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MEMORANDUM

To: Elaine Archibald
Fax No. (916) 736-3714

From: Joseph C. McGahan

Date: November 12, 1997

Subject: San Joaquin River Salinity

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You asked me for a best estimate description of the impacts to the San Joaquin River from the Grassland Bypass Project. I have analyzed data for water year 1997, the first year of operation for the project (October 1996 through September 1997). I have compared water year 1997 to the most recent years of similar water supplies which were water years 1995 and 1996. The salt discharged to the San Joaquin River through Mud and Salt Slough (See Map) in water year 1997 was basically equivalent to water year 1995 and water year 1996 (1 percent more than water year 1996 and 5 percent less than water year 1995). From the drainage area that discharges to the Grassland Bypass, the salt load was 27 percent less in water year 1997 than in water year 1996 and 36 percent less than in water year 1995. This says that other sources made up the difference. The discharge in pounds of selenium from Mud and Salt Sloughs in water year 1997 shows a reduction of 21 percent compared with the

previous two years. From the drainage area that discharges to the Grassland Bypass there was a reduction of 35 to 40 percent.

The bottom line is that there does not appear to be any change in the salt load discharged to the San Joaquin River from Mud and Salt Slough with implementation of the Grassland Bypass Project, although there is a significant reduction in the salt load from the drainage area. This means that there are other sources outside of the drainage area that are making up the difference to Mud and Salt Slough. It is worthwhile to note that in water year 1997 approximately 30 percent of the salt load to Mud and Salt Slough originated in the drainage area that discharges through the Grassland Bypass. The Grassland Bypass Project has resulted in a significant reduction in the selenium load discharged to the San Joaquin River.

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San Joaquin River Watershed from Mendota to Vernalis

