

Memorandum

To : FILES

Date : November 14, 1963

From : Department of Fish and Game

Subject: ^{glenn} Stony Gorge Reservoir and ^{Tehama} Black Butte Reservoir, Glenn County - Chemical Treatment

Treatment of Stony Gorge tributaries was initiated November 1, 1963. The valve at East Park Reservoir was opened to about 5 c.f.s. and 20 gallons of Pro Noxfish was released into the stream over a two-hour period. In addition, the isolated pool south of the foot bridge was treated. Twenty (20) gallons was released in Big Stony Creek at the Rainbow diversion dam which is located 3-4 miles above Stonyford (the flow was about 30 c.f.s.). Observations on Stony Creek on November 2 indicated a good kill of suckers and squawfish at the bridge upstream from Stony Gorge Reservoir and in the area of the Gillman ranch. Live carp were observed at the Gillman Ranch, however.

At Stony Gorge Reservoir the drawdown was completed at 4:00 p.m. at which time all the standing water was evacuated and a stream of about 30 c.f.s. of very silty water passed through the gates. During the release of water many thousands of fish passed out of the reservoir. Shad, catfish, and carp were the most numerous species. As the last 200 acre-feet was drafted, a massive number of 14-16 inch carp were evacuated. In general, the composition of the reservoir fish population by weight appeared to be about 70% carp, 10% catfish, 10% shad, and 10% bass and crappie.

During the drafting of the reservoir, 220 gallons of Pro Noxfish were released into the outflow off the top of the dam. The discharge was about 400 c.f.s. and the above gallons were discharged over a 5-hour period. As the last 200 acre-feet of extremely muddy water was discharged along with the thousands of carp the rotenone appeared to have little or no effect.

The gates at Stony Gorge are capable of discharging 600 c.f.s. at full head. The reservoir is silted up to the elevation of the outlet pipe.

^{glenn} On October 31 Grindstone Creek was treated with Pro Noxfish at the road crossing below Long Point lookout. The flow was about 10 c.f.s. and 15 gallons of rotenone was released over a 2-hour period. An additional 10 gallons was released at Euchre Glade six miles upstream. The kill at the Glade was small rainbow trout and suckers. At the road crossing the fish population composition was about 98% suckers, hardhead, and squawfish by weight and number. Actually only three 7-8 inch rainbow trout were observed in a 100-yard stream section. The rough fish were present in large numbers.

On November 6, Black Butte Reservoir was treated with 1,705 gallons of Pro Noxfish using four boats (all surface application). Due to motor breakdown only three boats were available to put out the chemical after 150 gallons had been used. At full speed (10 hp. motor) the siphons attached to the motor cavitation plate empty a 55-gallon drum in 30 minutes with the standard faucet full open. It required 9 hours for the 3½ boats to put out the 1705 gallons. During the last one hour of treatment, 200 gallons were put out with a hose siphon over the side of the boats in addition to the regular siphon attachment. With the two siphons a 55-gallon drum could be emptied in about 15 minutes.

In brief it required 10 hours for 5 men to get set up and put out the 1705 gallons.

According to the Corps of Engineer's project engineer, Black Butte held 2,718 acre-feet (282 surface acres maximum depth 26 feet) when treated. Inflow was about 70 c.f.s. - water temperature 60°F.

The kill was observed on November 7. It was not extensive insofar as could be observed in the turbid water. 98% of those fish seen were 9-10" carp and 6-8" bullheads.

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On November 6 Stony Creek was treated also. A release of 20 c.f.s. was made from Stony Gorge and 45 gallons of Pro Noxfish applied over two hours into the discharge. Two hours later 45 gallons were applied over one and one-half hours into Grindstone Creek at the bridge one mile above its confluence with Stony Creek. The Grindstone flow was about 60 c.f.s.

Two hours after the Grindstone treatment or about 3 p.m., 55 gallons were applied off the new bridge across Stony Creek leading to the Struben ranch six miles upstream from Black Butte Reservoir. About 35 gallons drained out before the valve plugged up. On November 7 in the a.m. the remaining 20 gallons were released into the creek.

Note: For "drip" treatment of streams, the regular brass faucets are not satisfactory. Although open to empty a drum in two hours, they tend to plug up for reasons unknown.

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