Healthy wetlands and communities for Southern California

Project Location

Tijuana River National Estuarine Research Reserve, California

Project Lead

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Targeted End Users and Products

- *Project overview*
- *Project final report*
- *Climate Understanding and Resilience in the River Valley: Future Scenarios Summary*
- *Webinar: Assessing Habitat and Community Sensitivity to Climate Change Impacts*

Project Partners

- *Tijuana River Reserve*
- *California Coastal Conservancy*
- *San Francisco Estuary Institute*
- *Sacramento State University Center for Collaborative Policy*
- *Southern California Coastal Water Research Project*
- *Southern California Wetlands Recovery Project*
- *Tijuana River Valley Recovery Team*

About the Science Collaborative
The National Estuarine Research Reserve System's Science Collaborative supports collaborative research that addresses coastal management problems important to the reserves. Learn more at *www.nerrs.noaa.gov.*

Overview

Southern California's coastal environments are under intense development pressure. In the Tijuana River Valley, this pressure translates into the fragmentation and loss of coastal wetlands that provide invaluable services, such as water quality protection. Conserving and restoring these wetlands has become a priority for regional coastal managers, scientists, and environmental organizations. However, despite a wealth of knowledge about these coastal systems, decision-makers lack essential information to transform wetland recovery and management priorities into action. In response, a team led by the Tijuana River reserve integrated the historical ecology of the region with information about the services that wetlands provide to develop a decision-making framework and tools to guide coastal wetland recovery and management in Southern California.

Project Benefits

- Created a decision making framework and a robust set of tools to help resource managers use information about past, current, and potential future changes to coastal wetlands to steer restoration and management goals in Southern California.
- The Southern California Wetland Recovery Project (WRP) used the project's results to update its Regional Strategy and work plan for protecting and restoring coastal wetlands.
- The Coastal Conservancy leveraged the project to receive funding from national agencies to further the development of the WRP Regional Strategy update.
- The team shared its decision-making framework with colleagues at San Francisco Bay reserve and other partners. This effort, called *Lifting the Fog*, took place in 2014 through a series of facilitated dialogues, trainings, and collaborative product development and resulted in a web site.

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Project Approach

The Tijuana River reserve led a team of scientists, coastal managers, and environmental organizations to develop a decision-making framework and robust set of tools to guide wetland restoration and management in Southern California.

- Stakeholder Engagement: The team conducted an issues assessment to understand local and regional stakeholder needs associated with wetland management. They partnered with the Southern California Wetlands Recovery Project and the Tijuana River Valley Recovery Team to conduct a historical ecological study of the Tijuana River Valley.
- Data Synthesis: The team synthesized ecological information about past, present, and future environmental conditions and ecosystem services in the context of climate change and altered landscapes.
- Vulnerability Assessment: Using this synthesis and the reserve's climate vulnerability assessment, they conducted scenario planning and developed GIS-based visualization tools to characterize changes in wetland ecosystem services over time.
- Framework Development: The team integrated the different types of temporal ecological information with stakeholder needs and developed a decision-making framework to support wetland recovery and regional planning under changing and uncertain conditions.