



# CREEK & WATERSHED MAP of Daly City & Vicinity

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Historical wetlands research by the San Francisco Estuary Institute

This map shows the current waterways of the Daly City area, including the creek and storm drain network and present-day watershed boundaries. The northern portion of the map includes part of the combined drainage system of the City of San Francisco (brown squares). This system collects municipal sewage and storm runoff together in underground drains, then routes them through large transport-storage structures to wastewater treatment plants in San Francisco. Other cities on this map have separate storm and sewage drainage systems, and we show only the storm system (red dots).

Also shown are the historical creeks, tidal marshes, and lakes. Many of these historical water features no longer exist. Development resulted in the construction of underground storm drains and engineered channels, the filling of tidal marshes and the bay, and construction of reservoirs.

Notes: Only larger features are shown. Creeks and engineered channels have a minimum of 0.2 square kilometers of watershed, and storm drains measure 24 inches or greater in diameter.

Engineered channels include both natural creeks significantly reinforced by concrete or rock, and artificial channels, ditches, and canals not coincident with a historical creek. Some newer engineered channels are designed to mimic natural channels.

Accuracy: Every effort was made to produce an accurate map. However, no map is completely accurate and all lines should be considered approximate. There is error in the historical maps, in the transfer of historical information to modern maps, and in the modern maps themselves. In addition, natural shifting of creeks and fluctuations in the extent of marshes and lagoons can be expected both before and after the historical maps or photos were made. Historical marsh and lagoon boundaries are considered accurate to within 1000 feet on either side of the line shown. Historical creek locations are accurate to within 200 feet, ephemeral channels to within 500 feet. Present-day creek and storm drain locations are considered accurate to within 100 feet on either side of the line shown.

How this map was made: Storm drains, engineered channels, flood-control channels, and present-day creeks and watersheds were compiled from city and county data, 2004 aerial photography, and field inspection. Combined sewage and storm drains, and transport-storage structures were compiled from San Francisco. The historical locations of creeks were interpreted from 1943 aerial photography and 1850-1910 historical maps. Historical tidal marshes and willow groves were researched by San Francisco Estuary Institute (SFEI) using a variety of sources including the 1857 U.S. Coast Survey. Complete documentation can be obtained from Robert Givler or Janet Sowers at William Lettis & Associates, Inc. in Walnut Creek, or [www.museumca.org/creeks](http://www.museumca.org/creeks). The base map showing present geographic features consists of portions of the following U.S. Geological Survey 7.5-minute topographic quadrangles: Montara Mountain (1980), Point Bonita (1997), San Francisco North (1999), and San Francisco South (1993). We added major new roads and highways.

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## POINTS OF INTEREST

- 1. Lake Merced.** Lake Merced is the largest lake in San Francisco. When named La Laguna de Nuestra Señora de la Merced by the first Spanish expeditions, Lake Merced was a single water body with a narrow, seasonal outlet to the Pacific Ocean (green line). There is some surface-water runoff to the lake, but the lake sits on porous, sandy soil, hence does not hold water in the ordinary sense. The surface of the lake is a continuation of the water table under the surrounding sandy hills. After World War II, extensive pumping of the Westside Aquifer by the local golf courses, municipalities, and cemeteries lowered groundwater levels, hence also lowered the lake level. Today, reduced pumping lessens the overdrain and the lake levels are rebounding. Recycled water from the Daly City treatment plant irrigates nearby golf courses. (See other side for details.) San Francisco now adds Hatch Hetchy system water and filtered stormwater to Lake Merced. As many as fifty bird species breed at Lake Merced, and thousands of migrating birds stop off along the Pacific Flyway.
- 2. Stormwater or wastewater?** Running between John Muir Drive and the golf course, the Vista Grande Canal carries stormwater runoff from Daly City north through San Francisco, then into an underground pipe (red dots) to its discharge point in the ocean offshore. By contrast, running underneath John Muir Drive is a pipe carrying combined storm and wastewater from San Francisco neighborhoods to the Oceanside Treatment Plant. There it is treated and discharged into the ocean. The city of San Francisco is served primarily by these combined storm/wastewater pipes (brown squares). The larger brown squares indicate enormous underground vaults that lead directly to the treatment plant. Only when intense rainstorms overflow the vaults do any combined flows discharge to the beach alongside Daly City's stormwater outfall.
- 3. Westlake Park.** This park is located astride an old creek, which once drained much of Daly City into Lake Merced. The present-day creek and its tributaries now flow in underground pipes. Within Westlake Park, look east and west. Notice that the park is located

- 4. San Bruno Mountain State & County Park.** Nestled in the canyons of San Bruno Mountain, small tributary creeks converge to form Colma Creek. This park is the perfect place to enjoy natural riparian habitat within the urbanized Peninsula. A short hike along the Bog and Lower Bog Trails takes you to a Colma Creek headwater. At the small bridge, notice the tall reeds (which look like grasses) lining the banks of the creek. Volunteers painstakingly removed invasive non-native plants along this section of the creek to plant the rushes and other native plants. Similar efforts are planned elsewhere within the park.
- 5. David R. Rowe Park.** Buried beneath playing fields, Bayshore Creek flows in a storm drain through this city park (formerly Bayshore Park). Look over the fence at the storm drain into an engineered channel. From here, the creek historically flowed into a large marsh then into the bay. Prior to 1915, Union Pacific filled this section of the marsh to make way for the railroad tracks. There is a remnant of the old marsh on the north bank of the channel between Rowe Park and the freeway.
- 6. Quarry Road in Guadalupe Valley.** From Quarry Road, climb the hill following the dirt road near the power lines to get a good view of Guadalupe Valley. Guadalupe Valley Creek originally flowed on the north side of Valley Valley; now the creek flows in a storm drain underneath the road. The small creeks tumbling down the canyons, such as the one just west of you, now flow into this storm drain. Imagine this landscape – originally named *Cañada de Guadalupe* – without buildings or roads, and with a tree-lined creek flowing into a marsh and then the bay.
- 7. Mussel Rock Park.** A visit to Mussel Rock Park is a lesson in the powerful forces of nature. The San Andreas Fault meets the sea here. To see this, move your finger northwest along the words SAN ANDREAS RIFT ZONE on the map until you reach the shore at Mussel Rock. The movement of the fault has sheared and weakened the rock, making it susceptible to erosion and landslides. As the ocean waves eat away the bottom of the cliff, the hillsides collapse into the sea. This is unfortunate for the homes perched at the top of the cliff. Several homes were demolished in recent years as the landslides threatened them.
- 8. Fairmont Park.** Although not here today, in the past a large pond covered much of Fairmont Park. This pond was likely a sag pond created by a strand of the San Andreas Fault. On the map, notice the series of historical ponds shown in green to the northwest and southeast of Fairmont Park. These ponds occupied small depressions created by movement along the San Andreas Fault. Notice a former sag pond named Laguna Alta, north of Fairmont Park. Although the pond no longer exists, the unnamed creek that likely drained the pond is visible from Westin Drive near Mussel Rock Park. Even though the historical ponds are filled, small, marshy patches with lilies and willows still occur along the fault in this neighborhood.
- 9. Buri Buri Park.** Underneath this park is a large tributary to Colma Creek, named Twelve Mile Creek, that is now entirely contained in culverts and storm drains beneath Westborough Boulevard. From within the park, notice the steep slope you descended as you entered the parking lot. A small bend in the former creek carved the sides of the valley creating the steep slope.
- 10. Orange Memorial Park.** Colma Creek is one of the largest creeks on the Peninsula, draining a highly urbanized watershed that also includes San Bruno Mountain. Only a few small tributaries on the mountainside remain in a natural state. Of the original seven and one half mile-long creek, one-half mile remains natural, two

- 11. Oyster Point Marina.** Beautiful views of the bay and modern marsh are a special treat here along the Bay Trail. A large section of the modern tidal marsh – formed during the last 100 years on the northwest side of the marina – is visible from the trail. High tides inundate most of the marsh; low tides expose the marsh. Much of the marina sits on artificial bay fill (see map). Try to recognize the boundary between fill and modern marsh. Natural forces build marshes out of fine sediment and plant debris. The fill here contains big boulders and angular chunks of rock.
- 12. San Bruno Creek at North Access Road.** Along the north side of the road, San Bruno Creek flows in an engineered channel. This large open area contains a very large section of historical tidal marsh. The Bay Trail around San Bruno Point is a wonderful starting point for exploring this large natural marsh. Look for birds such as clapper rails and sedge wrens tucked into pickleweed and cord grasses.
- 13. San Bruno Creek & First Avenue.** You may be asking yourself, "Where's the creek?" Through this section of the watershed, San Bruno Creek is in an underground culvert. Historically, San Bruno Creek soaked into the ground before reaching this point (see map). By the 1940s, the creek was ditched through this section to prevent seasonal flooding.
- 14. Sharp Park City Beach – Laguna Salada.** Sharp Park Beach is a wonderful place to learn about the historical interface between creeks and the ocean. Walk south from Beach Boulevard along the large levee that separates Sharp Park Beach from Laguna Salada and the golf course. This levee follows the crest of a large sand dune. This sand dune impounded water from the creek creating the Laguna Salada, or Salt Lake. In the past, peak storm flows caused Sharp Park Creek to breach the levee and flow directly into the ocean. Currently, a pump station can draw down the water level in Laguna Salada to reduce flooding. In very severe storms, such as the storms of 1962-63, waves can surge over the levee into the lake.
- 15. Rockaway State Beach.** The small cove sheltering Rockaway Beach is nestled between coastal bluffs formed by two small creeks. Calera Creek, located on the north side of the Rockaway Beach Boardwalk, has thick riparian vegetation along its banks including rushes, bulrushes, and horsetails, among others. You can easily explore the creek via the biking trail either starting at the Pacific State Beach or at Calera Creek Park further upstream. Notice on the map the relocation of Calera Creek. Look for evidence of engineered banks along the new creek channel.
- 16. Pacifica State Beach.** A short hike along this beach reveals an interesting mix of the natural and the engineered. Behind the public restroom, four huge valves periodically empty storm discharge onto the beach from the watershed across the highway. Walk south to the mouth of San Pedro Creek and enjoy the beautiful two-acre tidal wetlands, which Pacific Land Trust created in 2003 after purchasing this beachfront property.
- 17. San Pedro Creek trail.** Hike the old road along San Pedro Creek. This mile-long reach of creek – though well vegetated and full of wildlife – is artificially constructed. Before about 1870, San Pedro Creek did not typically flow to the sea. It spread into a willow thicket and lake tucked behind the coastal dunes, where it sank into the sandy ground. However, a native steelhead fishery indicates at least occasional connections to the ocean. Sometime around the 1870s, farmers dug a ditch to connect the creek to the ocean and drain the land for farming. A straight channel for over 100 years,

the channel was re-engineered in 2002 to provide not only better flood protection, but also six acres of creekside wetland habitat and a more natural meandering pattern.

**18. Sanchez Adobe Historic Site.** From an Indian village to a mission farm and cattle ranch, to the residence of Don Francisco Sanchez, then a rookhouse, an archedo parking shed, and finally a county historic site, this five-acre parcel along San Pedro Creek has seen a lot of California history. Open daily, the old adobe is packed with historical artifacts, and the grounds invite you to explore. San Pedro Creek borders the property and provided the water and fertile soils that made this site so valuable. When the adobe was built in the 1840s, the creek bed was only a few feet below the level of the fields; floods regularly spread fresh silt over the farmsteads.

**19. San Pedro Valley County Park.** Hike the headwaters of San Pedro Creek at this large county park. Seven different trails provide a total of ten miles of hiking through riparian woodland, grassland, coastal scrub, and chaparral communities. Spring wildflowers are a special attraction at this park. The visitor center offers you displays and books about the flowers, plants, animals, and history. Steelhead trout use the shaded stream for spawning – view them from the platform behind the visitor center.

**20. Sweeney Ridge.** In 1769, Spanish explorer Captain Juan Gaspar de Portola caught his first view of the San Francisco Bay from the crest of Sweeney Ridge. Visit Portola's discovery point by hiking 2.3 miles from the Skyline College parking lot along the Sweeney Ridge Trail in Golden Gate National Recreation Area. Look for wildlife hiding in the coastal scrub, wildflowers, and blue-eyed grass as you hike. The discovery point gives a dramatic view of both the San Francisco Bay and the Pacific Ocean. In fact, here Sweeney Ridge forms the divide between watersheds that drain the bay and those that drain to the ocean.

