

# Development and Implementation of Hydromodification Control Methodology

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## Review of Existing Data

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# 1. Introduction

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The overarching strategy of this project is to develop a hydromodification management approach that will maintain and restore key watershed processes in the Central Coast Region. This effort requires a thorough understanding of the climatic, watershed, and receiving water characteristics based on the best available data. To develop such an approach for the climatically and physically diverse Central Coast Region, this project will stratify key regional and sub-regional datasets into a tractable number of relatively homogeneous terrains on the basis of their watershed attributes (including dominant watershed processes) and receiving-water characteristics. This will be accomplished through a combination of spatial and temporal datasets and targeted field reconnaissance, recognizing the type, scale, quality, and value of available data.

A key element of this project is to efficiently identify and pursue the data necessary to characterize the dominant local watershed processes. The identification, review, compilation, and processing efforts must carefully consider the scale/resolution and accuracy of each dataset and the value of the dataset with respect to the overall project objectives. The purpose of this document is to describe the data identification and collection methodology and summarize each key dataset.

## 1.1. Identification of Data Needs

The hydrologic cycle for an individual watershed is driven by its unique climatic and physical characteristics. To assess the key watershed processes, it is important to understand the dominant characteristics of the watershed and its receiving waters. Although these characteristics might be numerous, there are many datasets that can be adequately used to provide a framework for assessing key watershed processes. On the basis of the project team's experience with developing watershed models and analyzing watershed processes, individual spatial and temporal datasets were identified as critical to support this project. The data categories are summarized in Table 1, and each category is described in more detail in Section 2.

## 1.2. Data Collection Methodology

This project will explore the extent to which spatial and temporal datasets can help to identify the dominant sub-regional watershed processes. Having identified the necessary datasets in Section 1.1, the approach for collecting the data is twofold: (1) identify publically available national or statewide datasets that provide uniform coverage across the entire Central Coast Region and (2) solicit local municipalities to identify sub-regional datasets that provide higher resolution or more up-to-date information. The primary (national and statewide) datasets were easily obtained from each responsible agency. The secondary (local or municipal) datasets were solicited by providing a Data Needs Request List to all participating local agencies throughout the Central Coast Region (Appendix A). This prioritized list provided a description of each data category to guide the agencies in identifying the appropriate datasets needed for this project. A Sharepoint site was created to allow each agency to upload its data contribution, and a tracking sheet was created to manage the metadata (Appendix B). Overall, a total of 29 agencies contributed some form of data. Data sources are summarized in Table 2, and each category is described in more detail in Section 2.

**Table 1. Summary of Data Categories**

<b>Data Category</b>	<b>Description</b>	<b>Data Use</b>
Climate	Time series records of historical precipitation, evaporation, and evapotranspiration	Characterizes hydrologic and hydraulic loading of runoff, which drives both watershed processes and hydromodification responses
Land Use/Land Cover	Spatial land use practices, including pervious and impervious surfaces	Determines runoff (rate, volume, quality, timing) and expected infiltration patterns
Imperviousness	Spatial percentage of land that is impervious in area	Determines runoff (rate, volume, timing) and expected infiltration patterns
Transportation	Transportation corridors in urban and rural areas (i.e., road coverage)	Assists in determining water quality and defines drainage boundaries in urban areas
Watershed Delineations	Boundaries of subcatchment drainage areas	Determine contributing areas to receiving waters
Topography	Elevation contours at select intervals	Establishes watershed delineations and watershed slopes
Flood Control Structures	Flood control features along stream reaches	Provide insight into altered runoff rates and volumes, and physical impacts on receiving-water conditions
Historical Burn Areas	Spatial areas subjected to controlled burns or wildfires	Help to determine increased runoff volumes and degraded water quality in burn areas
Receiving Water Conditions	Physical, chemical, and ecological health indicators of receiving waters	Provide a baseline for comparison against hydromodification impacts, and an indication of preexisting conditions and impacts
Jurisdictional Boundaries	Outline of the organizations with the rights, powers, and authorities to administer within a geographic area	Determine the proper authoritative channels to implement hydromodification controls
Storm Event Photos	Photos of flow depths and widths for storms of known intensity	Provide graphic illustrations of hydromodification and a benchmark for model comparisons
Geology	Spatial characterization of known geologic conditions	Determines expected sediment yields
Flow Data	Time series of flow records at known locations	Provide a benchmark for model calibration
Orthophotos/Aerial Imagery	Photographic record of current and historical land conditions	Provides a record of legacy for hydromodification impacts
Groundwater	Records of groundwater characteristics	Provides insight on possible groundwater receiving-water issues; identifies areas where recharge is a key watershed process
Blue-line Hydrography	Spatial alignment of known flow channels	Determines subwatershed connectivity
Soils	Spatial characterization of known soil conditions	Identify limitations on infiltration rates and sediment contribution

**Table 2. Data Source Quantitative Summary**

<b>Data Category</b>	<b>National/Statewide Source</b>	<b>Summary of Municipal Contributions</b>
Climate	National Climatic Data Center (NCDC), California Data Exchange Center (CDEC), Remote Automated Weather Stations (RAWS) & California Irrigation Management Information System (CIMIS)	1 county & 6 cities
Land Use/Land Cover	Central Coast Watershed Studies (CCoWS) 2005 Land Cover	4 counties, 16 cities & 1 university
Imperviousness	National Land Cover Database (NLCD) 2001 Impervious Surfaces	1 county & 2 cities
Transportation	Cal-Atlas Topologically Integrated Geographic Encoding and Reference system (TIGER) roads	4 counties, 11 cities & 1 university
Watershed Delineations	National Hydrography Dataset (NHD) Plus	3 counties, 4 cities & 1 university
Topography	National Elevation Dataset (NED)	1 county, 7 cities & 1 university
Flood Control Structures	CalFish Passage Assessment Database	4 counties, 8 cities & 1 university
Historical Burn Areas	California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (CalFRAP)	1 county
Receiving Water Conditions	Sanctuary Integrated Monitoring Network (SIMoN)	5 cities & 1 water district
Jurisdictional Boundaries	Cal-Atlas	3 counties, 8 cities & 1 university
Storm Event Photos		2 counties & 3 cities
Geology	Jennings 1977	3 counties, 3 cities & 1 university
Flow Data	United States Geological Survey (USGS) stream gages	2 counties & 2 cities
Orthophotos/Aerial Imagery	National Agriculture Imagery Program (NAIP)	1 county & 6 cities
Groundwater		1 county, 3 cities & 1 university
Blue-line Hydrography	USGS NHD and NHDPlus	1 county, 4 cities & 1 university
Soils	Natural Resources Conservation Service (NRCS) national soils databases (SSURGO and STASGO2)	2 counties, 5 cities & 1 university

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## 2. Review of Existing Data

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The following subsections summarize each data category identified in Section 1. Each summary includes an overview of all data identified during the data collection process and, where practical, a figure illustrating the extent and spatial or temporal resolution of the dataset.

### 2.1. Climate

Assessment of climatic conditions and trends is informative for developing an understanding of the seasonal and annual rainfall, evaporation, and evapotranspiration patterns and trends. Understanding sub-regional precipitation patterns will help to characterize the timing and volume of hydrologic loading, which is necessary for determining the best hydromodification management approach for each rainfall zone. Surface data consist of precipitation, air temperature, dew point temperature, snowfall, wind direction and speed, pan evaporation, and temperature of evaporation pan. The climate data will be used to characterize the hydrologic and hydraulic loading of runoff, which drives both watershed processes and hydromodification responses.

The Central Coast region has a variety of climate gages spread throughout the entire region. The National Climatic Data Center maintains most of the gages; the temporal resolution of the data varies from 15 minutes to monthly totals. Measurements are collected at individual stations and distributed by Remote Automated Weather Stations (RAWS), the California Irrigation Management Information System (CIMIS), and California Data Exchange Center (CDEC) in the region. The RAWS information is gathered by multiple government agencies, including the Bureau of Land Management, U.S. Forest Service, state and private forestry, and National Park Service. The CIMIS gages are operated and maintained by the California Department of Water Resources. The CDEC information is gathered by multiple national, state, and county organizations. These organizations include the counties of Santa Cruz, Santa Barbara, Monterey, and Ventura; California Department of Forestry; U.S. Forest Service; National Weather Service; California Department of Water Resources; U.S. Geological Survey (USGS); U.S. Bureau of Reclamation; U.S. Army; and National Park Service. Various municipalities provided supplemental data, but the geographic locations of the gages were not provided. The municipal data vary in resolution from 15 minutes to monthly totals. Figure 1 illustrates the locations of the individual gages that contain data from the past 15 years.



Figure 1. Climate resolution.

## 2.2. Land Use/Land Cover

For the purposes of hydrologic assessment, this attribute can typically be described with two distinct characteristics: (1) development type (i.e., “land use,” such as residential, commercial, agricultural) and (2) impervious cover, a key element of “land cover.” The impervious cover associated with individual land use types drives the quantity of runoff. An accurate understanding of land uses is extremely important for assessing hydrology and hydromodification in any system because differences in land use affect the quantity and quality of stormwater runoff.

A region-wide land use map at a resolution of 30 meters was created by Dr. Fred Watson at California State University–Monterey Bay in conjunction with the Central Coast Watershed Studies team (CCoWS) in 2005. The map serves as a primary data source with consistent and complete coverage for the entire Central Coast Region. The map does not distinctly identify impervious areas but rather labels the area as urban. Multiple municipalities have higher-resolution land use datasets available with an estimated spatial resolution of approximately 10 meters. All the 10-meter-resolution datasets consist of parcel information at the county or city level. The available parcel information provides coverage for the majority of the northern half of the Central Coast Region, whereas data for the southern half are limited to a few select cities. Appendix B includes a complete list of land use information available from the municipalities. Figure 2 illustrates the land use coverage resolution available for the Central Coast Region.

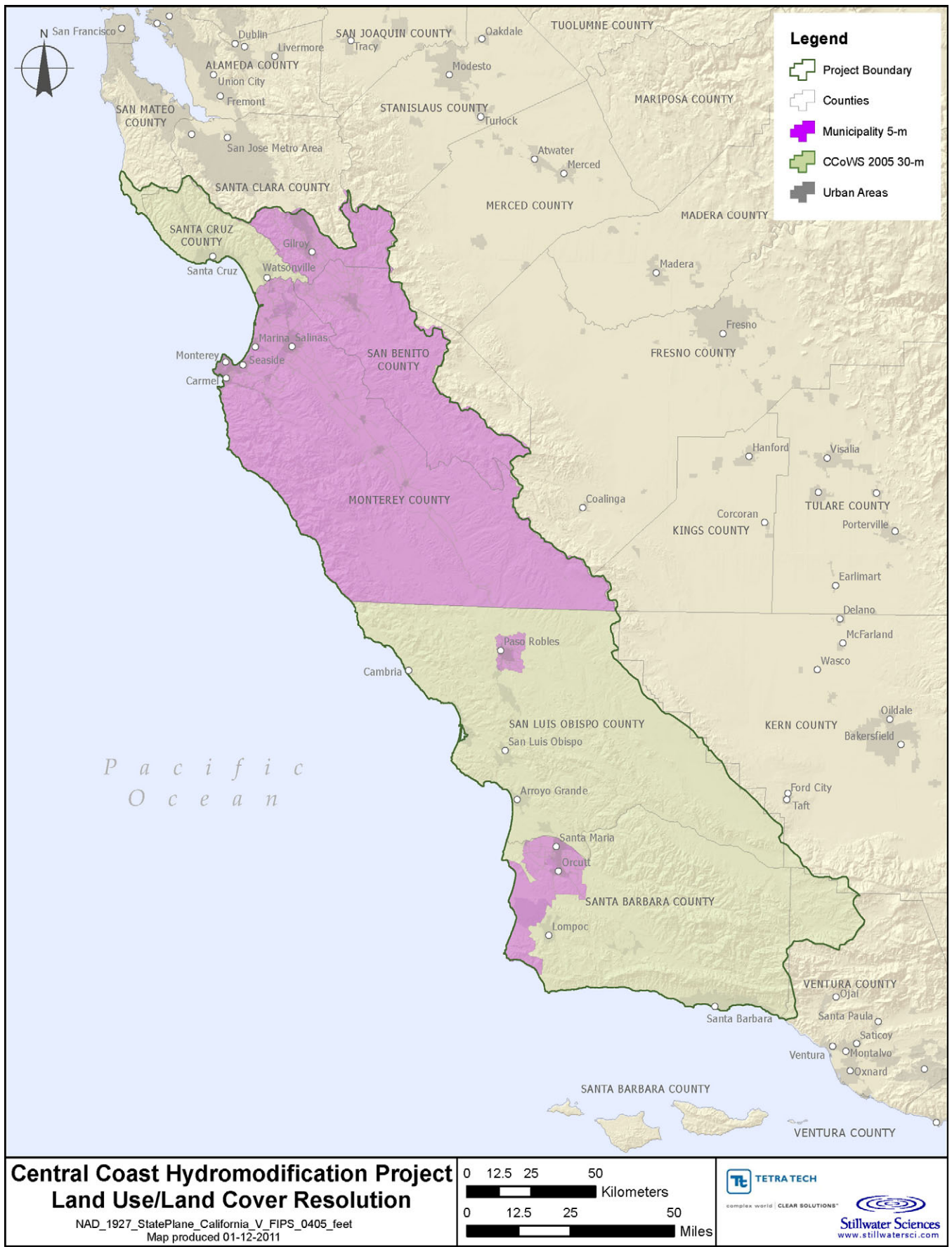


Figure 2. Land use spatial resolution.

The land use table associated with the CCoWS map identifies 15 unique land use types, which are listed in Table 3. The researchers elected to use the open space classifications established by the Farmland Mapping and Monitoring Program (FMMP) of California’s Department of Conservation. Each of the FMMP classifications is associated with the suitability of the soil for agriculture use. More information regarding these classifications is available on FMMP’s website at [http://www.conservation.ca.gov/dlrp/fmmp/mccu/Pages/map\\_categories.aspx](http://www.conservation.ca.gov/dlrp/fmmp/mccu/Pages/map_categories.aspx).

**Table 3. CCoWS Land Use Classifications**

<b>Land Use Aggregate</b>
Water
Mixed Woodland
Shrub
Grassland
Mixed Montane
Row Crop Agriculture
Golf or Green Crop
Vineyard/Berries
Urban
Bare soil
FMMP Prime
FMMP State Importance
FMMP Unique
FMMP Local Importance
FMMP Local Pot

Most of the parcel information received from the municipalities contains identification information with no reference to land use. Only the City of Santa Maria’s and the City of Morro Bay’s parcel data include land use classifications. The classifications must be consolidated into a uniform land use table for future use. They are provided in Tables 4 and 5.

**Table 4. Morro Bay Land Use Classifications**

Land Use Aggregate	Land Use	Land Use Aggregate	Land Use
Agricultural	Agricultural (NEC)	Public	Public (NEC)
	Farms		Religious
	Orchard		School
	Pasture	Recreational	Golf Course
Commercial	Animal Hospital/Vet	Recreational	Recreational (NEC)
	Auto Sales		Theater
	Cemetery		Residential
	Commercial (NEC)	Duplex	
	Financial Building	Mobile Home Lot	
	Food Stores	Motel	
	Hospital	Multi-Family >10 Unit	
	Laundromat	Multi-Family Dwelling	
	Medical Building	Quadruplex	
	Office Building	Residential (NEC)	
	Parking Lot	SFR	
	Restaurant Building	Triplex	
	Service Station/Market	Transport	
	Shopping Center		Easement
	Store Building		Utilities
Stores & Offices	Vacant Land	Commercial Lot	
Industrial		Heavy Industrial	Industrial Lot
		Industrial (NEC)	Residential Lot
		Light Industrial	Vacant Land (NEC)
		Mine/Quarry	
		Mini Warehouse	
		Petroleum	
	Warehouse		

**Table 5. Santa Maria Land Use Classifications**

<b>Land Use Aggregate</b>	<b>Land Use</b>	<b>Land Use Aggregate</b>	<b>Land Use</b>	
Agriculture	Dairies	Industrial	Heavy Industry	
	Dry Farms (Misc)		Light Manufacturing	
	Field Crops-Irrigated		Lumber Yards, Mills	
	Field Crops-Dry		Mineral Processing	
	Horses		Open Storage, Bulk Plant	
	Irrigated Farms, Misc		Packing Plants	
	Orchards		Petroleum & Gas	
	Orchards, Irrigated		Warehousing	
	Pasture-Irrigated		Institutional	Auditoriums, Stadiums
	Pasture of Grazing, Dry			Churches, Rectory
	Poultry			Colleges
	Truck Crops-Irrigated			Hospitals
	Vines & Bush Fruit-Irrigated			Institutional (Misc)
	Vineyards			Public Bldgs, Firehouses, Museums
	Commercial			Auto Sales, Repair, Storage
Banks, S&LS		Miscellaneous		
Bed & Breakfast		Industrial, misc		
Bowling Alleys		Rights-of-way, Sewer, Landfills		
Commercial (Misc)		Open/Recreation	Camps, Cabins	
Commercial and Office Condos			Clubs, Lodge Halls	
Day Care			Golf Courses	
Department Stores			Mortuaries, Cemeteries, Mausoleums	
Flowers			Nurseries, Greenhouses	
Hotels			Recreation	
Industrial Condos, PUDS			Recreational Open (Misc)	
Office Buildings, Multi-Story			Park	Parks
Office Buildings, Single-Story		Residential	Residential Income, 2-4 Units	
Other Food Processing, Bakeries		Rural Residence	Rancho Estates (Rural Home Sit)	
Professional Buildings		Single Family	Single Family Residence	
Restaurants, Bars		Transportation	Highways & Streets	
Retail Stores, Single-Story			Parking Lots	
Service Stations			Pipelines, Canals	
Shopping Centers (Neighborhood)			Utility, Water Company	
Shopping Centers (Regional)			Waste	
Store & Office Combination			Water Rights, Pumps	
Supermarkets			Vacant	Vacant
Wholesale Laundry		Water	Rivers & Lakes	
High Density	Apartments, 5 or more units			
	Condos, Community Apt Projs			
	Mobile Home Parks			
	Mobile Homes			
	Rest Homes			

## 2.3. Imperviousness

Characterization of impervious cover is fundamental to developing any hydrologic assessment. Flow magnitudes in a watershed are highly governed by the imperviousness of the land surface. The imperviousness data/information will be used to determine runoff rates and expected infiltration patterns. Where accurate, high-resolution imperviousness data are available, such data can allow for improved model calibration between modeling results and long-term flow records.

The National Land Cover Database 2001 Impervious Surfaces from USGS provides region-wide coverage at a resolution of 30 meters. It should be noted that many municipalities in the Central Coast Region have experienced significant development since 2001, generally limiting the usefulness of this dataset in those areas. Higher-resolution imperviousness information was made available by only two municipalities—the City of San Luis Obispo and the County of Santa Cruz. The resolution is approximately 5 meters and outlines all the buildings within each jurisdiction. The information provided by San Luis Obispo also outlines the transportation corridors within the city. Appendix B includes a complete list of impervious surface information available from the municipalities. Figure 3 illustrates the impervious surface coverage resolution available for the Central Coast Region.



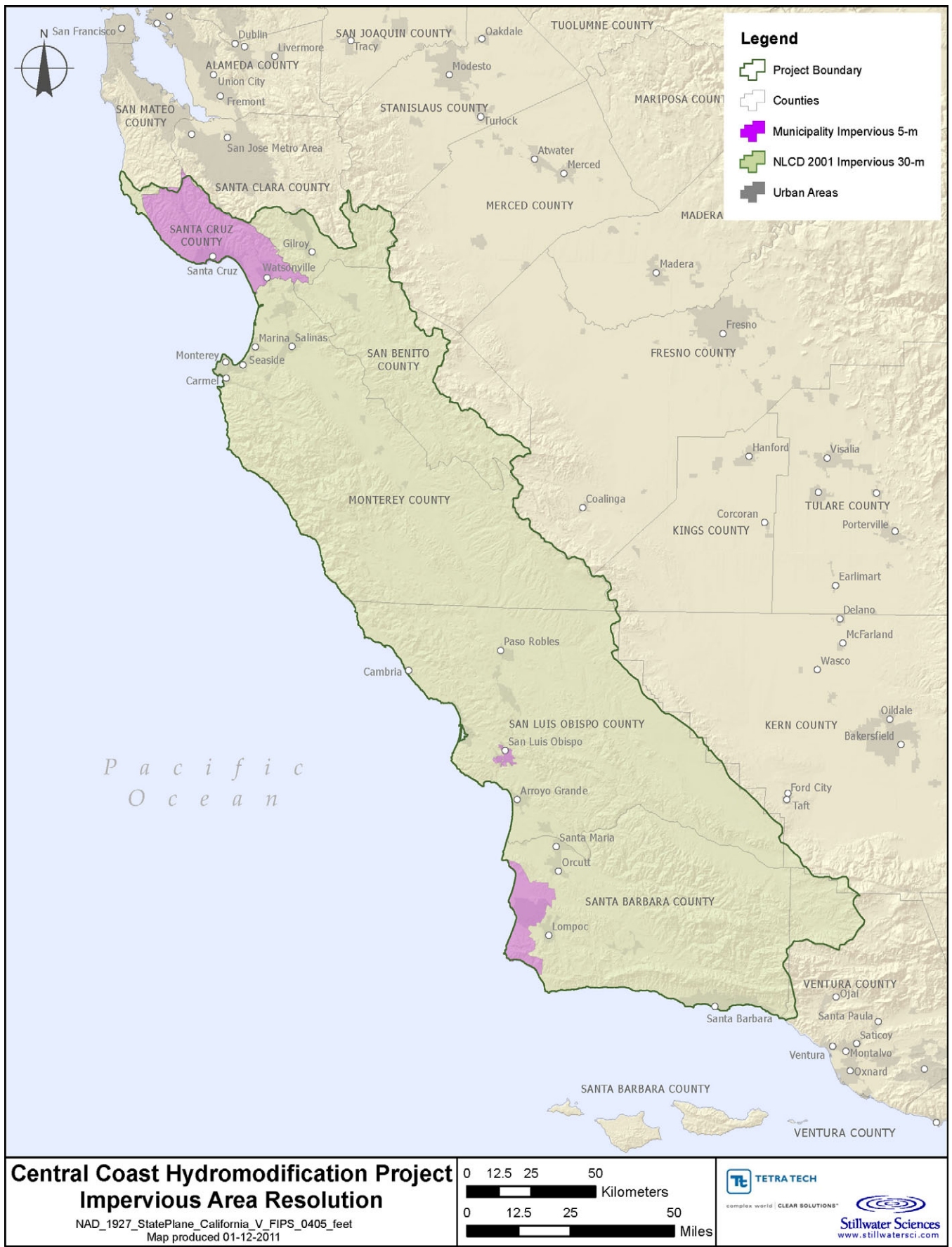


Figure 3. Impervious surfaces spatial resolution.

## 2.4. Transportation

Runoff from roads and highways can carry pollutants to water sources and degrade the water quality. Because of the generally flat nature of urban areas, the roadways may also help to define the drainage boundaries within cities and towns.

Transportation information is available region-wide from the TIGER roads datasets created in 2007. The TIGER roads data illustrate the major and local roads through the entire Central Coast Region. Several municipalities made road centerline information available, and these data correspond with the TIGER road data. The transportation data provided by the TIGER datasets and municipalities are center-line information; that is, they do not have geometric properties of width, slope, and so forth. Therefore, global assumptions about width and right-of-way would have to be applied to this dataset for it to be useful for hydrologic analysis. Appendix B includes a complete list of data available from the municipalities.

## 2.5. Watershed Delineations

An accurate understanding of watershed delineations is important for assessing hydrology and hydromodification in any system because watershed delineation affects the quantity, quality, and expected flow paths of stormwater runoff. The watershed delineations will assist in determining contributing areas to each of the receiving waters, thereby helping to establish runoff volumes.

The National Hydrography Dataset Plus (NHDPlus) provides high-resolution subwatershed delineations through the entire Central Coast Region at a resolution of 1:100K. The County of Santa Clara, the City of Monterey, and the City of Santa Maria provided watershed delineations of a resolution equal to or greater than the NHDPlus dataset. The Data Tracking Sheet in Appendix B includes a complete list of the municipal data available. Figure 4 illustrates the watershed delineation resolution coverage available for the Central Coast Region.

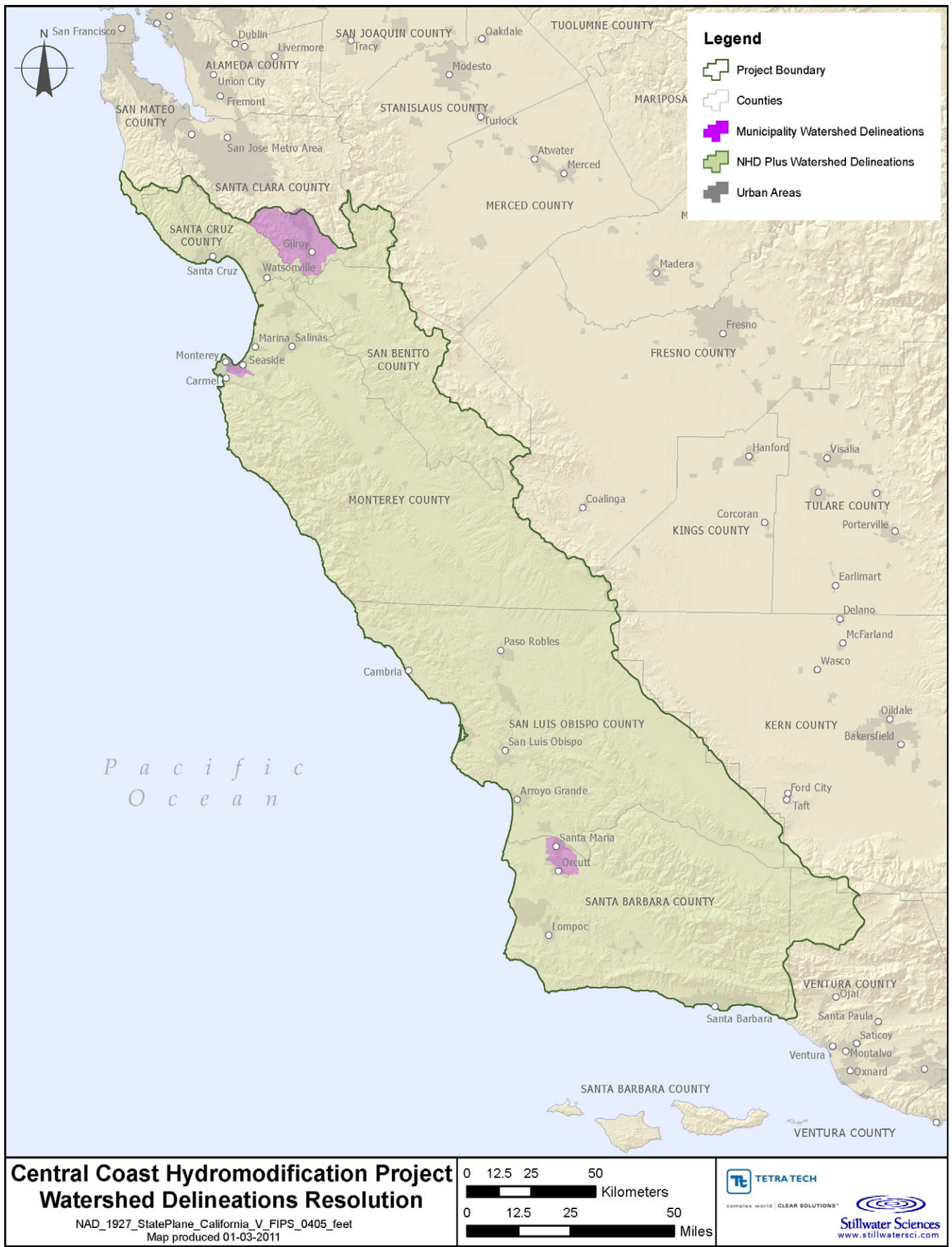


Figure 4. Watershed delineation spatial resolution.

## 2.6. Topography

Slope and topography are basic watershed characteristics that are needed in any consideration of watershed processes or in the development of standards and practices to prevent the adverse effects of hydromodification. Hillside gradient plays a large role in the erosive potential of an area, and thus topographic information is an important component of this study.

The Joint Effort Team acquired the National Elevation Dataset, which has 10-meter data resolution, from USGS. It should be sufficiently accurate for the topographic analysis required to perform the anticipated characterizations of watershed processes and receiving waterbodies. Additional topographic datasets with greater resolution than the NED dataset were received from the cities of Capitola, Paso Robles, San Luis Obispo, and Santa Maria and the County of San Luis Obispo. The datasets cover limited areal extent in two municipalities, Paso Robles and San Luis Obispo; their areal coverage does not extend much beyond the municipality boundaries. Although sourcing information is unavailable, the two contour datasets received are of high quality: The City of Paso Robles data show 2-foot contours; the data for San Luis Obispo, 2-meter contours. In addition, detailed topographic information is available to the Joint Effort Team for the cities of Santa Maria and Capitola; it has not been included in this report. The Data Tracking Sheet in Appendix B includes a complete list of the municipal data available. Figure 5 illustrates the topography coverage and resolution available for the Central Coast Region.



Figure 5. Topography spatial resolution.

## 2.7. Flood-Control Structures

The location of flood-control structures within a watershed can affect the runoff and expected flow rates; it can also directly affect the conditions of the associated waterbody. Information about flood-control structures with respect to one attribute, fish passage, has been compiled for the entire region in the Passage Assessment Database (PAD), available through CalFISH at a scale of 1:24,000. The PAD contains locations of known and potential barriers to salmonid migration in California streams, as well as additional information about each record.

The Joint Effort Team requested that municipalities provide an inventory of the locations, characteristics, and function of each flood-control structure within their jurisdiction, as available. Santa Clara, Santa Cruz, Monterey, and San Luis Obispo counties provided county-wide information. Other localized data were provided by the cities of Watsonville, Morgan Hill, Paso Robles, Morro Bay, San Luis Obispo, and Lompoc. The datasets provide information about the location of a variety of flood-control and stormwater structures. Examples of such information include the location of stormwater pipes, outfalls, detention ponds, catch basins, and ditches. Although a few datasets have attendant metadata, most do not. Beyond the location of various features, the files provide offer little to no identifying or explanatory information. Figure 6 illustrates the locations of the information available for flood-control structures.



Figure 6. Flood-control structure location.



## 2.8. Historical Burn Areas

Areas affected by wildfire within the preceding decade can have a dramatic effect on the runoff response of watersheds, but national and state land use/land cover files often do not account for historical burn areas. The default dataset for this study has been compiled from the inventory provided by the California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (CalFRAP). CalFRAP provided extensive technical and public information for statewide fire threat, fire hazard, watersheds, socioeconomic conditions, environmental indicators, and forest-related climate change. Much of this information is Geographic Information System (GIS) data at a scale of 1:1,100,000. To supplement these data, municipalities were asked to provide an inventory of the locations and dates of local wildfires in undeveloped areas, as available. Spatial data for historical burn areas were received from Santa Cruz County only, and the coverage spans that county. Little to no metadata or attributes are associated with the spatial dataset, however, and the fire boundaries associated with the files are either derived from the most recent available information from CalFRAP or offer less accurate depictions of the extent of fires already present in the CalFRAP data.

## 2.9. Receiving Water Conditions

The condition of receiving waters is a major aspect of identifying and managing for changes as a result of urbanization. The Joint Effort Team requested that municipalities provide any data and/or reports referencing physical, chemical, and/or biological conditions of waterbodies, as available. Several coordinated water-quality sampling efforts have been undertaken throughout the Central Coast Region. Denser sampling has occurred in coastal areas in general, but a few inland locations also have extensive datasets. The Sanctuary Integrated Monitoring Network (SIMoN) made a clearinghouse of information available. The SIMoN Water Quality Monitoring Viewer is a Google Maps application that provides the locations, measurement types, and data access information for water-quality monitoring programs in the region. Site-specific geographic references are provided, and the temporal extent of data collection is attributed to each point. Metadata for each effort are also available for download from the site. Regional-scale icons displayed on the receiving waters condition map (Figure 7) indicate sampling efforts that extend beyond the geographic scope of a single municipality.

The cities of Morro Bay, San Luis Obispo, Los Osos, Pismo Beach, and Lompoc also provided reports documenting water-quality sampling. The Data Tracking Sheet in Appendix B includes a complete list of the municipal and county data that were made available. Figure 7 illustrates the locations of information for receiving water conditions through the entire region.



Figure 7. Receiving water conditions location.

## **2.10. Jurisdictional Boundaries**

Jurisdictional boundaries outline the organizations with the rights, powers, and authorities to administer within a geographic area. The project extends through 9 counties and 36 cities in the Central Coast Region, each with existing stormwater control policies and procedures. The jurisdictional information will assist in determining the proper authoritative channels to implement hydromodification controls.

The primary datasets from the Cal-Atlas state database outline counties, private water district boundaries, and state water district boundaries. Most of the jurisdictional information provided by the various municipalities consists of city and county limits. The Data Tracking Sheet in Appendix B includes a complete list of the municipality data available. Figure 8 outlines the county and city jurisdictional limits within the entire Central Coast Region.



Figure 8. Central Coast Region jurisdictional boundaries.

## **2.11. Storm Event Photos**

Images taken during storm events, in conjunction with precipitation data, can provide a benchmark for model comparison. The photographs can provide the flooding levels experienced during rain events as well as a basis for floodplain delineation along streams and rivers. Such images will provide a graphic illustration of hydromodification and a benchmark for model comparisons.

No national or statewide dataset of storm event photos is available for this study. Storm event photographs were made available from several of the municipalities. Because of the large volume of images and events, most of the municipalities simply made it known that storm event photographs were available should they be requested. The Data Tracking Sheet in Appendix B provides a complete list of the municipality data available.

## 2.12. Geology

Geology is used to identify controls on channel morphology and is a strong determinant of various watershed processes, including runoff magnitude, groundwater infiltration, and sediment contribution to stream channels. The Joint Effort Team has acquired the statewide coverage from Jennings 1977 (1: 750,000) and will use this as a default base throughout the Central Coast Region as a coarse but comprehensive dataset. In addition, municipalities were asked to provide any available county-wide or city-wide geology GIS layers to improve upon the accuracy of the statewide geologic information. A variety of high-quality, well-documented, county-wide geological spatial data were received for geologic terrains covering Monterey County. The Data Tracking Sheet in Appendix B includes a complete list of the municipal and county data made available.

In addition, more detailed information is available for all but the extreme northwest part of the Central Coast Region from the published maps of Thomas Dibblee (1:24,000 scale; <http://store.sbnature.org/catalog/index.php?cPath=28>), but they have not yet been acquired because of cost and uncertain need at present. Figure 9 illustrates the spatial resolution available for geologic information through the entire region.

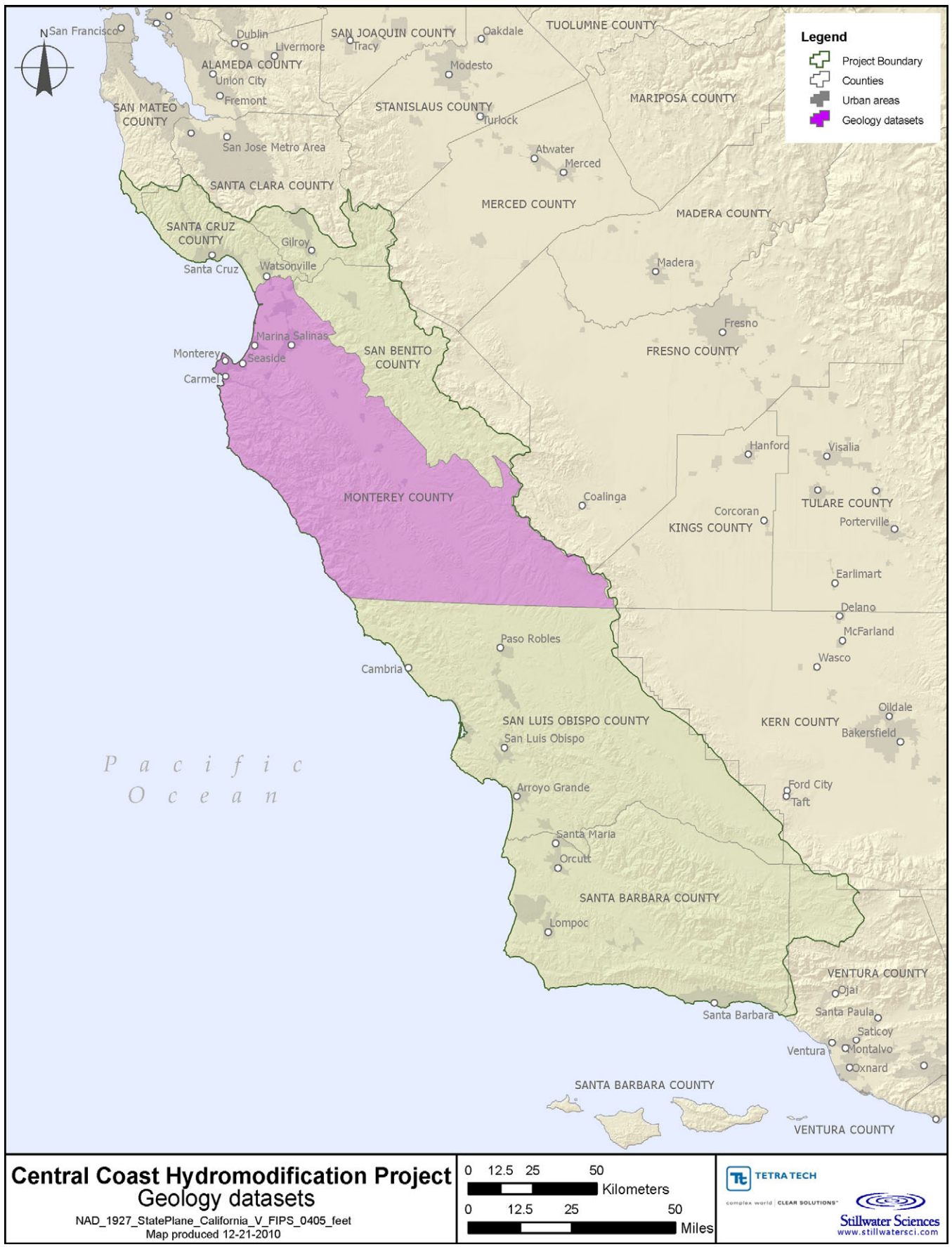


Figure 9. Geology spatial resolution.



## 2.13. Flow Data

The calibration process for any hydrologic or watershed model begins with a comparison of simulated flow time series with actual measurements in channels. To ensure that a model is accurately portraying the hydrology of a drainage area, the parameters of the model are iteratively adjusted until simulated results are sufficiently representative of the real data. It is, therefore, important to obtain existing recent flow data within the area being modeled.

The USGS maintains 59 active flow-monitoring stations, along with an additional 130 inactive gages, in the Central Coast region. Most of the gages are located on the larger rivers and streams and are predominantly concentrated in the County of Santa Barbara and the counties of Santa Cruz/Santa Clara. Four municipalities provided additional gage data, but the information lacks geographic references for the gage locations. Figure 10 illustrates the locations of the flow gages available in the Central Coast Region that contain data from the past 15 years.

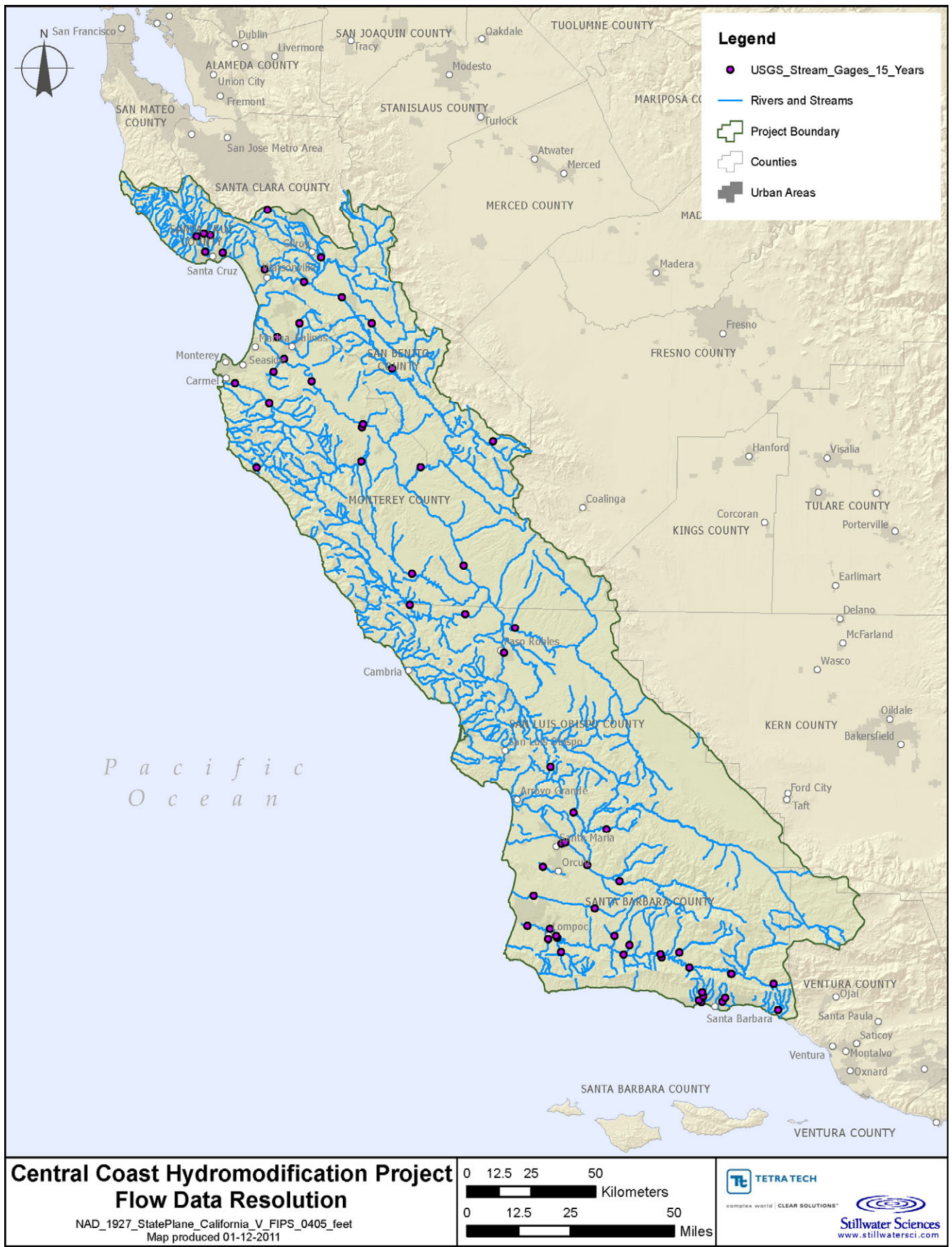


Figure 10. Flow data location.

## 2.14. Orthophotos/Aerial Imagery

The National Agriculture Imagery Program (NAIP) has captured and provides aerial imagery for the Central Coast Region. These photos are scaled at 1: 3,000 and will be used as the default data source. To provide additional information and better clarification of watershed conditions at all levels of detail, municipalities were asked to provide current and historical orthophotos /aerial images of urban and near-urban regions, as available. Such images could be compared against the land use/land cover information, leading to more accurate representations.

Aside from NAIP imagery, however, there is a general paucity of orthophotos for the Central Coast Region in the datasets acquired. The City of Pacific Grove provided imagery taken in 2007. The photos in this collection are unprojected and unrectified and of unknown resolution. A second set of imagery is of the City of Lompoc, and the date that the photos were taken is unknown; however, this imagery for the Lompoc area arrived rectified and is of very high quality. Orthophotos were received from the cities of Capitola and Morro Bay and the County of San Luis Obispo, but they have not been included in this report due to the very recent receipt of the information. Extensive air photos of varying dates and resolution are known to exist for Santa Barbara County (and are likely available for other counties as well), but they are not in a digital format and incorporating them into this project would likely be prohibitively expensive and time-consuming. Figure 11 illustrates the areas covered by aerial images of varying resolution.



Figure 11. Orthoimages/aerial photographs spatial resolution.

## 2.15. Groundwater

To better understand the groundwater system in the Central Coast Region, the Joint Effort Team asked municipalities to provide any available area-wide reports from recognized groundwater basins. The groundwater information provides insight on possible groundwater receiving water issues and identifies areas where groundwater recharge is a key watershed process.

Throughout the Central Coast Region, spatially explicit groundwater information appears to be sparse. The groundwater information provided to date is composed primarily of basin water management plans and monitoring reports. The overwhelming majority of groundwater information that has been obtained relates to municipalities and small basins within San Luis Obispo County. Most of the reports received cover topics such as water supply and demand, future capital planning, and historical water supply information. Little to no GIS data documenting locations or extents of groundwater reservoirs has been provided, and very little actual data has been received. The Data Tracking Sheet in Appendix B includes a complete list of the municipal data made available.

Regional-scale icons displayed on the groundwater map (Figure 12) indicate groundwater reports that extend beyond the geographic scope of a single municipality. Specifically, the County of San Luis Obispo provided a 2010 assessment of aquifers and hydrology throughout the county, as well as a 2008 San Luis Obispo General Plan and Wastewater Management Report. In addition, a substantial bibliography of groundwater information is readily available for the Santa Maria groundwater basin in north Santa Barbara/south San Luis Obispo counties, in the vicinity of the City of Santa Maria and surrounding cities.

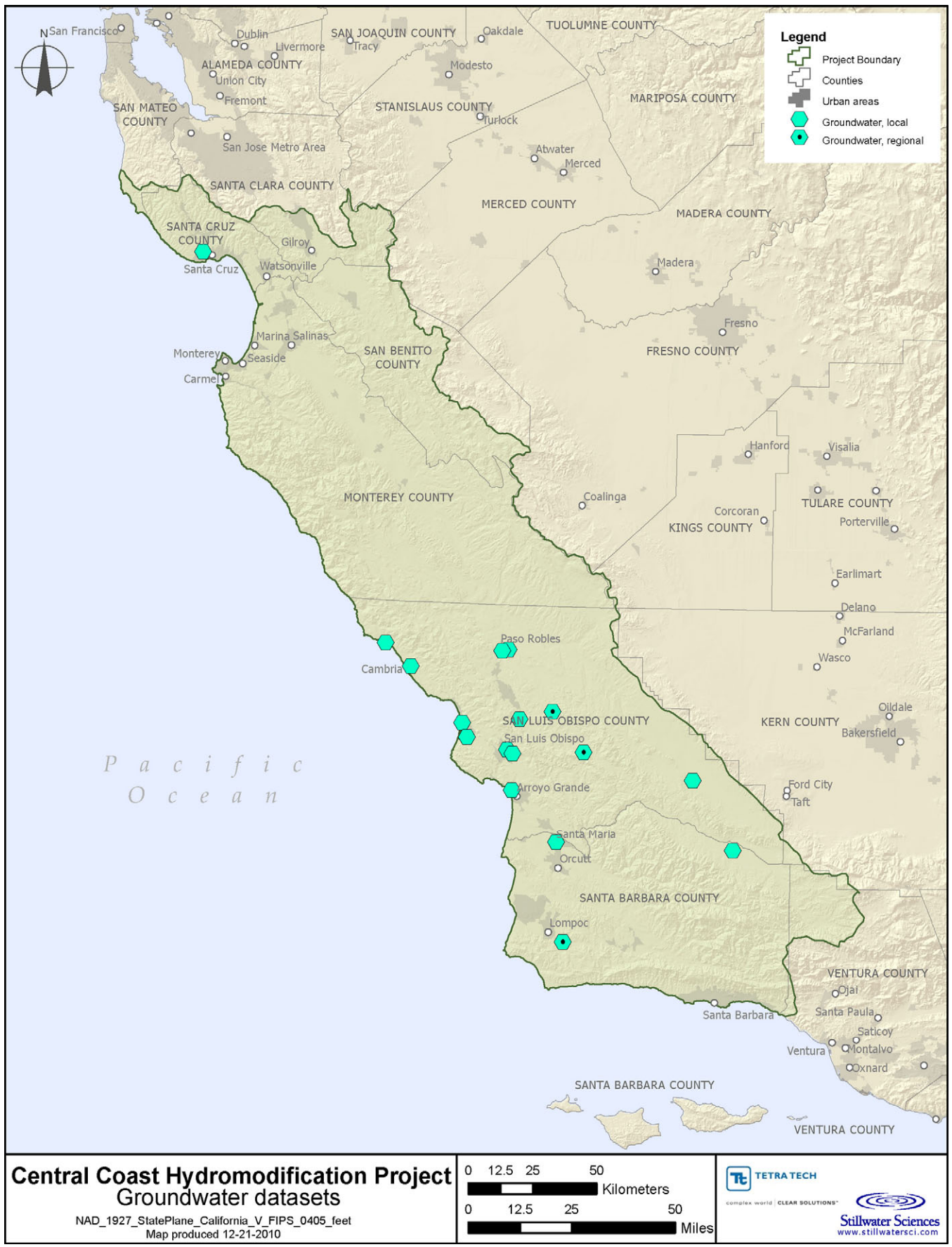


Figure 12. Groundwater.

## 2.16. Blue-line Hydrography

Blue-line hydrography determines the connectivity between subwatersheds and outlines overland flow paths in urban and suburban areas. Several agencies, including the USGS, have collaborated to produce the National Hydrography Dataset (NHD), a comprehensive set of digital geospatial data about surface water features. In 2006, this interagency collaboration produced NHDPlus, a suite of geospatial products that integrate the NHD with the National Elevation Dataset (NED). These data span the Central Coast Region and will be used as the default dataset. To improve upon the current NHDPlus information if/as appropriate, municipalities were asked to provide the most recent and accurate mapped drainage network in urban and near-urban areas, as available. Spatial streamline data were received from several municipalities (listed in Appendix B), as well as for the County of Santa Clara. Streamlines for the City of San Luis Obispo consist of a finer-resolution dataset than that of the NHD data and have attendant high-quality metadata. Figure 13 illustrates the blue-line hydrography information available in the Central Coast Region.



Figure 13. Blue-line hydrography location.



## 2.17. Soils

Soils information helps to estimate infiltration rates and sediment contributions. A request for hydrologic soil group classifications and geographic locations for soils in urban and near-urban areas was made in order to improve upon the widely available Natural Resources Conservation Service (NRCS) U.S. General Soil Map (STATSGO2) and Soil Survey Geographic (SSURGO) databases. The expansive NRCS information provides adequate datasets for undeveloped regions, and the quality of the additional data received does not exceed that of the NRCS data. The Data Tracking Sheet in Appendix B includes a complete list of the municipal and county data that were made available.



# **Appendix A:**

## **Joint Effort Data Needs List**

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# Joint Effort Data Needs List

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The following data sets will be collected to support the development of hydromodification control criteria for the Central Coast Region. Each data set will contribute to a comprehensive understanding the watershed's physical characteristics that influence (or are influenced by) stormwater runoff. Although national and state datasets are important, it is essential to also include local and municipal data sources to provide a higher degree of resolution where possible near urban areas. Data provided in electronic format (e.g., GIS, Excel, AutoCAD) will be the most helpful. Due to the size of the study area and the quantity of data, PDF copies of data are unlikely to be useful.

The Joint Effort Team understands that the time and resources available to municipal staffs will limit the amount of data that will be provided for this study. Please use this list to help guide and prioritize your staff's efforts to collect, organize, and deliver this important information. This list is formatted in order of priority with the highest priority items listed first. This list is also summarized in Table 1. Please use the attached data template to provide information about the data and contact information for the individual or department responsible for data collection in each of the categories below. This list serves as a starting point and additional information may be requested through the contact information made available. Should you have any questions regarding this request, please contact Chad Helmle of Tetra Tech by email at [chad.helmle@tetrattech.com](mailto:chad.helmle@tetrattech.com) or by phone at (805) 681-3100 x137.

## Climate/Precipitation/Evaporation/Evapotranspiration

Assessment of climatic conditions and trends is informative for developing an understanding of the seasonal and annual rainfall, and the evaporation and evapotranspiration patterns and trends. Understanding precipitation patterns in the region will help characterize the timing and volume of runoff, which is necessary for addressing hydromodification in the study area. Surface data consists of precipitation, air temperature, dew point temperature, snowfall, wind direction and speed, pan evaporation, and temperature of evaporation pan. The Joint Team Effort will acquire data recorded by the National Oceanic and Atmospheric Administration's National Climatic Data Center (NOAA-NCDC) in select locations throughout the study area.

We are requesting that municipalities provide supplemental surface data recordings measured continuously at hour intervals or better as available. In the absence of hourly or better data, daily totals may still be helpful. It is very important to note the frequency, duration, location, and method of each measurement.

## Land use/Land Cover

An accurate understanding of land uses is extremely important for assessing hydrology and hydromodification in any system because different land uses affect the quantity and quality of storm water runoff. For the purposes of hydrologic modeling, land use can typically be described with two distinct characteristics: development type (e.g., residential, commercial, agricultural) or impervious cover. The impervious cover of individual land use types drives the quantity of runoff. For this study, the Joint

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Effort Team will acquire the National Land Cover Database from USGS Land Cover Institute with 30-meter data resolution. The database was published in 2001 and provides general land cover and land use information.

Due to the changing nature of land use/land cover, we are requesting that municipalities provide up-to-date information for urban and near-urban areas as data is available. Land use/land cover data could include parcel data, city or county land use designations, city or county land use general plans and future planned land use/land cover information.

## Imperviousness

Characterization of impervious cover is fundamental to developing any hydrologic assessment. Flow magnitudes in a watershed are highly governed by the imperviousness of the land surface. Often in assessing the impervious cover for an area, a percent imperviousness is assumed for each land use type on the basis of the best available literature. Such a method provides a reliable assessment when a direct measure of imperviousness is not available. However, that approach neglects spatial differences in percent imperviousness. When accurate, high-resolution imperviousness data are available, it can allow for improved model calibration between modeling results and long-term flow records. For this study, the Joint Effort Team will acquire the Impervious Dataset from USGS with 30-meter resolution.

We are requesting that municipalities provide up-to-date higher resolution impervious maps for urban and near urban areas as available. Impervious cover data could include parcel data, city or county land use designations, city or county land use general plans and future planned land use/land cover information.

## Road Layers

Runoff from roads and highways carry pollutants to water sources and degrade the water quality. Due to the flat nature of urban areas, the roadways also define the drainage boundaries within cities and towns.

We are requesting that municipalities provide data sets that contain roadway geometric properties including but not limited to road width, longitudinal slope, cross slopes with crest elevations, and orientation as available.

## Watershed Delineations

An accurate understanding of watershed delineations is important for assessing hydrology and hydromodification in any system because watershed delineation affects the quantity, quality and expected flow paths of storm water runoff. Watershed delineations can be performed using automated tools for large areas but subwatersheds require higher topological resolution for accurate delineation.

The Joint Effort Team is requesting that municipalities provide up-to-date watershed delineations for urban and near-urban areas as available. Urban watersheds are often delineated primarily by drainage infrastructure, especially in flat areas. Watershed delineations and ineffective flow areas can be found in city or county utility plans or master plans.

## Topology

Slope and topography are important characteristics to consider in developing standards and practices to prevent the adverse effects of hydromodification. Areas with steeper slopes are more prone to erosion

due to the increased velocity and volume of storm-related flows. This presents water quality concerns when the erosive force of water leads to increased sedimentation and turbidity. Areas with shallower slopes are far less prone to erosion risk because water collects in depressions and low areas rather than flowing rapidly downslope. For this study, the Joint Effort Team will acquire the National Elevation Dataset with 30-meter and 10-meter data resolution from USGS. There exists the possibility that the 30-meter data resolution is not sufficiently accurate for the topographic analysis required to perform drainage modeling and higher resolution topography data could be necessary.

We are requesting that municipalities provide high resolution contour maps in urban and near-urban areas as available.

### Flood Control Structures

Location of flood control structures within a watershed affect the runoff and expected flow rates. Flood control structures can include detention basins, retention basins, dams, channels, and levees.

The Joint Effort Team is requesting that municipalities provide an inventory of the locations, characteristics, and function of each of the flood control structures within their jurisdiction as available.

### Historic Burn Areas

Areas affected by wildfire can have a dramatic effect on a watershed. The vegetation decreases, while runoff rates and sediment loads increases. National and state land use/land cover files often do not account for historic burn areas.

We are requesting that municipalities provide an inventory of the locations and dates of local wildfires in undeveloped areas as available.

### Receiving Water Conditions

Water quality is a major aspect of identifying and managing for changes as a result of urbanization. We are requesting that municipalities provide any data and/or reports referencing physical, chemical, and/or biological conditions of waterbodies as available.

### Jurisdictional boundaries

Jurisdictional boundaries outline the organizations with the rights, powers, and authorities to administer within a geographic area. The project will extend through a number of jurisdictions in the central coast region, each with existing storm water control policies and procedures. The Joint Effort Team will be acquiring national, state, and county jurisdictional boundaries.

We are requesting that municipalities provide the geographic limits of city and local jurisdictions as available.

### Storm Event Photographs

Images taken during storm events in conjunction with precipitation data can provide a benchmark for model comparison. The photographs can provide the flooding levels experienced during rain events and provide a basis for floodplain delineation along streams and rivers.

We are requesting that municipalities provide historical photographs and data relative to large storm events as available.

## Geology

One of the primary drivers of watershed processes is the geology. Over geologic timescales, it is a major driver of change and largely influences morphologic adjustments to minor perturbations in shorter timescales as well. Feedbacks occur between geologic constraints and sediment supply, hydrologic events and topographic controls. Geology will be used to identify controls on channel morphology and sediment contributions. The Joint Effort Team will acquire the state-wide coverage from Jennings 1977 and use this as a default base.

We are requesting that municipalities provide any available county-wide or city-wide geology GIS layers to improve upon the accuracy of the state-wide geologic information.

## Flow Data

The calibration process for any hydrologic or watershed model begins with a comparison of simulated flow time series with actual measurements in channels. To ensure that a model is accurately portraying the hydrology of a drainage area, the parameters of the model are iteratively adjusted until simulated results are sufficiently representative of real data. It is, therefore, important to obtain all historical flow data possible within the area being modeled. Ideally, hourly data are available for comparison. The Joint Effort Team will acquire flow data from the USGS stream flow gages in the region.

We are requesting that municipalities provide flow data for streams in or near urban areas to supplement USGS data and streams not currently monitored by USGS.

## Orthophotos/Aerial Images

Accurate maps provide a clearer picture of areas in question. Aerial images provide a backdrop to the overall study and create visually appealing deliverables. They lead to a better understanding of the project impacts at all levels of the involved parties. Images create a tool for comparison against the land use/land cover information thus leading to an accurate model.

We are requesting that municipalities provide current and historical orthophotos/aerial images of urban and near-urban regions as available.

## Groundwater

Any area-wide studies that could be made available will help with our understanding of the groundwater system in the Central Coast region. The Joint Team Effort will acquire the available data for the Santa Maria basin.

We are requesting that municipalities provide available groundwater reports from other recognized groundwater basins.

## Blue-line Hydrography (i.e., Stream/Drainage Network)

The Joint Effort Team's goal is to improve upon the current USGS information if/as appropriate, with a particular interest in the "representative" watersheds as identified later in the project.

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We are requesting that municipalities provide the most recent and accurate mapped drainage network in urban and near-urban areas as available.

## Soils

Soils information is widely available in rural areas from the NRCS and provides adequate data sets for undeveloped regions. The Joint Effort Team will acquire the soils data from the NRCS for rural areas.

We are requesting that municipalities provide hydrologic soil group classifications and geographic locations for soils in urban and near-urban areas as available.



**Table 1 - Data Request List for Municipalities**

<b>Data Type</b>	<b>Data to be Provided by Municipalities</b>
Climate/ Precipitation/ Evaporation/ Evapotranspiration	Surface data recordings measured continuously. Need measurement frequency, duration, location and method
Land use/Land Cover	Local hi-resolution and current land use/land cover information for urban and near-urban areas
Imperviousness	Local hi-resolution and current impervious surfaces for urban and near-urban areas
Road Layers	Local road geometric properties (width, slope, cross-slopes, crest elevation)
Watershed Delineations	Subwatershed delineations found in city utility/master plans for urban and near-urban areas
Topology	Local hi-resolution topology (1-m or 5-m contours) for urban and near-urban areas
Flood Control Structures	Inventory of detention basins, retention basins, dams, channels, and levees showing locations, characteristics, and functions
Historic Burn Areas	Local wildfire records indicating locations and dates
Receiving Water Conditions	Local water reports showing contaminants, historical, existing and anticipated future conditions
Jurisdictional Boundaries	Local organization jurisdictional boundaries
Storm Event Photos	Local historical photographs and data relative to large storm events
Geology	Local geology maps
Flow Data	Local stream flow measurements for all reaches
Orthophotos/ Aerial Images	Local hi-resolution orthoimages for urban and near-urban areas
Groundwater	Basin-specific reports. Historical and contemporary usage
Blue-line Hydrography (i.e., Stream/Drainage Network)	Local input and interpretations on the most recent and accurate mapped drainage network
Soils	Local hydrologic soil group classifications and geographic locations for soil types

The following table gives an example of the preferred documentation that should be included with each data set provided by the municipalities. See the attached template spreadsheet for assistance.

**Table 2 - Example Data Submittal Documentation**

<b>Data Type</b>	<b>Metadata</b>	<b>Format</b>	<b>Municipal Point of Contact</b>
Land use/land cover	<u>DATA NAME</u> : City of Santa Maria Land Use General Plan <u>DATE</u> : 2008 <u>SOURCE</u> : City of Santa Maria <u>LOCATION</u> : Santa Maria, CA <u>NOTES</u> :	GIS Shapefile	<u>NAME</u> : Dawn Robbins <u>PHONE</u> : 805.925.0951x446 <u>EMAIL</u> :
Topology	<u>DATA NAME</u> : Santa Maria Valley Aerial Topography Map <u>DATE</u> : 1993 <u>SOURCE</u> : City of Santa Maria <u>LOCATION</u> : Santa Maria, CA <u>NOTES</u> : Contour intervals of 1-2'	GIS Raster Image	<u>NAME</u> : Michelle Aquino <u>PHONE</u> : 805.925.0951x452 <u>EMAIL</u> :
Climate/Precipitation	<u>DATA NAME</u> : 380 - Santa Maria City Daily Rainfall Record <u>DATE</u> : 6/2/00 - Current <u>SOURCE</u> : Santa Barbara County Flood Control District <u>LOCATION</u> : Santa Maria, CA Lat - 345707 Long - 1202644 <u>NOTES</u> : Observer: SBCFCD; Gauge type: Data logger w/TB; Frequency: Daily	MS Excel	<u>NAME</u> : Shawn Johnson <u>PHONE</u> : <u>EMAIL</u> : sjohnso@cosbpw.net

# **Appendix B:** **Data Tracking Sheets**

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# Climate/Precipitation

## California Data Exchange Center (CDEC) Stations

ID	Station Name	Max Precip Resolution	Max Precip Method	Precip Start Dates	Precip End Dates	Operator
APT	APTOS CREEK AT RIDER ROAD	Event	Tipping Bucket	1/15/2010	Present	Santa Cruz County
ARG	ARROYO GRANDE	Hourly	Accumulated	2/6/1989	Present	CA Dept of Forestry
ARY	ARROYO SECO	Hourly	Accumulated	6/3/1999	Present	US Forest Service
BAK	BATES CREEK RANCH	Event	Tipping Bucket	1/15/2010	Present	Santa Cruz County
BDC	BOULDER CREEK	Event	Tipping Bucket	1/21/2002	Present	Santa Cruz County
BGS	BIG SUR STATE PARK	Monthly	Accumulated	10/1/1913	Present	National Weather Service
BLM	BLACK MOUNTAIN	Hourly	Tipping Bucket	12/3/1996	Present	CA Dept of Water Resources
BLN	BEN LOMOND	Event	Tipping Bucket	2/11/1997	Present	Santa Cruz County
BMO	BRANCH MOUNTAIN	Hourly	Accumulated	2/20/2001	Present	US Forest Service
BRA	SALINAS RIVER NEAR BRADLEY	Hourly	Tipping Bucket	1/1/1995	Present	USGS and DWR
BRL	BURRELL STATION	Event	Accumulated	10/1/1995	Present	Santa Cruz County
BTS	BATES RIDGE	Event	Accumulated	10/1/1995	Present	Santa Barbara County
BWV	BROWNS VALLEY (CORRALITOS 4NW)	Event	Tipping Bucket	1/15/2002	Present	Santa Cruz County
CAH	CAHOON	Hourly	Accumulated	9/27/1985	12/10/1996	CA Dept of Forestry
CCF	CORRALITOS CREEK @ FREEDOM	Event	Tipping Bucket	1/15/2010	Present	Santa Cruz County
CCH	CACHUMA LAKE	Daily	Incremental	1/7/2005	Present	US Bureau of Reclamation
CHT	PAJARO RIVER AT CHITTENDEN	Hourly	Tipping Bucket	1/1/1995	Present	USGS and DWR
CHW	CHEWS RIDGE	Event	Tipping Bucket	1/6/2000	Present	Monterey County
CKS	CHALKS	Hourly	Accumulated	1/1/1984	11/21/2001	CA Dept of Forestry
CMT	CASTLE MOUNTAIN	Hourly	Tipping Bucket	9/12/1997	Present	CA Dept of Water Resources/O & M
COR	CORRALITOS	Hourly	Accumulated	1/1/1984	Present	CA Dept of Forestry
CPO	CAMPO	Monthly	Accumulated	1/1/1905	9/1/1995	None Specified
CRZ	SANTA CRUZ	Monthly	Accumulated	1/1/1905	Present	National Weather Service
CZO	CARRIZO	Hourly	Accumulated	7/1/1994	Present	CA Dept of Forestry
DAP	DAVENPORT	Event	Tipping Bucket	1/15/2010	Present	Santa Cruz County
EKN	EUREKA CANYON (CORRALITOS 6NW)	Event	Tipping Bucket	1/31/2002	Present	Santa Cruz County
EST	ESTRELLA RIVER NEAR ESTRELLA	Hourly	Tipping Bucket	1/1/1995	Present	USGS and DWR
FGR	FIGUEROA MOUNTAIN	Event	Tipping Bucket	9/21/2007	Present	Santa Barbara County
FIG	FIGUEROA	Hourly	Accumulated	11/26/2001	Present	US Forest Service
FO1	FORT ORD #1	Hourly	Accumulated	10/10/2001	4/12/2007	US Army
FO2	FORT ORD #2	Hourly	Accumulated	10/4/2001	Present	US Army
FTD	FORT ORD	Hourly	Accumulated	11/26/2001	1/14/2005	US Forest Service
GGR	GLORIA GRADE	Event	Tipping Bucket	1/6/2000	Present	Monterey County
GLA	GLEN ANNIE	Hourly	Accumulated	11/1/1992	10/6/1999	US Forest Service
GRY	SISQUOC RIVER AT GAREY	Event	Tipping Bucket	12/23/2002	Present	National Weather Service

HDZ	HERNANDEZ	Hourly	Accumulated	1/1/1984	Present	CA Dept of Forestry
HLS	HOLLISTER	Monthly	Accumulated	10/1/1939	Present	National Weather Service
HTG	HASTINGS	Hourly	Accumulated	12/24/1997	Present	CA Dept of Forestry
IDR	IDRIA	Hourly	Tipping Bucket	9/11/1997	Present	CA Dept of Water Resources/O & M
JLW	JULIAN RS	Monthly	Accumulated	10/1/1982	9/1/1995	None Specified
JNL	JUNCAL DAM	Monthly	Accumulated	10/1/1940	Present	National Weather Service
KNC	KING CITY	Monthly	Accumulated	1/1/1905	11/1/1999	CA Dept of Forestry
LAL	LOS ALAMOS	Monthly	Accumulated	10/1/1908	4/1/2002	National Weather Service
LCM	LAS CUMBRES	Event	Tipping Bucket	1/15/2002	Present	Santa Cruz County
LPZ	LA PANZA	Hourly	Accumulated	1/1/1984	Present	CA Dept of Forestry
LSO	LOS OSOS	Event	Tipping Bucket	3/29/2000	Present	National Weather Service
LTB	LAS TABLAS	Hourly	Accumulated	1/1/1984	Present	CA Dept of Forestry
MMD	MOUNT MADONNA	Event	Tipping Bucket	1/6/2000	Present	Santa Clara County
MNG	MINING RIDGE	Event	Tipping Bucket	12/11/1997	Present	Monterey County
MTC	MONTECITO	Hourly	Accumulated	5/6/1998	Present	US Forest Service
MTG	MUSTANG RIDGE	Event	Tipping Bucket	1/6/2000	Present	Monterey County
NCY	NEW CUYAMA FIRE STATION	Monthly	Accumulated	10/1/1964	9/1/1993	National Weather Service
OLV	OLIVE SPRINGS QUARRY	Event	Tipping Bucket	1/15/2002	Present	Santa Cruz County
ORR	ORMSBY ROAD	Event	Tipping Bucket	1/15/2010	Present	Santa Cruz County
PAS	SALINAS RIVER AT PASO ROBLES	Hourly	Tipping Bucket	1/1/1995	Present	USGS and DWR
PHA	MCPHAILS PEAK	Event	Tipping Bucket	6/30/2004	Present	National Weather Service
PIU	PIRU	Hourly	Accumulated	8/10/2001	Present	Ventura County
PKF	PARKFIELD	Hourly	Accumulated	1/1/1984	Present	CA Dept of Forestry
PLV	PLEASANT VALLEY	Event	Tipping Bucket	1/15/2010	Present	Santa Cruz County
PMO	PALOMAR MTN OBSERVATORY	Monthly	Accumulated	10/1/1941	12/1/1993	None Specified
PNR	PONCIANO RIDGE	Event	Tipping Bucket	1/6/2010	Present	Monterey County
PPN	POINT PINOS	Event	Accumulated	1/1/1995	Present	Monterey County
PSV	PRIEST VALLEY	Monthly	Accumulated	1/1/1905	Present	National Weather Service
ROS	SANTA ROSA ISLAND	Hourly	Accumulated	1/1/1993	Present	National Park Service
SAM	SANTA MARIA WB AP	Monthly	Accumulated	10/1/1950	2/1/1994	National Weather Service
SAO	SAN ARDO	Monthly	Accumulated	10/1/1982	1/1/1987	None Specified
SAP	SALINAS NO2	Monthly	Accumulated	1/1/1905	Present	National Weather Service
SBR	SANTA BARBARA SANITATION	Monthly	Accumulated	10/1/1982	Present	Santa Barbara County
SBT	SANTA BARBARA PORTRERO	Event	Tipping Bucket	9/21/2007	Present	Santa Barbara County
SCH	SCHULTIES RD	Event	Tipping Bucket	10/1/1995	Present	Santa Cruz County
SCZ	SANTA CRUZ ISLAND	Hourly	Accumulated	1/1/1993	Present	National Park Service
SLO	SAN LUIS OBISPO POLY	Monthly	Accumulated	1/1/1905	Present	National Weather Service
SMA	SAN MARCOS	Hourly	Accumulated	1/1/1993	6/8/1999	US Forest Service
SMB	SANTA MARGARITA BOOSTER	Hourly	Tipping Bucket	1/1/1995	Present	CA Dept of Water Resources
SMI	SMITH MOUNTAIN	Hourly	Accumulated	8/20/1984	Present	CA Dept of Water Resources/O & M
SMV	SIMI VALLEY	Hourly	Accumulated	10/8/2001	Present	Ventura County

SQL	SOQUEL CREEK	Event	Accumulated	10/1/1995	Present	Santa Cruz County
SRI	SANTA RITA	Hourly	Accumulated	7/1/1994	Present	CA Dept of Forestry
VAN	VANDENBERG	Hourly	Accumulated	4/8/2002	Present	US Forest Service
VTC	VENTANA CONE	Event	Tipping Bucket	1/6/2000	Present	Monterey County
WBP	WEST BIG PINE	Event	Tipping Bucket	9/21/2007	Present	Santa Barbara County
WTW	WATSONVILLE WATER	Monthly	Accumulated	10/1/1940	Present	National Weather Service

# Climate/Precipitation

## National Climatic Data Center (NCDC) Stations

\*No Data Available On Line (Must be requested)

Station Name	County	Start Date	End Date	Resolution	Highest Resolution
*Aptos Cabrillo Clg	Santa Cruz County	1-Sep-78	31-May-81	Unknown	Unknown
*Arroyo Grande #1	San Luis Obispo County	1-May-37	31-Dec-37	Unknown	Unknown
*Arroyo Grande #2	San Luis Obispo County	1-May-38	31-Dec-38	Unknown	Unknown
*Arroyo Grande #4	San Luis Obispo County	1-Jan-38	31-Dec-38	Unknown	Unknown
*Arroyo Seco Gaging Station	Monterey County	1-Jun-53	Present	Unknown	Unknown
*Arroyo Seco River	Monterey County	1-Jan-62	27-Sep-04	Unknown	Unknown
*Arroyo Seco Rock	Monterey County	1-Nov-54	31-Oct-55	Unknown	Unknown
*Atascadero	San Luis Obispo County	1-Dec-15	30-Apr-29	Unknown	Unknown
*Atascadero Near	San Luis Obispo County	1-Jun-28	31-Aug-30	Unknown	Unknown
*Belmont	San Mateo County	01 Jun 1897	31-May-18	Unknown	Unknown
*Ben Lomond Whitney	Santa Cruz County	1-Jan-31	Present	Unknown	Unknown
*Big Pine Lookout	Santa Barbara County	1-Dec-42	31-Dec-45	Unknown	Unknown
*Big Sur 3 SE	Monterey County	1-Dec-93	27-Sep-04	Unknown	Unknown
*Bluff Camp	Santa Barbara County	2-Dec-41	30-Apr-42	Unknown	Unknown
*Bradley Telemetry	Monterey County	1-Apr-68	28-Jul-98	Unknown	Unknown
*Branch Mountain Lookout	San Luis Obispo County	1-Jan-44	31-May-44	Unknown	Unknown
*Calandra	Monterey County	1-May-53	Present	Unknown	Unknown
*Cambria	San Luis Obispo County	1-May-04	30-May-05	Unknown	Unknown
*Camp Morro Bay AAF	San Luis Obispo County	1-Oct-46	31-Dec-46	Unknown	Unknown
*Camp Roberts	Monterey County	1-Jul-45	30-Jun-46	Unknown	Unknown
*Campbell	Santa Clara County	01 Jan 1897	31-Dec-27	Unknown	Unknown
*Camuesa Lookout	Santa Barbara County	1-Jul-48	31-Oct-53	Unknown	Unknown
*Castroville	Monterey County	1-Jan-1897	31-Dec-14	Unknown	Unknown
*Castroville #2 Moss Landing F	Monterey County	10-Feb-73	30-Jun-80	Unknown	Unknown
*Castroville Fire Station	Monterey County	1-Feb-73	30-Apr-80	Unknown	Unknown
*Cerro Alto Lookout	San Luis Obispo County	1-Jan-44	30-Jun-44	Unknown	Unknown
*Chews Ridge Lo	Monterey County	1-Jun-53	Present	Unknown	Unknown
*Cold Springs Camp	Monterey County	1-Jul-48	30-Jun-56	Unknown	Unknown
*Colma	San Mateo County	Unknown	31-May-18	Unknown	Unknown

*Cone Peak Lookout	Monterey County	1-Jan-44	31-Oct-44	Unknown	Unknown
*Coyote Pass	Santa Clara County	1-May-70	31-May-70	Unknown	Unknown
*Del Monte Junction	Monterey County	1-Jan-14	31-May-18	Unknown	Unknown
*El Capitan St Beach	Santa Barbara County	1-Dec-81	Present	Unknown	Unknown
*Estero	San Luis Obispo County	1-Feb-30	31-Dec-43	Unknown	Unknown
*Felton 1 S	Santa Cruz County	16-Jan-90	22-May-98	Unknown	Unknown
*Fort Romie	Monterey County	01-Jun-1898	31-Dec-1898	Unknown	Unknown
*Fremont Peak	San Benito County	1-Jan-40	11-Jan-41	Unknown	Unknown
*Ft Hunter Liggett	Monterey County	Unknown	Present	Unknown	Unknown
*Garey Sisquoc River	Santa Barbara County	1-Dec-71	Present	Unknown	Unknown
*Gilroy	Santa Clara County	1-Sep-28	31-Dec-29	Unknown	Unknown
*Gilroy Hot Springs	Santa Clara County	1-Aug-40	31-Jul-42	Unknown	Unknown
*Gonzales	Monterey County	01-Feb-1899	28-Feb-18	Unknown	Unknown
*Guadalupe	Santa Barbara County	01 Jan 1897	31-May-18	Unknown	Unknown
*Half Moon	San Mateo County	1-May-48	30-Nov-74	Unknown	Unknown
*Harmony Field AAF	San Luis Obispo County	1-Jun-43	31-Oct-44	Unknown	Unknown
*Hernandez	San Benito County	5-Dec-39	30-Sep-42	Unknown	Unknown
*Hernandez	San Benito County	1-Dec-39	Present	Unknown	Unknown
*Hi Mountain L. O.	San Luis Obispo County	Unknown	1-Nov-45	Unknown	Unknown
*Hidden Potrero Camp	Santa Barbara County	1-Jul-48	31-Oct-53	Unknown	Unknown
*Hollister	San Benito County	1-Aug-28	31-Aug-59	Unknown	Unknown
*Jolon	Monterey County	1-Sep-1892	30-Nov-25	Unknown	Unknown
*Jolon Near #2	Monterey County	1-Dec-39	14-Jan-43	Unknown	Unknown
*Jolon Near #3	Monterey County	14-Jan-43	30-Jun-43	Unknown	Unknown
*Kgud Towers	Santa Barbara County	1-Jun-65	30-Sep-68	Unknown	Unknown
*King City Palo Alto Airport	Monterey County	1-Jun-28	30-Apr-47	Unknown	Unknown
*La Cumbre Lo	Santa Barbara County	1-Jun-53	Present	Unknown	Unknown
*La Zaca Foxen Div	Santa Barbara County	1-Dec-41	31-Jul-64	Unknown	Unknown
*La Zaca San Antonio Di	Santa Barbara County	1-Dec-41	31-Jul-64	Unknown	Unknown
*Lisque Alamo Pintada D	Santa Barbara County	1-Dec-41	27-Sep-45	Unknown	Unknown
*Little Pine Mountain	Santa Barbara County	1-Jul-48	31-Oct-53	Unknown	Unknown
*Lompoc Airport	Santa Barbara County	1-Jul-43	Present	Unknown	Unknown
*Los Burros	Monterey County	1-Sep-1895	28-Feb-41	Unknown	Unknown
*Los Vaqueros	Monterey County	1-Jul-02	31-Mar-10	Unknown	Unknown



*Menlo Park	San Mateo County	01 Jan 1878	31-May-18	Unknown	Unknown
*Millbrae	San Mateo County	01 Feb 1899	31-May-18	Unknown	Unknown
*Monterey	Monterey County	1-Mar-47	31-Dec-47	Unknown	Unknown
*Monterey Naf	Monterey County	2-Oct-07	Present	Unknown	Unknown
*Monterey Peninsul Airport	Monterey County	1-Aug-38	Present	Unknown	Unknown
*Monterey Point Pinos	Monterey County	1-Oct-72	Present	Unknown	Unknown
*Mt Soledad Santa Rosa Island	Santa Barbara County	1-Jun-43	28-Feb-44	Unknown	Unknown
*Ocrano	San Luis Obispo County	01 Jan 1896	31-May-18	Unknown	Unknown
*Pajaro	Monterey County	Unknown	31-Dec-1899	Unknown	Unknown
*Palo Alto	San Mateo County	1-May-28	Present	Unknown	Unknown
*Parkfield Near #2	Monterey County	19-Jan-40	17-Feb-43	Unknown	Unknown
*Pescadero 3 E	San Mateo County	1-Jun-94	13-Sep-05	Unknown	Unknown
*Pigeon Point Pescade	San Mateo County	1-Oct-72	Present	Unknown	Unknown
*Pine Crest	Santa Barbara County	01 Jan 1898	30-Sep-16	Unknown	Unknown
*Point Arguello	Santa Barbara County	1-Jul-25	Present	Unknown	Unknown
*Point Arguello AAF	Santa Barbara County	1-Jun-43	28-Feb-44	Unknown	Unknown
*Point Au Nuevo AAF	San Mateo County	1-Jun-43	31-Oct-44	Unknown	Unknown
*Point Conception	Santa Barbara County	1-Oct-72	28-Feb-73	Unknown	Unknown
*Point Montara	San Mateo County	1-Mar-38	31-Dec-62	Unknown	Unknown
*Point Montara Lt Station	San Mateo County	1-Apr-43	31-Mar-56	Unknown	Unknown
*Point San Luis Obispo Cg	San Luis Obispo County	8-Apr-43	16-Oct-51	Unknown	Unknown
*Point Sur Lt Station	Monterey County	1-Apr-43	30-Nov-72	Unknown	Unknown
*Pozo Gauging Station	San Luis Obispo County	1-Jun-53	Present	Unknown	Unknown
*Pozo Guard Station	San Luis Obispo County	1-Feb-43	1-Nov-45	Unknown	Unknown
*Redwood City #2	San Mateo County	1-Jan-97	1-Mar-08	Unknown	Unknown
*Robles Del Rio	Monterey County	1-Dec-67	22-May-98	Unknown	Unknown
*Rocky Butte	San Luis Obispo County	1-May-53	Present	Unknown	Unknown
*Salinas	Monterey County	1-Oct-57	Present	Unknown	Unknown
*Salinas Aab	Monterey County	1-Aug-41	30-Nov-45	Unknown	Unknown
*San Bruno Near	San Mateo County	29-Nov-40	20-Oct-43	Unknown	Unknown
*San Carlos	San Mateo County	01 Feb 1899	31-Oct-17	Unknown	Unknown
*San Carlos Airport	San Mateo County	1-Sep-69	Present	Unknown	Unknown
*San Lucas	Monterey County	1-Feb-1899	31-Mar-18	Unknown	Unknown
*San Luis Obispo Airport	San Luis Obispo County	12-Nov-46	Present	Unknown	Unknown

*San Luis Obispo Naaf	San Luis Obispo County	1-Jul-29	31-Aug-45	Unknown	Unknown
*San Luis Obispo Rs	San Luis Obispo County	1-Jun-53	Present	Unknown	Unknown
*San Miguel Island	Santa Barbara County	01 Mar 1894	31-May-42	Unknown	Unknown
*San Miguel Island	Santa Barbara County	Unknown	Present	Unknown	Unknown
*San Miguel Island	Santa Barbara County	1-Jan-40	31-Dec-47	Unknown	Unknown
*Santa Barbara	Santa Barbara County	1-Apr-76	Present	Unknown	Unknown
*Santa Barbara Edison	Santa Barbara County	1-Jul-53	31-Dec-67	Unknown	Unknown
*Santa Barbara F S 5	Santa Barbara County	1-Feb-75	1-Dec-95	Unknown	Unknown
*Santa Barbara Harbor	Santa Barbara County	17-Sep-76	Present	Unknown	Unknown
*Santa Cruz Island	Santa Barbara County	Unknown	Present	Unknown	Unknown
*Santa Cruz Island	Santa Barbara County	Unknown	Present	Unknown	Unknown
*Santa Cruz Yacht Harbor	Santa Cruz County	1-Feb-73	Present	Unknown	Unknown
*Santa Margarita	San Luis Obispo County	1-Dec-36	31-May-38	Unknown	Unknown
*Santa Margarita	San Luis Obispo County	01 Feb 1889	31-May-18	Unknown	Unknown
*Santa Maria	Santa Barbara County	1-Mar-47	Present	Unknown	Unknown
*Santa Maria #2	Santa Barbara County	11-May-40	23-Nov-42	Unknown	Unknown
*Santa Ynez Airport	Santa Barbara County	10-Apr-92	Present	Unknown	Unknown
*Santa Ynez Peak	Santa Barbara County	4-Dec-41	25-Nov-42	Unknown	Unknown
*Sherwood Air Force Base	San Luis Obispo County	1-Dec-41	31-May-42	Unknown	Unknown
*Sid Ormsbee Lo	Monterey County	1-May-53	Present	Unknown	Unknown
*Sisquoc Ranch	Santa Barbara County	1-Jan-04	30-Sep-15	Unknown	Unknown
*Sky Londa	San Mateo County	1-Apr-53	Present	Unknown	Unknown
*Slack Creek #1	Monterey County	1-May-40	30-Nov-42	Unknown	Unknown
*Smith Mountain	Monterey County	1-May-53	Present	Unknown	Unknown
*Sunnyvale Nas	Santa Clara County	1-Oct-33	31-Mar-42	Unknown	Unknown
*Sunnyvale Nas	Santa Clara County	1-Aug-32	31-Oct-35	Unknown	Unknown
*Templeton	San Luis Obispo County	Unknown	31-May-18	Unknown	Unknown
*Tres Pinos	San Benito County	01-Feb-1899	31-May-16	Unknown	Unknown
*Vandenberg Air Force Base	Santa Barbara County	17-Aug-93	Present	Unknown	Unknown
*Vandenberg Air Force Base	Santa Barbara County	2-Oct-07	Present	Unknown	Unknown
*Vandenberg Bldg 900	Santa Barbara County	1-Sep-69	Present	Unknown	Unknown
*Vandenberg South	Santa Barbara County	1-May-67	Present	Unknown	Unknown
*Windy Saddle Juncal Rd	Santa Barbara County	1-Jul-48	31-Oct-53	Unknown	Unknown
*Woodside	San Mateo County	1-Jan-00	30-Nov-07	Unknown	Unknown

Alma	Santa Clara County	1-Jul-48	28-Feb-50	Daily	Daily
Almaden	Santa Clara County	1-Jul-48	31-Jan-50	Daily	Daily
Arroyo Grande	San Luis Obispo County	1-Aug-59	30-Jun-77	Daily	Daily
Arroyo Grande 11 ENE	San Luis Obispo County	20-Oct-93	Present	15-min, 1-hr	15-min
Arroyo Seco	Monterey County	1-Nov-40	Present	15-min, 1-hr, Daily	15-min
Arroyo Seco Millers Lg	Monterey County	1-Jan-49	31-Dec-52	Daily	Daily
Avila Beach	San Luis Obispo County	1-May-63	24-Jun-71	Daily	Daily
Bates Ridge	Santa Barbara County	1-Jul-48	31-Dec-76	1-hr, Daily	1-hr
Ben Lomond #4	Santa Cruz County	1-Jan-37	Present	Daily	Daily
Betteravia	Santa Barbara County	1-Jan-31	30-Jun-43	Daily	Daily
Big Sur Station	Monterey County	1-Jan-31	Present	15-min, 1-hr, Daily	15-min
Black Mountain 2 WSW	Santa Clara County	1-Jan-43	1-Jul-95	Daily	Daily
Boulder Cr Locat Rch	Santa Cruz County	1-Jul-48	Present	15-min, 1-hr, Daily	15-min
Bradley	Monterey County	1-Jul-48	1-Dec-71	Daily	Daily
Bryson	Monterey County	1-Jul-48	Present	15-min, 1-hr, Daily	15-min
Buena Vista	San Benito County	1-Jul-48	1-Jul-71	1-hr, Daily	1-hr
Burlingame	San Mateo County	1-Jan-46	30-Jun-78	Daily	Daily
Cachuma Dam	Santa Barbara County	1-Oct-51	31-Dec-55	15-min, 1-hr, Daily	15-min
Cachuma Lake	Santa Barbara County	1-Dec-55	Present	15-min, 1-hr, Daily	15-min
Camp San Luis Obispo	San Luis Obispo County	1-Jul-48	30-Jun-67	Daily	Daily
Carmel Valley	Monterey County	1-Jan-59	Present	Daily	Daily
Carpinteria Rsvr	Santa Barbara County	1-Sep-68	Present	15-min, 1-hr	15-min
Chittenden Pass	Santa Cruz County	1-Jan-46	13-Sep-05	Daily	Daily
Cholame Alley Rch	San Luis Obispo County	1-Jul-66	11-Oct-78	15-min, 1-hr, Daily	15-min
Cholame Hatch Rch	San Luis Obispo County	1-Jul-48	31-Jul-66	15-min, 1-hr, Daily	15-min
Corralitos	Santa Cruz County	1-Jul-48	Present	15-min, 1-hr	15-min
Cuyama	Santa Barbara County	1-Jan-44	11-Dec-73	Daily	Daily
Cuyama Rch	San Luis Obispo County	1-Jul-48	18-May-70	1-hr, Daily	1-hr
Davenport	Santa Cruz County	1-Sep-60	30-Jun-77	Daily	Daily
Del Monte	Monterey County	1-Jan-31	1-Jul-95	15-min, 1-hr, Daily	15-min
Edwards	Santa Barbara County	4-Sep-95	Present	Unknown	Unknown
El Granada	San Mateo County	1-Feb-53	30-Apr-53	Daily	Daily
Felton	Santa Cruz County	22-Aug-00	1-Jul-09	Daily	Daily
Figueroa Lo	Santa Barbara County	1-Jul-48	30-Nov-49	1-hr, Daily	1-hr

Figueroa Mountain	Santa Barbara County	1-Jul-48	Present	15-min, 1-hr, Daily	15-min
Freedom 8 NNW	Santa Cruz County	1-Jul-48	1-Apr-74	1-hr	1-hr
Fritzsche AAF	Monterey County	1-Apr-60	Present	Daily	Daily
Gerber Rch	Santa Clara County	1-Jul-60	30-Jun-77	Daily	Daily
Gibraltar Dam	Santa Barbara County	1-Jul-48	28-Feb-59	Daily	Daily
Gibraltar Dam No 2	Santa Barbara County	1-Feb-57	Present	15-min, 1-hr, Daily	15-min
Gilroy	Santa Clara County	1-May-57	Present	Daily	Daily
Gilroy 14 ENE	Santa Clara County	1-Jul-48	11-Dec-76	Daily	Daily
Gilroy 14 NE	Santa Clara County	1-May-51	31-Jul-56	Daily	Daily
Gilroy 8 NE	Santa Clara County	1-Jul-48	Present	15-min, 1-hr, Daily	15-min
Gonzales 9 ENE	San Benito County	1-Jul-48	28-Apr-76	1-hr, Daily	1-hr
Greenfld Groover Rch	Monterey County	1-Jul-48	30-Nov-48	Daily	Daily
Half Moon Bay	San Mateo County	1-Jul-39	Present	Daily	Daily
Harris Gaging Station	Santa Barbara County	1-Jul-48	15-Dec-64	Daily	Daily
Hearst Castle	San Luis Obispo County	1-Sep-99	Present	Daily	Daily
Hernandez 2 NW	San Benito County	1-Jul-48	9-Jul-80	Daily	Daily
Hernandez 7 SE	San Benito County	1-Jul-48	Present	15-min, 1-hr, Daily	15-min
Hollister 1 SW	San Benito County	1-Jan-31	1-Feb-75	Daily	Daily
Hollister 2	San Benito County	1-Jul-48	Present	15-min, 1-hr, Daily	15-min
Hollister 9 ENE	San Benito County	1-Mar-62	18-Jan-00	15-min, 1-hr	15-min
Hollister Naas	San Benito County	1-Jul-43	31-Oct-45	Daily	Daily
Holy City 3 WNW	Santa Cruz County	1-May-40	30-Jun-57	Daily	Daily
Horse Canyon	Santa Barbara County	1-Jul-48	31-Jan-59	1-hr, Daily	1-hr
Huasna	San Luis Obispo County	1-Jul-48	1-Jul-93	15-min, 1-hr, Daily	15-min
Idria	San Benito County	1-Jan-31	16-May-77	Daily	Daily
Jolon Ft Hunter Liggett	Monterey County	1-Jul-64	Present	Daily	Daily
Juncal Dam	Santa Barbara County	1-Jul-48	Present	Daily	Daily
King City	Monterey County	1-Jan-31	Present	15-min, 1-hr, Daily	15-min
King City Airport	Monterey County	1-Mar-40	30-Apr-50	Daily	Daily
La Honda	San Mateo County	9-Jan-50	30-Sep-77	Daily	Daily
La Panza	San Luis Obispo County	1-Oct-75	20-Apr-94	15-min, 1-hr	15-min
La Panza Rch	San Luis Obispo County	1-Jul-48	17-Jun-75	1-hr, Daily	1-hr
Lockwood 1 N	Monterey County	1-Sep-43	27-Jul-79	15-min, 1-hr, Daily	15-min
Lompoc	Santa Barbara County	1-Jul-50	Present	Daily	Daily

Los Alamos	Santa Barbara County	1-Jan-31	16-Jul-09	Daily	Daily
Los Gatos	Santa Clara County	1-Jan-31	Present	Daily	Daily
Los Gatos 4 SW	Santa Cruz County	1-May-57	1-Feb-89	Daily	Daily
Los Prietos Rs	Santa Barbara County	1-Apr-42	1-Nov-04	Daily	Daily
Lucia Willow Springs	Monterey County	1-Jul-48	Present	15-min, 1-hr, Daily	15-min
Manzana School	Santa Barbara County	1-Apr-65	26-May-71	1-hr	1-hr
Manzanita Mountain	Santa Barbara County	1-Jul-48	30-Sep-67	1-hr, Daily	1-hr
Marre Rch	Santa Barbara County	1-Dec-41	31-Jul-64	Daily	Daily
Moffett Federal Airfield	Santa Clara County	9-Oct-33	Present	Daily	Daily
Monterey	Monterey County	1-Jan-49	Present	Daily	Daily
Monterey Naf	Monterey County	1-Mar-43	28-Feb-72	Daily	Daily
Monterey Wfo	Monterey County	1-Jul-95	Present	15-min, 1-hr, Daily	15-min
Morgan Hill	Santa Clara County	1-Jul-48	Present	15-min, 1-hr, Daily	15-min
Morgan Hill 2 E	Santa Clara County	1-Sep-43	30-Sep-77	Daily	Daily
Morgan Hill 6 WSW	Santa Clara County	1-Dec-68	31-Aug-75	1-hr	1-hr
Morro Bay 3 N	San Luis Obispo County	1-Aug-59	30-Jun-77	Daily	Daily
Morro Bay Fire Dept	San Luis Obispo County	1-Feb-59	Present	Daily	Daily
Mt Hamilton	Santa Clara County	1-Jul-29	Present	1-hr, Daily	1-hr
Mt Madonna	Santa Cruz County	1-Jul-48	30-Oct-74	1-hr, Daily	1-hr
Nacimiento Dam	San Luis Obispo County	1-May-57	30-Jun-78	Daily	Daily
New Cuyama Fire Station	Santa Barbara County	1-Dec-73	Present	15-min, 1-hr, Daily	15-min
Nipomo 2 NW	San Luis Obispo County	1-Oct-59	30-Jun-77	Daily	Daily
Pacifica	San Mateo County	1-Jul-83	25-Apr-84	Daily	Daily
Pacifica 2s	San Mateo County	22-Sep-00	31-May-09	Daily	Daily
Pacifica 4 SSE	San Mateo County	25-Apr-84	Present	Daily	Daily
Paicines 4 W	San Benito County	1-Jul-42	Present	Daily	Daily
Palo Alto	San Mateo County	1-Jan-31	31-Aug-53	1-hr, Daily	1-hr
Palo Alto	Santa Clara County	1-Sep-53	Present	1-hr, Daily	1-hr
Paloma	Monterey County	1-May-40	5-Apr-99	Daily	Daily
Panoche 2 W	San Benito County	1-Nov-49	Present	Daily	Daily
Parkfield	Monterey County	1-Sep-38	17-Jun-75	1-hr, Daily	1-hr
Parkfield 6 SE	Monterey County	1-Jan-31	31-Jan-43	Unknown	Unknown
Parkfield 7 NNW	Monterey County	1-Jul-48	1-Jun-69	1-hr, Daily	1-hr
Paso Robles	San Luis Obispo County	1-Jan-31	Present	15-min, 1-hr, Daily	15-min

Paso Robles 2 NW	San Luis Obispo County	1-Jan-34	31-Jan-40	Unknown	Unknown
Paso Robles 5 NW	San Luis Obispo County	1-Jul-48	13-Sep-76	1-hr, Daily	1-hr
Paso Robles CAA Airport	San Luis Obispo County	1-Feb-43	31-Mar-52	1-hr, Daily	1-hr
Paso Robles Municipal Airport	San Luis Obispo County	1-Sep-49	Present	1-hr, Daily	1-hr
Pendola Gauging Station	Santa Barbara County	1-Nov-43	31-Jan-58	Daily	Daily
Pillar Point Afs	San Mateo County	1-Feb-73	Present	Unknown	Unknown
Pine Canyon Gauging ST	Santa Barbara County	1-Mar-38	30-Nov-47	Unknown	Unknown
Pinnacles National Monument	San Benito County	1-Jan-37	Present	Daily	Daily
Pismo Beach	San Luis Obispo County	1-Jun-49	6-Mar-06	Daily	Daily
Point Arguello Afb	Santa Barbara County	1-Jul-59	31-Oct-65	Daily	Daily
Point Arguello Lt Station	Santa Barbara County	1-Oct-41	28-Feb-79	Daily	Daily
Priest Valley	Monterey County	1-Jan-31	Present	Daily	Daily
Redwood City	San Mateo County	1-Jan-31	Present	Daily	Daily
Salinas #2	Monterey County	4-Apr-58	Present	Daily	Daily
Salinas 6 SSW	Monterey County	1-Aug-89	1-Dec-91	Daily	Daily
Salinas Dam	San Luis Obispo County	1-Dec-42	Present	Daily	Daily
Salinas Municipal Airport	Monterey County	1-Jan-28	Present	1-hr, Daily	1-hr
Salsipuedes Gaging Station	Santa Barbara County	1-Nov-41	Present	Daily	Daily
Salsipuedes Jalama Div	Santa Barbara County	1-Nov-41	31-Jul-64	Daily	Daily
San Antonio Mission	Monterey County	1-Aug-59	18-Oct-72	Daily	Daily
San Antonio Santa Mari	Santa Barbara County	1-Jul-48	31-Jul-64	Daily	Daily
San Ardo	Monterey County	1-Oct-59	30-Jun-77	Daily	Daily
San Benito	San Benito County	1-Jul-48	1-Aug-01	15-min, 1-hr, Daily	15-min
San Benito Willow Ck	San Benito County	1-Feb-49	31-Oct-55	Daily	Daily
San Clemente Dam	Monterey County	1-Jan-40	Present	Daily	Daily
San Felipe Hwy Station	Santa Clara County	13-Aug-45	20-Nov-75	1-hr, Daily	1-hr
San Francisco International Airport	San Mateo County	1-May-28	Present	1-hr, Daily	1-hr
San Gregorio 2 SE	San Mateo County	1-May-54	1-Dec-07	Daily	Daily
San Jose	Santa Clara County	1-Oct-05	Present	15-min, 1-hr, Daily	15-min
San Jose International Airport	Santa Clara County	11-Mar-49	1-Oct-07	1-hr, Daily	1-hr
San Juan Bautista 3 SS	San Benito County	1-Jul-48	1-Jan-88	15-min, 1-hr, Daily	15-min
San Luis Obispo Poly U	San Luis Obispo County	01 Jan 1894	Present	15-min, 1-hr, Daily	15-min
San Marcos Pass	Santa Barbara County	1-Oct-67	Present	15-min, 1-hr	15-min
San Marcos Rch	Santa Barbara County	1-Oct-51	30-Jun-60	1-hr, Daily	1-hr

San Mateo	San Mateo County	1-Jul-34	31-Dec-78	Daily	Daily
San Miguel	San Luis Obispo County	01 Jan 1887	31-May-18	Daily	Daily
San Miguel Wolf Rch	San Luis Obispo County	1-Dec-73	Present	15-min, 1-hr	15-min
San Simeon Pt Piedras Blancas	San Luis Obispo County	8-Jun-38	Present	Daily	Daily
Santa Barbara	Santa Barbara County	1-Jan-31	Present	15-min, 1-hr, Daily	15-min
Santa Barbara 11 W	Santa Barbara County	19-Oct-07	Present	Unknown	Unknown
Santa Barbara 2	Santa Barbara County	1-Dec-41	Present	Daily	Daily
Santa Barbara Mcas	Santa Barbara County	1-Sep-43	28-Feb-46	Daily	Daily
Santa Barbara Municipal Airport	Santa Barbara County	1-Jul-29	Present	1-hr, Daily	1-hr
Santa Barbara Potrero	Santa Barbara County	1-Jul-48	30-Sep-67	1-hr, Daily	1-hr
Santa Barbara Tv Peak	Santa Barbara County	1-Dec-53	15-Jan-74	Daily	Daily
Santa Clara Univ	Santa Clara County	1-Jan-31	1-Jul-76	Daily	Daily
Santa Cruz	Santa Cruz County	1-Jan-31	Present	Daily	Daily
Santa Cruz Creek	Santa Barbara County	1-Jul-48	31-Oct-53	Daily	Daily
Santa Margarita 2 SW	San Luis Obispo County	1-May-40	1-Mar-75	Daily	Daily
Santa Margarita Boost	San Luis Obispo County	1-Jan-43	Present	15-min, 1-hr, Daily	15-min
Santa Maria	Santa Barbara County	1-Jan-31	30-Apr-59	Daily	Daily
Santa Maria 14 ENE	Santa Barbara County	1-Nov-54	31-Mar-67	Daily	Daily
Santa Maria Public Airport	Santa Barbara County	1-Jun-38	Present	1-hr, Daily	1-hr
Santa Ynez	Santa Barbara County	1-Jul-48	Present	15-min, 1-hr, Daily	15-min
Santa Ynez Lookout	Santa Barbara County	1-Jul-48	31-Dec-53	Daily	Daily
Searsville Lake	San Mateo County	1-Jan-31	1-Jan-73	Daily	Daily
Sisquoc South Fork Cam	Santa Barbara County	1-Jul-48	31-Aug-65	1-hr, Daily	1-hr
Skyline Ridge Preserve	San Mateo County	1-Jul-95	Present	Daily	Daily
Slack Canyon	Monterey County	1-Jul-48	15-Sep-76	1-hr	1-hr
Soledad	Monterey County	1-Nov-54	21-May-84	15-min, 1-hr, Daily	15-min
South Vandenberg Air Force Base	Santa Barbara County	Unknown	Present	Unknown	Unknown
Spreckels Hwy Brg	Monterey County	1-Jan-31	27-Sep-04	Daily	Daily
Stayton Mine	San Benito County	1-Jul-48	19-Mar-62	1-hr, Daily	1-hr
Suey Rch	San Luis Obispo County	1-Aug-59	30-Jun-77	Daily	Daily
Sunset State Beach	Santa Cruz County	1-Nov-56	Present	15-min, 1-hr	15-min
Surf 2 ENE	Santa Barbara County	1-Jul-48	17-Oct-06	15-min, 1-hr, Daily	15-min
Twitchell Dam	Santa Barbara County	1-Apr-59	Present	Daily	Daily
Upper Tres Pinos	San Benito County	1-Jul-48	31-Mar-77	1-hr, Daily	1-hr

Valleton	Monterey County	1-Jul-48	23-Jun-71	1-hr, Daily	1-hr
Valleton Wolf Rch	Monterey County	1-Jun-71	20-Dec-73	1-hr	1-hr
Vandenberg Air Force Base	Santa Barbara County	1-Jul-51	Present	Daily	Daily
Vandenberg Air Force Base Boathouse Site	Santa Barbara County	1-Aug-66	28-Feb-69	Daily	Daily
Vandenberg Air Force Base Sudden Rch	Santa Barbara County	1-Mar-69	31-Aug-69	Daily	Daily
Ventucopa Rs	Santa Barbara County	1-Sep-38	21-Nov-72	1-hr	1-hr
Wasioja Forbes Ranch	Santa Barbara County	21-May-42	19-Nov-55	1-hr, Daily	1-hr
Wasioja Phoenix Rch	Santa Barbara County	1-Nov-55	12-Dec-73	1-hr	1-hr
Watsonville 3 SW	Santa Cruz County	19-Nov-45	19-Nov-56	1-hr, Daily	1-hr
Watsonville Junction	Monterey County	1-Dec-1891	31-May-18	Unknown	Unknown
Watsonville Wtr Wks	Santa Cruz County	1-Jan-31	Present	Daily	Daily
West Big Pine Lo	Santa Barbara County	1-Jul-48	31-Dec-76	1-hr, Daily	1-hr
Woodside Fire Stn 1	San Mateo County	1-Jan-73	Present	Daily	Daily
Wrights	Santa Clara County	1-Jan-31	1-Sep-87	Daily	Daily



# Climate/Precipitation

## Remote Automated Weather Stations (RAWS)

\*Resolution for all Stations - Hourly & Daily

Station Name	Start Date	End Date	Agency	Resolution
Spring Valley	Oct-98	Present	State & Private Forestry	Hourly & Daily
Pulgas	May-97	Present	State & Private Forestry	Hourly & Daily
Los Altos	Feb-98	Present	State & Private Forestry	Hourly & Daily
La Honda	May-90	Present	State & Private Forestry	Hourly & Daily
Chalks	Feb-92	Jun-98		Hourly & Daily
Ben Lomond	Jun-98	Present	State & Private Forestry	Hourly & Daily
Los Gatos	May-97	Present	State & Private Forestry	Hourly & Daily
Corralitos	May-90	Present	State & Private Forestry	Hourly & Daily
Poverty	Oct-98	Present	State & Private Forestry	Hourly & Daily
Rose Peak	Jan-95	Present	State & Private Forestry	Hourly & Daily
Calaveras Road	May-97	Present	State & Private Forestry	Hourly & Daily
Hollister	Dec-02	Present	State & Private Forestry	Hourly & Daily
Los Banos	May-90	Present	State & Private Forestry	Hourly & Daily
Diablo Grande	Aug-98	Present	State & Private Forestry	Hourly & Daily
Sweetwater	Nov-94	May-98		Hourly & Daily
Fort Ord #1	Oct-01	Apr-07	Other	Hourly & Daily
Fort Ord (Portable)	Mar-01	Jan-05	Bureau of Land Management	Hourly & Daily
Hastings	Apr-97	Present	State & Private Forestry	Hourly & Daily
Pinacles	Mar-01	Present	National Park Service	Hourly & Daily
Hernandez	May-90	Present	State & Private Forestry	Hourly & Daily
Santa Rita	Oct-91	Present	Bureau of Land Management	Hourly & Daily
San Luis NWR	Mar-02	Present	Fish & Wildlife Service	Hourly & Daily
Panoche Road	May-90	Present	State & Private Forestry	Hourly & Daily
Cahoon	May-90	Apr-97		Hourly & Daily
Arroyo Seco (Mt Diablo)	May-96	Present	US Forest Service	Hourly & Daily
Big Sur	Jul-01	Present	US Forest Service	Hourly & Daily
Fort Hunter Ligget	Jun-01	Present	US Forest Service	Hourly & Daily
Bradley	Dec-02	Present	State & Private Forestry	Hourly & Daily
Parkfield	May-90	Present	State & Private Forestry	Hourly & Daily

Kettleman Hills	Feb-88	Present	Bureau of Land Management	Hourly & Daily
Las Tablas	May-90	Present	State & Private Forestry	Hourly & Daily
La Panza	May-90	Present	State & Private Forestry	Hourly & Daily
Arroyo Grande	Feb-97	Present	State & Private Forestry	Hourly & Daily
Branch Mountain	May-96	Present	US Forest Service	Hourly & Daily
Carrizo	Oct-91	Present	Bureau of Land Management	Hourly & Daily
Vandenberg	Mar-02	Present	US Forest Service	Hourly & Daily
Figueroa	Nov-02	Present	US Forest Service	Hourly & Daily
Los Prietos	Oct-97	Present	US Forest Service	Hourly & Daily
San Marcos	May-92	Feb-95		Hourly & Daily
Glen Annie	May-92	Feb-95		Hourly & Daily
Montecito	Sep-96	May-10	US Forest Service	Hourly & Daily
Casitas	Jan-04	Present	US Forest Service	Hourly & Daily
Ojai	Jun-00	Present	State & Private Forestry	Hourly & Daily
Rose Valley	Nov-93	Present	US Forest Service	Hourly & Daily
Ozena	Aug-01	Present	US Forest Service	Hourly & Daily
Casitas (old)	Jan-85	Sep-91		Hourly & Daily
Chuchupate	Feb-99	Present	US Forest Service	Hourly & Daily
Santa Rosa Island	Apr-90	Present	National Park Service	Hourly & Daily
Santa Cruz Island	Apr-90	Present	National Park Service	Hourly & Daily
Delnorte	Dec-99	Present	Other	Hourly & Daily
Anacapa Island	Jan-04	Present	National Park Service	Hourly & Daily

# Climate/Evapotranspiration

## California Irrigation Management Information System (CIMIS)

\*No Eto

Resolution: Hourly, Daily & Monthly for all sites

Station	Name	County	Start Date	End Date	Reference Surface	Datalogger
3	Beach /Santa Cruz CO	Santa Cruz	5/30/1982	8/25/1986	Grass	CR21
4	Webb /Santa Cruz CO	Santa Cruz	5/30/1982	4/29/1988	Grass	CR21
16	San Juan	Monterey	10/23/1982	8/24/1995	Grass	CR21
19	Castroville	Monterey	11/18/1982		Grass	CR10
23	King City	Monterey	11/19/1982	12/23/1985	Grass	CR21
28	Soledad	Monterey	1/4/1983	2/11/1987	Grass	CR21
37	USDA Salinas	Monterey	4/11/1983	7/27/1992	Grass	CR21x
38	Santa Maria	Santa Barbara	5/3/1983	4/27/1999	Grass	CR21
52	San Luis Obispo	San Luis Obispo	4/2/1986		Grass	CR10x
53	Greenfield	Monterey	10/10/1986	10/23/1991	Grass	CR21
58	Santa Paula	Ventura	7/30/1987	2/15/1991	Grass	CR21
64	Santa Ynez	Santa Barbara	11/21/1986		Grass	CR10
67	Goleta	Santa Barbara	2/17/1988	4/7/1993	Grass	CR21
69	San Jose	Santa Clara	6/8/1987	11/22/2002	Grass	CR21x
76	Betteravia	Santa Barbara	12/18/1987	7/1/1993	Grass	CR21
88	Cuyama	Santa Barbara	5/20/1989		Grass	CR10
89	Salinas South	Monterey	9/5/1992		Grass	CR10
94	Goleta Foothills	Santa Barbara	7/7/1990		Grass	CR10
95	Watsonville	Santa Cruz	9/13/1989	7/24/1995	Grass	CR21
96	Woodside	San Mateo	10/31/1990	1/24/1994	Grass	CR21
97	Port Hueneme	Ventura	2/16/1991	7/31/2000	Grass	CR21
101	Piru	Ventura	8/27/1991	2/20/2005	Alfalfa	CR10
104	De Laveaga	Santa Cruz	9/28/1990		Grass	CR10
107	Santa Barbara	Santa Barbara	4/7/1993		Grass	CR10
111	*Green Valley Road	Santa Cruz	5/29/1992	7/31/2009	Grass	CR10
112	San Ardo	Monterey	6/18/1993	3/13/1995	Grass	CR21
113	King City-Oasis Rd.	Monterey	6/12/1993		Grass	CR10
114	Arroyo Seco	Monterey	6/18/1993		Grass	CR10

115	Gonzales	Monterey	6/18/1993	11/10/1998	Grass	CR21
116	Salinas North	Monterey	6/18/1993		Grass	CR10
120	*Guadalupe	Santa Barbara	12/24/1993	11/28/2000	Grass	CR10
126	San Benito	San Benito	6/9/1994		Grass	CR10
129	Pajaro	Monterey	9/13/1995		Grass	CR10
132	Morgan Hill	Santa Clara	4/28/1997	5/1/2008	Grass	CR10
143	San Juan Valley	San Benito	1/1/1998		Grass	CR10
152	Camarillo	Ventura	1/21/2000		Grass	CR10
160	San Luis Obispo West	San Luis Obispo	11/1/2000		Grass	CR10x
163	Atascadero	San Luis Obispo	11/21/2000		Grass	CR10x
165	Sisquoc	Santa Barbara	4/26/2000		Grass	CR10
177	Watsonville West	Santa Cruz	11/30/2000	3/22/2006	Grass	CR10
198	Santa Paula	Ventura	3/30/2005		Grass	CR10x
202	Nipomo	San Luis Obispo	6/27/2006		Grass	CR10x
209	Watsonville West II	Santa Cruz	6/13/2007		Grass	CR10
210	Carmel	Monterey	7/22/2008		Grass	CR10
211	Gilroy	Santa Clara	9/1/2009		Grass	CR10x

# Climate Data

Source	File Description	Resolution	Date	Notes
Lompoc	Lompoc precip spreadsheet	Monthly	1964-Present	
Pismo Beach	Pismo Beach Daily Precip Data	Daily	2002-Present	Towards the far right of the data sets. Past all the WW data
SLO City	SLO Monitoring locations	Monthly	1869-Present	
SLO City	SLO Monitoring locations	Hourly	July 08 - Present	
SLO City	SLO Monitoring locations	10-min	July 00 - Aug 06	
SLO City	Camp SLO	12 hours or 0.04 inches or greater	Feb 2000 - June 2005	
SLO City	SLO Reservoir	12 hours or 0.04 inches or greater	March 2000 - June 2005	
SLO City	So Cal Gas	12 hours or 0.04 inches or greater	March 2000 - June 2005	
SLO City	Chorro Reservoir	0.01 inches	Sept 2004 - June 2005	
SLO City	South Portal	12 hours or 0.04 inches or greater	March 2003 - June 2005	
Santa Barbara City	Santa Barbara Rainfall	Daily	July 2000 - Feb 2010	
Santa Cruz City	Santa Cruz Climate Data	Daily	Oct 1995 - Sep 2007	
Santa Cruz City	Scotts Valley Water District Data	Daily	Jan 1990 - Jun 2005	
Santa Cruz City	San Lorenzo Data	Annual	1888 - 2004	
Santa Cruz City	No Data Available	Annual	?	Very disorganized file. Not useful.
Santa Cruz City	Correlitos Precip gage data	Event?	Feb 1996 - May 2009	No set interval for sampling. Probably part of the ALERT gages.
Santa Cruz City	Felton Area Precip gage data	Annual	Jul 1994 - Jun 2004	Annual totals from Jul 1st to Jun 30th.
Carmel	Carmel Police Department Rain Gage	Daily	Past 6 months	Only keep records for the past 6 months. No other historical records exist beyond this.
SLO County	California Isohyetal Lines			

## Land Use/ Land Cover

Source	Date	File Description	Scale	Geographic Location	Notes
USGS Seamless	September 1, 2003	National Land Cover Database 2001	30-m	Central Coast	
Cal-Atlas	August 1, 2003	Bay Delta Vegetation	Apx 100-m	Bay Delta	Course resolution.
Cal-Atlas	August 1, 2003	Central Coast Vegetation	Apx 100-m	Central Coast	Course resolution.
Cal-Atlas	August 1, 2003	San Joaquin Vegetation	Apx 100-m	San Joaquin	Course resolution.
Monterey City	Unspecified	Monterey City Parks	Apx 50-m	Monterey, CA	Illustrates better outline of pervious areas within city limits than the national dataset.
Santa Cruz County	Unspecified	Santa Cruz County Geodatabase	1"=800'	Santa Cruz Co, CA	
Carpinteria	Unspecified	Carpinteria Land Use File	Apx 50-m	Carpinteria, CA	Mostly consists of large parcel areas.
Carpinteria	Unspecified	Carpinteria Zoning File (*MISSING FILES)		Carpinteria, CA	ERROR IN FILE & WILL NOT OPEN (missing .dbf file)
Paso Robles	Unspecified	Paso Robles Geodatabase	Apx 50-m	Paso Robles, CA	Parcel data has resolution of 10-m while LU & Zoning have 50-m
Sand City	July 25, 2006	Sand City	Apx 10-m	Sand City, CA	Parcel data for entire Monterey County area. Some data gaps but overall, great resolution & coverage
Monterey County	Unspecified	Monterey County General Plan	Apx 50-m	Monterey County, CA	Mostly consists of large parcel areas.
King City	Unspecified	King City Parcel Data (*DWG)		King City, CA	
King City	Unspecified	King City Zoning Map 24x24 (*PDF)		King City, CA	
King City	Unspecified	King City General Plan Land-Use 24x24 (*PDF)		King City, CA	
Morro Bay	Unspecified	Morro Bay Parcel Data	Apx 10-m	Morro Bay, CA	Great coverage in urban area for parcel data
Morro Bay	Unspecified	Morro Bay Zoning Data	Apx 50-m	Morro Bay, CA	Large & broad parcel areas
Pismo Beach	Unspecified	Pismo Beach Parcel Data	Apx 10-m	Pismo Beach, CA	Good coverage in urban area for parcel data
Pismo Beach	Unspecified	Pismo Beach Zoning	Apx 10-m	Pismo Beach, CA	Nearly identical to zoning2009. Latter has most recent data
Pismo Beach	Unspecified	Pismo Beach Zoning	Apx 10-m	Pismo Beach, CA	Mostly large areas with some small zones included.
SLO City	Unspecified	San Luis Obispo General Plan	Apx 30-m	San Luis Obispo, CA	Mostly large areas.
SLO City	Unspecified	SLO Zoning	Apx 30-m	San Luis Obispo, CA	More defined than GeneralPlanLandUse but mostly large areas
Lompoc	Unspecified	Lompoc General Plan Microstation (*DGN)		Lompoc, CA	
Lompoc	Unspecified	Lompoc Parcel Data (*MISSING GEOREF)		Lompoc, CA	NO GEOREFERENCE INFORMATION
Lompoc	Unspecified	Lompoc Zoning Microstation (*DGN)		Lompoc, CA	

Marina	Unspecified	Marina Parcel & Landuse database	Apx 10-30-m	Marina, CA	Parcel data is higher resolution with some gaps. Landuse is most near 30-m resolution
Monterey City	Unspecified	Monterey Land Use file	Apx 10-m	Monterey, CA	Parcel data defined in LU.
Monterey County	Unspecified	Monterey County Parcel Information	Apx 10-m	Monterey County, CA	Parcel data for entire Monterey County. Possible data gaps.
Morgan Hill	Unspecified	Morgan Hill General Plan	Apx 50-m	Morgan Hill, CA	Larger parcel data typically outlined by streets.
Morgan Hill	Unspecified	Morgan Hill Land Cover	Apx 50-m	Morgan Hill, CA	Only has a developed classification & open space
Morgan Hill	Unspecified	Morgan Hill Parcel Data	Apx 10-m	Morgan Hill, CA	Parcel data with gaps at roads. Entire Santa Clara County
Pacific Grove	Unspecified	Pacific Grove Land Use (*MISSING FILES)		Pacific Grove, CA	ERROR IN FILE & WILL NOT OPEN (missing files)
Pacific Grove	Unspecified	Pacific Grove Parcels (*MISSING FILES)		Pacific Grove, CA	ERROR IN FILE & WILL NOT OPEN (missing files)
Santa Clara County	Unspecified	Santa Clara County General Plan	Apx 100-m	Santa Clara Co, CA	Very course data for county area. Does not include cities.
Santa Cruz County	Unspecified	Santa Cruz Land Use (*MISSING FILES)		Santa Cruz Co, CA	ERROR IN FILE & WILL NOT OPEN
SLO County	Unspecified	SLO County Land Use	Apx 30-m	San Luis Obispo Co, CA	Gaps in the data & often large areas with same classification.
Watsonville	Unspecified	Watsonville Land Use & Parcel info	Apx 30-m	Watsonville, CA	Both are very similar. Follow roads to delineate parcels.
UCSC	Unspecified	UCSC Landuse Geodatabase	Apx 100-m	Santa Cruz, CA	Course data with data gaps.
Santa Maria	Unspecified	Santa Maria Land Use	Apx 10-m	Santa Maria, CA	Used in previous analysis.
Seaside	Unspecified	Seaside General Plan (*DWG)		Seaside, CA	
Carmel	Unspecified	Carmel General Plan copy (*DOC)		Carmel, CA	Not available in a GIS format. Email from Bob Jaques.
SLO County	Unspecified	SLO County Land Use	Apx 30-m	San Luis Obispo Co, CA	Same as previous SLO County LU data.
CCoWS	Unspecified	Central Coast Region 2005 LU map	Apx 30-m	Central Coast	Similar to NLCD but more up to date and localized.
San Benito County	Unspecified	San Benito County Parcels	Apx 10-m	San Benito Co, CA	Parcel data for the entire county
San Benito County	Unspecified	Hollister Land Use	Apx 50-m	San Benito Co, CA	Land use information for city. Course resolution

## Impervious Cover

Source	Date	File Description	Scale	Geographic Location	Notes
USGS Seamless	1-Sep-03	National Land Cover Database 2001 Impervious Surfaces	30-m	Central Coast	
SLO City	Unspecified	San Luis Obispo Impervious Areas	Apx 5-m	San Luis Obispo, CA	Outlines buildings & transportation areas in high resolution.
Santa Cruz County	Unspecified	Santa Cruz Impervious Surfaces	Apx 5-m	Santa Cruz Co, CA	BuildingFootprints shapefile outlines every building in the county. General Plan shapefiles generalized.
Carmel	Unspecified	Carmel Impervious-area calcs		Carmel, CA	



## Road Layers

Source	Date	File Description	Scale	Geographic Location	Notes
USGS Seamless	June 1, 2003	BTS Roads: United States	1:100,000	Central Coast	Line shapefile. Centerlines only.
Cal-Atlas	June 29, 1905	TIGER/Line California Local Roads	Unspecified	Central Coast	
Cal-Atlas	June 29, 1905	TIGER/Line California Major Roads	Unspecified	Central Coast	
Cal-Atlas	June 29, 1905	TIGER/Line California Rail Roads	Unspecified	Central Coast	
USGS Seamless	November 1, 1999	National Atlas California Roads	1:2,000,000	Central Coast	
SB County GIS	Unspecified	Santa Barbara County Roads	Unspecified	Santa Barbara Co, CA	Line shapefile. Centerlines only.
Monterey County	Unspecified	Monterey County Roads	Unspecified	Monterey County, CA	Line shapefile. Centerlines only.
Monterey City	Unspecified	Monterey City Roads	Unspecified	Monterey, CA	Line shapefile. Centerlines only.
Paso Robles	Unspecified	Paso Robles Geodatabase	Unspecified	Paso Robles, CA	Line shapefile. Centerlines only.
Lompoc	Unspecified	Lompoc Road Centerline Shapefile (*MISSING FILE)	Unspecified	Lompoc, CA	NO GEOREFERENCE INFORMATION
Lompoc	Unspecified	Lompoc Road Data (*DGN)	Unspecified	Lompoc, CA	
Lompoc	Unspecified	Lompoc Road Width Drawing (*DWG)	Unspecified	Lompoc, CA	
Lompoc	Unspecified	Lompoc Road-Topo-Stormdrain (*DWG)	Unspecified	Lompoc, CA	
Morro Bay	Unspecified	Morro Bay Road Centerlines	Unspecified	Morro Bay, CA	Line shapefile. Centerlines only.
Morro Bay	Unspecified	Morro Bay Street Names	Unspecified	Morro Bay, CA	Text. Road names only.
SLO City	Unspecified	SLO Street information	Unspecified	San Luis Obispo, CA	Line shapefile. Centerlines only.
Marina	Unspecified	Marina centerline data	Unspecified	Marina, CA	Line shapefile. Centerlines only.
Monterey City	Unspecified	Monterey City Roads Centerlines	Unspecified	Monterey, CA	Line shapefile. Centerlines only. Identical to Monterey City above.
Morgan Hill	Unspecified	Morgan Hill Streets	Unspecified	Morgan Hill, CA	Line shapefile. Centerlines only. Entire Santa Clara County
Pismo Beach	Unspecified	Pismo Beach Centerline	Unspecified	Pismo Beach, CA	Line shapefile. Centerlines only.
Santa Cruz County	Unspecified	Santa Cruz Roads	Unspecified	Santa Cruz Co, CA	Line shapefile. Centerlines only.
Watsonville	Unspecified	Watsonville Road Centerline	Unspecified	Watsonville, CA	Line shapefile. Centerlines only.
UCSB	Unspecified	UCSB Roads	Unspecified	Santa Barbara, CA	Polygon shapefile.
Santa Maria	Unspecified	Santa Maria highways	Unspecified	Santa Maria, CA	Line shapefile. Centerlines only.
Santa Maria	Unspecified	Santa Maria streets	Unspecified	Santa Maria, CA	Line shapefile. Centerlines only.
Carmel	Unspecified	Carmel storm drainage map (*DOC)	Unspecified	Carmel, CA	Part of the storm drainage map. No separate road map available. No GIS data available.
SLO County	Unspecified	SLO County Roads	Unspecified	San Luis Obispo Co, CA	Line shapefile. Centerlines only.

## Watershed Delineations

Source	Date	File Description	Scale	Geographic Location	Notes
Cal-Trans	Unspecified	Regional Water Quality Control Board District Boundaries	1:24,000	Central Coast	
USGS Seamless	November 1, 2002	National Atlas Hydrologic Unit Boundaries	1:2,000,000	Central Coast	
NHD+	Unspecified	NHD+ Drainage Catchment Shape	Highest	Central Coast	Highest resolution of all the datasets
NRCS GeoSpatial	2009	Kern County HU12	HU12	Kern Co, CA	
NRCS GeoSpatial	2009	Kern County HU8	HU8	Kern Co, CA	
NRCS GeoSpatial	2009	Monterey County HU12	HU12	Monterey Co, CA	
NRCS GeoSpatial	2009	Monterey County HU8	HU8	Monterey Co, CA	
NRCS GeoSpatial	2009	San Benito County HU12	HU12	San Benito Co, CA	
NRCS GeoSpatial	2009	San Benito County HU8	HU8	San Benito Co, CA	
NRCS GeoSpatial	2009	San Mateo County HU12	HU12	San Mateo Co, CA	
NRCS GeoSpatial	2009	San Mateo County HU8	HU8	San Mateo Co, CA	
NRCS GeoSpatial	2009	Santa Barbara County HU12	HU12	Santa Barbara Co, CA	
NRCS GeoSpatial	2009	Santa Barbara County HU8	HU8	Santa Barbara Co, CA	
NRCS GeoSpatial	2009	Santa Clara County HU12	HU12	Santa Clara Co, CA	
NRCS GeoSpatial	2009	Santa Clara County HU8	HU8	Santa Clara Co, CA	
NRCS GeoSpatial	2009	Santa Cruz County HU12	HU12	Santa Cruz Co, CA	
NRCS GeoSpatial	2009	Santa Cruz County HU8	HU8	Santa Cruz Co, CA	
NRCS GeoSpatial	2009	SLO County HU12	HU12	San Luis Obispo Co, CA	
NRCS GeoSpatial	2009	SLO County HU8	HU8	San Luis Obispo Co, CA	
NRCS GeoSpatial	2009	Ventura County HU12	HU12	Ventura Co, CA	
NRCS GeoSpatial	2009	Ventura County HU8	HU8	Ventura Co, CA	
Morro Bay	Unspecified	Morro Bay Watersheds	Apx HU14	San Luis Obispo Co, CA	Covers the entire San Luis Obispo County
SLO City	Unspecified	SLO City Watersheds	HU8	San Luis Obispo, CA	
Monterey City	Unspecified	Monterey Watersheds	Highest	Monterey, CA	Resolution is equal or better than that of NHD Plus
Santa Clara County	Unspecified	Santa Clara County Watersheds	HU12	Santa Clara Co, CA	
Santa Clara County	Unspecified	Santa Clara County Subwatersheds	Highest	Santa Clara Co, CA	Resolution is equal or better than that of NHD Plus
Santa Cruz County	Unspecified	Santa Cruz Watersheds	Apx HU14	Santa Cruz Co, CA	
SLO County	Unspecified	SLO County Watersheds (*DWG)		San Luis Obispo Co, CA	
SLO County	Unspecified	SLO County Watersheds (*DWG)		San Luis Obispo Co, CA	

UCSC	Unspecified	UCSC Watershed delineations (*MISSING FILES)		Santa Cruz, CA	Wrong Coordinate System
Santa Maria	Unspecified	Santa Maria Watershed Files	Highest	Santa Maria, CA	Resolution is equal or better than that of NHD Plus
Carmel	Unspecified	Carmel watershed delineation (*DOC)		Carmel, CA	Used in conjunction with impervious calcs. Map is an image. Not available in a GIS format. Email from Bob Jaques.
SLO County	Unspecified	SLO County Watersheds	Apx HU14	San Luis Obispo Co, CA	Covers the entire San Luis Obispo County better than Morro Bay file

# Topography

Authors/Source	Date	File Description	Scale	Geographic location	Notes
City of Lompoc	Unspecified	Lompoc Microstation Topo File	Unspecified	Unspecified (Lompoc, likely)	Inscrutable data. Appears to be a box, a point, and a line creating a crude "lollipop" shape
City of Lompoc	Unspecified	Lompoc Road Topo Storm Drain	1-ft and 5ft contours	Town of Lompoc, CA	These are mixed topo lines for roads only--other areas are incomplete
City of Paso Robles	2005	Paso Robles 2005 2 ft contours	2-ft contours	Town of Paso Robles, CA	Contact information for provider of data may be found in: Z:\Data\407.51_CCH\SourceData\TetraTech\AllSharePointData\Paso.Robles\TetraTechGeodatabase.txt
City of San Luis Obispo	2001	City of San Luis Obispo 2-meter contours	2-meter contours	City of San Luis Obispo, CA	High quality dataset, good metadata. Additional source information may be found here: Z:\Data\407.51_CCH\SourceData\TetraTech\AllSharePointData\San.Luis.Obispo\Joint Effort Doc-CitySLO.xls

# Flood Control Structures

Authors/Source	Date	File Description	Scale	Geographic location	Notes
City of Lompoc	Unspecified	Lompoc storm drain inlets	Unspecified	Lompoc, CA	Point data reflecting catch basins (storm drain entry points). Quality of data are high, but no metadata are included.
City of Lompoc	Unspecified	Lompoc storm drain master plan	Unspecified	Lompoc, CA	Cad drawing depicting Lompoc storm drain master plan. The classification of features is not clear, however the quality of the data are high. There are no metadata.
City of Lompoc	Unspecified	Lompoc storm drain junctions	Unspecified	Lompoc, CA	Point data reflecting locations of Lompoc storm sewer junctions. Quality of data are high, but no metadata are included.
City of Lompoc	Unspecified	Lompoc storm drain mains (pipes)	Unspecified	Lompoc, CA	Line data reflecting locations of Lompoc storm sewer pipes. Quality of data are high, but no metadata are included.
City of Lompoc	Unspecified	Lompoc storm drain manholes	Unspecified	Lompoc, CA	Point data reflecting locations of Lompoc storm sewer manhole access points. Quality of data are high, but no metadata are included.
City of Lompoc	Unspecified	Lompoc storm drain outlets	Unspecified	Lompoc, CA	Point data reflecting locations of outlets of the Lompoc storm drain system to natural or artificial water bodies and channels. Quality of data are high, but no metadata are included.
City of Morgan Hill	Unspecified	Morgan Hill storm water easement	Unspecified	Morgan Hill, CA	Polygon datum reflecting location of single residential storm water easement in Morgan Hill. High quality data, but no metadata.
City of Morgan Hill	Unspecified	Morgan Hill storm water gravity mains (pipes)	Unspecified	Morgan Hill, CA	Line data reflecting locations of storm water mains (pipes) in Morgan Hill. High quality data, but no metadata.
City of Morgan Hill	Unspecified	Morgan Hill storm water inlets (drains/catch basins)	Unspecified	Morgan Hill, CA	Point data reflecting locations of storm water drains and entry points in Morgan Hill. High quality data, but no metadata.
City of Morgan Hill	Unspecified	Morgan Hill "lateral line" feature	Unspecified	Morgan Hill, CA	Line datum reflecting location of "lateral line" feature. This feature is singular, small, and unexplainable. High quality data, but no metadata.
City of Morgan Hill	Unspecified	Morgan Hill storm drain manholes	Unspecified	Morgan Hill, CA	Point data reflecting locations of storm water system manholes in Morgan Hill. High quality data, but no metadata.
City of Morgan Hill	Unspecified	Morgan Hill storm water system outfalls	Unspecified	Morgan Hill, CA	Point data reflecting locations of storm water system outfalls in Morgan Hill. High quality data, but no metadata.
City of Morgan Hill	Unspecified	Morgan Hill storm water pump stations	Unspecified	Morgan Hill, CA	point data reflecting locations of pumping stations for the Morgan Hill storm water system. High quality data, but no metadata.
City of Morgan Hill	Unspecified	Morgan Hill storm water structures	Unspecified	Morgan Hill, CA	Polygon data reflecting locations of Morgan Hill storm water structures- most if not all of these appear to be retention ponds. High quality data, but no metadata.

# Flood Control Structures

Authors/Source	Date	File Description	Scale	Geographic location	Notes
City of Morro Bay	Unspecified	Bridge Ground sections	N/A	Morro Bay, CA	File contains multiple tabs with lists of point numbers, coordinates, station values, elevations, and descriptions. Use or source of data is unclear.
City of Morro Bay	Unspecified	Bridge sections	N/A	Morro Bay, CA	Contains three distinct sets of numbers, no headers, no descriptions, no identifying information
City of Paso Robles	2005	Paso Robles storm water culverts	Unspecified	Paso Robles, CA	Line data reflecting locations of storm water culverts in Paso Robles. High quality data, but no metadata.
City of Paso Robles	2005	Paso Robles storm water drainage areas	Unspecified	Paso Robles, CA	Polygon data reflecting locations of Paso Robles storm water drainage areas--it is unclear what these represent, possible exposed channels or retention ponds. High quality data, but no metadata.
City of Paso Robles	2005	Paso Robles storm water drain features	Unspecified	Paso Robles, CA	Polygon datum reflecting location of single Paso Robles storm water drain feature--it is unclear what this represents. High quality data, but no metadata.
City of Paso Robles	2005	Paso Robles storm water drain inlets	Unspecified	Paso Robles, CA	Point data reflecting locations of storm water drains and entry points in Paso Robles. High quality data, but no metadata.
City of Paso Robles	2005	Paso Robles storm water easements	Unspecified	Paso Robles, CA	Polygon data reflecting locations of Paso Robles storm water easements--these could be for access, infrastructure, or runoff. High quality data, but no metadata.
City of Paso Robles	2005	Paso Robles storm water headwalls	Unspecified	Paso Robles, CA	Point data reflecting locations of storm water culvert headwalls in Paso Robles. High quality data, but no metadata.
City of Paso Robles	2005	Paso Robles storm water system junctions	Unspecified	Paso Robles, CA	Point data reflecting locations of storm water system junctions in Paso Robles. High quality data, but no metadata.
City of Paso Robles	2005	Paso Robles storm water system manholes	Unspecified	Paso Robles, CA	Point data reflecting locations of storm water system manholes in Paso Robles. High quality data, but no metadata.
City of Paso Robles	2005	Paso Robles storm water system outlet	Unspecified	Paso Robles, CA	Point data reflecting locations of storm water system outfalls in Paso Robles. High quality data, but no metadata.
City of Paso Robles	2005	Paso Robles storm water pipes	Unspecified	Paso Robles, CA	Line data reflecting locations of storm water mains (pipes) in Paso Robles. High quality data, but no metadata.
City of Paso Robles	2008 update	Paso Robles storm water bubble ups	Unspecified	Paso Robles, CA	Point data reflecting locations of storm water system bubble ups in Paso Robles--bubble ups are a storm water infrastructure feature. High quality data, but no metadata.
City of Paso Robles	2008 update	Paso Rboles storm water channels	Unspecified	Paso Robles, CA	Line data reflecting locations of storm water receiving channels in Paso Robles (additional data from 2008 not included in 2005). High quality data, but no metadata.

# Flood Control Structures

Authors/Source	Date	File Description	Scale	Geographic location	Notes
City of Paso Robles	2008 update	Paso Robles storm water culverts	Unspecified	Paso Robles, CA	Line data reflecting locations of storm water culverts in Paso Robles (additional data from 2008 not included in 2005). High quality data, but no metadata.
City of Paso Robles	2008 update	Paso Robles storm water drain inlets	Unspecified	Paso Robles, CA	Point data reflecting locations of storm water drains and entry points in Paso Robles (additional data from 2008 not included in 2005). High quality data, but no metadata.
City of Paso Robles	2008 update	Paso Robles storm water pipes	Unspecified	Paso Robles, CA	Line data reflecting locations of storm water mains (pipes) in Paso Robles (additional data from 2008 not included in 2005). High quality data, but no metadata.
City of Paso Robles	2008 update	Paso Robles storm water outfalls	Unspecified	Paso Robles, CA	Point data reflecting locations of storm water system outfalls in Paso Robles (additional data from 2008 not included in 2005). High quality data, but no metadata.
City of San Luis Obispo	2010	San Luis Obispo pipe junctions with waterways	Unspecified	City of San Luis Obispo, CA	Point data reflecting junctions of city storm drains with open waterways. Quality of data appears high, however, there are no metadata. Some additional information may be found in this tracking sheet:
City of San Luis Obispo	2010	San Luis Obispo storm drain pipes	Unspecified	City of San Luis Obispo, CA	Line data reflecting locations of city storm drain pipes. Quality of data appears high, however, there are no metadata. Some additional information may be found in this tracking sheet:
City of San Luis Obispo	2010	San Luis Obispo storm drain manholes	Unspecified	City of San Luis Obispo, CA	Point data reflecting locations of storm drain manholes. Quality of data appears high, however, there are no metadata. Some additional information may be found in this tracking sheet:
City of Watsonville	Unspecified	Watsonville BMPs (possibly Best Management Practices)	Unspecified	Watsonville, CA	Point data reflecting locations of Watsonville BMPs. Possibly Best Management Practices, points include various storm water treatment systems. High quality data, but no metadata.
City of Watsonville	Unspecified	Watsonville Caps (possibly storm drain end caps)	Unspecified	Watsonville, CA	Point data reflecting locations of Watsonville Caps (possibly storm drain end caps). High quality data, but no metadata.
City of Watsonville	Unspecified	Watsonville Municipal Airport channel drain features	Unspecified	Watsonville, CA	Line data reflecting locations of Watsonville Municipal Airport channel drain features. High quality data, but no metadata.
City of Watsonville	Unspecified	Watsonville storm drain cleanouts (possibly past or future cleanouts)	Unspecified	Watsonville, CA	Point data reflecting locations of Watsonville storm drain cleanouts (possibly past or future cleanouts). High quality data, but no metadata.
City of Watsonville	Unspecified	Watsonville storm water retention ponds	Unspecified	Watsonville, CA	Polygon data reflecting locations of Watsonville storm water retention ponds. High quality data, but no metadata.
City of Watsonville	Unspecified	Watsonville storm drain headwalls	Unspecified	Watsonville, CA	Point data reflecting locations of Watsonville storm drain headwalls. High quality data, but no metadata.

# Flood Control Structures

Authors/Source	Date	File Description	Scale	Geographic location	Notes
City of Watsonville	Unspecified	Watsonville storm drain inlets (drains/catch basins)	Unspecified	Watsonville, CA	Point data reflecting locations of Watsonville storm drain inlets (drains/catch basins). High quality data, but no metadata.
City of Watsonville	Unspecified	Watsonville manholes	Unspecified	Watsonville, CA	Pont data reflecting locations of Watsonville manholes. High quality data, but no metadata.
City of Watsonville	Unspecified	Watsonville permeable surfaces	Unspecified	Watsonville, CA	Polygon data reflecting location of Watsonville permeable surface (only one polygon.) High quality data, but no metadata.
City of Watsonville	Unspecified	Watsonville storm drain pipes	Unspecified	Watsonville, CA	Lind data reflecting locations of Watsonville storm drain pipes. High quality data, but no metadata.
City of Watsonville	Unspecified	Watsonville storm water pumps	Unspecified	Watsonville, CA	Point data reflecting locations of Watsonville storm water pumps. High quality data, but no metadata.
City of Watsonville	2005	Watsonville storm water runoff subbasins	Unspecified	Watsonville, CA	Polygon data reflecting boundaries of Watsonville storm water runoff subbasins. High quality data, including basic metadata.
City of Watsonville	Unspecified	Watsonville storm water swales	Unspecified	Watsonville, CA	Line data reflecting locations of Watsonville storm water swales. High quality data, but no metadata.
City of Watsonville	Unspecified	Watsonville storm water detention vault	Unspecified	Watsonville, CA	Point data reflecting locations of Watsonville storm water detention vaults. High quality data, but no metadata.
City of Watsonville	Unspecified	Watsonville storm water sampling stations	Unspecified	Watsonville, CA	Point data reflecting locations of Watsonville storm water sampling stations. High quality data with limited metadata.
Monterey County	Unspecified	Monterey County storm water outfalls	Unspecified	Monterey County, CA	Line data reflecting locations of outfalls from the Monterey co. storm drain system. Quality of data are high, but no metadata are included.
Monterey County	Unspecified	Monterey County storm drains lines	Unspecified	Monterey County, CA	Line data reflecting paths of Monterey co. storm drain system pipes. Quality of data are high, but no metadata are included.
University of Santa Barbara	Unspecified	UC Santa Barbara storm drain nodes (possibly junctions)	Unspecified	UC Santa Barbara, Santa Barbara, CA	Point data reflecting locations of UC Santa Barbara storm drain nodes (possibly junctions). High quality data, but no metadata.
City of Lompoc	Unspecified	Lompoc concrete channels	Unspecified	Lompoc, CA	Line data reflecting concrete channels for storm water. Quality of data are high, but no metadata are included.
City of Morgan Hill	Unspecified	Morgan Hill storm water creeks and ditches	Unspecified	Morgan Hill, CA	Line data reflecting locations of Morgan Hill storm water carrying creeks and ditches. High quality data, but no metadata.
City of Morro Bay	2009	Image of Highway 1 Brigde - Morro Bay	1:400 approx/4 inch	Morro Bay, CA	This image has been captured from google Earth and rectified. It covers a very small area surrounding the Highway 1 Bridge



# Flood Control Structures

Authors/Source	Date	File Description	Scale	Geographic location	Notes
City of Paso Robles	Unspecified	Paso Robles storm water channels 2005	Unspecified	Paso Robles, CA	Line data reflecting locations of storm water receiving channels in Paso Robles. High quality data, but no metadata.
City of San Luis Obispo	2010	San Luis Obispo storm drain catch basins	Unknown	City of San Luis Obispo, CA	Point data reflecting locations of water entry points to storm drain system. Quality of data appears high, however, there are no metadata. Some additional information may be found in this tracking sheet:
City of Watsonville	Unspecified	Watsonville BioSwales	Unspecified	Watsonville, CA	Line data reflecting locations of Watsonville BioSwales. High quality data, but no metadata.
Monterey County	Unspecified	Monterey County catch basins and culverts	Unspecified	Monterey County, CA	Point data reflecting locations of storm water drains and entry points as well as the location of culverts in Monterey Co. Quality of data are high, but no metadata are included.
San Luis Obispo County	Unspecified	SLO County storm water drainage basin information	N/A	San Luis Obispo Co., CA	Excel list of storm water drainage basins in San Luis Obispo County, no definite location information.
Santa Clara County Planning	2006	Santa Clara County dike failure flooding hazard zones	Unspecified	Santa Clara Co., CA near San Jose and SF Bay	Polygon areas reflecting areas of flood risk from dike failure. These areas are all along San Francisco Bay. More information on sourcing may be found here:
Santa Cruz County	1970's, 2000's	Santa Cruz County flood controls plans and pamphlets	N/A	Santa Cruz Co, CA	Public pamphlets/documents about flood control/risks in Santa Cruz Co.' TIFFs of old planning documents (1970s) for flood control structures.
University of Santa Barbara	Unspecified	UC Santa Barbara storm drain links (possibly pipes)	Unspecified	UC Santa Barbara, Santa Barbara, CA	Line data reflecting locations of UC Santa Barbara storm drain "links " (possibly pipes). High quality data, but no metadata.

## Historic Burn

Authors/Source	Date	File Description	Scale	Geographic location	Notes
Santa Cruz County	2008	Santa Cruz County area fire (likely Martin)	Unspecified	Santa Cruz Co, CA	Polygon data reflecting Santa Cruz County area fire (likely Martin). This file has no metadata or identifying attributes; the name of the fire has been surmised from the file name.
Santa Cruz County	2008	Santa Cruz County area fire (likely Trabing)	Unspecified	Santa Cruz Co, CA	Polygon data reflecting Santa Cruz County area fire (likely Trabin). This file has no metadata or identifying attributes; the name of the fire has been surmised from the file name.
Santa Cruz County	2009	Santa Cruz County Lockheed fire	Unspecified	Santa Cruz Co, CA	Polygon data reflecting Santa Cruz County Lockheed fire. This file has no metadata, but some attribute data.
Santa Cruz County	2009	Santa Cruz County area fire (likely Loma)	Unspecified	Santa Cruz Co, CA	Polygon data reflecting Santa Cruz County area fire (likely Loma). This file has no metadata or identifying attributes; the name of the fire has been surmised from the file name.
Santa Cruz County	2008	Santa Cruz County area Summit fire	Unspecified	Santa Cruz Co, CA	Polygon data reflecting Santa Cruz County area Summit fire. This file contains limited metadata discussing creation of file.

## Receiving Waters

Authors/Source	Date	File Description	Scale	Geographic location	Notes
Morro Bay National Estuary Program	2010	Kitajima 2010 - 2009 Morro Bay Stormwater Monitoring Report	n/a	Morro Bay	This report summarizes the results from the Urban Watch monitoring program that took place in June through September 2009 and the First Flush monitoring program that took place in October of 2009. Data is most likely available
Morro Bay National Estuary Program	2010	Kitajima 2010b - 2010 Data Summary Report Final	n/a	Morro Bay	Morro Bay National Estuary Program's Implementation effectiveness program for the morro bay watershed. Summary report of water quality monitoring efforts in several creeks in the Morro Bay watershed and in the Delta. Metadata is most likely available for several attributes.
various	2008	Kitts et al 2008 - PB Fecal Contamination Source ID Study Final Report	n/a	Pismo beach	Pismo Beach Fecal coliform contamination source study. Water quality report for coastal waters, 116 pages, a joint effort of Cal-Poly, the City of Pismo beach and California Clean Beaches Initiative.
Central Coast Salmon Enhancement	2008	CCSE 2008 - South coast inland online references	n/a	Pismo Creek/Edna Valley	Metadata may be available for water quality, from CCAMP.
City of Los Osos		Los Osos - North coast online references	n/a	Los Osos	Water quality study. No metadata provided, but may be available.
Morro Bay National Estuary Program	2010	MBNEP 210 - 2010 Suspended Sediment Report Final	n/a	Morro Bay	Suspended sediment sampling in San Luisito Creek, Walters Creek and Chorro Creek, 2007-2010.
Unspecified	TBD	Water Quality - MPA Monitoring Map	n/a	Central Coast	Google Earth map of State Marine protected areas, no land base, not applicable to our studies.
Unspecified	TBD	Water Quality - MPA Monitoring Map	n/a	Central Coast	Monitoring locations and reserves across the Central Coast Region. Water quality studies and data available.
Santa Cruz County Environmental Health- John Ricker	TBD	Water Quality - SCCEH Water Quality Monitoring sites- Regional	n/a	Central Coast	Water quality monitoring data, time span and monitoring locations for the Santa Cruz County Environmental Health water quality monitoring program
Unspecified Marc Los Huertos staff	TBD	Water Quality - MLH Water Quality Monitoring locations- Local	n/a	Central Coast	Water quality monitoring data, time span and monitoring locations for the Marc Los Huertos program
California State University Monterey Bay- Fred Watson	TBD	Water Quality - CCOWS-Regional	n/a	Central Coast	Water quality monitoring data, time span and monitoring locations for the California State University Monterey Bay Central Coast Watershed Studies program
Monterey Bay National Marine Sanctuary- Bridget Hoover	TBD	Water Quality - MBNMS	n/a	Central Coast	Water quality monitoring data, time span and monitoring locations for the Monterey Bay National Marine Sanctuary water quality monitoring program
Central Coast Ambient Monitoring Program- Karen Worcester	TBD	Water Quality - CCAMP	n/a	Central Coast	Water quality monitoring data, time span and monitoring locations for the Central Coast Ambient Monitoring Program.

# Receiving Waters

Authors/Source	Date	File Description	Scale	Geographic location	Notes
Unspecified US Geological Survey staff	TBD	Water Quality - USGS	n/a	Central Coast	Water quality monitoring data, time span and monitoring locations for the US Geological Survey water quality sampling.
Coastal Watershed Council- Greg Pepping	TBD	Water Quality - CWC	n/a	Central Coast	Water quality monitoring data, time span and monitoring locations for the Coastal Watershed Council monitoring program
Central Coast Water Quality Preservation program- Sarah Greene	TBD	Water Quality - CCWQP	n/a	Central Coast	Water quality monitoring data, time span and monitoring locations for the Central Coast Water Quality Preservation Cooperative Monitoring Program
Central Coast Long-term Environmental Assessment Network- Dane Hardin	TBD	Water Quality - CCLEAN	n/a	Central Coast	Water quality monitoring data, time span and monitoring locations for the Central Coast Long-term Environmental Assessment Network water quality monitoring program
Elkhorn Slough National Estuarine Research Reserve- Kerstin Wasson	TBD	Water Quality - ESNERR	n/a	Central Coast	Water quality monitoring data, time span and monitoring locations for the Elkhorn Slough National Estuarine Research Reserve volunteer monitoring program

## Jurisdictional Boundaries

Source	Date	File Description	Scale	Geographic Location	Notes
USGS Seamless	Aug-02	National Atlas County Boundries	1:2,000,000	Central Coast	
Cal-Atlas	May-09	Cal-Atlas County Boundries	1:24,000	Central Coast	
Cal-Atlas	Oct-03	Private Water District Boundries	1:24,000	Central Coast	
Cal-Atlas	Mar-03	State Water District Boundries	1:24,000	Central Coast	
Paso Robles	Unspecified	Paso Robles Geodatabase	Unspecified	Paso Robles, CA	
Monterey County	Unspecified	Monterey County City Limits	Unspecified	Monterey Co, CA	
SLO	Unspecified	SLO City Limit	Unspecified	San Luis Obispo, CA	
Lompoc	Unspecified	Lompoc City Limits	Unspecified	Lompoc, CA	
Marina	Unspecified	Marina City Limits	Unspecified	Marina, CA	
Morro Bay	Unspecified	Morro Bay City Limits	Unspecified	Morro Bay, CA	
Santa Clara County	Unspecified	Santa Clara County Cities	Unspecified	Santa Clara Co, CA	
Watsonville	Unspecified	Watsonville City Limits	Unspecified	Watsonville, CA	
UCSB	Unspecified	UCSB Campus Limits	Unspecified	Santa Barbara, CA	
Santa Maria	Unspecified	Santa Maria City Limits	Unspecified	Santa Maria, CA	
Seaside	Unspecified	Seaside City Limits (*DWG)	Unspecified	Seaside, CA	
Carmel	Unspecified	Carmel Sphere of Influence map (*DOC)	Unspecified	Carmel, CA	Not available in a GIS format. Email from Bob Jaques.
SLO County	Unspecified	SLO County Cities	Unspecified	San Luis Obispo Co, CA	
SLO County	Unspecified	SLO County Towns	Unspecified	San Luis Obispo Co, CA	
San Benito County	Unspecified	Hollister City Limits	Unspecified	San Benito Co, CA	

## Storm Event Photos

Municipality	Notes
Pismo Beach	Must be Requested
SLO City	Stage Data Folder
Lompoc	Must be Requested
SLO County	Storm Event Photos Folder
Santa Cruz County	Must be Requested

# Geology

Authors/Source	Date	File Description	Scale	Geographic location	Notes
Rosenberg, Lewis I., County of Monterey, Environmental Resource Policy Department	2001	Monterey County soil erosion hazard	Unspecified	Monterey County, CA	Polygon data reflecting Monterey County soil erosion hazard. See excellent metadata for additional information.
Rosenberg, Lewis I., County of Monterey, Environmental Resource Policy Department	2001	Monterey County fault lines	Unspecified	Monterey County, CA	Line data reflecting Monterey County fault lines--San Andreas is noted as only active fault though there are other faults for which there is geologic evidence of activity. Shapefile includes these other faults. See excellent metadata for additional information.
Rosenberg, Lewis I., County of Monterey, Environmental Resource Policy Department	2001	Monterey County earthquake-induced landslide risk	Unspecified	Monterey County, CA	Polygon data reflecting Monterey County earthquake-induced landslide risks. See excellent metadata for additional information.
Rosenberg, Lewis I., County of Monterey, Environmental Resource Policy Department	2001	Monterey County liquefaction susceptibility	Unspecified	Monterey County, CA	Polygon data reflecting Monterey County liquefaction susceptibility. See excellent metadata for additional information.
Rosenberg, Lewis I., County of Monterey, Environmental Resource Policy Department	2001	Monterey County estimated seismic shaking level	1:250,000	Monterey County, CA	Polygon data reflecting Monterey County estimated seismic shaking level with probability of 10% exceedance in 50 years. See excellent metadata for additional information.
Santa Cruz County	Unspecified	Santa Cruz County "MineralClass" layer	Unspecified	Santa Cruz Co, CA	Polygon data reflecting Unspecified geology layer in Santa Cruz County. No metadata and few attributes.
Santa Cruz County	Unspecified	Santa Cruz County "MineralDesignation" layer	Unspecified	Santa Cruz Co, CA	Polygon data reflecting Unspecified geology layer in Santa Cruz County. No metadata and few attributes.
Santa Cruz County	Unspecified	Santa Cruz County "MineralResources" layer	Unspecified	Santa Cruz Co, CA	Polygon data reflecting Unspecified geology layer in Santa Cruz County. No metadata and few attributes.
USGS and Rosenberg, Lewis I., County of Monterey, Environmental Resource Policy Department	2001	Monterey County geology	1:24,000	Monterey County, CA	Polygon data reflecting detailed Monterey County geology layer. See excellent metadata for additional information.
City of Morro Bay	Unspecified	Morro Bay Safety Element in General plan	Unspecified	Morro Bay, CA	This is a PDF copy of the safety element in Morro Bay's general plan. The pdf contains general information about natural hazards in and to Morro Bay and includes some basic, schematic maps to this effect.
James Baker, County Geologist, Santa Clara Co.	Feb 26 2002	Santa Clara County fault rupture hazard zones	Unspecified	Santa Clara Co., CA	Polygon data reflecting Santa Clara County fault rupture hazard layer. Metadata are included but are very limited
Northern California Earthquake Data Center	2001	Monterey County Earthquake epicenters	Unspecified	Monterey County, CA	Point data reflecting Monterey County Earthquake epicenters
Santa Cruz County	Unspecified	Santa Cruz County "GeoPaleo" layer	Unspecified	Santa Cruz Co, CA	Polygon data reflecting Unspecified geology layer in Santa Cruz County. No metadata and few attributes.

# Flow Data

Source	File Description/Station	Scale	Start Date	End Date
Cal-Trans	Location of USGS Streamgages	1:100,000		
Morro Bay	Morro Bay Stream Gage			
SLO	SLO Stream measurements			
SLO County	SLO County summary			
Santa Cruz County	Santa Cruz County gages			
USGS	CARPINTERIA C NR CARPINTERIA CA		1/1/1941	9/30/2004
USGS	FRANKLIN C A CARPINTERIA CA		10/1/1970	9/30/1978
USGS	ATASCADERO C NR GOLETA CA		10/1/1941	9/30/2004
USGS	MISSION C NR MISSION ST NR SANTA BARBARA CA		10/1/1970	9/30/2004
USGS	SYCAMORE C A SANTA BARBARA CA		10/1/1970	9/30/1980
USGS	SAN JOSE C A GOLETA CA		10/1/1970	9/30/2000
USGS	ATASCADERO C A PUENTE RD NR GOLETA CA		9/3/1970	9/30/1972
USGS	TECOLOTITO C NR GOLETA CA		10/1/1970	9/30/1991
USGS	ARROYO BURRO A SANTA BARBARA CA		10/1/1970	9/30/1993
USGS	SAN PEDRO C A GOLETA CA		10/1/1970	9/30/1972
USGS	MISSION C A RNP A SANTA BARBARA CA		10/28/1983	9/30/2004
USGS	MARIA YGNACIO C A UNIV DR NR GOLETA CA		10/1/1970	9/30/2004
USGS	SAN YSIDRO C A MONTECITO CA		10/1/1979	9/30/1983
USGS	SAN JOSE C NR GOLETA CA		1/1/1941	9/30/2004
USGS	GAVIOTA C NR GAVIOTA CA		10/1/1966	9/30/1986
USGS	JAMESON LK RELEASE WEIR A JAMESON LAKE CA		10/1/1970	9/30/2004
USGS	SANTA YNEZ R A JAMESON LK NR MONTECITO CA		10/1/1988	9/30/2002
USGS	JALAMA C NR LOMPOC CA		10/1/1965	9/30/1982
USGS	GIBRALTAR DAM DIV WEIR A GIBRALTAR DAM CA		10/1/1970	9/30/2004
USGS	GIBRALTER DAM REL WR A GIBRALTER DAM CA		10/1/1988	9/30/2004
USGS	SANTA YNEZ R BL GIBRALTAR DAM NR SNTA BRB C CA		10/1/1933	9/30/2004
USGS	SANTA YNEZ R AB GIBRALTAR DAM NR SANTA BARB CA		4/1/1904	9/30/1918
USGS	SANTA YNEZ R BL LOS LAURLS CYN NR SNTA YNEZ CA		5/13/1947	9/30/2004
USGS	ALISAL RES NR SOLVANG CA		-99999	-99999
USGS	ALISAL C NR SOLVANG CA		10/1/1954	9/30/1972
USGS	HILTON CYN C NR SANTA YNEZ CA		3/23/2002	9/30/2004



USGS	LK CACHUMA NR SANTA YNEZ CA		-99999	-99999
USGS	SANTA YNEZ R A SOLVANG CA		10/1/1928	9/30/2004
USGS	SANTA YNEZ R A GA NR SANTA YNEZ CA		10/1/1954	9/30/1965
USGS	ZANJA DE COTA C NR SANTA YNEZ CA		10/1/1954	9/30/1961
USGS	SANTA YNEZ R NR SANTA YNEZ CA		1/1/1929	9/30/2004
USGS	SALSIPUEDES C NR LOMPOC CA		4/1/1941	9/30/2004
USGS	SAN LUCAS C NR SANTA YNEZ CA		10/1/1952	9/30/1954
USGS	SANTA AGUEDA C NR SANTA YNEZ CA		10/1/1940	1/31/1978
USGS	NOJOQUI C NR BUELLTON CA		10/1/1952	9/30/1954
USGS	SANTA CRUZ C NR SANTA YNEZ CA		10/1/1941	9/30/2004
USGS	CANADA HONDA C NR ARGUELLO CA		4/1/1959	9/30/1962
USGS	CANADA HONDA C NR LOMPOC CA		6/1/1959	9/30/1962
USGS	SANTA YNEZ R A BUELLTON CA		10/1/1954	9/30/1959
USGS	CACHUMA C NR SANTA YNEZ CA		10/1/1950	9/30/1962
USGS	SANTA YNEZ R AT SANTA ROSA DAMSITE NR BUELLTON CA		10/1/1954	9/30/1964
USGS	SANTA YNEZ R NR BUELLTON CA		5/1/1952	9/30/1974
USGS	SANTA YNEZ R A COOPERS REEF NR LOMPOC CA		10/1/1954	10/1/1976
USGS	ZACA C A BUELLTON CA		2/1/1941	9/30/1963
USGS	ALAMO PINTADO C NR SOLVANG CA		10/1/1970	9/30/2004
USGS	SANTA CRUZ C AB STUKE CN NR SANTA YNEZ CA		5/1/1947	9/30/1952
USGS	MIGUELITO C A LOMPOC CA		10/1/1970	9/30/2004
USGS	SANTA YNEZ R BL SANTA RITA C NR LOMPOC CA		10/1/1954	9/30/1962
USGS	SANTA YNEZ R A NARROWS NR LOMPOC CA		5/1/1952	9/30/2004
USGS	SANTA YNEZ R NR LOMPOC CA		11/1/1906	6/18/1998
USGS	RODEO-SAN PASQUAL C NR LOMPOC CA		10/1/1970	9/30/1972
USGS	ZACA C NR BUELLTON CA		10/1/1963	9/30/2004
USGS	SANTA YNEZ R A V STREET NR LOMPOC CA		10/1/1954	10/1/1975
USGS	SANTA YNEZ R A H ST NR LOMPOC CA		10/1/1946	9/30/2004
USGS	SANTA YNEZ R A PINE CYN NR LOMPOC CA		10/1/1940	9/30/1983
USGS	SANTA YNEZ R A 13TH ST BRIDGE A VAFB NR LOMPOC CA		6/10/2004	9/30/2004
USGS	SANTA YNEZ R A BARRIER NR SURF CA		10/1/1946	9/30/1965
USGS	CUYAMA R NR VENTUCOPA CA		4/1/1945	9/30/1958
USGS	PURISIMA C NR LOMPOC CA		10/1/1970	10/1/1975
USGS	REYES C NR VENTUCOPA CA		7/27/1972	9/30/1978

USGS	WAGON RD C NR STAUFFER CA		6/29/1972	9/30/1978
USGS	SAN ANTONIO C A LOS ALAMOS CA		10/1/1970	9/30/2004
USGS	SAN ANTONIO C A HARRIS CA		2/1/1941	9/30/1955
USGS	SAN ANTONIO C AB BARKA SLOUGH CA		10/1/1984	9/30/1987
USGS	SAN ANTONIO C NR CASMALIA CA		10/1/1955	9/30/2003
USGS	SAN ANTONIO C TRIB NR CASMALIA CA		10/1/1964	9/30/1970
USGS	FOXEN C NR SISQUOC CA		10/1/1965	10/5/1973
USGS	SISQUOC R NR SISQUOC CA		10/1/1929	12/29/1999
USGS	LA BREA C NR SISQUOC CA		10/1/1943	10/3/1973
USGS	TEPUSQUET C NR SISQUOC CA		10/1/1943	9/30/1987
USGS	ORCUTT C NR ORCUTT CA		10/1/1982	9/30/2004
USGS	SISQUOC R NR GAREY		2/1/1941	9/30/2004
USGS	CUYAMA R BL TWITCHELL DAM CA		10/1/1958	9/30/1983
USGS	BRADLEY DITCH NR DONOVAN RD A SANTA MARIA CA		10/1/1970	9/30/1999
USGS	SANTA MARIA R A SUEY CROSSING NR SANTA MARIA CA		4/1/1999	9/30/1999
USGS	SANTA MARIA R A GUADALUPE		10/1/1940	9/30/1987
USGS	ALISO CYN C NR NEW CUYAMA CA		10/1/1963	9/30/1972
USGS	CUYAMA R NR SANTA MARIA CA		10/1/1929	9/30/1962
USGS	HUASNA R NR SANTA MARIA CA		10/1/1929	12/31/1961
USGS	CUYAMA R BL BUCKHORN CYN NR SANTA MARIA CA		10/1/1959	9/30/2004
USGS	ALAMO C NR SANTA MARIA CA		10/1/1943	9/30/1962
USGS	ALAMO C NR NIPOMO CA		3/1/1959	2/1/1978
USGS	HUASNA R NR ARROYO GRANDE CA		6/1/1959	9/30/2004
USGS	LOS BERROS C NR NIPOMO CA		8/1/1968	9/30/1978
USGS	ARROYO GRANDE AT ARROYO GRANDE CA		10/1/1939	9/30/1986
USGS	TAR SPRING C NR ARROYO GRANDE CA		10/1/1967	9/30/1979
USGS	ARROYO GRANDE NR ARROYO GRANDE CA		7/1/1958	9/30/1966
USGS	ARROYO GRANDE AB PHOENIX C NR ARROYO GRANDE CA		6/21/1967	9/30/1992
USGS	WITTENBERG C NR ARROYO GRANDE CA		8/1/1967	10/2/1975
USGS	LOPEZ C NR ARROYO GRANDE CA		7/21/1967	9/30/2004
USGS	SALSIPUEDES C NR POZO CA		10/1/1969	9/30/1983
USGS	SALINAS R NR POZO CA		10/1/1942	9/30/1983
USGS	TORO C NR POZO CA		10/1/1960	9/30/1983
USGS	SALINAS R BL SALINAS DAM NR POZO CA		10/1/1973	4/9/1986

USGS	SANTA MARGARITA LK NR POZO CA		-99999	-99999
USGS	SALINAS R AB PILITAS C NR SANTA MARGARITA CA		7/28/1942	10/3/1975
USGS	MORRO C A MORRO BAY CA		10/1/1970	9/30/1978
USGS	SALINAS R NR SANTA MARGARITA CA		4/1/1922	9/30/1949
USGS	TORO C NR MORRO BAY CA		10/1/1970	9/30/1978
USGS	SANTA RITA C NR TEMPLETON CA		10/1/1961	9/30/1994
USGS	SANTA RITA C TRIB NR TEMPLETON CA		8/1/1967	9/30/1972
USGS	PERRY C A CAMBRIA CA		11/21/1987	7/11/1989
USGS	JACK C NR TEMPLETON CA		10/1/1949	9/30/1978
USGS	SANTA ROSA C NR CAMBRIA CA		8/1/1957	9/30/1972
USGS	HUERHUERO C NR CRESTON CA		10/1/1958	9/30/1972
USGS	SAN SIMEON C NR CAMBRIA CA		10/1/1987	7/11/1989
USGS	SALINAS R A PASO ROBLES CA		11/1/1939	9/30/2004
USGS	ESTRELLA R NR PASO ROBLES CA		10/1/1939	9/30/1941
USGS	CHOLAME C NR SHANDON CA		10/1/1958	9/30/1972
USGS	ARROYO DE LA CRUZ NR SAN SIMEON CA		10/1/1950	9/30/1979
USGS	ESTRELLA R NR ESTRELLA CA		10/1/1954	9/30/1996
USGS	CHOLAME C TRIB NR CHOLAME CA		10/1/1958	9/30/1965
USGS	SAN CARPOFORO C NR SAN SIMEON CA		10/1/1977	9/30/1978
USGS	NACIMIENTO R BL NACIMIENTO DAM NR BRADLEY CA		10/1/1957	9/30/2004
USGS	NACIMIENTO R NR SAN MIGUEL CA		10/1/1939	9/30/1957
USGS	NACIMIENTO R BL SAPAQUE C NR BRYSON CA		9/16/1971	9/30/2004
USGS	NACIMIENTO R NR BRYSON CA		10/1/1955	9/30/1971
USGS	SAN ANTONIO R A PLEYTO CA		10/1/1929	9/30/1965
USGS	SAN ANTONIO R NR LOCKWOOD CA		10/1/1965	9/30/2004
USGS	SAN ANTONIO R A SAM JNS BR NR LOCKWOOD CA		7/1/1958	9/30/1965
USGS	SALINAS R NR BRADLEY CA		10/1/1948	9/30/2004
USGS	SULPHUR SPRINGS CYN NR JOLON CA		10/1/1967	9/30/1969
USGS	RAT C NR LUCIA CA		10/1/1960	9/30/1963
USGS	COW C NR SAN ARDO CA		10/1/1960	9/30/1964
USGS	SAN LORENZO C A KING CITY CA		10/1/1942	9/30/1945
USGS	ARROYO SECO NR GREENFIELD CA		10/1/1961	9/30/1986
USGS	BIG SUR R NR BIG SUR CA		4/1/1950	9/30/2004
USGS	SAN LORENZO C NR KING CITY CA		4/1/1940	9/30/1942

USGS	SAN LORENZO C BL BITTERWATER C NR KING CITY CA		10/1/1958	9/30/2004
USGS	ARROYO SECO NR SOLEDAD CA		10/1/1901	9/30/2004
USGS	CLEAR C NR IDRIA CA		10/1/1993	9/30/2004
USGS	SAN BENITO R BL M C NR HERNANDEZ CA		10/1/1949	9/30/1963
USGS	ARROYO SECO BL RELIZ C NR SOLEDAD CA		10/1/1994	9/30/2004
USGS	SALINAS R A SOLEDAD CA		10/1/1968	9/30/2004
USGS	CARMEL R A ROBLES DEL RIO CA		8/1/1957	9/30/2004
USGS	CARMEL R NR CARMEL CA		8/1/1962	9/30/2004
USGS	SALINAS R NR CHUALAR CA		10/1/1976	9/30/2004
USGS	EL TORO C NR SPRECKELS CA		10/1/1961	10/15/2001
USGS	WILLOW C TRIB NR SAN BENITO CA		7/1/1964	9/30/1969
USGS	ARROYO DEL REY A DEL REY OAKS CA		10/1/1966	9/30/1978
USGS	SAN BENITO R NR WILLOW CREEK SCHOOL CA		10/1/1939	9/30/2004
USGS	SALINAS R NR SPRECKELS CA		10/1/1929	9/30/2004
USGS	ALISAL C NR SALINAS CA		10/1/1970	9/30/1974
USGS	PESCADERO C NR PAICINES CA		7/1/1959	10/7/1970
USGS	RECLAMATION DITCH NR SALINAS CA		10/1/1970	9/30/2004
USGS	GABILAN C NR SALINAS CA		10/1/1970	9/30/2004
USGS	TRES PINOS C NR TRES PINOS CA		12/8/1922	9/30/2004
USGS	SAN BENITO R NR HOLLISTER CA		10/1/1949	9/30/1983
USGS	SAN BENITO R A HWY 156 NR HOLLISTER CA		10/1/1970	9/30/2004
USGS	PAJARO R A CHITTENDEN CA		10/1/1939	9/30/2004
USGS	PAJARO R A WATSONVILLE CA		10/1/1911	9/30/1973
USGS	PESCADERO C NR CHITTENDEN CA		9/11/1970	9/30/1981
USGS	PAJARO R A SARGENT CA		10/1/1940	9/30/1941
USGS	CORRALITOS C A FREEDOM CA		10/1/1956	9/30/2004
USGS	PACHECO C A DUNNEVILLE CA		10/1/1981	9/30/1985
USGS	PAJARO R NR GILROY CA		3/1/1959	9/30/1982
USGS	APTOS C A APTOS CA		10/1/1958	10/6/1972
USGS	GREEN VALLEY C NR CORRALITOS CA		10/1/1963	9/30/1967
USGS	PACHECO C NR DUNNEVILLE CA		10/1/1939	9/30/1982
USGS	BRANCIFORTE C A SANTA CRUZ CA		4/1/1940	9/30/1968
USGS	LLAGAS C NR GILROY		11/23/2002	9/30/2004
USGS	SAN LORENZO R A SANTA CRUZ CA		10/1/1952	9/30/2004

USGS	SOQUEL C A SOQUEL CA		5/1/1951	9/30/2004
USGS	UVAS C NR GILROY CA		1/1/1959	9/30/1992
USGS	MAJORS C NR SANTA CRUZ CA		10/1/1969	9/30/1976
USGS	APTOS C NR APTOS CA		10/1/1971	9/30/1985
USGS	BODFISH C NR GILROY CA		10/1/1959	9/30/1982
USGS	CORRALITOS C NR CORRALITOS CA		10/1/1957	10/11/1972
USGS	LAGUNA C NR DAVENPORT CA		10/1/1969	10/13/1976
USGS	SOQUEL C NR SOQUEL CA		10/1/1968	9/30/1972
USGS	SAN LORENZO R A BIG TREES CA		10/1/1936	9/30/2004
USGS	CEDAR C NR BELL STATION CA		10/1/1961	9/30/1982
USGS	CARBONERA C A SCOTTS VALLEY CA		2/7/1985	9/30/2004
USGS	WB SOQUEL C NR SOQUEL CA		10/1/1958	10/6/1972
USGS	SAN VICENTE C NR DAVENPORT CA		10/1/1969	9/30/1985
USGS	BEAN C NR SCOTTS VALLEY CA		1/6/1989	9/30/2004
USGS	SCOTT C NR DAVENPORT CA		10/1/1936	9/30/1941
USGS	SCOTT C AB LITTLE C NR DAVENPORT CA		10/1/1958	10/2/1973
USGS	UVAS C NR MORGAN HILL CA		10/1/1930	3/31/1957
USGS	ALEC CYN NR MORGAN HILL CA		11/7/1969	5/3/1972
USGS	ZAYANTE C A ZAYANTE CA		10/1/1957	12/31/1992
USGS	UVAS C A SVEADAL CA		10/1/1972	10/1/1974
USGS	UVAS C AB UVAS RES NR MORGAN HILL CA		8/1/1961	9/30/1982
USGS	NEWELL C A BEN LOMOND CA		10/1/1957	12/31/1960
USGS	LLAGAS C NR MORGAN HILL CA		10/1/1951	11/1/1971
USGS	BOULDER C AT BOULDER CREEK CA		10/1/1976	12/31/1992
USGS	BEAR C A BOULDER C CA		10/1/1977	12/31/1992
USGS	LLAGAS C AB CHESBRO RES NR MORGAN HILL CA		10/1/1971	9/30/2004
USGS	SAN LORENZO R NR BOULDER C CA		7/17/1968	12/31/1992

# Orthophotos

Authors/Source	Date	File Description	Scale	Geographic location	Notes
City of Lompoc	Unspecified	City of Lompoc aerial images	3-inch resolution	Lompoc, CA	High resolution aerial photos of Lompoc CA. Images came rectified but unprojected. They have been projected properly into CA stateplane V
City of Pacific Grove, CA	2007	City of Pacific Grove Airphotos	Unspecified	Pacific Grove, CA	Unrectified high resolution images of Pacific Grove, CA
Unspecified		Capitola Orthophotos	n/a	Capitola	Extremely large dataset; did not use
Unspecified		Morro Bay Orthophotos		Morro Bay	Extremely large dataset; did not use
Unspecified		San Luis Obispo Orthophotos		San Luis Obispo	Extremely large dataset; did not use

# Groundwater

Authors/Source	Date	File Description	Scale	Geographic location	Notes
RBF Consulting	2008	Water Master Plan Program Environmental Impact Report, 2008.	n/a	City of Cambria	Water Master Plan Program Environmental Impact Report, 2008. Topics include water supply vs demand; geologic hazards; long term planning, etc.
City of Cambria	2004	Update to Cambria Master Plan	n/a	City of Cambria	Update to Cambria Master Plan- no metadata, beyond the scope of our study.
Various	1988-2011	Cambria Well Level and Water Production Reports	n/a	City of Cambria	Cambria Well Level and Water Production Reports:well level reports for Santa Rosa and san Simeon Creeks; also a water production chart for the city. Metadata most likely available
Abbott- Todd Engineers	2004	Abbott 2004 - Inland West Reference Links/ CSA 23 GW Resources Technical Memo	n/a	Santa Margarita	CSA 23 GW Resources Technical Memo. Assesses the general groundwater supply and the long term feasibility for the city. Water quality and quantity assessments. Many references for additional reports for Santa Margarita
Boyle Engineering Corporation	2005	San Simeon CSD Water System Master Plan and Wastewater Collection System Evaluation.	n/a	City of Morro Bay	2005 City of Morro Bay Urban Management Plan. Topics include water Demands, existing water supplies, potential water supply sources, groundwater, water quality, capacity, yield and reliability of water supply sources, water conservation programs and contingency plans.
Boyle Engineering Corporation	2007	2005 City of Morro Bay Urban Management Plan	n/a	City of San Simeon	Existing water supply and water demands. A hydraulic model is presented and methods explained. Unclear if metadata is available or not. Most of the report discusses piping and sewer flows, little surface water or water quality discussed.
Central Coast Salmon Enhancement	2008	Pismo Creek/Edna Valley Watershed Management Plan	n/a	Pismo Creek/Edna Valley	Pismo Creek/Edna Valley Watershed Management Plan. Contents include:water quality; hydrology and geology soils.
Chaney, J.	2008	Spring and Stream flow report/data	n/a	Santa Cruz	This report presents results for the 2007 semi-annual stream, spring flow and groundwater level measurement monitoring conducted by Weber, Hayes and Associates. This report presents two, 2007 data sets of sixteen different stream, spring and/or groundwater level measurements collected in the vicinity of the UCSC campus.
City of Lompoc		Lompoc - Static Average 64 - 2015	n/a	Lompoc	Well elevation data 1964 - 2010
City of Lompoc	older	City of Lompoc General Plan	n/a	Lompoc	Older PDF report pdf;
City of Los Osos		Los Osos - Groundwater - North coast online references	n/a	Los Osos	Los Osos Master Plan. Contents include water demands, water storage, water supply wells, future water operations.
City of SLO and Boyle Engineering Corp	1991	Groundwater Basin Evaluation-SLO	n/a	Carizzo Plain	An assessment of groundwater resources and utilization on the Carizzo Plain.

# Groundwater

Authors/Source	Date	File Description	Scale	Geographic location	Notes
City of SLO and Boyle Engineering Corp	1991	City of SLO and BEC 2010 - Groundwater Basin Evaluation-SLO	n/a	City of San Luis Obispo, extending into Edna basin.	An assessment of the hydrogeology of the City of San Luis Obispo. Precedes the 1997 document that does a more robust assessment; Water well locations provided in a map. Wells data 1970 - to unspecified date.
City of SLO, Kemnitzer	1967	Kemnitzer 1967 - Groundwater in the Carizzo Plain, Kemnitzer	n/a	Carizzo Plain	An assessment of aquifers and hydrology throughout SLO County. Very little actual data provided. No point location maps, just general basin outlines.
Morgan Hill	2008	Morgan Hill - Depth to groundwater	not specified	Eastern Santa Clara County	GIS data layer.
Nanson- DWR	1997	1997 San Luis-Edna Valley Groundwater report	n/a	San Luis and Edna watersheds Watershed	An older PDF document (1997) discussing transmissivity and storage capacity of groundwater; yield water budget and extractions; surface and subsurface inflow and outflow results. No point locations of measurements provided.
Todd Engineers	2005	City of Paso Robles Urban Water Management Plan	n/a	City of Paso Robles	City of Paso Robles Urban Water Management Plan
Todd Engineers	2008	San Luis Obispo General Plan and Wastewater Management Element	n/a	SLO County	San Luis Obispo General Plan and Wastewater Management Element
Cambria Community Services District	2005	Cambria Community Services District Urban Water Management Plan	n/a	City of Cambria	2005 Urban water management plan. Topics include water supply, water demand, long term water supply projects, Appendix C - DWR Bulletin 118, San Simeon and Santa Rosa Groundwater Basin Summaries; Appendix L - "Final Report, Baseline Water Supply Analysis," December 8, 2000.
USGS- Upson and Worts	1948	Ground water in the Cuyama valley, CA.	n/a	Cuyama Valley, CA	Ground water in the Cuyama valley, CA. 1948. older reference likely outdated, but metadata may be available from USGS.
Various	various	Paso Robles Basin Reports	n/a	Paso Robles	Many planning documents based on groundwater resources available for review.
Wallace Group	2010	Technical Memorandum Number 2	n/a	SLO County	Water supply inventory and assessment- description of water resources. Groundwater resources throughout SLO county
USGS- Muir	1964	Geology and Ground Water of San Antonio Creek Valley SBC CA 1664	n/a	West-Central Santa Barbara County	Sixth in a series of interpretive reports on the groundwater basins in the principal agricultural districts in Santa Barbara County.



# Hydrography

Authors/Source	Date	File Description	Scale	Geographic location	Notes
Watsonville GIS center	Unspecified	Santa Cruz County streams	Unspecified	Watsonville, CA	Line data reflecting Santa Cruz County streams
Watsonville GIS center	Unspecified	Watersheds in and in the vicinity of Santa Cruz County	Unspecified	Watsonville, CA	Polygon data reflecting watersheds in and in the vicinity of Santa Cruz County
City of San Luis Obispo, GeoData Sevices, Public Works Department	2005	Streams in the city of San Luis Obispo	Unspecified	San Luis Obispo, CA	Line data reflecting streams in the city of San Luis Obispo, CA. Includes high quality metadata
NHD via Vestra Resources	2001	Santa Clara County NHD derived hydro lines	1:100,000	Santa Clara County, CA	Line data reflecting hydro lines Santa Clara County, CA derived from NHD lines. Includes limited metadata.
UC Santa Cruz	Unspecified	List of areas and water detention facilities for UCSC campus	N/A	UC Santa Cruz, Santa Cruz, CA	Excel list of areas and water detention facilities in those areas
USGS	Unspecified	Paso Robles USGS streams	Unspecified	Paso Robles, CA	Line data reflecting USGS streams in Paso Robles CA. No metadata, no attributes other than segment lengths.
Watsonville GIS center	Unspecified	Slough areas in Watsonville	Unspecified	Watsonville, CA	Polygon data reflecting slough areas in vicinity of Watsonville, CA. No descriptive attributes virtually no metadata

# Soils

Authors/Source	Date	File Description	Scale	Geographic location	Notes
City of Morro Bay	1998	Report on Panay area landslide, Morro Bay, CA	N/A	Morro Bay, CA	Report on Panay area landslide, Morro Bay, CA
City of Morro Bay	1998	Pictures accompanying report on Panay area landslide, Morro Bay, CA	N/A	Morro Bay, CA	Pictures accompanying report on Panay area landslide, Morro Bay, CA
Gary M. Mann, Mann Underground Imaging	1997	Structural and kinematic analysis of panay landslide, Morro Bay, CA	N/A	Morro Bay, CA	Structural and kinematic analysis of panay landslide, Morro Bay, CA
U.S. Department of Agriculture, Natural Resources Conservation Service	2005	Paso Robles SSURGO soils	Unspecified	Paso Robles, CA	Polygon data reflecting soil types in Paso Robles, CA. High quality metadata (same as layer above)
U.S. Department of Agriculture, Natural Resources Conservation Service	2007	Soil types in Morgan Hill, CA	Unspecified	Morgan Hill, CA	Polygon data reflecting soil types in Morgan Hill, CA. High quality data and metadata
U.S. Department of Agriculture, Natural Resources Conservation Service	2007	Parent material of soiltypes in Morgan Hill, CA	Unspecified	Morgan Hill, CA	Polygon data reflecting .parent material of soiltypes in Morgan Hill, CA. High quality data and metadata
County Geologist James Baker & GIS Administrator Greg Bazhaw Santa Clara County Planning Office	2006	Landslide hazard zones in Santa Clara Co., CA	Unspecified	Santa Clara Co., CA	Polygon data reflecting landslide hazard szones in Santa Clara County, CA. High quality data and metadata.
Staal, Gardner, and Dunne, Inc.	1987	Geotechnical study of Laurel Ave Landslide, Morro Bay, CA	N/A	Morro Bay, CA	Geotechnical study of Laurel Ave Landslide, Morro Bay, CA
U.S. Department of Agriculture, Natural Resources Conservation Service	2005	Paso Robles SSURGO soils	Unspecified	Paso Robles, CA	Polygon data reflecting soil types in Paso Robles, CA. High quality metadata (same as layer below)
U.S. Department of Agriculture, Natural Resources Conservation Service	2007	Depth to groundwater of soiltypes in Morgan Hill, CA	Unspecified	Morgan Hill, CA	Polygon data reflecting depth to groundwater of soiltypes in Morgan Hill, CA High quality data and metadata
Unspecified	Unspecified	Document with links to sources of soil data	N/A	San Luis Obispo Co., CA	Contains two URLs of soil data sources. We already have soil data so these links will not be explored at this time.