Stormwater Management System (SMS)

**Habitat Creation**
In the last 200 years, California has lost more than 90% of its wetlands to pollution and development. Of the 1,500 plant species historically native to Santa Barbara, most that are now threatened or extinct are wetland species. Habitat features like pools, islands, and mudflats allow the SMS to support a wide variety of plants in addition to providing refuge for many resident and migratory animals.

**Urban Runoff**
Urban runoff typically contains trash, oil, chemicals, pathogens, and other harmful substances. Through a series of natural processes these pollutants are extracted, broken down, and isolated from downstream ecosystems.

**Flood Control**
The San Clemente Stormwater Management System consists of three detention basins spanning 1 acre. It receives runoff from 14.5 acres of San Clemente Villages and El Colegio Res. These impermeable structures increase surface flow and raise the risk of flooding during storms. The SMS is designed to intercept high-energy flows and ensure they are safely discharged into the surrounding wetlands.

**PRE-TREATMENT**
Before water enters the system, hydrodynamic separation devices remove trash, debris, and oil through sedimentation and flotation.

**NUTRIENT UPTAKE**
Plants and microorganisms consume dissolved nutrients and store them in cellular material, which can be removed through periodic vegetation trimming.

**SEDIMENTATION**
Heavy metals and other chemicals bind to solid particles and become incorporated into sediments, which are deposited in the system.

**PERCOLATION**
Some water receives additional filtering as it passes through layers of subsoll and becomes groundwater.

**Did you know?**
The San Clemente Stormwater Management System is part of the Goleta Slough Watershed. In fact, the entire San Clemente Restoration Site eventually drains into the slough. Goleta Slough is home to many unique plant and animal communities including several rare and endangered species. Certain types of pollutants such as pesticides, fertilizers, and detergents are especially toxic to aquatic life and threaten to disrupt the slough’s sensitive ecosystem. By filtering urban runoff, the SMS plays a critical role in maintaining biodiversity and preserving regional ecology.