

**Golden Gate Audubon San Francisco Conservation Committee**

**and**

**San Francisco Bay Bird Observatory**

Southern Waterfront Monitoring at the

Port of San Francisco properties

2007

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## **Abstract**

The Port of San Francisco owns the piers and structures along San Francisco's waterfront. The Port's responsibilities include promoting maritime commerce, navigation, and fisheries; providing public access and recreation; and restoring the environment. More than 1,000 acres fall under its jurisdiction. The Port faces significant security, maintenance, and cost considerations that require some or all of these structures to be removed. Golden Gate Audubon Society volunteers conducted a survey of some of the piers potentially slated for demolition to identify any habitat issues. The goal of the survey was to identify any nesting and roosting birds, any special-status species using these structures, and any physical features that birds use on Port property that could possibly selectively preserved. The Golden Gate Audubon Society offers the findings of its survey as information to be considered in planning for demolition, rehabilitation and/or redevelopment of the subject piers.



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**SAN FRANCISCO BAY BIRD OBSERVATORY**

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## Introduction

On February 12, 2007, the Facilities Assessment Team from the Port of San Francisco published a list titled “Condemned Piers, Wharves and Aprons Scheduled for Demolition” to prepare for, prioritize and schedule future demolition projects (staff report to the Port Commission). The facilities on the list are posted as unsafe for occupancy and have been barricaded for public safety to prevent access. These facilities have served their useful purpose to the Port and no longer fulfill any operational or functional need. After consulting with Port staff, the Golden Gate Audubon Society (GGAS) initiated a survey of the piers to determine if the piers were being used for nesting or roosting purposes. The locations are listed below:

- Pier 96 Lash Barge Finger Pier – An 80-foot span of this structure collapsed into the Bay in the summer 2006. The structure has not been used for decades and no viable future use for this structure is envisioned by Port staff.
- Pier 90 Grain Terminal Apron – An antiquated facility, not used since the 1970’s. This structure has been condemned for years and is now falling into the Bay.
- Derelict wharf on Islais Creek west of Third St. – (not including the Copra Crane)
- Wharf 7 at Pier 70 – This structure has disintegrated to a large degree with remaining sections consisting primarily of piles sticking out of the water. There is nothing that can be done at this site except removal of the structural remains
- Wharf 8 at Pier 70 – This pier was used to pump oil from ships to nearby storage tanks. As recently as five years ago, some boats would still tie up to the structure. At one point, Port staff briefly considered retaining the pier and repairing it so that it could serve as a breakwater for dry dock operations, but this option, on its face, appeared too costly.
- Pier 64 – This facility has been disintegrating for a long time, and now consists of nothing but piles sticking out of the water.
- Pier 60, former Carmen’s Restaurant – The 4<sup>th</sup> Street bridge project forced the relocation of Carmen’s Restaurant. Following the move, Port staff evaluated the facility and determined that the substructure had deteriorated beyond the point of repair. A subsequent fire ensured that demolition was the most viable way forward for this facility.
- Pier 52, former railroad barge loading facility (potentially historic)

- Pier 36 and the marginal wharf between Piers 32 and 36 – Plans to construct the planned Brannon Street Wharf require removal of this pier. Removal is included in Bay Conservation & Development Commission’s (BCDC) special area plan.
- Remaining portion of Pier 24 adjacent to the Bay Bridge support pier – removal of this left-over piece of Pier 24, which should have been removed along with the original demolition of the pier, is a requirement of BCDC.

The Southern Waterfront along San Francisco Bay is now planned as part of the 13-mile publicly accessible Blue Greenway, which links open spaces and creates recreational spaces and green infrastructure. The area supports a variety of birds and other wildlife as an important foraging and roosting site. One species which in San Francisco breeds only along the Southern Waterfront is the Caspian Tern, *Sterna caspia*. The other species that breeds in the area is the Western Gull, *Larus occidentalis*. The Southern Waterfront is a significant area because of the overall decline in San Francisco Bay habitat available for birds and other wildlife.

Monitoring was conducted during the summer nesting season for gulls and terns. This report contains the results of 9 surveys conducted between June 3<sup>rd</sup> and September 1<sup>st</sup>, 2007, by eight volunteers from GGAS and the San Francisco Bay Bird Observatory (SFBBO).

Monitoring did not include night roosting, nor did it include the months from September through May.

### **Natural and Cultural Significance**

The piers and wharfs along the Southern Waterfront were constructed between approximately 1910 and 1980. Over time, these structures have deteriorated. The San Francisco Department of Public Works identified potential issues with the sites as part of their Embarcadero Roadway evaluations following the 1989 earthquake. The Port’s engineers confirmed the structural issues and established the Facilities Assessment Team (FAT) to evaluate the area.

### **Survey Area**

The survey area includes Piers 24, 36, 64, 96, the wharf near Islais Creek, and the Lash Lighter Pier across from Heron’s Head Park. Each survey required two volunteers, each with binoculars, and one volunteer with a spotting scope. The duration of each survey was approximately two hours. The survey times were selected to avoid traffic from the Giant’s baseball games and other activities scheduled at SBC Park.

There was no visual access to end of the following piers: 24, 42, 36, and 52. There was no access near Pier 70, Wharf 7, or Wharf 8. An attempt was made to view Wharfs 7 and 8 at Pier 70 from BAE Systems, a Port tenant, but monitoring was not successful due to fence barricades. GGAS and SFBBO volunteers did not have access to a boat for surveying structures from the water.

## Western Gulls Pier 96



### **Survey Technique**

Volunteers conducted two-hour surveys from the trail at Heron's Head Park and from the sidewalk or the street closest to the Pier locations using binoculars and spotting scope. Survey times included mornings, afternoons, weekdays, weekends, high tides, and low tides. All bird species were recorded.

### **Observers**

Regina Anavy  
Eddie Bartley  
Leslie Flint  
Richard Dreschler  
Charles Hibbard  
Lee Karney  
Donna Nicolette  
Noreen Weeden

### **Survey Dates**

June 3  
June 22  
July 11  
July 18  
July 21  
July 27  
August 4  
August 16  
August 25

## Results

### Species Observed

The following 18 species of birds were observed within the dilapidated pier area during the course of the surveys:

Western Grebe \*  
Double-crested Cormorant \*  
Mallard \*  
Red-shouldered Hawk \* #  
Black Oystercatcher \*  
Great Blue Heron \*  
Snowy Egret \*  
Herring Gull \*  
Glaucous-winged Gull \*  
Western Gull \*  
Heerman's Gull \*  
Caspian Tern \*  
Elegant Tern \*  
Forster's Tern \*  
Black Skimmer \*  
American Crow \*  
Rock Pigeon  
Barn Swallow \*

### NOTE:

\*Indicates bird species protected by the International Migratory Bird Species Act which covers all of their parts including eggs, nests and feathers.

# indicates the bird species is protected under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

### Other Observations:

Two Black Skimmers were observed on 06/22/07 at Pier 60. This was the first San Francisco reported and verified sighting of this species. The American Bird Conservancy lists the Black Skimmer on their "Green List" for highest priority birds in the United States and Canada. The Black Skimmer is listed under the category of moderately abundant with declines or high threats. The Black Skimmer may be expanding its' range northward.

A kayaker reported 2 Black Crowned Night Herons on 06/03/07 under the Islais Creek Bridge, but these could not be observed.

A Buff Breasted Sandpiper was observed 08/25/07 outside the survey area on the rocky shore of Heron's Head Park by observers. This is also a new species for San Francisco although reported and verified by other birders.

## Nesting Birds

Caspian Terns and Western Gulls were observed nesting.

The Caspian Tern is the world's largest tern. It has a large red bill with a dark tip, black cap, white neck; wings are white with black wingtips with a light gray body and notched tail. Caspian Terns nest in colonies on the ground and are vulnerable to disturbance at these sites. Aerial chases are performed by 3 to 5-year-old birds as part of pair bonding. They lay one to three pink eggs with brown spots in a scrape nest on rocks or sand, which may be lined with seaweed and moss. They have one brood per year. Caspian Terns are generally monogamous, but retention is based on nesting site stability. Chicks recognize the calls of their parents and stay near the nest for the first week after hatching. Adults feed the chicks, which they recognize initially by down color for 5-7 months. Human disturbance of nesting colony reduces nesting success. The Caspian Terns migrate to Baja California and as far as to Columbia for the winter.

The Western Gull is the only gull that regularly nests in San Francisco. Western Gulls have a dark back, yellow bill with a red spot and bulbous tip, pink legs and feet, black wingtips and dark grey undersides of secondary feathers in flight. The Western Gull builds a nest of grass and other vegetation on rocks, ground, boats, rooftops, and abandon piers. They are monogamous and lay 3 mottled eggs. The eggs can survive temperatures up to 114 degrees Fahrenheit. An unusual behavior is that the gull will soak its belly to cool the eggs. One mate will guard the nest while the other mate incubates the eggs. Adults teach young to drop shellfish to crack open food. Young leave after 70 days. The bird ranges from the West Coast of British Columbia, Canada, to Baja California, Mexico.

### Nesting and Roosting

The following table shows the species observed using the pier area for nesting and roosting, which would be those most impacted by demolition, construction or other disturbance.

<b>SURVEYS SPECIES OBSERVED</b>	<b>HIGH COUNT</b>	<b>LOW COUNT</b>
Black Oystercatcher	2	0
Western Gull	134	22
Caspian Tern	75	4

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Species	Location	Date Observed	Nesting	Roosting	Active Nests	Adults	Chicks	Comments	
Caspian Tern <i>Sterna caspia</i>	Pier 60	04/07/06		X	0	5	0	Only San Francisco nesting location for this species. This location is the northern part of Agua Vista.	
		04/17/06		X	0	10	0		
		04/21/06			X	0	8		0
		04/29/06	X	X	3	15	0		
		05/07/06	X	X	6	17	0		
		06/04/06	X	X	11	39	8		
		06/19/06	X	X	4	21	12		
		07/08/06		X	0	29	20		
		08/12/06		X	0	37	2		
		05/06/07			X	8	18		0
		05/20/07			X	10	14		0
		06/03/07	X	X	10	20	2		
		06/17/07	X	X	8	23	4		
		06/22/07	X	X	7	47	7		
		07/08/07	X	X	9	66	8		
07/18/07	X	X		43	5				
07/27/07	X	X		67	6				
08/12/07	X	X	0	138	28				
Western Gull <i>Larus occidentalis</i>	Islais Creek	07/11/07	X	X	1	3	0	Western Gulls nest on abandon piers and Alcatraz Island	
Western Gull	Pier 24	06/03/07	X	X	4	8	0		
Western Gull	Pier 36-32	06/03/07	X	X	3	31	0		
		06/22/07	X	X	4	12	0		
		07/11/07	X	X	3	17	3		
		07/27/07	X	X	1	35	3		
		08/25/07		X	0	26	5		
Western Gull	Pier 60	06/03/07	X	X	2	12	0		
		06/22/07	X	X	4	4	7		
		07/11/07	X	X		7	9		
		07/18/07	X	X	1	10	5		
		07/21/07	X	X		2	6		
		07/27/07	X	X		2	0		
		08/25/07		X		6	18		
Western Gull	Pier 64	08/25/07	X	X		26	5		
Western Gull	Pier 96	06/03/07	X	X	2	8	0		
		06/22/07	X	X	4	11	0		
		07/27/07	X	X	5	23	3		
		08/25/07	X	X	0	53	11		

Black Oystercatchers and Western Gulls at Pier 96



## Disturbances

Although monitoring disturbances to birds' roosting and nesting were not part of the survey, the surveyors noted significant disturbances observed while conducting the surveys.

For example, on June 22, a family was seen within the barricaded area to the north of Agua Vista Park at the former Pier 60 site where gulls and terns were nesting. Fireworks, even those labeled as "safe and sane" are illegal in San Francisco and are known to cause birds to flush and possibly abandon their nests. On the July 11 survey following the July 4<sup>th</sup> Holiday, debris from fireworks was noted and photographed at Pier 60.

Evidence of fireworks after the 4<sup>th</sup> of July holiday



## Information about nesting and roosting species

**Double-crested Cormorant** *Phalacrocorax auritus*- This is the most common cormorant in San Francisco Bay. The plumes on the side of this bird's head during the breeding season give it the name Double-crested Cormorant. The bird is dark with an orange or orange yellow facial skin. The Double-crested Cormorant eats fish and is a colonial nesting bird which breeds locally at Lake Merced.

Double-crested Cormorant on Pier 96



**Black Oystercatcher** *Haematopus bachmani* - The Black Oystercatcher is a resident bird of the San Francisco Bay and is listed as a Species of High Concern on the 2004 US Shorebird Conservation Plan. This designation was established based upon factors of population trends, breeding threats, and non-breeding distribution. The total population for the Black Oystercatcher is listed at 8,850. Black Oystercatchers live on the rocky Pacific Coast and forages in the mudflats. Their diet consists of shellfish which they open using their bright red bills. Conservation issues include oil spills like the Exxon Valdez, human disturbances, foxes and rodents which prey upon their young.

## Black Oystercatcher Heron's Head Park



**Western Gull** *Larus occidentalis*- This medium sized gull eats fish, squids, chicks and eggs of other seabirds, dead animals and garbage when other food is not available or when it is too available like after a baseball or football game in San Francisco. Western Gulls are non-migratory and live along the Pacific Coast. The adult has a yellow bill with red spot. Audubon estimates the population at 40,000 pairs at 200 nest sites. The Western Gull takes 4 years to reach adult plumage. Western Gulls nest in colonies offshore on islands, including Alcatraz Island and on abandon piers, where it can depend on other birds in the colony to alarm when a predator is in the area. The female lays three eggs which are incubated for a month by male and female. After six to seven weeks the chick can fly. The juvenile birds leave the nest site after about 10 weeks. Nesting pairs tend to use the same territory. The Western Gull may live up to 25 years although 10 to 15 is average. Predators of the Western Gull include hawks, eagles, sea lions, and seals.

Western Gull at Pier 96



**Caspian Tern** *Sterna caspia*– The Caspian Tern is a migrating bird. Most Juveniles stay at their wintering grounds. Eats primarily fish, and may eat crayfish and insects. These birds do what is called “pellet casting” a couple times daily to release scales and bones. Caspian Terns make several calls; chicks start calling while is still in its egg. They form flocks for overnight roosting and while migrating. It is a colonial breeding bird. Caspian Terns make scrape nests for one to three eggs in natural environments on sandy islands. They produce one clutch per year. They are active day and night; they are aggressive at breeding and roosting sites. Risks: Loss of habitat. Egg and chick predation from mammals and other birds especially gull species.



Photo: Caspian Tern at Agua Vista – Eddie Bartley – Nature Trip

## **Conclusions & Recommendation**

Survey data shows that birds nesting within the dilapidated piers include the Caspian Terns and Western Gulls. GGAS recommends that the Port of San Francisco schedule any construction, rehabilitation, or removal of pier structures at a time that does not impact the nesting of either Western Gulls or Caspian Terns, preferably November to January to avoid the nesting season February-September. The Black Oystercatcher is seen along the rocky shoreline and pier areas at Heron's Head Park and at Pier 94.

A study from a boat is recommended to see the structures that cannot be viewed from the road or sidewalk access points that are blocked by fence barricades at Piers 24, 42, 36, 52, and at Pier 70's Wharf 7 and Wharf 8.

US Fish & Wildlife supports the Caspian Tern colony in San Francisco. While US Fish & Wildlife supports the colony, they cannot provide any resources toward a man-made structure, but instead support natural, sandy island habitat secure from predators for Caspian Terns. The Birds of North America reports that islands constructed of sand and pea gravel have been successful in creating Caspian Tern colony nest sites. US Fish & Wildlife is currently constructing Caspian Tern colony nest sites at several salt pond island locations in California in hopes that the birds will nest there as part of the Final Caspian Tern Management Plan for the Columbia River Estuary.

Potential alternatives for the Caspian Terns include:

- 1) In conjunction with US Fish and Wildlife and Candlestick Point State Park, these agencies could create a sandy island for Caspian Tern nesting. This area would need to be off limits to disturbances by dogs, feral cats or other mammals, humans, and kayaks. Once the new sandy island is used for nesting, then the following October through May (during non-breeding months) the current nesting habitat could be demolished. The feasibility and costs are unknown although there is a large Candlestick Point State Park project underway that includes the revitalization of Yosemite Slough.
- 2) If at some future date the Port of San Francisco plans to remove piers, particularly Pier 64, then prior to implementing that demolition and removal, the Port of San Francisco should find a method of mitigation that includes evaluating creation of a sandy island or other similar feature in advance of the demolition and with efforts to relocate the species.

**Resources:**

*A Field Guide to 100 Birds of Heron's Head* 2007, Eddie Bartley, Alan Hopkins, Noreen Weeden, Zlatunich, edited by Mark Chambers

*Caspian Tern* – The Birds of North America, No. 403, 1999 Francesca J. Cuthbert and Linda R. Wires

Gull Tern and Shorebird Nesting Data Sheets 2006 and 2007 – San Francisco Bay Bird Observatory

Point Reyes Bird Observatory – Meredith Elliott

Port of San Francisco “*Condemned Piers, Wharves and Aprons Scheduled for Demolition*” dated February 12, 2007.

San Francisco Bay Bird Observatory – Janet Hanson, Executive Director  
Donna Nicoletti and Dan Singer – volunteers

*The Birder's Handbook* 1988, Paul R. Ehrlich, David S. Dobkin, and Darryl Wheye, Simon & Shuster Inc, New York, NY

US Fish & Wildlife – Nanette Seto, contact for Record of Decision and EIS for the Final Caspian Tern Management Plan for the Columbia River Estuary