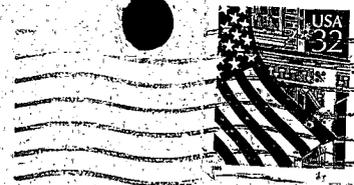
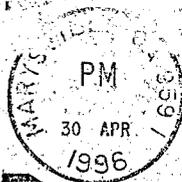


Robert E. Boyden
Consulting Engineer - CA 995
Applied Physics
6140 Kanaka Avenue
Oroville, CA 95966

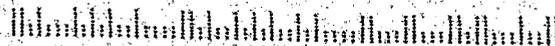


000515

Mr. Victor Pacheco - Cal Fed
1416 9th Street, Suite 1155
Sacramento, CA 95814

96 MAY - 2 AM 10:06
WATERMANS
SACRAMENTO
OF

95814-8311 91



G-005927

G-005927

CONSULTING ENGINEER - CA 995
APPLIED PHYSICS

ROBERT E. BOYDEN
6140 KANAKA AVE.
OROVILLE, CA 95966
(916) 589-0379

April 29, 1996

Mr. Lester Snow, Manager - Cal Fed
1416 9th Street, Suite 1155
Sacramento, CA 95814

Dear Mr. Snow:

Many Cal-Fed Bulletins have been sent to me and I have studied the Phase I Report, which outlines ten possible solutions to California major water problems. I have studied State water for many years, lived in the delta for nine years, and was with the Army Engineer Corps on the bay-delta channel survey.

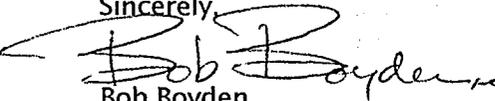
There are a few comments that seem appropriate at this time:

1. To the extent that additional reservoir capacity is added to the system, California will certainly benefit in drought times.
2. Any program such as "J" and possibly "C" and "D", that diverts upstream fresh water into isolated conveyances that go to the pumps at Tracy will only serve to deliver the best quality of water to the southern part of the State. They will also deprive the delta of the fresh water that it now gets to hold back salt water intrusion from the ocean. Additional reservoir releases will be required which might not be available in times of drought. Plan "J" is clearly a near-equivalent to the "peripheral canal", which was voted down about 1980.
3. A D.W.R. Report written in the 50's shows that at that time, $\frac{1}{3}$ to $\frac{1}{2}$ of all the fresh water flowing into the delta was used to hold back the salty tidal intrusion. I am surprised to find no salinity control mechanism at the ocean side of the delta included in your proposals. Salt is the No. 1 enemy of the delta and of water.
4. In 1980 a mechanism to control salinity was proposed to the California Senate and Assembly who instructed Mr. David Kennedy (Manager, DWR) to study it in depth. CH₂M Hill Co. and Delft Laboratories both recommended that it go forward and be studied on the Engineer Corps model in Sausalito. A study plan was developed and Mr. Kennedy cancelled further action, stating it would hurt the environment. Mr. Kennedy originally proposed the peripheral canal and he never really wanted to understand the salinity control mechanism.

This mechanism would replace large quantities of wasted fresh water. The gates hinge at the top and since salt water is heavier than fresh water, the outflows plus the restricted tidal inflow would, after repeated tidal reverses, gradually control the brackish zone. CH₂M Hill Co. estimated the cost 8 years ago at about $\frac{1}{2}$ billion dollars.

Mr. Snow, you and some of your staff should meet with me and Mr. Albrecht, a very knowledgeable retired Army Corps Engineer, and discuss this plan and your plans.

Sincerely,


Bob Boyden
(916) 589-0379

Enclosure: Drawing

cc: Governor Wilson, Wally Herger, Sen. Tim Leslie (CA), Michael Gardner (Chico Enterprise Record), Ted Albrecht, Victor Pachaco (Cal-Fed)

G - 0 0 5 9 2 8

G-005928