use that information for improved fisheries management in the region.

Strengthening TU Objectives – the primary goal for strengthening TU as an organization is to:

- Increase chapter awareness, education, and partnerships with on the ground activities that promote and encourage conservation that will help build new skills and tools for other projects.
- Strengthen and build lasting relationships with federal, state, and local agencies responsible for fisheries management decisions.
- Continue to build a conservation constituency that will inform and influence important fisheries management and direction decisions.
- Build chapter membership
- Engage new members
- Recruit new leaders
- Increase the awareness of how important it is to have a healthily and robust native fishery within our local and regional areas.

Educational Objective – the educational goals are:

- Use the project to inform local and regional communities of the importance of reconnecting, restoring and protecting our cold water resources. How important these local projects are and important tool for others to realize what outstanding natural resources we have and how to teach people about fisheries conservation.
- Reach out to non TU community members to help them understand the importance of our local cold water resources.
- Use this project for a local high school naturalist class for a hand's on educational experience that will build future conservation leaders.
- Communicate this project results to the local chamber of commerce and other activity groups through presentations.

Work Plan:

The priority will be to obtain a quality design for both the new instream diversion works and the fish screen. Chris Banks who is the project professional has indicated that the design can be done by Allen Johnson who is a staff engineer with the Idaho Department of Agriculture.

Typically what has worked with much success on other projects of this nature is a series of rock v-weirs that elevate the water surface sufficiently to divert water into a new concrete head works with control gate. For the fish screen the partners are looking at either a paddle driven drum screen which Idaho Fish and Game has used very extensively, or a solar powered Hydrolox belt screen which TU has successfully installed on the ground. Both of these screens are NOAA approved.

Once design plans are in hand, the partners will hire a qualified local contractor to build the rock weirs. A sub concrete contractor will be hired for the concrete work. If a drum screen is the preferred screen design, Peterson Precision Metal works out of Leadore Idaho would be contacted to construct a modular paddle wheel driven screen that could be set and assembled on site. If the Hydrolox screen is chosen sufficient time will need to be allocated to get the screen ordered and built. The South East Idaho Fly Fishers will coordinate with TU National staff and the other project leads on the revegetation component of the project. The chapter will be charged with recruiting the on the ground volunteers to help assist with site work and planting activities, and to inform the local community of the important work going on. The chapter can also use this project as way to recruit new members or volunteers. Certainly some new members could come from the small community of Lava. The project will use some Coir fiber mats to help stabilize affected or disturbed bank areas; these can be planted with native willow stock to beef up the stability holding characteristics of these mats, other bioengineering techniques like brush mattress, and vertical bundled willow plantings will be used.

Time Frame:

- May 1, 2011 have design in hand; go over with partners to fill in any gaps or concerns. Finalize what type of screen will be used and get screen under construction.
- July 10, 2011 chapter meeting to discuss media options, get volunteers committed.
- July 15, 2011 preconstruction meeting with partners to select contractor for instream work.
- July 25, 2011 hire contractor, locate materials.
- September 1, 2011 have materials on site
- September 15, 2011 start construction, have fish screen on site for install.
- September 20, 2011 organize on the ground work party for chapter volunteers; spend the day working on revegetation.
- September 30, 2011 final project out, have volunteers on site for another day of planting and clean of project.
- October 1, 2011 organize meeting with High School naturalist class to have onsite tour. Use this opportunity to do some additional on the ground revegetation work.
- October 2011 work with the Idaho State Council to illustrate this project at the annual fall council meeting.

- October 2011, work with the Idaho Falls chapter to publish / promote this project at there annual Fly Fishing EXPO the following spring.
- November 2011 organize a meeting of all the partners to discuss long term management strategy, consult with Idaho Fish and Game on population monitoring plans. Use this meeting to also look at lessons learned and improvement in efficiencies.

Role of TU:

The South East Idaho Fly Fishers will organize at least 10-12 volunteers for each of the work days proposed. The volunteers will be primarily from the local chapter but appeal will be made to the Idaho State TU council to encourage broader participation and support. The chapter will also coordinate with the Dempsey Creek Water Users Association on volunteer activities, which intern could lead to some new members being recruited.

Chapter president Darrel Brown will be the leader in this project with help coming from VP Dan Murbarger and Tom Banyas. The support of Idaho Council president James Piotrowski will be sought out during the project. TU national staffer Matt Woodard will serve as the main contact point and will be intimately involved with all parts of the project.

Roles of Other Partners:

Chris Banks with the Idaho Association of Soil Conservation Districts will use his knowledge and skills to use existing programs both within the Natural Resource Conservation Service and also with the State Department of Agriculture to help secure additional funds for the project. Cary Myler, U.S. Fish & Wildlife Service biologist, will be consulted on passage and fish screen design. Dave Teuscher regional fisheries manager in region five with the Idaho Department of Fish and Game will be consulted on all phases of the project. Dave will also be instrumental in providing monitoring support to gauge the effectiveness of the project and to look at long term fisheries management issues for this area.

Outreach Plan:

The South East Idaho Fly Fishers will work cooperatively with the Idaho State Council and Idaho Falls based TU national staff on a local and regional out-reach campaign to reach several media outlets, including newspapers, local television, state wide magazines, and local radio stations. Information about the project will be posted on both the local and state council web site. Getting something in the chapters monthly newsletter mailings, direct contacts, and mentioning of the projects monthly winter and spring meetings leading up to when the chapter suspends meetings for the summer. Work with the Idaho Falls TU chapter to have information / presentation at the annual Fly Fishing EXPO.

Other out reach actions would include:

- Press release to the **Post Register, Idaho State Journal, and the Rexburg Standard Journal.**
- Submit article for inclusion in the State Council annual newsletter.
- Story for **TROUT** magazine.

Evaluation:

The goals of this project are clearly stated. The primary measures of success will be to work with the Idaho Department of Fish and Game on a long term monitoring plan to effectively gauge how fish are using the reconnected habitat upstream and observe how overall population numbers look after the fish screen is in place. We would expect to see a significant gain in juvenile trout numbers that will be kept in the main stem of the creek and that will be no longer lost.

Measurable success for the chapter in relation to this project will include

- An increase in chapter attendance for fall meetings in 2011
- Opportunity for the chapter to build on this project and establish another project downstream of this one.
- Work with the local Dempsey Creek water association members and other conservation partners on a long term plan to place the outgoing ditch in a pipe, which will conserve water, allow more water to remain instream, and reduce overall maintenance issues for the association.
- Increased conservation presence in the community of Lava should yield 5-6 new members for the South East Idaho Fly Fishers.
- Increased chapter participation of volunteer work days.



EMBRACE-A-STREAM
2010 GRANT APPLICATION FORM

Applicant: (TU Chapter or Council and number) South East Idaho Fly Fishers, Pocatello Idaho Trout Unlimited Chapter.

Project Title: Dempsey Creek Fish Screen and Fish Passage Project

Project Location: (e.g. Stream, Watershed, City, State – add GPS coordinates if available)
Dempsey Creek is located in Bannock County Idaho, just above the city of Lava Hot Springs, Idaho. Dempsey Creek is a small Yellowstone Cutthroat Trout tributary to the Portneuf River, Latitude 42° 36' 11.17" N Longitude 112° 00' 51.93" W

Salmonid Species and Threatened/Endangered Status (if applicable): Yellowstone Cutthroat Trout are the native species in this system, they are listed as a species of concern by the Idaho Department of Fish and Game.

Please check which conservation strategy your project best fits with:

Protect (Public lands policy, Land trust partnerships, Defense from unwise development defense, Pacific Salmon Treaty, etc...)

Reconnect (Passage barrier removal, Instream flow enhancement, Water law advocacy – surface or groundwater, etc...)

Restore (Watershed and habitat restoration projects, Policy to provide restoration incentives and funding, Improved hatchery design, Private landowner stewardship recognition, etc...)

Sustain (Youth education, Trout in the Classroom, Coalition building, Chapter or Council Strengthening, etc...)

Date initial contact made with regional EAS Committee Representative: November 10, 2010

Amount Requested from Embrace-A-Stream: \$10,000

Beginning & Ending Dates of Proposed Project: September 15, 2011 to September 30, 2011

Has chapter received EAS funds before? If so, indicate project(s), year(s) and amount(s) for last 5 years:

Yes, the Portneuf River Fencing Project for \$10,000