

## Lesson #3: Responding to the Needs of the Population: A Civic Action Project - Lesson Materials Document

### San Juan Bay Estuary Program Project Development Milestones

<p>The main impacts on the San Juan Bay Estuary system - development of the land, illegal sewage discharges, and aquatic debris – are all a result of human settlement and human uses. The intrinsic values of the estuary are being destroyed by uncontrolled urban expansion and contamination.</p>
<p>In recognition of the continued threats facing the estuary system, the Governor of Puerto Rico nominated the San Juan Bay Estuary system for the U.S. Environmental Protection Agency’s (USEPA) National Estuary Program (NEP) on April 16, 1992.</p>
<p>With inclusion in the NEP, the San Juan Bay Estuary system was designated as “an estuary of national significance.”</p>
<p>The San Juan Bay Estuary (SJBE) system has provided valuable resources to the residents of the region. People are attracted to the port, beaches, beautiful parks, and historical and natural areas, and these resources are vital to the regional economy. <b>However</b>, the needs of a growing population have resulted in the exploitation of the system’s natural resources and the degradation and destruction of many of the components of the estuarine system.</p>
<p><b>Identify, evaluate, and enhance</b> existing recreational facilities located within the San Juan Bay Estuary to promote ‘ecotourism, low-impact activities, and recreational uses of the resources. Ecologically sensitive areas not compatible with recreational uses will be identified at this stage. Suggested sites include Parque de La Esperanza, Isla de Cabra, Piñones State Forest, San Juan Bay Waterfront, Condado Lagoon, and La Torrecilla Lagoon. Implementing partners: Dep. Sport &amp; Recreation (lead), Dep. Of Natural and Environmental Resources, PR Planning Board, Local Communities, Municipalities Schedule: Mid-term Cost: \$100,000 to \$125,000</p>
<p><b>Survey and identify</b> appropriate areas for the development of new recreational facilities to serve various or specific passive and low-impact recreational uses. Ecologically sensitive areas not compatible with recreational uses will be identified at this stage. Suggested areas for potential development include the San José Lagoon waterfront, Guachinanga Island, Martín Peña Channel, Cataño-Guaynabo waterfront, Suárez Canal, San Juan Bay waterfront, Las Cucharillas Marsh, Vacía Talega - Torrecilla Alta area, and SJBE tributaries. Implementing partners: Dep. Sport &amp; Recreation (lead), Dep. Of Natural and Environmental Resources, PR Planning Board Schedule: Mid-term Cost: \$150,000 to \$200,000</p>
<p><b>Survey and identify</b> appropriate areas for the development of new recreational facilities to serve various or specific passive and low-impact recreational uses. Ecologically sensitive areas not compatible with recreational uses will be identified at this stage. Suggested areas for potential development include the San José Lagoon waterfront, Guachinanga Island, Martín Peña Channel, Cataño-Guaynabo waterfront, Suárez Canal, San Juan Bay waterfront, Las Cucharillas Marsh, Vacía Talega - Torrecilla Alta area, and SJBE tributaries. Implementing partners: DSR (lead), DNER, PRPB, EQB, Local Communities, Municipalities Schedule: Mid-term Cost: \$150,000 to \$200,000</p>
<p><b>Design and develop</b> recreational facilities for low-impact and nature-oriented activities within selected sites of the SJBE. Suggested recreational facilities include waterfront linear parks, mangrove fringing boardwalks, docks, interpretative trails, fishing facilities, visitor centers, bike trails, and birdwatching towers. Implementing partners: DSR (lead), DNER, Local Communities, Municipalities Schedule: Mid-term Cost: Available data are insufficient to determine costs at this time.</p>

**Promote** the use of existing facilities and low-impact recreational activities in accordance with each site's potential. Suggested activities include birdwatching, hiking, bicycling, kayaking, fishing, sailing, swimming, snorkeling, and sightseeing by boat. Implementing partners: DSR (lead), DNER, Local Communities, Municipalities Schedule: Mid-term Cost: \$200,000 to \$300,000

*During the school year*, the estuary collaborates with a public or private school to provide them with a tool kit to conduct water quality tests. The school adopts a body of water and commits to performing water quality monitoring activities during the school year, and the data collected from each school is saved in a database at the Estuary. The Estuary also supports each guardian school by offering talks, workshops, and special activities.

*Fish at the San Juan Bay Estuary also has significant economic and recreational importance*, particularly the catch-and-release fishing for tarpon at the Laguna San José. More than 1,200 tourists a year visit Puerto Rico specifically to enjoy this sport in the EBSJ. Fishing as a sport in the EBSJ can contribute around \$1.5 million annually to the local economy.

*Coral communities and their habitats* are mainly found on the entrance to the ocean in the San Juan Bay and Laguna del Condado– the lagoon with the greatest biodiversity in the estuary system. In order to improve aquatic communities, the Estuario de la Bahía de San Juan Program placed 45 modules of artificial coral reefs at the bottom of the Laguna del Condado. These modules known as “Taíno Reefs” imitate the coral reef's structures to create new habitats in the ocean. After six months, the first coral colonies were observed; in nine months the amount and diversity of fish had increased.

## Flowchart of the Civic Action Project

Flowchart to **UNDERSTAND**, **ASSESS**, **PLAN**, and **ACT** (from beacitizen.org)

### Understand

Flowchart to **UNDERSTAND**, **ASSESS**, **PLAN**, and **ACT** (from beacitizen.org)

Assess

Flowchart to **UNDERSTAND, ASSESS, PLAN, and ACT** (from [beacitizen.org](http://beacitizen.org))

Plan

Flowchart to **UNDERSTAND, ASSESS, PLAN, and ACT** (from beacitizen.org)

Act

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Class Period: \_\_\_\_\_

**Casa Pueblo Civic Action Plan Flowchart - Assessment Document**

**Understand**

**Assess**

**Plan**

**Act**