

# Cayucos Creek – Whale Rock Area Watershed

Hydrologic Unit Name	Water Planning Area	Acreage	Flows to	Groundwater Basin(s)	Jurisdictions
Estero Bay 10	Cayucos WPA 3	54,974 acres	Pacific Ocean / Estero Bay	Cayucos Valley, Old Valley, Toro Valley & Morro Valley	County of San Luis Obispo, Cayucos, Morro Bay (ptn) Los Padres National Forest



### **Description:**

The Cayucos Creek – Whale Rock Area Watershed lies within the southern portion of the California Coast Range. The watershed is bounded to the west by Pacific Ocean and the east by the Santa Lucia Mountain Range. Consistent with the CalWater HUC 10 grouping scale, the watershed area contains four major drainages that independently reach the Pacific Ocean: Cayucos Creek, Old Creek, Toro Creek and Morro Creek, the latter of which borders and shares some attributes with the Morro Bay watershed. The headwaters of the watershed are in Santa Lucia Range, reaching a maximum elevation of approximately 2,345 feet with the lowest elevation at around at sea level, draining in to the Pacific Ocean. Whale Rock reservoir is located in the watershed approximately ½ mile east of the community of Cayucos. The dominant land use in the watershed is Agriculture with the sea side town of Cayucos providing an urban core area with tourist oriented opportunities.



### **Existing Watershed Plans:**

None to date

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## Characteristics:

Physical Setting	
Rainfall	Average Annual: 16 in (coast) - 32 in. (mountains) (NRCS shapefile, 2010)
Air Temperature	Summer Range (August 1990-2012): 54°-67°F Winter Range (December 1990-2012): 43°-62°F (Morro Bay, <i>outside of watershed</i> , NOAA National Climatic Data Center, viewed 2013)
Geology Description	<p>Cayucos Creek and Cottontail Creek are steep Franciscan non-infiltrative headwaters with flat pre-Quaternary moderate infiltrative valleys.</p> <p>Torro Creek sub-watershed is steep Franciscan non-infiltrative.</p> <p>Old Creek is moderately steep to steep pre-Quaternary non-infiltrative material.</p> <p>The Morro Creek sub watershed consists of steep pre-Quaternary non-infiltrative headwaters and a flat Franciscan low infiltrative valley.</p> <p>Whale Rock Reservoir is composed of flat Franciscan low infiltrative valley (Bell, pers. comm., 2013).</p> <p>Groundwater is found in Pleistocene and Holocene alluvium and terrace deposits. The specific yield is estimated at 15 percent. Alluvium consists of unconsolidated sand, clay, silt, and gravel. The deposits are often about 100 feet thick near the center of the valley and more than 120 feet thick at the coast. Stream-terrace deposits are primarily unconsolidated deposits of marine origin. They are generally less than 10 feet thick. (Chipping, 1987)</p>
Hydrology	
Stream Gage	Yes; USGS 11142100 (Toro Creek at Toro Creek Road, viewed August 2013) Yes, Morro Creek installed in 1970. (SLO County Water)
Hydrology Models	None to date.
Peak Flow	4,600 cfs, Jan. 1973 (USGS, 1970-78, viewed August 2013)
Base Flow	5.74 cfs (USGS, 1970-78, viewed August 2013)
Flood Reports	Yes, SLO County Flood Control and Water Conservation District, 2009
Flood Control Structures	Bridges: 3 over Toro Creek on Toro Creek Road; 2 over Old Creek on Santa Rita Road and Cabrillo Street; 1 over Cottontail Creek on Cottontail Creek Road; 1 over Willow Creek on Ocean Boulevard; 4 over Cayucos Creek on Ocean Avenue, Cayucos Creek Road and Picachio Drive (2); 1 over Little Cayucos Creek on Ash Street (PWD Bridges GIS Layer)

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		Pipelines; levees; pump station; stormdrain; inlets; outfall structures; diversion pipe (SLO County Flood Control and Water Conservation District, 2009).
	Areas of Flood Risk	<p>Toro, Old, Cayucos, Little Cayucos Creeks are flood-prone natural drainage courses that should be maintained in their natural state to protect native vegetation and wildlife habitats.</p> <p>A lack of suitable conveyance facilities for stormwater runoff has led to frequent flooding problems in the coastal community of Cayucos, including serious flooding adjacent to Cayucos Creek. (SLO County Flood Control and Water Conservation District, 2009)</p> <p>Serious flooding occurs in the floodplain of Cayucos Creek west of HWY 1, bounded by the mobile home park to the North and Cayucos Drive to the South: Flooding occurs during storm events due to flows overtopping Cayucos Creek, west of highway 1, creating inability for local drainage to enter creek and dissipate. (SLO County Flood Control and Water Conservation District, 2009)</p>
	<b>Biological Setting</b>	
	Vegetation Cover	<p>Primarily non-native annual grassland with coast live oak woodland, coastal scrub consisting mainly of chamise and California sagebrush, some mixed evergreen forest, and coastal dune. (SLO County vegetation shapefile, 1990)</p> <p>Many drainages are partially lined with willow riparian scrub near the coast.</p> <p><i>Data limited by age of shapefile</i></p>
	Invasive Species	No data available
	Special Status Wildlife and Plants	<p><b>Key:</b> FE - Federal endangered, FT - Federal threatened, SE - State endangered, ST - State threatened, SSC - State Species of Special Concern; FP- Fully Protected, SA – Special Animal, CRPR – CA rare plant rank (CNDDDB, viewed August, 2013)</p> <p>Locations listed refer to USGS 7.5' quadrangle names. Only the portion overlapping the watershed boundary was considered.</p> <p><i>Data limited to observations, not complete inventory</i></p>

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Common Name	Status	BURNETT PEAK	BURRO MOUNTAIN	LIME MTN	PEBBLESTONE SHUT-IN	PIEDRAS BLANCAS	SAN SIMEON
<b>Animals</b>							
<i>California red-legged frog</i>	FT			x	x	x	x
<i>ferruginous hawk</i>	SA (Wintering)						x
<i>foothill yellow-legged frog</i>	SSC						x
<i>fringed myotis</i>	SA						x
<i>long-legged myotis</i>	SA						x
<i>monarch butterfly</i>	SA	x	x			x	x
<i>pallid bat</i>	SSC						x
<i>prairie falcon</i>	SA (Nesting)	x			x		x
<i>steelhead - south/central California coast DPS</i>	FT				x	x	x
<i>tidewater goby</i>	FE					x	x
<i>Townsend's big-eared bat</i>	SSC	x					x
<i>tufted puffin</i>	SSC					x	
<i>two-striped garter snake</i>	SSC				x		x
<i>western pond turtle</i>	SSC				x	x	x
<b>Plants</b>							
<i>adobe sanicle</i>	SR; CRPR 1B.1					x	
<i>Arroyo de la Cruz manzanita</i>	CRPR 1B.2				x	x	x
<i>Arroyo de la Cruz mariposa-lily</i>	CRPR 1B.2					x	
<i>bristlecone fir</i>	CRPR 1B.3	x					x
<i>Cambria morning-glory</i>	CRPR 4.2					x	
<i>Carmel Valley bush-mallow</i>	CRPR 1B.2				x		

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Common Name	Status	BURNETT PEAK	BURRO MOUNTAIN	LIME MTN	PEBBLESTONE SHUT-IN	PIEDRAS BLANCAS	SAN SIMEON
<i>Chorro Creek bog thistle</i>	FE; SE; CRPR 1B.2				x		
<i>compact cobwebby thistle</i>	CRPR 1B.2					x	x
<i>Cook's triteleia</i>	CRPR 1B.3	x			x		
<i>Dudley's lousewort</i>	SR; CRPR 1B.2					x	x
<i>dwarf goldenstar</i>	SR; CRPR 1B.2					x	
<i>Hardham's bedstraw</i>	CRPR 1B.3	x			x		x
<i>Hearsts' ceanothus</i>	SR; CRPR 1B.2					x	x
<i>Hearsts' manzanita</i>	SE; CRPR 1B.2					x	x
<i>Hickman's onion</i>	CRPR 1B.2					x	x
<i>late-flowered mariposa-lily</i>	CRPR 1B.2				x		
<i>maritime ceanothus</i>	SR; CRPR 1B.2					x	x
<i>marsh microseris</i>	CRPR 1B.2					x	
<i>Monterey pine</i>	CRPR 1B.1						x
<i>Monterey spineflower</i>	FT; CRPR 1B.2						x
<i>most beautiful jewel-flower</i>	CRPR 1B.2			x	x	x	x
<i>Palmer's monardella</i>	CRPR 1B.2	x				x	
<i>perennial goldfields</i>	CRPR 1B.2					x	
<i>pink Johnny-nip</i>	CRPR 1B.1					x	
<i>San Luis mariposa-lily</i>	CRPR 1B.2				x		
<i>San Luis Obispo owl's-clover</i>	CRPR 1B.2					x	x
<i>San Luis Obispo sedge</i>	CRPR 1B.2	x			x	x	x

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<i>San Simeon baccharis</i>	CRPR 1B.2				x	x	
<i>Santa Lucia bush-mallow</i>	CRPR 1B.2				x		
<i>Toro manzanita woodland woollythreads</i>	CRPR 1B.2	x					
Steelhead Streams	Yes; Cayucos Creek, Old Creek, Cottontail Creek, Toro Creek, Morro Creek (Carollo, 2012).						
Stream Habitat Inventory	Yes; USFW, 1994 <i>Data limited by age of study</i>						
Fish Passage Barriers	<p>Morro Creek: Crossing at Morro Creek Ranch, Cerro Alto Campground on Highway 41, Highway 41 culvert, Dam, Natural bedrock falls (National Marine Fisheries Service, 2007).</p> <p>Old Creek: Whale Rock Dam/Reservoir very close to mouth (National Marine Fisheries Service, 2007).</p> <p>Toro Creek: Toro Creek Rd.-2 barriers coming from Highway 41 side, Flashboard dams-1 on Borg property on Highway 41 side, 1 location unknown (National Marine Fisheries Service, 2007)</p>						
Designated Critical Habitat	Yes; Steelhead Trout; California red-legged frog (USFWS Critical Habitat Portal, 2013)						
Habitat Conservation Plans	Yes; Morro Bay Estuary Comprehensive Conservation and Management Plan, Chorro and Morro Groundwater Basin Management Plan						
Other Environmental Resources	San Luis Obispo Coastal Zone, Cayucos Beach, Cayucos State Beach, Critical Coastal Area, Whale Rock Reservoir (SLO County Flood Control and Water Conservation District, 2007)						
<b>Land Use</b>							
Jurisdictions and Local Communities	County of San Luis Obispo, Town of Cayucos, Portion of Morro Bay						
% Urbanized	6% (3% in City of Morro Bay, 0.8% in City of Atascadero city limits, 0.04% Cayucos Commercial, 0.03% Public Facilities, 2.5% Residential) (SLO County LUC)						

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% Agricultural	68% Agriculture (row crops, vineyards, orchards and rangeland) (SLO County LUC)
% Other	26% (11% open space - Coastal and surrounding Whale Rock Reservoir, 1.6% Recreation - beaches, Morro Strand State Beach, whale rock reservoir, Cerro Alto campground, 13% rural lands) (SLO County LUC)
Planning Areas	Adelaida, Estero, Salinas River Planning Areas
Potential growth areas	Cayucos
Facilities Present	Whale Rock Reservoir, Cayucos Area Water Organization; Cayucos Water Treatment Plant (Whale Rock Reservoir water treatment)
Commercial Uses	Industrial facilities: (Whale Rock Pit -Negranti Construction, Guerra Quarry - Weyrick Companies, Standard Oil Company Tank Farm, Chevron); agriculture; tourism; retail outlets; hotels; restaurants; fishing
<b>Demographics</b>	
Population	9,795 in watershed 2,592 in the community of Cayucos (U.S. Census, 2010).
Race and Ethnicity	Caucasian, representing 81.3%. Latinos represent 13% in City. Mixed Race representing 2%. The remaining races each represent less than 3%, including African American (0.3%), American Indian (0.6%), Pacific Islander (0.1%), and Asian (2.4%) (U.S. Census Blocks, 2010).  Cayucos: Caucasian, representing 91.3%. Asians representing 2.1%. Mixed Race representing 2.4%. The remaining races each represent less than including African American (0.2%), American Indian and Alaska Native (0.5%), Pacific Islander (0.3%). (US Census, 2010)
Income	MHI \$49,312 in watershed (U.S. Census Tracts, 2010) MHI \$59,130 in Cayucos (US Census, 2010)
Disadvantaged Communities	No; 18.3% of individuals are below poverty level in watershed (U.S. Census Tract, 2010). 11% of individuals are below poverty level in Cayucos (US Census, 2010)
<b>Water Supply</b>	
Water Management Entities	Yes; Cayucos Area Water Organization, which consists of San Luis Obispo County Services 10A (Southern Cayucos), Paso Robles Beach Water Association, the Cayucos Cemetery District and Morro Rock Mutual Water Company (Boyle, 2007)
Groundwater	Yes; Alluvial; Cayucos Valley, Old Valley, Toro Valley & Morro Valley Basins  Cayucos Area Water Organization well located in Old Valley Creek – downstream from Whale Rock Reservoir.
Surface Water	Yes; Whale Rock Reservoir (San Luis Obispo 22,283 AFY, Cal Poly 13,707 AFY, California Men’s Colony 4,570 AFY, Paso Robles Beach Water Association 222 AFY, County Service Area 10A 190 AFY, Cayucos-Morro Bay Cemetery District 18 AFY, Mainini Ranch 50 AFY, Ogle 14 AFY) (SLOCountyWater.org)

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Imported Water	Yes; agreements with City of SLO for transfer of 25 to 90 AFY from Nacimiento Water Project (Carollo, 2012)
Recycled / Desalinated Water	None
Key groundwater percolation area(s)	No data on key areas identified  Basin recharge comes primarily from seepage of surface flows in creeks, deep percolation of precipitation, and residential/agricultural return flows. Old Valley basin recharge is augmented by dam underflow and seepage from reservoir releases. (Carollo, 2012)
Water budget	None to date
<b>Water Uses</b>	
Beneficial Uses	<p><i>Cayucos Creek</i> - Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Ground Water Recharge (GWR), Water Contact Recreation (REC-1), Non-Contact Water Recreation (REC-2), Wildlife Habitat (WILD), Cold Fresh Water Habitat (COLD), Warm Freshwater habitat (WARM), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction, and/or Early Development (SPWN), Preservation of Biological Habitats of Special Significance (BIOL), Threatened, or Endangered Species (RARE), Estuarine Habitat (EST), Freshwater Replenishment (FRESH), and Commercial and Sport Fishing (COMM).</p> <p><i>Morro Creek</i> – Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Ground Water Recharge (GWR), Freshwater Replenishment (FRSH), Water Contact Recreation (REC-1), Non-Contact Water Recreation (REC-2), Commercial and Sport Fishing (COMM), Warm Fresh Water Habitat (WARM), Cold Fresh Water Habitat (COLD), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction, and/or Early Development (SPWN) (CCRWQCB, 2011)</p>
<b>Other Unique Characteristics</b>	
Whale Rock Reservoir	Whale Rock Reservoir is located on Old Creek Road approximately one-half mile east of the community of Cayucos. The project was planned, designed, and constructed under the supervision of the State Department of Water Resources. Construction took place between October 1958 and April 1961. The reservoir is jointly owned by the City of San Luis Obispo (55.05%), the California Men's Colony (CMC) (11.24%), and Cal Poly (33.71%). These three agencies, with the addition of a representative from the Department of Water Resources, form the Whale Rock Commission, which is responsible for operational policy and administration of the reservoir and related facilities. Day-to-day operation is provided by the City of San Luis Obispo.



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	<p>In April 1996, the downstream water rights agreement was amended and replaced with a new agreement, establishing water entitlements for adjacent and downstream water users. The downstream water users (Cayucos Area Water Organization or CAWO) affected by this agreement consist of three public water purveyors and the cemetery, plus two other rural/agricultural users, all in the Cayucos area. These agencies are the Paso Robles Beach Water Association, Morro Rock Mutual Water Company, County Service Area 10A, and Cayucos-Morro Bay Cemetery District.</p>
<p>Historical Resources</p>	<p>Captain James Cass House (222 Ocean Ave., Cayucos); Cayucos Pier (PLN_DES_HISTORIC_POINTS GIS Layer)</p>
<p>Los Padres National Park</p>	<p>Provides a diverse wildlife habitat with 23 threatened and endangered animals. The Forest has one endangered plant, two threatened plant species and 71 sensitive plant species. Management of riparian vegetation focuses on supporting fish and wildlife populations. There are over 870,000 acres of livestock grazing allotments in the Forest. Prehistoric and historic Native American sites, properties related to the practice of Indian and non-Indian religion, historic properties and districts are also in the Park.</p> <p>The Big Sur Coast is one of the outstanding features of the Los Padres National Forest. Several popular recreation facilities along the coast that attract visitors year-round. Land acquisitions in this area from 1992 to the present included a total of almost 9,300 acres. The Forest acquired the 1,226-acre Brazil Ranch in the Bixby Creek through a partnership with the Trust for Public Land.</p>
<p>San Luis Obispo Coastal Zone</p>	<p>Spanning 118 miles of coastline with numerous wide sandy beaches, sheltered bays, and vista points offering scenic views of the Pacific Ocean. - The coastal zone of San Luis Obispo County is known throughout the state for its beauty and diversity. The north coast is characterized by the rugged headlands to Big Sur. The rocky shoreline along the Hearst Ranch is highly valued for offshore views of marine mammals as well as scenic cliffs and rocky points. The beach, sandspit, and extensive wetlands of Morro Bay form a unique setting for wetland habitat study.</p>
<p>Cayucos State Beach</p>	<p>Park operated by the State of California. Known for its fishing pier, beautiful beach and historical buildings. Buildings left over from the prospering old town still stand as a variety of shops such as restaurants, antique stores, and specialty items. The sandy beach offers mild weather, watersports such as surfing and swimming and tidepooling. There are picnic tables, play equipment, restrooms, and outside showers available. The pier is lit for night fishing.</p>
<p>Hardie Park, Norma Rose Park (undeveloped), Paul Andrew Park</p>	<p>Group Day-Use facilities operated by the County of San Luis Obispo.</p>

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Climate Change Considerations	
	See IRWMP, 2014 Section H, Climate Change <i>Data is general for County, not Watershed specific</i>

## Watershed Codes

CalWater / DWR Number	HA	Hydrologic Area Name	HSA	Hydrologic Sub-Area Name	SWRCB Number	CDF Super Planning	CDF Watershed Name
3310.160000	-	Cambria	-	Cayucos	3310.16	Unidentified	Cayucos Creek
3310.170001	1	Cambria	7	Old	3310.17	Undefined	Cottontail Creek
3310.170002	1	Cambria	7	Old	3310.17	Undefined	Whale Rock Reservoir
3310.170003	1	Cambria	7	Old	3310.17	Undefined	Old Creek
3310.180000	8	Cambria	1	Toro	3310.18	Unidentified	Toro Creek

## Major Changes in the Watershed

- Prehistorically the local area was inhabited by the Chumash people, who settled the coastal San Luis Obispo area approximately 10,000 to 11,000 BC, including a large village to the South of Cayucos at Morro Creek (Cayucos by the Sea).
- Captain James Cass left his New England home, sailed around the Horn and settled in Cayucos in 1867 on 320 acres of the original Rancho Moro Y Cayucos Spanish Land Grant of 8,845 acres. He realized the future possibilities of the excellent location as a shipping port of cheese, hides, beef and fresh water (Cayucos by the Sea).

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- The Cayucos pier was constructed by Captain James Cass, the founder of Cayucos, in 1872 and was rebuilt and lengthened to 982 feet into deeper water in 1876. The pier was an immediate commercial success with steamships from Los Angeles and San Francisco docking several times per week. The severe drought of the late 1890's weakened Cayucos economically. And while in 1915 the pier received an economic boost when an abalone canning plant was built about half way out, it became less commercially viable through the early 1900's (Cayucos Pier Project).
- Pier became state property in 1920 and over the next 30 years once again became central to the economic health of the community. As residents of the San Joaquin Valley discovered Cayucos and its Mediterranean climate the pier became very popular with sport fishermen and has remained popular for generations. Anglers young and old have caught a wide variety of fish including: red snapper, smelt, sea trout, halibut, salmon, rock fish, perch, shark and rays. For those who wanted larger catches and bigger fish, in the 1940's, 50's & 60's party boats used Cayucos as a fair-weather anchorage every summer. They took their customers deep water fishing north of Cayucos, loading and unloading fishermen from the pier (Cayucos Pier Project).

## ***Watershed Health by Major Tributary***

<b>Tributary Name</b>	<b>Ephemeral / Perennial</b>	<b>303d Listed/ TMDLs</b>	<b>Pollution Sources NP (non-point) MP (Major Point)</b>	<b>Environmental Flows</b>
Cayucos Creek*	Undetermined	Enterococcus	Agriculture	<b>Lower:</b> Spring: 0.82 cfs. Summer: 0.32 cfs.
Cottontail Creek	Undetermined	Not assessed	Undetermined	Not assessed
Old Creek*	Undetermined	Not assessed	Undetermined	<b>Lower:</b> Spring: 1.31 cfs. Summer: 0.45 cfs <b>Upper:</b> Spring: 0.83 cfs. Summer 0.33 cfs.
Toro Creek*	Undetermined	Fecal Coliform , Low Dissolved Oxygen	Industrial Activities (Oil), Natural Sources, Agriculture	<b>Lower:</b> Spring: 1.01 cfs Summer: 0.37 cfs

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Morro Creek*	Undetermined	No	Undetermined	See instream flow study (Appendix C)
Whale Rock Reservoir	n/a	n/a	n/a	

\* Indicates independent drainage to the Pacific Ocean

## Watershed Health by Major Groundwater Basin

Groundwater Basin	Estimated Safe Yield (Carollo, 2012)	Water Availability Constraints (Carollo, 2012)	Drinking Water Standard Exceedance	Water Quality Objective Exceedance (CCRWQB, 2011)
Cayucos Valley	600 AF	Physical limitations and water quality issues. The shallow alluvial deposits are typically more susceptible to drought impacts	*Yes; see description below.	No for basin. No information for sub-basin
Old Valley	505 AF	Physical limitations, water rights and environmental considerations	**Yes; see description below.	No for basin. No information for sub-basin
Toro Valley	532 AF	Physical limitations, water quality	None	No
Morro Valley	1500 AFY	Physical limitations, water quality issues, and water rights	***Yes; see description below.	

*Groundwater Quality Description:* Toro Valley: Total dissolved solids (TDS) typically range between 400 to 700 mg/L. In the lower basin near Highway 1, petroleum hydrocarbon contamination associated with

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Chevron marine tracker terminal has been detected in groundwater and remedial activities are ongoing (Carollo, 2012).

\*Analysis of groundwater from 32 wells in this basin taken during 1957 through 1993 show TDS content ranging from 346 to 2,462 ppm. Portions of the basin have chloride levels exceeding 100 ppm, indicating seawater intrusion has occurred (Carollo, 2012).

\*\*Analyses of groundwater from 33 wells in this basin taken during 1957 through 1993 show TDS content ranging from 346 to 2,462 ppm. Portions have chloride levels exceeding 100 mg/L. (Carollo, 2012).

\*\*\* In the mid-1980's TDS concentrations in groundwater downstream of the narrows near Highway 1 began to exceed 1,000 mg/l seasonally due to sea water intrusion. Measured in 2007, basin TDS concentrations were typically between 400 and 800 mg/l and increasing toward the coast, except for an area beneath agricultural fields in the lower valley where TDS concentrations reached 1000 mg/l, and nitrate concentrations reached 220 mg/l as nitrate (Cleath & Associates 1993a; 2007).

## ***Critical Issues***

<b><i>Issue</i></b>	<b><i>Potential Causes</i></b>	<b><i>Referenced from</i></b>
Treat to lagoon	Channelization, pollution	National Marine Fisheries Service, 2007
Loss of riparian width	Agriculture	National Marine Fisheries Service, 2007
Lack of enforcement		National Marine Fisheries Service, 2007
Water quantity	Agricultural and residential extractions	National Marine Fisheries Service, 2007
Erosion and Sedimentation		National Marine Fisheries Service, 2007
Sea Water Intrusion (Cayucos Valley basin)		Carollo, 2012
Nitrates	Agriculture	Carollo, 2012
Outdated Basin study – Cayucos Valley basin		Carollo, 2012
Alluvial water deposits subject to drought impacts		Carollo, 2012
Outdated groundwater basin analysis – Toro Valley		Carollo, 2012
Cayucos Creek 303(d) listed for enterococcus	Agriculture	Carollo, 2012
Toro Creek 303(d) listed for fecal coliform and low dissolved oxygen	Industrial Activities (Oil), Natural Sources, Agriculture	Carollo, 2012

# Cayucos Creek – Whale Rock Area Watershed

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## ***Significant Studies in Progress:***