

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

Woods Lake, Alpine County
2021 Angler Survey Box Analysis



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Introduction

Woods Lake is a 16-surface acre lake in Alpine County situated at 8,211 feet above mean sea level. Woods Lake is located off Highway 88, one mile southwest of the Carson Pass and 18 miles south of Lake Tahoe (**Figure 1**). Woods Lake receives rain and snowmelt from the immediate area and small tributaries and drains into Woods Creek, a five-mile creek that flows into Caples Lake. Woods Lake is open all year to the public with a five trout bag limit with a 10 in possession sport-fishing regulation.



Figure 1. Woods Lake, Alpine County. Woods Lake is also indicated by red dot in smaller data frame in relation to Lake Tahoe.

California Department of Fish and Wildlife (CDFW) has stocked Woods Lake annually since 1930 for recreational fishing. The lake was historically stocked by CDFW with Brook Trout (*Salvelinus fontinalis*; BK), Rainbow Trout (*Oncorhynchus mykiss*; RT), and Lahontan Cutthroat Trout (*Oncorhynchus clarkii henshawi*; LCT) with the last recorded stocking of RT on July 27, 2020.

To assess the fishery, CDFW installed an angler survey box (ASB) at Woods Lake on August 4, 2020 (**Figure 2**). Anglers voluntarily complete a survey form after they complete their fishing trip, and deposit it in the box. CDFW uses this data to assess angler satisfaction, species composition, and general angler statistics at Woods Lake. This report covers the data collected from Woods Lake's ASB from 2020–2021.



Figure 2. Woods Lake Angler Survey Box (ASB) location (Alpine County).

Methods

Participating anglers complete a voluntary survey form about their fishing. The survey asks anglers for information regarding hours fished, type of gear and method used, and the number of landed fish. Anglers are also asked the size and species of the fish landed and whether they kept or released their catch. Finally, anglers are 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, fish size, and number of fish caught. The back of the survey form was reserved for anglers who had additional comments (**Appendix 1**).

Results

In 2021, Woods Lake had seven respondents compared to 13 in 2020 (**Table 1**). These anglers landed 21 fish and fished for 28 hours compared to 53 fish caught and 47 hours fished in 2020 (Ewing 2021). The 2021 catch per angler was 3.00, compared to 4.08 in 2020, while hours per angler was 4.00, compared to 3.62 in 2020.

Table 1. Collection of average effort and catch statistics recorded from the 2020–2021 angler survey box (ASB) at Woods Lake.

Year	Respondents	Hours Fished	Fish Landed	Catch per Hour	Catch per Angler	Hours per Angler
2020	13	47	53	1.13	4.08	3.62
2021	7	28	21	0.75	3.00	4.00

Three anglers (42.9%) reported fishing from a boat, which resulted in the best success in terms of catch per angler for a second straight year (2021=5.33; 2020=7.00) (**Table 2**). Four anglers (57.1%) reported fishing from shore/wading, which resulted in the second highest rate in terms of catch per angler (0.80). In 2020, shore/wading anglers also had the second highest catch per angler value (3.56). In 2021, no anglers reported fishing from float tubes.

Table 2. The number of anglers and catch per angler based on angling method at Woods Lake from 2020–2021.

Method	2020		2021	
	No. of Anglers	Catch per Angler	No. of Anglers	Catch per Angler
Boat	2	7.00	3	5.33
Float tube	2	3.50	0	NA
Shore or Wading	9	3.56	4	0.80

In 2021, anglers used various combinations of gear while fishing at Woods Lake (**Table 3**). Six anglers (85.7%) used bait to catch fish and reported the highest catch rate (3.50 catch per angler) while one angler using multiple gear types caught zero fish. In 2020, five anglers (38.4%) used flies to catch fish and reported the highest catch rate

(4.60 catch per angler). Eight bait anglers reported a catch rate of 3.75 per angler (Ewing 2021).

Table 3. The frequency of anglers that used each angling gear and their corresponding catch rates 2020–2021.

Angling Method	2020	2021
	Catch per Angler (Total Anglers)	Catch per Angler (Total Anglers)
Bait	3.75 (8)	3.50 (6)
Fly	4.60 (5)	NA
Multiple	NA	0.00 (1)

In 2021, 66.7% (n=14) of the fish landed were BK, 28.6% (n=6) were RT, and 4.8% (n=1) were other. In 2020, 94% (n=50) of fish landed were RT while the remaining 6% (n=3) were other.

In 2021, 100% (n=21) of landed fish measured were < 10 inches (in.) in total length (**Figure 3**). In 2020, 70% (n=37) of the landed fish measured < 10 in. in total length while 9% (n=5) of landed fish measured between 12 and 16 in. No fish caught over 16 in. and greater have been reported in the two years of surveys.

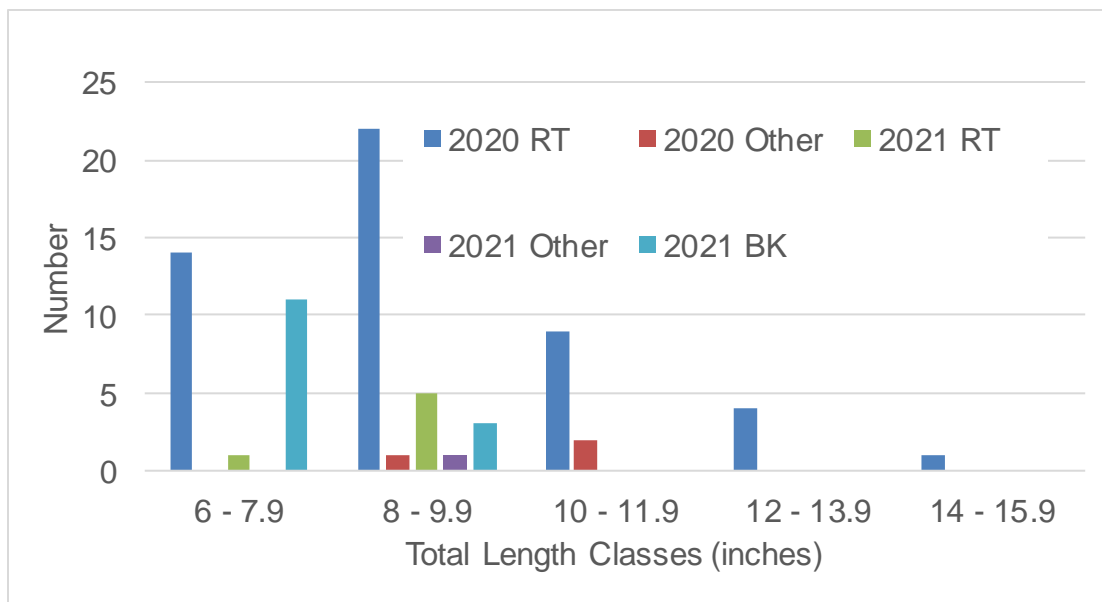


Figure 3. Frequency of fish in each size class that anglers reported landing at Woods Lake from 2020–2021.

In 2021, anglers released 33% of RT and 21% of BK caught compared to 66% RT released in 2020 (**Table 4**). No BK were reported caught in 2020. One unidentified fish was kept in 2021 compared to 100% of unidentified fish being released in 2020.

Table 4. Kept and released fish at Woods Lake from 2020–2021.

	Species	Kept	Released	Total Caught	Percent of Total Catch	Percent Released
2020	RT	17	33	50	94.3	66.0
	Other	0	3	3	5.7	100.0
	Total	17	36	53		
2021	RT	4	2	6	28.6	33.3
	BK	11	3	14	66.7	21.4
	Other	1	0	1	4.8	0
	Total	16	5	21		

Anglers reported being satisfied with their overall angling experience (0.60) for a second consecutive year (**Table 5**). Angler satisfaction for both size and number of fish increased from 2020 values. In 2020, Size value was -0.11, but increased to 0.50 in 2021. In 2020, number of fish value was 0.67 and increased to 0.75 in 2021.

Table 5. Angler satisfaction response averages for the Woods Lake fishery from 2020–2021.

	Overall Angling Experience	Size of Fish	Number of Fish
2020	0.55	-0.11	0.67
2021	0.60	0.50	0.75

Discussion

Although the 2021 Woods Lake anglers had lower catch per hour and catch per angler rates than 2020, the 2021 rates are still considered relatively good success. The decrease in catch rates from 2020 are likely because CDFW did not stock any trout in 2021 compared to stocking 2,625 RT into Woods Lake in July 2020. The evacuation of trout at American River Hatchery in June of 2021 contributed to a decrease in catchable size, stocked fish in not only Woods Lake, but many Region 2 waters.

For a second consecutive year, the greatest number of fish caught were in the 8.0–9.9 in. size class. However, unlike 2020, when anglers reported being “unsatisfied” with the size of their catch, 2021 anglers reported being satisfied with the size of their catch. These fish were likely two to three to the pound in size, which many anglers would argue are small for a lake population and do not possess the same value as a

larger-sized fish. It is possible that anglers were just happy to catch any sized fish since catching a fish, especially a RT in 2021 would be more of a challenge than 2020 because of the lack of stocking. Seventy-six percent of fish caught were kept compared to 32% in 2020, which may also support the “satisfied” size value in 2021 and the “unsatisfied” size value in 2020. Anglers were “satisfied” with the numbers of trout caught for a second consecutive year. The large percentage of BK caught compared to RT caught in 2021 may have helped contribute to the satisfaction values since it gave anglers an opportunity to catch nice fish that are wild and self-sustaining in Woods Lake.

The primary objective when managing recreational fisheries is often to improve the quality of fishing or optimize human benefit (Pollock et al. 1994; Weithman 1999). For a second consecutive year, the overall fishing experience for anglers was positive at Woods Lake. The 2021 positive overall satisfaction value may have been influenced by anglers being satisfied both with the sizes and numbers of fish caught. Angler trip satisfaction can also be influenced by factors other than fishing success (McCormick and Porter 2014). For some anglers, satisfaction with the overall fishing experience may have been due less to the fishing itself, and more to outside factors, such as weather, fishing access, lack of crowds, and scenery.

CDFW is the only agency/organization that stocks Woods Lake. RT currently stocked by CDFW are catchable-sized fish stocked under a put and take management strategy due to the combination of high angler usage and proximity to a state highway.

The number of respondents in the 2021 survey was seven, a decrease from the 2020 survey of 13. This is a low number for an ASB, but this may have been the result of widespread forest closures due to the Caldor Fire in the late summer thru early fall of 2021 as well as a \$10.00 day use fee imposed by the United States Forest Service. Ideally, the more respondents, the more feedback it provides CDFW on angler success at the fishery. It is essential CDFW maintain the trend of increasing angler participation in the ASB survey, which provides useful information on the results of fishing trips, which helps directly inform management of the fishery. CDFW staff should continue to notify anglers of the ASB location at Woods Lake and communicate the importance of ASBs to fisheries management.

Recommendations

- CDFW should continue to encourage anglers to fill out the ASB forms.
- Collect a minimum of five years' worth of ASB data to look at fishery trends over time. Data will help CDFW gather more accurate information on the Woods Lake fishery.
- Continue to stock Woods Lake for at least the next five years.

Literature Cited

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Appendix 1.

Woods Lake

The California Department of Fish and Wildlife is conducting an evaluation of the fishery at Woods 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 Woods Lake by one angler only.

Date Fished: _____ # Hours Fished: _____
mm/dd/yyyy

Primary gear type used (check one):

Bait Lure Fly

Primary method or location (check one):

shore/wading float tube boat/kayak

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

Size	Rainbow trout	Brook trout	Other:

	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" and Greater						

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 wild trout resources.

