

Goal # 6. Improve and maintain water and sediment quality to eliminate, to the extent possible, toxic impacts on organisms in the system, including humans.

The objectives within this goal are very broad, in part because they should overlap with more specific objectives developed in the Water Quality Program (WQP) of CALFED. The WQP, however, is focused on improving water quality for human health, so the reason for this section of the ERP is to make sure that water quality goals developed for human health are compatible with those needed for improving ecosystem health.

Objective #1. Reduce the concentrations and loadings of contaminants in all aquatic environments in the CALFED region.

A. Long-term objective: Reduce concentrations and loadings of contaminants that affect the health of organisms and ecosystems in water and sediments by 90% as measured against current average levels.

B. Short-term objective: Reduce concentrations and loadings of contaminants that affect the health of organisms and ecosystems in water and sediments by 25-50% as measured against current average levels.

Rationale: A wide variety of herbicides, pesticides, fumigants, and other toxic materials enter the aquatic environment of the CALFED region from many sources. The number and variety of contaminants entering the rivers and estuary is poorly known, as are their toxic effects, in part because the amounts and kinds are constantly changing. However, there is good reason to think that toxic compounds are having many negative effects on aquatic organisms, both acute and chronic. These same compounds can have effects on human health, so reduction in their entry into the aquatic systems should have positive health benefits as well. Reducing concentrations of toxic contaminants is not easy because it will require broad changes in land management practices and in the chemical dependency of agricultural and urban areas for pest control. It will require reductions in the amounts and kinds of pesticides applied for many purposes and changes in the way they are applied to reduce their ability to contaminate aquatic ecosystems. Changes in industrial practices that result in contaminants being released (e.g., hydrocarbons from oil refineries) will also be required.

Stage 1 expectations. Strategies and financial incentives should be developed and implemented that reduce the use of herbicides, pesticides, fumigants, and other toxic materials in urban and agricultural areas. The monitoring of contaminants should be substantially increased, both as applied and in the environment in order to get better handle on what is going where and on the association of contaminants with declines of aquatic species. Annual goals should be established for the reduction of selected contaminants (e.g., carbofuran, chlorpyrifos, diazinon, hydrocarbons, selenium) and monitoring programs set up to determine success of reduction programs.

Objective #2. Develop regional plans to reduce the effects of non-point source .