

EXHIBIT A - Scope of Work

GRANTEE and FISCAL AGENT (if different)

Purgatoire River Water Conservancy District

PRIMARY CONTACT

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PROJECT NAME

Purgatoire River Reach 3 Project

GRANT AMOUNT

INTRODUCTION AND BACKGROUND

The City of Trinidad has through its history been plagued by several damaging flood events. Significant flooding occurred in 1905, and again in the 1920's and 1930's. In 1958, the US Congress authorized construction of the Trinidad Dam and Reservoir (Trinidad Project) under the Flood Control Act of 1958. The primary purpose of the project was to provide flood control, as well as storage for irrigation and recreational use. Construction of the dam began in 1971, and was completed by 1976. Filling of the reservoir began following construction, and the reservoir began operations in 1979.

The Trinidad Project dam and reservoir have altered the natural flow regime of the Purgatoire River. The pre-project river hydrology was principally snow-melt driven, with additional influence from high-intensity, short duration storm events during the summer monsoon season. The Trinidad Project has flattened out the annual hydrograph, limiting the peak run-off flows below the dam, and significantly extending the period of higher than natural flows beginning earlier in the spring through the late summer into fall. Releases from the dam correspond to a designated irrigation season, and flows during the non-irrigation season are limited to flood control, stock-watering, and municipal/industrial (M&I) uses. In a typical year, irrigation releases begin in mid-April, and extend through mid-October. Flows through the study reaches typically exceed 200 cfs, and occasionally peak at over 600 cfs during summer thunderstorm events. During the non-irrigation season from mid-October to mid-April, releases from the dam are frequently zero, with the only flows in the project reaches coming from Raton Creek and a few other intermittent tributaries.

Interviews with long-time residents and local fishermen indicate that a remnant population of trout does persist in the study reaches, and many of the river's stakeholders in the region are convinced that the creation of an urban recreational fishery is in the best economic and social

interests of the community. Although a self-sustaining population of trout might be difficult to establish, there is an opportunity to create a seasonal “put-and take” fishery within the city limits of Trinidad, which would provide recreation enhancements including easier and more controlled access to the river corridor for residents. Enhancements could provide velocity shelter and in-channel holding cover for stocked fish during the sustained higher flow period. A project could provide seasonal fishing opportunities from April through October each year, and would address many of the access, dispersed recreation, and bank stability issues.

A demonstration project was undertaken in the river within Reach 4 in February 2012. The goals and objectives of the demonstration were principally focused on providing exceptional recreation and fishing opportunity within an urban setting. To this end, the demonstration project provides for adequate suitable habitat to sustain a stocked fishery during the summer months. The reach has benefitted from improved velocity shelter, cover, and additional useable habitat through the selective placement of in-channel structure. Holding cover and velocity shelter in the low gradient riffles is substantially improved, with 78 new boulder clusters installed in the reach. In addition to the in-channel habitat features, the handicap fishing component of the project has created a unique river fishing opportunity for the community. Fisherman use in the project reach appears to be better than expected, and several “fish tales” have already begun to circulate among the locals. In terms of creating a recreational fishery, it would appear that the project stakeholders are making very good progress toward this goal, and now desire to build upon this effort. The Reach 3 project has been identified as the next priority in their long term goal of creating an urban recreational fishery in the City of Trinidad.

OBJECTIVES

Project Objectives:

- Improved habitat and holding cover for stocked rainbow trout
- Stabilization of approximately 370 feet of river bank in the project reach
- Increased angler access and recreation opportunity in an urban setting
- Improved safety

Reach 3 will benefit from improved pocket water cover and pool habitat. This will be accomplished through the strategic placement of boulder clusters and J-hook vanes throughout the 2,000 foot long reach. Boulder vanes and J-Hook vanes will provide additional pocket water holding areas, as well as reducing near bank shear stress and bank erosion. Several failed jetty jack structures, which are currently a hazard to recreation users in the river, will be removed and replaced with boulder vanes or J-Hook structures and re-vegetated with native willow along 370 feet of river bank in the reach. Multiple boulder clusters will provide necessary velocity shelter in pocket water limited riffles. The project is expected to increase available fish holding water (i.e., fishable water) within this reach, thereby providing more angling opportunity, less crowding, and greater angler satisfaction.

TASKS

Provide a detailed description of each task using the following format. Detailed descriptions are only required for CWCB funded tasks. Other tasks should be identified but do not require details beyond a brief description.

TASK 1 – Jetty-Jack Removal

Description of Task

One row of steel Jetty-Jacks will be removed from approximately 370 feet of the south river bank of the Purgatoire River immediately upstream of the Linden Street Bridge. The river has eroded the river bank behind these structures, rendering them non-functional, and now present a serious hazard to recreational users, including rafters/tubers and fishermen.

Method/Procedure

Project management will be provided by Fin-Up Habitat Consultants, Inc. of Manitou Springs, CO. Chaparral Construction of La Veta, CO will provide the heavy equipment and operators necessary to complete the work. The Jetty Jacks will be dismantled by cutting each structure at the center joint with a gas-powered demolition saw. Steel cables connecting the separate structures will also be cut to short length for removal. Most of the Jetty Jacks to be removed are perched on the channel bed. The few spars that are still embedded in the bed or bank will be removed utilizing a JD160D excavator with a hydraulic thumb to grasp the spar and slide it out. Care will be taken to minimize disturbance to river bank and bed integrity. In the event of a river bank failure, the toe of the bank will be stabilized utilizing large wood or boulder to create a stable bank-full riparian bench that may be planted with willow and sedge. All steel and wire rope will be completely removed from the water influence zone and salvaged by the equipment contractor.

Deliverable

Approximately 370 feet of eroding river bank stabilized, and a significant hazard removed from the reach.

TASK 2 – J-Hook Vane / Boulder Vane Installation

Description of Task

The failed jetty jack structures along the 370 foot segment of the river will be replaced with up to ten boulder vanes and J-Hook vanes installed along the south bank to provide additional pocket water holding areas, as well as reducing near bank shear stress along the outside bank of this meander bend.

Method/Procedure

Project management will be provided by Fin-Up Habitat Consultants, Inc. of Manitou Springs, CO. Chaparral Construction of La Veta, CO will provide the heavy equipment and operators necessary to complete the work. Materials for the vanes will consist of boulders approximately 1 cubic yard in size, and will be installed utilizing a single 160 series excavator, equipped with a hydraulic thumb, and a large front loader.

Deliverable

Ten boulder vanes and/or J-Hook vanes. 370 feet of river bank stabilized. Approximately 1,500 square feet of additional holding cover and velocity shelter habitats for resident fishes.

TASK 3 – Other In-Channel Habitat Enhancements

Description of Task

Outside of the 370 foot segment of the river where the Jetty Jacks will be removed and replaced with vanes, additional habitat features and holding cover will be installed along the 2,000 ft length of Reach 3. Features will include additional J-Hook vanes, micro-vortices, and boulder clusters.

Method/Procedure

Project management will be provided by Fin-Up Habitat Consultants, Inc. of Manitou Springs, CO. Chaparral Construction of La Veta, CO will provide the heavy equipment and operators necessary to complete the work. Materials for the enhancement features will consist of boulders approximately 1 cubic yard in size and large wood available on-site (cottonwood). Habitat features will be installed utilizing a single 160 series excavator, equipped with a hydraulic thumb, and a large front loader. Short sections will be worked on and completed before moving downstream to the next segment. It is not anticipated that more than 400 feet of channel will be disturbed at any given time.

Deliverable

Two additional J-Hook Vanes. Up to 20 additional micro vortex structures / clusters. Approximately 2,500 square feet of additional useable habitat for resident fish.

TASK 4 – Project River Bank Re-Vegetation

Description of Task

All disturbed areas, including stockpiling sites, access routes, and site-specific disturbances, such as anchor points for the J-Hook and boulder vanes will be graded, seeded and re-vegetated utilizing native vegetation, including locally harvested willow and sedge.

Method/Procedure

Rough grading of stockpile sites, obliteration of access routes, and removal of spoils will be accomplished by the project contractors. Final grading and re-vegetation will be accomplished by volunteers, including the Purgatoire River Anglers Chapter of Trout Unlimited. One volunteer workday is anticipated immediately following installation of the project to accomplish this task.

Deliverable

Approximately 0.25 acres of riparian and 1 acre of upland areas reclaimed.

REPORTING AND FINAL DELIVERABLE

Reporting: The applicant shall provide the CWCBA a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or

partial completion of the tasks identified in the statement of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.