State of California
Department of Fish and Wildlife

M e m o r a n d u m

Date: 6/27/2018

To: Sarah Mussulman
Senior Environmental Scientist
Department of Fish and Wildlife
North Central Region

From: Mitch Lockhart
Environmental Scientist
Department of Fish and Wildlife
North Central Region

Subject: General Fish Survey at Lake Valley Reservoir, Placer County

On May 14, 2018, Mitch Lockhart, CDFW Environmental Scientist, Dan Teater, USFS Aquatic Biologist, and two seasonal CDFW staff operated a Smith Root electrofishing vessel on Lake Valley Reservoir, Placer County (Figure 1) from 17:30 to 20:30. The purpose of the survey was to collect current information on the fish populations within Lake Valley Reservoir to inform the Pre-Stocking Evaluation.

Eight transects were sampled for 10 minutes (600 seconds) each. The start location of the first transect was selected randomly. From the randomly selected point, the remaining seven transect start locations were spaced 1 kilometer apart.

Water temperature was 14.2 degrees Celsius at 17:30. Specific conductivity was 22.3 micro-siemens per meter at 17:30. Electrofishing settings were 60 hertz DC, high range (100-1,000 volts), and 30% duty cycle.

In three hours of electrofishing, 45 brown bullhead catfish (*Ameiurus nebulosus*) and 5 green sunfish (*Lepomis cyanellus*) were captured (Table 1). All captured fish were identified, weighed, measured, and returned alive into Lake Valley Reservoir. No rainbow trout (*Oncorhynchus mykiss*) were captured or observed.

Figure 1: Location of Lake Valley Reservoir, Placer County.

Table 1. Species composition of May 14, 2018 survey at Lake Valley Reservoir. CPUE is fish per hour.

Common Name	Count	% of Total	CPUE
Brown Bullhead	45	90%	15
Green Sunfish	5	10%	1.67

During the survey, Mr. Dan Teater and Mitch Lockhart observed high quality salmonid cover and habitat within

the littoral zone that was unoccupied by fish of any species. The far eastern end of the lake is dominated by shallow (1'-3') mud flats suitable for brown bullhead spawning and rearing. Salmonid spawning gravels were observed at the inlet of an unnamed ephemeral creek that flows into Lake Valley Reservoir southeast of the dam (Figure 2), although no redds or spawning fish were observed.

Figure 2: Google Earth image of Lake Valley Reservoir with notable features labeled (retrieved 6.27.2018).

In summary, unoccupied habitats exist throughout the lake to accommodate planted fish. Due to the presence of self-sustaining populations of non-native brown bullhead and green sunfish, continued rainbow trout plants pose no significant impact to native or special status species. As a result, Lake Valley Reservoir is acceptable to plant with catchable hatchery rainbow trout.

Figure 3: A brown bullhead catfish (*Ameiurus nebulosus*) captured at Lake Valley Reservoir, May 14, 2018 (photo D. Teater).

LENGTH-WEIGHT DATA SHEET

2.2.3 Conductivity

Water: Lake Valley Res   Method: _____   Hertz: _____   Seconds: _____
Date: 5/14/2018   Temp: 14.2 °c @ 1730   Volt: _____   Start: _____
Crew: _____   Duty Cycle: _____   End: _____

Species	Bullhead Catfish		BBH						Green Sunfish	
Count	Length TL (mm)	Weight (g)	Length TL (mm)	Weight (g)	Length TL (mm)	Weight (g)	Length TL (mm)	Weight (g)	Length TL (mm)	Weight (g)
1	335	408	145	17					108	17
2	290	308	130	25					80	8
3	301	360	235	135					117	26
4	310	385	275	323					79	8
5	286	304	326	461					96	15
6	314	423								
7	144	31								
8	300	337								
9	300	404								
10	290	347								
11	280	287								
12	280	302								
13	275	289								
14	230	140								
15	295	327								
16	195	81								
17	253	204								
18	286	297								
19	290	307								
20	279	290								
21	275	254								
22	357	251								
23	265	234								
24	290	308								
25	290	283								
26	300	334								
27	295	394								
28	274	258								
29	281	271								
30	290	308								
31	290	310								
32	250	204								
33	292	347								
34	210	112								
35	150	37								
36	273	266								
37	295	332								
38	280	276								
39	245	175								
40	225	104								

Microwave
Relay

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