

Virginia Creek

Mono County, California

2007 Stream Habitat Survey Report



Prepared By:

Carson Ranger District: Humbolt-Toiyabe National Forest

Introduction

Virginia Creek occurs in Mono County, California and originates at Virginia Lakes. Virginia Creek flows approximately 16.1 miles in a northeasterly direction until it flows into the East Walker River, which then flows into Bridgeport Reservoir. Virginia Creek flows through mostly private lands and lands managed by the Bureau of Land Management. Approximately the upper 2.5 miles of Virginia Creek occurs on National Forest Lands managed by the Humboldt-Toiyabe National Forest, Bridgeport Ranger District. Virginia Creek was surveyed from just downstream of the National Forest-Bureau of Land Management boundary off Forest Service Road 021 and proceeded upstream approximately 2.6 miles to a point just upstream of the Virginia Creek-Trumble Lake Creek confluence.

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. Virginia Creek was surveyed on September 21st, 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 Virginia 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 2.6 miles of Virginia Creek were surveyed from just downstream of the National Forest-Bureau of Land Management boundary off Forest Service Road 021 and then proceeded upstream to a point just upstream of the Virginia Creek-Trumble Lake Creek confluence. Throughout the 2.6 mile survey of Virginia Creek the most prevalent feature noted was campsites which were found throughout the survey and were documented at Sites 3, 4, 5, 7, 9, 11, 12, 14, 15, and 16. Three road-stream crossings were documented at Sites 2, 13, and 18. Two of these crossings are bridges and the other crossing is a ford crossing at Site 13, which has been closed to vehicle access. The one area where erosion is a concern can be seen at Site 6. One tributary was noted at Site 17.

Several large fish were seen in the creek and were specifically noted at Sites 8 and 10. No fish barriers were found while conducting the survey. The average stream gradient of Virginia Creek between Sites 1 and 19 is 3.9%.

Discussion

Virginia Creek provides 2.6 miles of potential LCT habitat between Sites 1 and 19. The habitat between Sites 1 and 19 is characterized a low gradient with long riffles, several pocket pools as well as big pools that create good fish habitat. The stream banks are not overly vegetated and are mostly filled with pines and grasses. Several fish were seen throughout the survey and these large fish make Virginia Creek a popular destination for recreational fishing.

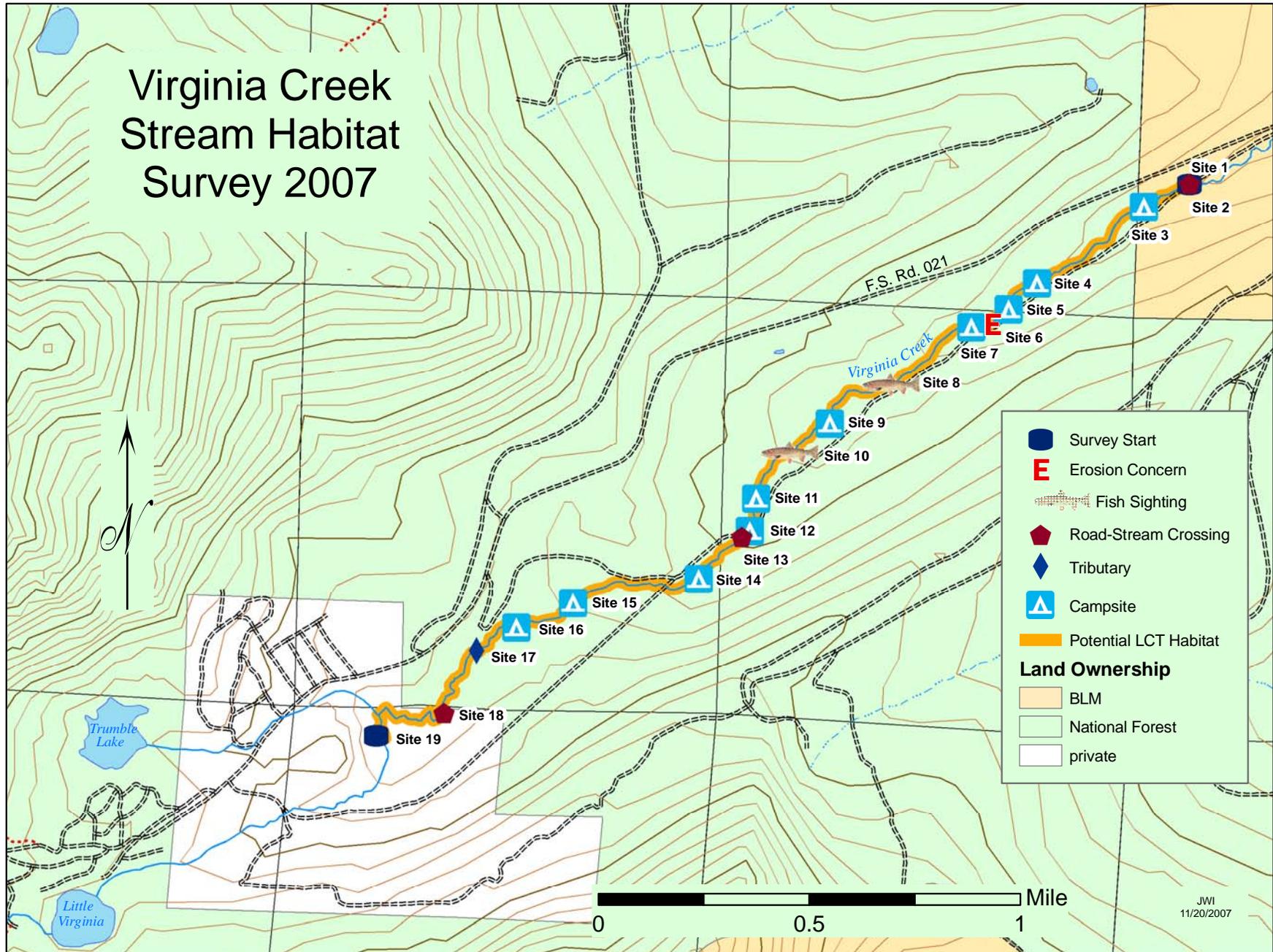
For most of the section surveyed, a dirt road runs parallel to the creek, providing easy access for fishing and camping. Downstream of Site 11 there were many campsites located on the stream that had fire rings, ample parking, and vaulted toilets. Even on a cold midweek day in mid September there were campsites being used by big RVs. Upstream of Site 11 the road is no longer right next to the creek and more dispersed campsites were seen. Most of these campsites consisted of stone fire rings and nothing else. Some of these campsites are close to the stream with one being right on the stream at Site 11. Although these sites appear to see little use, they still can have an impact on the stream.

Although the section of the stream surveyed contained no barriers and provides fish habitat, the majority of Virginia Creek occurs downstream of Site 1 on non National Forest lands, and therefore was not surveyed. The section surveyed accounts for approximately 10% of Virginia Creek. Although the section surveyed provides fish habitat, due to such easy access, and the popularity Virginia Creek has for camping and fishing, restoring a put-and-take recreational LCT fishery should be considered.

Recommendations

1. Consider the 2.6 mile section of Virginia Creek between Site 1 and Site 19 as potential LCT habitat and consider Virginia Creek a low candidate for restoration.
2. Work with the California Department of Fish and Game to obtain stocking records and information related to previous density and distribution surveys of fish in Virginia Creek.
3. Increase public awareness of Leave-No-Trace principles along Virginia Creek, (i.e.) more signs at Virginia Lakes.
4. Close and decommission all dispersed campsites within 100 feet of Virginia Creek. Only allow camping to occur more than 100 feet away from the streams edge.
5. Consider stocking a put-and-take recreational LCT fishery into Virginia Creek.

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JWI
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Site 1: Virginia Creek, Bridgeport Ranger District. The survey starts just downstream of the National Forest-Bureau of Land Management boundary. Photo shows downstream view of the creek at starting point. This site is located at UTM: N: 4216045 & E: 306071, Elev. 2714m.



Site 2: Virginia Creek, Bridgeport Ranger District, looking upstream at a bridge constructed of railroad ties and asphalt. Boulders under the bridge keep water from eroding the stream banks under the structure. This site is located at UTM: N: 4216046 & E: 306071, Elev. 2714m.



Site 3: Virginia Creek, Bridgeport Ranger District. Campsite located on river right contains a fire ring, road access, and a parking area. This site is located at UTM: N: 4215961 & E: 305892, Elev. 2717m.



Site 4: Virginia Creek, Bridgeport Ranger District. Another campsite located on river right contains 2 metal fire rings approx. 20m from the water's edge. A large vaulted toilet is placed right next to the stream and could be a concern if ruptured. This site is located at UTM: N: 4215659 & E: 305478, Elev. 2740m.



Site 5: Virginia Creek, Bridgeport Ranger District. Another smaller campsite with a fire pit, road access, and a parking area. The road is approximately 35m from the stream and it parallels the stream for a good distance. This site is located at UTM: N: 4215571 & E: 305387, Elev.2739m.



Site 6: Virginia Creek, Bridgeport Ranger District. This section of the stream bank has been covered with large boulders to prevent any further erosion. This site is located at UTM: N: 4215521 & E: 305324.



Site 7: Virginia Creek, Bridgeport Ranger District. Three large campsites are all equipped with established metal fire rings, easy road access, and parking. The closest fire ring is about 10m from the water's edge. This site is located at UTM: N: 4215501 & E: 305243, Elev. 2762m.



Site 8: Virginia Creek, Bridgeport Ranger District, looking upstream at where 3 large fish were sighted. The largest fish of unknown species was about 12 inches long. This site is located at UTM: N: 4215276 & E: 304907, Elev. 2769m.



Site 9: Virginia Creek, Bridgeport Ranger District. Another cluster of campsites are seen about 40m from the creek. Area contains at least two fire rings and a vaulted toilet. Campsite is road accessible. This site is located at UTM: N: 4215135 & E: 304704, Elev. 2777m.



Site 10: Virginia Creek, Bridgeport Ranger District. Seven large trout are seen in this deep run. The trout range in size from 10 to 15 inches in length. This site is located at UTM: N: 4215080 & E: 304589.



Site 11: Virginia Creek, Bridgeport Ranger District. This small dispersed campsite lies right on the creek's edge, contains a large stone fire ring, does not have road access, and appears to see little use. This site is located at UTM: N: 4214847& E: 304425.



Site 12: Virginia Creek, Bridgeport Ranger District. Another small dispersed campsite with a stone fire ring 4m from the creek. Campsite also appears to see little use. This site is located at UTM: N: 4214726 & E: 304401.



Site 13: Virginia Creek, Bridgeport Ranger District. The old road pictured above has been blocked off by large boulders. Fresh tracks; however, suggest that ATVs are still using the crossing. This site is located at UTM: N: 4214704 & E: 304368, Elev. 2797m.



Site 14: Virginia Creek, Bridgeport Ranger District. Another seldom used stone fire ring defines this campsite located 3m from the edge of the creek. There is no road access to this campsite. This site is located at UTM: N: 4214543 & E: 304206, Elev. 2815m.



Site 15: Virginia Creek, Bridgeport Ranger District. A large campsite with a metal fire ring and a large mortared fire ring is located approx. 12m from the edge of the creek. This site is located at UTM: N: 4214455 & E: 303724, Elev. 2850m.



Site 16: Virginia Creek, Bridgeport Ranger District. A series of campsites are spotted on the other side of the creek. There are at least 3 metal fire rings that are at least 15m from the water. These sites can be accessed from road on the other side of the stream. This site is located at UTM: N: 4214351 & E: 303518, Elev. 2869m.



Site 17: Virginia Creek, Bridgeport Ranger District. A small tributary enters on river left in an area where the stream is flowing at a very slow pace. This tributary adds 15% to the overall flow. This site is located at UTM: N: 4214269 & E: 303360, Elev. 2868m.



Site 18: Virginia Creek, Bridgeport Ranger District. A rustic bridge gives pedestrians access to several buildings. The bridge looks to get very little use and is still in good condition. This site is located at UTM: N: 4214030 & E: 303237, Elev. 2862m.



Site 19: Virginia Creek, Bridgeport Ranger District. The survey ends as we enter a large meadow. The entire meadow has been flooded and the creek seems to be partially supplied by a spring. Private property also occurs upstream of this point. This site is located at UTM: N: 4213947 & E: 302978, Elev. 2876m.