

Description of Project

Giacomini Wetland Restoration Project
Golden Gate National Recreation Area/
Point Reyes National Seashore

Project and Site Background

The National Park Service (Park Service) is proposing to conduct a wetlands restoration project at the Giacomini Ranch in Marin County, California. The Giacomini Ranch is in the north district of the Golden Gate National Recreation Area. The north district of the Golden Gate National Recreation Area (GGNRA) is administered by Point Reyes National Seashore (Seashore). In 2000, the Park Service purchased the property using a combination of federal and state funds. State funding was provided by the California



Robert Campbell

View of Tomales Bay with Giacomini Ranch in foreground.

Department of Transportation under an agreement with the California Coastal Commission that 3.6 acres of restored wetlands could be used to fulfill mitigation obligations resulting from a road repair conducted on Highway 1 in the early 1990s. The agreement also allowed for the possibility that up to 12.6 acres of restored wetlands could be “banked” by the California Department of Transportation to meet future mitigation needs, if the California Coastal Commission agreed. While 3.6 acres is the minimum that legally can be restored, the spirit of the agreement with the California

Department of Transportation and the other agencies calls for restoration of “a significant portion” of the historic tidal marsh. Under the purchase agreement with the Giacomini family, most (463 acres) of the Giacomini Ranch will be managed under reservation of use by the former landowners until 2007, when full management will be transferred to the Park Service. In the interim, the Park Service will be conducting environmental planning and permitting processes for the proposed project and possibly initiating restoration efforts on the 100 acres that are not under reservation of use.

The proposed project would restore most of the 563-acre Giacomini Ranch and nearby Olema Marsh, which are located at the southern end of Tomales Bay (**Figure 1**). Running along the eastern boundary of Point Reyes National Seashore, Tomales Bay is a 6,800-acre estuary that is approximately 12 miles long, one mile wide, and relatively shallow with an average depth of 18 feet (Tomales Bay Planning Group 2000). It occupies the ancient rift valley of the San Andreas fault zone (Daetwyler 1966). The Giacomini Ranch is bisected by Lagunitas Creek, which, with a drainage area of 81.7 square miles, represents the largest sub-watershed in Tomales Bay. The bisected

pasturelands are referred to as the East (adjoining Point Reyes Station) and West (adjoining Inverness Park) Pastures. Two other smaller creeks, Fish Hatchery and Tomasini, flow into the western and eastern portions of the Giacomini Ranch, respectively. Bear Valley Creek flows through the eastern side of Olema Marsh shortly before its confluence with Lagunitas Creek. The smaller, perennial Silver Hills drainage flows into the marsh's western side.

Prior to 1862, a substantial amount of the Giacomini Ranch was actually open water and intertidal mudflats, with the historic coastal salt marsh concentrated in the eastern portion of the ranch, Olema Marsh, and the mouth of Olema Creek (PWA et al. 1993; **Figure 2**). Logging, heavy grazing, and tilling in the latter half of the 19th century and early part of the 20th century, however, accelerated sediment delivery into the Tomales Bay watershed, resulting in a rapid growth of wetland habitat in the headwaters of the bay. Between the 1860s and the 1980s, approximately 650 acres of salt marsh habitat were created due to excessive sedimentation (PWA et al. 1993). The largest portion of sedimentation occurred prior to 1950: During the last 50 years, sedimentation delivery has been reduced due to the construction of several dams, including the Peters and Lagunitas Dams, which control about 70 percent of the Lagunitas Creek watershed (PWA et al. 1993). The rapid development of vegetated land allowed construction of the first dairy in the proposed project area around 1917 (PWA et al. 1993). Further expansion of the Lagunitas Creek delta in subsequent years encouraged Waldo Giacomini in 1946 to construct levees and reclaim approximately 563 acres of former salt marsh for conversion to pasturelands and dairy cattle grazing. Olema Marsh and the mouth of Olema Creek were leveed around the turn of the century for a road.

Approximately 50 percent of the 563-acre Giacomini Ranch is dominated by a mixture of non-native pasture grass and ruderal plant species that are adapted to grow in fresh or non-saline wetland conditions. However, failure of tide control structures on Fish Hatchery and Tomasini creeks, combined with some saline groundwater interaction, has allowed recolonization by salt-tolerant species such as pickleweed (*Salicornia virginica*) and saltgrass (*Distichlis spicata*) in about 20- to 25 percent of the pasturelands. In addition, freshwater inflow into the proposed project area from seeps along Point Reyes mesa and Inverness Ridge has created a complex mosaic of freshwater marsh and riparian habitat along the perimeter of the pasturelands and diked marsh habitats. Berming of Olema Marsh during the early 1900s forced the conversion of the historic tidal marsh that was once present into freshwater marsh and riparian wetlands. The complex mosaic of habitats has led to both the Giacomini



Giacomini Ranch.

Ranch and Olema Marsh supporting a diverse array of wildlife species, a large proportion of which are considered special status (Avocet Research Associates 2003). Most of these special status species are birds associated with the riparian-marsh complex present, particularly in the northwestern and southeastern portions of the Giacomini Ranch and in Olema Marsh (Avocet Research Associates 2003). Two other non-avian species that are listed as federally threatened or endangered do occur on the Giacomini Ranch, specifically the California red-legged frog (*Rana aurora draytonii*; federally threatened) and the tidewater goby (*Eucyclogobius newberryi*; federally endangered). The California red-legged frog also occurs in Olema Marsh, but the size of this population is unknown.

Project Purpose, Goals, and Need

In developing the project Purpose and Goals, the Park Service needed to integrate a number of factors or considerations, including:

- obligations to CalTrans and the California Coastal Commission to mitigate for impacts to aquatic habitat by restoration of at least 3.6 acres and preferentially restoration of a “significant portion” of the historic tidal marsh;
- the Park Service’s stated objectives at the time of the agreement;
- the Park Service’s own internal directives regarding protection of wetlands and floodplains and restoration;
- logistical constraints precluding return to historic conditions in 1860, specifically the high degree of sedimentation that has occurred in the southern portion of Tomales Bay since then.

Purpose: The purpose of the proposed project is to restore natural hydrologic processes within a “significant” portion of the Project Area, thereby promoting restoration of ecological processes and functions.

Goals: The Park Service has also identified several additional project goals:

1. Pursue a watershed-based approach to restoration in that restoration planning for the Project Area will emphasize opportunities to improve ecological conditions within the entire Tomales Bay watershed, not just in the Project Area itself.
2. To the extent possible, enable the public to experience the restoration process through passive public access opportunities as long as opportunities do not

conflict with the project’s purpose.

Restoring wetlands at the Giacomini Ranch will not only potentially increase habitat for special status species, but could benefit the Tomales Bay watershed ecosystem as a whole. The state of California has reportedly lost more than 95 percent of its coastal wetlands. The percentage of loss is not quite as high in Tomales Bay, but the minimal acreage and fragmented nature of coastal wetlands historically present within the watershed increases the impact of losses that have occurred. Coastal wetlands provide valuable functions for both humans and wildlife through floodwater storage, food

production, and filtration of nutrients and sediments. Increasing acreage of coastal wetlands could increase wetland functions and result in improved environmental conditions for both humans and wildlife in the Tomales Bay watershed. The San Francisco District of the Regional Water Quality Control Board has determined that Tomales Bay is impaired by sediment, nutrients, fecal coliform, and mercury under Section 303(d) of the Clean Water Act. This impairment jeopardizes not only but the bay's well-known oyster fisheries, but the wildlife species that use Tomales Bay for breeding or foraging habitat such as Pacific harbor seals, seal lions, gray whales, California brown pelican, and Pacific herring.

Project Planning and Status

The Park Service is currently in the planning stages for the restoration project. Because Lagunitas Creek is owned by the state of California, the proposed project will actually undergo a joint National Environmental Policy Act (NEPA)/California Environmental Quality Act (CEQA) process. The Park Service will act as the project manager and lead NEPA agency, and State Lands Commission will act as the lead CEQA agency. The Park Service is also collaborating with the Gulf of the Farallones National Marine Sanctuary, Audubon Canyon Ranch, and County of Marin.

Baseline studies for the project have been underway since 2001. Most of these studies have been completed, but as Olema Marsh was incorporated as a component of the project in 2004, these studies are still ongoing. A Notice of Intent and Notice of Preparation for the project was issued in September 2002 and January 2003, respectively. Public scoping was held during the fall and winter of 2002-2003. The Park Service is currently developing preliminary alternatives for the restoration project. The Park Service has been conducting a series of alternative workshops to gather input from internal staff, regulatory agencies, local agencies and organizations, and adjacent landowners on the proposed preliminary restoration alternatives. **A public alternatives workshop is scheduled for June 22, 2004.** Work on the environmental document and formal Section 7 consultation with U.S. Fish and Wildlife Service and NOAA Fisheries are expected to begin later this year.

If a restoration project is approved, the Park Service expects that construction could begin as early as 2006 on the lands that it currently owns and manages. Due to construction timing issues related to presence of special status species, construction would be phased over at least two (2) to three (3) years.

Scoping Issues

Issues raised during scoping included some of the following topics. A scoping report is available that lists comments and concerns in more detail.

- **Flooding:** How might the project increase flooding in the southern portion of Tomales Bay, specifically to Levee Road, private homes in the West Pasture near Inverness Park, and Sir Francis Drake?

- **Impacts to adjoining communities:** How might the project increase traffic or noise to adjoining communities such as Point Reyes Station and Inverness Park?
- **Inclusion of Olema Marsh in restoration project:** Should Olema Marsh be included in the restoration project, as Olema Marsh and Giacomini Ranch once represented an integrated complex of historic tidelands?
- **Land use changes:** How will the project affect status of agricultural lands in West Marin?
- **Public access:** How might the project increase safety of biking in the Inverness Park-Point Reyes Station area by providing multi-use paths in the Giacomini Ranch? Should the project minimize public access to minimize disturbance to wetlands and wildlife?
- **Public health:** How might restoration affect numbers of mosquitos and potential for vector-borne diseases?
- **Rare plants and animals:** The Giacomini Ranch and Olema Marsh are home to a number of rare plants and animals. How might restoration affect use by special status species through changing factors such as salinity dynamics?
- **Saltwater intrusion into local groundwater wells:** How might restoration affect saltwater intrusion into North Marin Water District (NMWD) groundwater wells located upstream of the Project Area?
- **Water quality:** What are the potential short-term and long-term impacts and benefits to water quality from restoration?
- **Wetlands:** How might restoration affect wetlands in the southern portion of Tomales Bay and in California in general?

Literature Cited

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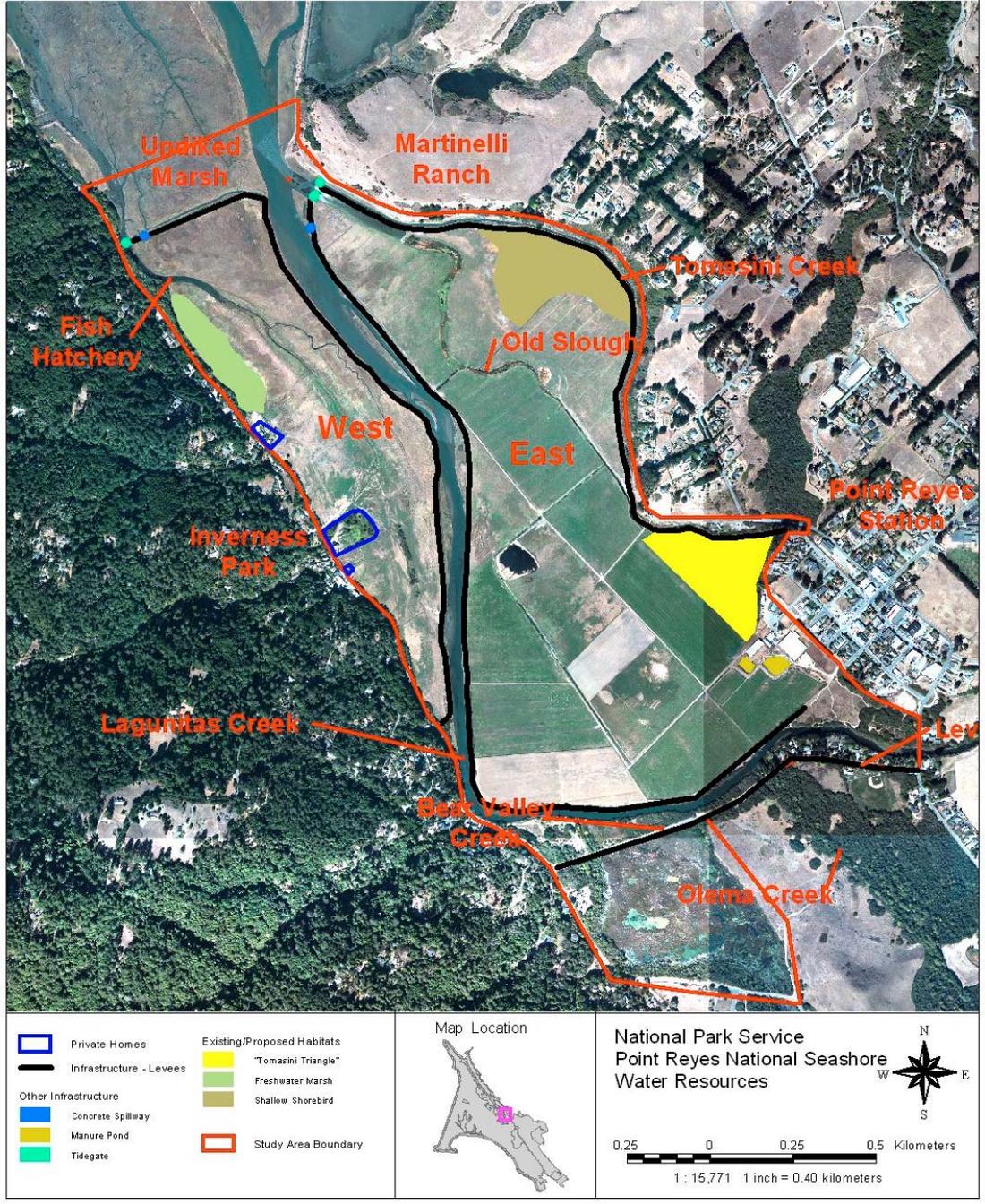
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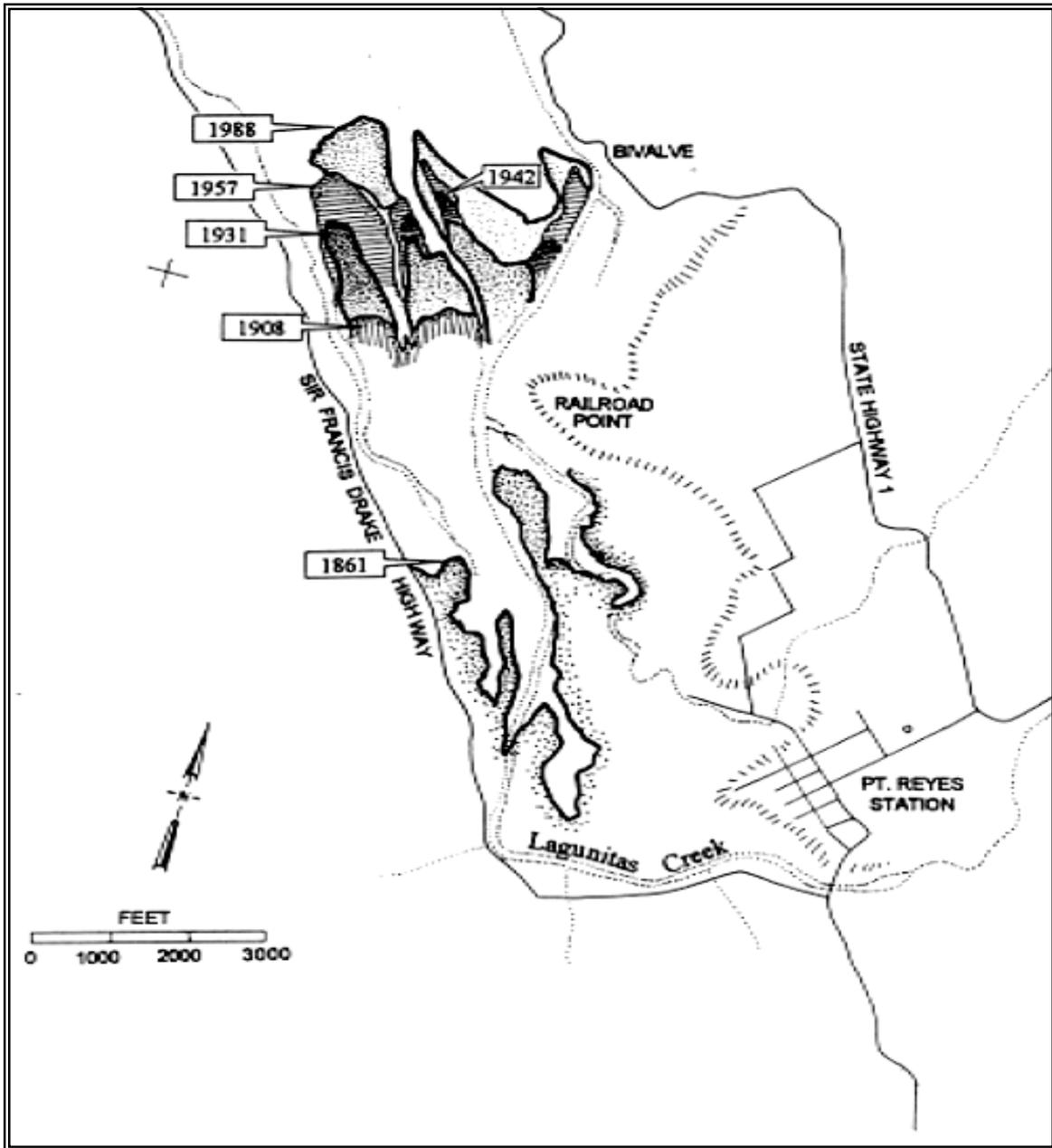
Giacomini Wetland Restoration Project

Golden Gate National Recreation Area



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Figure 1. Giacomini Wetland Restoration Project Study Area. Marin County, California. Map shows some of the existing infrastructure and habitats.



Phillip Williams and Associates, Ltd., 1993

Figure 2. Giacomini Wetland Restoration Project Study Area. Marin County, California. Expansion of Lagunitas Creek delta. Location of Edge of Marsh from 1861-1988.