

Table 1.1 Water Quality Parameters of Concern to Beneficial Uses

ENVIRONMENT	URBAN	AGRICULTURE	RECREATION	INDUSTRIAL
Metals&Toxic Elements Cadmium Copper Mercury Selenium Zinc Organics/Pesticides Carbofuran Chlordane Chlorpyrifos DDT Diazinon PCBs Toxaphene Other Ammonia Dissolved Oxygen Salinity (TDS, EC) Temperature Turbidity Unknown Toxicity*	Disinfection By-Product Precursors Bromide TOC Other Pathogens Turbidity Salinity (TDS) Nutrients (Nitrate) pH Chloride	Other Boron Chloride Nutrients (Nitrate) pH (Alkalinity) Salinity (TDS, EC) SAR Turbidity Temperature	Metals Mercury Organics/Pesticides PCBs DDT Other Pathogens Nutrients	Other Salinity pH Alkalinity Phosphates Ammonia

* Unknown toxicity refers to observed aquatic toxicity, the source of which is unknown.

Drinking Water

Drinking water beneficial uses can be impacted by loadings of bromide, nutrients, salinity, organic carbon, turbidity, pathogens, and or changes in pH. Pathogens such as *Cryptosporidium parvum* in source water can adversely affect municipal drinking water supplies and threaten public health. Nutrient loading, and subsequent algae blooms, can impair the taste and odor of municipal water supplies and increase the expense of treating the water. Elevated turbidity due to suspended solids can be responsible for increased treatment costs of municipal and industrial water supplies.

A major problem during periods of low Delta outflows is tidal mixing of salt into the Delta channels. Salts are a major concern with regard to municipal drinking water supplies because of the presence in sea water of bromide, which contributes to unwanted disinfection byproducts (DBPs). Salt can

result in salty taste, corrosion of appliances, plumbing and industrial facilities, and reduced opportunity for waste water recycling. Salts also are naturally present in freshwater Delta inflows to the Delta due to and can be increased by municipal and agricultural discharges. The most heavily concentrated sources inflow of agricultural drainage to the Delta are from is the San Joaquin River contributing selenium, salts and total organic carbon.

Organic carbon in source water can adversely affect municipal drinking water supplies by combining with water treatment disinfectants to produce harmful by-products (e.g., trihalomethanes). Agricultural drainage is of particular concern to drinking water because the peat soils of the Delta contribute organic carbon to the agricultural drainage water. The peat soils present in the Delta make island agriculture drainage water a source of organic carbon. Delta diversions for municipal supply water purposes occur

