Piute Creek Watershed 2009 Summary Report

July 28-August 03, 2009

State of California

Natural Resources Agency

Department of Fish and Game

Heritage and Wild Trout Program

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Introduction:

Piute Creek (Fresno County) is a tributary to the South Fork San Joaquin River in the John Muir Wilderness (JMW; Figure 1). The JMW (Inyo and Fresno counties) is situated along the crest of the central and southern Sierra Nevada Mountains from the Mammoth Lakes area south to Lone Pine. The JMW is a popular backcountry recreation destination for anglers, hikers, and campers. The majority of the JMW is within the Inyo National Forest, which has one of the highest recreational use levels of any National Forest in the United States. Backcountry recreation is by far the Inyo National Forest's top recreation use, and the JMW receives most of the recreational visitor days on the Forest (US Forest Service 2010).

On an annual basis, the DFG Heritage and Wild Trout Program (HWTP) is responsible for recommending to the California Fish and Game Commission (CFGC) 25 miles of stream and one lake that fit the criteria for Wild Trout Water designation. Wild Trout Waters are those that support self-sustaining (wild) trout populations, are aesthetically pleasing and environmentally productive, provide adequate catch rates in terms of numbers or size of trout, and are open to public angling. Wild Trout Waters may not be stocked with catchable-sized hatchery trout (Bloom and Weaver 2008). Due to the popularity of backcountry recreation in California, the HWTP has an interest in identifying and designating high elevation waters in the Sierra Nevada Mountains as "Wilderness" Wild Trout Waters. The HWTP evaluates candidate waters using a phased approach in order to systematically collect data and evaluate whether or not a stream or lake meets Wild Trout Water designation criteria.

In 2007, the HWTP conducted Phase 1 initial resource assessments via hook and line and creel census in several basins in the vicinity of Piute Creek, from the Glacier Divide north to Pine Creek, including the Piute Creek watershed itself (Golden Trout Lakes, Glacier Divide region, Humphreys Basin, and French Lakes), as well as Granite Lakes in the upper Pine Creek watershed (Weaver and Mehalick 2007). The objectives of this survey were to:

1. Interview all visitors encountered over the course of the survey period.

2. Determine how many individuals encountered were anglers (in general).

3. Out of the individuals encountered that stated they fish, determine how many fished or planned to fish during their visit to JMW.

4. Collect information about the values of this area in particular and backcountry angling in general from an angler perspective (including catch rates, catch sizes, satisfaction, and importance of backcountry angling).

5. Conduct Phase 1 resource assessments on various water bodies in the JMW using hook and line to determine species presence/absence and

composition, catch per unit effort, and whether or not a fishery is self-sustaining (e.g., multiple size classes caught or observed).

The results of this survey identified 14 lakes and one stream that contain self-sustaining trout populations and, under current management practices, are not stocked with hatchery fish. Eleven waters were identified as fast-action fisheries (catch rates of greater than two fish per hour) and 22% of the individuals encountered during the surveys were anglers and were actively fishing in the JMW during the course of their trip. These anglers showed a high value rating for the importance of backcountry angling. The HWTP identified 11 bodies of water surveyed in 2007 that meet the minimum qualifications for candidacy as Wild Trout Waters, the majority of which are within the Piute Creek watershed (Lost Lakes #1 and #2, Upper and Lower Golden Trout lakes, Piute Creek, Humphreys Lakes #1 and #2, and Tomahawk, Puppet, and Paris lakes). As a result, the HWTP recommended pursuing Phase 2 candidate water assessment on these bodies of water. HWTP Phase 2 assessments provide a comprehensive evaluation of the fishery, habitat, and angler use, including estimates of trout abundance and delineation of species distribution. In 2009, the HWTP conducted Phase 2 assessments in the Piute Creek watershed, from the headwaters downstream to the confluence with the South Fork San Joaquin River (Figure 2).

Figure 1. Vicinity map of Piute Creek watershed.

Methods:

Direct Observation Snorkel Surveys

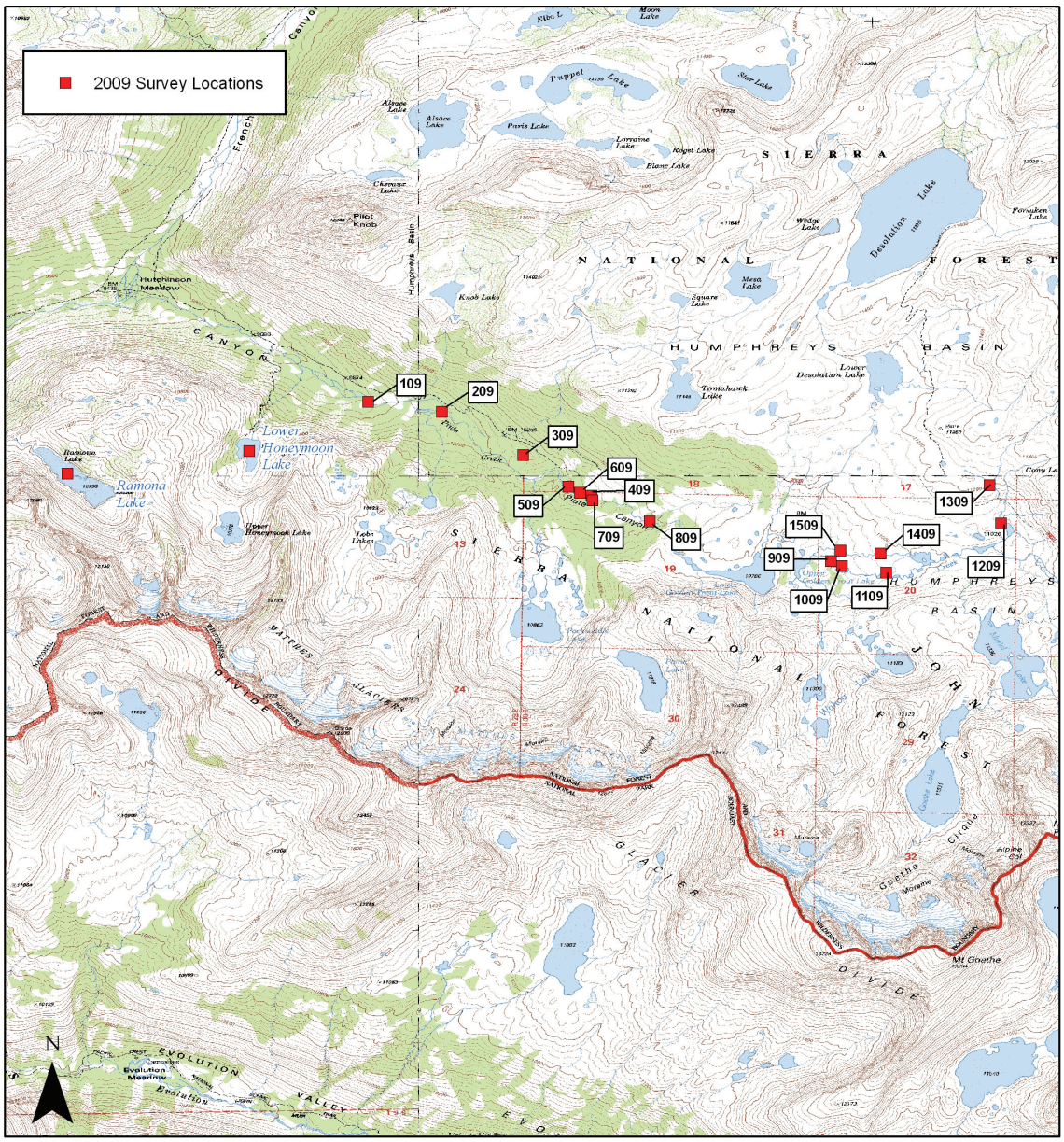
Direct observation surveys were conducted between July 31 and August 02, 2009 by HWTP personnel (Headquarters) at 15 locations on Piute Creek using snorkeling methods, an effective survey technique in many small streams and creeks in California and the Pacific Northwest (Hankin and Reeves 1988). Sections were spaced throughout Piute Creek from Desolation Lake downstream approximately six miles (Figure 2). In the upper portion of the watershed

(Sections 909-1509), sections were selected at random. Due to higher water velocities and decreased water visibility in the lower portions of the watershed, sections were selected based on survey feasibility and safety considerations and were located in areas where water visibility was conducive to observing fish (Sections 109-809). Higher gradient riffles and areas with swift water and/or turbulence were not surveyed. Direct observation surveys were not feasible downstream of Section 109 (near Hutchinson Meadow downstream to the confluence with the South Fork San Joaquin River), due to the influence of multiple tributaries and resulting high flows. Specific section boundaries were located at distinct breaks in habitat types and stream gradient. With the exception of Section 209, surveys were conducted in an upstream direction.

The number of divers for each section was determined based upon wetted width, water visibility, and habitat complexity and ranged between one and three people. Divers maintained an evenly-spaced line perpendicular to the current and counted fish by species. All observed trout were further separated and counted by size class. Size classes were divided into the following categories: young of year (YOY); small (< 6 inches); medium (6-11.9 inches); large (12-17.9 inches); and extra-large (≥ 18 inches). YOY are defined by the HWTP as age 0+ fish, emerged from the gravel in the same year as the survey effort. Depending on species, date of emergence, relative growth rates, and habitat conditions, the size of YOY varies greatly, but is generally between zero and three inches in total length. If a trout was observed to be less than six inches total length but it was difficult to determine whether it was an age 0+ or 1+ fish, by default it was classified in the small (<6 inches) size class.

Divers were instructed in both visual size class estimation and proper snorkel survey techniques prior to starting the survey (establishing diver lanes, determining the extent of their visual survey area, how and when to count (or not count) fish observed, safety considerations, etc.). For each section, surveyors measured section length along the thalweg, water and air temperature (in the shade), average wetted width and water depth, and water visibility. Habitat type (flatwater, riffle, or pool) was identified following Level 2 protocol as defined in the California Salmonid Stream Habitat Restoration Manual (Flosi et al. 1988). Representative photographs were taken and GPS coordinates were recorded for the section boundaries.

Figure 2. Map of Piute Creek 2009 direct observation survey locations.



Quads Mount Tom, Mount Hilgard, Mt. Darwin, Mount Henry (7.5')

0 0.5 1 Mile

Hook and Line Angling Assessments

Hook and line angling assessments were conducted between July 28 and August 03, 2009 by HWTP personnel (Headquarters) in the South Fork San Joaquin River (in the vicinity of the confluence with Piute Creek), Piute Creek (at various locations throughout the drainage), Lower Honeymoon Lake (along the shore and at the outflow), and Ramona Lake (along the shore). Angling was conducted with fly rods. Each captured fish was identified to species and total length was measured to the nearest inch with a calibrated landing net. All fish were handled to minimize injury and stress and were released back into the water after being identified and measured. Sampling effort was recorded for each body of water (hours fished) and based on the total catch, CPUE (number of fish caught per hour) was calculated. Representative photographs were taken of each body of water and written descriptions of the area(s) fished were recorded.

Creel Census

An informal (roving) creel census was conducted between July 28 and August 03, 2009 by HWTP personnel (Headquarters). The creel census was limited in scope and consisted of a questionnaire designed to determine angler effort and fishing location(s), gear type used, catch per unit effort (CPUE), satisfaction of each individual's experience, and importance of backcountry angling to the angler. All individuals or groups of people encountered during the one week period were approached and asked if they were anglers. If an individual indicated that they were an angler, they were asked to participate in a voluntary angler survey (Figure 3).

Figure 3. Creel census questionnaire for 2009 Piute Creek watershed survey.

CALIFORNIA DEPARTMENT OF FISH AND GAME
HERITAGE AND WILD TROUT PROGRAM
HIGH SIERRA LAKE AND STREAM ANGLER SURVEY FORM - 2010
QUESTIONNAIRE

DATE (mm/dd/yyyy):_____
CLERK:_____
ANGLER NUMBER: (____of____)
PAGE (____of____)

INTERVIEW LOCATION (place name, water name, etc.):
GPS COORDINATES:

HOURS FISHED:
WATER FISHED (one water per sheet):

GEAR USED (circle one): Fly Lure Bait

NUMBER PER SPECIES CAUGHT: ____brown ____rainbow ____brook ____golden
NUMBER RELEASED: ____brown ____rainbow ____brook ____golden

1) How would you rate your satisfaction with the number of trout you caught today?
Not satisfied.....Satisfied
-2 -1 0 +1 +2

2) How would you rate your satisfaction with the size of the trout you caught today?
Not satisfied.....Satisfied
-2 -1 0 +1 +2

3) How would you rate your satisfaction with the overall angling experience today?
Not satisfied.....Satisfied
-2 -1 0 +1 +2

5) Are you planning on fishing any other waters for the duration of this angling trip?
YES NO

If yes to question 5, where? _____
_____

6) Do you plan to return to this (or other) part(s) of the Sierra Nevada to fish in the backcountry?
YES NO

If yes to question 6, where do you plan to fish? _____
_____

7) What percentage of your annual angling trips take place in the Sierra Nevada backcountry? _____%

8) How important is the backcountry angling experience to you?
Not important.....Very important
-2 -1 0 +1 +2

ADDITIONAL COMMENTS: (please use reverse side of this sheet as needed)

Results:

Direct Observation Snorkel Surveys

A total of 1215.5 feet of stream habitat was surveyed via direct observation snorkel surveys (combination of all 15 sections) and included flatwater, riffle, and pool habitat, the majority of which was flatwater (Table 1 and Figures 4-10). High gradient riffle sections dominated the lower portion of the watershed; however, due to water turbulence, decreased water visibility, and high velocities, surveys generally did not include this habitat type (Figure 10). Water temperatures ranged from 11 ºC to 20 ºC and air temperatures ranged from 16 ºC to 22 ºC. Over the course of the week, weather conditions ranged from sunny and clear to rain and hail with thunderstorms. The direct observation snorkel surveys were only conducted during sunny or party cloudy weather; the hook and line assessments and creel census occurred in all types of weather encountered. The 15 sections averaged 26.1 feet in wetted width and 0.9 feet in water depth. A total of 240 golden trout were observed, ranging in size from YOY to medium-sized fish, with an average estimated density of 1,043 fish per mile (Table 2). Golden trout were observed in all sections except those located in the upper extent of the watershed (Sections 1209-1409; Figure 8). Density estimates for each species were calculated using the total length of all 15 sections combined, whether or not a particular species was observed in every section. A total of 59 small to large-sized brook trout were observed in seven of the sections with an average estimated density of 256 fish per mile. Brook trout were observed in both the downstream and upstream-most sections, but appeared to be absent from the middle sections (Sections 309-809; Figures 4 and 6).

Table 1. Summary of 2009 Piute Creek direct observation habitat data.

Section number	Survey date	Section Length (ft)	Habitat type percentages			Number of divers	Average wetted width (ft)	Average water depth (ft)	Water visibility (ft)
			Flatwater	Pool	Riffle				
109	7/31/2009	84.0	100%	0%	0%	3	34.8	1.4	10
209	7/31/2009	92.0	80%	0%	20%	3	22.1	1.3	10
309	7/31/2009	53.0	100%	0%	0%	3	32.0	1.5	5
409	7/31/2009	50.6	0%	100%	0%	3	36.0	1.0	6
509	8/1/2009	53.0	100%	0%	0%	3	26.2	1.0	7
609	8/1/2009	40.8	0%	100%	0%	3	30.7	1.2	10
709	8/1/2009	81.3	100%	0%	0%	3	27.1	0.8	10
809	8/1/2009	110.0	100%	0%	0%	3	34.1	1.0	10
909	8/2/2009	146.0	30%	20%	50%	2	24.2	0.8	5
1009	8/2/2009	69.5	15%	0%	85%	2	24.7	0.8	5
1109	8/2/2009	121.0	100%	0%	0%	2	42.9	1.1	10
1209	8/2/2009	72.0	100%	0%	0%	1	11.9	0.4	5
1309	8/2/2009	67.3	80%	0%	20%	1	13.4	0.3	5
1409	8/2/2009	97.0	100%	0%	0%	1	23.7	0.3	10
1509	8/2/2009	78.0	90%	0%	10%	1	7.0	0.5	10
Total	**n/a**	**1215.5**	**n/a**	**n/a**	**n/a**	**n/a**	**26.1**	**0.9**	**n/a**

Table 2. Summary of 2009 Piute Creek direct observation survey data including the number of fish observed by species, section, and size class.

Section number	Section length (ft)	Species	Number of fish observed						Estimated density (fish/ mi)
			YOY	Small < 5.9"	Medium 6" - 11.9"	Large 12" - 17.9"	Extra-large > 18"	Totals	
109	84.0	golden trout	0	6	10	0	0	16	1006
		brook trout	0	8	13	0	0	21	1320
209	92.0	golden trout	0	3	7	0	0	10	574
		brook trout	0	3	2	0	0	5	287
309	53.0	golden trout	0	13	15	0	0	28	2789
409	50.6	golden trout	0	18	13	0	0	31	3235
509	53.0	golden trout	0	12	10	0	0	22	2192
609	40.8	golden trout	1	26	11	0	0	38	4918
709	81.3	golden trout	0	14	13	0	0	27	1754
809	110.0	golden trout	5	20	14	0	0	39	1872
909	146.0	golden trout	1	7	4	0	0	12	434
		brook trout	0	0	2	0	0	2	72
1009	69.5	golden trout	0	2	1	0	0	3	228
		brook trout	0	1	2	1	0	4	304
1109	121.0	golden trout	0	6	4	0	0	10	436
		brook trout	0	17	4	0	0	21	916
1209	72.0	brook trout	0	2	1	0	0	3	220
1309	67.3	no trout	0	0	0	0	0	0	0
1409	97.0	brook trout	0	3	0	0	0	3	163
1509	78.0	golden trout	0	4	0	0	0	4	271
Total	**1215.5**	**golden trout**	**7**	**131**	**102**	**0**	**0**	**240**	**1043**
		brook trout	**0**	**34**	**24**	**1**	**0**	**59**	**256**

Figure 4. Detail map of Piute Creek 2009 direct observation Sections 109-309.

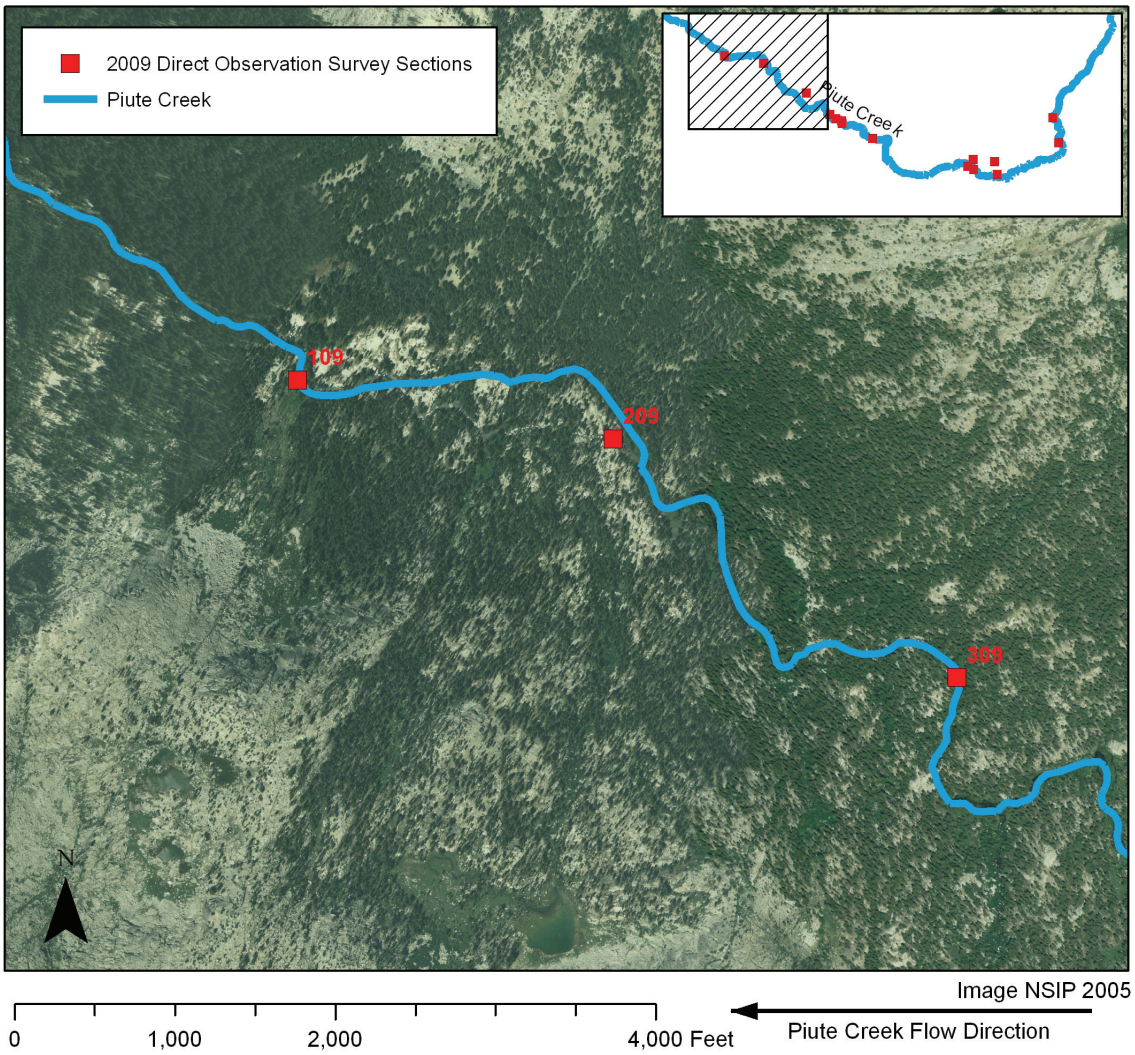


Figure 5. Site photographs of Piute Creek 2009 direct observation sections (From top left rotating clockwise: Section 109, 209, and 309).

Figure 6. Detail map of Piute Creek 2009 direct observation Sections 409-809.

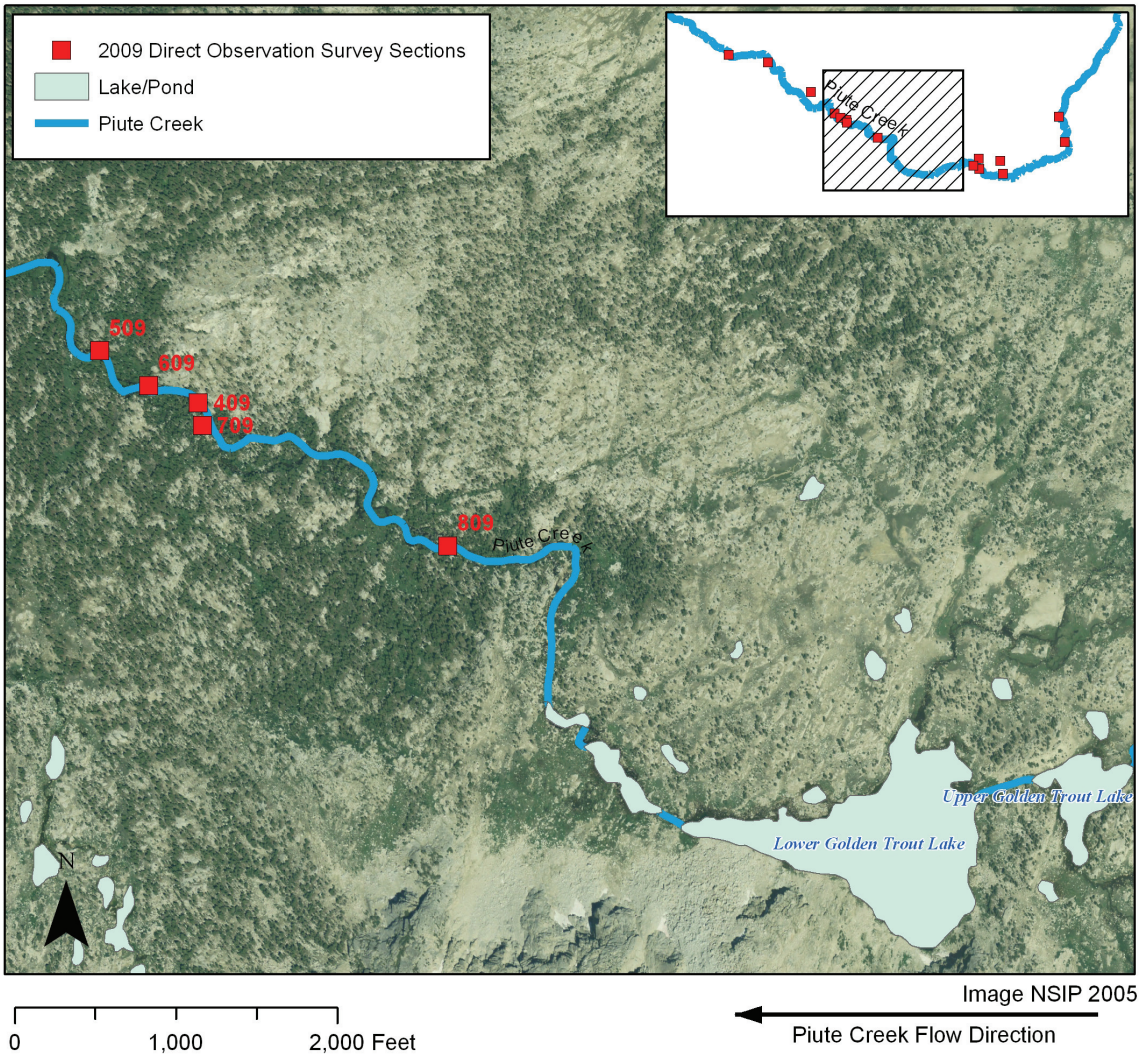


Figure 7. Site photographs of Piute Creek 2009 direct observation survey sections (From top left rotating clockwise: Section 409, 509, 609, 709, and 809).

Figure 8. Detail map of Piute Creek 2009 direct observation Sections 909-1509.

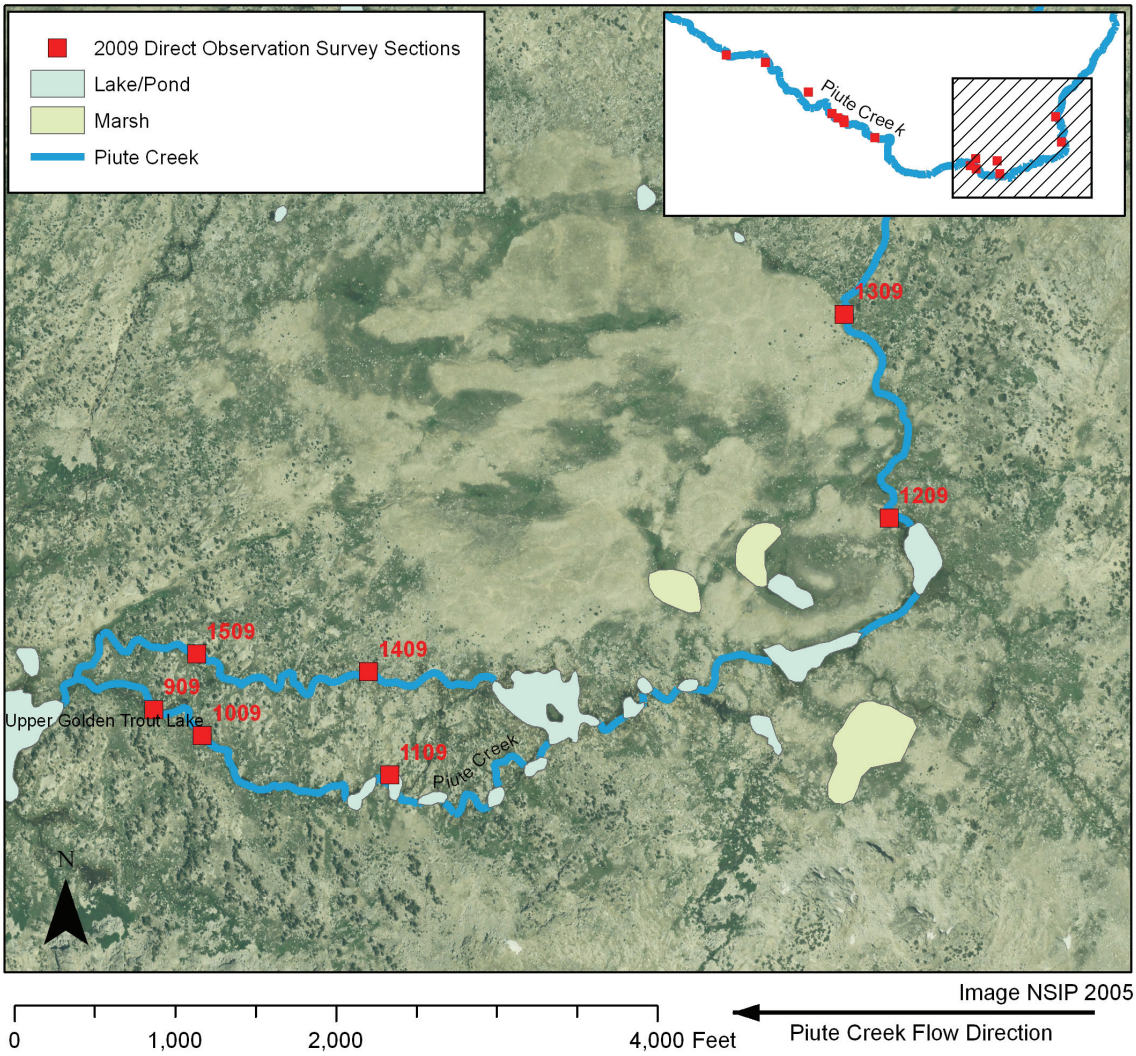


Figure 9. Site photographs of Piute Creek 2009 direct observation sections (From top left rotating clockwise: Sections 909, 1009, 1209, 1309, 1409, and 1509).

Figure 10. Photographs of Piute Creek near confluence with the South Fork San Joaquin River (left) and near the headwaters upstream of Golden Trout lakes (right), demonstrating the wide diversity of habitats found in this drainage.

Hook and Line Angling Assessments

HWTP staff captured a total of 790 trout in 52.9 hours of effort on Piute Creek (Table 3). The overall catch rate was 15.6 fish per hour. Species captured included California golden trout, golden/rainbow trout hybrids, brook trout, and brown trout. The brown trout and hybridized golden/rainbow trout were captured lower down in the system in the vicinity of the confluence with the South Fork San Joaquin River. Brook trout and California golden trout were captured throughout the watershed. Individual catch rates ranged from zero to 40.8 fish per hour. Approximately 68% of the fish captured were in the medium size class, 31% were small, and 1% was large; extra-large sized fish were not captured (nor observed in the direct observation snorkel surveys; Table 4).

Table 3. Summary of 2009 Piute Creek angling data including total number of hours fished, number of fish caught, and catch rate by angler and date.

Angler(s)	Date	Total hours fished	Number of trout caught	Catch rate (fish per hour)
Weaver	7/29/2009	2.42	30	12.4
Weaver	7/29/2009	1	7	7.0
Wassmund	7/29/2009	2	6	3.0
Zuber	7/29/2009	1.5	0	0.0
Notch	7/29/2009	2.17	20	9.2
Weaver	7/30/2009	0.97	32	33.0
Hennes and Wassmund	7/30/2009	0.67	13	19.4
Zuber	7/30/2009	0.83	14	16.9
Mehalick	7/30/2009	0.67	3	4.5
Notch and DeCarion	7/30/2009	1.67	23	13.8
Weaver	7/31/2009	0.5	19	38.0
Wassmund	7/31/2009	6.5	80	12.3
Zuber	7/31/2009	6.92	106	15.3
Hennes	8/1/2009	3	79	26.3
Mehalick	8/1/2009	3.5	73	20.9
Notch	8/1/2009	2.83	100	35.3
Weaver	8/2/2009	0.75	6	8.0
Weaver	8/2/2009	1.25	51	40.8
Wassmund	8/2/2009	2.5	14	5.6
Zuber	8/2/2009	3	26	8.7
DeCarion	8/3/2009	2	8	4.0
Mehalick	8/3/2009	1.5	24	16.0
Notch	8/3/2009	2.25	32	14.2
Hennes	8/3/2009	2.5	24	9.6
Average catch per hour				**15.6**

Table 4. Summary of 2009 Piute Creek angling data including the number of fish captured by species and size.

Water	Species	Number of trout landed by size			
		Small < 5.9"	Medium 6" - 11.9"	Large 12" - 17.9"	Totals
Piute Creek	California golden trout	155	373	0	528
	rainbow/golden trout	3	26	1	30
	brook trout	89	140	0	229
	brown trout	0	1	2	3
Totals		**247**	**540**	**3**	**790**

Hook and line assessments were also conducted in the South Fork San Joaquin River, Lower Honeymoon Lake, and Ramona Lake in order to gather additional data on other portions of the watershed, including headwater lakes and tributaries. Catch rates were the highest on Lower Honeymoon Lake with one angler landing approximately 41 fish per hour (Table 5; Figure 11). Size class structure for these waters was similar to that observed on Piute Creek. Catch rates were comparatively low in both Ramona Lake and the South Fork San Joaquin River (Table 5). Species composition on the South Fork San Joaquin River was similar to that observed in the lower end of Piute Creek. In both lakes surveyed, only California golden trout were captured (Table 6).

Table 5. Summary of 2009 angling data on the South Fork San Joaquin River, Lower Honeymoon Lake, and Ramona Lake including total number of hours fished, number of fish caught, and catch rate by angler and date.

Water	Angler(s)	Date	Total hours fished	Number of trout caught	Catch rate (fish per hour)
South Fork San Joaquin River	Weaver	7/28/2009	2.75	3	1
South Fork San Joaquin River	Wassmund	7/28/2009	2.33	3	1
South Fork San Joaquin River	Notch	7/28/2009	2	12	6
South Fork San Joaquin River average catch rate per hour					**3**
Lower Honeymoon Lake	Weaver	7/31/2009	0.68	36	53
Lower Honeymoon Lake Outlet Creek	Weaver	7/31/2009	0.42	12	29
Lower Honeymoon Lake average catch rate per hour					**41**
Ramona Lake	Weaver	7/31/2009	0.5	1	2

Table 6. Summary of 2009 angling data on the South Fork San Joaquin River, Lower Honeymoon Lake, and Ramona Lake including the number of fish captured by species and size.

Water	Species	Number of trout landed by size			
		Small < 5.9"	Medium 6" - 11.9"	Large 12" - 17.9"	Totals
South Fork San Joaquin River	California golden trout	4	8	1	13
	rainbow/golden trout	0	1	0	1
	brown trout	2	2	0	4
Lower Honeymoon Lake	California golden trout	11	25	0	36
Lower Honeymoon Lake outflow	California golden trout	3	9	0	12
Lower Honeymoon Lake Total	**California golden trout**	**14**	**34**	**0**	**48**
Ramona Lake	California golden trout	0	0	1	1

Figure 11. Site photograph of Lower Honeymoon Lake (left) and Ramona Lake (right).

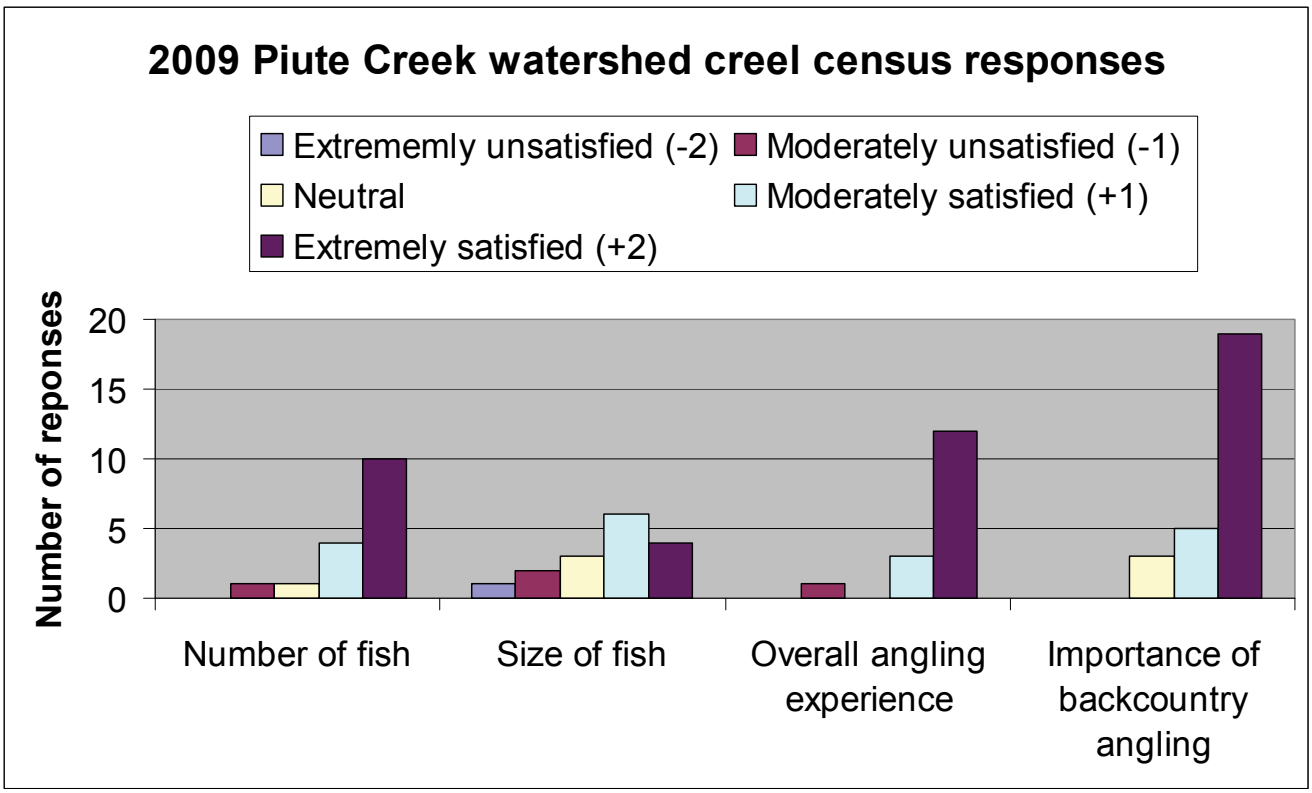
Creel Census

A total of 199 individuals were encountered by the HWTP during the entire week's survey effort (Table 7). Approximately 20% of these individuals indicated they were anglers (39 people) and, of these anglers, 69% participated in the creel census (27 people or 14% of the total number encountered). Eleven of the anglers had not yet fished and were unable to answer the satisfaction questions related to number of fish, size of fish, or overall angling experience. However, they did rate the importance of backcountry angling. In response to the number of fish, overall angling experience, and importance of backcountry angling, the majority of people were very satisfied (+2; Figure 12). In reply to their satisfaction with the size of fish captured, more people selected moderately satisfied than any other response; this question was the only one in which a response of very unsatisfied was selected. Overall, 89% of the people interviewed responded that backcountry angling was either important or very important. The type of angling gear used, whether fly, lure, or bait, appeared evenly divided between fly and lure (58% and 42%, respectively). One angler did not respond regarding gear type used and one angler used both fly gear and lures; they were not included in the percentages noted above. No angler reported using bait as a fishing method on their trip. The percentage of annual angling trips that take place in the Sierra Nevada backcountry average 65% amongst all respondents. In response to which waters each angler fished on this trip, the most popular answers included Piute Creek, the South Fork San Joaquin River, and Evolution Basin.

Table 7. Summary of 2009 creel data in the John Muir Wilderness.

Clerk	Number of individuals encountered	Number of anglers	Number of questionnaires completed
Mehalick	50	19	13
Hennes	42	1	1
Notch	33	4	4
DeCarion	16	6	4
Wassmund	15	3	2
Zuber	23	5	2
Weaver	20	1	1
Total	**199**	**39**	**27**

Figure 12. Graph of Piute Creek 2009 creel census responses to angler satisfaction regarding the number of fish, size of fish, overall angling experience, and importance of backcountry angling.



Discussion:

Based on the results of our 2009 direct observation snorkel surveys and hook and line assessments, the trout species encountered appear to be distributed along an elevation gradient within Piute Creek. Not surprisingly, current trout distribution throughout the drainage also appears to correlate directly with historic stocking records. In 1995, 1996, and 2004, the DFG High Mountain Lakes Program conducted fish presence/absence surveys throughout the Sierra Nevada; the results of this assessment corroborates the species distribution patterns observed in the Piute Creek drainage in 2009 (Milliron 2009). Golden/rainbow trout hybrids, brown trout, and brook trout were captured in the lower extent of Piute Creek and likely come from the South Fork San Joaquin system. The hybrids and brown trout appear to be limited to the lower extent of Piute Creek, possibly due to habitat-based limitations such as higher gradients, high stream velocities, and/or potential barriers to upstream fish migration.

Upstream of Hutchinson Meadow and the outflow of Lower Honeymoon Lake, both California golden trout and brook trout were observed (Sections 109-209). There was a marked difference in the outward appearance of these golden trout compared to the golden/rainbow trout hybrids captured farther downstream in the system. Based on morphological characteristics, the fish observed higher in the system were presumably California golden trout, with little to no phenotypic evidence of introgression with rainbow trout. Lower Honeymoon Lake was stocked once by the DFG with California golden trout in 1958 and is currently a self-sustaining fishery with a DFG management directive of “do not stock.” In Piute Creek itself, approximately three miles upstream of Section 209, only California golden trout were observed (Sections 309-809); gradient and potential barriers may limit the distribution of brook trout in this area or brook trout may be present but were not observed. In Section 1209, located in the upper extent of the watershed and upstream of Golden Trout lakes, only brook trout were observed. Brook trout were captured by the HWTP in Humphreys Lakes and Tomahawk Lake in 2007 (Weaver and Mehalick 2007) and downstream migration from these lakes likely explains the distribution of brook trout in the upper extent of the drainage. This species distribution is corroborated by data collected by the DFG High Mountain Lake Program (Milliron 2009). In Section 1309, the upstream-most section of the 2009 survey, zero fish were observed.

Fast action fisheries are defined by the HWTP as those waters exceeding average catch rates of two fish per hour (Bloom and Weaver 2008). Catch rates observed in the Piute Creek drainage in both 2007 and 2009 far exceeded the minimum qualifications for a fast action fishery. Trophy-sized trout may not be present in the system but, along with a fast-action fishing opportunity, Piute Creek provides a self-sustaining wild trout fishery in a remote back-country setting. The creel census showed that some anglers were unsatisfied with the size of fish captured. Survey data showed the presence of fish in all size classes except extra-large. The majority of fish observed were in the small size class with and exceptional few in the large size class. This size class distribution is considered typical for high alpine oligotrophic environments. Angling pressure in this area appears moderate in the summer through fall months, but is likely absent during winter months due to deep snow pack, difficult access, and prolonged periods of torpor

experienced by fishes at these elevations.

The setting of the John Muir Wilderness in the Sierra Nevada Mountains is remote, scenic, and very aesthetically pleasing. The Piute Creek drainage is occupied by multiple species of self-sustaining (wild) trout and provides a high quality, fast action recreational fishery that is open to the public. Based on our 2007 and 2009 assessments of this drainage, Piute Creek, along with numerous headwater lakes and tributaries, meet multiple criteria for candidacy as designated Wild Trout Waters. DFG Sierra District General fishing regulations allow for the take of five trout per day with a total of ten trout in possession. In addition to the daily bag and possession limits, up to ten brook trout per day (less than ten inches in total length) may be taken and possessed.

Conclusion:

The HWTP has an interest in identifying and designating high elevation waters in the Sierra Nevada Mountains (and other locations across the state) as "Wilderness" Wild Trout Waters. The 9,000+ lakes and countless miles of stream and river in the nearly 400-mile long Sierra Nevada Range contain a large portion of California's trout-bearing streams and lakes. These waters have long been an angling attraction and continue to provide important recreational benefits, in spite of recent management changes that have reduced aerial trout stocking in order to protect native aquatic species. As a result, the focus of efforts such as this one toward identifying, recognizing, and managing wild (naturally reproducing) trout populations in the Sierra Nevada backcountry has become all the more important. It is understood that, while candidate waters are evaluated based upon their potential recreational benefit(s) to the public, consideration and coordination must also be provided for the protection, conservation and possible restoration of native aquatic species. In September, 2009, the HWTP recommended to the CFGC that Lower Honeymoon Lake be designated as a Wild Trout Water. The CFGC adopted the recommendation and Lower Honeymoon Lake was incorporated into the HWTP program in 2009. The HWTP (Headquarters) will create a Fisheries Management Plan for Lower Honeymoon Lake by 2012 and plans to expand this designation to include Piute Creek and other headwater lakes and tributaries, creating a watershed-level "Wilderness" Wild Trout Water in the Piute Creek drainage.

References:

Bloom, R. and J. Weaver. 2008. California Heritage and Wild Trout Program Handbook (Draft). State of California. Natural Resources Agency. Department of Fish and Game. Heritage and Wild Trout Program. Gold River, CA.

Flosi, G., S. Downie, J. Hopelain, M. Bird, R. Coey and B. Collins. 1998. California Salmonid Stream Habitat Restoration Manual. State of California Resources Agency. 3rd Edition. Department of Fish and Game. Vol. 1.

Milliron, C. 2009. State of California. Natural Resources Agency. Department of Fish and Game High Mountain Lakes Database. Filemaker Pro. Version 5.5. Bishop, CA.

US Forest Service - Caring for the Land and Serving People. Web. 01 June 2010. <http://www.fs.fed.us>.

Weaver, J. and S. Mehalick. 2007. Phase 1 High Mountain Lake and Stream Resource Assessment; John Muir Wilderness Fishery and Angler Survey Report - 2007. State of California. Natural Resources Agency. Department of Fish and Game. Heritage and Wild Trout Program. Gold River, CA.