

**Section I: Executive Summary**

**Title:** IPM Partnership to Improve Water Quality in Suisun Bay and Local Creeks  
**Applicant:** Central Contra Costa Sanitary District (CCCSD)

**Project Description and Primary Biological/Ecological Objectives:**

The proposed project seeks to reduce the presence of toxic pesticides in Suisun Bay and local creeks in central Contra Costa County through a broad-based community effort to increase the use of Integrated Pest Management (IPM) and expand awareness of the water quality impacts of pesticide misuse. IPM is a pest-management strategy which emphasizes non-chemical methods to keep pests at acceptably low levels.

The project expands a pilot project, now underway, to form partnerships with stores and with Master Gardeners to promote IPM. In addition, it would promote IPM through videos, publicity about IPM demonstration gardens, public agency IPM use, and an "eco-friendly" yard campaign. By reducing pesticide use, the project will improve water quality and aquatic habitat. Project materials will be made available to interested agencies throughout the Bay/Delta watershed for broader implementation.

**Approach/Tasks/Schedule:**

The project builds on an existing pilot project and uses existing vehicles (such as trained Master Gardeners) and store employees as a cost-effective, credible way to disseminate information. The project uses strategies designed to change behavior—not just raise awareness—by addressing barriers to using IPM (lack of products and practical information) and by changing community norms. It employs strategies drafted by the Bay Area Urban Pesticide Committee to address the environmental threat from pesticides. The following tasks are proposed:

1. Manage the project. This task includes coordinating/sharing with other agencies.
2. Work with additional stores/nurseries so they provide IPM information and products.
3. Expand the partnership with Master Gardeners to help them be an IPM resource.
4. Purchase and distribute a video about IPM.
5. Publicize IPM strategies used by existing public gardens.
6. Help change community norms through an "eco-friendly" yard campaign.
7. Train Pest Control Operators (PCOs) on IPM techniques.
8. Evaluate results, as summarized under "monitoring and data evaluation."

Tasks 1 through 5 and 8 will begin when the contract is signed and continue for three years. Tasks 6 and 7 will begin later, as shown on the schedule chart in the proposal body.

**Justification for Project and Funding by CALFED:**

CCCSD became aware of the need to reduce toxic pesticides entering the sewer system when it discovered that organophosphate pesticides (diazinon and chlorpyrifos) in its treated wastewater were killing the test organism *Ceriodaphnia dubia*. Other research has shown that diazinon is found in creeks throughout the Bay area, and during storm events, concentrations are often high enough to be toxic to some species of aquatic life. Similarly, urban creeks monitored in the Central Valley consistently show diazinon and chlorpyrifos levels that exceed Hazards Assessment criteria set by the Department of Fish and Game.

The Bay Area Urban Pesticide Committee, comprised of key stakeholders, concluded that the environmental threat from pesticide use warrants a widespread public outreach program, and drafted a pesticide education strategy. This proposal implements some of those strategies within central Contra Costa County. It will improve water quality in local creeks and in Suisun Bay, the discharge point for CCCSD's treated wastewater and, along with local creeks, the receiving water for central Contra Costa County's stormwater runoff.

Suisun Bay is a tidal perennial aquatic habitat and includes saline emergent wetlands habitat, priority habitats identified by the CALFED Bay-Delta program. The urban creeks provide instream aquatic habitat. The proposal addresses water quality, an identified stressor of the priority habitats and species. Diazinon and chlorpyrifos are listed as constituents of concern by the CALFED Water Quality Group.

**Budget Costs and Third Party Impacts:**

The total project cost is \$457,000, of which \$266,000 is requested from the CALFED Bay-Delta program. Because the project seeks to change pesticide use, it may affect the manufacturers/suppliers of pest-control products.

**Applicant Qualifications:**

CCCSD, the applicant and project lead, is a regional leader in pollution prevention, research, and public education. Project manager Bart Brandenburg, CCCSD's Pollution Prevention Superintendent, and assistant project managers Earlene Millier and Tim Tullis, have excellent track records in implementing grant-funded projects, including the pilot project on which this project builds.

This project will be implemented in cooperation with the University of California Cooperative Extension Master Gardeners and the Contra Costa Clean Water Program. Coordination will occur with additional agencies through the Urban Pesticide Committee and other forums. In addition, the project team includes IPM experts: The Bio-Integral Resource Center (BIRC) and Baefsky & Associates. It also includes Janet Cox and Associates and her sub-consultant Tucker and Associates, consultants with extensive experience in pollution-prevention education.

**Monitoring and Data Evaluation:**

CCCSD proposes to undertake the following monitoring/project evaluation steps:

1. Prepare quarterly reports to describe progress during the grant.
2. Track project participation (such as how many Master Gardeners were trained).
3. Request feedback from participants (such as through workshop evaluation forms).
4. Collect pesticide sales information from participating stores.
5. Measure public awareness through a follow-up survey to a 1994 baseline survey.
6. Continue to periodically evaluate the toxicity of its effluent and the presence of diazinon and chlorpyrifos in its influent and effluent.

**Local Support/Coordination/Compatibility with CALFED objectives:**

The project implements significant elements of the Urban Pesticide Committee's draft pesticide education strategy. Throughout the grant, CCCSD will coordinate with that committee as well as other groups (see page 7). The project supports the CALFED water quality objective and does not foreclose any CALFED restoration options.