# Verbena Fields Restoration Project

Chico, CA

## Project Purpose

Verbena Fields Restoration Project is a 20.9-acre, city-owned former gravel quarry adjacent to Lindo Channel at East First Avenue near Verbena Avenue in Chico, CA. The project is designated as a natural park and is being restored to resemble the native habitats that once existed there. Construction will expand and improve seasonal wetlands, increase floodplain width, restore native plantings, establish a Mechoopda Indian Interpretive Place, construct a loop walking trail and provide public education, as well as pre- and post-restoration site monitoring. Construction started in the late summer of 2008 and is expected to be completed by June 2009.

## Special Factors

The Verbena Fields Restoration Project is unique in that the project will create and restore a mosaic of natural habitats including flood plain, riparian, wetland, grasslands and oak woodlands. The irrigation system is designed to establish native plant material and is scheduled to be removed within three years. Site soils are relatively good but contain 40-60 percent of cobble by weight. Unique design elements include constructed bioswales to slow and treat stormwater runoff and live siltation plantings to establish flood plain habitat.

Irrigation design challenges include meeting irrigation requirements for a diverse and complex native habitat and soil-moisture management in challenging soils. Irrigation product selection criteria were based on water application efficiency, distribution uniformity and the ability to manage soil moisture. In addition, installation methodology was developed to facilitate removal of irrigation components and encourage recycling of irrigation components after removal.

## Role of Irrigation Consultant

To provide Project Coordination, Grading Plan, Construction Plan, Planting Plan, Irrigation Plan, Interpretive Signage, Bid Documents, Bid Administration and Construction Administration. More specifically, to design a temporary irrigation system that is highly efficient, water conserving and capable of preventing water waste from evaporation, runoff and deep percolation.

## Significance

The Verbena Fields Restoration Project is significant to the irrigation profession in promoting sustainable irrigation design practices by using new and innovative irrigation products in an environmentally responsible manner. The irrigation professional is now required to adapt to increasing variability of water supply, increasing competition for its use and reduced allocations. He/she is challenged to meet the requirements of water management districts, water ordinances, plant restrictions and equipment requirements. Consequently, greater knowledge, more understanding, increased precision and higher qualifications are necessary for the irrigation consultant to keep pace in a rapidly changing industry.