

# **ROCK CREEK**

**Mono County, California**

## **2005 Stream Habitat Survey Report**



**Prepared by:**

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

## **Introduction**

Rock Creek is located in Mono County, California. The mainstem of Rock Creek flows for approximately 4.5 miles in a west direction to its confluence with the West Walker River near Walker, California located on Highway 395. The mainstem of Rock Creek ranges from approximately 5575 feet elevation to 7442 feet elevation. Most of the Rock Creek watershed is located on Humboldt-Toiyabe National Forest (HTNF) lands. A few parcels of private land are located within the watershed (see map for land ownership). Rock Creek was surveyed from the National Forest-private property boundary at Site 1 upstream to the top of the watershed at Site 25.

The Short-Term Action Plan for Lahontan Cutthroat Trout in the Walker River Basin (Walker RIT 2003) recommended habitat surveys be conducted as a high priority task to identify and evaluate fish passage and existing barriers within the Walker River Basin, to develop a watershed analysis of the physical components of the Walker River Basin, and to evaluate potential LCT introduction streams and validate against existing LCT inhabited streams. These high priority tasks were deemed necessary to initiate Lahontan cutthroat trout (LCT) (*Oncorhynchus clarki henshawi*) recovery in the Walker River Basin. The Rock Creek watershed was surveyed during summer 2005. Merri Meldi and Francisco Rayos from the HTNF were the surveyors who conducted the stream habitat survey.

## **Methodology**

Forest Service personnel hiked upstream along side Rock Creek and photographed and GPS'ed all interesting features (road crossings, fish sightings, permanent fish barriers, seasonal fish barriers, tributaries, springs, beaver dams, areas with high amounts of erosion, and any other features that appeared interesting). All tributaries that appeared to possibly provide LCT habitat were also surveyed using the same methodology. All photographs taken and a map are included in this report. Based on the overall gradient of the watershed, the number of permanent and seasonal fish barriers, and the overall condition of the stream habitat, the Forest Service personnel who conducted this survey determined in the field what areas of the Rock Creek watershed provide potential LCT habitat.

Seasonal and permanent barriers are referenced several times throughout this report. Seasonal barriers are features that appear to be fish barriers under base flow; however, during high flow events fish may be able to migrate up through the seasonal barrier. Permanent barriers are features that are greater than 5 feet high, or are cascades sheeting across bedrock material. These are features that appear to serve as fish barriers during all seasons of the year. Some seasonal barriers may actually be permanent barriers and some permanent barriers may actually be seasonal barriers.

## **Results**

Approximately 6.9 miles of the Rock Creek watershed was surveyed. Five permanent fish barriers (Sites 3, 7, 8, 9, & 22) were identified and eleven seasonal fish barriers were identified (Site 5, 6, 10, 12, 13, 14, 17, 18, 19, 20, & 21). One culvert road crossing (not currently a fish barrier) was identified (Site 1). Three tributaries were identified (Sites 11, 15, & 24). Photo points were taken at Site 2, 11, 16, 23, and 25. No fish were seen within the Rock Creek watershed. The overall gradient of Rock Creek between Site 1 and Site 25 is 8.3%. No potential LCT habitat was identified within the Rock Creek watershed. No other interesting features were photographed or GPS'ed.

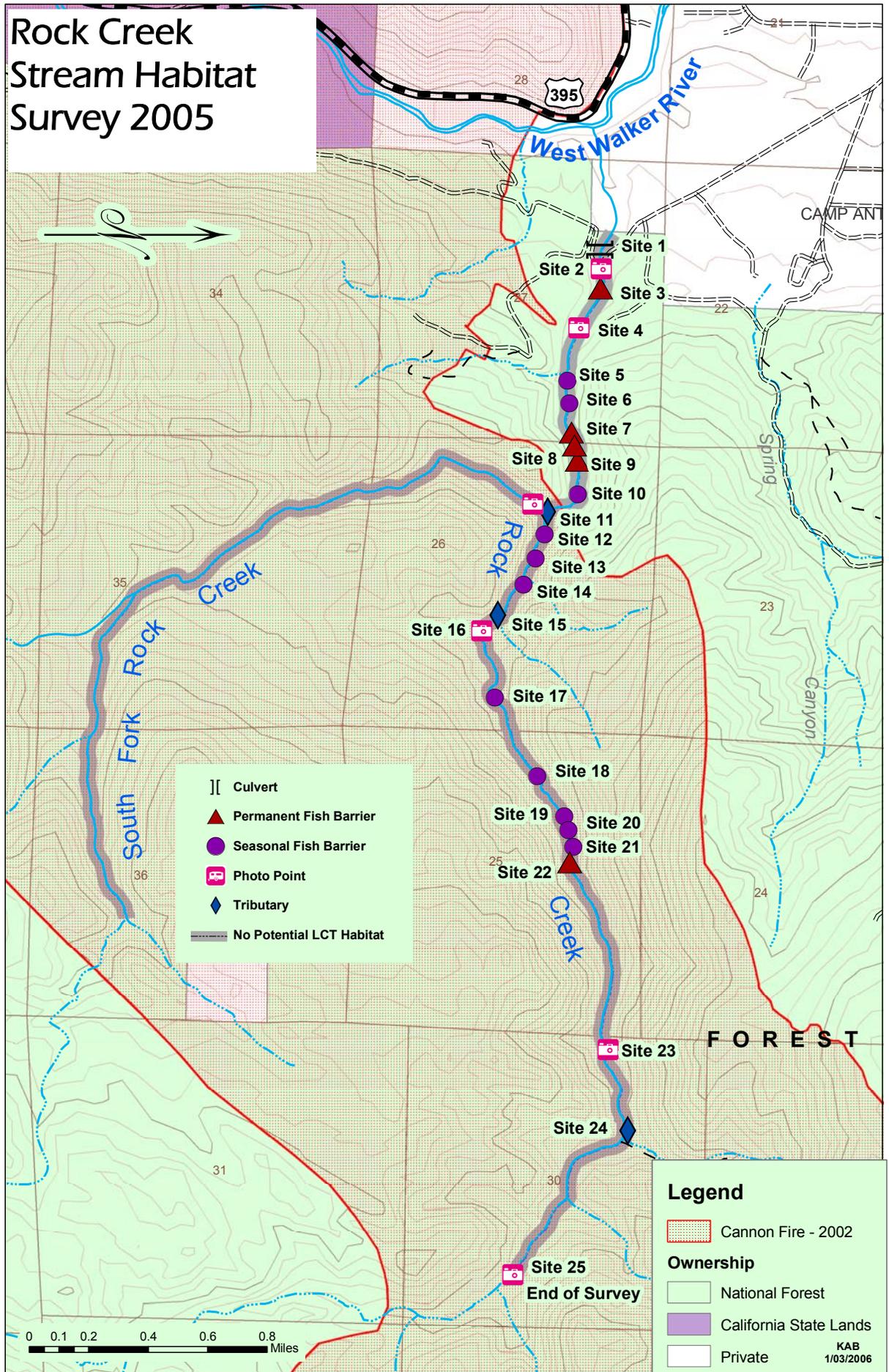
## **Discussion**

The Rock Creek watershed does not provide potential LCT habitat. The overall gradient of Rock Creek between Site 1 and Site 25 is 8.3%. Five permanent and eleven seasonal fish barriers were identified within the Rock Creek watershed. If LCT were introduced into the Rock Creek watershed, the large number of seasonal and permanent fish barriers would likely result in negative impacts to fish survival, migration, and reproduction. The Rock Creek watershed appears to have been heavily impacted by the 2002 Cannon Fire. Unstable banks, large amounts of erosion, and evidence of recent flooding were noted several times while conducting this survey. Based on the habitat characteristics of the Rock Creek watershed described above, the Forest Service personnel who conducted this survey determined that the Rock Creek watershed does not provide potential LCT habitat.

## **Recommendations**

1. Do not consider the Rock Creek watershed as having potential LCT habitat.

# Rock Creek Stream Habitat Survey 2005





**Site 1:** Rock Creek, Bridgeport Ranger District, looking upstream at a culvert. This culvert is currently not a fish barrier. The stream habitat survey started at this site. This site is located at UTM N: 4265610 & E: 287187.



**Site 1:** Rock Creek, Bridgeport Ranger District, looking downstream at a culvert. This culvert is currently not a fish barrier. The stream habitat survey started at this site. This site is located at UTM N: 4265610 & E: 287187.



**Site 2:** Rock Creek, Bridgeport Ranger District, photo point, looking upstream at some flood evidence. This site is located at UTM: N: 4265610 & E: 287187.



**Site 3:** Rock Creek, Bridgeport Ranger District, looking upstream at a permanent fish barrier. The height of the barrier is 4.9 feet and the depth of the pool at the bottom of the barrier is 1.1 feet deep. This site is located at UTM: N: 4265611 & E: 287332.



**Site 4:** Rock Creek, Bridgeport Ranger District, photo point, looking downstream. Some erosion and evidence of recent flooding is at this site. The width of the creek at this site is 5.2 feet and the average depth is 0.5 feet. This site is located at UTM N: 4265426 & E: 287667.



**Site 5:** Rock Creek, Bridgeport Ranger District, looking upstream at a seasonal fish barrier. This is the first/lower barrier of 3 in a series. The height of the barrier is 1.6 feet and the depth of the pool at the bottom of the barrier is 0.8 feet. This site is located at UTM N: 4265403 & E: 287812.



**Site 6:** Rock Creek, Bridgeport Ranger District, looking upstream at a seasonal fish barrier. The height of the barrier is 2.8 feet and the depth of the pool at the bottom of the barrier is 1.5 feet. This site is located at UTM N: 4265419 & E: 287971.



**Site 7:** Rock Creek, Bridgeport Ranger District, looking upstream at a permanent fish barrier. The height of the barrier is 5.9 feet. This site is located at UTM N: 4265438 & E: 288092.



**Site 8:** Rock Creek, Bridgeport Ranger District, looking upstream at a permanent fish barrier. The height of the barrier is 9.8 feet. This site is located approximately 40 meters upstream of site 7. Site 7 is located at UTM N: 4265438 & E: 288092.



**Site 9:** Rock Creek, Bridgeport Ranger District, looking upstream at a permanent fish barrier. The height of the barrier is 6.6 feet. This site is located at UTM N: 4265486 & E: 288255.



**Site 10:** Rock Creek, Bridgeport Ranger District, looking upstream at a seasonal fish barrier. The height of the barrier is 2.5 feet and the depth of the pool at the bottom of the barrier is 1.8 feet. This site is located at UTM N: 4265485 & E: 288465.



**Site 11:** Rock Creek, Bridgeport Ranger District, looking upstream at a tributary (South Fork Rock Creek) entering on the river left side. This tributary is contributing approximately 5% to the overall flow in Rock Creek. This tributary does not provide potential Lahontan cutthroat trout habitat. This site is located at UTM N: 4265316 & E: 288512.



**Site 11:** Rock Creek, Bridgeport Ranger District, photo point, looking upstream at where the 2002 Cannon Fire burned. This site is located at UTM N: 4265316 & E: 288512.



**Site 12:** Rock Creek, Bridgeport Ranger District, looking upstream at a seasonal fish barrier. The height of the barrier is 3.1 feet and the depth of the pool at the bottom of the barrier is 0.7 feet. This site is located at UTM N: 4265243 & E: 288714.



**Site 13:** Rock Creek, Bridgeport Ranger District, looking upstream at a seasonal fish barrier. The height of the barrier is 3.3 feet and the depth of the pool at the bottom of the barrier is 1.3 feet. A lot of stream bank erosion is occurring at this site. This site is located at UTM N: 4265195 & E: 288844.



**Site 14:** Rock Creek, Bridgeport Ranger District, looking upstream at a seasonal fish barrier. The height of the barrier is 4.3 feet and the depth of the pool at the bottom of the barrier is 0.7 feet. This site is located at UTM N: 4265129 & E: 288984.



**Site 15:** Rock Creek, Bridgeport Ranger District, looking upstream at a tributary entering on the river right side. This tributary is contributing approximately 5% to the overall flow in Rock Creek. This site is located at UTM N: 4265009 & E: 289115.



**Site 16:** Rock Creek, Bridgeport Ranger District, photo point, looking upstream. This site is located at UTM N: 4264959 & E: 289216.



**Site 17:** Rock Creek, Bridgeport Ranger District, looking upstream at a seasonal fish barrier. The height of the barrier is 4.1 feet and the depth of the pool at the bottom of the barrier is 0.8 feet. This site is located at UTM N: 4265031 & E: 289556.



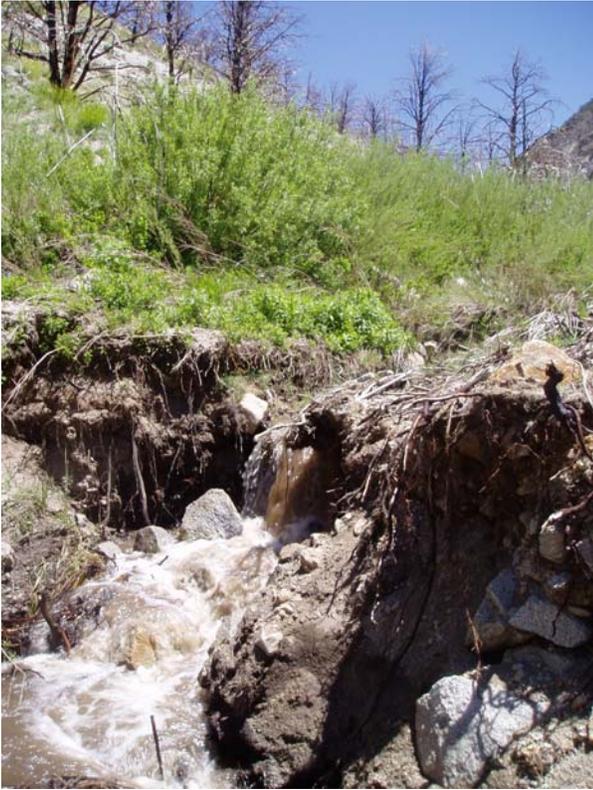
**Site 18:** Rock Creek, Bridgeport Ranger District, looking upstream at a seasonal fish barrier. The height of the barrier is 4.8 feet and the depth of the pool at the bottom of the barrier is 0.8 feet. This site is located at UTM N: 4265277 & E: 289984.



**Site 19:** Rock Creek, Bridgeport Ranger District, looking upstream at a seasonal fish barrier. The height of the barrier is 4.3 feet and the depth of the pool at the bottom of the barrier is 0.8 feet. This site is located at UTM N: 4265397 & E: 290207.



**Site 20:** Rock Creek, Bridgeport Ranger District, looking upstream at a seasonal fish barrier. The height of the barrier is 3.9 feet and the depth of the pool at the bottom of the barrier is 0.8 feet. This site is located at UTM N: 4265441 & E: 290270.



**Site 21:** Rock Creek, Bridgeport Ranger District, looking upstream at a seasonal fish barrier. The height of the barrier is 2.5 feet and the depth of the pool at the bottom of the barrier is 1.6 feet. This site is located at UTM N: 4265456 & E: 290351.



**Site 22:** Rock Creek, Bridgeport Ranger District, looking upstream at a permanent fish barrier. This barrier is the first/lower of 3 barriers in a series. The height of this barrier is 19.7 feet. The height of both of the other two barriers is 3.3 feet. This site is located at UTM N: 4265461 & E: 290448.



**Site 23:** Rock Creek, Bridgeport Ranger District, photo point, looking upstream. This site is located at UTM N: 4265649 & E: 291508.



**Site 24:** Rock Creek, Bridgeport Ranger District, looking upstream at a tributary entering on the river right side. This site is located at UTM N: 4265692 & E: 291946.



**Site 25:** Rock Creek, Bridgeport Ranger District, photo point, looking upstream. The stream habitat survey ended at this site. Stream starts to become intermittent at this site. This site is located at UTM N: 4265072 & E: 292726.



**Site 25:** Rock Creek, Bridgeport Ranger District, photo point, looking downstream. The stream habitat survey ended at this site. Stream starts to become intermittent at this site. This site is located at UTM N: 4265072 & E: 292726.