

# **Cowcamp Creek**

Mono County, California

## **2007 Stream Habitat Survey Report**



Prepared By:

Carson Ranger District: Humboldt-Toiyabe National Forest

## **Introduction**

Cowcamp Creek begins in Mono County, California northeast of Poore Lake. Cowcamp Creek flows in a northeasterly manner until it drains into the Little Walker River. Cowcamp Creek, for the most part, flows through lands managed by the Humboldt-Toiyabe National Forest, Bridgeport Ranger District. The creek does flow through a small parcel of private property for less than a mile. The survey for this stream started at the confluence with the Little Walker River and continued 1.6 miles upstream until water levels deemed it unnecessary to continue (Site 6).

## **Purpose and Need**

The 1995 Lahontan Cutthroat Trout Recovery Plan recommended that an ecosystem management plan be developed for the Walker River Basin in order to both determine objectives for the future desired conditions of the watershed, and to create strategies for achieving these objectives. In 1998 a Walker River Basin Recovery Implementation Team was organized to develop strategies for Lahontan cutthroat trout (LCT) restoration and recovery efforts in the Walker River Basin. In August 2003 the recovery team completed a Short-Term Action Plan for Lahontan Cutthroat Trout Recovery in the Walker River Basin. The short-term action plan outlines specific tasks to be completed within five years. Some of the tasks that were identified include: (1) identifying and evaluating fish passage and existing barriers within the Walker River Basin, (2) developing a watershed analysis of the physical components of the Walker River Basin, and (3) initiating habitat surveys to evaluate potential LCT introduction streams and validating against existing LCT inhabited streams.

The Walker River Basin historically provided an estimated 595 miles of stream habitat (Kling and Mellison 2008) and 49,400 acres of lake habitat for the native Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*). Populations of these salmonids within the watershed were interactive and interconnected, and therefore these metapopulations likely had high genetic diversity and were capable of long-term persistence through adverse conditions.

Within the Walker River basin, LCT currently occupy one stream that is within their historic range; By-Day Creek. Lahontan cutthroat trout have also been introduced into the formerly fishless headwaters of five other Walker River basin streams; Wolf Creek, Silver Creek, Mill Creek, Slinkard Creek, and Murphy Creek. Together, LCT within these 6 streams occupy approximately 17 miles of stream habitat, approximately 2.9% of the total miles that LCT presumably occupied historically.

The primary causes for the decline of LCT include: (1) reduction and alteration of stream discharge, (2) alteration of stream channels and morphology, (3) degradation of water quality, (4) reduction of lake levels and concentrated chemical components in natural lakes, and (5) introductions of non-native fish species. The Walker River Basin is primarily inhabited by non-native salmonid species that include but are not limited to: Rainbow Trout (*Oncorhynchus mykiss*), Brook Trout (*Salvelinus fontinalis*), and Brown

Trout (*Salmo trutta*). These competitive and aggressive introduced fish have displaced the endemic LCT. A small native population of LCT can be found in By-Day Creek part of the East Walker River system.

Long term survival and recovery of LCT with the Walker River Basin will require sustained cooperation and effort from multiple federal and state agencies, including the Forest Service and personnel of the Humboldt-Toiyabe National Forest. Gaining information through immediate action can aid in prioritizing future objectives for the restoration of LCT. The 2007 Walker River watershed surveys are being conducted to gain information about streams in the basin, and furthermore to provide an inventory of potential fish habitat for LCT. The surveys include the tasks of identifying potential fish passage barriers and evaluating physical characteristics that pertain to the success of the native LCT. Should recommendations be made to reintroduce LCT, these surveys can provide baseline information for future management of the fishery. Cowcamp Creek was surveyed on September 20, 2007 by Joel Ingram and Kevin Rybacki of the Carson and Bridgeport Ranger Districts: Humboldt-Toiyabe National Forest.

### **Methods and Materials**

Forest Service personnel surveyed Cowcamp Creek by hiking the watercourse in an upstream manner. Interesting and relevant features were documented, photographed, and recorded into a GPS unit. These features included but were not limited to: road crossings, fish sightings, permanent fish barriers, seasonal fish barriers, tributaries, springs, beaver dams, areas of erosion concern, grazing impacts, etc.

Fish passage barriers were noted and categorized into one of four categories: natural-permanent, natural-seasonal, artificial-permanent, and artificial-seasonal. A permanent barrier is categorized as an obstacle, waterfall, or drop in excess of 5ft that would prevent passage of fish year-round (specifically LCT). A stadia rod was used to measure barriers where applicable. Some permanent barriers may actually act as seasonal barriers and some seasonal barriers may actually act as a permanent barrier.

### **Results**

Approximately 1.6 miles of Cowcamp Creek were surveyed from its confluence with the Little Walker River to just upstream of the private property boundary at Site 5. The sites documented were a fish sighting at Site 2. A photo point was taken at Site 3. Sites 4 and 5 denote the stream leaving and entering private property respectively. A large diversion channel is also located at Site 6. No barriers, tributaries, road crossings, campsites or erosion concerns were found on Cowcamp Creek. Cowcamp Creek has an average stream gradient of 5.5% between Sites 1 and 6.

### **Discussion**

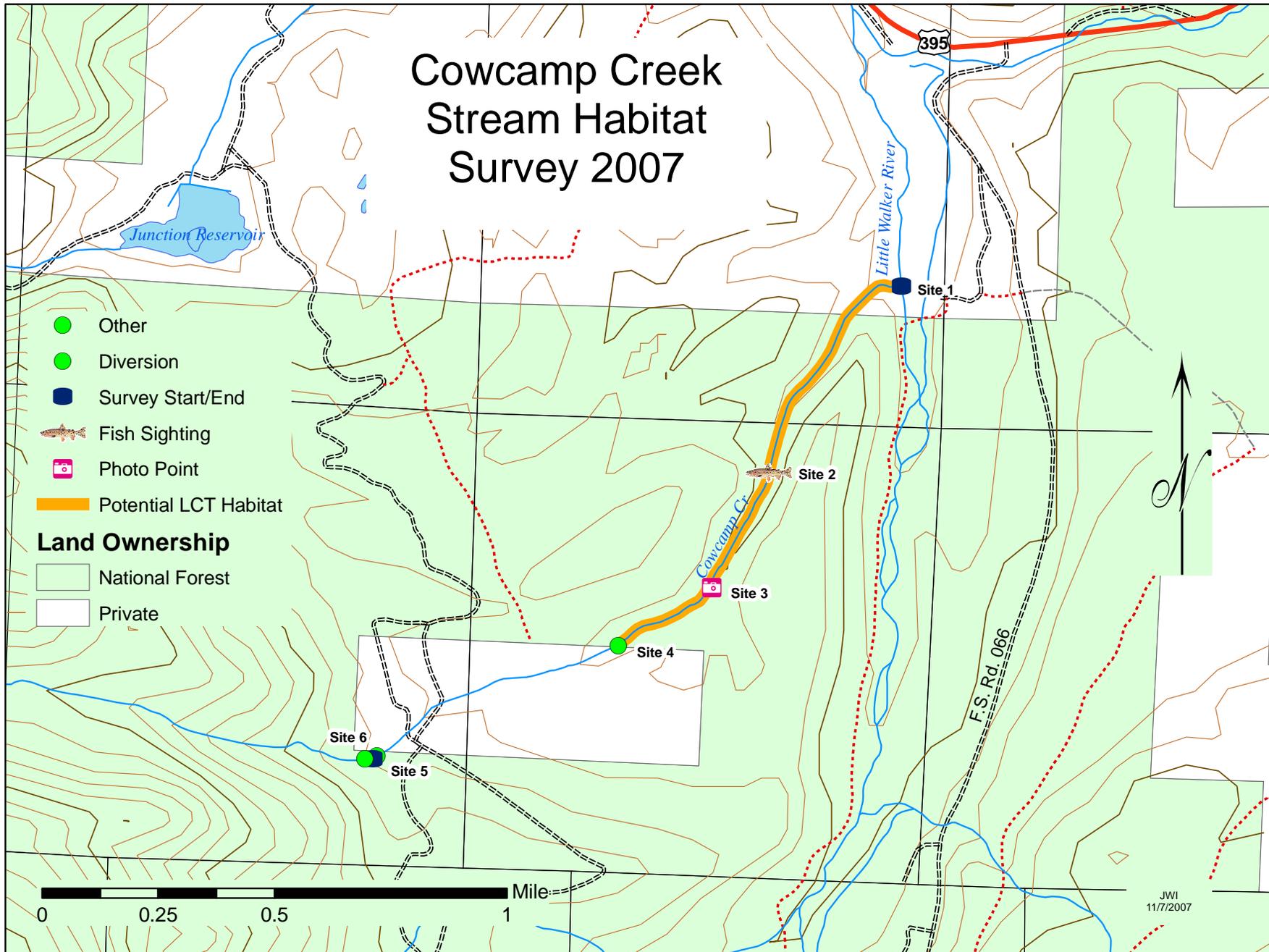
The entire 1.6 mile stretch of Cowcamp Creek between Sites 1 and 6 should be considered potential LCT habitat. The area upstream of Site 6 is not considered potential

fish habitat due to the lack of sufficient water levels present in this section. There were no barriers found on Cowcamp Creek thus allowing fish to move freely throughout the stream. Although small in size, many non-native fish were seen at Site 2. The area between Sites 4 and 5 was not surveyed due to the stream flowing through private property. The section of stream between Sites 4 and 5 probably does not have any barriers, and most likely provides potential LCT habitat. No campsites were found and this creek is probably not a popular spot for fishing.

### **Recommendations**

1. Consider the 1.6 mile section between Sites 1 and 6 as potential LCT habitat and consider Cowcamp Creek a high candidate for restoration. Cowcamp Creek could contribute towards restoring a metapopulation in the area.
2. Assess the efficiency and impact of the diversion at Site 6 making sure it is not diverting a quantity of water that exceeds the adjudicated rights.
3. Obtain permission from the private land owner to conduct a stream habitat survey between Sites 4 and 5.

# Cowcamp Creek Stream Habitat Survey 2007



- Other
  - Diversion
  - Survey Start/End
  - Fish Sighting
  - Photo Point
  - Potential LCT Habitat
- Land Ownership**
- National Forest
  - Private



JWI  
11/7/2007



**Site 1:** Cowcamp Creek, Bridgeport Ranger District. Survey starts at the confluence of Cowcamp Creek and the Little Walker River. The Cowcamp Creek enters river left and adds less than 5% to the overall flow of the Little Walker River. This site is located at UTM: N: 4245617 & E: 285999, Elev. 2129m.



**Site 2:** Cowcamp Creek, Bridgeport Ranger District. Three fish about 4 inches long are seen in a slow flowing section of the creek. This site is located at UTM: 4244973 & E: 285538, Elev. 2180m



**Site 3:** Cowcamp Creek, Bridgeport Ranger District. A photo point is taken to show characteristics of the creek. The stream is flowing at a steady rate as it meanders through a grass covered valley. This site is located at UTM: N: 4244576 & E: 285342, Elev. 2194m



**Site 4:** Cowcamp Creek, Bridgeport Ranger District. The creek leaves private property as a sign warns of the illegality of hunting, fishing and trespassing. This site is located at UTM: N: 4244374 & E: 285019, Elev. 2205m.



**Site 5:** Cowcamp Creek, Bridgeport Ranger District. As the stream leaves National Forest Land it has lost a lot of water and is getting close to the end of potential fish habitat. This site is located at UTM: N: 4243993 & E: 284210, Elev. 2257m.



**Site 6:** Cowcamp Creek, Bridgeport Ranger District. Survey ends as the stream forks into two halves and does not have adequate water for fish habitat. There is also a large diversion channel located at this site. This site is located at UTM: N: 4243994 & E: 284218, Elev. 2270m.