Integrated WATER Services, Inc.

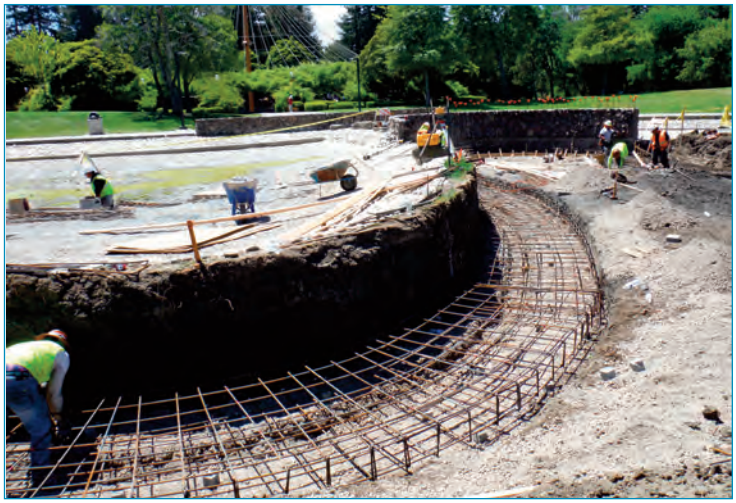
Constructed Wetlands Is Saving Silicon Valley Water

A before and after view of the project site

Integrated Water Services, Inc. (IWS) was selected by the City of Santa Clara, CA to construct an advanced multi-phase bio-filtration system to revitalize one of its showcase park's features, its Central Park Pond. The new system will save no less than 1.4 million gallons of potable water by switching to recycled water and the engineered wetland treatment system. The project had a very tight construction schedule which IWS met in time for the July 4th ribbon-cutting ceremony.

The old pond suffered from an imbalance in nutrients due to ducks, geese, and water runoff from the surrounding park bringing organic waste into the pond. The new bio-filtration system uses wetland plants to absorb the excess nutrients in the water, and the wetland plants used in the system will also provide habitat for birds and the insects they eat.

The IWS scope of work included demolition of some existing structures and piping, constructing a 175 ft. long and 8 ft. high stone faced concrete retaining wall, excavation in the existing island, placing the liner, importing and placing the aggregate for the bio-filtration system, all piping and pump installation, pond skimmers, and planting the vegetation on the surface of the treatment system. The engineered wetland treatment system uses the same processes as a natural wetland



Installing rebar for retaining wall footings

Site work in constructed wetlands treatment area

to clean the pond water, just at an accelerated rate. Bio-filtration is the primary process that removes algae, suspended solids, dissolved pollutants and nutrients, thereby keeping the pond water significantly cleaner and clearer. The pond includes wetland filtration cells in the middle of the pond. The wetland cells will contain a variety of wetland plants to mimic a natural wetlands' ability to filter water, resulting in a cleaner and healthier pond that more closely resembles natural pond environments. The bio-filtration system works by pumping water from surface skimmers in the lower pond into two wetland plant filtration cells.

The City of Santa Clara's Project Manager for the Central Park Project, Howard Salamanca, PE, was appreciative of the effort IWS made to complete the project under a very tight schedule: "IWS did a great job in mobilizing the resources to make this project happen by our July 4th ribbon cutting ceremony. It was a very tight construction schedule. We are very pleased with the work IWS did and with the outcome of the project".

Wetlands vegetation in foreground

For More Information Contact

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