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CCCWA/EDF Exhibit 3

# A FLOW STANDARD TO MAXIMIZE PHYTOPLANKTON ABUNDANCE BY POSITIONING AN ENTRAPMENT ZONE IN SAN PABLO BAY

by

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September 23, 1987

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#412

Report 412-6

## II. CONCLUSIONS

A. The shallows of San Pablo Bay are seasonally highly productive of phytoplankton, and in particular of diatoms.

B. Phytoplankton produced on the shallows are circulated into the main channel in San Pablo Bay, where they can be concentrated by the estuarine circulation in the vicinity of the Pinole Shoal.

C. An entrapment zone appears to form in the channel in the vicinity of the Pinole Shoal when there is sufficient Delta outflow.

D. The highest concentrations of phytoplankton occur in the channel when Delta outflows are approximately 20,000 cfs.

E. High turbidity in July and August due to wave action on the northern and western shoals appears to inhibit phytoplankton growth in those months.

F. Growth of marine benthos during the year appears to decrease phytoplankton biomass in the fall.

G. Colonization of San Pablo Bay shallows by marine benthos appears to be restricted by low salinities resulting from high winter Delta outflow.

H. In years which do not have sufficiently high winter Delta outflow, it appears that marine benthos can survive through the winter, resulting in high biomass during the following

season, which significantly reduces phytoplankton biomass, even though Delta outflows may be sufficient to establish an entrapment zone the following spring.

I. It appears that under present conditions of water development, in approximately the wettest 7 out of 10 years, winter Delta outflow has been sufficient to limit marine benthos in San Pablo Bay.

J. A salinity standard that would optimize phytoplankton abundance in San Pablo Bay is as follows: maintain the 28-day running average of Delta outflow at Chipps Island to be not less than 20,000 cfs during the period April through June. The standard should apply in all years except years when the unimpaired Delta outflow for the prior October through March period is less than the 30 percentile dry year, as determined by the average October-through-March unimpaired Delta outflow.