

**APPLICATION NUMBER 1-
Utah Division of Wildlife Resources
Project Title: Engineering /feasibility plan for Bonneville cutthroat spawning trap design**

UTAH DIVISION OF WATER QUALITY
195 North 1950 West
PO Box 144870
Salt Lake City, Utah 84114-4870

Red Butte Creek Project Proposal Form

Applicant Name: Mike Slater

Co-Applicant Name (if applicable): _____

Project Title: Engineering /feasibility plan for Bonneville cutthroat spawning trap design

Agency or Business Name (if applicable): Utah Division of Wildlife Resources

Mailing Address: 1115 N. Main Street City: Springville State: UT Zip: 84663

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Individual Non-Profit Govt. Agency Academic Commercial Other

1. **Estimated Project Costs:** The total project cost for construction of the spawning trap itself has been estimated at \$162,000 being broken out into categories listed below is: Labor- \$53,700, Material-\$43,000, Equipment-\$65,300, Miscellaneous-(10% of total \$16,200), and Administration- (5% of total \$8,100). A standard figure for engineering with the Utah Division of Water Resources who will likely be doing the engineering/design for the spawning trap construction project is 15% thus the total for the engineering and this proposal will be **\$24,300**.

Labor	\$
Materials	\$
Equipment	\$
Administration	\$
Miscellaneous	\$
TOTAL	<u>\$24,300</u>

Other sources of project funding:

_____	\$ _____	_____	\$ _____
Source	Amount	Source	Amount
_____	\$ _____	_____	\$ _____
Source	Amount	Source	Amount
_____	\$ _____	_____	\$ _____
Source	Amount	Source	Amount
_____	\$ _____	_____	\$ _____
Source	Amount	Source	Amount

Total project cost including other sources of funding: **\$24,300**
(please include bids for labor, equipment, rentals, etc.)

2. **Describe the purpose and need of the project:**

To evaluate the feasibility/engineering of building a permanent spawning trap in Mountain Dell Creek above Little Dell Reservoir near the stream gauging station.

The state fish; Bonneville cutthroat trout (BCT), have historically resided throughout Red Butte Creek until the recent oil spill of 2010. The Utah Division of Wildlife Resources (UDWR) is striving to get the BCT reestablished in Red Butte Creek. Currently BCT are categorized as a state sensitive species and have recently been petitioned to be listed as threatened or endangered under the Endangered Species Act of 1973. However, due to the efforts of the UDWR in cooperation with multiple state, federal and private agencies/organizations throughout Utah, Wyoming, Nevada and Idaho to help the BCT recover and get reestablished throughout their historic range within the Bonneville Basin, these petitions have been denied. A key component to this recovery plan (Conservation Agreement and Strategy) and current status along the Wasatch Front is the source population of BCT in Little Dell Reservoir.

In order to repopulate BCT in Red Butte Creek, UDWR will have to collect eggs from spawning adults from Little Dell Reservoir, raise them to a sufficient size in the state fish hatchery system and then stock them back into Red Butte Creek. Currently the spawning process consists of repeatedly electrofishing the stream to collect BCT that are evaluated and spawned or released back into the stream if they are not ready to spawn. This process is repeated throughout the spawning period (June-July). A permanent trap would be much more efficient, allow less handling, shocking and stress on these state sensitive species. The fish could be held in the trap for an extended period of time until they are ready to spawn rather than releasing and hoping to collect them another date. This would ultimately aid in the recovery of the BCT and in particular help UDWR reestablish the BCT along the Wasatch Front including Red Butte Creek.

3. **Estimated time frame of the project with significant milestones (Note: Project must be completed with final reports filed by November 10, 2014):**

February 13, 2012 Site visits completed and detailed proposal with more exact figures finalized/submitted if necessary.

Engineered design completed and submitted to UDWR by fall 2012 in order to begin proposal submissions for construction and permitting processes so construction of spawning trap can occur in late summer/fall 2013.

4. **Describe the location of the project with attached location map, including details on the total area that will be directly enhanced by the project:**

The spawning trap location will be directly below the stream gauging station approximately .25 miles upstream from Little Dell Reservoir along Mountain Dell Creek (see attached map below). Ultimately the benefits from this spawning trap will be seen throughout the Wasatch Front and not just at Red Butte Creek where BCT will be stocked.

**Bonneville Cutthroat Trout Spawning Locations
Mountain Dell and Little Dell Reservoirs**



5. **Describe how the project will specifically enhance and protect waterways affected by the Red Butte releases and improve the conditions of one or more of the following: wildlife, habitat, natural vegetation, water quality or emergency response:**

The feasibility and engineering of a permanent spawning trap will allow more efficient collection of BCT eggs from spawning adults in Mountain Dell Creek. There will be a significant reduction in the handling stress, mortality of some BCT and potential risk associated with the current process of collecting these eggs. Thus the population of BCT in Little Dell Reservoir, the brood source for the restoration efforts along the Wasatch Front including Red Butte Creek, will be better preserved and protected. Ultimately, supplementation of the BCT population in Red Butte Creek will be better secured and available particularly if any kind of incident like the oil spill in 2010 were to occur and kill the Red Butte Creek BCT population again. Ultimately this will help increase the numbers of BCT in the waters of the state and help keep the BCT from being listed on the Threatened and Endangered Species List.

6. **Describe project's connectivity to other natural areas or projects that further enhance wildlife, habitat, natural vegetation, water quality or emergency response:**

This project will also help supplement and reintroduce BCT into adjacent streams and waters including Red Butte Reservoir that has the potential to serve as a back-up brood source should anything happen to the brood source in Little Dell Reservoir. The brood source of the BCT is really the bottleneck of the BCT restoration efforts and needs to be improved and protected. If the eggs source can be improved or increased then the overall recovery efforts in Red Butte Creek and other waters along the Wasatch Front can be enhanced.

7. **Describe any additional social benefits of implementing this project:**

This project is helping with the conservation of a state sensitive species and preventing it from being listed on the Threatened and Endangered Species List. By doing this the public will continue to utilize waterways for recreation and other activities. However, if the BCT were to be listed on the Threatened and Endangered Species List there is the potential the opportunities including wildlife management options may be restricted. It is a benefit to all of the public not just wildlife management agencies to keep species from being listed. Places like Red Butte Creek right in our back yards can be home to the native BCT.

8. Project plans and details, including rights to work on specified piece of land:

This Project is to simply design and determine the feasibility of constructing the spawning trap to aid in the recovery of the BCT in Red Butte Creek and the Wasatch Front in general. Contacts have been made to the local authorities (Salt Lake City Public Utilities) to proceed with this project and the future construction of the spawning trap. We just need to have an engineering firm help design the trap. The following is a design of a very similar spawning trap that UDWR constructed a few years ago at Duck Fork Reservoir and the design we anticipate will be similar but off channel.

Mtn. Dell Creek and I want to have some help from certified engineers to help with this particular design. We have several within our agency that have built and are operating these types of spawning traps and they are working very well. We have a sister agency (Utah Division of Water Resources) that we will contract/work with in designing/engineering this spawning trap just as we have with others (Duck Fork trap).

10. Describe how ongoing maintenance of the project will be funded and carried out:

UDWR personnel will operate and maintain this spawning trap with our annual budget. There will be no addition funds needed for maintenance of this project. In particular, we are only asking for the funds to help with the design of the spawning trap which doesn't include any kind of maintenance.

11. List consultants or agency partners that have participated in project development (below):

Name/Company	Address	Phone
Florence Reynolds/Salt Lake City Public Utilities 483-6864	1530 S West Temple Salt Lake City, UT 84115-5223	801-
Bob Dibblee/Trout Unlimited 235-6558	P.O. Box681311 Park City, UT 84068	630-
BJ Clark P.E./Utah Division of Water Resources 538-7258	1594 W. North Temple Salt Lake City, UT 84115	801-

Signature _____ Date _____
 _____ Applicant

Signature _____ Date _____
 _____ Co-Applicant (if applicable)