



WYOMING GAME AND FISH DEPARTMENT

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Final Report: February 2007

Project Title: LaBarge Creek Restoration Project to benefit Colorado River Cutthroat Trout. Renovation of barrier and stream to improve native Colorado River Trout populations and prevent federal listings.

The LaBarge Creek restoration project aims to restore native fish to the LaBarge Creek watershed in the upper Green River basin, located in Sublette and Lincoln counties, Wyoming. This watershed is extremely important to the long-term sustainability of Colorado River cutthroat trout populations. The fifty-eight miles of stream above the fish migration barrier have been chemically treated over three years to remove all exotic fish species. Native fish species will be reintroduced in 2007.

An integral part of LaBarge restoration and management effort is a fish migration barrier that was constructed in 2002 at the lower end of the project area to prevent the upstream movement of non-native salmonids (brook trout and rainbow trout). In 2005 we determined that modifications would be necessary to the barrier and began seeking funds to assist with construction costs. The USFWS provided a \$50,000 grant associated with the National Fish Habitat Initiative and Western Native Trout Initiative. In 2006, we confirmed our suspicions that fish were passing the barrier. To address this problem we hired an engineering firm, developed barrier plans and estimated costs. Cost estimates greatly exceeded the available grant so the WGF Commission agreed to provide up to an additional \$100,000 of funding to the project. With adequate funding in place a contract was awarded and construction work on phase 1 began in September 2006.

Phase 1 was completed in November 2006. This phase stabilized the barrier and secured the low flow notch making it impassible at flows up to approximately 570cfs (10 year flow event). This included creating a concrete splash pad to remove the pool below the spillway, raising the height of the notch (and thus the jump), placing concrete on the downstream face of the gabion barrier and constructing concrete wing walls (see the attached photos). Final project costs were \$144,735, exceeding the initial bid price by over \$36,000. Construction associated with oil and gas development in the area greatly impacted the project costs. In September 2005 we obtained estimates for concrete of \$99/yard. That estimate was the basis of the \$50,000 grant request. The project was bid at \$414/yard in July 2006 and due to difficulty obtaining concrete locally it had to be hauled from Green River increasing the final cost to \$600/yard.

The work in 2006 significantly improved the barrier. We plan to complete Phase 2 of this project in 2007 to make the barrier impassible during high flow events (25 to 100 year flow events) and ensure the long-term integrity and functionality of the barrier.

Fish Migration Barrier on LaBarge Creek, a fourth order tributary to the Green River, in Sublette and Lincoln counties, Wyoming.



Barrier before construction. Splash pad created from metal landing mats in place to prevent development of jump pool have been torn up by flow and icing. Photo taken October 2005.



Start of construction, side view. Photo taken September 2006.



Start of construction, metal landing mat splash pad being removed. Photo taken September 2006.



Concrete cap on gabions, work ongoing to put concrete cap on downstream face of barrier. Photo taken October 2006.



During construction, showing the concrete splash pad and wing walls installed in the low flow notch. Photo taken October 2006.



After completion of phase 1. Photo taken November 2006.



After completion of phase 1. Photo taken November 2006.



After completion of phase 1. Photo taken November 2006.