



State of California – Natural Resources Agency  
DEPARTMENT OF FISH AND WILDLIFE  
1701 Nimbus Road, Suite A  
(916) 358-2900  
Rancho Cordova, CA 95667  
[www.wildlife.ca.gov](http://www.wildlife.ca.gov)

**EDMUND G. BROWN JR., Governor**  
**CHARLTON H. BONHAM, Director**



## Memorandum

**Date:** August 10, 2018

**To:** Sarah Mussulman  
Senior Environmental Scientist, Supervisor

**From:** Ben Ewing  
District Fisheries Biologist (California Department of Fish and Wildlife)  
Alpine, Amador, Calaveras, and Lake Counties

**Subject: Summary of 2017 - 2018 Brush Shelter Habitat Placement in New Hogan Reservoir**

The Department of Fish & Wildlife (Department), in cooperation with U.S. Army Corps of Engineers (Army Corps), placed 60 brush shelter habitats into New Hogan Reservoir (Calaveras County) from June 20, 2017 through August 9, 2018. The brush shelter habitats were composed of repurposed Christmas trees received as donations from the Placerville Home Depot as well as Placer County's Chipper Program. The number of Christmas trees used for each brush shelter ranged from one to two depending on the size of the trees. This was the third and fourth consecutive year of the brush shelter habitat placement project.

Brush shelter habitats were created by drilling a 1/2 inch hole into the base of each tree. One or two concrete cinder block(s) were secured to each shelter with 3/8" polypropylene rope in order to sink them. The brush shelter habitats were then taken to various locations on New Hogan Reservoir using a Department boat.

Global Positioning Satellite (GPS) coordinates were recorded at each spot where a brush shelter habitat was placed into New Hogan Reservoir. Additional data on the number of trees per habitat was also recorded. To the best of the Department and Army Corp's ability, habitats were placed within a localized area using a set transect line consistent with the lake bottom contour. This was done to create "communities" that increase localized productivity that contribute to maintaining the warmwater fisheries, to place them in a consistent lake level where fish could utilize them, and to make their locations easier to document. All habitats were placed within areas to allow anglers relatively safe access where underwater structure would likely not damage their boats, and minimize potential hazards to boaters and swimmers.

Table 1 identifies the number of brush shelters, number of trees per brush shelter, and locations of the brush shelters that were placed into New Hogan Reservoir.

Table 1. Number of brush shelters, number of trees per brush shelter, and the locations of the brush shelters that were dropped into New Hogan Reservoir from June 20, 2017 - August 9, 2018.

GPS Point	Coordinates	Number of trees
1	38.12729 N, 120.79996 W	2
2	38.12714 N, 120.79996 W	2
3	38.12649 N, 120.80029 W	2
4	38.12649 N, 120.80102 W	2
5	38.12656 N, 120.80202 W	2
6	38.12650 N, 120.80196 W	2
7	38.12623 N, 120.80193 W	2
8	38.12631 N, 120.80211 W	2
9	38.12638 N, 120.80211 W	2
10	38.12642 N, 120.80209 W	1
11	38.12541 N, 120.80118 W	2
12	38.12525 N, 120.80105 W	2
13	38.12520 N, 120.80110 W	2
14	38.12823 N, 120.79861 W	2
15	38.12747 N, 120.79808 W	2
16	38.12758 N, 120.79781 W	2
17	38.12762 N, 120.79773 W	2
18	38.12758 N, 120.79790 W	2
19	38.12722 N, 120.79842 W	2
20	38.12639 N, 120.79832 W	2
21	38.12628 N, 120.79832 W	2
22	38.12622 N, 120.79837 W	2
23	38.12656 N, 120.79854 W	2
24	38.12593 N, 120.79837 W	2

Table 1.  
Continued

25	38.12605 N, 120.79829 W	2
26	38.12593 N, 120.79844 W	2
27	38.12642 N, 120.80117 W	2
28	38.12630 N, 120.80075 W	2
29	38.13035 N, 120.80099	1
30	38.13035 N, 120.80099	1
31	38.13015 N, 120.80096 W	2
32	38.13015 N, 120.80096 W	1
33	38.13010 N, 120.80080 W	2
34	38.12740 N, 120.79988 W	2
35	38.12740 N, 120.79988 W	1
36	38.12740 N, 120.79988 W	1
37	38.12578 N, 120.79877 W	2
38	38.12578 N, 120.79877 W	2
39	38.12578 N, 120.79877 W	1
40	38.12552 N, 120.79920 W	1
41	38.12552 N, 120.79920 W	1
42	38.12552 N, 120.79920 W	2
43	38.12552 N, 120.79920 W	1
44	38.14204 N, 120.80458 W	2
45	38.14159 N, 120.80358 W	2
46	38.14136 N, 120.80233 W	2
47	38.14138 N, 120.80212 W	1
48	38.14153 N, 120.80360 W	2
49	38.14141 N, 120.80319 W	2
50	38.14119 N, 120.80251 W	2
51	38.14118 N, 120.80211 W	1
52	38.14102 N, 120.80286 W	2
53	38.14116 N, 120.80264 W	2
54	38.14116 N, 120.80257 W	2
55	38.14132 N, 120.80269 W	2
56	38.14124 N, 120.80237 W	2
57	38° 07.542 N, 120° 48.062 W	1
58	38° 07.562 N, 120° 48.066 W	1
59	38° 07.567 N, 120° 48.065 W	1
60	38° 07.562 N, 120° 48.060 W	1

The habitats were placed in different areas on the reservoir with safe access for boats. The Department tried to put the brush shelter habitats along the set transect line in 25 - 50 feet of water using the onboard depth finder. The habitats were placed at these depth ranges in order to compensate for the predicted decrease in lake level in the coming months, yet still provide habitat for various warmwater fish species. The

Department plans to deploy the Diving Safety Program's inland Dive Team of scuba certified fishery biologists to video and photograph the brush shelter habitats in 2019 to document fish usage. Information gathered from scuba surveys will be recorded and used in future fishery habitat management decisions.

**Cc:** Jason Pipes (Army Corps of Engineers)  
Home Depot of Placerville  
Elisa Noble (Placer County Resource Conservation District)