



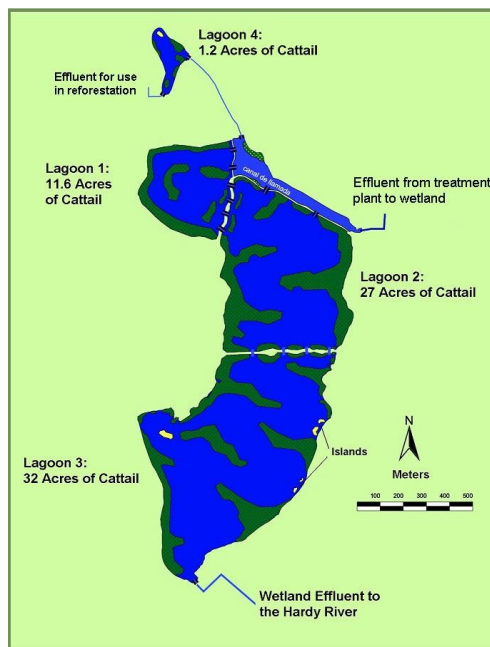
Las Arenitas Wetland

Las Arenitas Treatment Plant began operation in 2007 and currently treats 840 liters per second of domestic and industrial water in the Mexicali region. In 2008, the Sonoran Institute developed plans to construct an artificial wetland at the site in order to improve the water quality of effluent from the plant to be in accordance with environmental regulations.

The waste-water treatment plant Las Arenitas, located on the Mexicali-San Felipe highway, was designed and certified to discharge effluent to an agricultural drain, which flows into the Hardy River and later unites with the Colorado River. The certification requires that the plant comply with Norma Oficial Mexicana NOM-001-SEMARNAT-96, a set of environmental regulations for water treatment plants in Mexico. In the plant's initial operation, the effluent did not meet the required standards, raising concerns of users of the Hardy River.

The State Commission for Public Works of Mexicali (CESPM) has implemented a series of plant improvements to meet the required regulations and enhance the environment and economic activities on the Hardy River. To further improve the quality of the plant's effluent while providing habitat for a great number of diverse bird and fish species, the Sonoran Institute and Pronatura have partnered with CESPM to construct a 250-acre artificial wetland.

Wetland design consists of three main lagoons to hold and improve water quality through the processes of sedimentation and uptake of nutrients by vegetation.



Artificial Wetland Design



Blue-gray gnatcatcher perched on a mesquite tree in the reforested corridor

Successes Up-to-Date

- Dedication of 12,000 acre-feet per year of effluent from the wastewater treatment plant to environmental purposes.
- Revegetation of four acres with native plant species, including willow, cottonwood, mesquite, and ironwood.
- Establishment 14.8 acres of cattail, prime habitat for a multitude of bird species including the endangered Yuma clapper rail.
- Identification of 103 different bird species and a total of 12,162 birds following the implementation of a bird monitoring program.
- Increased involvement and interest of government agencies including new project partnerships with SEMARNAT and the Baja California Environmental Protection Secretary.

2011 Objectives

- Begin construction on dividing levies and gates to create three wetland lagoons for improved water flow and movement.
- Establish additional 30 acres of cattail beds, ensuring 80% survival rate.
- Monitor water quality and quantity and seasonal bird diversity and abundance at the wetland.
- Install a weather station and monitor changes in weather at the site.

