

Trout Creek 2012 summary report

July 27, 2012

State of California

Department of Fish and Wildlife

Heritage and Wild Trout Program



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Introduction

Trout Creek, tributary to Edson Creek (Siskiyou County; Figure 1), is located approximately 15 miles northeast of McCloud, CA and is within the McCloud River basin. Trout Creek contains a self-sustaining wild population of McCloud River redband trout (*Oncorhynchus mykiss stonei*; MRRT) within its native range. McCloud River redband trout are native to the upper McCloud River and tributaries above Middle Falls and are designated as both a US Forest Service (USFS) Sensitive Species and California State Species of Special Concern (Moyle et al. 1995). In 1994, MRRT were listed as a Category 1 species under the Endangered Species Act of 1973 (ESA) due to concerns regarding introgression with hatchery fish, habitat reduction during an extended drought and potential hydropower development (Federal Register, Vol. 219, Nov. 15, 1994, page 58982). A subsequent Conservation Agreement for MRRT was signed by federal, state and private entities in 1998 which identified threats to the persistence of MRRT, defined conservation actions to be taken to prevent listing (including the delineation of a refugium area) and development of a watershed improvement plan and monitoring strategy for grazing and timber practices (USFS 1998). In 1999, due to the implementation of the conservation agreement, MRRT were removed from the ESA Candidate list (Federal Register, Vol. 65, October 20, 2000, page 63044). Anglers have reported catching brown trout (*Salmo trutta*) in Trout Creek in recent years and if present in the system, may negatively affect the MRRT population through predation and/or competition.

In 2012, the California Department of Fish and Wildlife Heritage and Wild Trout Program (HWTP) conducted single-pass electrofish surveys in Trout Creek to document the presence or absence and potential distribution of brown trout.

Methods

Single-pass electrofish surveys were conducted at two locations in Trout Creek (Sections 312-412) on July 27th, 2012 (Figures 2-3). Surveys were conducted using Smith Root backpack electrofishers. In each section, one shocker and one netter targeted shallow-water habitat with water depths conducive to backpack electroshocking. HWTP personnel captured fish opportunistically at accessible locations in each section. Prior to electrofishing, physical measurements of the stream and environmental conditions were taken, including air and water temperature (°C) and conductivity (specific and ambient in microsiemens). These factors were used to determine appropriate electrofisher settings. Representative photographs were taken and coordinates were recorded for the section boundaries using Global Positioning System hand-held units (North American Datum 1983). Surveys proceeded in an upstream direction, with netters capturing fish and placing them in five-gallon buckets to be held until processing. All captured fish were identified to species and measured to the nearest inch using a calibrated landing net (total length). Any observed dry stream segments were documented and geo-referenced. Any brown trout captured during the survey

effort were to be euthanized and dispatched (buried or dispersed in dense vegetation).

Results

Zero fish were either captured or observed in Section 312 and 32 MRRT were captured in Section 412 in Trout Creek. Captured MRRT ranged from four to nine inches in total length (Figure 4). Mean water and air temperature were 10 °C and 14.5 °C, respectively (measured twice during the survey effort). The downstream-most extent of wetted habitat was observed in Section 312; all other access locations downstream of this location were dry (Figures 2-3). Upon completion of the survey effort in Section 312, surveyors noted that wetted habitat had increased a few feet farther downstream. This may have been in part due to an increase in snowmelt and/or to changes in water use at the transfer station located near the Trout Creek Campground.

Discussion

Zero brown trout were observed or captured during the survey effort. Due to time limitations, the geographic extent of sampling was limited. Trout Creek is a popular fishery and a USFS campground provides easy access and recreational opportunities. The HWTP recommends further fisheries and habitat assessments in Trout Creek to gather baseline information on the MRRT population, angler use, and to determine presence or absence and potential distribution of brown trout. If brown trout are found in the system, consideration should be given to manual removal efforts.

References

Moyle, P. B., R. M. Yoshiyama, J. E. Williams, and E. D. Wikramanayake. 1995. Fish species of special concern in California, 2nd edition. Prepared for the California Department of Fish and Game, Rancho Cordova.

US Fish and Wildlife Service. 1994. Endangered and threatened wildlife and plants: animal candidate review for listing as endangered or threatened species. Federal register 219: (15 November 1994): 58985.

US Fish and Wildlife Service. 2000. Endangered and threatened wildlife and plants: notice of reclassification of nine candidate taxa. Federal register 65 (204): (20 March 2000):63044-63045.

US Forest Service. 1998. Redband trout conservation agreement. Shasta-Trinity National Forest. Redding, California.

Figure 1. Vicinity map of 2012 Trout Creek survey locations

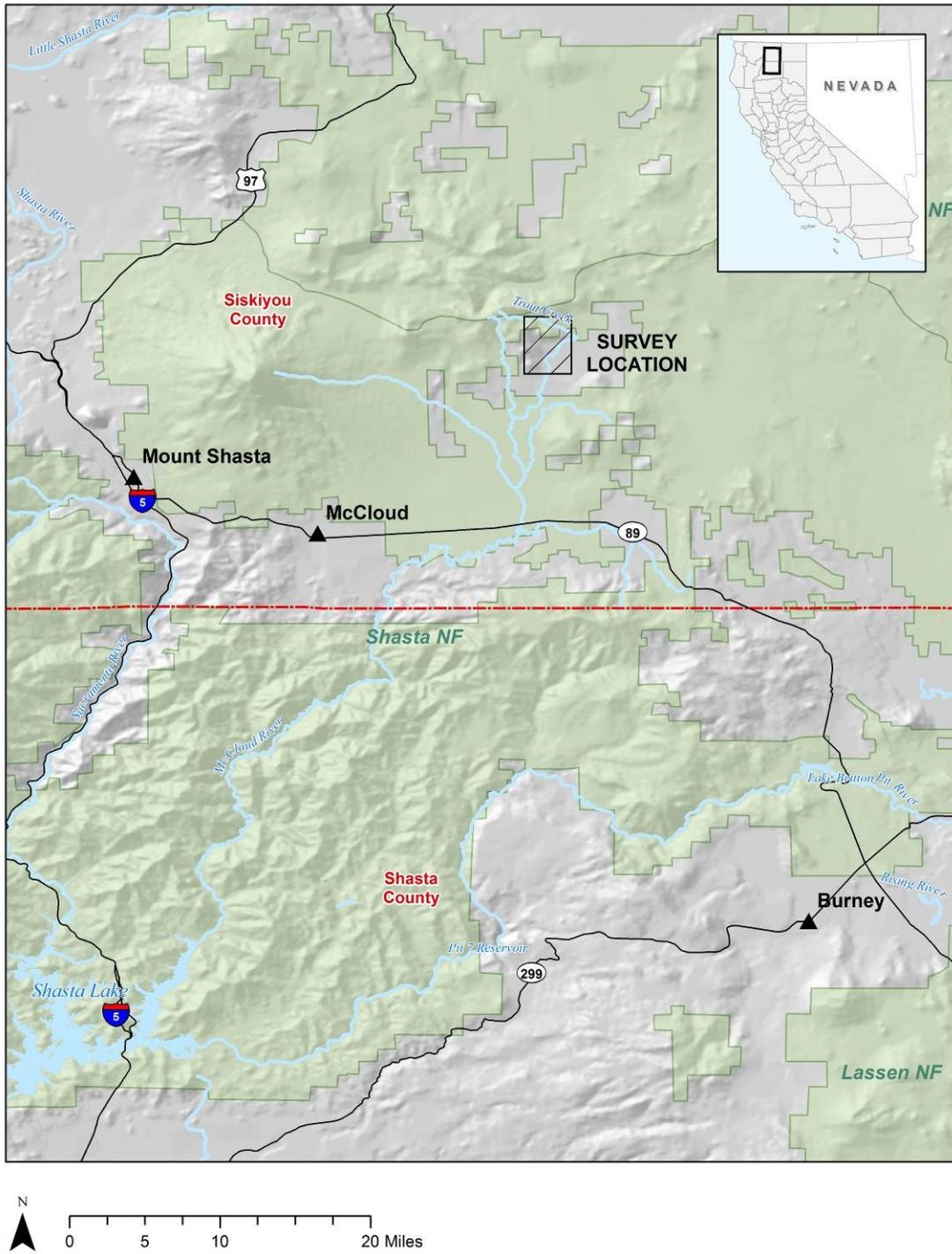


Figure 2. Detail map of 2012 Trout Creek single-pass electrofish section locations

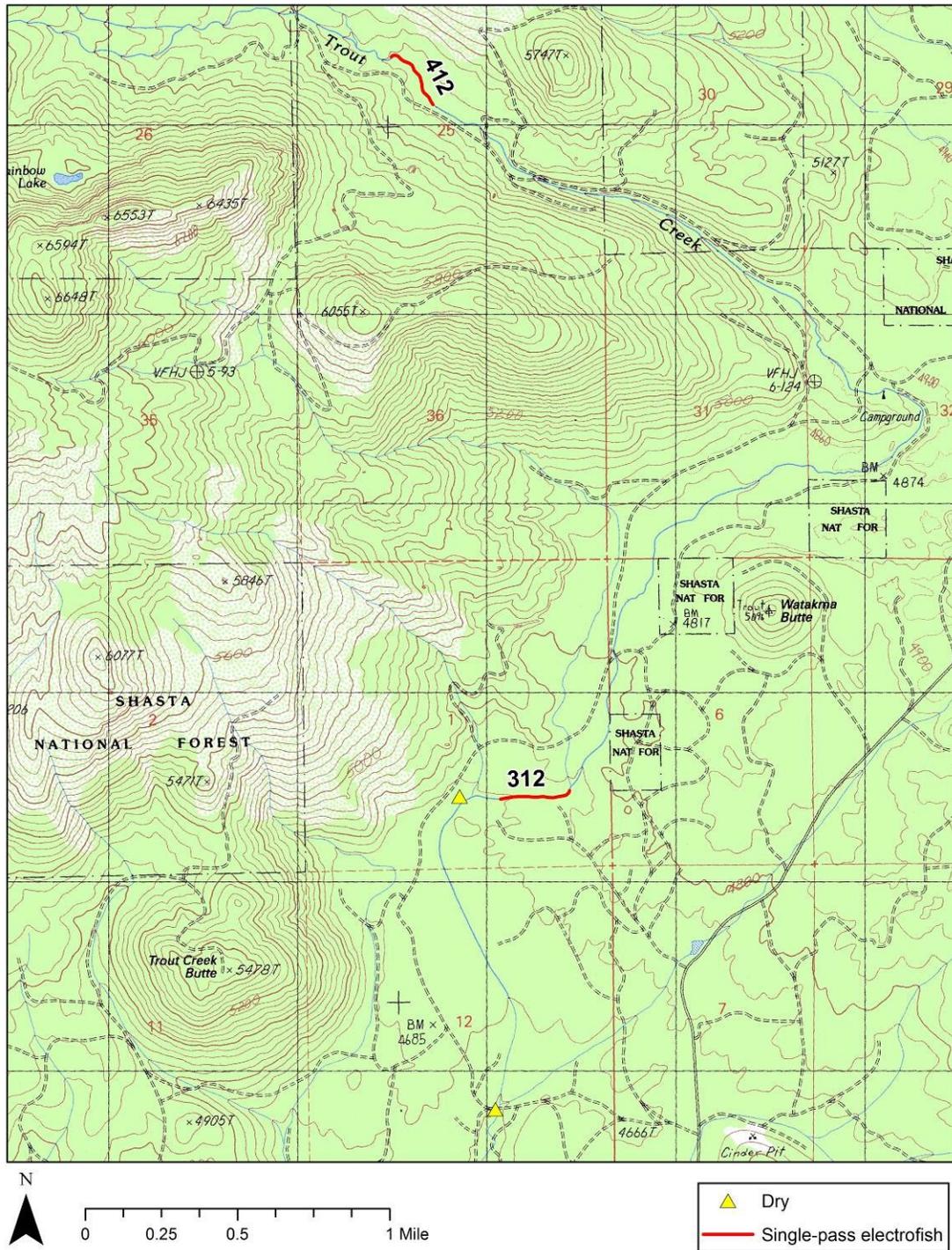


Figure 3. Aerial map of 2012 Trout Creek single-pass electrofishing section locations

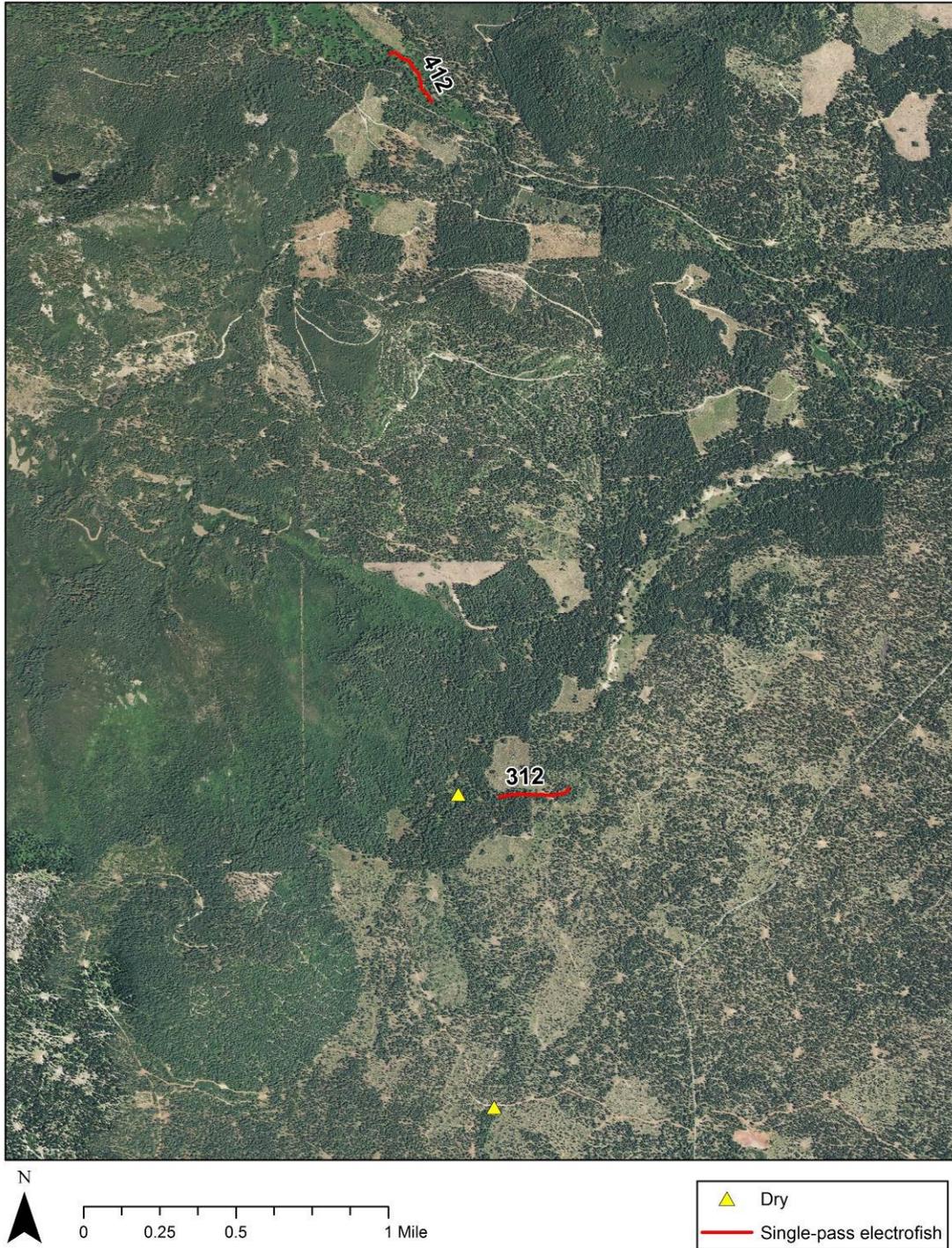


Figure 4. Length frequency histogram of MRRT captured in Trout Creek Section 412 in 2012

