



Guide to Oceanside Waterbodies



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Water Quality Programs

Under various state and local regulations, the Clean Water Program is required to monitor the water quality of our rivers, creeks and beaches. Three separate monitoring programs have been instituted in Oceanside: the Dry Weather Analytical Monitoring and Field Screening Program, the Coastal and Lagoon Outfall Monitoring Program and the Beach Water Quality Monitoring Program.

Dry Weather Analytical Monitoring and Field Screening Program

This program is designed to test the water quality of our rivers and creeks during May through September, months when little to no rainfall occurs. Testing during the “dry season” allows the City an opportunity to measure the quality of our rivers and creeks when only urban runoff is entering our waterbodies. By understanding how urban runoff discharges affect our local waterbodies, it gives us more information about the quantity and seriousness of certain pollutant problems and where they might originate.



Coastal and Lagoon Outfall Monitoring Program

In order to monitor the affects of urban runoff discharges to our lagoons and the ocean, storm drain outfalls on our coastline and around the lagoons and harbor are observed year round. All storm drains west of Interstate 5 feed urban runoff to these outfall pipes and eventually the ocean. Clean Water Program staff regularly monitor the outfall pipes to see if any water is discharging to the ocean. If so, two samples are taken: one of the water coming out of the pipes and one of nearby ocean water. These two samples help us determine whether or not the urban runoff coming from the outfall pipes is affecting the water quality of the ocean.



Beach Water Quality Monitoring Program

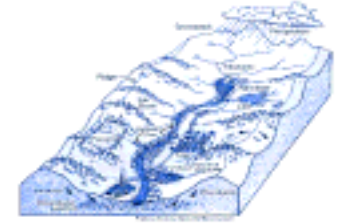
Mandated by the Beach Safety Bill, the City of Oceanside and the County of San Diego collect samples of our ocean water to test for bacteria. Ten monitoring locations, sampled weekly between April through September and biweekly October through March, determine whether or not the beaches should be closed to the public or posted for high bacteria counts. This assures the safety of the recreational users of Oceanside’s beautiful beaches.



Watersheds

Each river, creek or stream you see is part of a huge national network of approximately three million that ultimately sends water from inland areas to an ocean. Each lake, lagoon, wetland, river, creek or stream is part of what is called a watershed. Everyone lives in a watershed, because watersheds are everywhere.

Watersheds are drainage areas for water to flow to the nearest lake or ocean. Typically, watersheds are surrounded by land areas of higher elevation that drain rainwater to areas of lower elevation. When water draining from higher elevations flows downhill, it cuts into the earth creating a river, creek, or stream (depending on the amount of water). These rivers, creeks and streams connect together to form a network that channels water into a lake or ocean.



Watersheds do not follow political boundaries; therefore, many cities or other jurisdictions are part of multiple watersheds.

Because watersheds are all around us, many of the activities we do at home and work can affect the water quality of our watersheds. For instance, washing your car in the street allows soaps, grit, grime, metals and bacteria to enter a storm drain and eventually flow into a river, creek, or stream untreated. Additionally, commercial businesses that store oil-leaking equipment outside can pollute our waterbodies when rain washes that oil into the nearest waterbody. It is up to all of us to help protect the water quality of Oceanside’s watersheds for our families and our community. Everyone impacts a watershed, because watersheds are everywhere.



The following pages are full of interesting information about the waterbodies of Oceanside.

San Luis Rey River

The San Luis Rey (SLR) River is located primarily along Highway 76 in Oceanside. Originating in the Palomar and Hot Springs Mountains, the river ultimately ends at the Pacific Ocean. It extends over 55 miles across northern San Diego County forming a watershed with an area of approximately 360,000 acres or 562 square miles. Within the City of Oceanside, the San Luis Rey River is also fed by one of its tributaries, Pilgram Creek, which is located on the northeast end of Oceanside.



About 8 percent of the City of Oceanside's water supply comes from the San Luis Rey River Basin. Water from the basin is pumped from wells and treated at a reverse osmosis plant before being sent to Oceanside residents.

There are 36 vegetation communities within the SLR River Watershed, with the coastal sage scrub, chaparral and grassland communities being the most abundant. Numerous protected and sensitive species and vegetation communities occur throughout the watershed.

The San Luis Rey River flows through the County of Riverside, County of San Diego, City of Escondido and City of Vista before making its way downstream to Oceanside. There are numerous land use types within the watershed; however, the majority of the watershed has remained undeveloped. Much of the western half of the watershed is privately owned and much of the eastern half is publicly owned.



Many agricultural areas, sand mining operations and septic systems surround the San Luis Rey Watershed. These land uses, along with urban runoff from developed areas, have introduced many pollutants into the river and have degraded the water quality. According to the State Water Resources Control Board, the river shows high levels of chloride and total dissolved solids. At the mouth of the river, near the Pacific Ocean, the river water shows high levels of bacteria.



Calavera Creek/Lake

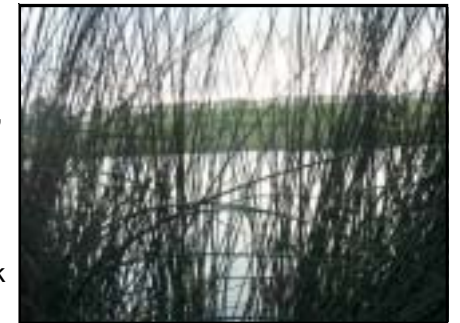
Within the boundaries of the City of Oceanside resides a portion of a small tributary to Agua Hedionda Creek, called Calavera Creek. Located in the southeastern corner of Oceanside near Lake Boulevard, Calavera



Creek flows approximately one mile through the publicly owned Oak Riparian Park. Beginning in an undeveloped portion of land just west of Highway 78, Calavera Creek's headwaters start in Vista, proceed through a pocket of San Diego County unincorporated area, head into Oceanside, then eventually drain to Calavera Lake in Carlsbad. At the base of Calavera Lake the creek reforms to

wind its way through Carlsbad and joins the major artery of Agua Hedionda Creek. Near the Pacific Ocean, Agua Hedionda Creek opens up into a lagoon. The entire Calavera Creek Basin is approximately 3,770 acres. Calavera Creek joins a larger watershed, Agua Hedionda Creek, which is approximately 18,837 acres. Both Calavera Creek and Agua Hedionda Creek are a part of the larger Agua Hedionda Watershed, a sub-basin of the regional Carlsbad Hydrologic Unit.

Along the banks of Calavera Creek in the City of Oceanside is extensive growth of cattails and bulrush. Additionally, coast live oak, chaparral, and arroyo willows pepper the area. No endangered species have been identified within the area of Calavera Creek that flows through Oceanside. However, as a whole, Calavera Creek does serve as a wildlife corridor for migratory species.



Upstream of Oak Riparian Park are significant residential neighborhoods that contribute pollutants from urban runoff into the creek. While there is no federal-or state-listed pollutant impacts to the creek, sedimentation within the basin has been a problem that the City of Oceanside is currently correcting.

Buena Vista Creek/Lagoon

The Buena Vista Watershed extends approximately 10.6 miles inland from the coast, totaling 14,437 acres and draining 21 square miles. The Watershed begins on the western slopes of the San Marcos Mountains, turns into a lagoon and then ends at the Pacific Ocean.



In the City of Oceanside, Buena Vista Creek parallels Highway 78. The Lagoon is located south of Highway 78 and west of Jefferson Street. The upper and western basins of the Buena Vista Watershed are primarily in the City of Vista, the southeastern portions are primarily in the San Diego County jurisdiction, and the lower basin is straddled between the Cities of Carlsbad and Oceanside as the Creek weaves its way between the two cities.

Approximately 80 percent of the Buena Vista Watershed is developed, primarily with commercial and residential land uses. Because of the intense development in the watershed, large sections of Buena Vista Creek have been concrete-channelized to reduce the chance of flooding private property. Some agricultural activities also exist along the watershed. All of these land uses are potential sources of pollutants for the watershed. According to the State Water Resources Control Board, Buena Vista Lagoon has been found to have high levels of bacteria, sediment and nutrients.



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Fourteen natural vegetation communities have been identified in the Buena Vista Watershed, such as chaparral and sage scrub, willows and cottonwoods. However, much of the vegetation is fragmented due to the high level of development. Additionally, invasive plant species, such as Arundo, have presented a problem in the Buena Vista Watershed as it smothers out native plants and reduces habitat areas needed to support existing wildlife communities.

The watershed also provides refuge for a wide array of wildlife and endangered species, such as the California Gnatcatcher, Least Bell's Vireo, Orange-throated Whiptail and the Yellow-breasted Chat.



The Lagoon is designated as an Ecological Reserve by the California Fish and Game Department, a state agency which oversees its management.

Guajome Lake

Located in the far eastern edge of Oceanside lies Guajome Lake, a County-managed waterbody that is part of the Guajome Regional Park and the San Luis Rey Watershed. This 12-acre lake is in the larger San Luis Rey Watershed. Adjacent to the Lake is Guajome Marsh, which is separated from the Lake by a stream, called Guajome Creek, that drains approximately 1,293 acres into Guajome Lake.



The Lake has undergone many structural changes as a result of diking and dredging activities done prior to the 1970's. At one time, the marsh, creek and lake were all combined. However, sediments have filled in the area and contributed to loss of lake depth over the years. A study conducted by the County of San Diego in 1994 showed that the lake receives approximately 1,041 tons of sediments annually, though the quantity could vary year to year.

Guajome Lake is surrounded by one of the larger freshwater marsh habitats in San Diego County, with a stand of riparian woodland at the east end of the lake. The marsh habitat is dominated by bulrush and cattails. Riparian habitat in the area has primarily willow species, pickleweed and mulefat. There have been a few endangered bird species observed around Guajome Lake, including the California Least Tern and the Light Footed Clapper Rail.



The areas draining runoff into the lake include a mixture of residential, commercial, agricultural and open space. Due to a few of these land uses, Guajome Lake has been listed by the State Water Resources Control Board as being impacted by eutrophication, or having too many nutrients in the water which contribute to the overproduction of algae. Due to the eutrophication impairment, few fish reside in the lake.

The County of San Diego is concerned about the health of the Guajome Lake and strives to continually improve its water quality, which is why in January of 1994 the County initiated a study to identify the sources of the pollutants impacting its water quality. Today, the County of San Diego is looking at projects to assist in the reduction of these pollutants, such as aeration machines to increase the levels of oxygen in the water.

Foss Lake

Located in the northeastern portion of Oceanside, along Douglas Drive, lies a very sensitive and unique wetland habitat called Foss Lake. Approximately 75 acres in size, Foss Lake is one of the only inland alkali marshes in San Diego County.



Over the years Foss Lake has been altered in various ways. Approximately 50 years ago the area was filled and used as an agricultural site supporting crops and cattle. Recently, the construction of Douglas Drive has divided Foss Lake into two sections, a parcel north of Douglas Drive and a parcel south of Douglas Drive. The southern parcel is undergoing a habitat management project to remove invasive plant species and allow the multitude of sensitive and endangered native vegetation, such as the Diegan coastal sage, pickleweed, and Southern willow scrubs, to flourish.

Foss Lake supports an array of wildlife including the endangered Least Bells Vireo, Yellow-breasted Chat, and threatened California Gnatcatcher.

As part of the San Luis Rey Watershed, Foss Lake has been preserved as an open space biological reserve and is currently under the management of two separate environmental management organizations. The northern portion of Foss Lake is under the management of the Environmental Trust. The southern portion of the Lake is held in trust to the Center for Natural Lands Management. The public may visit the lake, but access is limited to walking. No boating, biking, or motorized vehicles are permitted on the premises.



Loma Alta Creek/S lough

Loma Alta Creek is the northernmost watershed in the Carlsbad Hydrologic Unit. It flows alongside Oceanside Boulevard, beginning as rising springs just west of Melrose Drive in the City of Vista and ending at Buccaneer Beach Park where it enters the Pacific Ocean. Approximately 5 percent of the Loma Alta Creek Watershed is in the City of Vista, and the remaining portion is entirely in the City of Oceanside. Loma Alta Creek is just over seven miles long and encompasses nearly 6,300 acres of land, 70 percent of which is developed. Almost 90 percent of the land within the watershed is privately owned.



Several tributaries drain into Loma Alta Creek, however, the only named tributary is Garrison Creek, located along Garrison Street west of El Camino Real. Much of the creek has been modified throughout the years, with the use of fully or partially concrete-lined channels to stabilize the creek-bed slopes.

Most of the undeveloped land in the Loma Alta Watershed supports disturbed and non-native habitat, with numerous exotic/invasive plant species. The seven percent of remaining native vegetation includes freshwater marsh, willow riparian scrub, coastal sage scrub, chaparral, and valley and coastal grassland. Loma Alta Creek is an important wildlife corridor and supports several threatened and endangered species, as well as approximately 100 species of wildlife.

Residential development comprises 45 percent of the predominant land use in the Loma Alta Watershed. Industrial facilities account for 7 percent, commercial businesses 4 percent, and public facilities make up nearly 16 percent of the additional land uses. All of these land uses are potential sources of pollutants for the watershed. According to the State Water Resources Control Board, Loma Alta Creek has been found to have high levels of bacteria and nutrients.



Whelan Lake

Located in the San Luis Rey Watershed on the northern end of the City of Oceanside lies a 73-acre bird sanctuary called Whelan Lake. Bordered by Camp Pendleton and adjacent to the City of Oceanside San Luis Rey Wastewater Treatment Plant, Whelan Lake is a man-made body of water that was used to assist a dairy farm operation owned by the Whelan Family. Ellen Whelan, upon her death in 1985, donated the entire 305-acre property to a Board of Trustees with the understanding that the land was to remain protected and used as a sanctuary for migrating and permanent waterfowl.



The water table in Whelan Lake is fed by tertiary-treated effluent from the San Luis Rey Wastewater Treatment Plant. Tertiary-treated waters, high in nutrients, help promote the growth and sustainability of the many species of plant life. Grassland habitat predominately characterizes the area around the Lake. However, some scrub and chaparral habitats can also be found. Over the next few years, the Board of Trustees will plant native trees in the area, including sycamores, willows, oaks and cottonwoods.

Volunteers from the National Audubon Society assist in collecting information as to the numbers and types of species visiting Whelan Lake.



To date, 170 species of birds have been sighted in the area, including Canadian Geese, Willowflyer Catcher, Least Bells Vireo and White Pelicans. Resident birds include Egrets and 10-15 different Mallard duck species. At one point in time, Whelan Lake supported various species of fish, however, it remains unclear if these fish stocks still thrive in the Lake due to the large populations of hungry birds.

Whelan Lake does not support recreational uses by humans. It has been preserved to function solely as a sanctuary for resident and migratory waterfowl. The Lake is behind gates to protect the sanctuary and undeveloped area.

Talone Lake

Situated between Frazee Road and College Boulevard, behind the Town Center North Shopping Area lies Talone Lake, a 23-acre lake surrounded by isolated wetland ponds. Located in the San Luis Rey Watershed, Talone Lake has become an important habitat refuge for migrating wildlife and is home to several endangered species. Created by a natural depression in the land, Talone Lake's water is recharged primarily by urban runoff and rainfall.



Over the years, Talone Lake has gradually begun to fill and become overtaken by vegetation. Eventually the lake will dry up, but the area will remain an undeveloped wildlife harbor full of riparian vegetation. The Lake area is home to extensive willow, cottonwood and mule fat habitats.



Patches of isolated wetlands primarily house woodland and riparian scrub species. In the interior portions of the Lake, bulrush continues to grow rapidly, naturally depleting Talone Lake's water level.

Least Bells Vireo and California Gnatcatcher are the two primary endangered species sighted in the Talone Lake area.

Talone Lake does not support recreational uses by humans. It has been preserved to solely function as a wildlife harbor for flora and fauna.

City of Oceanside

- Aqua Hedionda Watershed
- Buena Vista Watershed
- Loma Alta Watershed
- San Luis Rey Watershed

PACIFIC OCEAN

