State of California
California Department of Fish and Wildlife
North Central Region

Caples Lake, Alpine County

2015 - 2016 Angler Survey Box Analysis

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Introduction

Caples Lake (Caples) is an El Dorado Irrigation District (EID) managed reservoir in Alpine County. At capacity, Caples has 620 surface acres. and is situated at approximately 7,820 feet above mean sea level. It is located off Highway 88, roughly one mile west of the Carson Pass and about 17 miles south of Lake Tahoe (Figure 1). Woods Creek and Emigrant Creek are the main sources of inflow Caples. Caples drains into Caples Creek, which flows into the South Fork American River. Caples is open to angling all year with a five trout daily take and a 10 in possession bag limit regulation.

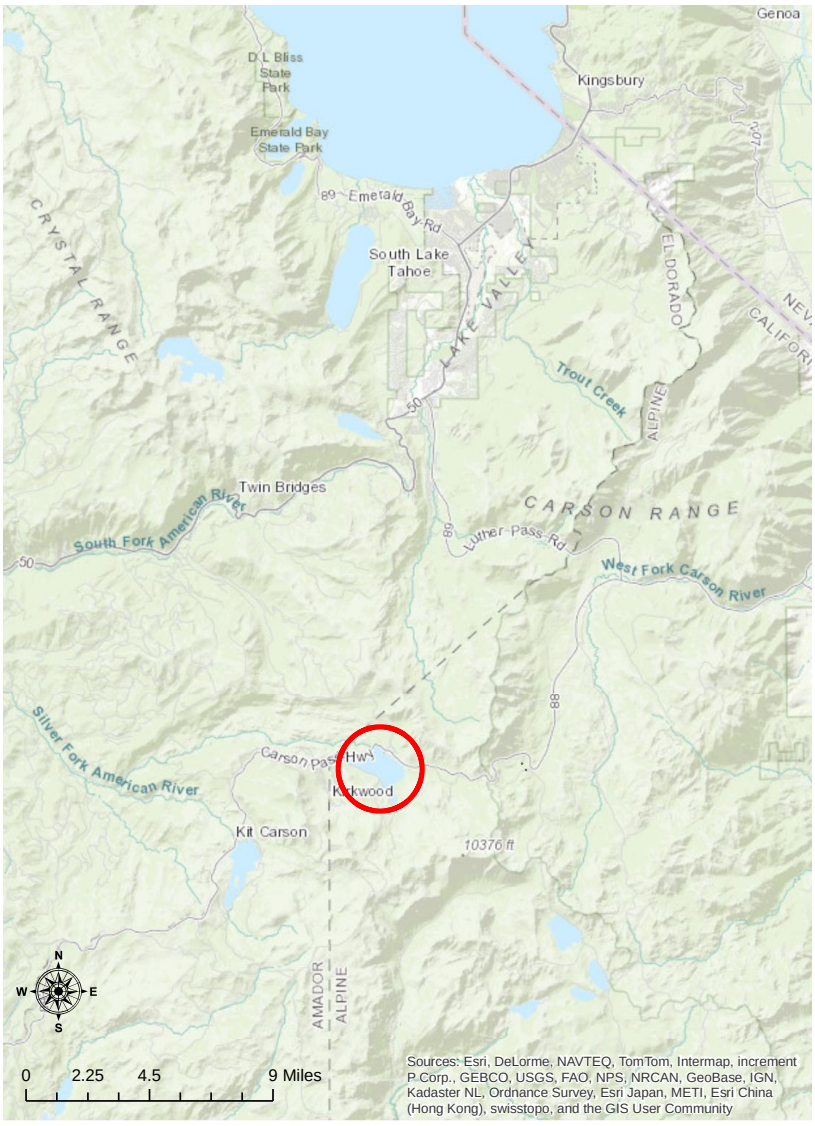

Figure 1. Caples Lake (Alpine County, CA).

Caples has been stocked since 1930 by California Department of Fish and Wildlife (CDFW) for recreational fishing (CDFW Fish Files). Historically, Caples has been planted with rainbow trout (*Oncorhynchus mykiss*) (RT), brook trout (*Salvelinus fontinalis*) (BK), brown trout (*Salmo trutta*) (BN), and lake trout (*Salvelinus namaycush*) (LT). Currently only RT and BN are being stocked in Caples by CDFW and EID (Appendix 1). Along with current and past CDFW stocking, Caples currently supports populations of non-game fish such as Lahontan redsides (*Richardsonius egregius*) and tui chub (*Gila bicolor*). There is also a self-sustaining LT sport fishery.

In order to assess the fishery, CDFW installed three angler survey boxes (ASBs) at Caples. One box was installed just below the lake's spillway, one at the E.I.D public boat launch, and the third is at the Woods Creek parking lot (Figure 2). Anglers voluntarily fill out a survey sheet after they complete their fishing trip, and deposit it in one of the boxes. CDFW uses the data collected to assess angler satisfaction, species composition, and angler catch statistics at the lake. This report covers the data collected from Caples ASB from 2015 and 2016.

Figure 2. Caples Lake Angler Survey Box locations: #1 - Below spillway, #2 - EID Boat Launch. #3 - Woods Creek Parking Lot.

Methods

Anglers were asked to fill out a voluntary survey form about their fishing experience. The survey asks anglers for information regarding hours fished, type of gear used, fishing method, and the number of landed fish. Anglers were asked the size and species of the fish landed and whether they kept or released their catch. Anglers were asked three questions, and their answers were recorded on a scale of -2 to 2, with "2" representing most satisfied and "-2" representing least satisfied. The questions pertain

to satisfaction of overall angling experience, size, and number of fish landed. The back of the survey form is reserved for anglers who had any additional comments.

Results

A total of 78 anglers responded to the survey in 2016, an increase from 67 respondents in 2015 (Table 1). Cumulatively, these anglers reported 154 fish landed in 2016 compared to 48 in 2015 (Ewing 2016). The average catch per angler and hours per angler was 1.97 and 4.0, respectively in 2016. Average catch per angler in 2016 increased more than two-fold from 2015 (0.72), while the hours per angler in 2016 was almost identical to 2015 (3.9). A total of 309.50 hours of fishing were reported in 2016, for an average catch per hour of 0.50. These values are an increase from the 2015 hours fished (n = 258.25 hours) and average catch per hour (0.19).

Table 1. Collection of average effort and catch statistics recorded from the 2015 - 2016 Angler Survey Boxes located at Caples Lake.

Year	Respondents	Hours Fished	Fish Landed	Catch per Angler	Catch per Hour	Hours per Angler
2015	67	258.25	48	0.72	0.19	3.9
2016	78	309.50	154	1.97	0.50	4.0

Anglers reported using bait, lures, and flies while fishing at Caples (Table 2). Five anglers (6%) used flies and had a 3.0 catch/angler average in 2016. This was the highest identifiable gear used to take fish in 2016. In 2015, the one fly angler caught no fish, which had the lowest catch per angler as well. Sixteen anglers using multiple angling methods had a 2.3 catch/angler average in 2016. In 2015, anglers using multiple methods had a 0.5 catch/angler average. In 2016, anglers using only lures had a 2.1 catch/angler average. In 2015, anglers using only lures had a 0.4 catch/angler average. Anglers using bait had a 1.8 catch/angler average in 2016 and 0.5 catch/angler average in 2015. Anglers not reporting their method of take had the lowest catch/angler average (0.0) in 2016.

Table 2. The frequency of anglers that used each angling method and their corresponding catch rates in 2015 and 2016.

	2015		2016	
Angling Method	Number of Anglers	Catch per Angler	Number of Anglers	Catch per Angler
Bait	29	0.5	42	1.8
Lure	10	0.4	13	2.1
Fly	1	0.0	5	3.0
Multiple	21	0.5	16	2.3
Not Recorded	6	3.3	2	0.0

Approximately 90% (n = 138) and 96% (n = 46) of fish landed were RT in 2016 and in 2015, correspondingly. Lake trout comprised approximately six percent of fish landed in 2016 and

approximately four percent in 2015. Brook trout and brown trout combined to be less than five percent of the total catch in 2016. Seventy percent of RT that were measured were less than 14.0 inches in total length in 2016, which is consistent with 2015 at 76% (Figure 3). Anglers reported landing seven (5% of total fish landed) fish greater than 20.0 inches in 2016, which were made up of three RT, two LT, and two BN. Anglers reported landing five (10% of total fish landed) fish greater than 20.0 inches, which included three RT and two LT in 2015. The modal size class for RT in both 2015 and 2016 was the 12.0 - 13.9 inch size class (2016, n = 38) (2015, n = 14) (Table 3). The modal size class for LT in 2016 (n = 3) was in the 16.0 – 17.9 inch size class while in 2015, the modal size class (n = 2) was in the 20.0 - 21.9 inch size class. The modal size class for BK in 2016 (n = 3) was the 6.0 – 7.9 inch size class. There was no modal size class for BN in 2016.

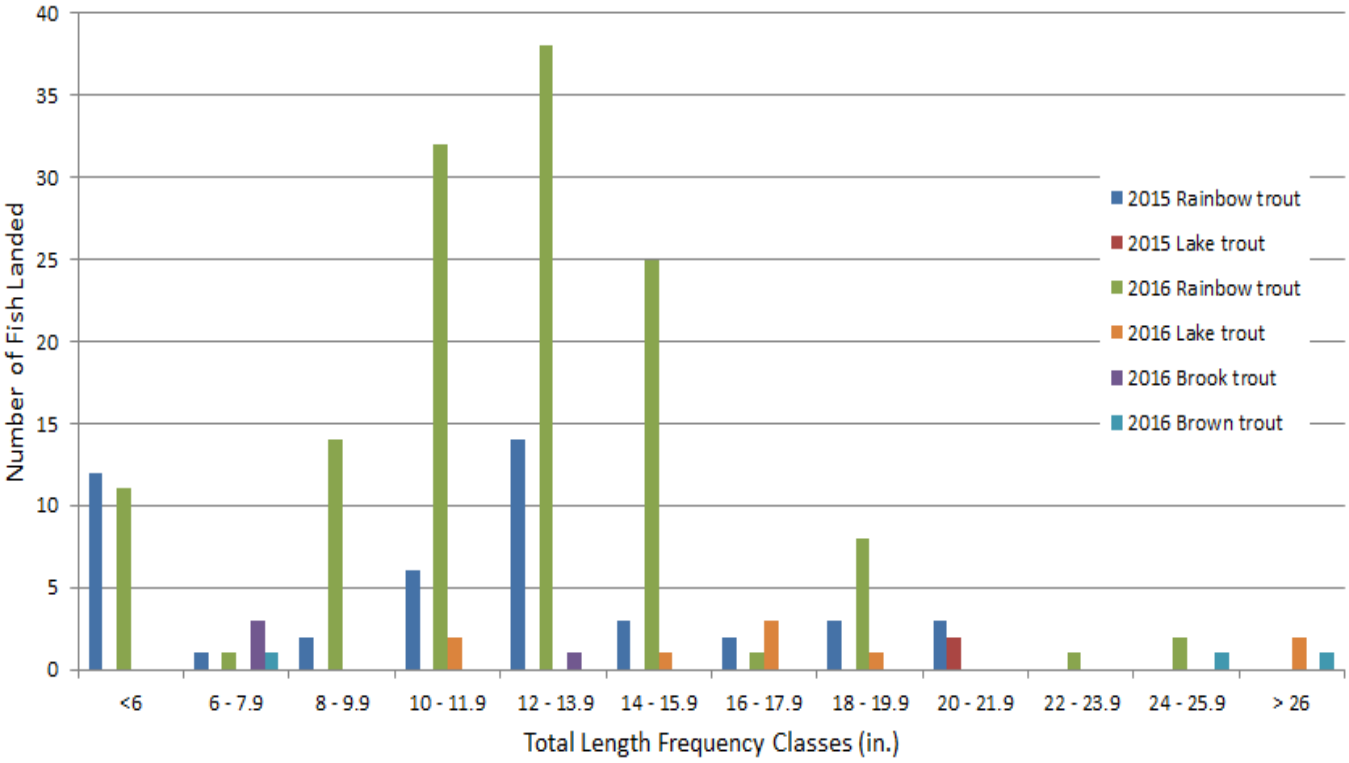

Figure 3. Frequency of fish in each size class that anglers reported landing at Caples Lake in 2015 and 2016.

The 2015 – 2016 ASB data showed that RT had the lowest percentage of released catch compared to any other specie caught (2015, n = 30.4%; 2016, n = 43.5%) (Table 3). Anglers released approximately 44% of LT caught in 2016 compared to 50% in 2015. In 2016, anglers released 50% BK and 100% of BN that had been caught.

Table 3. Data on kept and released fish at Caples Lake in 2015 and 2016.

2015							
Species	Kept	Released	Unknown Disposition	Total Caught	Percent of Total Catch	Percent Released	Modal Size Class
RT	32	14	0	46	95.8%	30.4%	12.0 - 13.9
LT	1	1	0	2	4.2%	50.0%	20.0 - 21.9
Total	33	15	0	48			

2016							
Species	Kept	Released	Unknown Disposition	Total Caught	Percent of Total Catch	Percent Released	Modal Size Class
RT	76	60	2	138	89.6%	43.5%	12.0 - 13.9
LT	5	4	0	9	5.8%	44.4%	16.0 - 17.9
BK	2	2	0	4	2.6%	50.0%	6.0 - 7.9
BN	0	3	0	3	1.9%	100.0%	NA
Total	83	69	2	154			

A total of two anglers (2.6%) reported fishing from float tube/kayak, which resulted in the best success in terms of catch per angler (8.50 fish/angler) in 2016 (Table 4). A total of three anglers (3.8%) reported fishing from multiple methods, which resulted in the second best success rate in terms of catch per angler (3.00 fish/angler) in 2016. A total of 34 anglers (43.6%) reported fishing from shore or by wading, which resulted in the third best success method in terms of catch per angler (2.62 fish/angler) in 2016. It was also the most popular method of fishing in 2016. The least used method in 2016 was float tube/kayak fishing, however the float tube/kayak fishing method did have the highest catch per angler.

Table 4. The number of anglers and catch per angler based on angling method at Caples Lake.

	2016	
Method	Number of Anglers (%)	Catch per Angler
Boat	12 (15.4%)	2.33
Float tube/kayak	2 (2.6%)	8.50
Shore/Wading	34 (43.6%)	2.62
Multiple	3 (3.8%)	3.00
Not recorded	27(34.6%)	0.41
	78	

In 2016, anglers reported being slightly unsatisfied with the fishery in regards to overall satisfaction for a second consecutive year (2016, -0.14; 2015, -0.03). Anglers were satisfied with the size

of the fish they caught for a second consecutive year (2016, 0.54; 2015, 0.70). Anglers were also satisfied with the number of the fish they caught for a second consecutive year (2016, 0.43; 2015, 0.22).

Discussion

Data gathered from the Caples Lake ASBs indicates anglers had caught less than one fish on average per day in 2015 (0.72), but in 2016 catch per angler increased to almost two fish per day (1.97). Average catch per unit effort was only 0.19 fish/hour in 2015, but increased to 0.50 in 2016 with little change in angler effort from 2015 to 2016 (2015, 3.9 fish/hr; 2016, 4.0 fish/hour). The increase in catch rate and total fish caught may be due to the high number of fingerling-size RT stocked in 2014 and 2015, which have grown to catchable size. The number of respondents in 2016 was 78, an increase from 67 in 2015. The high number of respondents in the 2015 and 2016 surveys provides CDFW a good representation of the fishery. However, an ASB survey does not get an estimation of the total number of anglers or total number of fish landed. It is essential that CDFW promote angler participation in the ASB survey, especially since 2015 was the first survey year at Caples and many anglers might still not be aware of the ASB locations.

Gear-used catch rates for anglers using flies in 2016 had the highest catch rate, but only five anglers reported using only flies which may have not been an accurate representation. Bait and multiple methods were tied for highest rates using identified gear in 2015. Six anglers did not record the type of gear used, but had a catch rate of 3.3 fish/angler in 2015. Only two of the 78 respondents did not record an angling method in 2016 compared to six out of 67 in 2015. The greatest percentage of anglers fished from shore, but float tube/kayak anglers had the greatest catch per angler in 2016. It is possible that the float tube/kayak anglers in 2016 had better access to where the fish were than anglers from shore and/or boat due to various environmental reasons (snow, water levels, vegetation abundance, limited shoreline access, etc.).

The ASB survey showed the overwhelming majority of fish caught by anglers were RT for both years. No BN were reported caught in 2015 and only three in 2016. At least one more year of data should be collected in order to assess the BN stocking program at Caples. It is possible that the BN fingerlings may be preyed on by the larger RT, LT, and BN in the lake. The lack of BN being caught could be entirely related to the time of year anglers reported their fishing experience, since BN generally can be targeted in reservoirs in the fall when water temperatures are cooler and they occupy shallower depths to feed and spawn. CDFW should install a species identification sign listing all of the fish present in Caples. The sign could include a few words explaining how the lake is a diverse recreational fishery.

Seventy percent in 2016 and seventy-six percent of RT caught in 2015 at Caples measured less than 14 inches in total length. This corresponds with stocking data, as likely 100% of fish stocked by CDFW and a portion of the RT that EID contributed were less than 14 inches in length (Appendix 1). Anglers were satisfied with the size of fish caught for a second consecutive year. EID has stocked approximately 1,875, 2.5 lb. and greater RT into Caples from 2014 - 2016 and anglers have caught large-size RT from Caples. It is not known whether the six RT caught over 20.0 inches the last two years were holdovers or E.I.D. stocked trophies. Anglers were also satisfied with the number of fish they caught for

a second consecutive year. It is possible that the recent year's allotments are at a successful/satisfactory level.

The overall fishing experience for anglers was slightly unsatisfactory for a second consecutive year at Caples. Ideally, a lake where anglers had a positive experience with the size and numbers of fish caught would likely have a positive overall experience fishing for that day. The unsatisfactory angling experience might not have anything to do with actual fishing, but may be due to outside factors such as weather, fishing access, crowds, etc.

Recommendations

- CDFW staff should install a species identification board on the ASBs at Caples Lake, in order to minimize species misidentification by anglers.
- If present, CDFW staff should continue to encourage anglers to fill out the ASB forms in future trips.
- Assess the BN stocking allotments.
- Space the stockings out to a bi-monthly schedule rather than the year's allotment going in on a single stocking event.

Literature Cited

California Fish and Wildlife. Caples Lake Fish Stocking Records. California Fish and Wildlife Region 2 Fish Files. Unpublished.

Ewing, B. 2016. Caples Lake, Alpine County 2015 Angler Survey Box Analysis. California Fish and Wildlife Region 2 Fish Files and Document Library. Unpublished.

Appendix 1. Stocking history at Caples Lake 2014 - 2016.

CDFW

Date	Species	Weight (lbs.)	Number	Size
5/13/2014	BN	140.4	22,745	Fingerling
6/2/2014	RT	413.1	124,756	Fingerling
6/13/2014	RT	1,700.0	5,610	Catchable
6/13/2014	RT	3,300.0	6,600	Catchable
6/19/2014	RT	1,300.0	3,900	Catchable
6/19/2014	RT	2,700.0	5,400	Catchable
4/30/2015	BN	80.4	25,000	Fingerling
6/1/2015	ELT	2,000.0	8,000	Catchable
6/29/2015	RT	381.7	79,400	Fingerling
7/10/2015	ELT	750.0	2250	Catchable
5/11/2016	BN	187.5	120,000	Fingerling
7/8/2016	RT	1,000.0	4,400	Catchable

E.I.D.

Date	Species	Weight (lbs.)	Number	Size
2014	RT	1,633.5	3267	Catchable
2014	RT	841.5	337	Trophy
2015	RT	1,197.9	2396	Catchable
2015	RT	617.1	247	Trophy
2015	RT	1,600.0	640	Trophy
2016	RT	1,415.7	2831	Catchable
2016	RT	729.3	292	Trophy
2016	RT	900.0	360	Trophy