

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

Woods Lake, Alpine County
2020 Angler Survey Box Analysis



Ben Ewing
District Fisheries Biologist
Alpine, Amador, Calaveras, and Lake Counties

November 2021

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 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.

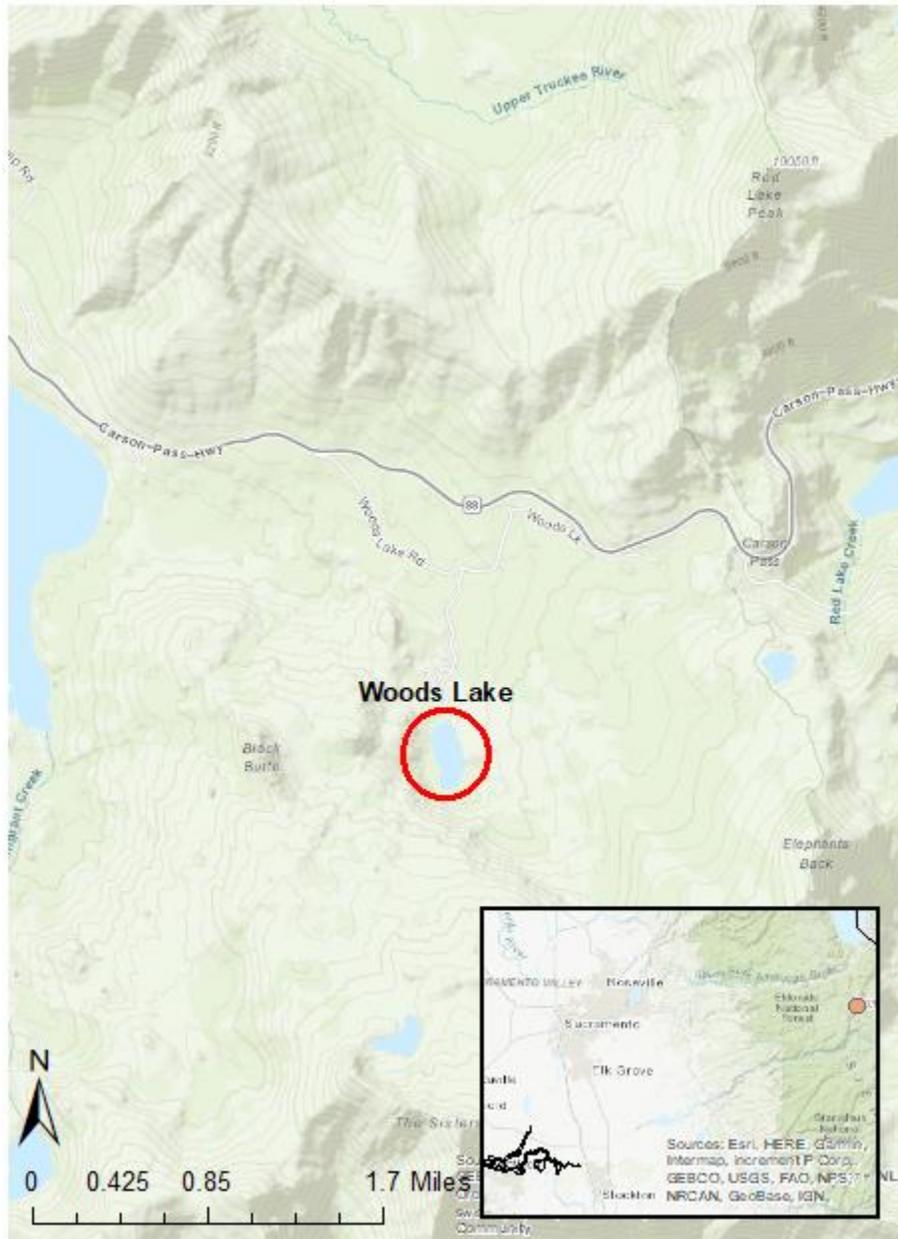


Figure 1. Woods Lake, Alpine County. Woods Lake is also indicated by beige dot in smaller data frame in relation to California.

California Department of Fish and Wildlife (CDFW) has stocked Woods Lake annually since 1930 for recreational fishing. California Department of Fish and Wildlife (CDFW) historically stocked Woods Lake 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 in 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 in 2020.



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 2020, Woods Lake had 13 respondents (**Table 1**). These anglers landed 53 fish and fished for 47 hours. The catch per angler was 4.08 while hours per angler was 3.62 (**Table 1**).

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

Respondents	Hours Fished	Fish Landed	Catch per Hour	Catch per Angler	Hours per Angler
13	47	53	1.13	4.08	3.62

Two anglers (15.3%) reported fishing from a boat, which resulted in the best success in terms of catch per angler (7.00) (**Table 2**). Nine anglers (69.2%) reported fishing from shore/wading, which resulted in the second highest rate in terms of catch per angler (3.56). Two float tube anglers had a 3.50 catch per angler value.

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

Method	Number of Anglers	Catch per Angler
Boat	2	7.00
Float tube	2	3.50
Shore or Wading	9	3.56

Anglers used bait and flies while fishing at Woods Lake (**Table 3**). 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.

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

Angling Method	Catch per Angler (Total Anglers)
Bait	3.75 (8)
Fly	4.60 (5)

Ninety-four percent (n=50) of fish landed were RT while the remaining 6% (n=3) were Other.

Seventy percent (n=37) of the landed fish measured < 10 inches (in.) in total length (**Figure 3**). Nine percent (n=5) of landed fish measured between 12 and 16 in. No fish caught from any of the respondents were greater than 20 in.

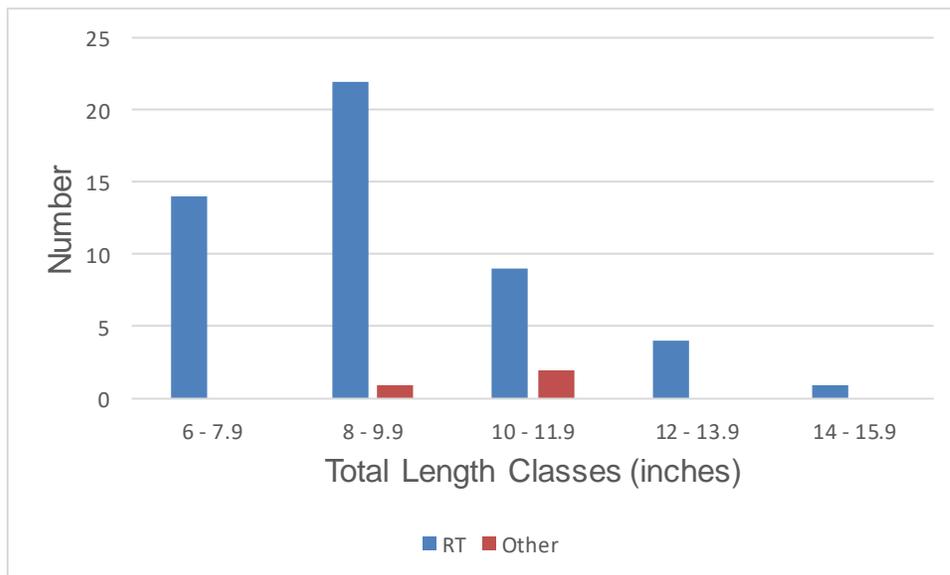


Figure 3. Frequency of fish in each size class that anglers reported landing at Woods Lake in 2020.

Anglers released 66% of RT caught compared to 100% of Other released (**Table 4**).

Table 4. Kept and released fish at Woods Lake in 2020.

Species	Kept	Released	Total Caught	Percent of Total Catch	Percent Released
RT	17	33	50	94.3	66.0
Other	0	3	3	5.7	100.0
Total	17	36	53		

Anglers reported being satisfied with their overall angling experience (0.55) (**Table 5**). However, anglers were unsatisfied with the size (-0.11) of fish caught. Anglers were satisfied with the number of fish caught (0.67).

Table 5. Angler satisfaction response averages for the Woods Lake fishery in 2020.

Overall angling experience	Size of the fish	Number of fish
0.55	-0.11	0.67

Discussion

Woods Lake anglers caught over four fish on average per trip and had an average CPUE of 1.13 fish per hour, which is a relatively good success rate. The high catch rates are likely because CDFW stocked 2,625 RT into Woods Lake in July 2020. The large number of fish stocked combined with the relatively small size of Woods Lake likely increased the likelihood of anglers catching fish.

The greatest number of fish caught in 2020 were in the 8.0–9.9 in. size class. This corresponds with anglers being “unsatisfied” 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. However, anglers were “satisfied” with the numbers of trout caught in 2020. It is possible that a combination of previously stocked fish, ideal shore and boat opportunities for anglers, and small size of Woods Lake gave anglers a great chance to access and catch fish.

Sixty-six percent of Rainbow Trout caught and 100% of other fish were released, which may support the “unsatisfied” size value.

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). The overall fishing experience for anglers was positive at Woods Lake. Although the satisfactory values for “size” was negative, it appeared anglers still had a good fishing

experience. 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.

The number of respondents in the 2020 survey was 13. This is a fair number for an ASB, particularly considering that it was the first year of an ASB at Woods, and the ASB was not installed until early August. 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.

Only CDFW stocks Woods Lake. The RT currently stocked by CDFW are catchable-sized fish. These catchable trout are stocked under a put and take management strategy due to the combination of high angler usage and proximity to a state highway.

Recommendations

- When possible, 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

McCormick, J. L. and T. K. Porter. 2014. Effect of fishing success on angler satisfaction on a central Oregon rainbow trout fishery: implications for establishing management objectives. *North American Journal of Fisheries Management* 34:5 938–944.

Pollock, K. H., C. M. Jones, and T. L. Brown. 1994. Angler survey methods and their applications in fisheries management. *American Fisheries Society, Special Publication 25*, Bethesda, Maryland.

Weithman, A. S. 1999. Socioeconomic benefits of fisheries. Pages 193–213 *in* C. C. Kohler and W. A. Hubert, editors. Inland fisheries management in North America, 2nd edition. American Fisheries Society, Bethesda, Maryland.

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.