

COLORADO RIVER DELTA RESTORATION PROJECT



Shaping the Future of the West

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Las Arenitas Treatment Wetland

The Las Arenitas Wastewater Treatment Plant began operation in 2007 to treat wastewater from the Mexicali region in Baja California. In 2008, the Sonoran Institute approached state agencies to construct an artificial treatment wetland in order to improve the Plant's effluent water quality. An agreement was established to dedicate 30% of the Plant's effluent water per year to the Hardy River, a tributary of the Colorado River. These flows have enhanced habitat along the Hardy, and the treatment wetland itself is an oasis for bird species.

What is an artificial treatment wetland? It is a constructed wetland designed to act as a biofilter to remove sediment and pollutants from partially treated wastewater. Natural chemical processes and microorganisms living in the wetland's vegetation break down organic materials over time and improve water quality.

Since its initial construction in 2009, the 250-acre Las Arenitas treatment wetland has significantly improved the Plant's effluent water quality. This is important for communities and wildlife in the region, as 1/3 of the Plant's effluent (12,000 acre-feet) is dedicated to the Hardy River, a critical habitat area for bird species and a popular recreation spot for hunting, fishing, boating, and swimming.



Aerial view of Las Arenitas Treatment Plant (bottom) and treatment wetland (top) in 2012.

As one of the only instances when effluent has been dedicated to environmental purposes in Mexico, the Institute hopes to build upon its success and construct an additional 250-acre wetland in order to double the effluent flows to the Hardy River and lower Colorado River.



Las Arenitas treatment wetland provides critical habitat for birds migrating along the Pacific Flyway, waterfowl species, and the endangered Yuma clapper rail. The Hardy River is a local recreational site and source of income for fishermen and hunters.

Benefits to Delta: The treatment wetland is scheduled for completion in 2014, but already it is benefiting communities and wildlife in the region. Improved effluent water quality has enhanced riparian habitat along the rivers, and the wetland itself has become a birding hotspot for resident and migratory birds. In turn, this has increased economic and recreational opportunities for communities along the Hardy.

Next Steps: Over the next few years, the Las Arenitas Treatment Plant plans to double its treatment capacity to meet growing demands. The Institute and partners aim to construct a second 250-acre treatment wetland to fulfill treatment requirements. If the project advances, an additional 12,000 acre-feet of water could be dedicated to the Hardy River. Additional flows would not only benefit the Hardy, but could reconnect the lower Colorado to the sea, improving estuarine habitat in areas upstream of the river's mouth.

Project Funders and Partners:

SEMARNAT



North American Wetlands Conservation Act
NAWCA



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