

Memorandum

To: Brian Sanford
Marin County Open Space District

Date: September 23, 2002

From: Department of Fish and Game — Bill Cox

Subject: Pine Gulch Creek, Marin County

On the morning of September 23, 2002 I electrofished an approximately 175 foot reach of Pine Gulch Creek at the request of the Marin County Open Space District to remove fish from the instream sediment detention basin prior to dredging. The upstream end of this basin is located approximately 500 feet downstream of Bolinas Road near the town of Bolinas.

At approximately 1130 the air temperature was 68°F and the water temperature was 60°F. Conductivity was 240 μ S/cm. Flow was estimated at 0.1 cfs.

Electrofisher settings were 300 volts DC at 60 pps. A total effort of 2180 seconds of electrofishing time was expended. Four passes were made through the site; on the first pass the entire reach was sampled, on the second, third, and fourth passes only those areas likely to support steelhead or coho salmon were sampled.

The total catch included 46 steelhead, 2 coho salmon, 67 sculpin, and 11 lamprey. All the fish were released in a pool upstream of the dredging site. Of the 46 steelhead, 34 were age 0+ (< 110 mm FL), 8 were probably age 1+ (\geq 110, <140 mm), and 4 were probably age 2+ (\geq 140 mm). I assumed, based on the length frequency distribution, 110 mm as the break between age 0+ and age 1+, and 140 mm as the break between age 1+ and age 2+. The two coho were 84 and 95 mm FL. From my experience, I expect that I captured most of the steelhead and coho present, but probably captured a relatively small portion of the sculpin population, and an even smaller portion of the lamprey population.

Length (mm)	Number of steelhead
50 --- 59	0
60 --- 69	1
70 --- 79	6
80 --- 89	13
90 --- 99	7
100 --- 109	7
110 --- 119	1
120 --- 129	4
130 --- 139	3
140 --- 149	0
150 --- 159	3
160 --- 169	1

The depletion between the four passes was good with 30 steelhead caught on the first pass, 10 on

the second pass, and 3 on the third pass, and 3 on the fourth pass. So it is unlikely that more than 3 to 5 steelhead were missed.

In the 175-foot sediment detention basin, only about 10% of the area provided cover that would be considered good for steelhead. The cover present consisted of slightly undercut banks stabilized by alder roots and overhanging terrestrial vegetation, and one fallen alder tree. Most of this reach is a very shallow run with fine sandy gravel and no cover.

Bill Cox

Bill Cox
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