

# CREEK & WATERSHED MAP of Fremont and Vicinity

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Historical wetlands research by the San Francisco Estuary Institute

This map shows the modern hydrology of the Fremont area, including the creek and storm drain network and present-day watershed boundaries. Also shown are the historical shoreline, tidal marshes, sloughs, ponds, willow groves, and creeks. Most of these historical features no longer exist. Development has resulted in the culverting and channelization of many creeks, and the filling of portions of the bay and tidal marsh lands. Most of the tidal marsh lands in the Fremont area have been diked for salt evaporators or farming. Some of these marshlands have been, or are now being, restored.

**NOTES** The map shows creeks having a minimum of 0.2 square kilometers of watershed, and storm drains 24 inches or greater in diameter. Where the entire creek flow is carried by a culvert buried in a former creek bed, only the culvert symbol (red dots) is shown on the map.

**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, sloughs, tidal marshes, shoreline, and willow groves can be expected both before and after the historical maps or photos were made. Historical shoreline and tidal marsh boundaries are

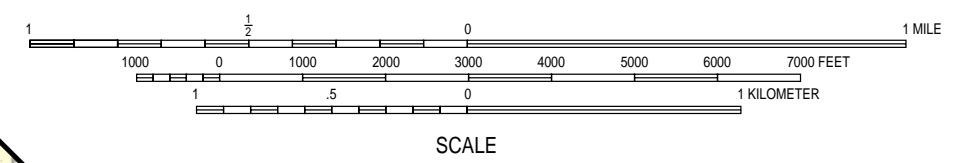
considered accurate to within 200 feet, or if dashed, to within 1000 feet on either side of the line shown, as are willow groves. Former creek locations are accurate to within 200 feet, or if dashed, to within 500 feet on either side of the line shown. Present-day creek and storm drain locations are considered accurate to within 100 feet on either side of the line shown.

**HOW THIS MAP WAS MADE** Storm drains, engineered channels, and present-day creeks were compiled from city and county maps, 1989 and 1992 aerial photography, and field inspection. The historical locations of creeks were compiled primarily from 1939 aerial photography, with the exception of the 1874 channel of Alameda Creek, which was taken from a historical map. The historical shoreline, tidal marshes, ponds, sloughs, and willow groves were compiled with the assistance of the San Francisco Estuary Institute (SFEI) of Richmond, CA, using 1857 U. S. Coast Survey maps, early Spanish and American maps and written accounts. Complete documentation can be obtained from Janet Sowers at William Lettis & Associates, Inc. in Walnut Creek, or Christopher Richard at the Oakland Museum of California. The base map (showing present geographic features) was prepared in 1980 by the U. S. Geological Survey. We added major new roads.

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## EXPLANATION

- Creeks
- Creeks circa 1939, now buried or drained. Creeks are dashed where location is less certain
- Bay shoreline and sloughs, circa 1857
- Underground culverts and storm drains
- Engineered channels
- Flood control channel
- Willow groves, circa 1850
- Tidal and fresh water marsh and ponds, circa 1850
- now water
- now fill land
- Tidal marsh formed after 1857
- Bay
- Bay, circa 1857, now fill land
- Artificial bodies of water
- Present watersheds
- Points of interest



## POINTS OF INTEREST

1. **Hayward Shoreline Interpretive Center** Located on Breakwater Drive, this attractive center provides information on wetland wildlife and ecology, and local hiking trails. Trails lead from the center into the marshlands.
2. **Alameda Creek Trail in Union City Park** at the north end of Kohoutek Drive, walk north on Hesperian Boulevard, then turn right onto the Alameda Creek Trail. The trail follows the levee of the flood control channel. Alameda Creek originally flowed to the bay at this location, but it has been diverted into a larger flood control channel to the south. The water in this channel comes from Union City and south Hayward. Sediment on the floor of the channel is host to wetland plants and animals.
3. **Dry Creek** Tamarack Drive is the southern trailhead for the Dry Creek Trail in Dry Creek Pioneer Regional Park. The trail follows the creek upstream for about 1.6 miles. Compare the cool lushness of the streamside vegetation (riparian zone) to the dryness of the hillsides.
4. **Alameda Creek Trail at San Andreas Park** This unremarkable channel was once the main channel of the largest stream in the East Bay. Now only local runoff and stormwater flow here. The Alameda Creek Trail takes you upstream alongside the shady creek bed for about a mile -- a pleasant place for a hike or bike ride.
5. **Cann Park** At the end of Hop Ranch Road in a shady park is another abandoned portion of the original Alameda Creek channel. Note that the channel here is deeper and wider than at San Andreas Park (located downstream), and not as deep nor as wide as at Arroyo Park (located upstream). Most stream channels on alluvial fans become progressively shallower downstream.
6. **Arroyo Park** Park along Osprey Drive and cross the playground to see another abandoned segment of the natural Alameda Creek channel. From its size and depth here it is easy to imagine that it once carried the largest stream in Alameda County. Now it serves as a site for groundwater recharge as stormwater percolates into the ground.
7. **Alameda Creek Flood Control Channel at Isherwood Drive Park** in the lot on the north side of the channel, then cross Isherwood Drive and walk west along the levee of the channel. This channel, completed in 1972, is wide enough to contain Alameda Creek and its floodwaters. After 0.5 miles you will see an abandoned segment of the natural Alameda Creek channel, lined with trees, abutting the levee on the right side. Take a moment to compare the natural versus the engineered channel.
8. **Quarry Lakes Regional Recreation Area (to open in 2000)** The Niles area contains about 15 abandoned quarry pits partially filled with water. Sand and gravel deposits of Alameda Creek were mined from these pits from the 1890's to 1990's, some of it used to build the transcontinental railroad. Since the 1950's, the Alameda County Water District has diverted water from Alameda Creek into the abandoned pits, using them as percolation ponds to recharge the groundwater. This groundwater is later pumped out for drinking water.
9. **Ardenwood Regional Preserve** George Patterson was a successful farmer in the late 1800's who owned about 4,000 acres in southern Alameda County, including Ardenwood Ranch. Here the soils were fertile - nourished with silt from winter floods, rich with humus from the old willow marsh, and irrigated by water from Alameda Creek. Crops were taken to Patterson Creek and loaded onto boats to be taken to market in San Francisco. Ardenwood is now an historical park where 19th century farming techniques are demonstrated for visitors.
10. **Niles Community Park** Park at 3rd and H Streets in Niles to visit three lakes: Shinn Pond, Grau Pond, and Snell Pond (in order from largest to smallest). These are three of about 15 abandoned gravel quarries in the area. Fishing is allowed.
11. **Rubber dams** Park on Mission Boulevard near the bridge and walk downstream on the levee of the flood control channel. Most days the water is backed up forming a lake that fills the channel. A short distance downstream from Mission you will see the reason for the backup - an inflatable rubber dam! There are several of these dams along the channel; they create lakes where the water can percolate downward to recharge the groundwater. The dams can be deflated to let flood waters safely pass. Downstream under the BART tracks is a weir that blocks the upstream migration of salmon and steelhead.
12. **Coyote Hills Regional Park** Here is one of the few relatively unspoiled freshwater marshes in the Bay Area. Take the boardwalk through thick stands of cattails and tules. Near the Ohlone shell mound is the DUST marsh, which stands for Demonstration Urban Stormwater Treatment. Water of Crandell Creek filters slowly through the marsh where plants, animals, and microorganisms breakdown and remove chemicals and pollutants.
13. **Don Edwards San Francisco Bay National Wildlife Refuge** This vast wetland preserve extends from the Coyote Hills south, past Dumbarton Point. Most of these tidal marshes were diked early this century for salt evaporation ponds; miles of trails run along the crests of the old dikes. Drop in at the Visitor Center for trail maps and nature guides.
14. **Tide Pond** This sag pond owes its existence to sinking of the ground between two strands of the Hayward fault that run along either side of the pond. View it from the corner of the BART parking lot, which takes a bite out of the original pond. Stormwater enters an artificial marsh on the northeast side, where urban pollutants are removed naturally before the water flows into the pond.
15. **Lake Elizabeth in Central Park** This site was originally occupied by Silver Lagoon, a wet-season pond ringed with marshes. The pond and marshes filled a natural basin created by sinking of the land adjacent to the Hayward fault. In the 1970's an artificial lake was constructed in the basin and named for Fremont's sister city, Elizabeth, Australia.
16. **Gomes Park** Mission Creek meanders through this city park in a sinuous tree-lined channel. The meandering probably was created as landscaping for the park. Photographs taken in 1939 show this part of the creek to be a straight ditch, dug to keep the shifting creek from flooding farms.
17. **Mission Creek on Mill Creek Road** Drive up this narrow, winding road, and for 7 miles you will be rewarded with views of a lovely lush canyon, babbling Mission Creek, and finally a grand vista of Mission Pass. This road was named for an old mill which has since been removed and restored near Mission San Jose.
18. **Kennedy High School** An old creek channel is buried beneath the school building. The creek has been replaced by a concrete canal on the west side of the campus. Blacow Road crosses four such canals that drain rainwater to the bay.