

TRAIL ALIGNMENT

This chapter describes the 7.70 miles of off-street trails and on-street bicycle and pedestrian facilities that link Rancho San Antonio County Park to Stevens Creek County Park. The proposed trails would be constructed approximately parallel to the Stevens Creek for 3.30 miles and extend through open space lands near Rancho San Antonio County Park for 3.15 miles. These two trail areas would be connected using bicycle lanes and the associated sidewalks on city streets for 1.25 miles. These on-street segments link together the trail system to provide a total of 7.70 miles off-street and on-street routes.

The trail system includes one underpass beneath McClellan Road, two at-grade street crossings on Stevens Creek Boulevard, one pedestrian/bicycle bridge spanning Stevens Creek and one crossing of the Union Pacific Railroad tracks. The McClellan Road underpass will likely be subject to temporary closures during significant winter storm events.

The project area was divided into four study areas to facilitate the planning process and future trail development. The study areas vary by size, topography and ownership or jurisdiction. Study Areas A and D are linked via bicycle lanes and sidewalks on Stevens Creek Boulevard (*See Map 2 - Stevens Creek Trail Study Areas Map*). The four study areas include:

<p style="text-align: center;">Study Area A Rancho San Antonio County Park to Stevens Creek Boulevard</p>
<p style="text-align: center;">Study Area B Stevens Creek County Park to Linda Vista Park</p>
<p style="text-align: center;">Study Area C Linda Vista Park through McClellan Ranch to Blackberry Farm</p>
<p style="text-align: center;">Study Area D McClellan Ranch through Blackberry Farm to Stevens Creek Boulevard</p>

This chapter contains detailed descriptions of each of the study areas. Maps, cross-sections and drawings are provided to illustrate the design concepts. This chapter also identifies the proposed trail access points, staging areas and interpretive stations within each of the study areas.

STUDY AREA A RANCHO SAN ANTONIO COUNTY PARK TO STEVENS CREEK BOULEVARD

LOCATION, LAND USE AND OWNERSHIP

Study Area A encompasses approximately 130 acres of the land currently owned by the Diocese of San Jose. These lands will be transferred to Santa Clara County Parks and Recreation Department under the terms of the 1998 Oak Valley Development Agreement between the City of Cupertino and the O'Brien Group and the 1998 Agreement for Exchange of Property and Easements between the County of Santa Clara and the City of Cupertino, the O'Brien Group and the Roman Catholic Bishop of San Jose. The Development Agreement was prepared as mitigation for the Oak Valley Development. The land dedication is for open space purposes and trail development. The land will be transferred to Santa Clara County Parks and Recreation Department in 2002. The site is bordered by Cristo Rey Drive to the north, the Union Pacific Railroad and Pacific Gas and Electric Company substation to the east and south and Rancho San Antonio County Park to the west. Santa Clara County Roads and Airports Department owns a small, 2.83-acre parcel of land located between the Union Pacific Railroad line and Stevens Creek Boulevard.

The soon-to-be-acquired parkland encircles a portion of the Oak Valley Residential Development and the Gate of Heaven Cemetery. The historic Hammond-Snyder Home that is owned by the Cupertino Historical Society is located directly adjacent to the new parklands to the west. The site connects to the 165 acres of parkland and 2,135 acres of open space that are respectively owned by Santa Clara County Parks and Recreation Department and Midpeninsula Regional Open Space District (MROSD). MROSD manages the entire 2,300 acres of trails and other recreational features under a ten-year management agreement with Santa Clara County Parks and Recreation Department dated July 1, 2000. MROSD will also assume management of 4.8 acres of the 130 acres of new parkland under the terms of the management agreement. This acreage is comprised of three small parcels situated within the existing park and open space lands. The first parcel is situated to the north of The Forum at the end of St. Joseph Avenue near Highway 280. The second parcel is a small parking area at the entrance to the lower Oak Valley development near The Forum. The final parcel is the open space directly adjacent to the upper parking lot at Rancho San Antonio County Park. An existing trail extends through this site to connect the two parking lots. Santa Clara County Parks and Recreation Department will assume management of

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the remaining 125.2 acres of parkland. The City of Cupertino will enter into an agreement with the County to operate a staging area within this acreage in the vicinity of Stevens Creek Boulevard.

CULTURAL HISTORY

The Ohlone Indians lived in the Rancho San Antonio area for over 3,000 years prior to the arrival of the Europeans. A large village, known as Partacsi, was located in this general area. An expedition led by Colonel Juan Bautista de Anza passed through this area in March of 1776. Study Area A is on the overland route taken by the Juan Bautista de Anza expedition. The prominent knoll located within the new parklands is the site of the expedition's first view of the estuary of San Francisco. It was sighted the morning of March 26, 1776 after the expedition departed its 93rd encampment on their journey up the peninsula toward San Francisco. Outstanding views of San Francisco Bay and Santa Clara Valley can still be seen today from this knoll. The entire route of the Anza expedition from Arizona to California is to be implemented by the National Park Service as a national historic trail. The trail was also one of 16 distinguished by the White House as a National Millennium Trail in 2000.

Mission Santa Clara de Asis was founded in October 1776. Many of the Ohlone people were taken to this mission. In 1822, Mexico became independent and the Secularization Act stripped the missions of their holdings. After 1833, land grants were given mainly to army veterans and many ranchos were established. The chief commercial products of the ranchos were cattle hides and tallow.

Rancho San Antonio was granted by Governor Alvarado to Juan Prado Mesa in 1839. This 4,440-acre rancho was bounded by Adobe Creek to the north, Stevens Creek to the south and included Permanente Creek. Mesa had been a soldier at the San Francisco Presidio since 1828, served as a corporal in the Santa Clara Guard and had won fame as a soldier and Indian fighter. Mesa died in 1845. California became part of the United States in 1848 and all land grants issued by the Mexican government became subject to review under U.S. law.

In 1853, William Dana, a former seafarer and merchant, purchased the Rancho. During this time the original Mexican Land Grants were challenged and six persons laid claim to the Rancho. Two of the claims were patented by the United States in 1857, with Dana retaining 3,542 acres. In 1861, John and Martha Snyder purchased 850 acres of the original Rancho San Antonio lands along Permanente Creek. The Snyder's grain crop of 1862 was the first raised

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in this area of Santa Clara County without irrigation and was so successful that it inspired others. The Snyder's had about 500 acres under cultivation, including a 16-acre vineyard with a large winery and 25 acres in orchard. John Snyder, born in 1828 in Indiana, arrived in Santa Clara County in 1850 where he was employed on local farms. In 1855 he married Martha Kifer. John Snyder died in 1901 and his wife continued to live on the ranch until her death in 1919. John Snyder built a home on the property for his daughter Martha Bell Snyder. She married the local schoolteacher Dr. W. H. Hammond. The Hammond-Snyder home was built along the banks of the North Fork of Permanente Creek in 1881. It is now owned by the Cupertino Historical Society and restoration plans are in the works.

In 1923, the Catholic Church purchased the Snyder Ranch and in 1926 constructed Saint Joseph's Seminary and Maryknoll Seminary. St. Joseph's was badly damaged in the 1989 Loma Prieta earthquake and was subsequently demolished. The Maryknoll Seminary, with its oriental motif, stands to the east of Rancho San Antonio County Park across Cristo Rey Drive. The Santa Clara County Parks and Recreation Department purchased 130 acres in 1977 and another 35 acres in 1981 from St. Joseph's Seminary. In the 1990's the Seminary sold additional parcels that were developed as The Forum, a 400-unit residential senior retirement community and as Oak Valley, a 183-homesite residential neighborhood.

CREEK CHARACTER, PLANT COMMUNITIES AND ANIMAL LIFE

A number of plant communities and wildlife habitats exist in Study Area A. Habitat types include open grassland, blue oak woodland interspersed with grassland, freshwater wetland with seeps, willow-dominated riparian vegetation, and suburban development (*See Map 4 - Study Area Habitat Map*). Rare, sensitive or listed species known to occur in the area include red-legged frog, Loggerhead Shrike, Merlin, blue oak and valley oak. Rare or protected species potentially existing in the area include the western pond turtle, Burrowing Owl and other birds of prey.

The annual grassland has been heavily grazed for decades and much of the area is covered by non-native species. Typical non-native grasses include wild oat (*Avena spp.*) brome (*Bromus spp.*) and ryegrass (*Lolium spp.*). Several native grassland species can be observed easily amidst the annual grasses. These plants include fiddleneck (*Amsinckia spp.*), soap plant (*Chlorogalum pomeridianum.*), California poppy (*Eschscholzia californica*), lupine species (*Lupinus spp.*), and blue-eyed grass (*Sisyrinchium bellum*). Grassland rodents,

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such as voles, mice and gophers are prevalent, providing a large prey base for a wide variety of raptors. Red-tailed hawks, kestrels, white-tailed kites, and sharp-shinned hawks are easily seen hunting over the grasslands. Great-horned owls, screech owls, and merlin have also been observed in the area.

Oak woodland is also a significant habitat in this study area. Blue oaks (*Quercus douglassii*) dominate the grasslands on the hillsides and down the drainages. Coast live oaks (*Quercus agrifolia*) and some valley oaks (*Quercus lobata*) are also found in the area. These trees are keystone species in the habitat. They are essential for supporting many other organisms. Deer and acorn woodpeckers are just two species found in the area that depend on oaks.

Three ponded, freshwater wetlands and the associated drainages exist on-site: one on the north side of the study area below Cristo Rey Drive, one on the east side between Rancho San Antonio County Park and the Gate of Heaven Cemetery, and one on the south side near the Whispering Creek Stables paddock area. Each wetland has emergent freshwater vegetation including cattails (*Typha spp.*) and rushes (*Juncus spp.*). The wetland zone just south of Cristo Rey Drive is fed by two drainages with wetlands species present in each tributary. This wetland zone is fed by seeps and provides continuous ponding to support the red-legged frog.

Riparian vegetation, dominated by willow species (*Salix spp.*), lines the North Fork of Permanente Creek between the Hammond-Snyder House and Rancho San Antonio County Park. Other tree species in this corridor include coast live oak (*Quercus agrifolia*), sycamore (*Platanus racemosa*), elderberry (*Sambucus mexicana*), and buckeye (*Aesculus californica*). Cattails and horsetails grow along some of the exposed stream edges. Coyote bush, horehound, fiddleneck, and miner's lettuce grow under and just outside the willow drip-line. In the past, this riparian corridor was damaged by grazing, agriculture practices and grading activities.

The in-stream habitat of the North Fork of Permanente Creek is maintained by flows from the Hansen-Permanente quarry operation. A holding pond at the edge of the study area is designed to remove sediments before water moves downstream. This habitat supports red-legged frogs and may be adequate for western pond turtles, a state species of concern.

Elevations within the study area range from ___ feet in the wetland areas to ___ feet on the De Anza Knoll. The most prominent geologic feature in the vicinity is the San Andreas fault zone located three miles west of the study

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area and the Monta Vista fault, a splinter fault that traverses along Permanente Creek.

POINTS OF INTEREST

Rancho San Antonio County Park provides both formal and informal recreational opportunities. The most popular activities at Rancho San Antonio County Park are jogging and hiking. The park provides hiking, bicycling and equestrian trails that connect with over twenty-three miles of trails within Rancho San Antonio Open Space Preserve. Bicycles are restricted to a single paved trail, the Rancho San Antonio Trail, and are not permitted west of Deer Hollow Farm in the Open Space Preserve. Similarly, equestrians are limited to the equestrian staging area, the Coyote Trail and most trails in the Open Space Preserve. One of the most popular destinations for school groups and families within the Open Space Preserve is Deer Hollow Farm, which is operated by the City of Mountain View. A variety of environmental and agricultural education programs are conducted at the farm throughout the year (See Figure 3).

POINTS OF INTEREST IN STUDY AREA A	
Recreational Facilities	Residential Neighborhoods
<ul style="list-style-type: none">◆ Rancho San Antonio County Park◆ Rancho San Antonio Open Space Preserve◆ Deer Hollow Farm	<ul style="list-style-type: none">◆ The Forum◆ Oak Valley
Historical Sites	Institutional Facilities
<ul style="list-style-type: none">◆ Hammond-Snyder Home◆ Juan Bautista De Anza Lookout	<ul style="list-style-type: none">◆ Maryknoll Seminary◆ Gate of Heaven Cemetery

Figure 3 - Points of Interest in Study Area A

SITE ANALYSIS FINDINGS

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Study Area A provides sufficient land for trail development. This positive finding is balanced by several challenges to trail routing. Trails were tentatively identified in the development agreement that dedicated the 130 acres to Santa Clara County. However, these trail alignments were never reviewed for feasibility. As a result, several of the originally proposed trails have been rerouted to avoid impacts and to provide better connections to the community. There are three key challenges to trail design in Study Area A.

The first constraint includes crossing the habitat of the California red-legged frog (*Rana aurora draytonii*), a species federally listed as threatened by the United States Fish and Wildlife Service (USFWS) under the Endangered Species Act (ESA). The second challenge is to provide a trail connection to Stevens Creek Boulevard that must extend through County Roads and Airports Department property and cross the Union Pacific Railroad tracks which extend to Hanson Permanente Cement. The trains typically run three times per week to and from the quarry.

The third challenge is to implement improved equestrian access through the site. The original trail routes required that equestrians enter the Oak Valley Development on a trail easement that has been designed as a sidewalk. This easement provides an excellent connection for residents wishing to access the open space, but a poor surface for equestrian use. A new equestrian route is proposed through the Pacific Gas and Electric Company lands. Whispering Creek Stables leases a portion of these lands from Pacific Gas and Electric Company for its stable and paddock areas.

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A loop trail circumnavigating the residential development and Gate of Heaven Cemetery was originally proposed in the development agreement between the City of Cupertino and the developers of Oak Valley. The trail alignment in this report retains a loop route but eliminates the trail from red-legged frog habitat and provides additional connections to the neighborhood, points of interest within the park and the on-street bicycle system (*See Map 5 - Study Area A Trail Alignment - Rancho San Antonio County Park to Stevens Creek Boulevard*). Two different trail types are proposed to accommodate different user groups and to provide connectivity for these users. Approximately 3.15 miles of different trail types and 0.75 miles of bicycle lanes are proposed within Study Area A.

HIKING AND EQUESTRIAN TRAILS

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Rancho San Antonio County Park and Rancho San Antonio Open Space Preserve are jointly managed by Midpeninsula Regional Open Space District (MROSD). The most popular activities in the 2,300 acres of open space are hiking, jogging and horseback riding. In the county park, equestrians are limited to the equestrian staging area and the Coyote Trail. This trail provides access to the open space preserve lands where the vast majority of trails are open to horseback riding, hiking, jogging and walking. Bicycling is prohibited in most of the park.

Whispering Creek Stables leases land from Pacific Gas and Electric Company which is located to the east of the existing horseback riding routes and equestrian staging area. Whispering Creek Stables has boarding accommodations (stables, paddocks) for 60 horses. The stable is currently at capacity. One of the goals within Study Area A is to provide a loop trail for hiking and riding through the 130 acres of open space. Another goal is to provide equestrian trail access from the stables to the many horseback riding trails within the open space preserve.

The original trail route proposed in the 1998 development agreement extended from the auto circle and paralleled Cristo Rey Drive on an old farm road. This graded roadbed descends into a small blue oak studded ravine and through a permanent freshwater wetland at the base of the ravine (*See Map 5 - Study Area A Trail Alignment - Rancho San Antonio County Park to Stevens Creek Boulevard*). Two drainages contribute runoff to the ravine. The freshwater wetland that supports the State and Federally-listed California Red-legged Frog is at the bottom of the ravine. A bridge was proposed across the drainage at the bottom of the ravine.

Two alternative trail routes are proposed in this area to avoid the freshwater wetland. The first alternative extends the trail parallel to Cristo Rey Drive and crosses the ravine approximately 40 feet above the wetland. A sidewalk constructed as a cantilevered boardwalk paralleling Cristo Rey Drive was built above the ravine as part of the adjacent residential development. This sidewalk was unsuccessfully designed to accommodate equestrians. It is too narrow. The proposed project will widen this sidewalk, using piles to extend the boardwalk from 6 feet to 12 feet. The second alternative extends the trail down the ravine, but crosses the drainage above the outflow culvert, which keeps the trail away from the freshwater wetland.

Upon crossing the ravine area, the trail will continue to parallel Cristo Rey Drive until reaching the construction access road to the Oak Valley development. This access road will be retained for fire access only upon

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completion of construction. A short 0.12-mile trail will extend along this fire access road to connect a cul de sac in Oak Valley to the main trail. The main hiking and riding trail will begin an ascent up the hill toward the De Anza Knoll. The trail is proposed slightly below the knoll so that the trail users can experience the views of Silicon Valley while simultaneously preserving the knoll in an untrampled state. After swinging around the knoll the trail descends toward the rear of the Oak Valley development and the horse paddock on Pacific Gas and Electric Company lands. This route from the auto circle to the horse paddock is 0.80 miles.

All soft-surface trails throughout Study Area A will be developed in accordance with Countywide Trails Master Plan Guideline G-4 - Single Track Trail - Natural Tread. The trail surface will be of native material with a 6-foot trail width. The short interpretive trail to the knoll will be developed in accordance with Countywide Trails Master Plan Guideline G-5 - Single-Use Trails - Natural Tread for Hikers. The trail surface will be of native material with a 3-foot trail width.

The original trail planned called for trail users to enter the Oak Valley development on an easement dedicated for trail use. This 0.20-mile section of trail was constructed with the residential development and is currently in use by local equestrians and area residents. Trail users pass through gaps in the stockade fence and walk or ride on a sidewalk through the development. A second gap in the fence provides access to an 11-foot easement located between the Gate of Heaven Cemetery and Pacific Gas and Electric Company lands. Dual chain link fences indicate this easement. The fencing ends where the easement enters another parcel of open space land near the Hammond-Snyder Home. Equestrians riding from Whispering Creek Stables will use an existing path that parallels the paddock to reach the trail segment within Oak Valley from the stables.

Two additional routes to this new trail easement are existing paths currently used by equestrians. Each path is approximately 0.65 miles. One path extends across Pacific Gas and Electric Company lands from the Whispering Creek Stables paddock to the beginning of the 11-foot trail easement. This route provides a loop connection for equestrians not wishing to ride along the sidewalk in Oak Valley. A second existing path parallels the Union Pacific

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See Map 5 - Study Area A Trail Alignment Map

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Railroad right-of-way and then curves north to avoid an existing wetland. This route is currently used by equestrians from Whispering Creek Stables to reach the county park and open space preserve riding trails. This route is on Pacific Gas and Electric Company property that abuts the 80-foot wide Union Pacific Railroad right-of-way. Both routes enter the newly dedicated open space land below the Hammond-Snyder Home and will provide access to the existing Coyote Trail that leads equestrians into the Rancho San Antonio Open Space Preserve. A new access point in an existing PG&E fence will be required to connect to the 11-foot easement.

WALKING AND BICYCLING TRAIL WITH PARALLEL EQUESTRIAN TRAIL

Bicycles are restricted to a single paved trail, the Rancho San Antonio Trail, within the park. This existing paved route extends from Los Altos into the park and open space lands. The route passes beneath Highway 280 on St. Joseph Avenue and extends along the North Fork of Permanente Creek to both the upper and lower parking lots within the county park. Two extensions are proposed to this bicycling route (*See Map 5 - Study Area A Trail Alignment - Rancho San Antonio County Park to Stevens Creek Boulevard*). A short 0.20-mile paved trail is proposed to extend from the upper parking lot to the auto circle on Cristo Rey Drive, which is located at the entrance to the Oak Valley development. This paved route will connect to an existing riding and hiking path at the auto circle. This paved trail will also provide access to 0.75 miles of new bicycle lanes proposed along Cristo Rey Drive from the auto circle to Foothill Boulevard.

Approximately 1.00 mile of paved trail is also proposed to extend from the upper parking lot, past the Hammond-Snyder Home and across the Union Pacific Railroad tracks to connect to Stevens Creek Boulevard. This route would continue to parallel the North Fork of Permanente Creek. The two sections of trail between the upper parking lot and the Hammond-Snyder Home and the auto circle would also be designed with a soft surface equestrian trail parallel to the paved facility. These soft surface trails provide a connection for horseback riders using the new loop trail or attempting to reach Whispering Creek Stables.

Past the Hammond-Snyder Home an at-grade railroad crossing with signal and crossing arms is proposed at the Union Pacific Railroad tracks. Currently, trains run three times per week to and from the quarry. Upon crossing the railroad tracks the route enters Santa Clara County Roads and Airports Department property that parallels Stevens Creek Boulevard. A 0.30-mile

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paved trail for bicyclists and pedestrians is proposed to extend through these lands paralleling Stevens Creek Boulevard until reaching Ridgeway Drive. No accommodations are made for equestrians along this trail. A crosswalk is proposed on Stevens Creek Boulevard to the west of Ridgeway Drive. The crosswalk would be painted a red brick color and include flashing indicator lights installed in the pavement which are activated by a push button. Median islands and fencing would be installed in the center of Stevens Creek Boulevard to direct trail users to the crosswalk and to provide some traffic calming in this residential area. The crosswalk would provide a connection to the bicycle lanes on Stevens Creek Boulevard. Bicyclists must follow the rules of the road that include riding with the flow of traffic. The crosswalk provides a transition from the off-street trail to the eastbound bicycle lanes for cyclists wishing to travel toward Foothill Boulevard and Blackberry Farm.

ACCESS POINTS

Access points are intended to accommodate trail users wishing to reach the trail by bicycle, on foot or on horseback. The access points in Study Area A are improved and may include short segments of trail, gates, bollards and signage. Access points are identified at specific locations to minimize cross traffic and provide safe access to the trail. Trail access is proposed from two roadways and three recreation facilities located adjacent to Study Area A. The trail connects to bicycle lanes on Cristo Rey Drive and Stevens Creek Boulevard. Access is provided from Rancho San Antonio County Park and Whispering Creek Stables. The trail is also conveniently reached from the Hammond-Snyder Home. Several locations within the Oak Valley neighborhood provide direct connections to the trail (*See Figure 4*).

STAGING AREAS

Staging areas are planned to accommodate those who wish to drive to a trailhead. A staging area provides automobile parking, access to the trail and amenities such as restrooms, drinking fountains and signage. Several of the staging areas for Study Area A are located at existing parks situated along the trail route. One new staging area is proposed below the Hammond-Snyder Home off Stevens Creek Boulevard (*See Figure 4*).

A twenty-car staging area with restrooms, trail connections, signage and an interpretive kiosk is proposed in Study Area A on the new parklands soon to be transferred to Santa Clara County Parks and Recreation Department (*See*

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Map 5 - Study Area A Trail Alignment - Rancho San Antonio County Park to Stevens Creek Boulevard). This site would be developed and maintained by the City of Cupertino in conjunction with the development of the Stevens Creek Trail. This staging area will be located below the Hammond-Snyder Home on the north side of the Union Pacific Railroad tracks. Access to the staging area would be off of Stevens Creek Boulevard. This staging area would serve local residents wishing to access the new trails to be developed on the new parklands surrounding the Oak Valley Development and the Gate of Heaven Cemetery.

SUMMARY OF STUDY AREA A TRAIL IMPROVEMENTS		
Trail Routes	Miles	Trail Crossings
◆ All Weather Multi-Use Path	1.50	◆ Union Pacific Railroad
◆ Soft Surface Hiking and and Horseback Riding	1.65	◆ Stevens Creek Boulevard
◆ On-Street Bicycle Lanes	<u>0.75</u>	
Total	3.90	
Access Points		Staging Areas
◆ Cristo Rey Drive		◆ Upper Lot in County Park
◆ Fire Access Road from Oak Valley		◆ Equestrian Staging Area in County Park
◆ Upper Parking Lot in County Park		◆ Proposed Staging Area near Hammond-Snyder Home
◆ Equestrian Staging Area in County Park		◆ Whispering Creek Stables
◆ Hammond-Snyder Home		
◆ Proposed Staging Area near Stables		
◆ Hammond-Snyder Home		
◆ Whispering Creek Stables		
◆ Stevens Creek Boulevard		

Figure 4 - Summary of Study Area A Trail Improvements

INTERPRETIVE STATIONS

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Interpretive stations are trailside way points that provide opportunities to experience scenic vistas, observe the flora and fauna, reflect on local history and/or learn about hydraulic, geologic or biological phenomena. These stations may include benches, overlooks or interpretive signs or monuments. Study Area A includes two interpretive stations (*See Map 5 - Study Area A Trail Alignment - Rancho San Antonio County Park to Stevens Creek Boulevard*). The historical significance of the Juan Bautista De Anza Lookout and the Hammond-Snyder Home are recognized and designated as historical/cultural interpretive sites.

Study Area A is on the overland route taken by the Juan Bautista de Anza expedition. The prominent knoll located in the northeastern corner of the new parklands is the site of the expedition's first view of the estuary of San Francisco. It was sighted the morning of March 26, 1776 after the expedition departed its 93rd encampment on their journey up the peninsula toward San Francisco. An interpretive plaque was installed on the knoll in 2001 to commemorate the 225th anniversary of the expedition.

The 1881 Hammond-Snyder home is located in the southern edge of the new parklands. This historic home is owned by the Cupertino Historical Society. This nonprofit organization intends to restore the home and open it to the public.

HABITAT ENHANCEMENT OPPORTUNITIES

The Cristo Rey wetland drainage is a small basin that provides a number of restoration opportunities. This area is of significance as the red-legged frog (*Rana aurora draytoni*), a federally-listed threatened species, has been found on-site. The drainage is degraded by a number of impacts that habitat restoration can help correct. Specific projects that can improve the drainage and wetland are gully repair, non-native species removal, riparian and wetland species planting, oak planting, and community education on reducing the use of pesticides and fertilizers. Parts of this site may be slated to become a storm water retention area for the Oak Valley development. Restoration work must be coordinated with this use.

This small drainage is found between Cristo Rey Drive on the north, new homes on the south and two small ridges on the east and west. In 1994, red-legged frogs were found in the small freshwater wetland that exists at the bottom of the ravine and extends from south to north. Red-legged frogs were also found nearby, on the Lands of the Diocese, in 2000. The Cristo Rey

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wetland is fed by freshwater seeps and run-off from the roads and new houses. Riparian, wetland, and non-native plant species are found in and along the ravine. Blue oak woodland and grassland extend up the slopes on either side of the ravine. An eroding farm road used by hikers and equestrians runs down the west hill and up the east side. The drainage is designated as public open space and is bordered by open space on the northeast and northwest sides. Development surrounds the wetland on the south end. New houses were recently built and others are under construction on the southeast and southwest ends of the ravine.

Natural Communities/Habitats

- Freshwater wetland community, which includes red-legged frog habitat
- Blue oak woodland/non-grassland savanna
- Open grassland dominated by non-native species

Problems Affecting Habitats in this Drainage

- Eroding farm road
- Direct wetland impacts of trail users
- Invasion by non-native wetland species
- Loss of wetland and riparian habitat
- Loss of oak woodland habitat
- Run-off impacts from new development

Benefits of Restoration in this Region

- Protect and improve red-legged frog habitat
- Enhance native plant diversity
- Protect/improve wetland water quality
- Provide community restoration projects

Agencies/Experts to Involve in Planning

- *Agencies:* Army Corps of Engineers, California Department of Fish and Game, U.S. Fish and Wildlife Service
- *Experts:* Wetland/riparian restoration specialist, red-legged frog expert, geotechnical expert, grassland expert, oak woodland restoration specialist, volunteer coordinator

Project 1: Repair Farm Road

Description of Problem

- Location--along dirt road down the hill on the west side of the wetland
- Gully 2 to 3 feet deep down entire slope and hillside erosion next to the road (Figure 3 – Farm Road Gully)

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- Soil erodes directly into the wetland below

Project Goals

- Stop erosion
- Fill gully and recontour slope to remove road and eroded slope next to the road
- Redirect trail use to protect the habitat values of the wetland

Potential Methods

- Back-fill gully and road cut with native soil that has non-native seeds removed, if possible.
- Cover with biodegradable stabilizing material; seed with a mix of fast-growing, non-invasive grass or other cover species
- Collect local plant material from native annual and perennial plants; have native plant nursery grow seedlings for planting
- Plant with seeds and plugs of native annual and perennial plants

Timing Issues

- Allow 1 year for growing plants in a nursery
- Implement gully repair after rainy season ends
- Seed or plant in fall/early winter
- This is a relatively rapid project that should be completed within a year.

Agencies to Consult/Potential Permits

- None/none

Experts Needed

- Geotechnical specialist for physical gully repair
- Native grassland expert for choosing/collecting best species to stabilize slopes
- Native plant nursery to grow native plant plugs
- Volunteer coordinator

Volunteer Opportunities

- Assist grassland expert with collecting seeds
- Assist nursery with growing seedlings
- Assist in planting seeds and/or seedlings

Monitoring/Maintenance Needed

- Monitor for development of new gullies

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- Monitor plant growth; remove non-natives; replant with natives if needed.

Project Difficulty: **Relatively Simple**
 Moderately Difficult
 Difficult

Project 2: Improve Wetland Habitat

Description of Problem

- Location—along the length of the wetland
- Non-native wetland species are crowding out native plants (See Figure 4—Non-natives clog the wetland)
- Riparian vegetation cover is missing in some areas

Project Goals

- Reestablish native wetland species throughout wetland
- Reestablish riparian species cover, such as willows, where appropriate
- Improve the habitat for red-legged frogs and other wetland/riparian species

Potential Methods

- Remove non-native species by hand or other effective method as prescribed by restoration experts; use chemical means as a last resort
- Collect local plant material from native wetland and riparian areas; treat and install plant material as recommended by restoration experts
- Plant with seeds and plugs of native annual and perennial plants

Timing Issues

- Avoid any potential impacts to red-legged frogs, especially during the breeding season
- Install plant material in fall/winter
- This is a relatively long-term project, which will take approximately 2-4 years to complete.

Agencies to Consult/Potential Permits

- Army Corps of Engineers/Clean Water Act, Section 404 Permit
- U.S. Fish and Wildlife Service/Federal Endangered Species Act
- California Department of Fish and Game/DFG Code

Experts Needed

TRAIL ALIGNMENT - STUDY AREA A

- Wetland restoration expert for non-native removal and native species recovery
- Riparian restoration expert for reestablishment of riparian species
- Red-legged frog expert for advice on providing high-quality frog habitat
- Volunteer coordinator

Volunteer Opportunities

- Assist in removing non-native species
- Assist in planting native species materials

Monitoring/Maintenance Needed

- Monitor for invasion by non-native species; remove as needed
- Monitor plant survival and replant as needed

Project Difficulty: **Relatively Simple**
 Moderately Difficult
 Difficult

The actual non-native species removal is relatively straightforward. Consultations with agencies may take some time.

Project 3: Enhance Blue Oak Woodland

Description of Problem

- Location – hillsides adjacent to the wetland
- Most endemic California oak species are not regenerating
- Most oak habitat in the Bay Area has been lost

Project Goals

- Establish young blue oaks that could one day replace aging oaks
- Create more hillside and wetland shading

Potential Methods

- Collect acorns on site and within the watershed
- Treat acorns to find nonviable ones and to enhance chances of germination
- Grow some acorns into seedlings and plant acorns on site as recommended by the restoration expert
- Protect acorns and seedlings from herbivores with below-ground cages and above-ground tubes
- Water regularly through the first summer

TRAIL ALIGNMENT - STUDY AREA A

Timing Issues

- Collect acorns in fall as determined by oak restoration specialist
- Allow at least 1 year for seedling growth
- Install plant material in fall/winter
- This is a very long-term project that will take a decade or more of work to produce results

Agencies to Consult/Potential Permits

- None/None

Experts Needed

- Oak woodland restoration expert
- Native plant nursery to grow saplings
- Restoration volunteer coordinator

Volunteer Opportunities

- Assist in collecting, treating and growing acorns
- Assist in planting native species materials
- Assist in watering oaks and monitoring oak survival

Monitoring/Maintenance Needed

- Monitor and repair herbivore guards
- Monitor plant survival and replant as needed
- Water regularly through the first year

Project Difficulty: ___ Relatively Simple
 X Moderately Difficult
 ___ Difficult

While oak planting projects are easy and fun for volunteers to implement, oak survival is often low and growth is usually very slow. It may take more than a decade to know if the plantings are succeeding.

Project 4: Inform Local Homeowners about Watershed Protection Measures

Description of Problem

- Location—Cristo Rey Drainage
- Adjacent land uses can degrade the wetland. In particular, new homes are located directly adjacent to the wetland; storm water runoff is directed into this wetland and pollutants from residents' cars and lawn maintenance are likely to degrade the wetland habitat

TRAIL ALIGNMENT - STUDY AREA A

Project Goals

- Determine what pollutants come from new homes and landscaping
- Identify solutions homeowners could take to reduce pollutant loading
- Inform local homeowners about the solutions

Potential Methods

- Work with a watershed expert to determine the pollutants likely to come from new homes and develop solutions for homeowners to take.
- Develop an informational packet and survey to give to local homeowners to inform them about impacts to wetlands and what they can do.
- Deliver the information and survey (methods include door-to-door, a community meeting, a mailing).
- Follow-up, after an appropriate period, to determine homeowner views and actions.

Timing Issues

- Can be done any time of the year
- This project can be done quickly, within a year

Agencies to Consult/Potential Permits

- None/None Maybe use materials already developed by SCVWD

Experts Needed

- Restoration expert to help with developing watershed protection measures
- Volunteer coordinator to organize and support volunteers

Volunteer Opportunities

- Develop questionnaire and administer it
- Help with information analysis
- Revisit households for follow-up interview

Follow-up Needed

- Return to households to find out if homeowners implemented any of the recommendations and to assess their views of changing their yard care practices.

Project Difficulty: **Relatively Simple** **Moderately Difficult**
 Difficult

This project is relatively easy to implement, but assessing effectiveness can be difficult.