

MEMO

6 October 1994

To: Mr. Rob Titas, California Department of Fish and Game**From:** Mr. Jeff Davis, Ventana Wilderness Sanctuary**Re:** Big Sur River flow conditions

Water from the Big Sur River ceased flowing to the Pacific Ocean sometime between 9 and 11 August. That is, on 9 August the effluent water was reduced to a trickle; and on the 11th, no water was breaching the sand bar and reaching the ocean. I have casually monitored the river flow conditions at least weekly for the last two years and have not before witnessed the cessation of effluent water. This is peculiar because the summer of 1992 followed six years of drought and yet the river continued to flow. Whereas the summer of 1994 followed a winter of above average rainfall in '92/'93 and one slightly below average in '93/'94. I suspect a water overdraft from the aquifer below the Big Sur River would explain this anomaly. Each year, the pastures on the El Sur Ranch (situated on a terrace on the north side of the lower reaches of the river) are flood irrigated. It may be that the amount of water drawn from El Sur's seven wells has not increased significantly, but that both the aquifer cannot sustain a constant annual draw during drought years, and that the heavy rainfall in '92/'93 did not sufficiently replenish the aquifer. If ground water overdraft is a viable explanation, one would expect that flow conditions upstream from the pumping stations be comparable to previous year's; i.e., if upstream flow was inordinately low this year, then that itself (or combined with the affects of overdraft) may explain the apparent anomaly.

Between the evening of 21 September and the afternoon of 22 September, the river mouth opened and river water flowed to the ocean. Near the river mouth, there was a strong odor of decayed organic material in the air; and, in fact, decayed vegetation was visible in the effluent water. The temporal aspect of this event is also anomalous as the only measurable precipitation fell after the opening of the river mouth. From 12 a.m. to 3 p.m. on 23 September, 13.1 mm of rainfall was recorded at Andrew Molera State Park. (Note: This figure is typically doubled for the mountains about the headwaters of the Big Sur River.) Although it is conjectural, I did not hear the water pumps running on 22 September and suspect that, if water was not being drawn, this may have influenced the untimely opening of the river mouth.

Sincerely,


Jeff Davis