

# **Poore Creek**

**Mono County, California**

## **2006 Stream Habitat Survey Report**



**Prepared By:**

**Humboldt-Toiyabe National Forest, Bridgeport Ranger District**

## **Introduction**

Poore Creek is located in Mono County, California. The mainstem of Poore Creek flows for approximately 2.6 miles in a northerly direction from Poore Lake to its confluence with the West Walker River in Pickle Meadows off Highway 108. The upper half of Poore Creek occurs on National Forest Lands and the lower half of Poore Creek occurs on California State lands. The 1 mile of stream between Site 1 (2060m) and Site 2 on California State lands was not surveyed; however, the 1.6 miles between Site 2 (2062m) near the California State-National Forest boundary and Poore Lake (Site 12, 2201m) was surveyed.

## **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 2006 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. Poore Creek was surveyed on August 15-16, 2006 by Joel Ingram and Harrison Davis of the Bridgeport Ranger District: Humboldt-Toiyabe National Forest.

## **Methodology**

Forest Service personnel surveyed Poore Creek by hiking the stream in an upstream manner. Interesting and relevant features were documented, photographed, and recorded into a Trimble GPS unit. These features included but were not limited to: road crossings, trail crossings, fish sightings, permanent fish barriers, seasonal fish barriers, tributaries, springs, beaver dams, areas of erosion concern, grazing impacts, dispersed campsites, 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. Barriers categorized as permanent barriers may actually be seasonal barriers, and some seasonal barriers may actually act as a permanent barrier.

## **Results**

Approximately 1.6 miles of Poore Creek were surveyed between Site 2 and Site 12. One permanent fish barrier, a 33 foot high waterfall, was documented at Site 6. No seasonal fish barriers were identified. A photo point was taken at Site 1; however, because of California State lands, approximately 1 mile of stream was not surveyed between Sites 1 and 2. Everything between Site 2 and Site 12 at Poore Lake was surveyed. A campsite was documented at Site 11 and fish were sighted at Sites 3 and 10. Photo points were also taken at Sites 2, 7 and 9. Three ford road-stream

crossings were documented at Sites 3, 4 and 8 and a beaver dam was noted at Site 5. The average stream gradient between Site 1 and Site 12 is 3.4%.

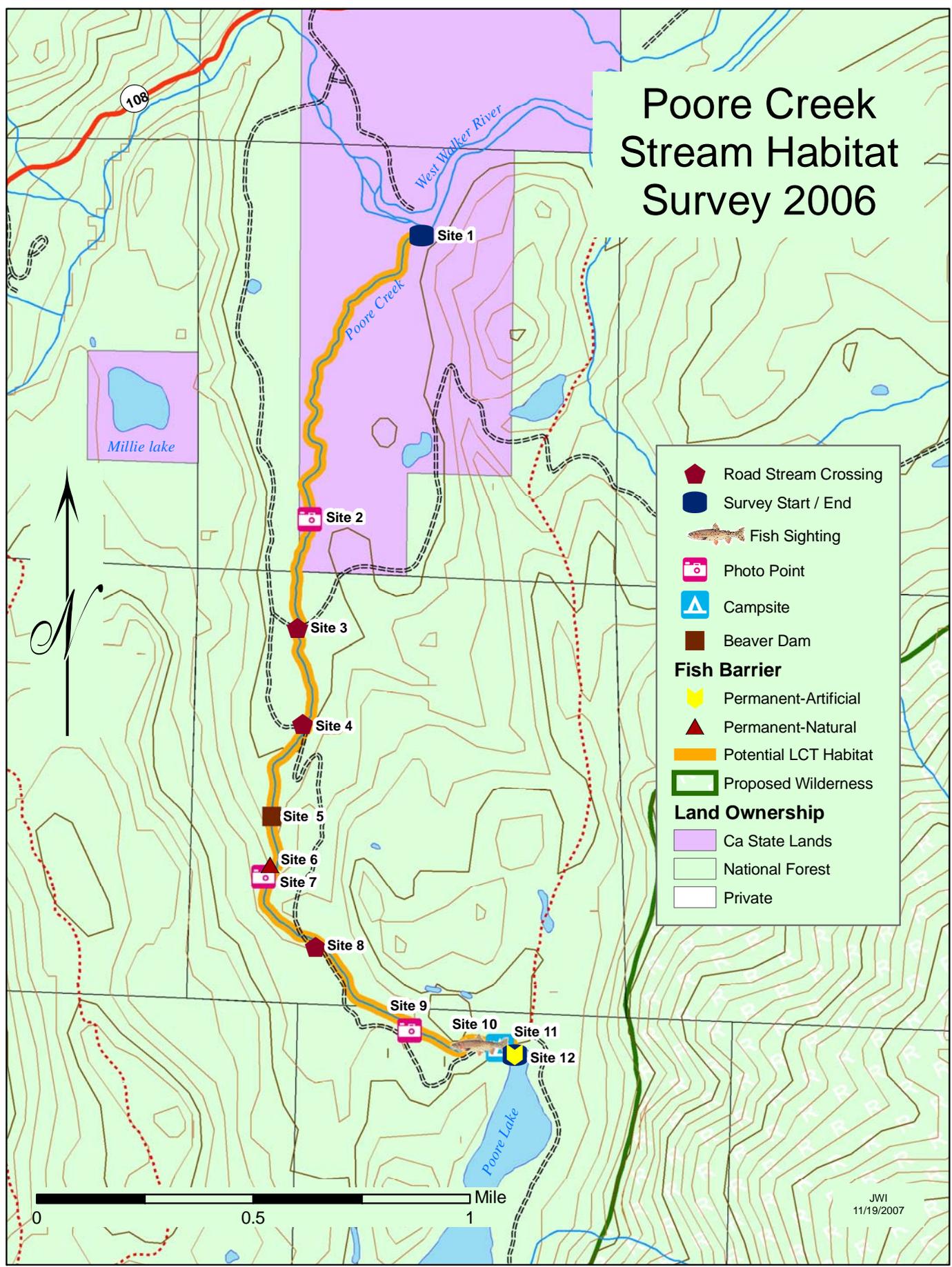
## **Discussion**

Poore Creek offers 2.6 miles of potential LCT habitat located between Sites 1 and 12. Although the 1 mile of stream between Site 1 and Site 2 was not surveyed, after reviewing a topographic map, that 1 mile section of stream would probably provide potential LCT habitat; therefore, in this report that 1 mile section of stream is considered potential LCT habitat. A stream habitat survey of that 1 mile reach would need to be completed to confirm this presumption. The average stream gradient between Site 1 and Site 12 is 3.4%. Site 6 has a 33 foot high naturally occurring waterfall; never-the-less, potential LCT habitat does exist between Site 6 and Poore Lake. Poore Creek receives its flows from Poore Lake. Poore Lake has an artificial dam/dike system (Site 12) thus controlling the amount of flow in Poore Creek.

## **Recommendations**

1. Consider the 2.6 mile section of Poore Creek between Sites 1 and 12 as potential LCT habitat and consider Poore Creek a low candidate for restoration.
2. If permission can be obtained, conduct a stream habitat survey on the 1 mile of Poore Creek between Site 1 and Site 2 to confirm that this section of stream does provide potential LCT habitat.
3. Close and decommission all dispersed campsites within 100 feet of Poore Creek. Only allow camping to occur more than 100 feet away from the streams edge.
4. Investigate the water allocation and water management schedules for Poore Lake. If needed, pursue the possibility of allocating more water to flow into Poore Creek during the driest parts of the year (July-September).

# Poore Creek Stream Habitat Survey 2006



- Road Stream Crossing
- Survey Start / End
- Fish Sighting
- Photo Point
- Campsite
- Beaver Dam
- Fish Barrier**
  - Permanent-Artificial
  - Permanent-Natural
  - Potential LCT Habitat
- Proposed Wilderness
- Land Ownership**
  - Ca State Lands
  - National Forest
  - Private

0 0.5 1 Mile

JWI  
11/19/2007



**Site 1:** Poore Creek, Bridgeport Ranger District, looking upstream at the West Walker River from the survey start point. The survey start point is at the confluence of Poore Creek and the West Walker River. Poore Creek contributes less than 10% of the overall flow in the West Walker River. This site is located at UTM: N: 4246751 & E: 279149, Elevation 2060m.



**Site 1 continued:** Poore Creek, Bridgeport Ranger District, looking downstream at the West Walker River from the survey start point. This site is located at UTM: N: 4246751 & E: 279149, Elevation 2060m.



**Site 2:** Poore Creek, Bridgeport Ranger District, looking downstream at the California State Land. The state land appears to be heavily grazed by cattle and the stream banks show signs of heavy erosion. This site is located at UTM: N: 4245644 & E: 278712, Elevation 2062m.



**Site 2 continued:** Poore Creek, Bridgeport Ranger District, upstream view of this section of stream. This site is located at UTM: N: 4245644 & E: 278712, Elevation 2062m.



**Site 3:** Poore Creek, Bridgeport Ranger District, a cross-section view of a road-stream crossing. Note the widening of the stream channel at this location. Fish were also sighted at this location. This site is located at UTM: N: 4245241 & E: 278668, Elevation 2067



**Site 4:** Poore Creek, Bridgeport Ranger District, cross section view of a road-stream crossing. The stream channel has widened a little at this location. This site is located at UTM: N: 4244884 & E: 278688, Elevation 2075m.



**Site 4 continued:** Poore Creek, Bridgeport Ranger District, looking upstream from the road-stream crossing. This site is located at UTM: N: 4244884 & E: 278688, Elevation 2075m.



**Site 4 continued:** Poore Creek, Bridgeport Ranger District, looking downstream from the road-stream crossing. This site is located at UTM: N: 4244884 & E: 278688, Elevation 2075m



**Site 5:** Poore Creek, Bridgeport Ranger District, a cross-section view of a beaver dam. There is a small network of beaver dams in this heavily vegetated area of willows. This is a small beaver dam; however, it still slows water and has created some deep pools for fish. This site is located at UTM: N: 4244541 & E: 278572, Elevation 2089m.



**Site 6:** Poore Creek, Bridgeport Ranger District, a cross-section view of a permanent fish barrier. This waterfall is approximately 10m (33ft) high. This site is located at UTM: N: 4244361 & E: 278566, Elevation 2122m.



**Site 7:** Poore Creek, Bridgeport Ranger District, photo point. This photo point was taken to show that even though there is not an actual waterfall or a defined fish barrier, the water is flowing incredibly fast through this section and probably causes upstream migration to be very difficult for fish. This site is located at UTM: N: 4244318 & E: 278541, Elevation 2133m.



**Site 8:** Poore Creek, Bridgeport Ranger District, a cross-section view of a road-stream crossing. This site is located at UTM: N: 4244088 & E: 278737, Elevation 2147m.



**Site 8 continued:** Poore Creek, Bridgeport Ranger District, looking upstream from the road-stream crossing. This site is located at UTM: N: 4244088 & E: 278737, Elevation 2147m.



**Site 8 continued:** Poore Creek, Bridgeport Ranger District, looking downstream from the road-stream crossing. This site is located at UTM: N: 4244088 & E: 278737, Elevation 2147m.



**Site 9:** Poore Creek, Bridgeport Ranger District, looking upstream at the stream characteristics typical for this section of stream. This site is located at UTM: N: 4243747 & E: 279081, Elevation 2177m.



**Site 9 continued:** Poore Creek, Bridgeport Ranger District, looking downstream at the stream characteristics typical for this section of stream. This site is located at UTM: N: 4243747 & E: 279081, Elevation 2177m.



**Site 10:** Poore Creek, Bridgeport Ranger District, looking upstream at an area where several small fish were sighted. As we walked up the stream we noted a small pool off the main flow. In this pool several small fish were sighted, averaging between 1-2 inches long. This site is located at UTM: N: 4243689 & E: 279341, Elevation 2189m.



**Site 10 continued:** Poore Creek, Bridgeport Ranger District, looking downstream from where the fish were sighted. This site is located at UTM: N: 4243689 & E: 279341, Elevation 2189m.



**Site 11**, Poore Creek, Bridgeport Ranger District, cross-section view of a campsite near the stream. Right at the outflow source for Poore Creek is a campsite that is marked with a picnic table and fire ring. This campsite is quite large and flat, and it is on the edge of a large meadow. This site is located at UTM: N: 4243688 & E: 279419, Elevation 2196.



**Site 11 continued**, Poore Creek, Bridgeport Ranger District, another view of the camping area and its vicinity to the stream. This site is located at UTM: N: 4243688 & E: 279419, Elevation 2196.



**Site 12:** Poore Creek, Bridgeport Ranger District, a view of Poore Lake from the survey end point. The survey end point is where Poore Creek flows out of Poore Lake. Upon getting to this point it appears as if there is a man made system built to create Poore Lake. Through this dike there is some sort of valve system that when opened, water is allowed to flow into Poore Creek. This site is located at UTM: N: 4243658 & E: 279476, Elevation 2201m.



**Site 12 continued:** Poore Creek, Bridgeport Ranger District, a view of Poore Lake and the dike system. This site is located at UTM: N: 4243658 & E: 279476, Elevation 2201m.



**Site 12 continued:** Poore Creek, Bridgeport Ranger District, a view of the valve system. This site is located at UTM: N: 4243658 & E: 279476, Elevation 2201m.



**Site 12 continued:** Poore Creek, Bridgeport Ranger District, a view of the Lakes outflow which forms Poore Creek. This site is located at UTM: N: 4243658 & E: 279476, Elevation 2201m.