

Year 2000 and 2001 Priority Actions

Drinking Water Assessments - 36

1. General Description of the Action

Assess sources and magnitudes of loadings of constituents of concern for drinking water and evaluate potential for correction.

Total Organic Carbon (TOC) is a water quality constituent that is a precursor to disinfection byproducts which are human health hazards. TOC originates from many sources including vegetation in natural channels, algae, decomposing peat soils, agricultural drain material, and treated sewage effluent. These sources and more are present in the Delta. The relative contributions of each source to the TOC levels in export pumps is not well understood.

Nutrients in the delta contribute to algae production which produces more TOC upon degradation.

High salinity in drinking water reduces the utility of the water to be recycled. The origin of the salt in the export pumps is largely attributed to the ocean. Full assessment of the methods salt is introduced and reduction of salinity are warranted.

Pathogens originate from sewage treatment plants, water craft, confined animal facilities, and urban stormwater. Determining relative contributions and implementing programs to reduce pathogen loading are warranted.

Bromide is a salt constituent that commonly originates in ocean waters that intrude on the delta. Sea water is picked up at the diversion pumps in the south delta and delivered to the San Joaquin Valley. Other sources of bromide may also contribute to south delta diversions. Sources of bromide and control options are proposed to be studied.

Both water users and ecosystem would benefit from control of bromide.

2. Cost Estimates

Monitoring studies would begin in some critical areas at a cost of about \$0.5 million for the first year. As different issues are studied in greater depth, the budget should be increased to \$1 million per year for a several years.

CALFED Staff for about 1/2 time would be needed to oversee priorities in studies of different areas. Additional CALFED time may be used if modeling is needed.

3. Program Administration and Governance

The CALFED Water Quality Program should oversee the priorities of individual studies and

coordination study efforts. The Water Quality stakeholder group (the Water Quality Technical Group) would be given access to results of the studies and would have input on priority criteria.

Study contracting services should go to DWR or to USGS.

4. Program Coordination

The Department of Water Resources has the research staff to conduct or contract for studies and other pilot scale projects. USGS also has scientists for studies and appropriate contract offices.

The Department of Water Resources staff and it's Bryte Chemical Laboratories could provide staff and services for sampling and analysis.

5. Schedule

Assessment structure should be designed by mid to late 1999 and studies based on priority structure could begin by January 2000.