FWS recommended additions/changes to environmental water quality parameters of concern given in CALFED Water Quality Program Component Report (August 1997). These recommendations are excerpted from our previously submitted comments on the report.

- Nutrients (nitrogen, phosphorous) should be included as an environmental parameter(s) of concern (Section 3 and Table 3.1).

Nutrient loading is discussed throughout the report as a water quality issue and concern. For example, high nutrient levels are listed under water quality issues and concerns on page 2-2. Nutrient loading is discussed in the section on environmental water quality issues and concerns (p. 2-4). Nutrients are listed as a parameter of concern for Suisun marsh wetlands in the CALFED problem area and several other Clean Water Act Section 303(d) listed impaired waterbodies that may affect the CALFED problem area (Appendix D). Nutrient loading is a water quality concern in south San Francisco Bay (Hager and Schemel 1996, pp. 189-215 in San Francisco Bay: The Ecosystem), which also is an impaired waterbody that may affect the CALFED problem area. Thus, nutrients (nitrogen and phosphorous) should be included as an environmental parameter of concern (listed in Table 3.1 and discussed in Section 3).

Furthermore, the Ecosystem Restoration Program Plan (ERPP) states that nutrient processes (e.g., nutrient cycling, primary productivity) are important elements in ecosystem management and restoration. Nutrient processes are an important component of the following ecosystem elements discussed in ERPP: bay-delta aquatic foodweb, natural sediment supply, all of the aquatic and wetland habitats, herbivorous waterfowl (indirectly), invasive aquatic plants, and contaminants. Nutrient dynamics are an important ecological process in all aquatic ecosystems, especially estuaries. Nutrient dynamics in the bay-delta ecosystem need to be understood and monitored to facilitate successful ecosystem restoration and protection.

- Light attenuation/penetration or water clarity should be listed (with turbidity or separately) as an environmental parameter of concern (Section 3 and Table 3.1).

Light attenuation is discussed as a parameter of concern on p. 3-11. Light attenuation is influenced by factors in addition to turbidity. Light availability (water clarity) is a major controlling factor of phytoplankton and benthic plant productivity, and therefore a key control on food-web dynamics, in much of the Bay-Delta estuary (Cole and Cloern 1984, Mar. Ecol. Prog. Ser. 17: 15-24; IEP 1995 , Tech. Rept. 42). Light extinction coefficient is the preferred measure for this parameter. Secchi disk depth (with corresponding correlation/regression factor with extinction coefficient) would also be an acceptable measure.