

Restore Sand Creek to a Native Rio Grande Cutthroat Fishery

State(s): Colorado

Managing Agency/Organization: National Park Service, Great Sand Dunes National Park

Type of Organization: Government

Project Status: Underway

Project type: WNTI Project

Project action(s): Eradicate fish that currently occupy Sand Creek watershed within the Great Sand Dunes National Park. Upon successful treatment, the lakes and streams will be re-populated with genetically pure Rio Grande Cutthroat Trout collected by Colorado Parks and Wildlife. In-stream restoration will add 12 miles and 2 lakes of habitat for the species within its historic/native range.

Trout species benefitted: Rio Grande Cutthroat Trout

Population: Sand Creek watershed

Project summary: This project will reclaim high quality stream and lake habitat for a new population of Rio Grande Cutthroat Trout on public lands within its historic range. The project will use rotenone to eliminate non-native salmonids from Upper and Lower Sand Creek Lakes, as well as Sand Creek and its tributaries in order to provide a large resilient watershed for the re-introduction of the native Rio Grande Cutthroat Trout within the Great Sand Dunes National Park.

Problem the Project Addresses: The Rio Grande Cutthroat Trout (RGCT) occupies approximately 12% of its historic range in Colorado and New Mexico. The subspecies has been reviewed for ESA listing several times and the latest decision of not-warranted in 2014 is currently being challenged in court. RGCT are currently listed as a Colorado Species of Greatest Conservation Need and is a WNTI prioritized species for 2017-2019. The majority of the currently occupied habitat consists of small isolated populations in short sections of streams protected by barriers that exclude non-natives. This project will reclaim an entire watershed which includes connected tributaries and two high elevation lakes. This will provide for a much more resilient population with refuge habitat that can withstand droughts. Successful reproduction of hybrid cutthroat trout has been documented in both Upper and Lower Sand Creek lakes which increases the resiliency of the watershed and the long term success of the project. The project addresses WNTI's priorities, as it will provide long term protection for a prioritized native trout sub species in healthy aquatic habitat and a self-sustaining population of RGCT will be restored to the Sand Creek watershed providing resiliency to the viability of RGCT range-wide. The project will add 12 miles and 2 lakes of habitat for RGCT and provide opportunity for backcountry anglers to catch the native cutthroat of the Rio Grande watershed.

Objectives: The project will use the piscicide rotenone to eradicate the fish that currently occupy the watershed. Upon successful treatment, the lakes and streams will be re-populated with genetically pure Rio Grande Cutthroat Trout collected by Colorado Parks and Wildlife. This supports the objectives of the RGCT range-wide conservation plan and the project is one of six chosen for inclusion by RGCT team leadership in WNTI's strategic projects portfolio for Rio Grande Cutthroat Trout.

Beginning in 2020, Colorado Parks and Wildlife and project partners will create a treatment plan for the watershed, using information from the Sand Creek watershed characterization report and data collected in the field. In the fall of 2019, an initial treatment will be executed. Colorado Parks and Wildlife, National Park Service and Colorado BLM will all contribute professional fisheries staff and the local Trout Unlimited Chapter and Running Rivers are contributing volunteer to the effort. Following successful eradication, the lakes and stream will be restocked in the upper watershed. In 2021 and 2022, additional treatments are expected in the lower watershed working downstream towards the sand dunes, where the stream goes sub-surface creating a terminal barrier that protects the watershed from subsequent invasions. Prior to the initial treatment Colorado Parks and Wildlife will remove harvest restrictions to allow the angling public and local tribes maximum take/public salvage of the fish currently occupying the waters. Public meetings will be held in mid Spring 2019 to alert the public and signs of increased harvest limits will be posted on the trailhead. Local tribes have already been made aware of the project and they are excited for the return of RGCT but asked that we do not waste food and allow increased take of as many of the fish as possible before the rotenone treatment.

Partners:

- National Park Service – Great Sand Dunes Park
- Running Rivers/Rocky Mountain Flyathlon
- Trout Unlimited
- Western Native Trout Initiative small grants funding

- Colorado Parks and Wildlife

Project Monitoring: During the project period, frequent monitoring via electrofishing and eDNA will guide the project activities. Following successful treatment, frequent monitoring will be done to track the population against target population numbers which will inform stocking rates and management decisions. Once the population is thought to self-sufficient and stable, the population will be monitored periodically by Colorado Parks and Wildlife and the National Park Service following the objectives detailed in the range-wide conservation plan.

Funding Source(s): National Fish Habitat Action Plan

Project cost: \$10,000

Start Date: 09/01/2019 **Completion Date:** 9/30/2022

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