
PART 1

INTRODUCTION

Goleta Slough is a coastal wetland located along the central coast of California, a region with high biodiversity in which many species reach their northern and southern limits. Like many tidal wetlands along the Pacific Coast, the Slough has been greatly reduced in size and function over the past two centuries through a combination of natural processes, land use changes, and other human activities. The *Goleta Slough Area Sea Level Rise and Management Plan (Plan)* comprises an update to previous Slough management plans and includes new detailed information and analysis of future conditions projected to occur as the climate changes over the next century.

The City of Santa Barbara prepared the *Airport/Goleta Slough Coastal Plan* in 1982. This document, certified by the California Coastal Commission, recognized the importance of the Goleta Slough. In 1984, the City of Santa Barbara prepared an Environmental Impact Report/Environmental Assessment that analyzed the potential impacts associated with the 1980 Airport Master Plan. The EIR/EA found that there would be significant biological impacts in the Slough if all the projects envisioned in the Master Plan were implemented. The EIR/EA recommended that “A Goleta Slough Advisory Committee be organized by the City of Santa Barbara” and that a “Goleta Slough Preserve” be established.

1.1 Goleta Slough Ecological Reserve – 1987

The Goleta Slough Ecological Reserve was established in 1987 and is managed by the California Department of Fish and Wildlife (CDFW). The Ecological Reserve System, authorized by the California Legislature in 1968, is designed to conserve areas for the protection of rare plants, animals and habitats, and to provide areas for education and scientific research. The reserve includes approximately 400 acres located on Santa Barbara Airport property, which is owned by the City of Santa Barbara, and about another 40 acres owned by CDFW (see Figure 2-6). The City-owned portion of the Reserve is also designated as “Goleta Slough Reserve” and “Environmentally Sensitive Habitat Area” in the Coastal Plan and is in the original permit jurisdiction of the Coastal Commission. In 1988, a draft management plan was prepared for the Reserve by Dr. Joy Zedler. This plan was not adopted although it did serve as an important background document for later studies.

1.2 Goleta Slough Management Committee – 1991

In 1991, the City of Santa Barbara began an update to their *Aviation Facilities Plan*. The plan included projects that would encroach into wetlands in the Goleta Slough Ecological Reserve. At that time it was decided that, rather than prepare a plan that focused only on the Ecological Reserve, a more comprehensive plan was needed that addressed ecosystem-wide issues rather than just the habitats within the Reserve. This led to the establishment of the Goleta Slough Management Committee (GSMC) and the beginning of the *Goleta Slough Ecosystem Management Plan* process.

The Goleta Slough Management Committee (GSMC) was established in 1991 in recognition of the importance of the Slough and the challenge of managing it comprehensively.

A number of agencies have regulatory authority in the area including two cities, a county, several special districts, a public university, and several state and federal resource protection agencies (Figure 2-5). The GSMC was formed to work cooperatively with regulatory agencies, property owners and public interest groups to provide for a healthy Goleta Slough, irrespective of jurisdictional or other boundaries.

1.3 *Goleta Slough Ecosystem Management Plan – 1997*

In 1997, GSMC completed the draft *Goleta Slough Ecosystem Management Plan (GSEMP)*. The plan addresses 2,250 acres in and around the Slough, including the major creeks that drain into the marsh (see Figure 2-14). The GSEMP provides detailed background and natural history information about the Goleta Slough Ecosystem based on prior studies and planning documents prepared by the City and County of Santa Barbara, UC Santa Barbara, California Department of Fish and Wildlife and other regulatory agencies. Existing policies of those jurisdictions and agencies were synthesized into a list of goals, policies and actions in the GSEMP that addressed the following issue areas:

- Administrative Framework
- Protection and Maintenance
- Restoration and Enhancement
- Education, Research and Public Access

The plan was incorporated into the City of Santa Barbara's Airport/Goleta Slough Coastal Plan and certified by the California Coastal Commission although it has not been formally adopted by any other jurisdictions in the area. Outside the Airport area, the GSEMP serves as an informational document only. Since its adoption in 1997, the GSMC has been guided by the GSEMP as they have provided input to local agencies, restoration groups and property owners on projects, studies and plans that may affect the Goleta Slough Ecosystem (see Figure 2-4).

1.4 *Goleta Slough Marine Conservation Area – 2007*

On September 20, 2007, the approximately 160-acre Goleta Slough State Marine Conservation Area was created by CDFW. This Marine Conservation Area includes the area located below the mean high tide line within Goleta Slough and Atascadero Creek. This area is designated a "no take" zone where no marine life may be taken or caught.

1.5 *Existing Conditions and Monitoring Report – 2012*

In recent years, the GSMC recognized the need to update the GSEMP. The first step in that process was to update the natural resources, policy and other baseline information included in the plan. The GSMC worked with the Land Trust for Santa Barbara County to prepare the *Goleta Slough Ecosystem Existing Conditions and Monitoring Report* using funding from the California Wildlife Conservation Board. The report identified changes in development patterns and infrastructure, and habitat restoration and enhancement projects that had been completed since 1997. It added reference to the new City of Goleta, which was incorporated in 2002. Other legislation and policies applicable to the area were updated, and a new section discussing monitoring protocols was added. The status of implementation of the goals, policies and actions included in the original plan was provided in anticipation of this update to the GSEMP. Updated elevations were provided to serve as the basis for the Sea Level Rise Study that is also incorporated into this update.

1.6 Sea Level Rise and Vulnerability Assessment – 2014

The second major task related to the update of the 1997 Management Plan was the preparation of a sea level rise vulnerability assessment to help decision-makers, planners and land managers understand hazards and risks from sea level rise and to identify and prioritize adaptation strategies. These include infrastructure improvements, policy changes and management actions that will assist with adapting to sea level rise related impacts.

The state of California's Ocean Protection Council (www.opc.ca.gov) adopted a resolution in March 2011 based on work done by a task force including state agencies such as Caltrans, Fish and Wildlife, Water Resources and State Water Resources Control Board. The resolution states that sea level rise should be considered in all planning studies and projects. In March 2013, the OPC updated its *Sea Level Rise Guidance*, designed to help state agencies incorporate future sea-level rise impacts into planning decisions, to include the best current science, as summarized in the final report from the National Academy of Sciences, [Sea-Level Rise for the Coasts of California, Oregon, and Washington](#). In October 2013, state legislation was adopted (AB 691) requiring that cities, counties and special districts with leased tide lands (i.e., "trustees") whose gross public trust revenues average over \$250,000 annually prepare and submit to the Commission assessments of how they propose to address sea level rise. The bill would also permit, but not require, a local trustee whose gross public trust revenues are \$250,000 or less to prepare and submit to the commission an assessment. Given the importance of and interest in sea level rise and its potential impact in the Slough area, the GSMC pursued grants and agency funding to prepare a *Sea Level Rise Vulnerability Assessment* to incorporate it into this Plan.

In August 2015, the Coastal Commission finalized its *Sea Level Rise Policy Guidance* (available at <http://www.coastal.ca.gov/climate/slrguidance.html>), which provides an overview of best available science on sea level rise for California and recommended steps for addressing sea level rise in Coastal Commission planning and regulatory decisions. The guidance document includes updates to reflect newly developing science, tools, and resources for sea level rise adaptation planning. In drafting the Guidance, Commission staff coordinated with other California state efforts related to climate change and adaptation, that complements the *2014 Safeguarding California: Reducing Climate Risk* document produced by the California Natural Resources Agency by addressing issues specific to the Coastal Act, including Local Coastal Programs and Coastal Development Permits.

1.7 Other Studies and Plans in the Goleta Slough Area

As the GSMC is completing its Management Plan update in 2015, several other agencies are preparing similar studies and plan updates including:

- City of Goleta – Drafting a new Local Coastal Program for certification by the California Coastal Commission including preparation of hazard assessments and other technical studies, a Coastal Land Use Plan, and Implementation Plan.
- City of Santa Barbara –The City is preparing an update to their Local Coastal Plan that includes draft sea level rise adaptation policies. The Santa Barbara Airport is preparing an *Airport Master Plan and Draft Environmental Impact Report* and *Goleta Slough Mouth Management Study* relating primarily to the effect of the mechanical opening of the Slough mouth on sensitive fish species (Steelhead trout and Tidewater gobies). The

City also received a grant from Santa Barbara County's Coastal Resources Enhancement Fund (CREF) to conduct hydrologic modeling of the Goleta Slough inlet to further inform future mouth management actions. The hydrologic modeling study is attached as Appendix G.

- County of Santa Barbara – Preparing resource and planning tools databases, coastal hazard modeling, and mapping to conduct an analysis of coastal resource vulnerabilities as part of a process to update to their Local Coastal Program policies.
- California Sea Grant – Preparing the Santa Barbara Area Coastal Ecosystem Vulnerability Assessment (SBA CEVA) that will measure historic and project future daily temperature, precipitation and waves near shore for incorporation into an analysis of potential climate changes.
- University of California at Santa Barbara – In November 2014, the Coastal Commission approved the University's *Long Range Development Plan* that addresses UCSB's anticipated growth through 2025. One of the studies required by that plan is a sea level rise vulnerability and adaptation study.
- The Eastern Goleta Valley Community Plan, which covers the unincorporated area between Goleta and Santa Barbara, including portions of the GESMP area, is scheduled for final approval by the Board of Supervisors in fall, 2015.

One goal of the management plan update is for it to serve as a foundation for other studies in the area and as a platform for sharing of information. The updated Plan will provide “place holders” for these plans and studies so that they may be incorporated into the Plan in the future. Ideally the goals, policies and actions of the new Plan will be updated periodically to incorporate new information derived from these studies and plans.

1.8 Goleta Slough Area Sea Level Rise and Management Plan – 2015

The third and final step in updating the 1997 GSEMP is the preparation of this document, the *Goleta Slough Area Sea Level Rise and Management Plan* (Plan). This Plan incorporates information from the 1997 GSEMP, the 2012 *Existing Conditions Report*, the 2014 sea level rise study, the 2015 inlet modeling study, and new information from area studies as it becomes available. The development of the Plan involved many public meetings and focus groups related to infrastructure, environmental considerations, and input from local and regional government. The GSMC, in particular, spent many hours reviewing and providing input on drafts of the document, especially the updated goals, policies and actions, including establishing priorities for implementation.

The *Goleta Slough Area Sea Level Rise and Management Plan* is an informational document. The Plan synthesizes available information related to historic and existing condition of Goleta Slough and discusses current and anticipated future challenges related to the management of the Slough. The Plan concludes with a set of goals and policies that have been developed by the GSMC for the preservation and enhancement of Goleta Slough. The GSMC will encourage local jurisdictions to consider these goals and policies as they update their Local Coastal Programs and undertake new studies in the Goleta Slough area. We look forward to participating in these processes with the local community.