

2005 Angler Creel Survey:
Rock Creek - Cresta Project (FERC No. 1962)
North Fork Feather River
Butte and Plumas Counties, California
DRAFT FINAL REPORT



Prepared for:

**Pacific Gas and Electric Company
Technical and Ecological Services
3400 Crow Canyon Road
San Ramon, California 94583**

Prepared by:

**Meadowbrook Conservation Services
P.O. Box 226
Taylorsville, California 95983-9703**

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EXECUTIVE SUMMARY

This report describes the results of the 2005 Angler Creel Survey performed by Meadowbrook Conservation Services on the Rock Creek and Cresta reaches of the North Fork Feather River, Plumas and Butte Counties, California.

For comparative purposes, this report follows the format of the 2002 Angler Creel Survey report by Garcia and Associates, and the 2004 Angler Creel Survey report by Meadowbrook Conservation Services, these reports also follow a similar methodology that was utilized by the California Department of Fish and Game during the 1981-1986 Fisheries Management Study (California Department of Fish and Game 1988).

The 2005 Angler Creel Survey was conducted in the fourth year of the current Operating License and Settlement Agreement (issued October 24, 2001) for the Rock Creek-Cresta Hydroelectric Project (FERC No. 1962). The 2005 Angler Survey builds on the database started by the 2002 Angler Creel Survey report (Garcia and Associates 2002), and supports one element of the Project's 15-year monitoring program. The primary objective of the angler surveys is to track the quality of the fishery from an angling perspective during the initial 15 years of the License.

Meadowbrook Conservation Services conducted surveys for a total of 59 days throughout the 2005 trout season (April 30th through November 15th). In each full month (May through October), survey efforts included four weekend days and five weekdays. All holidays throughout the season were surveyed. All holidays and their associated weekend days were combined and analyzed as "holiday" days.

Whitewater (boating flow) weekends, which occurred in 2005 on one weekend per month from June through October, were excluded from this report. Angling during whitewater weekends was assessed separately in association with other recreation monitoring.

Survey methods included instantaneous use counts (drive-by) and angler interviews. An estimated 2,572 anglers fished the Rock Creek and Cresta reaches during the 2005 trout season, based on a total of 759 anglers observed during instantaneous use counts. Of the 759 anglers observed, 727 anglers were interviewed (96%).

Fishing pressure was highest on weekend days (non-holiday) with an average of 21.3 anglers in all reaches, followed by holidays (and their associated weekend days) with an average of 16.3 anglers in all reaches, and finally weekdays with an average of 5.8 anglers in all reaches. The estimated number of anglers per day was highest during May through June.

The 727 anglers reported catching 1,182 fish. Of these 1,182 fish, the anglers reported catching 878 trout (872 rainbow trout and 6 brown trout) and 304 non-trout fish (194 Sacramento pikeminnow, 81 smallmouth bass, 21 hardhead, and 8 Sacramento sucker). Anglers kept 16 rainbow trout (2% of rainbow trout caught), 1 smallmouth bass (1% of smallmouth bass caught), and 7 Sacramento pikeminnow (4% of pikeminnow caught),

despite catch and release regulations in the riverine reaches. Because pikeminnow and hardhead are difficult to distinguish from one another, an unknown number of pikeminnow reported were possibly hardhead.

Anglers interviewed reported 1,176 angler hours in the study area, during survey days. The angler catch rate, also called the catch per unit effort (CPUE), averaged 1.01 fish per hour for all fish caught. Unlike the previous year, CPUE this year for all fish caught was lower in Cresta riverine reach (1.00 fish per hour) than at Rock Creek riverine reach (1.17 fish per hour). Overall, 83% of interviewed anglers were fishing in riverine reaches, while 17% were fishing in reservoirs.

Like the previous year, fly fishing was again the most popular angling method reported, in terms of angler numbers. Anglers using flies accounted for 48% of all anglers, followed by lure anglers (34%), bait anglers (15%), and a fourth category, anglers using a combination of two or three angling methods (4%). Of all angler methods, fly fishing anglers reported the highest CPUE (1.19 fish per hour) for all fish. Likewise, fly fishing anglers also reported the highest CPUE (1.05 fish per hour) for rainbow trout.

Bait fishing was still a popular method (15% of anglers this year and 19% of anglers last year). Almost half (49%) of all bait anglers had fished in the riverine reaches, even though bait fishing was prohibited those reaches by the catch and release regulations.

Settlement Agreement Targets

The Settlement Agreement identified a target of 80% wild trout/ 20% non-game fish in the catch. This target was nearly met, or was met, depending on how the figures are calculated. If smallmouth bass (a non-native species) was included in the total catch, then rainbow trout comprised 74% of the total catch, just short of the target criteria. However, the Settlement Agreement did not take smallmouth bass into account. If smallmouth bass were removed from the total catch, and if rainbow and brown trout were combined, then all trout comprised 80% of the total catch. (Brown trout contributed about 1% to the trout figure.)

The Settlement Agreement also established the following as targets: (1) an average size of 9.7 inches fork length for wild trout, and (2) availability of rainbow trout > 17 inches. Both of these targets were met. In 2005, rainbow trout had an average length of 12.3 inches. In addition, 60 of the rainbow trout reported caught were 17 inches or longer.

The Settlement Agreement also established, as a target, an angler catch rate (i.e., catch per unit effort) of one fish per angling hour, including catch and release. This target was met for all fish combined, with 1.01 fish per hour caught. CPUE averaged 0.74 fish per hour for rainbow trout, for all reaches combined. CPUE for rainbow trout was higher at the Rock Creek riverine reach (0.91 fish per hour) than at the Cresta riverine reach (0.79 fish per hour), the opposite of last year.

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1.0 INTRODUCTION

The Rock-Creek-Cresta Hydroelectric Project License No. 1962 (issued October 24, 2001) requires the Pacific Gas and Electric Company to evaluate fish populations and trout angling in the Project area. The Company contracted with Meadowbrook Conservation Services to conduct angler creel surveys in Years 3, 4, and 5 of the new License (i.e., 2004, 2005, and 2006). The angler surveys are one element of a multiple-component fisheries monitoring program.

The long-term monitoring objective is to measure the response of fish populations in the Rock Creek and Cresta study areas of the North Fork Feather River, given flow regime changes specified within Condition 5 of the License. The overall objective of the Rock Creek – Cresta Settlement Agreement (PG&E 2000) is to provide “an excellent trout fishery and a functioning ecosystem to all naturally occurring species.” To achieve this objective, the target criteria in the Settlement Agreement includes:

- a. Wild rainbow trout (*Oncorhynchus mykiss*) population with four age classes (fish population surveys).
- b. Fish catch of 80% wild trout/ 20% non-game fish (angler surveys).
- c. Average wild trout caught > 9.7 inches fork length (angler surveys).
- d. Adult rainbow trout available for catch > 17 inches (angler surveys).
- e. Harvestable component of 595 lbs/mile wild trout (fish population surveys).
- f. Wild trout biomass 62 lbs/acre (fish population surveys).
- g. Angler catch rate of one fish per angling hour, including catch and release (angler surveys).

The information reported here addresses items b, c, d, and g above. The other criteria (i.e., a, e, and f) are better addressed with results from other monitoring actions.

2.0 METHODS

2.1 Angler Surveys

The 2005 angler surveys in the Rock Creek - Cresta Project were completed according to the same methodologies that the California Department of Fish and Game used for creel surveys during the 1981-1986 Fisheries Management Study (California Department of Fish and Game 1988).

Surveys were conducted throughout the 2005 trout season from April 30th through November 15th (Appendix D). In each full month (May through October), survey efforts included four weekend days and four to five weekdays (non-holidays). All holidays throughout the season were surveyed. In April, only one day (a weekend day) was surveyed, due to the first day of the season, April 30th, falling on a Saturday 9t (the next day, Sunday, was May 1st). Opening weekend of trout season are the busiest days of the season. In November, two weekend days, one weekday (non-holiday), and one holiday were surveyed. Memorial Day (May 30th), Forth of July (July 4th), Labor Day (September 5th), Columbus Day (October 10th), Veteran's Day (November 11th), and their associated weekend days were analyzed as "holiday" days.

Whitewater (boating flow) weekends, which occurred in 2005 on one weekend per month from June through October, were excluded from this report. Angling during whitewater weekends was assessed separately in association with other recreation monitoring.

The study area was divided into four main sampling areas (Figure 1):

- Reach 1: Cresta riverine reach – Cresta Dam Powerhouse to Cresta Dam
- Reach 2: Cresta reservoir – Cresta Dam to Rock Creek Powerhouse Outlet
- Reach 3: Rock Creek riverine reach – Rock Creek Powerhouse to Rock Creek Dam
- Reach 4: Rock Creek reservoir – Rock Creek Dam to Belden Bridge

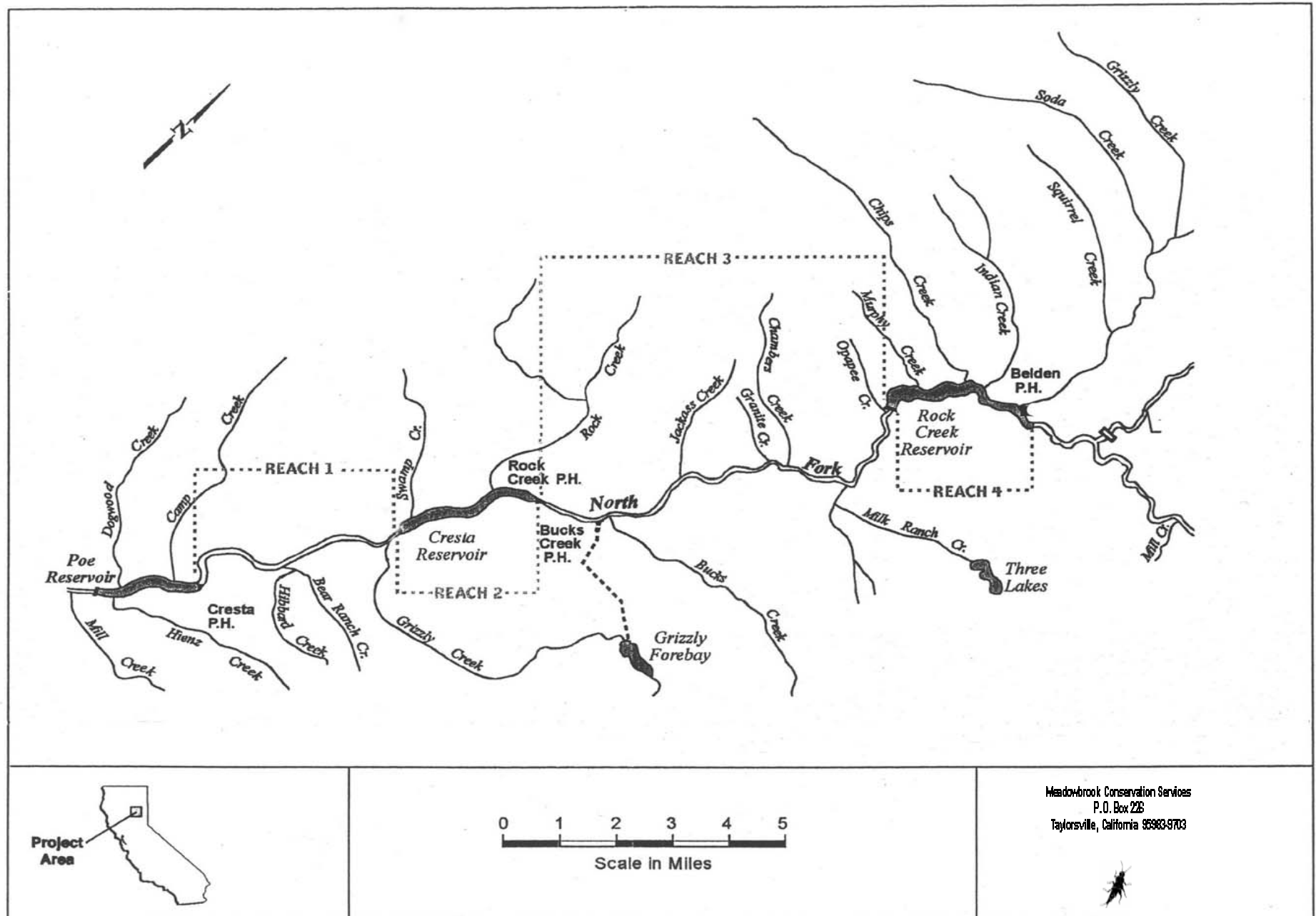


Figure 1. Survey Area for the Rock Creek-Cresta Creel Census

Survey methods consisted of instantaneous use counts (drive-by) and angler interviews using a standard data sheet (Appendix A). Use counts consisted of driving along the river reaches and reservoirs and then counting the number of anglers, vehicles, and boats. Surveyors also drove the road into the “school house” area and the “whitewater parking area” just above Tobin to look for anglers who were parked away from Highway 70.

The angling day was divided into five periods: 6:00-9:00, 9:00-12:00, 12:00-15:00, 15:00-18:00, and after 18:00. At least one instantaneous use count was conducted during each period in each reach, to estimate the number of anglers. The remaining time in each period was devoted to conducting as many angler interviews as possible.

Data collected included the number of anglers in the party, hours fished, county of residence, number of fish caught by species, estimated or measured lengths, and bait used.

2.2 Data Analysis

The total number of angler hours, total catch, and catch per unit effort were calculated for each reach, for the survey days. Separate values were generated for weekends, weekdays, and holidays, as well as for monthly periods.

Monthly and seasonal estimates of angler hours, total catch, and catch per unit effort were calculated by extrapolating information from the survey days. To obtain monthly projections, extrapolations were made by taking the averages for each day type (i.e., weekday, weekend day, holiday) and multiplying by the appropriate number of days. For example, May had 22 weekdays, 1 of which was a holiday, and 9 weekend days, 2 of which were associated with a holiday. Monthly projections then were added together to formulate an estimate for the total season.

For each survey day, daily angler use (i.e., number of anglers) was calculated by totaling the number of anglers counted in each reach during each time period (5 time periods per day). Then, the average number of anglers for each time period was calculated for weekdays, weekend days, holidays, and the total season.

3.0 RESULTS

3.1 Summary of Angler Use Counts

Meadowbrook Conservation Services observed 759 anglers during instantaneous use counts, over the 59 survey days in the 2005 fishing season. Like the previous year, fly fishing was again the most popular angling method reported, in terms of angler numbers. Anglers using flies accounted for 48% of all anglers, followed by lure anglers (34%), bait anglers (15%), and a fourth category, anglers using a combination of two or three angling methods (4%).

Almost half (49%) of all bait anglers had fished in the riverine reaches, even though bait fishing was prohibited those reaches by catch and release regulations. Many bait anglers were not aware of the prohibition.

Angler boating (e.g., boats, rafts) was seen only in reservoirs. Angler boating (e.g., kayaks) was not seen in riverine reaches.

Fishing pressure was highest on weekend days (non-holiday) with an average of 21.3 anglers in all reaches, followed by holidays (and their associated weekend days) with an average of 16.3 anglers in all reaches, and finally weekdays with an average of 5.8 anglers in all reaches (Table 1). About 2,572 anglers fished the Rock Creek and Cresta reaches during the entire fishing season (Table 2), as projected from Table 1 figures for the average number of anglers on survey days.

Table 1. Average Number of Anglers on Survey Days, by reach and time period

	Time	Reach 1	Reach 2	Reach 3	Reach 4	Cumulative	% Distribution
Weekday	6:00 - 9:00	0.06	0.03	0.16	0.00	0.3	4%
Weekday	9:00 - 12:00	0.41	0.00	0.59	0.09	1.1	19%
Weekday	12:00 - 15:00	0.66	0.16	0.41	0.06	1.3	22%
Weekday	15:00 -18:00	0.56	0.09	0.53	0.41	1.6	28%
Weekday	After 18:00	1.00	0.00	0.41	0.16	1.6	27%
	Total	2.69	0.28	2.09	0.72	5.8	100%
Weekend Day	6:00 - 9:00	0.33	0.04	0.48	0.00	0.9	4%
Weekend Day	9:00 - 12:00	1.04	0.19	2.96	0.26	4.4	21%
Weekend Day	12:00 - 15:00	1.78	0.30	3.22	0.74	6.0	28%
Weekend Day	15:00 -18:00	1.30	0.41	3.48	0.56	5.7	27%
Weekend Day	After 18:00	1.07	0.30	2.26	0.56	4.2	20%
	Total	5.52	1.22	12.41	2.11	21.3	100%
Holiday	6:00 - 9:00	0.25	0.17	0.17	0.00	0.6	4%
Holiday	9:00 - 12:00	0.42	0.25	1.92	0.25	2.8	17%
Holiday	12:00 - 15:00	2.75	0.58	2.17	0.58	6.1	37%
Holiday	15:00 -18:00	0.33	0.17	2.42	0.33	3.3	20%
Holiday	After 18:00	1.50	0.25	1.50	0.33	3.6	22%
	Total	5.25	1.42	8.17	1.50	16.3	100%
2005 Season	6:00 - 9:00	0.19	0.03	0.31	0.00	0.5	4%
2005 Season	9:00 - 12:00	0.69	0.08	1.68	0.17	2.6	20%
2005 Season	12:00 - 15:00	1.17	0.22	1.69	0.37	3.5	27%
2005 Season	15:00 -18:00	0.90	0.24	1.88	0.47	3.5	27%
2005 Season	After 18:00	1.03	0.14	1.25	0.34	2.8	21%
	Total	3.98	0.71	6.81	1.36	12.9	100%

Note: These are approximate values, since some anglers were counted in multiple time periods.

Table 2. Total Number of Anglers for the Entire Fishing Season (Projected), by reach and time period

	Time	Reach 1	Reach 2	Reach 3	Reach 4	Cumulative	% Distribution
Weekday	6:00 - 9:00	8.88	4.44	22.19	0.00	35.5	4%
Weekday	9:00 - 12:00	57.69	0.00	84.31	13.31	155.3	19%
Weekday	12:00 - 15:00	93.19	22.19	57.69	8.88	181.9	22%
Weekday	15:00 -18:00	79.88	13.31	75.44	57.69	226.3	28%
Weekday	After 18:00	142.00	0.00	57.69	22.19	221.9	27%
	Total	381.63	39.94	297.31	102.06	820.9	100%
Weekend Day	6:00 - 9:00	19.33	2.15	27.93	0.00	49.4	4%
Weekend Day	9:00 - 12:00	60.15	10.74	171.85	15.04	257.8	21%
Weekend Day	12:00 - 15:00	103.11	17.19	186.89	42.96	350.1	28%
Weekend Day	15:00 -18:00	75.19	23.63	201.93	32.22	333.0	27%
Weekend Day	After 18:00	62.30	17.19	131.04	32.22	242.7	20%
	Total	320.07	70.89	719.63	122.44	1233.0	100%
Holiday	6:00 - 9:00	1.25	0.83	0.83	0.00	2.9	4%
Holiday	9:00 - 12:00	2.08	1.25	9.58	1.25	14.2	17%
Holiday	12:00 - 15:00	13.75	2.92	10.83	2.92	30.4	37%
Holiday	15:00 -18:00	1.67	0.83	12.08	1.67	16.3	20%
Holiday	After 18:00	7.50	1.25	7.50	1.67	17.9	22%
	Total	26.25	7.08	40.83	7.50	81.7	100%
2005 Season	6:00 - 9:00	37.29	6.78	61.02	0.00	105.1	4%
2005 Season	9:00 - 12:00	138.98	16.95	335.59	33.90	525.4	20%
2005 Season	12:00 - 15:00	233.90	44.07	338.98	74.58	691.5	27%
2005 Season	15:00 -18:00	179.66	47.46	376.27	94.92	698.3	27%
2005 Season	After 18:00	206.78	27.12	250.85	67.80	552.5	21%
	Total	796.61	142.37	1362.71	271.19	2572.9	100%

Note: These are approximate values, since some anglers were counted in multiple time periods.

3.2 Angler Interviews

3.2.1 Angler Methods, Locations, and Hours

During the 2005 fishing season, Meadowbrook Conservation Services interviewed 727 out of the 759 anglers (96%) that were observed during instantaneous use counts. Of those interviewed, 48% were fishing with flies, 34% with lures, 15% with bait, and 4% with a combination of two or three angling methods (e.g., flies and lures, flies and bait, or lures and bait).

Of the anglers that were interviewed, 44% were fishing in the Rock Creek riverine reach (Reach 3), 39% were fishing in the Cresta riverine reach (Reach 1), 11% were fishing in the Rock Creek reservoir (Reach 4), and 5% were fishing in the Cresta reservoir (Reach 2) (Table 3). Almost half (49%) of those fishing with bait were in the riverine reaches (n=52), even though bait fishing was prohibited those reaches.

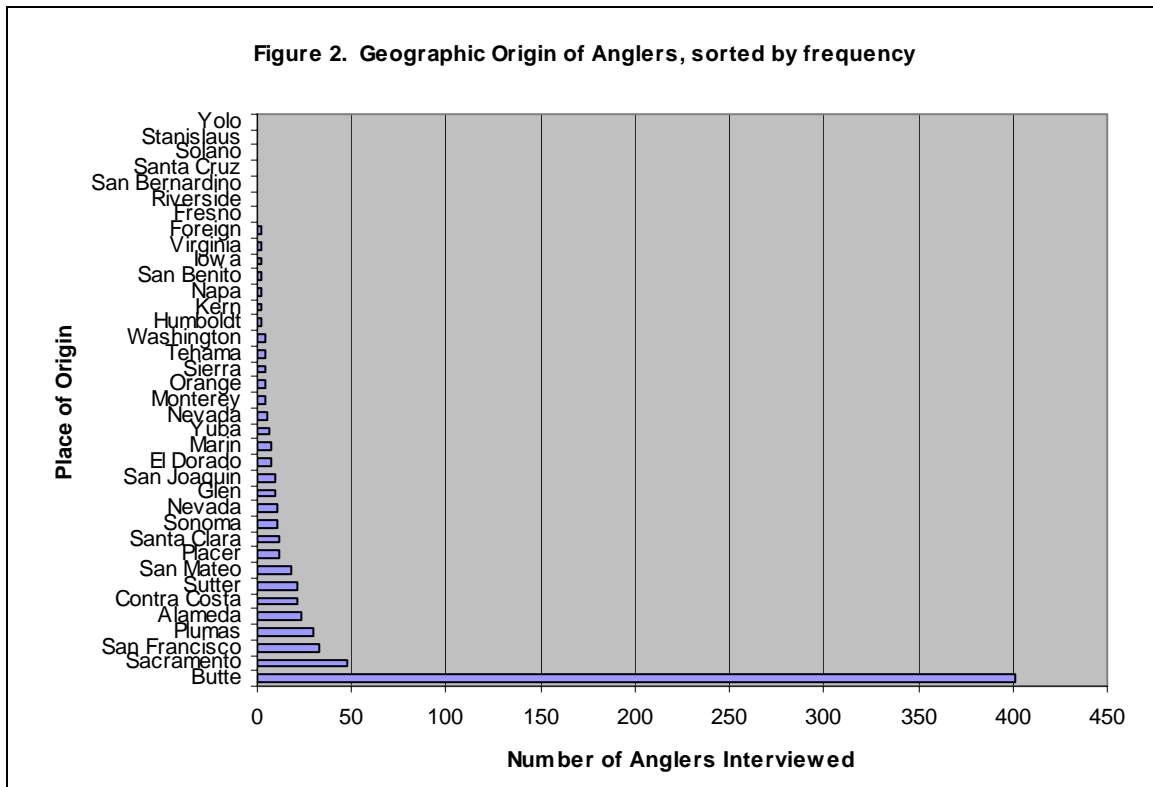
Table 3. Anglers Interviewed and Angler Hours Reported, by angling method and reach

	Number of Anglers Interviewed						Number of Angler Hours Reported					
	Bait	Lure	Fly	Combo	Total	% by Reach	Bait	Lure	Fly	Combo	Total	% by Reach
Reach 1	27	86	162	11	286	39%	24	93	258	11	386	33%
Reach 2	14	20		5	39	5%	37	20		8	64	5%
Reach 3	25	105	183	6	319	44%	40	133	415	23	611	52%
Reach 4	44	33	2	4	83	11%	43	52	1	20	116	10%
Totals	110	244	347	26	727	100%	144	297	674	62	1176	100%
% by Method	15%	34%	48%	4%		100%	12%	25%	57%	5%		100%

The 727 anglers said that they had fished for 1,176 hours. Slightly more than half of the fishing hours (52%) was spent in the Rock Creek riverine reach (Reach 3), with 33% of fishing hours spent in the Cresta riverine reach (Reach 1), 10% of fishing hours spent in the Rock Creek reservoir (Reach 4), and 5% of fishing hours spent in the Cresta reservoir (Reach 2).

3.2.2 Geographic Origin of Anglers

The vast majority of anglers, 401 of 727 interviewed (55%), were from Butte County (Figure 2). The other most highly represented counties were Sacramento County (7% of interviewed anglers), San Francisco County (5% of interviewed anglers), and Plumas County (4% of interviewed anglers). Anglers from four states other than California were interviewed, though they accounted for only about 2% of anglers. Out-of-state anglers were from Nevada, Washington, Iowa, and Virginia. Two anglers were from another country.



3.2.3 Composition of Catch and Length Distributions

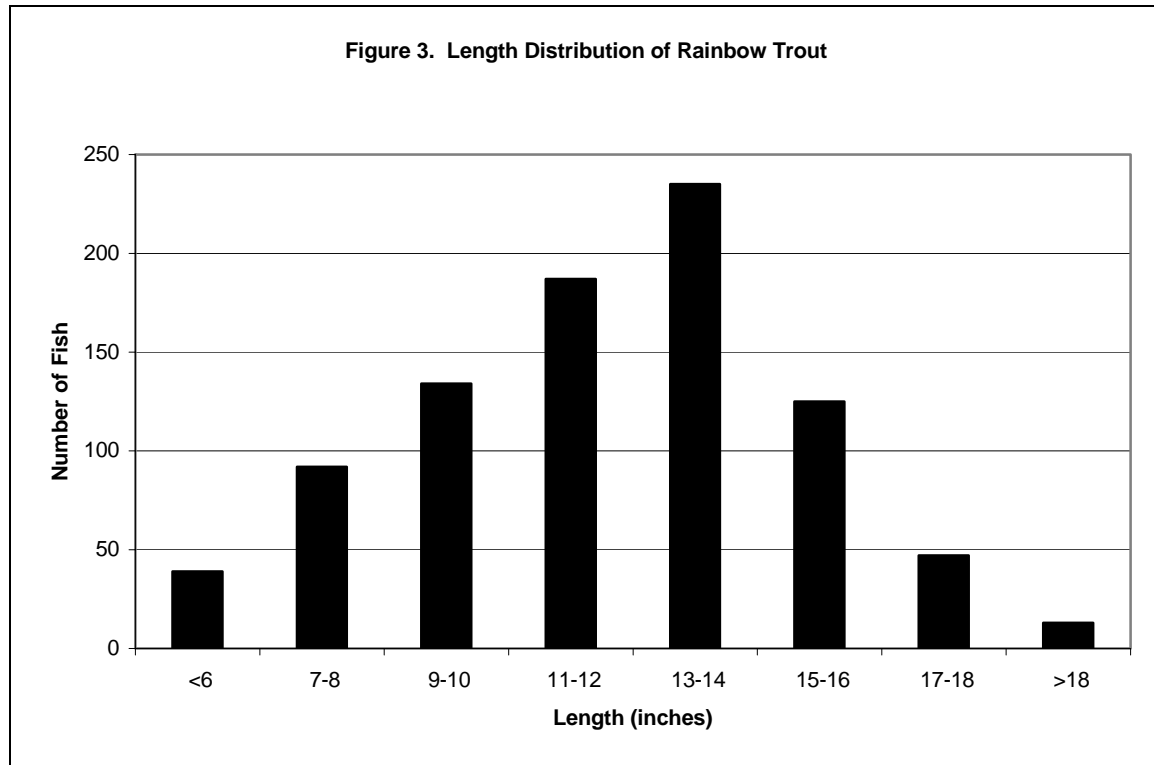
The 727 anglers reported catching 1,182 fish (Table 4). Of these 1,182 fish, there were 878 trout (872 rainbow trout and 6 brown trout) and 304 non-trout fish (194 Sacramento pikeminnow, 81 smallmouth bass, 21 hardhead, and 8 Sacramento sucker).

Table 4. Rainbow Trout Catch and Total Catch for All Fish, by angling method and reach

	Rainbow Trout Catch						Total Catch for All Fish					
	Bait	Lure	Fly	Combo	Total	% by Reach	Bait	Lure	Fly	Combo	Total	% by Reach
Reach 1	3	32	269	2	306	42%	9	81	293	3	386	33%
Reach 2	1	0	0	2	3	6%	16	19	0	18	53	5%
Reach 3	11	83	440	24	558	41%	25	148	509	33	715	52%
Reach 4	4	0	1	0	5	11%	11	14	1	2	28	10%
Totals	19	115	710	28	872	100%	61	262	803	56	1182	100%
% by Method	2%	13%	81%	3%		100%	5%	22%	68%	5%		100%

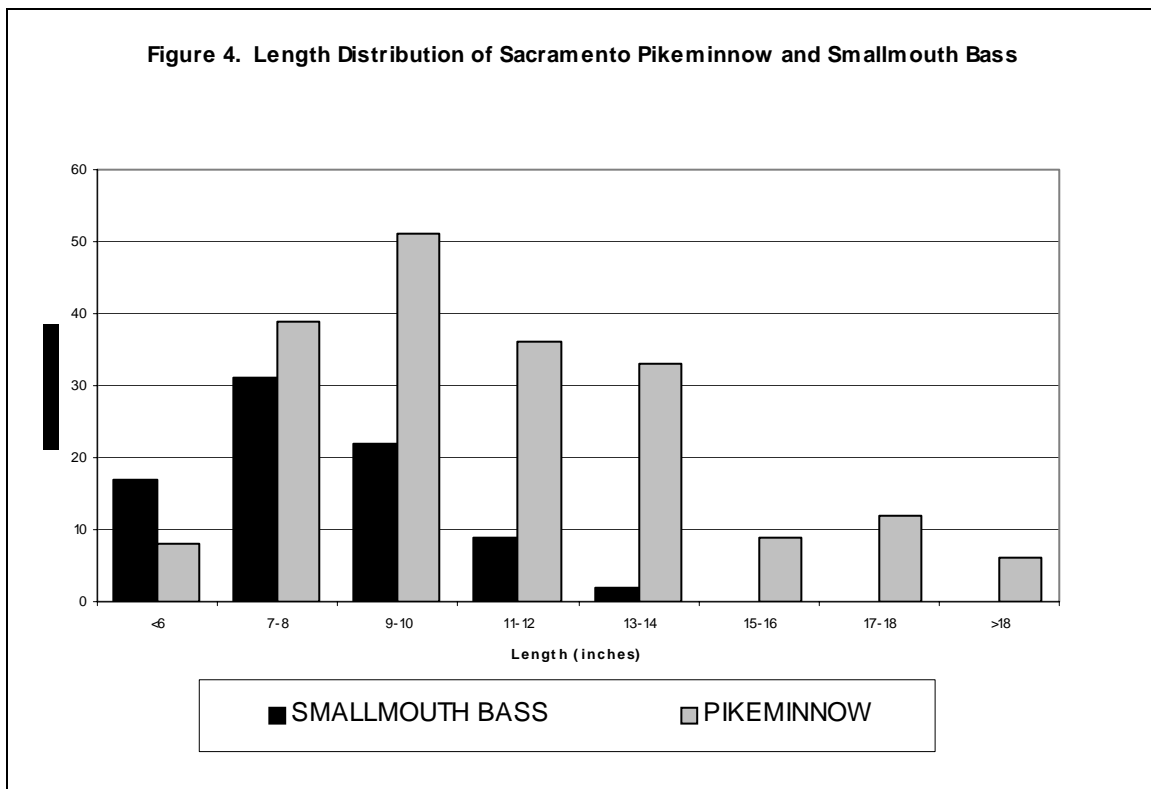
Anglers reported catching rainbow trout in all four reaches, including 558 in the Rock Creek riverine reach (Reach 3), 306 in the Cresta riverine reach (Reach 1), 5 in the Rock Creek reservoir (Reach 4), and 3 in the Cresta reservoir (Reach 2) (Table 4). About 81% of rainbow trout were caught by anglers using flies, 13% were caught by anglers using lures, 3% were caught by anglers using a combination of methods, and 2% were caught by anglers using bait.

Sixty rainbow trout were reported to be 17 inches or more in length. Rainbow trout ranged from 4 to 20 inches long and had an average length of 12.4 inches. The most represented size classes were the 11 to 14 inch ranges (Figure 3).



Brown trout were caught in all reaches except for Cresta reservoir—3 were caught in the Rock Creek riverine reach, 2 were caught in the Cresta riverine reach, and 1 was caught in the Rock Creek reservoir. The 6 brown trout ranged from 5 to 14 inches long, with an average of 9 inches.

One hundred and ninety-four (194) Sacramento pikeminnow, 81 smallmouth bass, 21 hardhead, and 8 Sacramento sucker also were reported caught. Of the 194 Sacramento pikeminnow reported caught, about 55% were in the Rock Creek riverine reach, 22% in the Cresta riverine reach, 38% in the Cresta reservoir, and 4% in the Rock Creek reservoir. Of the 81 smallmouth bass reported caught, about 36% were in the Cresta riverine reach, 33% in the Rock Creek riverine reach, 16% in the Cresta reservoir, and 15% in the Rock Creek reservoir. Of the 21 hardhead reported caught, about 81% were in the Rock Creek riverine reach, 14% in the Cresta riverine reach, 5% in the Rock Creek reservoir, and 0% in the Cresta reservoir. Of the 8 Sacramento suckers reported caught, 5 fish were in the Rock Creek riverine reach, 2 fish were in the Cresta riverine reach, 1 fish was in the Rock Creek reservoir, and 0 fish were in the Cresta reservoir. The most represented size classes for Sacramento pikeminnow were the 7 to 14 inch ranges, and the most represented size classes for smallmouth bass were the 7 to 10 inch size classes (Figure 4).



The Settlement Agreement identified a target of 80% wild trout/ 20% non-game fish in the catch. This target was nearly met, or was met, depending on how the figures are calculated. If smallmouth bass (a non-native species) was included in the total catch, then rainbow trout comprised 74% of the total catch, just short of the target criteria. However, the Settlement Agreement did not take smallmouth bass (another game fish) into account. Smallmouth bass comprised 7% of the total catch. If smallmouth bass were removed from the total catch, and if rainbow and brown trout were combined, then all trout comprised 80% of the total catch. (Brown trout contributed about 1% to the trout figure.)

The Settlement Agreement also established the following as targets: (1) an average size of 9.7 inches fork length for wild trout, and (2) availability of rainbow trout > 17 inches. Both of these targets were met. In 2005, rainbow trout had an average length of 12.3 inches. In addition, 60 of the rainbow trout reported caught were 17 inches or longer.

A monthly breakdown of creel data is presented in Appendix C.

3.2.4 Catch Per Unit Effort

Catch per unit effort (CPUE) was calculated for rainbow trout and all fish, by angling method and reach (Table 5), based on information provided by the 727 anglers interviewed. The data were limited to what those anglers had caught at the time of the interview and did not include any fish caught after the interview. Therefore, the values may not accurately reflect the total catch of each angler. In many cases, surveyors encountered anglers as they were just starting. At the time of the interviews, anglers had fished for an average of 1.62 hours.

Table 5. Catch Per Unit Effort (CPUE) for Rainbow Trout and All Fish, by angling method and reach

	CPUE -- Rainbow Trout					CPUE -- All Fish				
	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total
Reach 1	0.12	0.34	1.04	0.18	0.79	0.37	0.87	1.14	0.27	1.00
Reach 2	0.03	0.00	--	0.26	0.05	0.44	0.97	--	2.32	0.83
Reach 3	0.28	0.63	1.06	1.04	0.91	0.63	1.12	1.23	1.43	1.17
Reach 4	0.09	0.00	1.00	0.00	0.04	0.25	0.27	1.00	0.10	0.24
Average CPUE	0.13	0.39	1.05	0.45	0.74	0.42	0.88	1.19	0.91	1.01

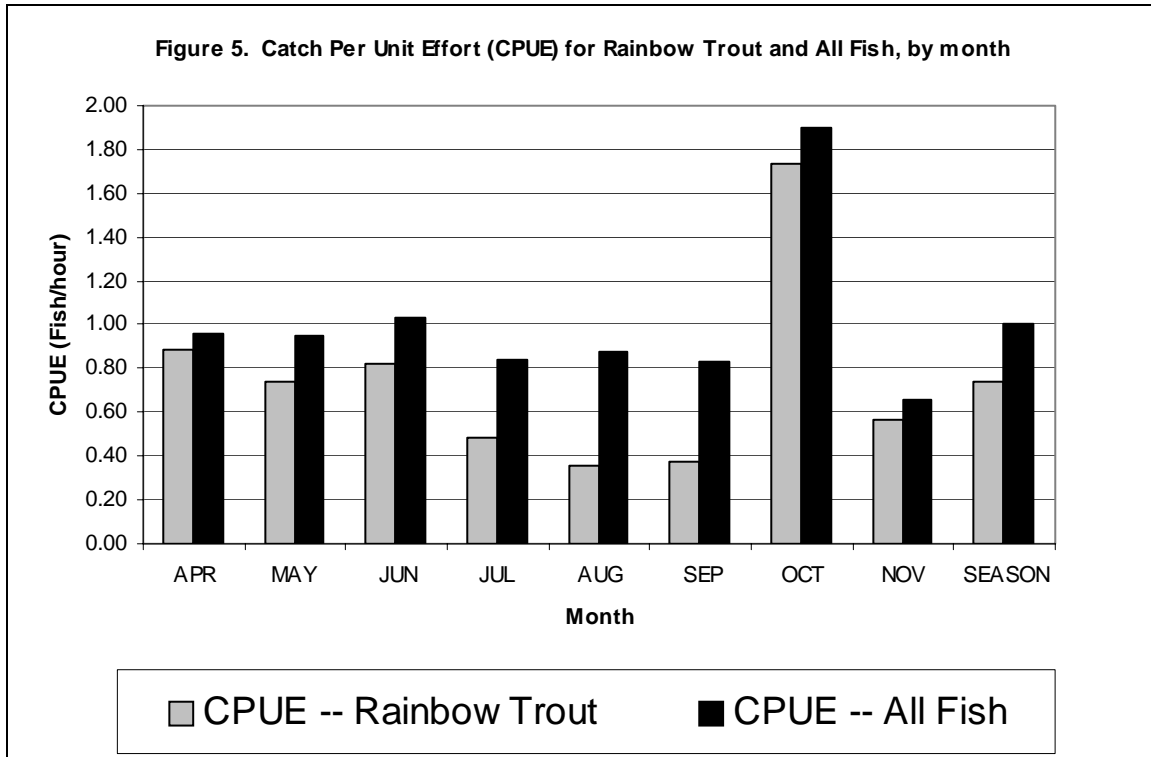
Note: A "0" means hours were spent fishing, but no fish were caught.

A "--" means no fish were caught using that particular angling method.

For all fish combined, the Rock Creek riverine reach (Reach 3) had a higher CPUE at 1.17 fish per hour than in the Cresta riverine reach (Reach 1) at 1.00 fish per hour. CPUE was much lower in Rock Creek reservoir (Reach 4) at 0.24 fish per hour than in Cresta reservoir (Reach 2) at 0.83 fish per hour, but both reservoirs had a lower CPUE than did the riverine reaches.

For all fish and for rainbow trout, bait was the least effective angling method, while fly fishing was the most successful, in terms of CPUE.

October had the highest CPUE for rainbow trout (Figure 5). April, May, and June were other good months for rainbow trout, while July, August, September, and November were the least productive months for rainbow trout anglers. August had the lowest CPUE.



The Settlement Agreement set a catch rate target of one fish per hour. In 2005, the CPUE was 1.01 fish per hour for all fish and 0.74 fish per hour for rainbow trout.

Though CPUE was met for all fish when averaged across the season (1.01 fish per hour), the CPUE was not met in all months individually. On a monthly basis, CPUE of one fish per hour for all fish combined was met in June and October, but not in April, May, July, August, September, and November. The CPUE was lowest in November (0.66 fish per hour).

For rainbow trout only, CPUE was greater than one trout per hour only in October (1.73 fish per hour). The CPUE was lowest in August (0.35 fish per hour).

4.0 DISCUSSION

4.1 Angler Success

Angler use appeared to be up from the previous year, with 759 anglers observed in 2005 (compared to 605 anglers observed in 2004), over 59 days (compared to 60 days in 2004). Therefore, there was an average of 12.9 anglers per day in 2005. Extrapolated for the season, the angling use data suggested that about 2,572 anglers fished the Rock Creek and Cresta reaches during the fishing season (Table 6). Almost half of these anglers (47%) fished the Rock Creek and Cresta reaches in April through June. About 32% of anglers fished between July through September, and about 9% of anglers fished after October.

Table 6. Comparison Between 2002, 2004, and 2005

	Year		
	2002	2004	2005
Total Number of Anglers Observed	507	605	759
Average Number of Anglers Per Day	8.6	10.1	12.9
Total Number of Anglers Interviewed	494	528	727
Projected Total Anglers for the Season	1,258	2,091	2,572

The 2005 survey, based on the format of the 2002 Angler Creel Survey report by Garcia and Associates, and the 2004 Angler Creel Survey report by Meadowbrook Conservation Services, these surveys follow a similar methodology that was utilized by the California Department of Fish and Game during the 1981-1986 Fisheries Management Study (California Department of Fish and Game 1988). Therefore, the 2005 is similar to the 2002 and 2004 surveys in that the study design underestimates the total number of hours fished and the total catch, since anglers rarely were interviewed as they were leaving the river. It may be valuable to add a question to future surveys that asks anglers if they are through fishing for the day. This question was included in the surveys conducted during the 1980-1986 California Department of Fish and Game studies.

Although aesthetics may play a part in the apparently low angler use, it may also be due to high summertime temperatures. While conducting angler surveys in 2005, it became obvious that as summertime temperatures increased, angling and angling success declined. Figure 5 suggests that all fish, especially rainbow trout, may become less active and therefore less susceptible to anglers as air and water temperature rise, typically in the summer months of July through early September.

In addition, many reaches in the study area were not angler friendly due to difficult access along the rivers edge because of large boulders, steep banks, deep water, and

dense vegetation. Difficult or dangerous parking along Highway 70 also was a problem.

Conducting angler surveys in the study area was not an easy task as Highway 70 parallels the entire study area. Highway 70 is one of the main routes between the Sacramento Valley and the Northern Sierra Nevadas. During use counts, it appeared that many anglers were fishing their way up the river while traveling to another destination point other than the Rock Creek and Cresta reaches of the North Fork Feather River. The same was true for returning traffic, especially on weekends.

Anglers, vehicles, and boats were noted during drive-by counts. When conducting follow-up interviews connected with the same use counts, many anglers or vehicles noted previously were never relocated. There were many areas along the study reaches where it was difficult to see the angler during use counts because streamside vegetation had become very dense and because many areas had large boulders that concealed anglers. It was easier to count vehicles because there were very few parking spots that could not be observed from the highway.

Angler use was highest between 12:00 noon and 6:00 p.m. on weekend days, probably because the majority of anglers were from Butte County. It is a relatively short distance from Chico or Oroville to the North Fork Feather River, for two to three hours of fishing in the late afternoon and evening. Sunday is often a travel day for “weekenders” fishing the North Fork Feather River as they fish their way upriver or downriver toward their points of destination.

Weekday angler use indicated a different pattern with more use occurring later in the day, from 3:00 p.m. till after 6:00 p.m. Holiday angler use was heaviest in mid-afternoon, from 12:00 noon to 3:00 p.m. As fall approached in October, air and water temperatures cooled and the fishing improved. Even though relatively few anglers utilized the river this past fall, those that did fish were successful, especially in October. This pattern of higher success and an increase in use in the fall is consistent for many rivers and streams in California.

Rainbow trout, the primary species caught in the Rock Creek and Cresta riverine reaches, were caught at an overall rate of 0.85 fish per hour (all angling methods combined) for those reaches. For fly anglers, rainbow trout were caught at an even higher rate of 1.05 fish per hour in riverine reaches. Trout fishing was best in October (1.8 fish per hour in riverine reaches).

5.0 CONCLUSIONS

Overall, the average and experienced anglers seemed to be satisfied. Fly fishing was the most effective angling method. Angling pressure was higher than last year, at an average of 12.9 anglers per day in 2005 (as opposed to 8.8 anglers per day in 2004). The greatest number of anglers fished in May and June, the lowest number of anglers fished in April, October, and November, and an intermediate number of anglers fish in the summer (July, August, and September).

The trout caught were of quality size and condition. The overall CPUE (1.01 fish per hour, for all fish combined) met the target of one fish per hour, with CPUE for rainbow trout (at 0.74 fish per hour) approaching the target. In addition, the monthly catch rates were often close to or above the one fish per hour target for all fish combined.

The following bullets summarize the most significant findings from the 2005 survey:

- Angler use was highest on weekend days (non-holidays), followed by holidays (and their associated weekend days) and finally weekdays.
- The greatest number of anglers fished in May and June, the lowest number of anglers fished in April, October, and November, and an intermediate number of anglers fish in the summer (July, August, and September).
- Trout comprised 80% of the total catch when smallmouth bass were removed from the total catch, and rainbow and brown trout were combined. (Brown trout contributed about 1% to the trout figure.) Rainbow trout comprised 74% of the total catch when smallmouth bass was included in the total catch.
- The average rainbow trout was 12.3 inches long.
- Sixty (60) trout measuring greater than 17 inches were reported caught.
- The CPUE was 0.74 fish per hour for rainbow trout and 1.01 fish per hour for all fish combined.

Literature Cited

California Department of Fish and Game. 1988. Rock Creek-Cresta Project (FERC 1962), Fisheries Management Study, North Fork Feather River, California. Prepared by California Department of Fish and Game's Region 2 Environmental Services.

Pacific Gas and Electric Company. 2000. Rock Creek – Cresta Relicensing Settlement Agreement. Rock Creek – Cresta Project, FERC Project No. 1962. Filed with FERC on September 29, 2000 and Approved as part on the New License on October 24, 2001.

Garcia and Associates. 2002 Angler Creel Survey Rock Creek – Cresta Project (FERC Project No. 1962) North Fork Feather River Report—Butte and Plumas Counties. Prepared for Pacific Gas and Electric Company, Technical and Ecological Services, 3400 Crow Canyon Road, San Ramon, California 94583.

APPENDIX A: Survey Form

Angier Creel Census Survey Form

North Fork Feather River Rock Creek-Cresta Project

[illegible]

Section:

1. Cresta - Cresta Powerhouse to Cresta Dam
2. Cresta Reservoir
3. Rock Creek - Rock Creek Powerhouse to Rock Creek Dam
4. Rock Creek Reservoir

Fish Species:

BN	=	Brown Trout
RT	=	Rainbow Trout
SMB	=	Smallmouth Bass
SPB/LMB	=	Largemouth/Spotted Bass
PM	=	Pikeminnow
HH	=	Hardhead Minnow

Method:

F = Fly
L = Lure
B = Bait

Others:

UK = Unknown
NF = Not Fishing
V = Vehicle
A = Angler
B = Boat

Page ____ of ____

**APPENDIX B: Projections of Angler Use for the Entire Fishing
Season, by Month**

Projections of Angler Use for the Entire Fishing Season, by Month

Month	Time	Reach 1	Reach 2	Reach 3	Reach 4	Cumulative
April	6:00 - 9:00	4.0	0.0	2.0	0.0	6.0
April	9:00 - 12:00	2.0	0.0	28.0	0.0	30.0
April	12:00 - 15:00	9.0	0.0	29.0	0.0	38.0
April	15:00 -18:00	13.0	0.0	30.0	2.0	45.0
April	After 18:00	2.0	0.0	15.0	0.0	17.0
	Total	30.0	0.0	104.0	2.0	136.0
	Time	Reach 1	Reach 2	Reach 3	Reach 4	Cumulative
May	6:00 - 9:00	3.4	0.0	3.4	0.0	6.9
May	9:00 - 12:00	17.2	10.3	55.1	6.9	89.6
May	12:00 - 15:00	65.4	13.8	75.8	0.0	155.0
May	15:00 -18:00	48.2	6.9	48.2	3.4	106.8
May	After 18:00	48.2	6.9	37.9	17.2	110.2
	Total	182.6	37.9	220.4	27.6	468.4
	Time	Reach 1	Reach 2	Reach 3	Reach 4	Cumulative
June	6:00 - 9:00	6.7	0.0	10.0	0.0	16.7
June	9:00 - 12:00	30.0	0.0	73.3	6.7	110.0
June	12:00 - 15:00	20.0	6.7	83.3	30.0	140.0
June	15:00 -18:00	46.7	13.3	100.0	13.3	173.3
June	After 18:00	40.0	3.3	106.7	16.7	166.7
	Total	143.3	23.3	373.3	66.7	606.7
	Time	Reach 1	Reach 2	Reach 3	Reach 4	Cumulative
July	6:00 - 9:00	3.4	0.0	0.0	0.0	3.4
July	9:00 - 12:00	37.9	0.0	10.3	6.9	55.1
July	12:00 - 15:00	72.3	0.0	20.7	13.8	106.8
July	15:00 -18:00	6.9	0.0	24.1	6.9	37.9
July	After 18:00	51.7	0.0	6.9	3.4	62.0
	Total	172.2	0.0	62.0	31.0	265.2
	Time	Reach 1	Reach 2	Reach 3	Reach 4	Cumulative
August	6:00 - 9:00	6.9	0.0	27.6	0.0	34.4
August	9:00 - 12:00	20.7	0.0	27.6	6.9	55.1
August	12:00 - 15:00	10.3	0.0	10.3	17.2	37.9
August	15:00 -18:00	17.2	17.2	13.8	37.9	86.1
August	After 18:00	41.3	6.9	10.3	3.4	62.0
	Total	96.4	24.1	89.6	65.4	275.6

Projections of Angler Use for the Entire Fishing Season, by Month

	Time	Reach 1	Reach 2	Reach 3	Reach 4	Cumulative
September	6:00 - 9:00	3.3	6.7	13.3	0.0	23.3
September	9:00 - 12:00	10.0	6.7	30.0	6.7	53.3
September	12:00 - 15:00	16.7	20.0	13.3	13.3	63.3
September	15:00 -18:00	13.3	10.0	30.0	23.3	76.7
September	After 18:00	10.0	10.0	23.3	16.7	60.0
	Total	53.3	53.3	110.0	60.0	276.7

	Time	Reach 1	Reach 2	Reach 3	Reach 4	Cumulative
October	6:00 - 9:00	0.0	0.0	0.0	0.0	0.0
October	9:00 - 12:00	17.2	0.0	24.1	0.0	41.3
October	12:00 - 15:00	17.2	3.4	20.7	0.0	41.3
October	15:00 -18:00	3.4	0.0	37.9	3.4	44.8
October	After 18:00	6.9	0.0	6.9	10.3	24.1
	Total	44.8	3.4	89.6	13.8	151.6

	Time	Reach 1	Reach 2	Reach 3	Reach 4	Cumulative
November	6:00 - 9:00	0.0	0.0	0.0	0.0	0.0
November	9:00 - 12:00	0.0	0.0	22.5	0.0	22.5
November	12:00 - 15:00	3.8	0.0	18.8	0.0	22.5
November	15:00 -18:00	0.0	0.0	22.5	0.0	22.5
November	After 18:00	3.8	0.0	7.5	0.0	11.3
	Total	7.5	0.0	71.3	0.0	78.8

	Time	Reach 1	Reach 2	Reach 3	Reach 4	Cumulative
2005 Season	6:00 - 9:00	37.3	6.8	61.0	0.0	105.1
2005 Season	9:00 - 12:00	139.0	16.9	335.6	33.9	525.4
2005 Season	12:00 - 15:00	233.9	44.1	339.0	74.6	691.5
2005 Season	15:00 -18:00	179.7	47.5	376.3	94.9	698.3
2005 Season	After 18:00	206.8	27.1	250.8	67.8	552.5
	Total	796.6	142.4	1362.7	271.2	2572.9

APPENDIX C: Monthly Breakdown of Creel Data

	Number of Anglers					Number of Angler Hours					Rainbow Trout Catch					Total Catch -- All Fish					CPUE -- Rainbow Trout					CPUE -- All Fish				
APRIL	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total
Reach 1	5	7	17	0	29	7.5	12.5	36.3	0.0	56.3	1	0	68	0	69	7	3	68	0	78	0.13	0.00	1.88	--	1.23	0.93	0.24	1.88	--	1.39
Reach 2	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--
Reach 3	0	4	20	1	25	0.0	5.5	63.8	3.0	72.3	0	3	34	8	45	0	3	35	8	46	--	0.55	0.53	2.67	0.62	--	0.55	0.55	2.67	0.64
Reach 4	5	0	1	0	6	4.3	0.0	0.8	0.0	5.0	3	0	1	0	4	3	0	1	0	4	0.71	--	1.33	--	0.80	0.71	--	1.33	--	0.80
	60.0					133.5																								
MAY	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total
Reach 1	10	16	28	0	54	11.0	7.8	58.8	0.0	77.5	1	1	35	0	37	1	4	41	0	46	0.09	0.13	0.60	--	0.48	0.09	0.52	0.70	--	0.59
Reach 2	5	0	0	2	7	11.0	0.0	0.0	4.0	15.0	0	0	0	2	2	4	0	0	15	19	0.00	--	--	0.50	0.13	0.36	--	--	3.75	1.27
Reach 3	4	10	26	1	41	3.0	12.8	64.3	2.5	82.5	0	37	61	0	98	1	37	68	3	109	0.00	2.90	0.95	0.00	1.19	0.33	2.90	1.06	1.20	1.32
Reach 4	5	4	0	0	9	8.0	2.0	0.0	0.0	10.0	0	0	0	0	0	1	0	0	0	1	0.00	0.00	--	--	0.00	0.13	0.00	--	--	0.10
	111.0					185.0																								
JUNE	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total
Reach 1	0	5	40	1	46	0.0	8.3	69.3	0.2	77.8	0	3	54	0	57	0	10	60	1	71	--	0.36	0.78	0.00	0.73	--	1.21	0.87	4.00	0.91
Reach 2	4	1	0	0	5	15.5	1.0	0.0	0.0	16.5	1	0	0	0	1	11	0	0	0	11	0.06	0.00	--	--	0.06	0.71	0.00	--	--	0.67
Reach 3	6	17	40	3	66	7.3	22.5	124.0	13.3	167.0	7	14	152	12	185	7	25	170	18	220	0.97	0.62	1.23	0.91	1.11	0.97	1.11	1.37	1.36	1.32
Reach 4	9	3	1	3	16	12.8	6.8	0.2	15.5	35.3	1	0	0	0	1	3	0	0	1	4	0.08	0.00	0.00	0.00	0.03	0.24	0.00	0.00	0.06	0.11
	133.0					296.5																								
JULY	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total
Reach 1	7	16	22	5	50	2.7	19.8	24.5	7.0	54.0	1	4	20	1	26	1	20	20	1	42	0.38	0.20	0.82	0.14	0.48	0.38	1.01	0.82	0.14	0.78
Reach 2	0	0	0	3	3	0.0	0.0	0.0	3.8	3.8	0	0	0	0	0	0	0	0	3	3	--	--	--	0.00	0.00	--	--	--	0.80	0.80
Reach 3	2	14	18	0	34	11.0	15.3	24.5	0.0	50.8	0	8	34	0	42	0	20	37	0	57	0.00	0.52	1.39	--	0.83	0.00	1.31	1.51	--	1.12
Reach 4	4	11	0	1	16	3.0	25.0	0.0	4.5	32.5	0	0	0	0	0	3	12	0	1	16	0.00	0.00	--	0.00	0.00	1.00	0.48	--	0.22	0.49
	103.0					141.0																								
AUGUST	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total
Reach 1	1	21	17	5	44	0.8	27.2	19.3	3.8	50.9	0	6	7	1	14	0	19	10	1	30	0.00	0.22	0.36	0.27	0.27	0.00	0.70	0.52	0.27	0.59
Reach 2	0	11	0	0	11	0.0	10.5	0.0	0.0	10.5	0	0	0	0	0	0	12	0	0	12	--	0.00	--	--	0.00	--	1.14	--	--	1.14
Reach 3	2	17	26	0	45	6.0	20.1	34.8	0.0	60.8	0	6	28	0	34	7	19	49	0	75	0.00	0.30	0.81	--	0.56	1.17	0.95	1.41	--	1.23
Reach 4	12	4	0	0	16	10.3	2.8	0.0	0.0	13.0	0	0	0	0	0	1	0	0	0	1	0.00	0.00	--	--	0.00	0.10	0.00	--	--	0.08
	116.0					135.3																								

	Number of Anglers					Number of Angler Hours					Rainbow Trout Catch					Total Catch -- All Fish					CPUE -- Rainbow Trout					CPUE -- All Fish				
SEPTEMBER	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total
Reach 1	1	14	15	0	30	0.2	12.8	15.6	0.0	28.7	0	10	13	0	23	0	15	19	0	34	0.00	0.78	0.83	--	0.80	0.00	1.17	1.22	--	1.19
Reach 2	5	8	0	0	13	10.0	8.0	0.0	0.0	18.0	0	0	0	0	0	1	7	0	0	8	0.00	0.00	--	--	0.00	0.10	0.88	--	--	0.44
Reach 3	7	30	10	0	47	8.8	42.1	10.3	0.0	61.1	2	8	14	0	24	5	37	19	0	61	0.23	0.19	1.37	--	0.39	0.57	0.88	1.85	--	1.00
Reach 4	7	9	0	0	16	4.5	14.5	0.0	0.0	19.0	0	0	0	0	0	0	2	0	0	2	0.00	0.00	--	--	0.00	0.00	0.14	--	--	0.11
	106.0					126.8																								
OCTOBER	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total
Reach 1	2	5	21	0	28	1.8	3.6	31.5	0.0	36.8	0	8	69	0	77	0	10	71	0	81	0.00	2.23	2.19	--	2.09	0.00	2.79	2.25	--	2.20
Reach 2	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--
Reach 3	4	11	34	0	49	3.8	9.5	52.3	0.0	65.5	2	6	94	0	102	5	6	104	0	115	0.53	0.63	1.80	--	1.56	1.33	0.63	1.99	--	1.76
Reach 4	2	2	0	0	4	0.5	0.5	0.0	0.0	1.0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	--	--	0.00	0.00	0.00	--	--	0.00
	81.0					103.3																								
NOVEMBER	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total
Reach 1	1	2	2		5	0.3	1.0	2.5	0.0	3.8	0	0	3	0	3	0	0	4	0	4	0.00	0.00	1.20	--	0.80	0.00	0.00	1.60	--	1.07
Reach 2	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--
Reach 3	0	2	9	1	12	0.0	5.0	41.5	4.3	50.8	0	1	23	4	28	0	1	27	4	32	--	0.20	0.55	0.94	0.55	--	0.20	0.65	0.94	0.63
Reach 4	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--
	17.0					54.5																								
ALL MONTHS	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total	Bait	Lure	Fly	Combo	Total
Reach 1	27	86	162	11	286	24.2	92.9	257.6	11.0	385.7	3	32	269	2	306	9	81	293	3	386	0.12	0.34	1.04	0.18	0.79	0.37	0.87	1.14	0.27	1.00
Reach 2	14	20	0	5	39	36.5	19.5	0.0	7.8	63.8	1	0	0	2	3	16	19	0	18	53	0.03	0.00	--	0.26	0.05	0.44	0.97	--	2.32	0.83
Reach 3	25	105	183	6	319	39.8	132.7	415.3	23.0	610.7	11	83	440	24	558	25	148	509	33	715	0.28	0.63	1.06	1.04	0.91	0.63	1.12	1.23	1.43	1.17
Reach 4	44	33	2	4	83	43.3	51.5	1.0	20.0	115.8	4	0	1	0	5	11	14	1	2	28	0.09	0.00	1.00	0.00	0.04	0.25	0.27	1.00	0.10	0.24
Totals	110	244	347	26	727	143.7	296.6	673.8	61.8	1175.8	19.0	115.0	710.0	28.0	872.0	61.0	262.0	803.0	56.0	1182.0										

APPENDIX D: 2005 Angler Survey Schedule

**Meadowbrook Conservation Services
2005 Angler Creel Census Survey Schedule**

April	May	June	July	August	September	October	November	General Information
			FRI 1					
	SUN 2 1		SAT 20 2			SAT 1		
	MON 3		SUN 21 3			SUN 2		
	TUE 4		MON 22 4	MON 1		MON 47 3		
	WED 5	WED 1	TUE 5	TUE 2		TUE 4	TUE 1	
	THR 3 5	THR 11 2	WED 6	WED 3		WED 5	WED 2	
	FRI 6	FRI 3	THR 7	THR 4	THR 1	THR 6	THR 3	
	SAT 7	SAT 12 4	FRI 23 8	FRI 5	FRI 2	FRI 7	FRI 4	SUN 14
	SUN 8	SUN 13 5	SAT 9	SAT 6	SAT 38 3	SAT 48 8	SAT 5	MON 9
	MON 9	MON 6	SUN 10	SUN 29 7	SUN 39 4	SUN 49 9	SUN 6	TUE 5
	TUE 10	TUE 7	MON 11	MON 8	MON 40 5	MON 50 10	MON 7	WED 7
	WED 11	WED 8	TUE 12	TUE 9	TUE 6	TUE 51 11	TUE 8	THR 5
	THR 12	THR 14 9	WED 24 13	WED 30 10	WED 7	WED 12	WED 9	FRI 6
	FRI 13	FRI 10	THR 14	THR 11	THR 8	THR 13	THR 10	SAT 13
	SAT 14	SAT 15 11	FRI 15	FRI 31 12	FRI 9	FRI 14	FRI 56 11	
	SUN 15	SUN 16 12	SAT 16	SAT 32 13	SAT 10	SAT 15	SAT 57 12	59
	MON 16	MON 13	SUN 25 17	SUN 14	SUN 41 11	SUN 16	SUN 58 13	
	TUE 4 17	TUE 14	MON 18	MON 15	MON 12	MON 17	MON 14	Times
	WED 5 18	WED 15	TUE 19	TUE 16	TUE 13	TUE 18	TUE 59 15	
	THR 19	THR 16	WED 26 20	WED 34 17	WED 14	WED 19		Single Days 23 29
	FRI 20	FRI 17	THR 21	THR 18	THR 15	THR 20		2 Day's in a Row 16 8
SAT 23	SAT 21	SAT 18	FRI 22	FRI 19	FRI 16	FRI 21		3 Day's in a Row 12 4
SUN 24	SUN 22	SUN 19	SAT 23	SAT 20	SAT 17	SAT 22		4 Day's in a Row 8 2
MON 25	MON 23	MON 20	SUN 24	SUN 21	SUN 18	SUN 23		
TUE 26	TUE 24	TUE 21	MON 25	MON 22	MON 19	MON 24		59
WED 27	WED 25	WED 22	TUE 27 26	TUE 23	TUE 20	TUE 25		
THR 28	THR 26	THR 23	WED 27	WED 24	WED 21	WED 26		Holidays 5
FRI 29	FRI 27	FRI 24	THR 28	THR 25	THR 22	THR 27		High Use Weekend Day's 10
SAT 1 30	SAT 28	SAT 25	FRI 29	FRI 26	FRI 23	FRI 28		Regular Weekend Day's 16
	MON 9 29	SUN 26	SAT 28 30	SAT 27	SAT 24	SAT 29		Weekday's 28
	MON 10 30	MON 19 27	SUN 31	SUN 28	SUN 25	SUN 30		
	TUE 31	TUE 28		MON 29	MON 26	MON 31		59
		WED 29		TUE 30	TUE 27			
		THUR 30		WED 31	WED 28			
					THR 46 29			
					WED 30			
1	8	9	8	9	8	8	3	Angler 54
0	1	0	1	0	1	1	1	Angler/holiday 5

