

## **6.16 15<sup>TH</sup> AVENUE STEPS**

### **GENERAL DESCRIPTION AND LOCATION**

The 15<sup>th</sup> Avenue Steps Natural Area is located in the Golden Gate Heights area of San Francisco. This 0.3-acre Natural Area is the extension of 15<sup>th</sup> Avenue between Kirkham Street on the north and Lawton Street on the south (Figure 1-1). Elevations range from approximately 350 feet on Kirkham Street at the lower end of the Steps to 450 feet above sea level on Lawton Street at the upper end of the Steps. Access to the Natural Area is by a set of concrete stairs that bisect the Natural Area (Figure 6.16-1). The 15<sup>th</sup> Avenue Steps Natural Area provides views of the surrounding neighborhoods, supports native oak trees and habitat suitable for a variety of resident and migratory bird species and thus, has high natural resources values for San Franciscans.

### **GEOLOGY, HYDROLOGY, AND TRAILS**

This Natural Area consists of dune sand overlying Franciscan chert bedrock (Figure 6.16-2). The bedrock is not exposed at this site, but is known from a quarry (now redeveloped) across Lawton Street from the upper end of the Steps. The wind-driven sand that forms on the surface soil is anchored on the steep bedrock slopes (a little less than 1:1) by California blackberry scrub and coast live oaks. A landslide scar behind a residence near 14<sup>th</sup> and Kirkham (northeast of the Steps) is evidence of the instability of this soil on such steep grades.

There is no surface water at the site. Previous observation of seeps behind residences along Kirkham and Lawton Streets during the rainy season indicated the presence of shallow groundwater. Drainage of the area is by overland flow. There are natural runoff-formed furrows down the slopes that are not eroded extensively because of the ground cover. Adjacent to the concrete stairs and platforms, deeper ruts have formed where the ground cover is missing. Both parcels have small patches of nearly bare soil that have resulted from a combination of natural forces (stormwater runoff, wind, animals) and trampling by people climbing on the slopes, but no well-defined network of designated trails has developed.

### **VEGETATION**

The vegetation of 15<sup>th</sup> Avenue Steps was classified into three series, all dominated by native species (Table 6.16-1; Figure 6.16-3). Coast live oak was mapped at the 15<sup>th</sup> Avenue Steps and accounted for 0.12 acres, or approximately 48 percent of the total area. Point sampling within the oak woodlands at 15<sup>th</sup> Avenue Steps resulted in observations of 28 plant species, 13 of which were native and accounted for 84 percent of the cover. A single scrub series, California blackberry scrub, accounted for an equal area. A very small patch of Italian ryegrass/California blackberry mosaic (0.01 acres) was mapped on the southeastern side of the stairs at 15<sup>th</sup> Avenue Steps.

## **Sensitive Plant Species**

The California Natural Diversity Data Base (CNDDDB) does not report the occurrence of any sensitive plant species at the 15<sup>th</sup> Avenue Steps (CNDDDB 2005). None of the species designated as sensitive for this management plan have been recorded at 15<sup>th</sup> Avenue Steps.

## **WILDLIFE**

### **Birds**

The multi-storied habitat of the area provides suitable foraging and roosting habitat for a variety of species. The scrub habitats provide excellent nesting areas for smaller birds (passerines). The small areas of coast live oak forest are likely too small to provide suitable nesting habitat for raptors. The CNDDDB does not report the occurrence of any special-status species of birds nor are there records of sensitive bird species for the 15<sup>th</sup> Avenue Steps (CNDDDB 2005).

### **Mammals**

To date, no small mammal surveys have been conducted at the 15<sup>th</sup> Avenue Steps. The CNDDDB does not report the occurrence of any sensitive mammal species within the area (CNDDDB 2005). Small mammals such as the house mouse (*Mus musculus*), Norway rat (*Rattus norvegicus*), and pocket gopher (*Thomomys bottae*) may use this Natural Area. Larger mammals such as raccoons (*Procyon lotor*), striped skunks (*Mephitis Mephitis*), and Virginia opossum (*Didelphis virginiana*) are typical of urbanized parks in general and are expected to occur within the 15<sup>th</sup> Avenue Steps.

### **Reptiles/Amphibians**

A survey of the 15<sup>th</sup> Avenue Steps by an EIP biologist and a San Francisco Recreation and Park Department (SFRPD) volunteer on the morning of May 17, 1999, did not result in observations of any reptiles or amphibians. No additional surveys have been conducted at the 15<sup>th</sup> Avenue Steps. Snakes and lizards may use this Natural Area. The CNDDDB does not report the occurrence of any sensitive reptile or amphibian species within the area (CNDDDB 2005).

## **MANAGEMENT AREAS**

A single Management Area (MA-2a) has been designated at 15<sup>th</sup> Avenue Steps (Figure 6.16-4). This Management Area includes both coast live oak trees and California blackberry scrub on both sides of the concrete stairs.

## **ISSUES AND RECOMMENDATIONS**

Several conservation and recreation-related issues have been identified for 15<sup>th</sup> Avenue Steps. Recommendations developed for each of these issues will guide restoration, enhancement, and

maintenance work. In the following discussion, system-wide issues and recommendations (GR-1 for example; see Chapter 5) that apply to the entire Natural Area are presented first within each topical area, followed by site-specific issues and recommendations. Site-specific recommendations are keyed to the Management Area in which they should occur.

**Site Improvements** – Implementation of management recommendations at 15<sup>th</sup> Avenue Steps would not change significantly the overall look of the park and would result in:

- improved habitat for resident and migratory birds; and
- maintenance of oak woodland and coastal scrub habitats.

Implementation of management recommendations at 15<sup>th</sup> Avenue Steps would not change significantly the overall look of the Natural Area and would result in increased area and qualities of native vegetation including dune species and native oak trees and improved bird habitat as native vegetation provides sources of food and shelter.

### **Vegetation**

Issues relating to vegetation management at the 15<sup>th</sup> Avenue Steps Natural Area focus on protection of native habitats, typically through the control of invasive plants (GR-1) and management of sensitive species and vegetation series of limited distribution (GR-2). In addition to these general recommendations, the following site-specific issues should be addressed.

**Issue FI-1:** Issues relating to vegetation management at the 15<sup>th</sup> Avenue Steps site involves the protection of native plants, which currently dominate the site, and continued recruitment of native species. Areas of invasive vegetation (Cape ivy [*Senecio mikanioides*] and ehrharta grass [*Ehrharta erecta*]) occur within and adjacent to the Management Area. These species grow in dense stands and prevent the establishment of other native plant species, including recruitment of coast live oaks.

**Recommendation FI-1a:** In order to protect the existing native plant assemblages, allow for recruitment of native plants. Enhance the existing habitats, contain and reduce invasive herbaceous and woody species such as vinca, Bermuda buttercup (*Oxalis pes-caprae*), Cape ivy, and ehrharta grass. Invasive plants shall be removed and the areas restored with appropriate dune species using reference site species composition (Appendix B).

**Recommendation FI-1b:** Maintain and enhance oak woodland and coastal scrub communities. No trees shall be removed from this Natural Area, and all invasive tree species will be prevented from establishing.

## **Wildlife**

Wildlife issues at 15<sup>th</sup> Avenue Steps are limited because of the size of the Natural Area. However, the limited habitat available would be improved by implementing recommendations for FI-1. Ensure that vegetation management during the breeding season does not impact nesting birds (GR-4); however, vegetation management also can provide materials to create artificial habitat for ground-dwelling birds, small mammals, and reptiles (GR-9). Finally, reduction in predation pressures will benefit all animals that use this Natural Area (GR-7). Because of the limited wildlife resources at 15<sup>th</sup> Avenue Steps, there are no site-specific wildlife recommendations.

## **Soils, Erosion, and Public Use**

Erosion control measures in this Natural Area are closely associated with weed control and understory replacement issues (Issue FI-1). There appears to be little need for structural erosion control measures, but if they are needed, GR-11 and GR-12 and the Best Management Practices found in Section 5.3 will be sufficient to address the issue. There are no trails within this Natural Area. The steps that bisect the 15<sup>th</sup> Avenue Steps could be enhanced and incorporated into the 16<sup>th</sup> Avenue Tiled Steps Project. However, this project would require the approval of the Department of Public Works, which owns and manages the stairway.

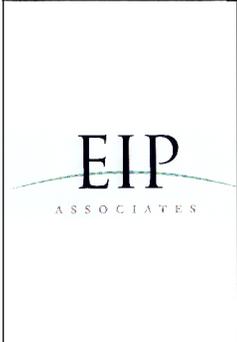
**Table 6.16-1. Vegetation series mapped at 15<sup>th</sup> Avenue Steps.**

	<b>Vegetation Series</b>	<b>Total Acreage</b>
<b>Forest</b>	coast live oak forest*	0.12
<b>Mosaic</b>	Italian ryegrass/California blackberry mosaic*	0.01
<b>Scrub</b>	California blackberry scrub*	0.12
<b>Grand Total</b>		<b>0.25</b>

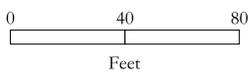
\* Indicates vegetation type is dominated by native species.



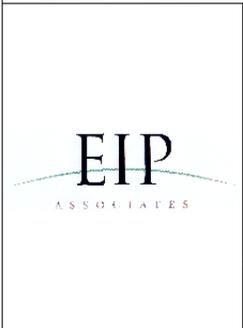
 Natural Area Boundary and SFRPD Jurisdiction (SF City Property)  
 10-Foot contour line



Source: Aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution, 2001; property boundary data derived by San Francisco Recreation and Park Department (RPD) 2005 from data provided by San Francisco Department of Telecommunications and Information Services, 2002; natural area boundary data created by San Francisco State University Institute for GISc from information provided by RPD's Natural Areas Program (NAP), 2005; contour lines provided by San Francisco Department of Conservation; all data are California State Plane Zone III, NAD 83.  
 Created by Debra Dwyer, San Francisco State University Institute for GISc, May 4, 2002, revised June 7, 2005.

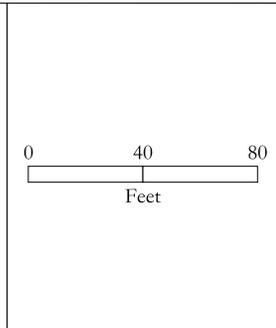


**FIGURE 6.16 - 1**  
**AERIAL PHOTOGRAPH, PROPERTY BOUNDARIES, AND NATURAL AREAS**  
**15th Avenue Steps**  
 Significant Natural Resource Areas Management Plan  
 San Francisco, California



Source: Vegetation data collected by San Francisco Department of Recreation and Parks Significant Natural Areas Program (NAP), San Francisco State University Biology Department, and EIP Associates, 1999-2000; soil and land features data collected by EIP Associates, 1999 - 2002; trails data collected by NAP, 2005; data layers digitized by Geotopo, Inc., 1999 - 2000; edited and corrected by San Francisco State University Institute for GISc (SFSU IGIS), 2000, 2005; trails data digitized by SFSU IGIS, 2005; natural area boundary created by SFSU IGIS from data determined by NAP, 2005; streets data excerpted from ArcView StreetMap 2000 Data, copyright 1998-2000, Environmental Systems Research Institute, Inc. (ESRI).

Created by D. Dwyer, San Francisco State University Institute for GISc, created August 23, 2001, revised December 10, 2005.



**FIGURE 6.16 - 2**  
**SOILS AND LAND FEATURES**  
**15th Avenue Steps**  
 Significant Natural Resource Areas Management Plan  
 San Francisco, California



**Vegetation Subformation and Series**

Mosaic

**MC** Italian ryegrass/California blackberry mosaic

Native Forest

**TC** coast live oak forest

Northern Franciscan Coastal Scrub

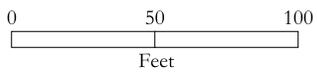
**FB** California blackberry scrub

--- Natural Area boundary



Source: Vegetation data collected by San Francisco Department of Recreation and Parks Significant Natural Areas Program (NAP), San Francisco State University Biology Department and EIP Associates, 1999-2000; data layers digitized by Geotopo, Inc., 2000; edited and corrected by San Francisco State Institute for GISc (SFSUGIS), 2000 - 2002; natural area boundary created by SFSUGIS from data provided by NAP, 2005; streets data excerpted from ArcView StreetMap 2000 data from Environmental Systems Research Institute, Inc., copyright 1998-2001.

Created by D. Dwyer, San Francisco State University Institute for GISc August 16, 2001, revised August 21, 2005.



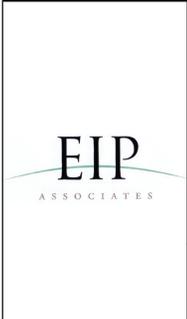
**FIGURE 6.16 - 3**  
**VEGETATION**  
**15th Avenue Steps**  
 Significant Natural Resource Areas  
 Management Plan  
 San Francisco, California



Mgmt Area	Action
MA-2a	<ul style="list-style-type: none"> <li>Maintain and enhance oak woodland and coastal scrub</li> </ul>
<b>Natural Area Wide Management Actions</b> <ul style="list-style-type: none"> <li>Reduce and contain herbaceous and woody weeds</li> <li>No invasive tree removal unless specified above</li> <li>Prevent recruitment of invasive trees unless specified above</li> <li>Provide access on designated trails only</li> <li>Social trails subject to closure</li> <li>Total invasive trees to remove: 0; Total invasive trees to remain: 0</li> <li>Implement erosion control as required (GR-12)</li> <li>Implement wildlife enhancements as appropriate</li> </ul>	

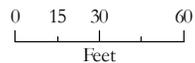
Management Areas

 management area 2



Source: Management areas and trails data collected by San Francisco Department of Recreation and Park Natural Areas Program (NAP), 2005; trails data digitized by San Francisco State University Institute for GISc (SFSU IGIS), 2005; streets data excerpted from Environmental Systems Research Institute (ESRI), Inc.'s Street-Map 2000 data copyright ESRI 1998-2001; aerial photography San Francisco Department of Public Works, 2002, Orthophoto - San Francisco - 1-foot resolution - 2001; all data are in California State Plane Zone III projection, NAD 1983; map produced using ArcGIS 9.0 software by ESRI.

Map created May 28, 2005 by Debra Dwyer, San Francisco State University, Institute for Geographic Information Science; revised August 23, 2005.



**FIGURE 6.16 - 4**  
**MANAGEMENT AREAS AND TRAIL PLAN**  
**15th Avenue Steps**  
 Significant Natural Resource Areas Management Plan  
 San Francisco, California