

**Pacific Shores Center
CO-2**



Site Location:

1500 Seaport Boulevard
Redwood City, CA

Features:

- Multi-purpose detention basin and playing fields
- Second detention basin with cobble bottom
- Parking lot vegetated swales
- 3 miles of paved trails that are an extension of the Bay Trail

Stormwater Benefits:

- Reduced amount of impervious surface area
- Natural treatment of runoff
- Reduced volume and velocity of runoff
- Reduced directly-connected impervious area (DCIA)



This athletic field also serves as a detention basin. The basin is designed to fill up to a four-foot depth and drain within eight (8) hours.

**Pacific Shores Center
CO-2 (cont.)**



Photograph taken from: <http://www.pacificshores.com/>

This photograph offers an aerial view of baseball fields and detention basin.



Photograph taken from: <http://www.pacificshores.com/>

The multi-story buildings allow for vast landscaping that helps reduce the amount of runoff from the site.



Photograph taken from: <http://www.pacificshores.com/>

Aerial view of Pacific Shores Center shows an ideal area to enjoy the Bay Trail.



Parking lot dividers are used as infiltration areas with vegetated swales and trees. Boulders are used to prevent automobile encroachment across the swale.



The parking lot is graded to drain to these vegetated swales, planted with vegetation and trees. The swales were excavated and backfilled with imported sandy loam soil to increase porosity, and constructed with perforated sub-drains. The concrete strip protects the asphalt from water damage. This image was taken prior to grass establishment.

**Pacific Shores Center
CO-2 (cont.)**



Photograph courtesy of Bill Southard (DES, Architects and Engineers)

Cobbles along this detention basin run for several hundred feet to prevent channeling during high runoff.



Photograph courtesy of Bill Southard (DES, Architects and Engineers)

This photo shows the vegetated swale after the native vegetation has grown in.

Lessons Learned:

- Trees planted with only two (2) stakes for support in sandy loam soil within the vegetated swales blew over during a windstorm prior to root establishment. Using three (3) stakes per tree are now recommended.

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**Hillview
CO-10**

Site Location:

3300 Hillview
Palo Alto, CA

Features:

- Parking lot biofilters
- Commercial building courtyard with pervious pavement
- Courtyard also serves a buffer between multi-story building and the creek behind
- Section of parking lot drains to swale of native plants between courtyard and riparian area
- Buildings set back from riparian corridor

Stormwater Benefits:

- Reduced impervious surface area
- Natural treatment of runoff
- Reduced runoff velocity
- Setback from riparian corridor
- Reduced directly-connected impervious area (DCIA)



Pervious pathway placed through the courtyard allows easy access for visitors as well as drainage areas for stormwater. The creek runs behind the trees towards the back. Between the trees and the benches is a swale of native vegetation that treats water from the parking lot.



The parking lot design incorporates biofilters to filter and infiltrate runoff before entering the storm drain. Concrete edging protects the asphalt parking lot from water damage.

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**Ulistac Natural Area
(Guadalupe River)
PA-8**

Site Location:

Lick Mill Boulevard
at Tasman Drive
Santa Clara, CA



Features:

- Provides natural buffer area between the Guadalupe River and urbanized areas
- The City removed existing buildings to put in pocket parks and to restore natural preserve areas
- Provides habitat for flora and fauna
- Promotes community outdoor educational activities including volunteering with restoration efforts

Stormwater Benefits:

- Riparian buffer
- Reduced impervious surface area
- Open space benefits



Photograph courtesy of the Ulistac Natural Area Community Habitat Restoration Project

Trees and open space provide permeability for stormwater runoff, wildlife habitat, and a buffer area for the Guadalupe River.



Photograph courtesy of the Ulistac Natural Area Community Habitat Restoration Project

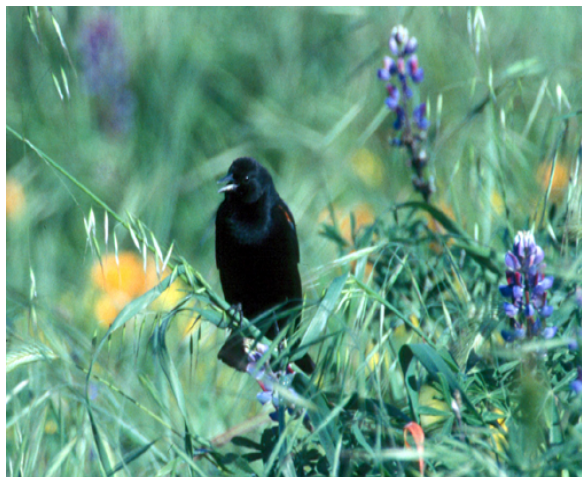
This 40-acre nature area, preserved on January 20, 1997, by the City of Santa Clara, attracts many birds.



Photograph courtesy of the Ulistac Natural Area Community Habitat Restoration Project

Wilcox High School students spend the day in the nature area and help with the restoration efforts by weeding.

**Ulistac Natural Area
(Guadalupe River)
PA-8 (cont.)**



Photograph courtesy of the Ulistac Natural Area Community Habitat Restoration Project

A bird sits on the vegetation at the Ulistac Natural Area, which once served as a pear orchard and golf course.

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