

Community Assets In Public Works Projects

Community Assets and Environmental Stewardship

The old school of thought on public works projects is that they should serve their function (i.e., treat wastewater) but not be seen, smelled, heard, and certainly not be accessible to the public. As more people are bound by the asphalt and concrete that fill our cities, there is a greater need for people to relate to nature, or to enjoy a little slice of paradise. Cities and agencies are increasingly being pressured to allow the public into public works projects, to treat the environment with respect and to create a community asset beyond its traditional functions. Today's public works facilities, including reservoirs, pumping stations, retention basins, and treatment plants must not only coexist in harmony with the neighborhood but offer a positive community experience. The nation's infrastructure facilities present a unique and often overlooked opportunity to provide a synergistic interface within their local communities.

Essential to creating a successful community asset is to create what people want, so a sense of ownership is developed. This requires not only community participation, but also input from local organizations such as schools and teachers, local and regional environmental and nonprofit organizations, and regulating agencies. Carollo Engineers has been assisting with the integration of the public and public works projects for decades. We have successfully led complex public involvement programs and have a policy of interfacing with regulating agencies in the early stages of projects to incorporate their ideas and determine their concerns. Carollo uses a concept known as "passive immersion" to lead visitors into and through public works facilities without conscious



Daly City's underground storage facility below the baseball diamond is one example of the integration of public amenities and a public works project.



The design of this reflecting pool feature in Portland, Oregon, was a result of local stakeholder involvement and community outreach efforts.

recognition that they were on a tour. Visitors are immersed in surroundings that are familiar yet entice them into learning through the use of eye-catching points of interest.

A rising interest in environmental impact and preservation has led to the idea of environmental stewardship. The goal of environmental stewardship is to preserve and enhance significant environmental features and create new opportunities for habitat. A key to meeting these goals is to understand the biology and ecology of the habitat proposed or already present. Part of environmental stewardship is understanding the impact of the public on wildlife and possibly limiting public access to certain areas or during certain times of year (e.g., nesting season). At the Riparian Preserve at Water Ranch in Gilbert, Arizona, recharge ponds were designed with deeper survival pools so that wildlife can retreat to the pools as the rest of the pond dries out. Incorporating features such as this into public works projects sets a new standard for achieving multiple benefits: for the wildlife using the facilities, for the public viewing the wildlife, and for the agency achieving its goals for the functional aspects of the project. A public agency that sets environmental stewardship as a goal and aims to create a community asset will reap the rewards of being forward thinking and having provided benefits for their communities for generations to come.

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Town of Gilbert, Arizona

The Town of Gilbert's Riparian Preserve at Water Ranch consists of approximately 70 acres of recharge basins and marsh areas designed to recharge 4 mgd of treated effluent or Central Arizona Project (CAP) water. It also includes a five-acre recreation lake that is supplied by two shallow aquifer wells. The facility also serves as a "wide spot in the pipe" to help manage seasonal demand fluctuations associated with Gilbert's reclaimed water distribution system.

Carollo helped design this riparian preserve to be a focal point for visitors and provide the opportunity for the community to learn about water management, the natural history of the region, and local wildlife.



Gilbert's Riparian Preserve at Water Ranch provides a focal point for visitors to learn about water management, the natural history of the region, and local wildlife.

The Preserve has a permanent marsh, and native riparian and upland vegetation areas. The plants in the park are native to the Sonoran desert and the planting design adheres to the principals of low maintenance xeriscape.

The project included specific elements to attract wildlife to the riparian area and enhance the park's public-use value. These include establishing native desert vegetation along pond margins, marsh vegetation in a permanent pond, and upland vegetation on adjacent upper slopes; interpretive exhibits to provide environmental education opportunities; and blinds for the public to view the area without disturbing the wildlife. The park also features a non-conventional play area consisting of concrete structures with organic shapes, a hand water pump with cascading stream bed, and old fashioned grassy hills to encourage imaginative child (and adult!) play.



Conceptual Plan for Polishing Wetlands and Public Facilities.

City of Petaluma, California

The City of Petaluma has embarked upon a project to replace their existing wastewater plant built in 1938 with a new ecologically and economically sustainable water reuse facility. The new facility includes: treatment wetlands to remove algae from undisinfectated water, polishing wetlands with public access (receiving disinfected water), preservation and enhancement of existing tidal marshes and riparian creek corridor, and development of educational facilities about the environment, green building features and wastewater treatment.

Unusual features designed for creating a community asset include: agricultural fields managed for butterfly habitat, native grasses, upland and riparian habitat, demonstration gardens, educational marsh walks, creation of bird blinds, and boat and kayak docks on the Petaluma River and tributary creek.



Carollo has worked with the City through the planning, predesign and design of the new facilities. The project

team includes experts in wastewater treatment with wetlands, wetlands biologists, landscape architects, specialists in green building design and an environmental artist. The project has required interfacing with a multitude of organizations including the Petaluma Wetlands Park Alliance (a local group formed in support of the project), Ducks Unlimited, the Audubon Society, local educators from the high schools and junior college, and the local mosquito abatement district. Funding for the public features of the project is being secured by the California State Coastal Commission and local open space district with the assistance of the San Francisco Bay Joint Ventures and the San Francisco Bay Institute, both nonprofit organizations with goals of restoring and enhancing the San Francisco Bay's wetland habitats.