

Memorandum

To: Files

Date:

From: Department of Fish and Game

Subject: Walker Creek, Marin County

During the summer of 1998, between July 30 and October 5, I maintained three Onset Hobo Temp recording thermographs in Walker Creek downstream from Soulajule Reservoir. The first thermograph was located just upstream of the Thee Peaks Bridge on the Soulajule access road off the Marshall - Petaluma Road, approximately one-half mile below Soulajule dam. The second thermograph was located at the old stream gaging station on the Marin County Office of Education Walker Creek Ranch, approximately three miles below the dam. The third thermograph was at the bridge at the downstream end of the Walker Creek Ranch property, approximately five miles below the dam. All three thermographs were placed between six inches and one foot below the surface in places that were shaded most of the time.

Assuming that the low temperatures recorded on the Three Peaks Bridge thermograph represented the temperature of the discharge from Soulajule Reservoir, the discharge water temperature was about 56° F in early summer and reached a high of about 58° F in late September. Daily highs through the entire sampling period were generally between 59° F and 60° F, and reached a maximum of nearly 61° F for four days in mid-September.

At the old gaging station daily highs in the first two weeks of August ranged from 68° F to 74° F, from mid-August to mid-September the daily highs ranged from 63° F to 70° F, and during the last half of September dropped steadily from 68° F to 62° F with a few days as low as 59° F.

At the downstream end of the Walker Creek Ranch daily highs followed the same pattern as at the gaging station with the highest high temperatures in early August ranging from 66° F to 72° F, from mid-August to mid-September the daily highs mostly ranged from 64° F to 67° F, but with one day as low as 62° F and two days up to 70° F. During the last half of September the daily highs dropped steadily from 65° F to 60° F, with a few days as low as 59° F.

The highest temperatures occurred at the old gaging station with slightly lower temperatures occurring at the downstream end of the Walker Creek Ranch. This seem to correlate well with the density of riparian vegetation which is relatively sparse from the Soulajule dam to about a quarter mile downstream of the old gaging station, from that point to the downstream end of the Walker Creek Ranch, and for a considerable distance further, the density of riparian vegetation is much greater providing relatively good shade cover.