

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

Caples Lake, Alpine County

2015 - 2017 Angler Survey Box Analysis



Ben Ewing

District Fisheries Biologist: Alpine, Amador, Calaveras, and Lake Counties

April, 2018

## 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. Caples is located off Highway 88, roughly one mile west of the Carson Pass and about 17 miles south of Lake Tahoe (Figure 1). Woods and Emigrant Creeks are the main sources of inflow to 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 stocked 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 stocked in Caples by CDFW and EID (Appendix 1) and LT are persisting without supplemental stockings. Along with current and past CDFW stockings, Caples currently supports populations of non-game fish including Lahontan reidsides (*Richardsonius egregius*) and tui chub (*Gila bicolor*).

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 EID public boat launch, and the third is at the Woods Creek parking lot (Figure 2). Anglers voluntarily complete 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 Caples. This report covers the data collected from the Caples ASB from 2015 - 2017.



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 have any additional comments (Appendix 2).

## Results

Sixty anglers responded to the survey in 2017, the lowest total in the last three years (Table 1). Cumulatively, these anglers reported 200 fish landed in 2017 compared to 48 in 2015 and 154 in 2016 (Ewing 2018). The average catch per angler and hours per angler was 3.33 and 3.8, respectively in 2017. The average catch per angler and hours per angler was 1.97 and 4.0, respectively in 2016. Average catch per angler in 2017 increased 69% from 2016, while the hours per angler in 2017 was almost identical to 2015 (3.9) and 2016 (4.0). A total of 225.00 hours of fishing were reported in 2017, for an average catch per hour of 0.89. The total number of hours fished in 2017 was the lowest in three years, but the average catch per hour was the highest in three years.

Table 1. Collection of average effort and catch statistics recorded from the 2015 - 2017 Angler Survey Boxes 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
2017	60	225.00	200	3.33	0.89	3.8

Anglers reported using bait, lures, and flies while fishing at Caples (Table 2). Ten anglers (17%) used lures and had a 4.2 catch per angler average in 2017. This was the highest identifiable gear used to take fish in 2017. In 2016, catch per angler for lures was 2.1, while in 2015 it was 0.4. Twenty-nine anglers using bait had a 3.8 catch per angler average in 2017. In 2016, catch per angler for bait was 1.8, while in 2015 it was 0.5. In 2017, anglers using multiple methods had a 3.3 catch per angler average compared to 2.3 in 2016 and 0.5 in 2015. In 2017, fly anglers had a 3.0 catch per angler average, identical to 2016, and higher than the 0.0 value in 2015. Anglers not reporting their gear type had the highest catch per angler average (4.0) in 2017.

Table 2. The frequency of anglers that used each angling method and their corresponding catch rates from 2015 - 2017.

Angling Method	2015		2016		2017	
	Number of Anglers	Catch per Angler	Number of Anglers	Catch per Angler	Number of Anglers	Catch per Angler
Bait	29	0.5	42	1.8	29	3.8
Lure	10	0.4	13	2.1	10	4.2
Fly	1	0.0	5	3.0	2	3.0
Multiple	21	0.5	16	2.3	16	3.3
Not Recorded	6	3.3	2	0.0	3	4.3
Total	67		78		60	

Approximately 92% (n = 183) of fish landed were RT in 2017, which is similar to 2016 (90%; n = 138) and 2015 (96%; n = 46). Lake trout comprised approximately six percent of fish landed in 2017, identical to 2016 and similar to 2015 (4%) (Table 3). Brook trout and brown trout combined to be less than five percent of the total catch in 2017 for a second consecutive year. Sixty-six percent of RT measured were less than 14.0 inches in total length in 2017, which is a decrease from 2016 (70%) (Figure 3) and 2015 (76%) (Ewing 2018). Anglers reported landing 16 (8% of total fish landed) fish greater than 20.0 inches in 2017, which were made up of 15 RT and one LT. The modal size class for RT in 2017 was the 8.0 – 9.9 inch size class (n=39), compared to 2015 and 2016 when the 12.0 - 13.9 inch size class (2016, n = 38) (2015, n = 14) had the greatest numbers (Table 3). The modal size class for LT in 2017 (n = 7) was in the 16.0 – 17.9 inch size class, same as 2016 (n = 3), 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 2017 (n = 3) was the 6.0 – 7.9 inch size class for a second consecutive year (2016, n = 3). The modal size class for BN in 2017 was the 16.0 – 17.9 inch length class (n = 1). There was no modal size class for BN in 2016 or 2015.

Table 3. Data on kept and released fish at Caples Lake from 2015 - 2017.

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			

2017							
Species	Kept	Released	Unknown Disposition	Total Caught	Percent of Total Catch	Percent Released	Modal Size Class
RT	97	86	0	183	91.5%	47.0%	8.0 - 9.9
LT	11	0	0	11	5.5%	0.0%	16.0 - 17.9
BK	5	0	0	5	2.5%	0.0%	6.0 - 7.9
BN	1	0	0	1	0.5%	0.0%	16.0 - 17.9
Total	114	86	2	200			

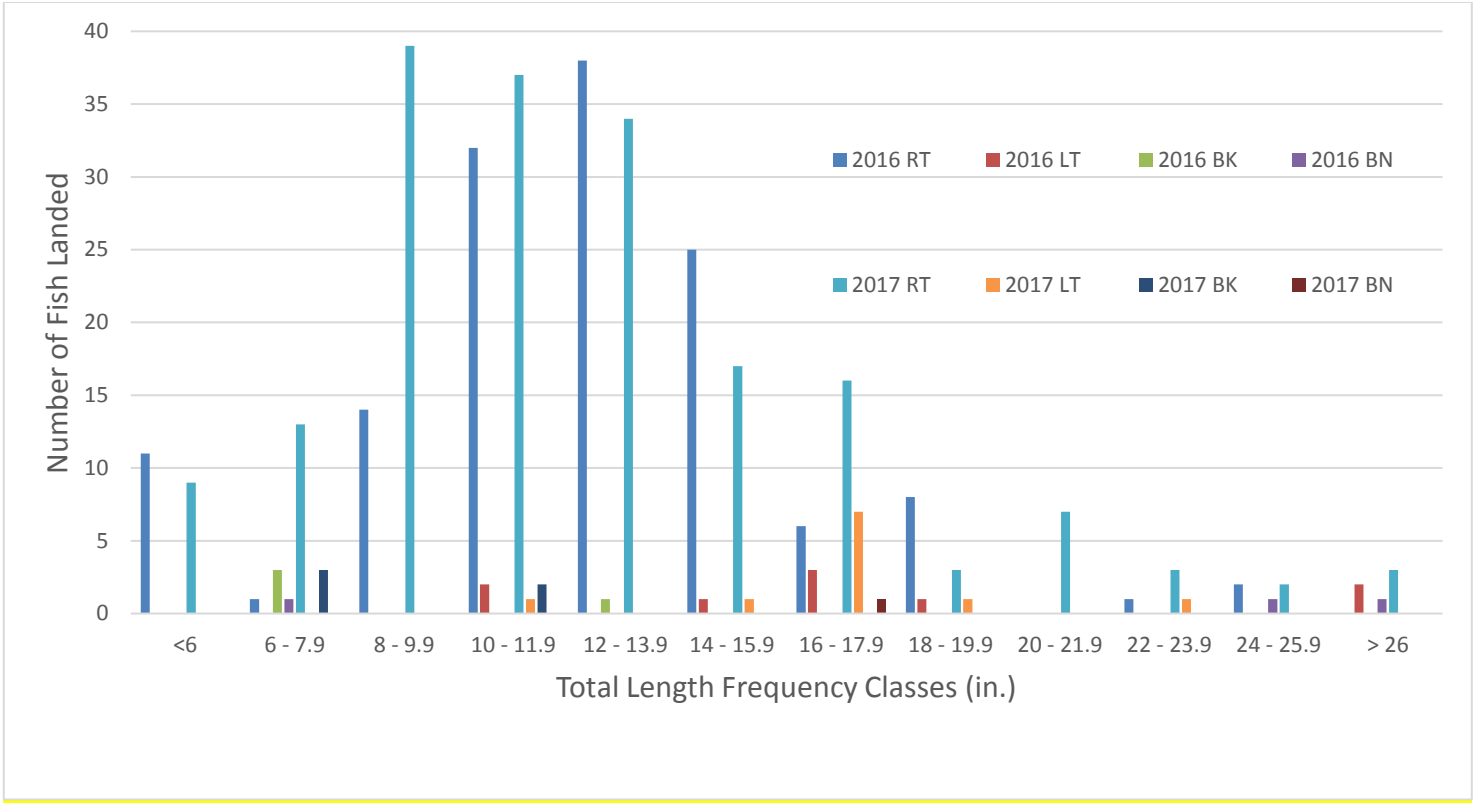


Figure 3. Frequency of fish in each size class that anglers reported landing at Caples Lake in 2016 and 2017. Fish collected from 2015 were not included in this figure to lessen the viewing complication.

The 2017 ASB results indicated that RT had the highest percentage of released catch (47.0%) compared to any other specie caught (Table 3). 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 kept 100% of LT caught in 2017, but released approximately 44% of LT caught in 2016 and 50% in 2015. Anglers also kept 100% of BK and BN caught in 2017 compared to 2016, when anglers released 50% BK and 100% of BN that were caught.

Twenty-one anglers (35.0%) did not report their fishing method in 2017, which resulted in the best success in terms of catch per angler (4.10) (Table 4). Thirty-five anglers (58.3%) reported fishing from shore/wading, which resulted in the best identified method of success in terms of catch per angler (3.23) in 2017 (Table 4). Four anglers (6.7%) reported fishing from a boat, which resulted in the lowest success rate in terms of catch per angler (0.25) in 2017. No anglers reported using float tube/kayak or multiple fishing methods for angling in 2017.

Table 4. The number of anglers and catch per angler based on angling method at Caples Lake in 2016 and 2017. Angling Method was not recorded in 2015.

Method	2016		2017	
	Number of Anglers (%)	Catch per Angler	Number of Anglers (%)	Catch per Angler
Boat	12 (15.4%)	2.33	4 (6.7%)	0.25
Float tube/kayak	2 (2.6%)	8.50	0 (0.0%)	NA
Shore/Wading	34 (43.6%)	2.62	35 (58.3%)	3.23
Multiple	3 (3.8%)	3.00	0 (0.0%)	NA
Not recorded	27 (34.6%)	0.41	21(35.0%)	4.10
Total	78		60	

In 2017, anglers reported being satisfied with the fishery (0.78) in regards to overall satisfaction for the first time in the three years' of surveys. Anglers were satisfied with the size of the fish they caught for a third consecutive year (2017 = 0.87; 2016 = 0.54; 2015 = 0.70). The 2017 "size" value was also the highest in three years. Anglers were also satisfied with the number of the fish they caught for a third consecutive year (2017 = 0.70; 2016 = 0.43; 2015 = 0.22). Like the "overall" and "size" values, the 2017 "number" value was also the highest in three years.

Table 5. Angler satisfaction response averages for the Caples Lake fishery from 2015 - 2017.

Year	Overall Angling Experience	Size of the Fish	Number of Fish
2015	-0.03	0.70	0.22
2016	-0.14	0.54	0.43
2017	0.78	0.87	0.70

## 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), and over three fish per day in 2017. Like catch per angler, catch per unit effort also increased every year from 2015 through 2017. 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, as well as the increase of catchable-size RT from CDFW in 2017 compared to 2016. The number of respondents in 2017 was the lowest in the three years' of surveys. The low number of respondents in 2017 appears to follow the trend of other nearby waters, which also experienced a decrease in angler response. It is unknown why the number



of anglers declined, not only at Caples, but at other nearby waters, especially since the stocking allotments were higher than in previous years and the catch rates were high at Caples.

Catch rates for anglers using lures in 2017 had the highest catch rate for an identified method. Bait, fly, and multiple gear methods had the second, third, and fourth greatest catch per angler rates in 2017. Three anglers did not record the type of gear used, but had the highest catch per angler rate in 2017. Only three of 60 respondents in 2017 did not record their gear method, compared to two of 78 in 2016, and six out of 67 in 2015. The greatest percentage of anglers fished from shore for a second consecutive year, but anglers who did not record their method of fishing had the greatest catch per angler in 2017. It is possible that anglers who are having a lot of success are purposely trying to keep their gear method a secret.

The overwhelming majority of fish caught by anglers the last three years have been RT. No BN were reported caught in 2015, three in 2016 and one in 2017. It is possible the fingerling BN are being predated on by the larger LT, RT, and BN in the lake. CDFW will likely decrease or eliminate the BN fingerling allotment at Caples due to poor returns the last three years compared to the amount of BN stocked in that same time period.

The majority of RT caught at Caples the last three years 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 third consecutive year. EID has stocked approximately 3,171, 2.5 lb. and greater RT into Caples from 2014 - 2017 and anglers have caught these large-size RT. It is not known whether the 21 RT caught over 20.0 inches the last three years were holdovers or EID stocked trophies. Anglers were also satisfied with the number of fish they caught for a third consecutive year. It is possible that the recent year's allotments are at a successful/satisfactory level.

In 2017, the overall fishing experience for anglers was satisfactory for the first time since the ASB started at Caples. Ideally, a lake where anglers had a positive experience with both the size and numbers of fish caught may explain the positive overall fishing experience, which is what may have occurred.

### **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.
- Decrease 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. 2018. Caples Lake, Alpine County 2015 - 2016 Angler Survey Box Analysis. California Fish and Wildlife Region 2 Fish Files. Unpublished. Document Library - <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=155318>

Appendix 1. Stocking history at Caples Lake 2014 - 2017.

CDFW				
Stocking 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
6/7/2017	BN	65.9	29,004	Fingerling
6/23/2017	ELT	1,000	2,800	Catchable
8/1/2017	RT	1,000	3,000	Catchable
9/5/2017	RT	1,000	2,700	Catchable
11/1/2017	RT	1,000	2,900	Catchable

E.I.D.				
Date	Species	Weight (lbs.)	Number	Size
2014	RT	1,633.5	3267	Catchable
2014	RT	841.5	337	Trophy
2014	RT	1,600.0	640	Trophy
2015	RT	1,197.9	2396	Catchable
2015	RT	617.1	247	Trophy
2015	RT	1,600	640	Trophy
2016	RT	1,415.7	2831	Catchable
2016	RT	729.3	292	Trophy

2016	RT	900.0	360	Trophy
2017	RT	417.5	835	Catchable
2017	RT	215.0	86	Trophy
2017	RT	1,425.0	570	Trophy

Appendix 2. Caples Lake Angler Survey Box Data Sheet.

## Caples Lake

The California Department of Fish and Wildlife is conducting an evaluation of the fishery at Caples Lake. We request your help in this evaluation by providing the following information in this survey. Please use this form for **one** day's fishing at the lake by **one** angler only.

Date Fished: \_\_\_\_\_  
mm/dd/yyyy

# Hours Fished: \_\_\_\_\_

Primary gear type used (check one):

- Lure                       Bait                       Fly

Primary method or location (check one):

- shore/wading               float tube               boat

Enter the total number of fish caught and released by species and size class:

Size	Rainbow trout		Brown trout		Brook trout		Lake trout		Other:	
	Kept	Released	Kept	Released	Kept	Released	Kept	Released	Kept	Released
Less than 6"										
6"-7.9"										
8"-9.9"										
10"-11.9"										
12"-13.9"										
14"-15.9"										
16"-17.9"										
18"-19.9"										
20-21.9"										
22"-23.9"										
24"-25.9"										
>26"										

Please indicate your level of satisfaction with the following statements regarding your fishing experience today:

	Least satisfied		Neutral	Most satisfied	
Overall angling experience today:	-2	-1	0	+1	+2
Size of fish:	-2	-1	0	+1	+2
Number of fish:	-2	-1	0	+1	+2

Please use the back of this form for any additional comments. Thank you for helping us manage and protect California's fisheries.