**APPENDIX I: OWTS Policy** *State Water Resources Control Board* 



# OWTS POLICY

Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems

June 19, 2012



STATE WATER RESOURCES CONTROL BOARD REGIONAL WATER QUALITY CONTROL BOARDS



State of California Edmund G. Brown Jr., Governor



California Environmental Protection Agency Matthew Rodriquez, Secretary



# State Water Resources Control Board http://www.waterboards.ca.gov

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### Preamble

Onsite wastewater treatment systems (OWTS) are useful and necessary structures that allow habitation at locations that are removed from centralized wastewater treatment systems. When properly sited, designed, operated, and maintained, OWTS treat domestic wastewater to reduce its polluting impact on the environment and most importantly protect public health. Estimates for the number of installations of OWTS in California at the time of this Policy are that more than 1.2 million systems are installed and operating. The vast majority of these are functioning in a satisfactory manner and meeting their intended purpose.

However there have been occasions in California where OWTS for a varied list of reasons have not satisfactorily protected either water quality or public health. Some instances of these failures are related to the OWTS not being able to adequately treat and dispose of waste as a result of poor design or improper site conditions. Others have occurred where the systems are operating as designed but their densities are such that the combined effluent resulting from multiple systems is more than can be assimilated into the environment. From these failures we must learn how to improve our usage of OWTS and prevent such failures from happening again.

As California's population continues to grow, and we see both increased rural housing densities and the building of residences and other structures in more varied terrain than we ever have before, we increase the risks of causing environmental damage and creating public health risks from the use of OWTS. What may have been effective in the past may not continue to be as conditions and circumstances surrounding particular locations change. So necessarily more scrutiny of our installation of OWTS is demanded of all those involved, while maintaining an appropriate balance of only the necessary requirements so that the use of OWTS remains viable.

### Purpose and Scope of the Policy

The purpose of this Policy is to allow the continued use of OWTS, while protecting water quality and public health. This Policy recognizes that responsible local agencies can provide the most effective means to manage OWTS on a routine basis. Therefore as an important element, it is the intent of this policy to efficiently utilize and improve upon where necessary existing local programs through coordination between the State and local agencies. To accomplish this purpose, this Policy establishes a statewide, risk-based, tiered approach for the regulation and management of OWTS installations and replacements and sets the level of performance and protection expected from OWTS. In particular, the Policy requires actions for water bodies specifically identified as part this Policy where OWTS contribute to water quality degradation that adversely affect beneficial uses.

This Policy only authorizes subsurface disposal of domestic strength, and in limited instances high strength, wastewater and establishes minimum requirements for the permitting, monitoring, and operation of OWTS for protecting beneficial uses of waters

of the State and preventing or correcting conditions of pollution and nuisance. And finally, this Policy also conditionally waives the requirement for owners of OWTS to apply for and receive Waste Discharge Requirements in order to operate their systems when they meet the conditions set forth in the Policy. Nothing in this Policy supersedes or requires modification of Total Maximum Daily Loads or Basin Plan prohibitions of discharges from OWTS.

This Policy also applies to OWTS on federal, state, and Tribal lands to the extent authorized by law or agreement.

### **Structure of the Policy**

This Policy is structured into ten major parts:

#### **Definitions**

Definitions for all the major terms used in this Policy are provided within this part and wherever used in the Policy the definition given here overrides any other possible definition.

[Section 1]

#### **Responsibilities and Duties**

Implementation of this Policy involves individual OWTS owners; local agencies, be they counties, cities, or any other subdivision of state government with permitting powers over OWTS; Regional Water Quality Control Boards; and the State Water Resources Control Board.

[Sections <u>2</u>, <u>3</u>, <u>4</u>, and <u>5</u>]

#### Tier 0 – Existing OWTS

Existing OWTS that are properly functioning, and do not meet the conditions of failing systems or otherwise require corrective action (for example, to prevent groundwater impairment) as specifically described in Tier 4, and are not determined to be contributing to an impairment of surface water as specifically described in Tier 3, are automatically included in Tier 0.

[Section 6]

#### Tier 1 – Low-Risk New or Replacement OWTS

New or replacement OWTS that meet low risk siting and design requirements as specified in Tier 1, where there is not an approved Local Agency Management Program per Tier 2.

[Sections  $\underline{7}$  and  $\underline{8}$ ]

#### <u>Tier 2 – Local Agency Management Program for New or Replacement OWTS</u>

California is well known for its extreme range of geological and climatic conditions. As such, the establishment of a single set of criteria for OWTS would either be too restrictive so as to protect for the most sensitive case, or would have broad allowances that would not be protective enough under some circumstances. To accommodate this

extreme variance, local agencies may submit management programs ("Local Agency Management Programs") for approval, and upon approval then manage the installation of new and replacement OWTS under that program.

Local Agency Management Programs approved under Tier 2 provide an alternate method from Tier 1 programs to achieve the same policy purpose, which is to protect water quality and public health. In order to address local conditions, Local Agency Management Programs may include standards that differ from the Tier 1 requirements for new and replacement OWTS contained in Sections 7 and 8. As examples, a Local Agency Management Program may authorize different soil characteristics, usage of seepage pits, and different densities for new developments. Once the Local Agency Management Program is approved, new and replacement OWTS that are included within the Local Agency Management Program may be approved by the Local Agency. A Local Agency, at its discretion, may include Tier 1 standards within its Tier 2 Local Agency Management Program for some or all of its jurisdiction. However, once a Local Agency Management Program is approved, it shall supersede Tier 1 and all future OWTS decisions will be governed by the Tier 2 Local Agency Management Program

[Section 9]

#### <u> Tier 3 – Impaired Areas</u>

Existing, new, and replacement OWTS that are near impaired water bodies may be addressed by a TMDL and its implementation program, or special provisions contained in a Local Agency Management Program. If there is no TMDL or special provisions, new or replacement OWTS within 600 feet of impaired water bodies listed in Attachment 2 must meet the specific requirements of Tier 3. [Section 10]

#### Tier 4 – OWTS Requiring Corrective Action

OWTS that require corrective action or are either presently failing or fail at any time while this Policy is in effect are automatically included in Tier 4 and must follow the requirements as specified.

[Section 11]

#### Conditional Waiver of Waste Discharge Requirements

The requirement to submit a report of waste discharge for discharges from OWTS that are in conformance with this policy is waived. [Section 12]

<u>Effective Date</u> When this Policy becomes effective. [<u>Section 13</u>]

#### Financial Assistance

Procedures for local agencies to apply for funds to establish low interest loan programs for the assistance of OWTS owners in meeting the requirements of this Policy. [Section 14]

#### Attachment 1

AB 885 Regulatory Program Timelines.

#### Attachment 2

Tables 4 and 5 specifically identify those impaired water bodies that have Tier 3 requirements and must have a completed TMDL by the date specified.

#### Attachment 3

Table 6 shows where one Regional Water Board has been designated to review and, if appropriate, approve new Local Agency Management Plans for a local agency that is within multiple Regional Water Boards' jurisdiction.

#### What Tier Applies to my OWTS?

Existing OWTS that conform to the requirements for Tier 0 will remain in Tier 0 as long as they continue to meet those requirements. An existing OWTS will temporarily move from Tier 0 to Tier 4 if it is determined that corrective action is needed. The existing OWTS will return to Tier 0 once the corrective action is completed if the repair does not qualify as major repair under Tier 4. Any major repairs conducted as corrective action must comply with Tier 1 requirements or Tier 2 requirements, whichever are in effect for that local area. An existing OWTS will move from Tier 0 to Tier 3 if it is adjacent to an impaired water body listed on Attachment 2, or is covered by a TMDL implementation plan.

In areas with no approved Local Agency Management Plan, new and replacement OWTS that conform to the requirements of Tier 1 will remain in Tier 1 as long as they continue to meet those requirements. A new or replacement OWTS will temporarily move from Tier 1 to Tier 4 if it is determined that corrective action is needed. The new or replacement OWTS will return to Tier 1 once the corrective action is completed. A new or replacement OWTS will move from Tier 1 to Tier 3 if it is adjacent to an impaired water body, or is covered by a TMDL implementation plan.

In areas with an approved Local Agency Management Plan, new and replacement OWTS that conform to the requirements of the Tier 2 Local Agency Management Plan will remain in Tier 2 as long as they continue to meet those requirements. A new or replacement OWTS will temporarily move from Tier 2 to Tier 4 if it is determined that corrective action is needed. The new or replacement OWTS will return to Tier 2 once the corrective action is completed. A new or replacement OWTS will move from Tier 2 to Tier 3 if it is adjacent to an impaired water body, or is covered by a TMDL implementation plan, or is covered by special provisions for impaired water bodies contained in a Local Agency Management Program.

Existing, new, and replacement OWTS in specified areas adjacent to water bodies that are identified by the State Water Board as impaired for pathogens or nitrogen and listed in Attachment 2 are in Tier 3. Existing, new, and replacement OWTS covered by a TMDL implementation plan, or covered by special provisions for impaired water bodies contained in a Local Agency Management Program are also in Tier 3. These OWTS will temporarily move from Tier 3 to Tier 4 if it is determined that corrective action is needed. The new or replacement OWTS will return to Tier 3 once the corrective action is completed.

Existing, new, and replacement OWTS that do not conform with the requirements to receive coverage under any of the Tiers (e.g., existing OWTS with a projected flow of more than 10,000 gpd) do not qualify for this Policy's conditional waiver of waste discharge requirements, and will be regulated separately by the applicable Regional Water Board.

### **1.0 Definitions.** The following definitions apply to this Policy:

#### "303 (d) list" means the same as "Impaired Water Bodies."

- "**At-grade system**" means an OWTS dispersal system with a discharge point located at the preconstruction grade (ground surface elevation). The discharge from an at-grade system is always subsurface.
- "Average annual rainfall" means the average of the annual amount of precipitation for a location over a year as measured by the nearest National Weather Service station for the preceding three decades. For example the data set used to make a determination in 2012 would be the data from 1981 to 2010.
- "Basin Plan" means the same as "water quality control plan" as defined in Division 7 (commencing with Section 13000) of the Water Code. Basin Plans are adopted by each Regional Water Board, approved by the State Water Board and the Office of Administrative Law, and identify surface water and groundwater bodies within each Region's boundaries and establish, for each, its respective beneficial uses and water quality objectives. Copies are available from the Regional Water Boards, electronically at each Regional Water Boards website, or at the State Water Board's *Plans and Policies* web page (http://www.waterboards.ca.gov/plans\_policies/).
- "**Bedrock**" means the rock, usually solid, that underlies soil or other unconsolidated, surficial material.
- "CEDEN" means California Environmental Data Exchange Network and information about it is available at the State Water Boards website or <u>http://www.ceden.org/index.shtml</u>.
- "Cesspool" means an excavation in the ground receiving domestic wastewater, designed to retain the organic matter and solids, while allowing the liquids to seep into the soil. Cesspools differ from seepage pits because cesspool systems do not have septic tanks and are not authorized under this Policy. The term cesspool does not include pit-privies and out-houses which are not regulated under this Policy.
- "Clay" means a soil particle; the term also refers to a type of soil texture. As a soil particle, clay consists of individual rock or mineral particles in soils having diameters <0.002 mm. As a soil texture, clay is the soil material that is comprised of 40 percent or more clay particles, not more than 45 percent sand and not more than 40 percent silt particles using the USDA soil classification system.</p>
- "**Cobbles**" means rock fragments 76 mm or larger using the USDA soil classification systems.
- "**Dispersal system**" means a leachfield, seepage pit, mound, at-grade, subsurface drip field, evapotranspiration and infiltration bed, or other type of system for final wastewater treatment and subsurface discharge.

- "Domestic wastewater" means wastewater with a measured strength less then highstrength wastewater and is the type of wastewater normally discharged from, or similar to, that discharged from plumbing fixtures, appliances and other household devices including, but not limited to toilets, bathtubs, showers, laundry facilities, dishwashing facilities, and garbage disposals. Domestic wastewater may include wastewater from commercial buildings such as office buildings, retail stores, and some restaurants, or from industrial facilities where the domestic wastewater is segregated from the industrial wastewater. Domestic wastewater may include incidental RV holding tank dumping but does not include wastewater consisting of a significant portion of RV holding tank wastewater such as at RV dump stations. Domestic wastewater does not include wastewater from industrial processes.
- "**Dump Station**" means a facility intended to receive the discharge of wastewater from a holding tank installed on a recreational vehicle. A dump station does not include a full hook-up sewer connection similar to those used at a recreational vehicle park.
- "**Domestic well**" means a groundwater well that provides water for human consumption and is not regulated by the California Department of Public Health.
- "**Earthen material**" means a substance composed of the earth's crust (i.e. soil and rock).
- "EDF" see "electronic deliverable format."
- "Effluent" means sewage, water, or other liquid, partially or completely treated or in its natural state, flowing out of a septic tank, aerobic treatment unit, dispersal system, or other OWTS component.
- "Electronic deliverable format" or "EDF" means the data standard adopted by the State Water Board for submittal of groundwater quality monitoring data to the State Water Board's internet-accessible database system Geotracker (http://geotracker.waterboards.ca.gov/).
- "Escherichia coli" means a group of bacteria predominantly inhabiting the intestines of humans or other warm-blooded animals, but also occasionally found elsewhere. Used as an indicator of human fecal contamination.
- "Existing OWTS" means an OWTS that was constructed and operating prior to the effective date of this Policy, and OWTS for which a construction permit has been issued prior to the effective date of the Policy.
- "Flowing water body" means a body of running water flowing over the earth in a natural water course, where the movement of the water is readily discernible or if water is not present it is apparent from review of the geology that when present it does flow, such as in an ephemeral drainage, creek, stream, or river.
  - "Groundwater" means water below the land surface that is at or above atmospheric pressure.

- "High-strength wastewater" means wastewater having a 30-day average concentration of biochemical oxygen demand (BOD) greater than 300 milligramsper-liter (mg/L) or of total suspended solids (TSS) greater than 330 mg/L or a fats, oil, and grease (FOG) concentration greater than 100 mg/L prior to the septic tank or other OWTS treatment component.
- "IAPMO" means the International Association of Plumbing and Mechanical Officials.
- "Impaired Water Bodies" means those surface water bodies or segments thereof that are identified on a list approved first by the State Water Board and then approved by US EPA pursuant to Section 303(d) of the federal Clean Water Act.
- "Local agency" means any subdivision of state government that has responsibility for permitting the installation of and regulating OWTS within its jurisdictional boundaries; typically a county, city, or special district.
- **"Major repair"** means either: (1) for a dispersal system, repairs required for an OWTS dispersal system due to surfacing wastewater effluent from the dispersal field and/or wastewater backed up into plumbing fixtures because the dispersal system is not able to percolate the design flow of wastewater associated with the structure served, or (2) for a septic tank, repairs required to the tank for a compartment baffle failure or tank structural integrity failure such that either wastewater is exfiltrating or groundwater is infiltrating.
- "Mottling" means a soil condition that results from oxidizing or reducing minerals due to soil moisture changes from saturated to unsaturated over time. Mottling is characterized by spots or blotches of different colors or shades of color (grays and reds) interspersed within the dominant color as described by the USDA soil classification system. This soil condition can be indicative of historic seasonal high groundwater level, but the lack of this condition may not demonstrate the absence of groundwater.
- "**Mound system**" means an aboveground dispersal system (covered sand bed with effluent leachfield elevated above original ground surface inside) used to enhance soil treatment, dispersal, and absorption of effluent discharged from an OWTS treatment unit such as a septic tank. Mound systems have a subsurface discharge.
- "New OWTS" means an OWTS permitted after the effective date of this Policy.
- "**NSF**" means NSF International (a.k.a. National Sanitation Foundation), a not for profit, non-governmental organization that develops health and safety standards and performs product certification.
- "Oil/grease interceptor" means a passive interceptor that has a rate of flow exceeding 50 gallons-per-minute and that is located outside a building. Oil/grease interceptors are used for separating and collecting oil and grease from wastewater.

- "Onsite wastewater treatment system(s)" (OWTS) means individual disposal systems, community collection and disposal systems, and alternative collection and disposal systems that use subsurface disposal. The short form of the term may be singular or plural. OWTS do not include "graywater" systems pursuant to Health and Safety Code Section 17922.12.
- "**Percolation test**" means a method of testing water absorption of the soil. The test is conducted with clean water and test results can be used to establish the dispersal system design.
- "**Permit**" means a document issued by a local agency that allows the installation and use of an OWTS, or waste discharge requirements or a waiver of waste discharge requirements that authorizes discharges from an OWTS.
- "**Person**" means any individual, firm, association, organization, partnership, business trust, corporation, company, State agency or department, or unit of local government who is, or that is, subject to this Policy.
- "**Pit-privy**" (a.k.a. outhouse, pit-toilet) means self-contained waterless toilet used for disposal of non-water carried human waste; consists of a shelter built above a pit in the ground into which human waste falls.
- "Policy" means this Policy for Siting, Design, Operation and Management of OWTS.
- "**Pollutant**" means any substance that alters water quality of the waters of the State to a degree that it may potentially affect the beneficial uses of water, as listed in a Basin Plan.
- "**Projected flows**" means wastewater flows into the OWTS determined in accordance with any of the applicable methods for determining average daily flow in the USEPA Onsite Wastewater Treatment System Manual, 2002, or for Tier 2 in accordance with an approved Local Agency Management Program.
- "Public Water System" is a water system regulated by the California Department of Public Health or a Local Primacy Agency pursuant to Chapter 12, Part 4, California Safe Drinking Water Act, Section 116275 (h) of the California Health and Safety Code.
- "**Public Water Well**" is a ground water well serving a public water system. A spring which is not subject to the California Surface Water Treatment Rule (SWTR), CCR, Title 22, sections 64650 through 64666 is a public well.
- "Qualified professional" means an individual licensed or certified by a State of California agency to design OWTS and practice as professionals for other associated reports, as allowed under their license or registration. Depending on the work to be performed and various licensing and registration requirements, this may include an individual who possesses a registered environmental health specialist certificate or is currently licensed as a professional engineer or professional geologist. For the purposes of performing site evaluations, Soil Scientists certified by the Soil Science Society of America are considered qualified professionals. A local agency may modify this definition as part of its Local Agency Management Program.

- "Regional Water Board" is any of the Regional Water Quality Control Boards designated by Water Code Section 13200. Any reference to an action of the Regional Water Board in this Policy also refers to an action of its Executive Officer, including the conducting of public hearings, pursuant to any general or specific delegation under Water Code Section 13223.
- "**Replacement OWTS**" means an OWTS that has its treatment capacity expanded, or its dispersal system replaced or added onto, after the effective date of this Policy.
- **"Sand"** means a soil particle; this term also refers to a type of soil texture. As a soil particle, sand consists of individual rock or mineral particles in soils having diameters ranging from 0.05 to 2.0 millimeters. As a soil texture, sand is soil that is comprised of 85 percent or more sand particles, with the percentage of silt plus 1.5 times the percentage of clay particles comprising less than 15 percent.
- "Seepage pit" means a drilled or dug excavation, three to six feet in diameter, either lined or gravel filled, that receives the effluent discharge from a septic tank or other OWTS treatment unit for dispersal.
- "Septic tank" means a watertight, covered receptacle designed for primary treatment of wastewater and constructed to:
  - 1. Receive wastewater discharged from a building;
  - 2. Separate settleable and floating solids from the liquid;
  - 3. Digest organic matter by anaerobic bacterial action;
  - 4. Store digested solids; and
  - 5. Clarify wastewater for further treatment with final subsurface discharge.
- "**Service provider**" means a person capable of operating, monitoring, and maintaining an OWTS in accordance to this Policy.
- **"Silt"** means a soil particle; this term also refers to a type of soil texture. As a soil particle, silt consists of individual rock or mineral particles in soils having diameters ranging from between 0.05 and 0.002 mm. As a soil texture, silt is soil that is comprised as approximately 80 percent or more silt particles and not more than 12 percent clay particles using the USDA soil classification system.
- "**Single-family dwelling unit**" means a structure that is usually occupied by just one household or family and for the purposes of this Policy is expected to generate an average of 250 gallons per day of wastewater.
- "**Site**" means the location of the OWTS and, where applicable, a reserve dispersal area capable of disposing 100 percent of the design flow from all sources the OWTS is intended to serve.
- "**Site Evaluation**" means an assessment of the characteristics of the site sufficient to determine its suitability for an OWTS to meet the requirements of this Policy.

- "Soil" means the naturally occurring body of porous mineral and organic materials on the land surface, which is composed of unconsolidated materials, including sandsized, silt-sized, and clay-sized particles mixed with varying amounts of larger fragments and organic material. The various combinations of particles differentiate specific soil textures identified in the soil textural triangle developed by the United States Department of Agriculture (USDA) as found in Soil Survey Staff, USDA; Soil Survey Manual, Handbook 18, U.S. Government Printing Office, Washington, DC, 1993, p. 138. For the purposes of this Policy, soil shall contain earthen material of particles smaller than 0.08 inches (2 mm) in size.
- "**Soil Structure**" means the arrangement of primary soil particles into compound particles, peds, or clusters that are separated by natural planes of weakness from adjoining aggregates.
- **"Soil texture"** means the soil class that describes the relative amount of sand, clay, silt and combinations thereof as defined by the classes of the soil textural triangle developed by the USDA (referenced above).
- "State Water Board" is the State Water Resources Control Board
- "**Supplemental treatment**" means any OWTS or component of an OWTS, except a septic tank or dosing tank, that performs additional wastewater treatment so that the effluent meets a predetermined performance requirement prior to discharge of effluent into the dispersal field.
- "SWAMP" means Surface Water Ambient Monitoring Program and more information is available at: <u>http://www.waterboards.ca.gov/water\_issues/programs/swamp/</u>
- **"Telemetric"** means the ability to automatically measure and transmit OWTS data by wire, radio, or other means.
- "TMDL" is the acronym for "total maximum daily load." Section 303(d)(1) of the Clean Water Act requires each State to establish a TMDL for each impaired water body to address the pollutant(s) causing the impairment. In California, TMDLs are usually adopted as Basin Plan amendments and contain implementation plans detailing how water quality standards will be attained.
- **"Total coliform"** means a group of bacteria consisting of several *genera* belonging to the family *Enterobacteriaceae*, which includes Escherichia coli bacteria.
- "USDA" means the U.S. Department of Agriculture.
- "Waste discharge requirement" or "WDR" means an operation and discharge permit issued for the discharge of waste pursuant to Section 13260 of the California Water Code.

#### 2.0 OWTS Owners Responsibilities and Duties

- 2.1 All new, replacement, or existing OWTS within an area that is subject to a Basin Plan prohibition of discharges from OWTS, must comply with the prohibition. If the prohibition authorizes discharges under specified conditions, the discharge must comply with those conditions and the applicable provisions of this Policy.
- 2.2 Owners of OWTS shall adhere to the requirements prescribed in local codes and ordinances. Owners of new and replacement OWTS covered by this Policy shall also meet the minimum standards contained in Tier 1, or an alternate standard provided by a Local Agency Management Program per Tier 2, or shall comply with the requirements of Tier 3 if near an impaired water body and subject to Tier 3, or shall provide corrective action for their OWTS if their system meets conditions that place it in Tier 4.
- 2.3 Owners of OWTS shall comply with any and all permitting conditions imposed by a local agency that do not directly conflict with this Policy, including any conditions that are more stringent than required by this Policy.
- 2.4 To receive coverage under this Policy and the included waiver of waste discharges, OWTS shall only accept and treat flows of domestic wastewater. In addition, OWTS that accept high-strength wastewater from commercial food service buildings are covered under this Policy and the waiver of waste discharge requirements if the wastewater does not exceed 900 mg/L BOD and there is a properly sized and functioning oil/grease interceptor (a.k.a grease trap).
- 2.5 Owners of OWTS shall maintain their OWTS in good working condition including inspections and pumping of solids as necessary, or as required by local ordinances, to maintain proper function and assure adequate treatment.
- 2.6 The following owners of OWTS shall notify the Regional Water Board by submitting a Report of Waste Discharge for the following:
  - 2.6.1 a new or replacement OWTS that does not meet the conditions and requirements set forth in either a Local Agency Management Program if one is approved, an existing local program if it is less than 60 months from the effective date of the Policy and a Local Agency Management Program is not yet approved, or Tier 1 if no Local Agency Management Program has been approved and it is more than 60 months after the effective date of this Policy;
  - 2.6.2 any OWTS, not under individual waste discharge requirements or a waiver of individual waste discharge requirements issued by a Regional Water Board, with the projected flow of over 10,000 gallons-per-day;

- 2.6.3 any OWTS that receives high-strength wastewater, unless the waste stream is from a commercial food service building;
- 2.6.4 any OWTS that receives high-strength wastewater from a commercial food service building: (1) with a BOD higher than 900 mg/L, or (2) that does not have a properly sized and functioning oil/grease interceptor.
- 2.7 All Reports of Waste Discharge shall be accompanied by the required application fee pursuant to California Code of Regulations, title 23, section 2200.

#### 3.0 Local Agency Requirements and Responsibilities

- 3.1 Local agencies, in addition to implementing their own local codes and ordinances, shall determine whether the requirements within their local jurisdiction will be limited to the water quality protection afforded by the statewide minimum standards in Tier 0, Tier 1, Tier 3, and Tier 4, or whether the local agency will implement a Local Agency Management Program in accordance with Tier 2. Except for Tier 3, local agencies may continue to implement their existing OWTS permitting programs in compliance with the Basin Plan in place at the effective date of the Policy until 60 months after the effective date of this Policy, or approval of a Local Agency Management Program, whichever comes first, and may make minor adjustments as necessary that are in compliance with the applicable Basin Plan and this Policy. Tier 3 requirements take effect on the effective date of this Policy. In the absence of a Tier 2 Local Agency Management Program, to the extent that there is a direct conflict between the applicable minimum standards and the local codes or ordinances (such that it is impossible to comply with both the applicable minimum standards and the local ordinances or codes), the more restrictive standards shall govern.
- 3.2 If preferred, the local agency may at any time provide the State Water Board and all affected Regional Water Board(s) written notice of its intent to regulate OWTS using a Local Agency Management Program with alternative standards as authorized in Tier 2 of this Policy. A proposed Local Agency Management Program that conforms to the requirements of that Section shall be included with the notice. A local agency shall not implement a program different than the minimum standards contained in Tier 1 and 3 of this Policy after 60 months from the effective date of this Policy until approval of the proposed Local Agency Management Program is granted by either the Regional Water Board or State Water Board. All initial program submittals desiring approval prior to the 60 month limit shall be received no later than 36 months from the effective date of this Policy. Once approved, the local agency shall adhere to the Local Agency Management Program, including all requirements, monitoring, and reporting. If at any time a local agency wishes to modify its Local Agency Management Program, it shall provide the State Water Board and all affected Regional Water Board(s) written notice of its intended modifications and will continue to implement its existing Local Agency Management Program until the modifications are approved.

- 3.3 All local agencies permitting OWTS shall report annually to the Regional Water Board(s). If a local agency's jurisdictional area is within the boundary of multiple Regional Water Boards, the local agency shall send a copy of the annual report to each Regional Water Board. The annual report shall include the following information (organized in a tabular spreadsheet format) and summarize whether any further actions are warranted to protect water quality or public health:
  - 3.3.1 number and location of complaints pertaining to OWTS operation and maintenance, and identification of those which were investigated and how they were resolved;
  - 3.3.2 shall provide the applications and registrations issued as part of the local septic tank cleaning registration program pursuant to Section 117400 et seq. of the California Health and Safety Code;
  - 3.3.3 number, location, and description of permits issued for new and replacement OWTS and which Tier the permit is issued.
- 3.4 All local agencies permitting OWTS shall retain permanent records of their permitting actions and will make those records available within 10 working days upon written request for review by a Regional Water Board. The records for each permit shall reference the Tier under which the permit was issued.
- 3.5 A local agency shall notify the owner of a public well or water intake and the California Department of Public Health as soon as practicable, but not later than 72 hours, upon its discovery of a failing OWTS as described in sections 11.1 and 11.2 within the setbacks described in sections 7.5.6 through 7.5.10.
- 3.6 A local agency may implement this Policy, or a portion thereof, using its local authority to enforce the policy, as authorized by an approval from the State Water Board or by the appropriate Regional Water Board.
- 3.7 Nothing in the Policy shall preclude a local agency from adopting or retaining standards for OWTS in an approved Local Agency Management Program that are more protective of the public health or the environment than are contained in this Policy.
- 3.8 If at any time a local agency wishes to withdraw its previously submitted and approved Tier 2 Local Agency Management Program, it may do so upon 60 days written notice. The notice of withdrawal shall specify the reason for withdrawing its Tier 2 program, the effective date for cessation of the program and resumption of permitting of OWTS only under Tiers 1, 3, and 4.

#### 4.0 Regional Water Board Functions and Duties

- 4.1 The Regional Water Boards have the principal responsibility for overseeing the implementation of this Policy.
- 4.2 Regional Water Boards shall incorporate the requirements established in this Policy by amending their Basin Plans within 12 months of the effective date of this Policy, pursuant to Water Code Section 13291(e). The Regional Water

Boards may also consider whether it is necessary and appropriate to retain or adopt any more protective standards. To the extent that a Regional Water Board determines that it is necessary and appropriate to retain or adopt any more protective standards, it shall reconcile those region-specific standards with this Policy to the extent feasible, and shall provide a detailed basis for its determination that each of the more protective standards is necessary and appropriate.

- 4.2.1 Notwithstanding 4.2 above, the North Coast Regional Water Board will continue to implement its existing Basin Plan requirements pertaining to OWTS within the Russian River watershed until it adopts the Russian River TMDL, at which time it will comply with section 4.2 for the Russian River watershed.
- 4.3 The Regional Water Board designated in Attachment 3 shall review, and if appropriate, approve a Local Agency Management Program submitted by the local agency pursuant to Tier 2 in this Policy. Upon receipt of a proposed Local Agency Management Program, the Regional Water Board designated in Attachment 3 shall have 90 days to notify the local agency whether the submittal contains all the elements of a Tier 2 program, but may request additional information based on review of the proposed program. Approval must follow a noticed hearing with opportunity for public comment. If a Local Agency Management Program is disapproved, the Regional Water Board designated in Attachment 3 shall provide a written explanation of the reasons for the disapproval. A Regional Water Board may approve a Local Agency Management Program while disapproving any proposed special provisions for impaired water bodies contained in the Local Agency Management Program. If no action is taken by the respective Regional Water Board within 12 months of the submission date of a complete Local Agency Management Program, the program shall be forwarded to the State Water Board for review and approval pursuant to Section 5 of this Policy.
  - 4.3.1 Where the local agency's jurisdiction lies within more than one Regional Water Board, staff from the affected Regional Water Boards shall work cooperatively to assure that water quality protection in each region is adequately protected. If the Regional Water Board designated in Attachment 3 approves the Local Agency Management Program over the written objection of an affected Regional Water Board, that Regional Water Board may submit the dispute to the State Water Board under Section 5.3.
  - 4.3.2 Within 30 days of receipt of a proposed Local Agency Management Program, a Regional Water Board will forward a copy to and solicit comments from the California Department of Public Health regarding a Local Agency Management Program's proposed policies and procedures, including notification to local water purveyors prior to OWTS permitting.
- 4.4 Once a Local Agency Management Program has been approved, any affected Regional Water Board may require modifications or revoke authorization of a local agency to implement a Tier 2 program, in accordance with the following:

- 4.4.1 The Regional Water Board shall consult with any other Regional Water Board(s) having jurisdiction over the local agency before providing the notice described in section 4.4.2.
- 4.4.2 Written notice shall be provided to the local agency detailing the Regional Water Board's action, the cause for such action, remedies to prevent the action from continuing to completion, and appeal process and rights. The local agency shall have 90 days from the date of the written notice to respond with a corrective action plan to address the areas of non-compliance, or to request the Regional Water Board to reconsider its findings.
- 4.4.3 The Regional Water Board shall approve, approve conditionally, or deny a corrective action plan within 90 days of receipt. The local agency will have 90 days to begin implementation of a corrective action plan from the date of approval or 60 days to request reconsideration from the date of denial. If the local agency fails to submit an acceptable corrective action plan, fails to implement an approved corrective action plan, or request reconsideration, the Regional Water Board may require modifications to the Local Agency Management Program, or may revoke the local agency's authorization to implement a Tier 2 program.
- 4.4.4 Requests for reconsideration by the local agency shall be decided by the Regional Water Board within 90 days and the previously approved Local Agency Management Program shall remain in effect while the reconsideration is pending.
- 4.4.5 If the request for reconsideration is denied, the local agency may appeal to the State Water Board and the previously approved Local Agency Management Program shall remain in effect while the appeal is under consideration. The State Water Board shall decide the appeal within 90 days. All decisions of the State Water Board are final.
- 4.5 The appropriate Regional Water Board shall accept and consider any requests for modification or revocation of a Local Agency Management Program submitted by any person. The Regional Water Board will notify the person making the request and the local agency implementing the Local Agency Management Program at issue by letter within 90 days whether it intends to proceed with the modification or revocation process per Section 4.4 above, or is dismissing the request. The Regional Water Board will post the request and its response letter on its website.
- 4.6 A Regional Water Board may issue or deny waste discharge requirements or waivers of waste discharge requirements for any new or replacement OWTS within a jurisdiction of a local agency without an approved Local Agency Management Program if that OWTS does not meet the minimum standards contained in Tier 1.
- 4.7 The Regional Water Boards will implement any notifications and enforcement requirements for OWTS determined to be in Tier 3 of this Policy.

4.8 Regional Water Boards may adopt waste discharge requirements, or conditional waivers of waste discharge requirements, that exempt individual OWTS from requirements contained in this Policy.

#### 5.0 State Water Board Functions and Duties

- 5.1 As the state agency charged with the development and adoption of this Policy, the State Water Board shall periodically review, amend and/or update this Policy as required.
- 5.2 The State Water Board may take any action assigned to the Regional Water Boards in this Policy.
- 5.3 The State Water Board shall resolve disputes between Regional Water Boards and local agencies as needed within 12 months of receiving such a request by a Regional Water Board or local agency, and may take action on its own motion in furtherance of this Policy. As part of this function, the State Water Board shall review and, if appropriate, approve Local Agency Management Programs in cases where the respective Regional Water Board has failed to consider for approval a Local Agency Management Program. The State Water Board shall approve Local Agency Management Programs at a regularly noticed board hearing and shall provide for public participation, including notice and opportunity for public comment. Once taken up by the State Water Board, Local Agency Management Programs shall be approved or denied within 180 days.
- 5.4 A member of the public may request the State Water Board to resolve any dispute regarding the Regional Water Board's approval of a Local Agency Management Program if the member of the public timely raised the disputed issue before the Regional Water Board. Such requests shall be submitted within 30 days after the Regional Water Board's approval of the Local Agency Management Program. The State Water Board shall notify the member of the public, the local agency, and the Regional Water Board within 90 days whether it intends to proceed with dispute resolution.
- 5.5 The State Water Board shall accept and consider any requests for modification or revocation of a Local Agency Management Program submitted by any person, where that person has previously submitted said request to the Regional Water Board and has received notice from the Regional Water Board of its dismissal of the request. The State Water Board will notify the person making the request and the local agency implementing the Local Agency Management Program at issue by letter within 90 days whether it intends to proceed with the modification or revocation process per Section 4.4 above, or is dismissing the request. The State Water Board will post the request and its response letter on its website.
- 5.6 The State Water Board or its Executive Director, after approving any Impaired Water Bodies [303 (d)] List, and for the purpose of implementing Tier 3 of this Policy, shall update Attachment 2 to identify those water bodies where: (1) it is likely that operating OWTS will subsequently be determined to be a contributing

source of pathogens or nitrogen and therefore it is anticipated that OWTS would receive a loading reduction, and (2) it is likely that new OWTS installations discharging within 600 feet of the water body would contribute to the impairment. This identification shall be based on information available at the time of 303 (d) listing and may be further updated based on new information. Updates to Attachment 2 will be processed as amendments to this Policy.

5.7 The State Water Board will make available to local agencies funds from its Clean Water State Revolving Fund loan program for mini-loan programs to be operated by the local agencies for the making of low interest loans to assist private property owners with complying with this Policy.

### Tier 0 – Existing OWTS

Existing OWTS that are properly functioning and do not meet the conditions of failing systems or otherwise require corrective action (for example, to prevent groundwater impairment) as specifically described in Tier 4, and are not determined to be contributing to an impairment of surface water as specifically described in Tier 3, are automatically included in Tier 0.

### 6.0 Coverage for Properly Operating Existing OWTS

- 6.1 Existing OWTS are automatically covered by Tier 0 and the herein included waiver of waste discharge requirements if they meet the following requirements:
  - 6.1.1 have a projected flow of 10,000 gallons-per-day or less;
  - 6.1.2 receive only domestic wastewater from residential or commercial buildings, or high-strength wastewater from commercial food service buildings that does not exceed 900 mg/L BOD and has a properly sized and functioning oil/grease interceptor (a.k.a. grease trap);
  - 6.1.3 continue to comply with any previously imposed permitting conditions;
  - 6.1.4 do not require supplemental treatment under Tier 3;
  - 6.1.5 do not require corrective action under Tier 4; and
  - 6.1.6 do not consist of a cesspool as a means of wastewater disposal.
- 6.2 A Regional Water Board or local agency may deny coverage under this Policy to any OWTS that is:
  - 6.2.1 Not in compliance with Section 6.1;
  - 6.2.2 Not able to adequately protect the water quality of the waters of the State, as determined by the Regional Water Board after considering any input from the local agency. A Regional Water Board may require the submission of a report of waste discharge to receive Region specific waste discharge requirements or waiver of waste discharge requirements so as to be protective.
- 6.3 Existing OWTS currently under waste discharge requirements or individual waiver of waste discharge requirements will remain under those orders until notified in writing by the appropriate Regional Water Board that they are covered under this Policy.

### Tier 1 – Low Risk New or Replacement OWTS

New or replacement OWTS meet low risk siting and design requirements as specified in Tier 1, where there is not an approved Local Agency Management Program per Tier 2.

#### 7.0 Minimum Site Evaluation and Siting Standards

- 7.1 A qualified professional shall perform all necessary soil and site evaluations for all new OWTS and for existing OWTS where the treatment or dispersal system will be replaced or expanded.
- 7.2 A site evaluation shall determine that adequate soil depth is present in the dispersal area. Soil depth is measured vertically to the point where bedrock, hardpan, impermeable soils, or saturated soils are encountered or an adequate depth has been determined. Soil depth shall be determined through the use of soil profile(s) in the dispersal area and the designated dispersal system replacement area, as viewed in excavations exposing the soil profiles in representative areas, unless the local agency has determined through historical or regional information that a specific site soil profile evaluation is unwarranted.
- 7.3 A site evaluation shall determine whether the anticipated highest level of groundwater within the dispersal field and its required minimum dispersal zone is not less than prescribed in Table 2 by estimation using one or a combination of the following methods:
  - 7.3.1 Direct observation of the highest extent of soil mottling observed in the examination of soil profiles, recognizing that soil mottling is not always an indicator of the uppermost extent of high groundwater; or
  - 7.3.2 Direct observation of groundwater levels during the anticipated period of high groundwater. Methods for groundwater monitoring and determinations shall be decided by the local agency; or
  - 7.3.3 Other methods, such as historical records, acceptable to the local agency.
  - 7.3.4 Where a conflict in the above methods of examination exists, the direct observation method indicating the highest level shall govern.
- 7.4 Percolation test results in the effluent disposal area shall not be faster than one minute per inch (1 MPI) or slower than one hundred twenty minutes per inch (120 MPI). All percolation test rates shall be performed by presoaking of percolation test holes and continuing the test until a stabilized rate is achieved.
- 7.5 Minimum horizontal setbacks from any OWTS treatment component and dispersal systems shall be as follows:
  - 7.5.1 5 feet from parcel property lines and structures;
  - 7.5.2 100 feet from water wells and monitoring wells, unless regulatory or legitimate data requirements necessitate that monitoring wells be located closer;

- 7.5.3 100 feet from any unstable land mass or any areas subject to earth slides identified by a registered engineer or registered geologist; other setback distance are allowed, if recommended by a geotechnical report prepared by a qualified professional.
- 7.5.4 100 feet from springs and flowing surface water bodies where the edge of that water body is the natural or levied bank for creeks and rivers, or may be less where site conditions prevent migration of wastewater to the water body;
- 7.5.5 200 feet from vernal pools, wetlands, lakes, ponds, or other surface water bodies where the edge of that water body is the high water mark for lakes and reservoirs, and the mean high tide line for tidally influenced water bodies;
- 7.5.6 150 feet from a public water well where the depth of the effluent dispersal system does not exceed 10 feet;
- 7.5.7 Where the effluent dispersal system is within 1,200 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 400 feet from the high water mark of the reservoir, lake or flowing water body.
- 7.5.8 Where the effluent dispersal system is located more than 1,200 feet but less than 2,500 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 200 feet from the high water mark of the reservoir, lake or flowing water body.
- 7.6 Prior to issuing a permit to install an OWTS the permitting agency shall determine if the OWTS is within 1,200 feet of an intake point for a surface water treatment plant for drinking water, is in the drainage catchment in which the intake point is located, and located such that it may impact water quality at the intake point such as being upstream of the intake point for a flowing water body. If the OWTS is within 1,200 feet of an intake point for a surface water treatment plant for drinking water, is in the drainage catchment in which the intake point is located such that it may impact water treatment plant for drinking water, is in the drainage catchment in which the intake point is located, and is located such that it may impact water quality at the intake point:
  - 7.6.1 The permitting agency shall provide a copy of the permit application to the owner of the water system of their proposal to install an OWTS within 1,200 feet of an intake point for a surface water treatment. If the owner of the water system cannot be identified, then the permitting agency will notify California Department of Public Health Drinking Water Program.
  - 7.6.2 The permit application shall include a topographical plot plan for the parcel showing the OWTS components, the property boundaries, proposed structures, physical address, and name of property owner.

- 7.6.3 The permit application shall provide the estimated wastewater flows, intended use of proposed structure generating the wastewater, soil data, and estimated depth to seasonally saturated soils.
- 7.6.4 The public water system owner shall have 15 days from receipt of the permit application to provide recommendations and comments to the permitting agency.
- 7.7 Natural ground slope in all areas used for effluent disposal shall not be greater than 25 percent.
- 7.8 The average density for any subdivision of property made by Tentative Approval pursuant to the Subdivision Map Act occurring after the effective date of this Policy and implemented under Tier 1 shall not exceed the allowable density values in Table 1 for a single-family dwelling unit, or its equivalent, for those units that rely on OWTS.

Table 1: Allowable Average Densities per Subdivision under Tier 1.				
Average Annual Rainfall (in/yr)	Allowable Density (acres/single family dwelling unit)			
0 - 15	2.5			
>15 - 20	2			
>20 - 25	1.5			
>25 - 35	1			
>35 - 40	0.75			
>40	0.5			

#### 8.0 Minimum OWTS Design and Construction Standards

- 8.1 OWTS Design Requirements
  - 8.1.1 A qualified professional shall design all new OWTS and modifications to existing OWTS where the treatment or dispersal system will be replaced or expanded. A qualified professional employed by a local agency, while acting in that capacity, may design, review, and approve a design for a proposed OWTS, if authorized by the local agency.
  - 8.1.2 OWTS shall be located, designed, and constructed in a manner to ensure that effluent does not surface at any time, and that percolation of effluent will not adversely affect beneficial uses of waters of the State.
  - 8.1.3 The design of new and replacement OWTS shall be based on the expected influent wastewater quality with a projected flow not to exceed 3,500 gallons per day, the peak wastewater flow rates for purposes of sizing hydraulic components, the projected average daily flow for purposes of sizing the dispersal system, the characteristics of the site, and the required level of treatment for protection of water quality and public health.

- 8.1.4 All dispersal systems shall have at least twelve (12) inches of soil cover, except for pressure distribution systems, which must have at least six (6) inches of soil cover.
- 8.1.5 The minimum depth to the anticipated highest level of groundwater below the bottom of the leaching trench, and the native soil depth immediately below the leaching trench, shall not be less than prescribed in Table 2.

Table 2: Tier 1 Minimum Depths to Groundwater and Minimum Soil
Depth from the Bottom of the Dispersal System

Percolation Rate	Minimum Depth
Percolation Rate ≤1 MPI	Only as authorized in a Tier 2 Local Agency Management Program
1 MPI< Percolation Rate ≤ 5 MPI	Twenty (20) feet
5 MPI< Percolation Rate ≤ 30 MPI	Eight (8) feet
30 MPI< Percolation Rate ≤ 120 MPI	Five (5) feet
Percolation Rate > 120 MPI	Only as authorized in a Tier 2 Local Agency Management Program
MPI = minutes per inch	

- 8.1.6 Dispersal systems shall be a leachfield, designed using not more than 4 square-feet of infiltrative area per linear foot of trench as the infiltrative surface, and with trench width no wider than 3 feet. Seepage pits and other dispersal systems may only be authorized for repairs where siting limitations require a variance. Maximum application rates shall be determined from stabilized percolation rate as provided in Table 3, or from soil texture and structure determination as provided in Table 4.
- 8.1.7 Dispersal systems shall not exceed a maximum depth of 10 feet as measured from the ground surface to the bottom of the trench.

Table 3: Application Rates as Determined from Stabilized Percolation Rate							
Percolation	Application		Percolation	Application		Percolation	Application
Rate	Rate		Rate	Rate		Rate	Rate
(minutes	(gallons		(minutes	(gallons		(minutes	(gallons
per Inch)	per day per		per Inch)	per day per		per Inch)	per day per
	foot)			foot)			foot)
<1	Requires		31	0.522		61	0.197
	Local Manage-						
	ment						
- 1	Program		22	0.544		60	0.404
1	1.2		32	0.511		62	0.194
2	1.2		24	0.3		03	0.19
3	1.2		25	0.409		65	0.107
5	1.2		30	0.470		66	0.104
5	0.8		30	0.407		67	0.10
7	0.8		38	0.430		68	0.177
9	0.8		30	0.443		60	0.174
0	0.8		40	0.434		70	0.17
9	0.8		40	0.422		70	0.107
10	0.0		41	0.411		71	0.104
12	0.780		42	0.4		72	0.10
12	0.771		43	0.389		73	0.157
13	0.737		44	0.370		74	0.134
14	0.743		45	0.356		76	0.13
15	0.729		40	0.330		70	0.147
10	0.7		47	0.343		78	0.144
18	0.686		40	0.323		70	0.14
10	0.000		49 50	0.323		80	0.137
19	0.071		50	0.311		81	0.133
20	0.657		51	0.3		01	0.13
21	0.643		52	0.289		82	0.127
22	0.629		53	0.278		٥ <i>3</i>	0.123
23	0.614		54	0.267		84	0.12
24	0.6		55	0.256		85	0.117
25	0.589		56	0.245		86	0.113
26	0.578		5/	0.234		8/	0.11
27	0.567		58	0.223		88	0.107
28	0.556		59	0.212		89	0.103
29	0.545		60	0.2		90	0.1
30	0.533					>90 - 120	0.1
1	1						

Table 4: Design Soil Application Rates						
(Source: USEPA Onsite Wastewater Treatment Systems Manual, February 2002)						
Soil Texture (per the USDA soil classification system)	Soil Structure Shape	Grade	Maximum Soil Application Rate(gallons per day per square foot) <sup>1</sup>			
Coarse Sand, Sand, Loamy Coarse Sand, Loamy Sand	Single grain	Structureless	0.8			
Fine Sand, Very Fine Sand, Loamy Fine Sand, Loamy Very Fine Sand	Single grain	Structureless	0.4			
Coarse Sandy Loam, Sandy Loam	Massive	Structureless	0.2			
	Platy	Weak	0.2			
		Moderate, Strong	Prohibited			
	Prismatic, Blocky,	Weak	0.4			
	Granular	Moderate, Strong	0.6			
Fine Sandy Loam, very fine Sandy	Massive	Structureless	0.2			
Loam	Platy	Weak, Moderate, Strong	Prohibited			
	Prismatic, Blocky,	Weak	0.2			
	Granular	Moderate, Strong	0.4			
Loam	Massive	Structureless	0.2			
	Platy	Weak, Moderate, Strong	Prohibited			
	Prismatic, Blocky, Granular	Weak	0.4			
	Grandiar	Moderate, Strong	0.6			
Silt Loam	Massive	Structureless	Prohibited			
	Platy	Weak, Moderate, Strong	Prohibited			
	Prismatic, Blocky, Granular	Weak	0.4			
		Moderate, Strong	0.6			
Sandy Clay Loam, Clay Loam, Silty	Massive	Structureless	Prohibited			
	Platy	Weak, Moderate, Strong	Prohibited			
	Prismatic, Blocky, Granular	Weak	0.2			
		Moderate, Strong	0.4			
Sandy Clay, Clay, or Silty Clay	Massive	Structureless	Prohibited			
	Platy	Weak, Moderate, Strong	Prohibited			
	Prismatic, Blocky, Granular	Weak	Prohibited			
		Moderate, Strong	0.2			

<sup>&</sup>lt;sup>1</sup> Soils listed as prohibited may be allowed under the authority of the Regional Water Board, or as allowed under an approved Local Agency Management Program per Tier 2.

- 8.1.8 All new dispersal systems shall have 100 percent replacement area that is equivalent and separate, and available for future use.
- 8.1.9 No dispersal systems or replacement areas shall be covered by an impermeable surface, such as paving, building foundation slabs, plastic sheeting, or any other material that prevents oxygen transfer to the soil.
- 8.1.10 Rock fragment content of native soil surrounding the dispersal system shall not exceed 50 percent by volume for rock fragments sized as cobbles or larger and shall be estimated using either the point-count or line-intercept methods.
- 8.1.11 Increased allowance for IAPMO certified dispersal systems is not allowed under Tier 1.
- 8.2 OWTS Construction and Installation
  - 8.2.1 All new or replacement septic tanks and new or replacement oil/grease interceptor tanks shall comply with the standards contained in Sections K5(b), K5(c), K5(d), K5(e), K5(k), K5(m)(1), and K5(m)(3)(ii) of Appendix K, of Part 5, Title 24 of the 2007 California Code of Regulations.
  - 8.2.2 All new septic tanks shall comply with the following requirements:
    - 8.2.2.1 Access openings shall have watertight risers, the tops of which shall be set at most 6 inches below finished grade; and
    - 8.2.2.2 Access openings at grade or above shall be locked or secured to prevent unauthorized access.
  - 8.2.3 New and replacement OWTS septic tanks shall be limited to those approved by the International Association of Plumbing and Mechanical Officials (IAPMO) or stamped and certified by a California registered civil engineer as meeting the industry standards, and their installation shall be according to the manufacturer's instructions.
  - 8.2.4 New and replacement OWTS septic tanks shall be designed to prevent solids in excess of three-sixteenths (3/16) of an inch in diameter from passing to the dispersal system. Septic tanks that use a National Sanitation Foundation/American National Standard Institute (NSF/ANSI) Standard 46 certified septic tank filter at the final point of effluent discharge from the OWTS and prior to the dispersal system shall be deemed in compliance with this requirement.

8.2.5 A Licensed General Engineering Contractor (Class A), General Building Contractor (Class B), Sanitation System Contractor (Specialty Class C-42), or Plumbing Contractor (Specialty Class C-36) shall install all new OWTS and replacement OWTS in accordance with California Business and Professions Code Sections 7056, 7057, and 7058 and Article 3, Division 8, Title 16 of the California Code of Regulations. A property owner may also install his/her own OWTS if the as-built diagram and the installation are inspected and approved by the Regional Water Board or local agency at a time when the OWTS is in an open condition (not covered by soil and exposed for inspection).

#### Attachment F Tier 2 – Local Agency OWTS Management Program

### Tier 2 – Local Agency OWTS Management Program

Local agencies may submit management programs for approval, and upon approval then manage the installation of new and replacement OWTS under that program. Local Agency Management Programs approved under Tier 2 provide an alternate method from Tier 1 programs to achieve the same policy purpose, which is to protect water quality and public health. In order to address local conditions, Local Agency Management Programs may include standards that differ from the Tier 1 requirements for new and replacement OWTS contained in Sections 7 and 8. As examples, a Local Agency Management Program may authorize different soil characteristics, usage of seepage pits, and different densities for new developments. Once the Local Agency Management Program is approved, new and replacement OWTS that are included within the Local Agency Management Program may be approved by the Local Agency. A Local Agency, at its discretion, may include Tier 1 standards within its Tier 2 Local Agency Management Program for some or all of its jurisdiction. However, once a Local Agency Management Program is approved, it shall supersede Tier 1 and all future OWTS decisions will be governed by the Tier 2 Local Agency Management Program until it is modified, withdrawn, or revoked.

#### 9.0 Local Agency Management Program for Minimum OWTS Standards

The Local Agency Management Program for minimum OWTS Standards is a management program where local agencies can establish minimum standards that are differing requirements from those specified in Tier 1 (Section 7 and Section 8), including the areas that do not meet those minimum standards and still achieve this Policy's purpose. Local Agency Management Programs may include any one or combination of the following to achieve this purpose:

- Differing system design requirements;
- Differing siting controls such as system density and setback requirements;
- Requirements for owners to enter monitoring and maintenance agreements; and/or
- Creation of an onsite management district or zone.
- 9.1 Where different and/or additional requirements are needed to protect water quality the local agency shall consider the following, as well as any other conditions deemed appropriate, when developing Local Agency Management Program requirements:
  - 9.1.1 Degree of vulnerability to pollution from OWTS due to hydrogeological conditions.
  - 9.1.2 High Quality waters or other environmental conditions requiring enhanced protection from the effects of OWTS.
  - 9.1.3 Shallow soils requiring a dispersal system installation that is closer to ground surface than is standard.
  - 9.1.4 OWTS is located in area with high domestic well usage.

# Tier 2 – Local Agency OWTS Management Program

- 9.1.5 Dispersal system is located in an area with fractured bedrock.
- 9.1.6 Dispersal system is located in an area with poorly drained soils.
- 9.1.7 Surface water is vulnerable to pollution from OWTS.
- 9.1.8 Surface water within the watershed is listed as impaired for nitrogen or pathogens.
- 9.1.9 OWTS is located within an area of high OWTS density.
- 9.1.10 A parcel's size and its susceptibility to hydraulic mounding, organic or nitrogen loading, and whether there is sufficient area for OWTS expansion in case of failure.
- 9.1.11 Geographic areas that are known to have multiple, existing OWTS predating any adopted standards of design and construction including cesspools.
- 9.1.12 Geographic areas that are known to have multiple, existing OWTS located within either the pertinent setbacks listed in Section 7.5 of this Policy, or a setback that the local agencies finds is appropriate for that area.
- 9.2 The Local Agency Management Program shall detail the scope of its coverage, such as the maximum authorized projected flows for OWTS, as well as a clear delineation of those types of OWTS included within and to be permitted by the program, and provide the local site evaluation, siting, design, and construction requirements, and in addition each of the following:
  - 9.2.1 Any local agency requirements for onsite wastewater system inspection, monitoring, maintenance, and repairs, including procedures to ensure that replacements or repairs to failing systems are done under permit from the local governing jurisdiction.
  - 9.2.2 Any special provisions applicable to OWTS within specified geographic areas near specific impaired water bodies listed for pathogens or nitrogen. The special provisions may be substantive and/or procedural, and may include, as examples: consultation with the Regional Water Board prior to issuing permits, supplemental treatment, development of a management district or zone, special siting requirements, additional inspection and monitoring.
  - 9.2.3 Local Agency Management Program variances, for new installations and repairs in substantial conformance, to the greatest extent practicable. Variances are not allowed for the requirements stated in sections 9.4.1 through 9.4.9.
  - 9.2.4 Any educational, training, certification, and/or licensing requirements that will be required of OWTS service providers, site evaluators, designers, installers, pumpers, maintenance contractors, and any other person relating to OWTS activities.
  - 9.2.5 Education and/or outreach program including informational materials to inform OWTS owners about how to locate, operate, and maintain their

OWTS as well as any Water Board order (e.g., Basin Plan prohibitions) regarding OWTS restrictions within its jurisdiction. The education and/or outreach program shall also include procedures to ensure that alternative onsite system owners are provided an informational maintenance or replacement document by the system designer or installer. This document shall cite homeowner procedures to ensure maintenance, repair, or replacement of critical items within 48 hours following failure. If volunteer well monitoring programs are available within the local agency's jurisdiction, the outreach program shall include information on how well owners may participate.

- 9.2.6 An assessment of existing and proposed disposal locations for septage, the volume of septage anticipated, and whether adequate capacity is available.
- 9.2.7 Any consideration given to onsite maintenance districts or zones.
- 9.2.8 Any consideration given to the development and implementation of, or coordination with, Regional Salt and Nutrient Management Plans.
- 9.2.9 Any consideration given to coordination with watershed management groups.
- 9.2.10 Procedures for evaluating the proximity of sewer systems to new or replacement OWTS installations.
- 9.2.11 Procedures for notifying the owner of a public water system prior to issuing an installation or repair permit for an OWTS, if the OWTS is within 1,200 feet of an intake point for a surface water treatment plant for drinking water, is in the drainage area catchment in which the intake point is located, and is located such that it may impact water quality at the intake point such as upstream of the intake point for a flowing water body, or if the OWTS is within a horizontal sanitary setback from a public well.
- 9.2.12 Policies and procedures that will be followed when a proposed OWTS dispersal area is within the horizontal sanitary setback of a public well or a surface water intake point. These policies and procedures shall either indicate that supplemental treatment as specified in 10.9 and 10.10 of this policy are required for OWTS that are within a horizontal sanitary setback of a public well or surface water intake point, or will establish alternate siting and operational criteria for the proposed OWTS that would similarly mitigate the potential adverse impact to the public water source.
- 9.2.13 Any plans for the phase-out or discontinuance of cesspool usage.
- 9.3 The minimum responsibilities of the local agency for management of the Local Agency Management Program include:
  - 9.3.1 Maintain records of the number, location, and description of permits issued for OWTS where a variance is granted.

#### Attachment F Tier 2 – Local Agency OWTS Management Program

- 9.3.2 Maintain a water quality assessment program to determine the general operation status of OWTS and to evaluate the impact of OWTS discharges, and assess the extent to which groundwater and local surface water quality may be adversely impacted. The focus of the assessment should be areas with characteristics listed under section 9.1. The assessment program will include monitoring and analysis of water quality data, review of complaints, variances, failures, and any information resulting from inspections. The assessment may use existing water quality data from other monitoring programs and/or establish the terms, conditions, and timing for monitoring done by the local agency. At a minimum this assessment will include monitoring data for nitrates and pathogens, and may include data for other constituents which are needed to adequately characterize the impacts of OWTS on water quality. Other monitoring programs for which data may be used include but are not limited to any of the following:
  - 9.3.2.1. Random well samples from a domestic well sampling program.
  - 9.3.2.2. Routine real estate transfer samples if those are performed and reported.
  - 9.3.2.3. Review of public system sampling reports done by the local agency or another municipality responsible for the public system.
  - 9.3.2.4. Water quality testing reports done at the time of new well development if those are reported.
  - 9.3.2.5. Beach water quality testing data performed as part of Health and Safety Code Section 115885.
  - 9.3.2.6. Receiving water sampling performed as a part of a NPDES permit.
  - 9.3.2.7. Data contained in the California Water Quality Assessment Database.
  - 9.3.2.8. Groundwater sampling performed as part of Waste Discharge Requirements.
  - 9.3.2.9. Groundwater data collected as part of the Groundwater Ambient Monitoring and Assessment Program and available in the Geotracker Database.
- 9.3.3 Submit an annual report by February 1 to the applicable Regional Water Board summarizing the status of items 9.3.1 through 9.3.2 above. Every fifth year, submit an evaluation of the monitoring program and an assessment of whether water quality is being impacted by OWTS, identifying any changes in the Local Agency Management Program that will be undertaken to address impacts from OWTS. The first report will commence one year after approval of the local agency's Local Agency Management Program. In addition to summarizing monitoring data collected per 9.3.2 above, all groundwater monitoring data generated by the local agency shall be submitted in EDF format for inclusion into

### Tier 2 – Local Agency OWTS Management Program

Geotracker, and surface water monitoring shall be submitted to CEDEN in a SWAMP comparable format.

- 9.4 The following are not allowed to be authorized in a Local Agency Management Program:
  - 9.4.1 Cesspools of any kind or size.
  - 9.4.2 OWTS receiving a projected flow over 10,000 gallons per day.
  - 9.4.3 OWTS that utilize any form of effluent disposal that discharges on or above the post installation ground surface such as sprinklers, exposed drip lines, free-surface wetlands, or a pond.
  - 9.4.4 Slopes greater than 30 percent without a slope stability report approved by a registered professional.
  - 9.4.5 Decreased leaching area for IAPMO certified dispersal systems using a multiplier less than 0.70.
  - 9.4.6 OWTS utilizing supplemental treatment without requirements for periodic monitoring or inspections.
  - 9.4.7 OWTS dedicated to receiving significant amounts of wastes dumped from RV holding tanks.
  - 9.4.8 Separation of the bottom of dispersal system to groundwater less than two(2) feet, except for seepage pits, which shall not be less than 10 feet.
  - 9.4.9 Installation of new or replacement OWTS where public sewer is available. The public sewer may be considered as not available when such public sewer or any building or exterior drainage facility connected thereto is located more than 200 feet from any proposed building or exterior drainage facility on any lot or premises that abuts and is served by such public sewer. This provision does not apply to replacement OWTS where the connection fees and construction cost are greater than twice the total cost of the replacement OWTS and the local agency determines that the discharge from the OWTS will not affect groundwater or surface water to a degree that makes it unfit for drinking or other uses.
  - 9.4.10 Except as provided for in sections 9.4.11 and 9.4.12, new or replacement OWTS with minimum horizontal setbacks less than any of the following:
    - 9.4.10.1 150 feet from a public water well where the depth of the effluent dispersal system does not exceed 10 feet in depth.
    - 9.4.10.2 200 feet from a public water well where the depth of the effluent dispersal system exceeds 10 feet in depth.
    - 9.4.10.3 Where the effluent dispersal system is within 600 feet of a public water well and exceeds 20 feet in depth the horizontal setback required to achieve a two-year travel time for microbiological contaminants shall be evaluated. A qualified professional shall conduct this evaluation. However in no case shall the setback be less than 200 feet.

#### Attachment F Tier 2 – Local Agency OWTS Management Program

- 9.4.10.4 Where the effluent dispersal system is within 1,200 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 400 feet from the high water mark of the reservoir, lake or flowing water body.
- 9.4.10.5 Where the effluent dispersal system is located more than 1,200 feet but less than 2,500 feet from a public water systems' surface water intake point, within the catchment area of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 200 feet from the high water mark of the reservoir, lake or flowing water body.
- 9.4.11 For replacement OWTS that do not meet the above horizontal separation requirements, the replacement OWTS shall meet the horizontal separation to the greatest extent practicable. In such case, the replacement OWTS shall utilize supplemental treatment and other mitigation measures, unless the permitting authority finds that there is no indication that the previous system is adversely affecting the public water source, and there is limited potential that the replacement system could impact the water source based on topography, soil depth, soil texture, and groundwater separation.
- 9.4.12 For new OWTS, installed on parcels of record existing at the time of the effective date of this Policy, that cannot meet the above horizontal separation requirements, the OWTS shall meet the horizontal separation to the greatest extent practicable and shall utilize supplemental treatment for pathogens as specified in section 10.8 and any other mitigation measures prescribed by the permitting authority.
- 9.5 A Local Agency Management Program for OWTS must include adequate detail, including technical information to support how all the criteria in their program work together to protect water quality and public health.
- 9.6 A Regional Water Board reviewing a Local Agency Management Program shall consider, among other things, the past performance of the local program to adequately protect water quality, and where this has been achieved with criteria differing from Tier 1, shall not unnecessarily require modifications to the program for purposes of uniformity, as long as the Local Agency Management Program meets the requirements of Tier 2.
### Tier 3 – Advanced Protection Management Programs for Impaired Areas

Existing, new, and replacement OWTS that are near impaired water bodies may be addressed by a TMDL and its implementation program, or special provisions contained in a Local Agency Management Program. If there is no TMDL or special provisions, new or replacement OWTS within 600 feet of impaired water bodies listed in Attachment 2 must meet the applicable specific requirements of Tier 3.

#### 10.0 Advanced Protection Management Program

An Advanced Protection Management Program is the minimum required management program for all OWTS located near a water body that has been listed as impaired due to nitrogen or pathogen indicators pursuant to Section 303(d) of the Clean Water Act. Local agencies are authorized to implement Advanced Protection Management Programs in conjunction with an approved Local Agency Management Program or, if there is no approved Local Agency Management Program, Tier 1. Local agencies are encouraged to collaborate with the Regional Water Boards by sharing any information pertaining to the impairment, provide advice on potential remedies, and regulate OWTS to the extent that their authority allows for the improvement of the impairment.

- 10.1 The geographic area for each water body's Advanced Protection Management Program is defined by the applicable TMDL, if one has been approved. If there is not an approved TMDL, it is defined by an approved Local Agency Management Program, if it contains special provisions for that water body. If it is not defined in an approved TMDL or Local Agency Management Program, it shall be 600 linear feet [in the horizontal (map) direction] of a water body listed in Attachment 2 where the edge of that water body is the natural or levied bank for creeks and rivers, the high water mark for lakes and reservoirs, and the mean high tide line for tidally influenced water bodies, as appropriate. OWTS near impaired water bodies that are not listed on Attachment 2, and do not have a TMDL and are not covered by a Local Agency Management Program with special provisions, are not addressed by Tier 3.
- 10.2 The requirements of an Advanced Protection Management Program will be in accordance with a TMDL implementation plan, if one has been adopted to address the impairment. An adopted TMDL implementation plan supersedes all other requirements in Tier 3. All TMDL implementation plans adopted after the effective date of this Policy that contain load allocations for OWTS shall include a schedule that requires compliance with the load allocations as soon as practicable, given the watershed-specific circumstances. The schedule shall require that OWTS implementation actions for OWTS installed prior to the TMDL implementation plan's effective date shall commence within 3 years after the TMDL implementation plan's effective date, and that OWTS implementation actions for OWTS installed after the TMDL implementation plan's effective date and that OWTS implementation actions for OWTS installed after the TMDL implementation plan set effective date shall commence immediately. The TMDL implementation plan may use some or all of the Tier 3 requirements and shall establish the applicable area of

implementation for OWTS requirements within the watershed. For those impaired water bodies that do have an adopted TMDL addressing the impairment, but the TMDL does not assign a load allocation to OWTS, no further action is required unless the TMDL is modified at some point in the future to include actions for OWTS. Existing, new, and replacement OWTS that are near impaired water bodies and are covered by a Basin Plan prohibition must also comply with the terms of the prohibition, as provided in Section 2.1.

- 10.3 In the absence of an adopted TMDL implementation plan, the requirements of an Advanced Protection Management Program will consist of any special provisions for the water body if any such provisions have been approved as part of a Local Agency Management Program.
- 10.4 The Regional Water Boards shall adopt TMDLs for impaired water bodies identified in Attachment 2, in accordance with the specified dates.
  - 10.4.1 If a Regional Water Board does not complete a TMDL within two years of the time period specified in Attachment 2, coverage under this Policy's waiver of waste discharge requirements shall expire for any OWTS that has any part of its dispersal system discharging within the geographic area of an Advanced Protection Management Program. The Regional Water Board shall issue waste discharge requirements, general waste discharge requirements, waivers of waste discharge requirements, or require corrective action for such OWTS. The Regional Water Board will consider the following when establishing the waste discharge requirements, general waste discharge requirements, waivers of waste discharge requirements, or requirement for corrective action:
    - 10.4.1.1 Whether supplemental treatment should be required.
    - 10.4.1.2 Whether routine inspection of the OWTS should be required.
    - 10.4.1.3 Whether monitoring of surface and groundwater should be performed.
    - 10.4.1.4 The collection of a fee for those OWTS covered by the order.
    - 10.4.1.5 Whether owners of previously-constructed OWTS should file a report by a qualified professional in accordance with section 10.5.
    - 10.4.1.6 Whether owners of new or replacement OWTS should file a report of waste discharge with additional supporting technical information as required by the Regional Water Board.
- 10.5 If the Regional Water Board requires owners of OWTS to submit a qualified professional's report pursuant to Section 10.4.1.5, the report shall include a determination of whether the OWTS is functioning properly and as designed or requires corrective actions per Tier 4, and regardless of its state of function, whether it is contributing to impairment of the water body.
  - 10.5.1 The qualified professional's report may also include, but is not limited to:

- 10.5.1.1 A general description of system components, their physical layout, and horizontal setback distances from property lines, buildings, wells, and surface waters.
- 10.5.1.2 A description of the type of wastewater discharged to the OWTS such as domestic, commercial, or industrial and classification of it as domestic wastewater or high-strength waste.
- 10.5.1.3 A determination of the systems design flow and the volume of wastewater discharged daily derived from water use, either estimated or actual if metered.
- 10.5.1.4 A description of the septic tank, including age, size, material of construction, internal and external condition, water level, scum layer thickness, depth of solids, and the results of a one-hour hydrostatic test.
- 10.5.1.5 A description of the distribution box, dosing siphon, or distribution pump, and if flow is being equally distributed throughout the dispersal system, as well as any evidence of solids carryover, clear water infiltration, or evidence of system backup.
- 10.5.1.6 A description of the dispersal system including signs of hydraulic failure, condition of surface vegetation over the dispersal system, level of ponding above the infiltrative surface within the dispersal system, other possible sources of hydraulic loading to the dispersal area, and depth of the seasonally high groundwater level.
- 10.5.1.7 A determination of whether the OWTS is discharging to the ground's surface.
- 10.5.1.8 For a water body listed as an impaired water body for pathogens, a determination of the OWTS dispersal system's separation from its deepest most infiltrative surface to the highest seasonal groundwater level or fractured bedrock.
- 10.5.1.9 For a water body listed as an impaired water body for nitrogen, a determination of whether the groundwater under the dispersal field is reaching the water body, and a description of the method used to make the determination.
- 10.6 For new, replacement, and existing OWTS in an Advanced Protection Management Program, the following are not covered by this Policy's waiver but may be authorized by a separate Regional Water Board order:
  - 10.6.1 Cesspools of any kind or size.
  - 10.6.2 OWTS receiving a projected flow over 10,000 gallons per day.
  - 10.6.3 OWTS that utilize any form of effluent disposal on or above the ground surface.
  - 10.6.4 Slopes greater than 30 percent without a slope stability report approved by a registered professional.

- 10.6.5 Decreased leaching area for IAPMO certified dispersal systems using a multiplier less than 0.70.
- 10.6.6 OWTS utilizing supplemental treatment without requirements for periodic monitoring or inspections.
- 10.6.7 OWTS dedicated to receiving significant amounts of wastes dumped from RV holding tanks.
- 10.6.8 Separation of the bottom of dispersal system to groundwater less than two (2) feet, except for seepage pits, which shall not be less than 10 feet.
- 10.6.9 Minimum horizontal setbacks less than any of the following:
  - 10.6.9.1 150 feet from a public water well where the depth of the effluent dispersal system does not exceed 10 feet in depth;
  - 10.6.9.2 200 feet from a public water well where the depth of the effluent dispersal system exceeds 10 feet in depth:
  - 10.6.9.3 Where the effluent dispersal system is within 600 feet of a public water well and exceeds 20 feet in depth the horizontal setback required to achieve a two-year travel time for microbiological contaminants shall be evaluated. A qualified professional shall conduct this evaluation. However in no case shall the setback be less than 200 feet.
  - 10.6.9.4 Where the effluent dispersal system is within 1,200 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 400 feet from the high water mark of the reservoir, lake or flowing water body.
  - 10.6.9.5 Where the effluent dispersal system is located more than 1,200 feet but less than 2,500 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 200 feet from the high water mark of the reservoir, lake or flowing water body.
  - 10.6.9.6 For replacement OWTS that do not meet the above horizontal separation requirements, the replacement OWTS shall meet the horizontal separation to the greatest extent practicable. In such case, the replacement OWTS shall utilize supplemental treatment and other mitigation measures.
  - 10.6.9.7 For new OWTS, installed on parcels of record existing at the time of the effective date of this Policy, that cannot meet the above horizontal separation requirements, the OWTS shall meet the horizontal separation to the greatest extent practicable and shall

utilize supplemental treatment for pathogens as specified in section 10.10 and any other mitigation measures as prescribed by the permitting authority.

- 10.7 The requirements contained in Section 10 shall not apply to owners of OWTS that are constructed and operating, or permitted, on or prior to the date that the nearby water body is added to Attachment 2 who commit by way of a legally binding document to connect to a centralized wastewater collection and treatment system regulated through WDRs as specified within the following timeframes:
  - 10.7.1 The owner must sign the document within forty-eight months of the date that the nearby water body is initially listed on Attachment 2.
  - 10.7.2 The specified date for the connection to the centralized community wastewater collection and treatment system shall not extend beyond nine years following the date that the nearby water body is added to Attachment 2.
- 10.8 In the absence of an adopted TMDL implementation plan or Local Agency Management Program containing special provisions for the water body, all new or replacement OWTS permitted after the date that the water body is initially listed in Attachment 2 that have any discharge within the geographic area of an Advanced Protection Management Program shall meet the following requirements:
  - 10.8.1 Utilize supplemental treatment and meet performance requirements in 10.9 if impaired for nitrogen and 10.10 if impaired for pathogens,
  - 10.8.2 Comply with the setback requirements of Section 7.5.1 to 7.5.5, and
  - 10.8.3 Comply with any applicable Local Agency Management Program requirements.
- 10.9 Supplemental treatment requirements for nitrogen
  - 10.9.1 Effluent from the supplemental treatment components designed to reduce nitrogen shall be certified by NSF, or other approved third party tester, to meet a 50 percent reduction in total nitrogen when comparing the 30-day average influent to the 30-day average effluent.
  - 10.9.2 Where a drip-line dispersal system is used to enhance vegetative nitrogen uptake, the dispersal system shall have at least six (6) inches of soil cover.

- 10.10 Supplemental treatment requirements for pathogens
  - 10.10.1 Supplemental treatment components designed to perform disinfection shall provide sufficient pretreatment of the wastewater so that effluent from the supplemental treatment components does not exceed a 30-day average TSS of 30 mg/L and shall further achieve an effluent fecal coliform bacteria concentration less than or equal to 200 Most Probable Number (MPN) per 100 milliliters.
  - 10.10.2 The minimum soil depth and the minimum depth to the anticipated highest level of groundwater below the bottom of the dispersal system shall not be less than three (3) feet. All dispersal systems shall have at least twelve (12) inches of soil cover.
- 10.11 OWTS in an Advanced Protection Management Program with supplemental treatment shall be designed to meet the applicable performance requirements above and shall be stamped or approved by a Qualified Professional.
- 10.12 Prior to the installation of any proprietary treatment OWTS in an Advanced Protection Management Program, all such treatment components shall be tested by an independent third party testing laboratory.
- 10.13 The ongoing monitoring of OWTS in an Advanced Protection Management Program with supplemental treatment components designed to meet the performance requirements in Sections 10.9 and 10.10 shall be monitored in accordance with the operation and maintenance manual for the OWTS or more frequently as required by the local agency or Regional Water Board.
- 10.14 OWTS in an Advanced Protection Management Program with supplemental treatment components shall be equipped with a visual or audible alarm as well as a telemetric alarm that alerts the owner and service provider in the event of system malfunction. Where telemetry is not possible, the owner or owner's agent shall inspect the system at least monthly while the system is in use as directed and instructed by a service provider and notify the service provider not less than quarterly of the observed operating parameters of the OWTS.
- 10.15 OWTS in an Advanced Protection Management Program designed to meet the disinfection requirements in Section 10.10 shall be inspected for proper operation quarterly while the system is in use by a service provider unless a telemetric monitoring system is capable of continuously assessing the operation of the disinfection system. Testing of the wastewater flowing from supplemental treatment components that perform disinfection shall be sampled at a point in the system after the treatment components and prior to the dispersal system and shall be conducted quarterly based on analysis of total coliform with a minimum detection limit of 2.2 MPN. All effluent samples must include the geographic coordinates of the sample's location. Effluent samples shall be taken by a service provider and analyzed by a California Department of Public Health certified laboratory.

10.16 The minimum responsibilities of a local agency administering an Advanced Protection Management Program include those prescribed for the Local Agency Management Programs in Section 9.3 of this policy, as well as monitoring owner compliance with Sections 10.13, 10.14, and 10.15.

## **Tier 4 – OWTS Requiring Corrective Action**

### **Tier 4 – OWTS Requiring Corrective Action**

OWTS that require corrective action or are either presently failing or fail at any time while this Policy is in effect are automatically included in Tier 4 and must follow the requirements as specified. OWTS included in Tier 4 must continue to meet applicable requirements of Tier 0, 1, 2 or 3 pending completion of corrective action.

#### **11.0 Corrective Action for OWTS**

- 11.1 Any OWTS that has pooling effluent, discharges wastewater to the surface, or has wastewater backed up into plumbing fixtures, because its dispersal system is no longer adequately percolating the wastewater is deemed to be failing, no longer meeting its primary purpose to protect public health, and requires major repair, and as such the dispersal system must be replaced, repaired, or modified so as to return to proper function and comply with Tier 1, 2, or 3 as appropriate.
- 11.2 Any OWTS septic tank failure, such as a baffle failure or tank structural integrity failure such that either wastewater is exfiltrating or groundwater is infiltrating is deemed to be failing, no longer meeting its primary purpose to protect public health, and requires major repair, and as such shall require the septic tank to be brought into compliance with the requirements of Section 8 in Tier 1 or a Local Agency Management Program per Tier 2.
- 11.3 Any OWTS that has a failure of one of its components other than those covered by 11.1 and 11.2 above, such as a distribution box or broken piping connection, shall have that component repaired so as to return the OWTS to a proper functioning condition and return to Tier 0, 1, 2, or 3.
- 11.4 Any OWTS that has affected, or will affect, groundwater or surface water to a degree that makes it unfit for drinking or other uses, or is causing a human health or other public nuisance condition shall be modified or upgraded so as to abate its impact.
- 11.5 If the owner of the OWTS is not able to comply with corrective action requirements of this section, the Regional Water Board may authorize repairs that are in substantial conformance, to the greatest extent practicable, with Tiers 1 or 3, or may require the owner of the OWTS to submit a report of waste discharge for evaluation on a case-by-case basis. Regional Water Board response to such reports of waste discharge may include, but is not limited to, enrollment in general waste discharge requirements, issuance of individual waste discharge requirements, or issuance of waiver of waste discharge requirements. A local agency may authorize repairs that are in substantial conformance, to the greatest extent practicable, with Tier 2 in accordance with section 9.2.3 if there is an approved Local Agency Management Program, or with an existing program if a Local Agency Management Program has not been approved and it is less than 5 years from the effective date of the Policy.

## **Tier 4 – OWTS Requiring Corrective Action**

- 11.6 Owners of OWTS will address any corrective action requirement of Tier 4 as soon as is reasonably possible, and must comply with the time schedule of any corrective action notice received from a local agency or Regional Water Board, to retain coverage under this Policy.
- 11.7 Failure to meet the requirements of Tier 4 constitute a failure to meet the conditions of the waiver of waste discharge requirements contained in this Policy, and is subject to further enforcement action.

Waiver – Effective Date – Financial Assistance

#### **Conditional Waiver of Waste Discharge Requirements**

- 12.0 In accordance with Water Code section 13269, the State Water Board hereby waives the requirements to submit a report of waste discharge, obtain waste discharge requirements, and pay fees for discharges from OWTS covered by this Policy. Owners of OWTS covered by this Policy shall comply with the following conditions:
  - 12.0.1 The OWTS shall function as designed with no surfacing effluent.
  - 12.0.2 The OWTS shall not utilize a dispersal system that is in soil saturated with groundwater.
  - 12.0.3 The OWTS shall not be operated while inundated by a storm or flood event.
  - 12.0.4 The OWTS shall not cause or contribute to a condition of nuisance or pollution.
  - 12.0.5 The OWTS shall comply with all applicable local agency codes, ordinances, and requirements.
  - 12.0.6 The OWTS shall comply with and meet any applicable TMDL implementation requirements, special provisions for impaired water bodies, or supplemental treatment requirements imposed by Tier 3.

12.0.7 The OWTS shall comply with any corrective action requirements of Tier 4.

12.1 This waiver may be revoked by the State Water Board or the applicable Regional Water Board for any discharge from an OWTS, or from a category of OWTS.

## **Effective Date**

13.0 This Policy becomes effective six months after its approval by the Office of Administrative Law, and all deadlines and compliance dates stated herein start at such time.

## **Financial Assistance**

- 14.0 Local Agencies may apply to the State Water Board for funds from the Clean Water State Revolving Fund for use in mini-loan programs that provide low interest loan assistance to private property owners with costs associated with complying with this Policy.
  - 14.1 Loan interest rates for loans to local agencies will be set by the State Water Board using its policies, procedures, and strategies for implementing the Clean Water State Revolving Fund program, but will typically be one-half of the States most recent General Obligation bond sale. Historically interest rates have ranged between 2.0 and 3.0 percent.
  - 14.2 Local agencies may add additional interest points to their loans made to private entities to cover their costs of administering the mini-loan program.
  - 14.3 Local agencies may submit their suggested loan eligibility criteria for the min-loan program they wish to establish to the State Water Board for approval, but should consider the legislative intent stated in Water Code Section 13291.5 is that assistance is encouraged for private property owners whose cost of complying with the requirements of this policy exceeds one-half of one percent of the current assessed value of the property on which the OWTS is located.

**OWTS Policy Time Lines** 



The tables below specifically identify those impaired water bodies where: (1) it is likely that operating OWTS will subsequently be determined to be a contributing source of pathogens or nitrogen and therefore it is anticipated that OWTS would receive a loading reduction, and (2) it is likely that new OWTS installations discharging within 600 feet of the water body would contribute to the impairment. Per this Policy (Tier 3, Section 10) the Regional Water Boards must adopt a TMDL by the date specified in the table. The State Water Board, at the time of approving future 303 (d) Lists, will specifically identify those impaired water bodies that are to be added or removed from the tables below.

Table	e 5. Water Bodie	es impaired for pathogens	s that are subject to Tier 3 as o	of 2012.
7				

REGION	REGION NAME	WATERBODY NAME	COUNTIES	TMDL Completion Date
1	North Coast	Clam Beach	Humboldt	2020
1	North Coast	Luffenholtz Beach	Humboldt	2020
1	North Coast	Moonstone County Park	Humboldt	2020
1	North Coast	Russian River HU, Lower Russian River HA, Guerneville HSA, mainstem Russian River from Fife Creek to Dutch Bill Creek	Sonoma	2016
1	North Coast	Russian River HU, Lower Russian River HA, Guerneville HSA, Green Valley Creek watershed	Sonoma	2016
1	North Coast	Russian River HU, Middle Russian River HA, Geyserville HSA, mainstem Russian River at Healdsburg Memorial Beach and unnamed tributary at Fitch Mountain	Sonoma	2016
1	North Coast	Russian River HU, Middle Russian River HA, mainstem Laguna de Santa Rosa	Sonoma	2016
1	North Coast	Russian River HU, Middle Russian River HA, mainstem Santa Rosa Creek	Sonoma	2016
1	North Coast	Trinidad State Beach	Humboldt	2020
2	San Francisco Bay	China Camp Beach	Marin	2014
2	San Francisco Bay	Lawsons Landing	Marin	2015
2	San Francisco Bay	Pacific Ocean at Bolinas Beach	Marin	2014

REGION NO.	REGION NAME	WATERBODY NAME	COUNTIES	TMDL Completion Date
2	San Francisco	Pacific Ocean at Fitzgerald Marine Reserve	San Mateo	0040
0	Bay San Francisco	Desifie Ossen et Muiz Deseb	Maria	2016
2	San Francisco Bay	Pacific Ocean at Mulr Beach	wann	2015
2	San Francisco	Pacific Ocean at Pillar Point Beach	San Mateo	0010
	Bay	Did have Diver		2016
2	San Francisco Bay	Petaluma River	Marin, Sonoma	2017
2	San Francisco Bay	Petaluma River (tidal portion)	Marin, Sonoma	2017
2	San Francisco	San Gregorio Creek	San Mateo	2011
	Вау			2019
3	Central Coast	Pacific Ocean at Point Rincon (mouth of Rincon Cr, Santa	Santa Barbara	
		Barbara County)		2015
3	Central Coast	Rincon Creek	Santa Barbara,	
			Ventura	2015
4	Los Angeles	Canada Larga (Ventura River Watershed)	Ventura	2017
4	Los Angeles	Coyote Creek	Los Angeles, Orange	2015
4	Los Angeles	Rincon Beach	Ventura	2017
4	Los Angeles	San Antonio Creek (Tributary to Ventura River Reach 4)	Ventura	2017
4	Los Angeles	San Gabriel River Reach 1 (Estuary to Firestone)	Los Angeles	2015
4	Los Angeles	San Gabriel River Reach 2 (Firestone to Whittier Narrows Dam	Los Angeles	2015
4	Los Angeles	San Gabriel River Reach 3 (Whittier Narrows to Ramona)	Los Angeles	2015
4	Los Angeles	San Jose Creek Reach 1 (SG Confluence to Temple St.)	Los Angeles	2015
4	Los Angeles	San Jose Creek Reach 2 (Temple to I-10 at White Ave.)	Los Angeles	2015
4	Los Angeles	Sawpit Creek	Los Angeles	2015
4	Los Angeles	Ventura River Reach 3 (Weldon Canyon to Confl. w/ Coyote Cr)	Ventura	2017
4	Los Angeles	Walnut Creek Wash (Drains from Puddingstone Res)	Los Angeles	2015
5	Central Valley	Wolf Creek (Nevada County)	Nevada, Placer	2020
5	Central Valley	Woods Creek (Tuolumne County)	Tuolumne	2020
7	Colorado River	Alamo River	Imperial	2017

REGION	REGION NAME	WATERBODY NAME	COUNTIES	TMDL Completion Date
7	Colorado River	Palo Verde Outfall Drain and Lagoon	Imperial, Riverside	2017
8	Santa Ana	Canyon Lake (Railroad Canyon Reservoir)	Riverside	2019
8	Santa Ana	Fulmor, Lake	Riverside	2019
8	Santa Ana	Goldenstar Creek	Riverside	2019
8	Santa Ana	Los Trancos Creek (Crystal Cove Creek)	Orange	2017
8	Santa Ana	Lytle Creek	San Bernardino	2019
8	Santa Ana	Mill Creek Reach 1	San Bernardino	2015
8	Santa Ana	Mill Creek Reach 2	San Bernardino	2015
8	Santa Ana	Morning Canyon Creek	Orange	2017
8	Santa Ana	Mountain Home Creek	San Bernardino	2019
8	Santa Ana	Mountain Home Creek, East Fork	San Bernardino	2019
8	Santa Ana	Silverado Creek	Orange	2017
8	Santa Ana	Peters Canyon Channel	Orange	2017
8	Santa Ana	Santa Ana River, Reach 2	Orange, Riverside	2019
8	Santa Ana	Temescal Creek, Reach 6 (Elsinore Groundwater sub basin boundary to Lake Elsinore Outlet)	Riverside	2019
8	Santa Ana	Seal Beach	Orange	2017
8	Santa Ana	Serrano Creek	Orange	2017
8	Santa Ana	Huntington Harbour	Orange	2017

**Table 6.** Water Bodies impaired for nitrogen that are subject to Tier 3.

<u>.</u>				
REGION N	REGION NAME	WATERBODY NAME	COUNTIES	TMDL Completion Date
		Russian River HU, Middle Russian River HA, mainstem		
1	North Coast	Laguna de Santa Rosa	Sonoma	2015
	San Francisco			
2	Bay	Lagunitas Creek	Marin	2016
	San Francisco			0011
2	Bay	Napa River	Napa, Solano	2014
2	San Francisco	Bataluma Diver	Marin Sanama	2017
	Day San Francisco			2017
2	Bay	Petaluma River (tidal portion)	Marin, Sonoma	2017
	San Francisco			
2	Bay	Sonoma Creek	Sonoma	2014
	San Francisco			
2	Bay	Tomales Bay	Marin	2019
	San Francisco			
2	Вау	Walker Creek	Marin	2016
4	Los Angeles	Malibu Creek	Los Angeles	2016
4	Los Angeles	San Antonio Creek (Tributary to Ventura River Reach 4)	Ventura	2013
8	Santa Ana	East Garden Grove Wintersburg Channel	Orange	2017
8	Santa Ana	Grout Creek	San Bernardino	2015
8	Santa Ana	Rathbone (Rathbun) Creek	San Bernardino	2015
8	Santa Ana	Summit Creek	San Bernardino	2015
8	Santa Ana	Serrano Creek	Orange	2017

Regional Water Boards, upon mutual agreement, may designate one Regional Water Board to regulate a person or entity that is under the jurisdiction of both (Water Code Section 13228). The following table identifies the designated Regional Water Board for all counties within the State for purposes of reviewing and, if appropriate, approving new Local Agency Management Plans.

County	Regions with Jurisdiction	Designated Region	County	Regions with Jurisdiction	Designated Region
Alameda	2,5	2	Placer	5,6	5
Alpine	5,6	6	Plumas	5	5
Amador	5	5	Riverside	7,8,9	7
Butte	5	5	Sacramento	5	5
Calaveras	5	5	San Benito	3,5	3
Colusa	5	5	San		
Contra			Bernardino	6,7,8	6
Costa	2,5	2	San Diego	9,7	9
Del Norte	1	1	San		
El Dorado	5,6	5	Francisco	2	2
Fresno	5	5	San Joaquin	5	5
Glenn	5,1	5	San Luis Obispo	35	3
Humboldt	1	1	Son Motoo	3,5	2
Imperial	7	7	Santa	2,3	2
Inyo	6	6	Barbara	3	3
Kern	3,4,5,6	5	Santa Clara	2.3	2
Kings	5	5	Santa Cruz	3	3
Lake	5,1	5	Shasta	5	5
Lassen	5,6	6	Sierra	56	5
Los Angeles	4,6	4	Siskiyou	1.5	1
Madera	5	5	Solano	2.5	5
Marin	2,1	2	Sonoma	1.2	1
Mariposa	5	5	Stanislaus	5	5
Mendocino	1	1	Sutter	5	5
Merced	5	5	Tehama	5	5
Modoc	1,5,6	5	Trinity	1	1
Mono	6	6	Tulare	5	5
Monterey	3	3	Tuolumne	5	5
Napa	2,5	2	Ventura	43	<u>ح</u>
Nevada	5,6	5	Yolo	5	5
Orange	8,9	8	Yuba	5	5

Table 7. Regional Water Board designations by County.

**APPENDIX II: On-Site Sewage Guidelines County of Orange** 

300 N. Flower Street



**On-Site Sewage Guidelines** 

**County of Orange** 

Santa Ana, CA 92703 714.667.8888

714.667.8885

ocpCustomerCare@ocpw.ocgov.com

www.ocplanning.net

#### **ON-SITE SEWAGE ABSORPTION SYSTEM GUIDELINES**

The purpose of these guidelines is to provide a uniform approach to the percolation testing requirements and design criteria of an on-site sewage absorption system so as to reasonably expect the system to function in a safe and sanitary manner. An on-site sewage absorption system consists of either a trench leach field or a seepage pit. The use of these systems is considered temporary until such time as a public sanitary sewer becomes available.

The Orange County Public Works Department (OCPW) is responsible for the review and approval of all percolation tests for on-site sewage systems, as well as plans for their design. OC Public Works' approval of proposed on-site sewage systems may be either a requirement for recordation of a parcel/tract map or a requirement before building/structural permits are issued. For approval of an on-site sewage system, not only must the percolation tests be performed in accordance with the procedures but the system must be designed as provided herein.

#### I. **Building/Structural Permit**

Percolation tests and plans illustrating the designed on-site sewage may be necessary in order to obtain a building and/or plumbing permit for an existing legal building site, remodeling a home, or renovating a failed system. The intent is to assure that the system is designed and can be constructed in accordance with County requirements.

#### II. **Recordation of a Tract or Parcel Map**

Percolation tests and plans illustrating the designed on-site sewage system may also be a recordation requirement of a tentative map. In this instance, it is not normally necessary to site a dwelling on each lot; but rather demonstrate that there is sufficient area with suitable percolation, physiographic and geologic characteristics to be able to construct an absorption system to serve a three to four bedroom house. Consideration should be given to conditions expected after grading. At least three to four passing tests are required in an area where a trench leach field system can be designed and/or one passing test for seepage pits.

#### III. **Preparation of the Report/Plan**

All percolation tests, reports and plans shall be under the supervision of a Registered Environmental Health Specialist (Sanitarian), Registered Civil Engineer, Registered Geologists, or Engineering Geologist. Orange County Public Works' offices are located at 300 North Flower, Santa Ana, CA 92702. Public hours are 7:30 a.m. to 5:00 p.m., Monday through Friday, except holidays.

#### IV. <u>Submittal of Reports and Plans</u>

Four (4) copies of the engineer's soil percolation reports are to be submitted to the Plumbing Plan Check section, OC Public Works. All reports must include a log of all soil borings and percolation tests as well as plans showing a designated system.

Reports and plans submitted to obtain **<u>Building Permits</u>** must include:

- Depth to groundwater
- Depth to any impervious layers
- Acceptable result of six percolation tests distributed throughout an area set aside for trench leach fields and/or at least one passing percolation for seepage pits for the proposed dwelling
- Distance between trenches or seepage pits
- Location of property lines
- Drainage courses
- Soils characteristics
- Trench width or pit diameter
- Pit depth or depth of gravel below pipe
- Topographic lines, if steep slopes exist
- Footprint of house
- Outline of septic tank and distribution box
- The plan must reflect all conditions after precise grading, including items listed in Table 4, page 10.

Reports and plans submitted for recordation of a map must include:

- Acceptable results of three to four percolation tests for a trench leach field and one passing test for a seepage pit
- Soils characteristics
- Size of proposed lots
- Slopes, topographical lines
- Drainage courses
- Depth of groundwater
- Depth of impervious layer
- Required set backs
- Any pertinent constraints

#### V. <u>Percolation Tests for Trench Leach Fields and Seepage Pits</u>

Percolation rates must be figured on the basis of the test data obtained after the soil has had the opportunity to be saturated with clear water. After the test hole has been bored it must be kept filled for at least four hours and preferably overnight. Tests are to be conducted the following day to allow the soil to swell for at least 24 hours, thereby approaching the conditions during the wettest season of the year.

In no instance shall percolation tests be conducted in a graded "fill area".

In the case of either a trench leach field or seepage pit, at least one exploratory boring is required per system in order to determine depth to groundwater and any impervious layer. The boring must extend at least five feet below the proposed trench bottom and ten feet below the pit bottom. Further, the soil profiles in each of the exploratory borings are to be recorded. Groundwater is defined as zones of saturation, which include perched water tables, shallow regional groundwater tables or aquifers, or zones that are seasonally, periodically, or permanently saturated. Zones of seasonal or periodic soil saturation shall be estimated at the highest level of redoximorphic features, such as soil mottles or low-chroma colors (except soils with rapid permeability). Test holes and exploratory borings shall be back-filled and properly compacted after tests are done.

Unless otherwise waived by the Building Official, both trench leach fields and seepage pit effective sidewall shall be increased by an amount equal to 100% of the original design capacity. This is to assure a "backup" system is available at the time of initial construction. Separate the backup system from the primary system with a diverter valve, (see pages 12 & 13).

#### VI. <u>Trench Leach Field Test Procedures</u>

- A. Tests shall be made in separate test holes spaced uniformly over the proposed absorption field site.
- B. Holes are to be dug or bored with a diameter of 8-12 inches. The bottom of the test hole shall be located at the same depth as the bottom of the proposed leaching field.
- C. The bottom and sides of the hole are to be roughened or scored with a knife blade or putty knife in order to remove any smeared soil surfaces and to provide a natural soil interface into which water may percolate. All loose material is to be removed from the hole. Two inches of coarse sand and fine gravel are to be added to protect the bottom from scouring.
- D. Each test hole is to be presaturated with clear water as noted above.
- E. After the 24 hour presaturated period each hole is to be carefully filled with clear water to a level approximately six inches over the gravel.
- F. From a fixed reference point, the drop in water level is to be measured at approximately 30 minute intervals for six hours, refilling to six inches over the gravel as necessary. The slowest drop of all tests that occurs during the final 30 minute period is used to calculate the percolation rate. The drops during prior periods provide information for possible modification of the procedure to suit local circumstances.
- G. In sandy soils in which two consecutive measurements show that six inches of water seeps away in less than 25 minutes, the test may be run for an hour with measurements taken every ten minutes. The drop that occurs during the final ten minutes should be used to calculate the percolation rate. Field data must show the two-25 minute readings, along with the six-10 minute readings.
- H. The minimum acceptable percolation rate for a trench leach field is 60 min./in. The maximum rate shall not exceed 4 min./in.

#### VII. Trench Leach Field Design Standards

Disposal Field shall be constructed as follows:

-		
1.	Minimum Number of Drain Lines Per Field	1
2.	Maximum Length of Each Line	100 ft.
3.	Minimum Bottom Width of Trench	18 in.
4.	Maximum Bottom Width of Trench	36 in.
5.	Minimum Spacing of 18" Width Lines Center to Center	6 ft.
6.	Minimum Spacing of 36" Width Lines Center to Center	8 ft.
7.	Minimum Depth of Cover of Lines	12 in.
8.	Preferred Depth of Cover of Lines	18 in.
9.	Minimum Filter Material Over Drain Lines	2 in.
10.	Minimum Separation Between Bottom of Leach Line and	5 ft.
	Seasonally High Groundwater	
11.	Leach Lines are not to be Installed Under Driveways, Paved	
	or Unpaved, or in Horse Corrals	
12.	Perforated Pipe Shall be Laid Level and with the End of the	
	Line Capped.	
13.	Any portion of the disposal field located to the top of a cut or	See
	on sloping ground shall maintain a 15 foot horizontal	Table 1
	distance from day light to any portion of the leach line or	
	leach bed. Table 1 gives the minimum cover allowed versus	
	the percent of slope in the area of the disposal field to meet	
	the 15 foot requirement. This table also gives a factor by	
	which to increase the square foot of bottom area due to the	
	loss in evaportranspiration caused by the added cover	
	required.	

#### TABLE 1

Slope of natural ground in area of	Minimum cover over	Minimum Depth of	Overburden
disposed system	filter material (ft.)	Test Req. * (ft.)	factor **
5%	1.0'	3.0'	1.0
10%	1.5'	3.5'	1.0
15%	2.25'	4.25'	1.0
20%	3.0'	5.0'	1.0
25%	3.75'	5.75'	1.1
30%	4.5'	6.5'	1.2
35%	5.25'	7.25'	1.3
40%	6.0'	8.0'	1.4
45%***	7.0'	9.0'	1.5

\* Assuming standard trench (see Table 2). To be adjusted for greater than 12" gravel below pipe.

\*\* Overburden factor for leaching line where overburden is not removed to allow for minimum cover. \*\*\* No system shall be installed with a slope greater than 45 % (equivalent to 2:1 slope where 100% is

\*\*\* No system shall be installed with a slope greater than 45 % (equivalent to 2:1 slope where 100% is equivalent to 1:1 slope)

Tables 2 and 3 below are used to calculate the linear feet required for a trench leach line. Table 2 lists the required linear feet of standard trench for a given percolation rate.

#### TABLE 2

Percolation rate (time required for water to fall one	Required absorption area, in sq. ft. per
inch, in minutes)	bedroom based on a standard trench*
4 min./in.	115 sq. ft.
5 min./in.	125 sq. ft.
10 min./in.	165 sq. ft.
15 min./in.	190 sq. ft.
30 min./in.	250 sq. ft.
45 min./in.	300 sq. ft.
60 min./in.	330 sq. ft.

(Provides for garbage disposal and automatic clothes washing machines)

\* A standard trench is one in which the filter material extends 2 inches above and 12 inches below a 4 inch perforated drain line.

In cases where the depth of filter material below the drain line exceeds the standard 12 inch depth, credit may be given for the added absorption area provided in deeper trenches with a resultant decrease in length of trench. Such credit shall be given in accordance with Table 3 which gives the percentage of length of standard absorption trench (as computed from Table 2), based on six inch increments of increase in depth of filter material.

#### TABLE 3

	PERCENTAGE: DEPTH VS. WIDTH					
Depth of Gravel be inches	low Pipe in	Trench width 12"	Trench width 18"	Trench width 24"	Trench width 36"	
12"		75%	78%	80%	83%	
18"		60%	64%	66%	71%	
24"		50%	54%	57%	62%	
30"		43%	47%	50%	55%	
36"		37%	41%	44%	50%	

The following formula is used to determine the length of the line required.

 $\frac{(AxB)}{W} \ge C \ge D = \text{length of line (then multiply by 2 to equal 100\% of the original design capacity)}$ 

- Where: A = absorption area (from Table 2) B = the number of bedrooms W = the proposed width of the trench in feet C = percentage of standard trench (from Table 3)D = overburden factor (from Table 1)
- Note: It must be stressed that the proposed maximum depth of the trench disposal system must not exceed the depth of the percolation test. For example, tests must be performed at 54 inches to utilize 36 inches of filter material below the pipe.



#### VIII. Seepage Pits Percolation Test Procedures

- A. Six to eight inch diameter holes only are accepted for percolation testing.
- B. The holes are to be drilled and tested to the depth of the proposed pit, prepared and presaturated as noted in Section V above. Minimum of 12 foot separation is required between percolation test hole and ground water test boring.
- C. The percolation rate measurement shall be made on the day following the presoak.
- D. The water depth is to be adjusted to the proposed seepage pit inlet depth; usually four feet below the natural grade.
- E. From a fixed reference point, the drop in water level is to be measure over a 30 minute period for at least five hours; refilling after every reading.
- F. The last or the sixth hour, the hole should not be refilled; but the drop in the water level is to be read every ½ hour. The drop that occurs during the final 30 minute period is used to calculate the percolation rate.

- G. The total depth of the hole must also be taken at every reading to determine if caving has occurred.
- H. In sandy soils where the water on two consecutive readings seeps away faster than half the wetted depth in 25 minutes or less, after a two hour presoak the test may then be taken at ten minute intervals and run for one hour. The last ten minute reading shall be the design rate.
- I. Seepage pit percolation rates shall be calculated by the equation.

$$Q = \frac{\underline{F}}{\underline{T} \times D \times 9}$$

where:

Q = rate in gallon/sq. ft. of side wall per day

- F = drop during time interval (ft)
- D = boring diameter (ft)
- T = time interval (hr)
- L = average wetted depth (ft)



- J. The minimum acceptable percolation rate for seepage pits is a Q equal to 1.1 the maximum rate shall not exceed 3.0 gal/sq.ft./day.
- K. The amount of effective side wall below pit inlet is as follows:
  - a. For a five foot diameter pit

Depth of seepage =  $\frac{\text{Septic Tank Capacity x } 2^*}{Q \times 15.7}$ 

b. For a six foot diameter pit

Depth of seepage =  $\underline{Septic Tank Capacity x 2^*}$ pit below inlet Q x 18.8

Q = percolation rate in gal./sq.ft./day

\*100% of the original design capacity

#### IX. <u>Seepage Pit Design</u>

- A. Seepage pit should be constructed as follows:
  - a. Each seepage pit shall be circular in shape and shall have an excavated, diameter of not less then five feet. Each such pit shall be lined with whole new hard burned clay brick, concrete brick, concrete circular type cesspool blocks or other materials approved by OC Public Works. Approval from OC Public Works shall be obtained prior to construction for any pit having an excavated diameter greater than six (6) feet.
  - b. Each seepage pit shall have a minimum sidewall (not including the arch) of (10) feet below the inlet with a maximum total depth of 40 feet unless approved by the Building Official.
  - c. The top of the arch, or cover, must be at least eighteen (18) inches but no more than four (4) feet below the surface of the ground.
  - d. The horizontal distance from a seepage pit to the top of a cut bank shall be equal to five times the vertical height of the bank or 25 feet, which ever is less.
  - e. Maintain a ten-foot separation between bottom of the pit and seasonally high groundwater.
  - f. A 10-foot separation is required between the pit bottom and an impervious layer (e.g., bedrock or any layer where the percolation rate is greater than 20 min./in.).

#### X. Septic Tank Design

A. Capacity of septic tank shall be per California Plumbing Code, currently adopted edition (see page 9).

Residential septic tank size is based on the number of bedrooms served. For design purposes, a bedroom is defined as any space in a conditioned (heated) area of a dwelling unit which is 70 square feet and greater in size and which is an exterior room, unless it is one of the following:

- Hall;
- Bathroom;
- Kitchen;
- Living Room (maximum of one per dwelling unit);
- Dining Room (opening off of the kitchen or living room, maximum of one per dwelling unit);
- Family Room (opening off of the kitchen or living room, maximum of one per dwelling unit);
- Breakfast Nook (opening off of the kitchen, maximum of one per dwelling unit);
- Pantry (maximum of one per dwelling unit);
- Laundry Room;
- Closet/Dressing Room opening off of the bedroom

Sewing rooms, dens, offices, studios, lofts, game rooms, and any other exterior room 70 square feet and greater in size shall be counted as bedrooms regardless of whether they are entered through a door, unless the room is otherwise exempted.

The Building Official may grant exceptions, if, in his/her discretion, a room cannot, by its design, function as a bedroom.

- B. Provide effluent filter and water tight risers to grade, for filter maintenance.
- C. When the quantity of sewage exceeds the amount that can be disposed in five hundred (500) Linear feet (152.4 m) of leach line, a dosing tank shall be used. Dosing tanks shall be equipped with an automatic siphon or pump which discharges that tank once every three (3) or four (4) hours. The tank shall have a capacity equal to sixty (60) to seventy-five (75) percent of the interior capacity of the pipe to be dosed at one time. Where the total length of pipe exceeds one thousand (1000) linear feet (304.8 m), the dosing tank shall be provided with two (2) siphons or pumps dosing alternately and each serving one-half (1/2) of the leach field.
- D. Water softener, iron filter discharge, or swimming pool and spa filter backwash to a sewage disposal system is prohibited.

#### CALIFORNIA PLUMBING CODE

Single family dwellings -	Multiple dwelling units or	Other Uses: Maximum	Minimum septic
number of bedrooms	apartments - one bedroom each	Table 4-1	gallons (liters)
1 or 2		15	750 (2839)
3		20	1000 (3785)
4	2 units	25	1200 (4542)
5 or 6	3	33	1500 (5678)
	4	45	2000 (7571)
	5	55	2250 (8518)
	6	60	2500 (9464)
	7	70	2750 (10410)
	8	80	3000 (11356)
	9	90	3250 (12303)
	10	100	3500 (13249)

#### **Capacity of Septic Tanks\***

Extra bedroom, 150 gallons (567.8 liters) each. Extra dwelling units over 10; 250 gallons (946.3 liters) each. Extra fixture units over 100; 25 gallons (94.6 liters) per fixture units.

\*NOTE: Septic tank sizes in this table include sludge storage capacity and the connection disposal of domestic food waste units without further volume increase.

#### XI. Sewage Disposal Setback Requirements

Minimum horizontal separations for subsurface sewage disposal are as follows:

Minimum Horizontal Distance Required From:	Septic Tank	Disposal Field	Seepage Pit
Building of structures <sup>1</sup>	5 ft.	8 ft.	8 ft.
Swimming pools/spas	8 ft.	15 ft.	15 ft.
Property line adjoining private property <sup>2</sup>	5 ft.	5 ft.	8 ft.
Water supply wells	50 ft.	100 ft.	150 ft.
Streams (Ephemeral/Perennial)	50 ft.	50 ft.	100 ft.
Trees	10 ft.	10 ft.	10 ft.
Seepage pits or cesspools	5 ft.	5 ft.	12 ft.
Disposal field	5 ft.	8 ft. <sup>3</sup>	5 ft.
On-site domestic water service line	5 ft.	5 ft.	5 ft.
Distribution box		5 ft.	5 ft.
Pressure public water main	10 ft. <sup>4</sup>	10 ft. <sup>4</sup>	10 ft. <sup>4</sup>
Flood plain/flooding	5 ft	15 ft. <sup>5</sup>	15 ft. <sup>5</sup>

#### TABLE 4

<sup>1</sup> Including porches and steps, whether covered or uncovered, breezeways, roofed porte-cocheres, roofed patios, carports, covered walks, covered driveways and similar structures or appurtenances.

<sup>2</sup> System may go up to edge of property line adjoining public property if no public water mains are within or anticipated within 25 feet of the property line. A statement from the Water District is required.

<sup>3</sup> For a 36 inch wide trench, 8 feet is required center to center. See Section VII, Trench Leach Field Design Standards.

<sup>4</sup> Preferably 25 feet.

<sup>5</sup> No part of the absorption system shall be allowed within a 100-Year Flood Plain unless the finished grade in the absorption system is 12 inches above the limit of the Flood Plain and there is a 15-foot setback from said plain to the sidewall limits of the absorption system. The flood plain is defined by the Flood Insurance Rate Map description (Firm Mapping) developed by the U.S. Dept. of Housing and Urban Development, Federal Insurance Administration.

#### XII. Abandoned Sewage Disposal Facilities

- A. Every abandoned building (house) sewer, or part thereof, shall be plugged or capped in an approved manner within five (5) feet (1524 mm) of the property line.
- B. Every cesspool, septic tank, and seepage pit which has been abandoned or has been discontinued otherwise from further use or to which no waste or soil pipe from a plumbing fixture is connected, shall have the sewage removed there from and be completely filled with the earth, sand, gravel, concrete, or other approved material.
- C. Break out two minimum 12" diameter or equivalent holes at the bottom for drainage.
- D. The top or arch over the cesspool, septic tank, or seepage pit shall be removed before filling and the filling shall not extend above the top of the vertical portions of the sidewalls or above the level of any outlet pipe until inspection has been called and the cesspool, septic tank, or seepage pit has been inspected. After such inspection, the cesspool, septic tank, or seepage pit shall be filled to the level of the top of the ground.
- E. Fill material may be sand, pea gravel or slurry.
- F. Site plan shall indicate the location of this abandoned sewage disposal facility as "No build area" unless the tank is completely removed.

#### DIVERTER VALVE

#### INSTALLATION INSTRUCTIONS

#### INSTALLING THE VALVE

The valve must be installed with the septic tank effluent line connected to port marked "IN". The ports marked "OUT" are to be connected to lines supplying each septic field.

The Riser Tube can be cut to any suitable length from 4" PVC or ABS pipe. The Riser should be cut and installed so the water-tight access cap is flush with the finished backfilled grade. Pipe inserts over the top of the valve body. Use PVC or multipurpose adhesive to form a water-tight joint.



#### **OPERATING THE VALVE**

The Direction Control Handle should be rotated periodically to direct effluent to one or the other of two septic fields. After removing the screw cap at the top of Riser Tube, the valve handle can be turned with the Valve Key furnished.



#### PLACEMENT OF LABEL

This label is designed to be placed in a service area, such as a laundry room or a basement area, possibly near a fuse box or circuit breakers. The label should be placed in a work area, not in an area that may become a recreation area where the homeowner may tend to remove it or cover it with some decorative wall covering. It should serve as a helpful reminder to turn the valve, thus prolonging the life of the septic system.

#### FILLING THE BLANKS

The label should be filled in by the installer or by the person certifying the system, so the consumer has a ready reference for turning the valve on schedule. It also provides a place for naming an agency to call for answers to any questions that may arise during the use of the system.

The label to the right is an example of the proper way to fill in the label. This way it should be the most help to the consumer.

YOUR SEWAGE DISPOSAL SYSTEM IS EQUIPPED WITH A DIVERTER VALVE.	
THE VALVE SHOULD BE TURNED (Frequency) <u>YEARLY</u> ON/AROUND (Date) TO ADD YEARS OF LIFE TO YOUR DISPOSAL SYSTEM.	
For Questions Please       300 North Flower         Contact Orange County       300 North Flower         Public Works Department       Santa Ana, CA.         Telephone Number       714-667-8888         Installing Contractor	
Operating the Valve	
Use the handle provided by installer to turn valve. By providing long periods of rest for your drainage field. Its life will be greatly increased. Your septic tank should be serviced by a reputable contractor periodically.	

APPENDIX III: Profile of the Unincorporated Area of Orange County Southern California Association of Governments



# Profile of the Unincorporated Area of Orange County

Southern California Association of Governments' (SCAG) Regional Council includes 69 districts which represent 191 cities in the SCAG region



# LOCAL PROFILES REPORT 2017

This profile report was prepared by the Southern California Association of Governments and shared with Orange County. SCAG provides local governments with a variety of benefits and services including, for example, data and information, GIS training, planning and technical assistance, and sustainability planning grants.



#### SCAG REGIONAL COUNCIL DISTRICTS IN ORANGE COUNTY

Source: 2016 SCAG city boundary data, provided by the county Local Agency Formation Commissions. Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

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## I. Introduction

### The Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the largest Metropolitan Planning Organization (MPO) in the nation, with nearly 19 million residents. The SCAG region includes six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura) and 191 incorporated cities. In addition, the SCAG region is a major hub of global economic activity, representing the 16<sup>th</sup> largest economy in the world and is **considered the nation's gateway for international trade, with two of the largest ports in** the nation. SCAG is the also the most culturally diverse region in the nation, with no single ethnic group comprising a majority of the population. With a robust, diversified economy and a growing population substantially fueled by international immigration, the SCAG region is poised to continue its role as a primary metropolitan center on the Pacific Rim.

### SCAG Activities

As the designated MPO, SCAG is mandated by federal law to research and develop a Regional Transportation Plan (RTP), which incorporates a Sustainable Communities Strategy (SCS) per California state law. Additionally, SCAG is pursuing a variety of innovative planning and policy initiatives to foster a more sustainable Southern California. In addition to conducting the formal planning activities required of an MPO, SCAG provides local governments with a wide variety of benefits and services including, for example, data and information, GIS training, planning and technical assistance, and support for sustainability planning grants.

### The Local Profiles

In 2008, SCAG initiated the Local Profiles project as a part of a larger initiative to provide a variety of new services to its member cities and counties. Through extensive input from member jurisdictions, the inaugural Local Profiles Reports were released at the SCAG General Assembly in May 2009. The Profiles have since been updated every two years.

The Local Profiles reports provide a variety of demographic, economic, education, housing, and transportation information about each member jurisdiction including, but not limited to, the following:

- How much growth in population has taken place since 2000?
- Has the local jurisdiction been growing faster or slower than the county or regional average?
- Have there been more or fewer school-age children?
- Have homeownership rates been increasing or decreasing?
- How and where do residents travel to work?
- How has the local economy been changing in terms of employment share by sector?

Answers to questions such as these provide a snapshot of the dynamic changes affecting each local jurisdiction.

The purpose of this report is to provide current information and data for Orange County for planning and outreach efforts. Information on population, housing, transportation, employment, retail sales, and education can be utilized by the city to make well informed planning decisions. The report provides a portrait of the unincorporated area and its changes since 2000, using average figures for Orange County as a comparative baseline. In addition, the most current data available for the region is also included in the Statistical Summary (page 3). This profile demonstrates current trends occurring in Orange County.

### Factors Affecting Local Changes Reflected in the 2017 Report

Overall, member jurisdictions since 2000 have been impacted by a variety of factors at the national, regional, and local levels. For example, the vast majority of member jurisdictions included in the 2017 Local Profiles reflect national demographic trends toward an older and more diverse population. Evidence of continued progress toward economic recovery is also apparent through gradual increases in employment, retail sales, building permits, and home prices. Work destinations and commute times correlate with regional development patterns and the geographical location of local jurisdictions, particularly in relation to the regional transportation system.

#### Uses of the Local Profiles

Following release at the SCAG General Assembly, the Local Profiles are posted on the SCAG website and are used for a variety of purposes including, but not limited to, the following:

- Data and communication resource for elected officials, businesses, and residents
- Community planning and outreach
- Economic development
- Visioning initiatives
- Grant application support
- Performance monitoring

The primary user groups of the Local Profiles include member jurisdictions and state and federal legislative delegates of Southern California. This report is a SCAG member benefit and the use of the data contained within this report is voluntary.

#### Report Organization

This report includes three sections. The first section presents a statistical summary for Orange County. The second section provides detailed information organized by subject area and includes brief highlights of some of the trends identified by that information. The third section, Methodology, describes technical considerations related to data definitions, measurement, and sources.

Attachment F

#### Unincorporated Area of Orange County

## 2016 STATISTICAL SUMMARY

Category	Unincorporated Area	Orange County	Unincorporated Area Relative to Orange County*	SCAG Region
2016 Total Population	125,420	3,183,011	[3.9%]	18,954,083
2016 Population Density (Persons per Square Mile)	470	4,055	-3,585	489
2016 Median Age (Years)	37.0	37.5	-0.5	36.0
2016 Hispanic	21.5%	34.7%	-13.2%	46.8%
2016 Non-Hispanic White	58.4%	41.0%	17.4%	31.2%
2016 Non-Hispanic Asian	14.9%	19.3%	-4.4%	12.7%
2016 Non-Hispanic Black	1.2%	1.6%	-0.4%	6.3%
2016 Non-Hispanic American Indian	0.2%	0.2%	0.0%	0.3%
2016 All Other Non- Hispanic	3.8%	3.1%	0.7%	2.7%
2016 Number of Households	39,134	1,024,810	[3.8%]	6,132,938
2016 Average Household Size	3.2	3.1	0.1	3.1
2016 Median Household I ncome	\$42,582	\$77,390	-\$34,808	\$61,792
2016 Number of Housing Units	40,583	1,075,699	[3.8%]	6,629,879
2016 Homeownership Rate	76.7%	54.3%	22.4%	54.3%
2016 Median Existing Home Sales Price	\$839,750	\$645,000	\$194,750	\$466,000
2015 - 2016 Median Home Sales Price Change	3.5%	5.9%	-2.4%	6.6%
2016 Drive Alone to Work	88.5%	82.4%	6.1%	78.8%
2016 Mean Travel Time to Work (minutes)	31.0	29.0	2.0	31.0
2015 Number of Jobs	24,165	1,615,214	[1.5%]	7,920,602
2014 - 2015 Total Jobs Change	1,167	23,037	[5%]	117,499
2015 Average Salary per Job	\$48,601	\$58,120	-\$9,519	\$53,962
2016 K-12 Public School Student Enrollment	20,139	488,465	4%	2,961,726

Sources: U.S. Census Bureau American Community Survey, 2015; Nielsen Co.; California Department of Finance E-5, May 2016; CoreLogic/DataQuick; California Department of Education; and SCAG

\* Numbers with [] represent Unincorporated Area's share of Orange County. The other numbers represent the difference between Unincorporated Area and Orange County.

Mapped jurisdictional boundaries are as of July 1, 2016 and are for visual purposes only. Report data, however, are updated according to their respective sources.

# II. Population

# Population Growth

Population: 2000 - 2016



- Between 2000 and 2016, the total population of unincorporated Orange County decreased by 42,712 to 125,420 in 2016.
- During this 16year period, the unincorporated area's population growth rate of -25.4 percent was lower than the Orange County rate of 11.8 percent.
- 3.9% of the total population of Orange County is in unincorporated Orange County.

## Population by Age



Sources: 2000 and 2010 U.S. Decennial Census; Nielsen Co., 2016

Population by Age: 2000, 2010, and 2016



- Between 2000 and 2016, the age group 5-20 experienced the largest increase in share, growing from 20.4 to 23.7 percent.
- The age group that experienced the greatest decline, by share, was age group 35-54, decreasing from 31.9 to 29.2 percent.
- The age group 35-54 added the most population, with an increase of 25,634 people between 2000 and 2016.

## Population by Race/Ethnicity





Sources: 2000 and 2010 U.S. Decennial Census; Nielsen Co., 2016



### Non-Hispanic White: 2000, 2010, and 2016

- Between 2000 and 2016, the share of Non-Hispanic White population in the unincorporated area decreased from 86.5 percent to 58.4 percent.
- Please refer to the Methodology section for definitions of the racial/ethnic categories.

Between 2000 and 2016, the share of Hispanic population in the unincorporated area increased from 6.0 percent to 21.5 percent.

#### Non-Hispanic Asian: 2000, 2010, and 2016



 Between 2000 and 2016, the share of Non-Hispanic Asian population in the unincorporated area increased from 4.9 percent to 14.9 percent.

Sources: 2000 and 2010 U.S. Decennial Census; Nielsen Co., 2016

#### Non-Hispanic Black: 2000, 2010, and 2016



 Between 2000 and 2016, the share of Non-Hispanic Black population in the unincorporated area increased from 0.5 percent to 1.2 percent.

Sources: 2000 and 2010 U.S. Decennial Census; Nielsen Co., 2016



### Non-Hispanic American Indian: 2000, 2010, and 2016

 Between 2000 and 2016, the share of Non-Hispanic American Indian population in the unincorporated area decreased from 0.3 percent to 0.2 percent.

Sources: 2000 and 2010 U.S. Decennial Census; Nielsen Co., 2016

All Other Non-Hispanic: 2000, 2010, and 2016



 Between 2000 and 2016, the share of All Other Non-Hispanic population group in the unincorporated area increased from 1.8 percent to 3.8 percent.

## III. Households

Number of Households: 2000 - 2016

## Number of Households (Occupied Housing Units)



Sources: 2000 and 2010 U.S. Decennial Census; California Department of Finance E-5, 2016



- Between 2000 and 2016, the total number of households in unincorporated Orange County decreased by 19,211 units, or -32.9 percent.
- During this 16year period, the unincorporated area's household growth rate of -32.9 percent was lower than the county growth rate of 9.6 percent.
- 3.8 percent of Orange County's total number of households are in unincorporated Orange County.
- In 2016, the unincorporated area's average household size was 3.2, higher than the county average of 3.1.

## Households by Size

Percent of Households by Household Size: 2016



Source: Nielsen Co., 2016

## Households by Income

Percent of Households by Household Income: 2016



- In 2016, 60.6 percent of all unincorporated area households had 3 people or fewer.
- About 15 percent of the households were single-person households.
- Approximately 20 percent of all households in the unincorporated area had 5 people or more.
- In 2016, about 22 percent of households earned less than \$50,000 annually.
- Approximately 55 percent of households earned \$100,000 or more.

Source: Nielsen Co., 2016

## Household Income

Median Household Income: 2000, 2010, and 2016



- From 2000 to 2016, median household income decreased by \$16,238.
- Note: Dollars are not adjusted for annual inflation.

Source: Nielsen Co., 2016

## Renters and Homeowners

Percentage of Renters and Homeowners: 2000, 2010, and 2016



Sources: 2000 and 2010 U.S. Decennial Census; Nielsen Co., 2016

Between 2000 and 2016, homeownership rates increased and the share of renters decreased.

# IV. Housing Total Housing Production

### Total Permits Issued for all Residential Units: 2000 - 2016



 Between 2000 and 2016, permits were issued for 16,814 residential units.

Source: Construction Industry Research Board, 2000 - 2016

Permits Issued for all Residential Units per 1,000 Residents: 2000 - 2016



Source: Construction Industry Research Board, 2000 - 2016

- In 2000, unincorporated Orange County had 19.6 permits per 1,000 residents compared to the overall county figure of 4.5 permits per 1,000 residents.
- For the unincorporated area in 2016, the number of permits per 1,000 residents decreased to 7.8 permits. For the county overall, it decreased to 3.4 permits per 1,000 residents.

## Single-Family Housing Production

Permits Issued for Single-Family Units: 2000 - 2016



Source: Construction Industry Research Board, 2000 - 2016

Single-Family Permits Issued per 1,000 Residents: 2000 - 2016



Source: Construction Industry Research Board, 2000 - 2016

- Between 2000 and 2016, permits were issued for 10,894 single family homes.
- 12.8 percent of these were issued in the last 3 years.

- In 2000, unincorporated Orange County issued 12.6 permits per 1,000 residents compared to the overall county figure of 2.4 permits per 1,000 residents.
- For the unincorporated area in 2016, the number of permits issued per 1,000 residents decreased to 4.6 permits. For the county overall, it decreased to 1.2 permits per 1,000 residents.

## Multi-Family Housing Production

Permits Issued for Multi-Family Units: 2000 - 2016



Multi-Family Permits Issued per 1,000 Residents: 2000 - 2016



 Between 2000 and 2016, there were permits issued for 5,920 multi-family residential units.

• For the unincorporated area in 2016, the number of permits per 1,000 residents decreased to 3.2 permits. For the county overall, it increased to 2.2 permits per 1,000 residents.

## Home Sales Prices

Median Home Sales Price for Existing Homes: 2000 -2016 (in \$ thousands)



Source: CoreLogic/DataQuick, 2000-2016





- Between 2000 and 2016, the median home sales price of existing homes increased 61.6 percent from \$519,500 to \$839,750.
- Median home sales price increased by 48.8 percent between 2010 and 2016.
- In 2016, the median home sales price in the unincorporated area was \$839,750, \$194,750 higher than that in the county overall.
- Note: Median home sales price reflects resale of existing homes, which varies due to type of units sold.
- Between 2000 and 2016, the largest single year increase was 40.6 percent.

## Housing Type

Housing Type by Units: 2016

Housing Type	Number of Units	Percent of Total Units	
Single Family Detached	30,895	76.1 %	
Single Family Attached	4,215	10.4 %	
Multi-family: 2 to 4 units	854	2.1 %	
Multi-family: 5 units plus	3,988	9.8 %	
Mobile Home	631	1.6 %	
Total	40,583	100 %	

- The most common housing type is Single Family Detached.
- Approximately 86 percent were single family homes and 12 percent were multifamily homes.

Source: California Department of Finance, E-5, 2016





- 35 percent of the housing stock was built before 1970.
- 65 percent of the housing stock was built after 1970.

Source: Nielsen Co., 2016

## Foreclosures

Number of Foreclosures: 2016



- There were 23 foreclosures in 2016.
- Between 2007 and 2016, there were 2,082 foreclosures.

Source: CoreLogic/DataQuick, 2002-2016

## Housing Cost Share

Percentage of Housing Cost for Renters and Homeowners: 2014



- Housing costs accounted for an average of 35.8 percent of total household income for renters.
- Housing costs accounted for an average of 24.8 percent of total household income for homeowners.

Source: U.S. Census American Community Survey, 2015

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# V. Transportation Journey to Work for Residents



Sources: 2000 U.S. Decennial Census; 2010 U.S. Census American Community Survey; and Nielsen Co., 2016

35 31 31 29 30 25 **Travel Time (minutes)** 20 15 10 5 0 2000 2010 2016 Sources: 2000 U.S. Decennial Census; 2010 U.S. Census American Community

Survey; and Nielsen Co., 2016

greatest change occurred in the percentage of individuals who traveled to work by carpool; this share decreased by 6.9 percentage points. **'Other' refers** to bicycle,

Between 2000

and 2016, the

- bicycle, pedestrian, and home-based employment.
- Between 2000 and 2016, the average travel time to work increased by approximately 2 minutes.

Southern California Association of Governments

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Average Travel Time (minutes): 2000, 2010, and 2016

### 2017 Local Profile

Travel Time to Work (Range of Minutes): 2016



- In 2016, 45.0 percent of unincorporated Orange County commuters spent more than 30 minutes to travel to work.
- Travel time to work figures reflect average one-way commute travel times, not round trip.

Source: Nielsen Co., 2016

Household Vehicle Ownership: 2016



 21.4 percent of unincorporated Orange County households own one or no vehicles, while 78.6 percent of households own two or more vehicles.

Source: Nielsen Co., 2016

# VI. Active Transportation

Over the course of the next 25 years, population growth and demographic shifts will continue to transform the character of the SCAG region and the demands placed on it for livability, mobility, and overall quality of life. Our future will be shaped by our response to this growth and the demands it places on our systems.

SCAG is responding to these challenges by embracing sustainable mobility options, including support for enhanced active transportation infrastructure. Providing appropriate facilities to help make walking and biking more attractive and safe transportation options will serve our region through reduction of traffic congestion, decreasing greenhouse gas emissions, improving public health, and enhancing community cohesion.

Beginning with the 2017 Local Profiles, SCAG will be providing information on the active transportation resources being implemented throughout our region. The 2017 Local Profiles initiates this enhanced active transportation element with a compilation of bicycle lane mileage by facility type at the county level. This data, provided by our County Transportation Commissions for the year 2012, will serve as a baseline to measure regional progress over subsequent years. It is expected that with each cycle of the Local Profiles, additional active transportation data resources will become available for inclusion in these reports at the local jurisdictional level. Information on rates of physical activity (walking) is available in the Public Health section of this report.

County	Class 1	Class 2	Class 3	Class 4	Total Miles
Imperial	3	4	82	0	89
Los Angeles	302	659	519	2	1,482
Orange	259	706	87	0	1,052
Riverside	44	248	129	0	421
San Bernardino	77	276	150	0	503
Ventura	61	257	54	0	372
SCAG Region	746	2,150	1,021	2	3,919

Bike Lane Mileage by Class: 2012

Source: County Transportation Commissions, 2012

Class 1 (Bike Path): Separated off-road path for the exclusive use of bicycles and pedestrians.

Class 2 (Bike Lane): Striped on-road lane for bike travel along a roadway.

Class 3 (Bike Route): Roadway dedicated for shared use by pedestrians, bicyclists, and motor vehicles.

Class 4 (Separated Bikeway): Lane(s) separated from vehicle traffic by more than striping, with physical barriers such as grade separation, landscaping, or parking.

# VII. Employment

Employment Centers

## Top 10 Places Where Orange County Residents Commute to Work: 2014

Local Jurisdiction		Number of Commuters	Percent of Total Commuters
1.	Orange County	35,155	66.6 %
2.	Los Angeles County	10,603	20.1 %
3.	San Diego County	1,647	3.1 %
4.	Riverside County	1,512	2.9 %
5.	San Bernardino County	1,280	2.4 %
6.	Santa Clara County	361	0.7 %
7.	Ventura County	308	0.6 %
8.	San Francisco County	274	0.5 %
9.	Alameda County	205	0.4 %
10.	Sacramento County	122	0.2 %
All Other Destinations		1,304	2.5 %

Source: U.S. Census Bureau, 2017, LODES Data; Longitudinal-Employer Household Dynamics Program, <u>https://lehd.ces.census.gov/data/lodes/</u>

- This table identifies the top 10 locations where residents from Unincorporated Orange County commute to work.
- 66.6% work and live in Orange County, while 33.4% commute to other places.

## SCAG REGIONAL LOCATION





## Total Jobs

Total Jobs: 2007 - 2015



Sources: California Employment Development Department, 2007 - 2015; InfoGroup; and SCAG

# Jobs by Sector

Jobs in Manufacturing: 2007 - 2015



Sources: California Employment Development Department, 2007 - 2015; InfoGroup; and SCAG

- Total jobs include wage and salary jobs and jobs held by business owners and selfemployed persons. The total job count does not include unpaid volunteers or family workers, and private household workers.
- In 2015, total jobs in unincorporated Orange County numbered 24,165, an increase of 0.37 percent from 2007.
- Manufacturing jobs include those employed in various sectors including food; apparel; metal; petroleum and coal; machinery; computer and electronic products; and transportation equipment.
- Between 2007 and 2015, the number of manufacturing jobs in the unincorporated area decreased by 71.1 percent.

Jobs in Construction: 2007 - 2015



Sources: California Employment Developm InfoGroup; and SCAG

#### Jobs in Retail Trade: 2007 - 2015



Sources: California Employment Development Department, 2007 - 2015; InfoGroup; and SCAG

- Construction jobs include those engaged in both residential and non-residential construction.
- Between 2007 and 2015, construction jobs in the unincorporated area decreased by 7.1 percent.

- Retail trade • jobs include those at various retailers including motor vehicle and parts dealers, furniture, electronics and appliances, building materials, food and beverage, clothing, sporting goods, books, and office supplies.
- Between 2007 and 2015, the number of retail trade jobs in the unincorporated area decreased by 10 percent.

#### 3,500 3,000 2,500 Number of Jobs 2,581 2,000 1,500 1,000 500 0 2007 2008 2009 2010 2011 2012 2013 2014 2015

Jobs in Professional and Management: 2007 - 2015

Sources: California Employment Development Department, 2007 - 2015; InfoGroup; and SCAG

- Jobs in the professional and management sector include those employed in professional and technical services, management of companies, and administration and support.
- Between 2007 and 2015, the number of professional and management jobs in the unincorporated area increased by 11.4 percent.

### 2017 Local Profile

#### Attachment F Unincorporated Area of Orange County

#### Jobs by Sector: 2007



- From 2007 to 2015, the share of Education jobs increased from 22.7 percent to 31.2 percent.
- See Methodology Section for industry sector definitions.

Sources: California Employment Development Department, 2007; InfoGroup; and SCAG  $% \left( {{\mathcal{G}}_{{\mathcal{G}}}} \right)$ 



Sources: California Employment Development Department, 2016; InfoGroup; and SCAG

- In 2015, the Education sector was the largest job sector, accounting for 31.2 percent of total jobs in the unincorporated area.
- Other large sectors included Professional (14.6 percent), Leisure (13.2 percent), and Transportation (8 percent).

## Average Salaries



- Average salaries for jobs located in the unincorporated area increased from \$42,918 in 2003 to \$48,601 in 2015, a 13.2 percent change.
- Note: Dollars are not adjusted for annual inflation.

# Average Annual Salary by Sector: 2015 (\$ thousands)



- In 2015, the employment sector providing the highest salary per job in the unincorporated area was Information (\$69,920).
- The Leisure-Hospitality sector provided the lowest annual salary per job (\$23,402).

## VIII. Retail Sales

## Real Retail Sales



 Real (inflation adjusted) retail sales in unincorporated Orange County increased by 5.7 percent between 2005 and 2015.

Retail Sales per Person (in 2015 \$ thousands): 2001 - 2015



 Between 2001 and 2015, retail sales per person for the unincorporated area increased from \$8,628 to \$15,059.

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# IX. Education

## Total Student Enrollment

### K-12 Public School Student Enrollment: 2000 - 2016



Between 2000 and 2016, total K-12 public school enrollment for schools within unincorporated Orange County increased by 7,209 students, or about 55.8 percent.

## Student Enrollment by Grade

K-6 Public School Student Enrollment: 2000 - 2016



 Between 2000 and 2016, total public elementary school enrollment increased by 3,313 students or 35.9 percent.



- Grades 7-9 Public School Student Enrollment: 2000 2016
- Between 2000 and 2016, total public school enrollment for grades 7-9 increased by 1,644 students or 82.4 percent.

Grades 10-12 Public School Student Enrollment: 2000 - 2016



 Between 2000 and 2016, total public school enrollment for grades 10-12 increased by 2,252 students, about 131.7 percent.

Percent of City Population 25 Years & Over Completing High School or Higher



 In 2016, 91.6 percent of the population 25 years and over completed high school or higher, which is higher than the 2000 level.

Percent of City Population 25 Years & Over Completing a **Bachelor's Degree or Higher** 



 In 2016, 49.8 percent of the population 25 years and over completed a Bachelor's degree or higher, which is higher than the 2000 level.

Sources: 2000 and 2010 Census; Nielsen Co., 2016

# X. Public Health

Beginning with the 2017 edition, the Local Profiles will be providing information on public health performance at the local jurisdictional level. Many adverse public health outcomes related to obesity and poor air quality may be reduced through the implementation of a more sustainable and integrated program of community and transportation planning at the regional and local levels. Evidence has shown that built environment factors play an important role in supporting healthy behavior and reducing rates of chronic diseases and obesity. For example, improved active transportation infrastructure, better accessibility to recreational open space, and the development of more walkable communities enhance opportunities for physical exercise and thereby result in a reduction of obesity rates, along with the chronic diseases associated with physical inactivity.



Obesity/Physical Activity Rates (18 & Over): 2014

### Chronic Disease Rate (18 Years & Over): 2014



• The obesity rate in unincorporated Orange County was 14.8 percent in 2014, which was lower than the County rate.

- 'Obesity' is defined as a Body Mass Index (BMI) of 30 or higher.
- 'Physical Activity' refers to walking a minimum of 150 minutes per week.
- The share of population in unincorporated Orange County who were ever diagnosed with asthma was 13.0 percent in 2014; for diabetes the rate was 6.4 percent; and for heart disease 7.4 percent.

Source: California Health Interview Survey, 2016

Source: California Health Interview Survey, 2016

# XI. SCAG Regional Highlights

Regional Median Sales Price for Existing Homes: 2002 - 2016



Source: CoreLogic/DataQuick, 2002-2016

### Regional Retail Sales: 2005 - 2015



- After reaching its peak in 2007, the median sales price for existing homes in the SCAG region dropped by almost half by 2009.
- In 2016, the median sales price had rebounded by about 69 percent from the 2009 low to \$466,000.
- Median home sales price was calculated based on total existing home sales in the SCAG region.
- Retail sales tend to follow closely with trends in personal income, employment rates, and consumer confidence.
- Before 2005, real (inflation adjusted) retail sales increased steadily by 11 percent before dropping by about 25 percent between 2005 and 2009.
- In 2015, total real retail sales in the SCAG region increased by about 29 percent since 2009.

## XII. Data Sources

California Department of Education California Department of Finance, Demographic Research Unit California Employment Development Department, Labor Market Information Division California State Board of Equalization Construction Industry Research Board InfoGroup CoreLogic/DataQuick Nielsen Company U.S. Census Bureau

California Health Interview Survey

## XIII. Methodology

**SCAG's Local Profiles utilize** the most up-to-date information from a number of publicly available sources, including the U.S. Census Bureau, California Department of Finance, and the California Department of Education. In the event that public information is not available or is not the most recent, SCAG contracts with a number of private entities to obtain regional data. The following sections describe how each data source was compiled to produce the information displayed in this report.

#### Statistical Summary Table

In the Statistical Summary Table (page 3), the values in the **field** 'Jurisdiction Relative to County/Region' represent the difference between the **jurisdiction's** value and the county/region value, except for the following categories which represent the **jurisdiction's** value as a share of the county (or in the case of an entire county as a share of the region): Population, Number of Households, Number of Housing Units, Number of Jobs, Total Jobs Change, and K-12 Student Enrollment.

Median Age, Homeownership Rate, and Median Household Income are based on Nielsen Company data. Number of Housing Units is based on the 2010 Census and estimates from the California Department of Finance. Data for all other categories are referenced throughout the report.

#### Population Section

Where referenced, data from 2000 to 2016 was taken from the California Department of Fina**nce's (DOF) E**-5 estimates, which were published in May 2016. This dataset was benchmarked to population figures from the 2000 and 2010 U.S. Decennial Censuses. Data relating to population by age group and by race/ethnicity was derived from the 2000 and 2010 U.S. Decennial Censuses, and Nielsen Co. The 2000 figure was based on U.S. Decennial Census figures for April 1, 2000 and the 2010 figure was based on U.S. Decennial Census figures for April 1, 2010.

Below are definitions for race and ethnicity, as provided by the U.S. Census Bureau.

The Hispanic or Latino origin category is:

• A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.

The race categories are:

- American Indian or Alaska Native A person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment.
- Asian A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
- Black or African American A person having origins in any of the black racial groups of Africa, including those who consider themselves to be "Haitian."
- White A person having origins in any of the original peoples of Europe, North Africa, or the Middle East.
- Some other race This category includes Native Hawaiian or Other Pacific Islander (a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands) and all other responses not included in the "American Indian or Alaska Native," "Asian," "Black or African American," and "White" race categories described above.

Charts for population based on age were tabulated using 2000 and 2010 U.S. Decennial Census data and Nielsen Company data for 2016. Charts for race/ethnicity were tabulated using 2000 and 2010 U.S. Decennial Census data and Nielsen Company data for 2016.

#### Households Section

The 2000 figure was based on U.S. Decennial Census figures for April 1, 2000 and the 2010 figure was based on U.S. Decennial Census figures for April 1, 2010. Information for 2016 was supplied by the Nielsen Company. Average household size was developed using information from the California Department of Finance (DOF). Households by Size was calculated based on Nielsen Company data. Households refer to the number of occupied housing units.

#### Housing Section

Housing units are the total number of both vacant and occupied units. Housing units by housing type information was developed using data from the California Department of Finance (DOF). Age of housing stock information was provided by the Nielsen Company.

The number of residential units with permits issued was obtained using Construction Industry Research Board data, which are collected by counties and are self-reported by individual jurisdictions. It represents both new single family and new multi-family housing units that were permitted to be built. Please note that SCAG opted to report the annual number of permits issued by each jurisdiction which may be different than the number of housing units completed or constructed annually. This was done using a single data source which provides consistent data for all jurisdictions. The Construction Industry Research **Board defines "multi-family housing" to include duplexes, apartments, and condominiums in** structures of more than one living unit.

The median home sales price, compiled from CoreLogic/DataQuick, was calculated based on total resales of existing homes in the jurisdiction, including single family units and condominiums. The median price does not reflect the entire universe of housing in the jurisdiction, only those that were sold within the calendar year.

Housing Cost Share refers to the percentage of household income that is devoted to housing expenses. Housing cost share information for homeowners and renters is provided by the U.S. Census American Community Survey.

#### Transportation Section

The journey to work data for the year 2000 was obtained by using the 2000 U.S. Decennial Census Summary File 3. Data for 2010 is based on the 2010 U.S. Census American Community Survey. Information for 2016 was provided by the Nielsen Company.

#### Active Transportation Section

Data sources for county bike lane mileage by facility classification was provided by the six County Transportation Commissions in the SCAG region.

#### Employment Section

Data sources for estimating jurisdiction employment and wage information include the 2010 U.S. Census Bureau Local Employment Dynamics Survey, and information from the California Employment Development Department, InfoGroup, and SCAG for years 2007-2015. In many instances, employment totals from individual businesses were geocoded and aggregated to the jurisdictional level.

Employment information by industry type is defined by the North American Industry Classification System (NAICS). Although the NAICS provides a great level of detail on industry definitions for all types of businesses in North America, for the purposes of this report, this list of industries has been summarized into the following major areas: agriculture, construction, manufacturing, wholesale, retail, information, finance/insurance/ real estate, professional/management, education/health, leisure/hospitality, public administration, other services, and non-classified industries.

A brief description of each major industry area is provided below:

- Agriculture: Includes crop production, animal production and aquaculture, forestry and logging, fishing hunting and trapping, and support activities for agriculture and forestry.
- Construction: Includes activities involving the construction of buildings, heavy and civil engineering construction, and specialty trade contractors.
- Manufacturing: Includes the processing of raw material into products for trade, such as food manufacturing, apparel manufacturing, wood product manufacturing, petroleum and coal products manufacturing, chemical manufacturing, plastics and rubber products manufacturing, nonmetallic mineral product manufacturing and primary metal manufacturing.
- Wholesale: Includes activities that conduct business in the trade of raw materials and durable goods.
- Retail: Includes activities engaged in the sale of durable goods directly to consumers.
- Information: Includes activities that specialize in the distribution of content through a means of sources, including newspaper, internet, periodicals, books, software, motion pictures, sound recording, radio and television broadcasting, cable or

subscription programming, telecommunications, data processing/hosting, and other information mediums.

- Finance/Insurance/Real Estate: Includes businesses associated with banking, consumer lending, credit intermediation, securities brokerage, commodities exchanges, health/life/medical/title/property/casualty insurance agencies and brokerages, and real estate rental/leasing/sales.
- Professional/Management: Includes activities that specialize in professional/ scientific/technical services, management of companies and enterprises, and administrative and support services. Establishment types may include law offices, accounting services, architectural/engineering firms, specialized design services, computer systems design and related services, management consulting firms, scientific research and development services, advertising firms, office administrative services, and facilities support services.
- Education/Health: Organizations include elementary and secondary schools, junior colleges, universities, professional schools, technical and trade schools, medical offices, dental offices, outpatient care centers, medical and diagnostic laboratories, hospitals, nursing and residential care facilities, social assistance services, emergency relief services, vocational rehabilitation services, and child day care services.
- Leisure/Hospitality: Includes activities involved in the performing arts, spectator sports, museums, amusement/recreation industries, traveler accommodations, and food and drink services.
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- Other Services: Includes, for example, automotive repair and maintenance, personal and household goods repair and maintenance, personal laundry services, dry-cleaning and laundry services, religious services, social advocacy organizations, professional organizations, and private households
- Non-Classified: All other work activities that are not included in the North American Industry Classification System.

#### Retail Sales Section

Retail sales data is obtained from the California Board of Equalization, which does not publish individual point-of-sale data. All data is adjusted for inflation.

#### Education Section

Student enrollment data is based on public school campuses that are located within each **jurisdiction's respective boundary. Enrollment numbers by grade within a given jurisdiction** are tabulated based upon data obtained from the California Department of Education.

Enrollment year is based on the end date of the school year; for example, enrollment data for the year 2000 refers to the 1999-2000 school year. City boundaries used in the dataset for all years is based on data provided by the Local Agency Formation Commission for each county in the region.

#### Public Health Section

Data sources for city and county obesity rates (share of population with a BMI of 30 or higher) and rates of physical activity (share of population that walked a minimum of 150 minutes each day) for the year 2014 was obtained through the California Health Interview Survey (AskCHIS: Neighborhood Edition). Chronic disease incidence rates for 2014 were also obtained through the California Health Interview Survey.

#### Regional Highlights

Information for this section was developed through data from CoreLogic/DataQuick and the California Board of Equalization.

#### Data Sources Section

In choosing data sources for use in this report, the following factors were considered:

- Availability for all jurisdictions in the SCAG region
- The most recognized source on the subject
- Data sources available within the public domain
- Data available on an annual basis

The same data sources are used for all Local Profiles (except where noted) to maintain overall reporting consistency. The jurisdictions are not constrained from using other data sources for their planning activities.

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### XIV. Acknowledgments

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#### Attachment F

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Attachment F

# Notes:

#### Attachment F



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# Orange County Septic Tank Locations



# Watershed Name

- Aliso Creek
- Carbon Canyon
- Coyote Creek
- Laguna Canyon
  - Los Trancos/ Muddy Creek
  - Newport Bay
  - Prima Deshecha/ Segunda Deshecha
  - Salt Creek
  - San Diego Creek
  - San Juan Creek
  - Santa Ana River
  - Talbert
  - Westminster

# ORANGE COUNTY STORMWATER PROGRAM

# **APPENDIX E4**

# SEPTIC SYSTEM INVENTORY AND ASSESSMENT

**June 2003** 

A cooperative project between the County of Orange, Orange County Flood Control District and the incorporated cities of Orange County

Page 123 of 238

Prepared by:

RBF Consulting 14725 Alton Parkway Irvine, CA 92618-2027 949.472.3505

#### **EXECUTIVE SUMMARY**

Septic systems have proven to be a relatively inexpensive and effective method of wastewater treatment in low-density areas if they are correctly designed and responsibly maintained. However, if systems do fail, poorly treated effluent may surface and drain to nearby storm drain systems and receiving waters.

The objectives of this study were to develop an inventory/database of the septic systems in Orange County and to estimate the potential impact of septic systems on the quality of selected receiving waters. Septic systems throughout the County were inventoried, and placed in a GIS layer for ease of viewing and inventory maintenance.

#### **Septic System Inventory**

The final inventory/database compilation resulted in a list of over 2776 active septic systems. Septic systems are widely dispersed throughout the County but are found in the highest concentrations in the Santa Ana River watershed. The City of Yorba Linda recorded the highest number of systems with over 26% of the total, followed by the unincorporated County area with 23% of the total.

#### Septic System Performance Evaluation

A random field survey of septic system owners within four selected major areas of the County was undertaken to evaluate existing system performance:

- > The City of Yorba Linda
- > The City of Tustin and adjacent unincorporated areas
- ➢ The City of Anaheim
- The City of Orange

The study areas were selected based on the estimated number of systems present, the occurrence of low permeability soils, and proximity to sensitive receiving waters. For the four areas as aggregate, the overall failure rate was determined by the survey of the homeowners and visual inspection of the septic system if possible. The failure rate determined through the field survey was then verified by findings from similar surveys reported in the literature.

Eighty septic system owners were contacted over a period of about 3 weeks from December 23, 2002, to January 10, 2003 during the field survey. Failure of a septic system was defined as the observance of surface seepage or flow during the inspection. Other information was also gathered from the homeowner during the field survey, and an educational pamphlet regarding operation and maintenance of septic systems was left with each homeowner who was contacted.

Of the eighty field surveys that were conducted, one failed system was noted, representing a failure rate of 1.25%. This finding was validated by a literature review, which revealed that a similar study in Oregon recorded a failure rate of 1.3 percent of

i

the 389 systems studied-identical to that of the Orange County survey. The literature review indicated that most septic system failures were primarily due to poor operation and maintenance (O&M). Excessive water use or insufficient system capacity were contributors, but the primary failure mechanism was lack of, or deferred maintenance.

#### **Impact Estimation of Pollutant Loading from Septic Systems**

An analysis was performed on the extent septic systems may impact water quality in Orange County based on the results from the field survey findings. A spreadsheet model was developed to estimate the loading of pathogen indicators and total Kjeldahl nitrogen (TKN) from the failed systems. A simple mass based loading model was also used to calculate total ambient constituent/indicator load for each study watershed at the points of interest as a comparison to the estimated load from the failed septic systems. This comparison was for the purpose of determining if BMPs are required to mitigate discharges from the failed septic systems.

The potential impact of failing septic systems was assessed at: 1) the ocean outfall of the Santa Ana River, where impacts to REC-1 beneficial use are of particular practical significance near swimming beaches and 2) in Upper Newport Bay, where the receiving water is impaired for sanitary quality and is currently under a fecal coliform TMDL.

The ambient indicator load model was compiled for the two selected watersheds to estimate the relative contribution (load) of pathogen indicators in the receiving waters from the failed systems. Two cases were evaluated in each watershed: dry and wet weather. Selection of two study cases allowed for varying assumptions as to the indicator load estimated to arrive at the receiving water based on expected physical site conditions such as the presence of saturated soils. The septic system failure rate was assumed to be 2% (the average of the computed confidence interval for system failures determined in the survey portion of this study).

Study results show that the load from the failed septic systems is a very marginal contributor to pathogen indicators in the receiving waters and is an insignificant contributor for TKN. The loadings of pathogen indicators and TKN from failed septic systems at the mouth of the Santa Ana River and San Diego Creek at Upper Newport Bay are estimated to be less than a fraction of one percent of total contributory loading under both dry and wet weather conditions.

Based on the analysis of these two study areas, it is reasonable to conclude that septic systems do no represent a significant source of constituents of concern for Orange County receiving waters. In general, failure rates are relatively low; for 79 of 80 systems surveyed there was no observed or reported incidence of surface seepage or flow failures. Furthermore, the flow path of septic tank effluent to the receiving water in most cases provides for significant storage and infiltration, as well as discovery and site-specific system correction, prior to the possibility of conveyance and discharge to receiving waters. Finally, there is a steady conversion of septic systems to sewer service as service becomes available in rural areas, and as existing homes are sold and connections are made to available service by the new owner.

It is recommended that periodic homeowner education be conducted via reminder notices to service septic systems, and that Permitees notify homeowners with septic systems when sewer system service becomes available in their area. Regulation of the construction of new systems, and regular maintenance of existing systems will remain the foundation of the program to ensure that septic systems do not adversely impact receiving waters.

#### **STUDY PRODUCTS**

The results of this study are presented by means of (1) a database, containing the identified septic systems by legal parcel in Orange County; (2) a GIS layer, linked to the database with each septic system geo-coded and plotted; (3) a load model comparing the estimated loading of selected constituents and indicators from failed septic tanks in any given year to the total estimated loading of constituents and bacteria indicators in the receiving water; and (4) this summary report.

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# List of Acronyms

CWA	Clean Water Act
EPA	Environmental Protection Agency
FC	Total Fecal Coliform
GIS	Geographic Information System
NPDES	National Pollutant Discharge Elimination System
OC	County of Orange
OCSD	Orange County Sanitation District
O&M	Operation and maintenance
REC	Recreational use
SAR	Santa Ana River
SCAG	Southern California Association of Governments
SDC	San Diego Creek
SWRCB	State Water Resources Control Board
TC	Total coliform
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Load

#### **1 INTRODUCTION**

The purpose of this study was to develop an inventory/database of septic systems in The County of Orange and to assess the potential impact of failing septic systems on the quality of receiving water. The study was conducted in response to Section XI.1 of the Orange County NPDES municipal stormwater permit issued by the Santa Ana Regional Water Quality Control Board (Permit No. R8-2002-0010).

The first subtask, which was conducted countywide, was to identify the location of existing systems based on permittee records and information from the sanitation districts. This task involved the following primary elements:

 Augmenting the initial septic system database compiled by the County of Orange with information from the permittees and the local sanitation districts, and compiling it into a central database and a geographic information system (GIS) layer (see Figure 1-1).

Using the augmented central database and the GIS layer, the following assessments were then conducted:

- An estimate of the number of systems which were failing A random survey was conducted of septic system owners within four selected major areas (see Figure 1-2). The four areas were selected based on hydrologic soil type (A, B, C, or D with a minimum infiltration rate of 0.30-0.45, 0.15-0.30, 0.05-0.15, and 0-0.05 in/hr, respectively and C or D soils receiving preference), proximity to receiving water, and septic system relative density. For the four areas as aggregate, the overall failure rate was determined by the survey of the homeowners. The failure rate determined through the survey was similar to the failure rate obtained from a literature review.
- An estimate of the potential pathogen and other pollutant loadings A spreadsheet model was developed to estimate the loading into the watershed of pathogens and total Kjeldahl nitrogen (TKN) as compared to the total loading in the watershed. This comparison was done to assess the relative magnitude of the contribution of pathogen loads of the failing septic systems and to determine if control measures are required to mitigate discharges from the systems.

The results of this study are presented as a package including: the database, containing the identified septic systems by legal parcel in Orange County; a GIS layer that is linked to the database with each septic system geo-coded and plotted; a load model comparing the estimated loading of selected constituents and indicators from failed septic tanks in any given year to the total loading of constituents and bacteria indicators in the receiving water; and this summary report. Discussion is provided as to whether additional controls are required on septic systems to mitigate the impact of failed systems on receiving waters.

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#### Figure 1-1. Septic System Locations

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#### Figure 1-2. Septic System Locations with Soil Type

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#### 2 SEPTIC SYSTEMS INVENTORY

#### 2.1 Information Sources

The County's initial septic system database was provided in a spreadsheet format with local jurisdictions such as Orange County Sanitation District (OCSD) serving as the main data source. The initial septic system database compiled by the County was subsequently updated countywide based on the following sources of information:

- Data from co-permittees on known septic systems
- Data from local sewer agencies for connected units vs. legal parcels
- A review of sewer systems service areas as compared to urbanized areas

The data was compiled into a MS Access<sup>®</sup> database linked to ArcView<sup>®</sup> allowing the locations of the septic systems to be shown on a watershed overlay for Orange County (see Appendix F).

#### 2.1.1 Septic System Identification Approach

The identification process attempted to locate most septic systems in Orange County through available records search, discussion with City personnel, and limited field review. In some locations, conversion to sewer service is occurring gradually as homes are sold and the new owner connects to the existing available sewer. In other areas, sewer service remains unavailable, and system conversion is not possible. Information obtained from the co-permittees and the sewer agencies was spot-checked in the field for accuracy by manually verifying the presence of an active septic system. The initial County and co-permittee databases were refined using this approach, as some areas that had recently received sewer service could be eliminated from the database.

#### 2.2 Description of Database

The information collected in the septic system inventory was compiled into a master database in MS Access format, which contains over 2776 septic systems (records) located within Orange County, including incorporated areas. A mapped GIS layer with the identified septic systems was compiled in ArcView GIS (Version 3.2a) with the assistance of the County's Geomatics Division for geocoding of the APN information. Where address matches were not found electronically, the Geomatics division determined an address manually. An ArcView GIS data dictionary is included as Appendix F along with a plot (map) of the database entries.

#### 2.3 Potential Data Gaps

There may be gaps in the septic system database for several reasons. Orange County Sanitation District (OCSD) was the main source of PFRD's initial septic system information. The OCSD assesses an annual service fee for every Assessors Parcel Number (APN) in their service area unless the resident notifies the District's customer service department that the property does not receive sewer service. Therefore, it is probable that some residents who maintain a septic system but have not contacted their local sewer agency for a fee exemption are not included in the database. For example, 13 unregistered septic system owners within the four survey study areas were added to the database during the door-to-door field survey. In general, the integrity of the database is considered good, and it is estimated to be representative within about 10 to 15% of the actual number of active systems.

#### 2.4 Inventory Findings

A total of 2,775 septic systems were recorded and compiled into a GIS layer. Of the septic systems inventoried countywide, the two highest areas of concentration were found in the City of Yorba Linda and the unincorporated area of Orange County, with 26.6% and 23.3% of all known systems, respectively. The City of Orange (13.3%), San Juan Capistrano (12.4%), and Rancho Santa Margarita (9.8%) contained the next highest concentrations relative to the countywide system inventory. Twenty-one other copermittees accounted for the remaining 14.6% of septic systems inventoried. The distribution of septic systems by total number and by percent for each jurisdiction is shown in Table 2.1.

	No. of Septic Systems	
Jurisdiction	Inventoried	Percent Represented
Anaheim	79	2.8
Brea	21	0.8
Buena Park	2	0.1
Costa Mesa	4	0.1
Dana Point	7	0.3
Fountain Valley	1	<0.1
Fullerton	20	0.7
Garden Grove	46	1.7
Huntington Beach	14	0.5
La Habra	28	1.0
Laguna Beach	20	0.7
Laguna Hills	1	<0.1
Lake Forest	1	<0.1
Mission Viejo	1	<0.1
Newport Beach	5	0.2
Orange, City of	368	13.3
Orange County (unincorporated areas)	646	23.3
Placentia	40	1.4
Rancho Santa Margarita	271	9.8
San Juan Capistrano	345	12.4
Santa Ana	25	0.9
Stanton	7	0.3
Tustin	24	0.9
Villa Park	56	2.0
Westminster	4	0.1
Yorba Linda	739	26.6
Total	2776	100

 Table 2.1 County-Wide Distribution Of Septic Systems

#### **3 ASSESSMENT OF SEPTIC SYSTEM PERFORMANCE**

#### 3.1 Septic System Operation and Maintenance

A typical septic system includes inlet piping, a septic tank that traps solids and provides storage for peak inflows, and a drain field or leach field that purifies and disperses liquid effluent at a rate governed by the permeability of the surrounding soils. Septic systems have proven to be a reliable, inexpensive, long-term method of wastewater treatment and disposal as long as they are properly designed and homeowners properly to maintain them. Some possible reasons for septic system failure include:

- *Inadequate design* Systems must be sized appropriately (storage), and constructed in soils with adequate permeability to leach the effluent. Systems may become overburdened if additional square footage is added to the residence without expansion of the septic system.
- *Inadequate maintenance* Systems must be periodically maintained by pumping the tank to remove accumulated solids, and keeping the inlet, tank, and effluent field clear of roots.

Failing to maintain the systems may result in reduced treatment performance and ultimately in septic system failure (See Appendix D for additional information). The buildup of aquatic weeds or algae in lakes or ponds adjacent to a system could potentially indicate the presence of microbial pathogens in surface drainage, thus impacting receiving water quality. Some septic system failure symptoms are as follows:

- Sewage backup in the drains or toilets or sluggish flow
- Surface ponding and seepage of effluent
- Unpleasant odors

#### 3.2 Selection of Survey Areas for Field Assessment

The purpose of the field assessment was to develop a representative estimate of Countywide system performance and verify the accuracy of the existing County database. Four target areas were chosen for field assessment of the septic systems, including (Ref. Figure 1-2):

- The City of Yorba Linda (Area No.1)
- The City of Tustin and adjacent unincorporated areas (Area No. 2)
- The City of Orange (Area No. 3)
- The City of Anaheim (Area No. 4)

The goal of the field assessment was to use the inventory database as a guide to contact 20 homeowners in each of the four target areas (see Figure 1-2). A "contact" was defined as speaking with a homeowner about his/her septic system. The homeowner was

encouraged to answer the questions as shown on the Septic System Survey (see Appendix C). An informational flyer on septic system maintenance and operation was also distributed to each homeowner contacted (Appendix D). Field survey contact records are included as Appendix E. Areas 1, 3, and 4 are located in the Santa Ana River watershed. Area 2 (Tustin and adjacent area) is located in the San Diego Creek watershed. The target areas were selected based upon a determination of which areas may have the greatest impact on receiving water quality. Selection criteria were as follows:

- Marginal to poor soil conditions (hydrologic soil type areas C and D targeted)
- Proximity to receiving water (locations closer to major receiving waters with contact recreation targeted)
- Septic system relative density (locations with higher density targeted)

Systems in soil types C and D have more fine clay and less sand fractions, and likely have greater potential for reduced infiltrative capacity than systems sited in more permeable soil types A and B. Similarly, closer proximity to receiving waters and denser concentrations of systems tend to bias towards a more conservative assessment of septic system impacts on receiving water beneficial uses.

#### 3.3 Failure Assessment Approach/Survey Findings

Field visits were conducted in each of the four target areas to determine a septic system failure rate. A failure of a septic system was defined as observed surface flow at the time of the survey. Information regarding historical operation and past failures of the systems was also obtained from the homeowner if possible.

The four selected survey areas are shown individually on Figures 3-1 through 3-4.



Figure 3-1. The Survey Area within the City of Yorba Linda.



Figure 3-2. The survey area by the City of Tustin and nearby unincorporated area.



Figure 3-3. The survey area nearby the City of Anaheim.



Figure 3-4. The survey area by the City of Orange and nearby unincorporated area.

Table 3-1 provides selected data from the field survey for the four target areas. The information was compiled from the survey results for those respondents that provided information.

	Year Built			No.	Toilet	Service Frequency (yr)		
Survey Area	Median	Avg	Range	Failures	Backup	Median	Avg	Range
Yorba Linda	1961	1963.2	1956-1976	0	2.8	2.8	5.0	1-25
Tustin & UA	1957	1957.5	1953-1963	1*	2.5	2.5	3.5	Never; 0.83-9
Anaheim	1976	1971.3	1952-1990	1	2.8	2.8	4.6	Never, 2-14
Orange & UA	1958	1957.1	1949-1963	0	3.0	3.0	3.2	Never, 0.2-6

 Table 3-1 Results of Field Survey of Septic Systems in Orange County – Various

 Parameters

\*A failure (surface flow/discharge) event that occurred in the past.

Survey respondents were generally interested in the process by which they could connect to the sewer system and the fees required as a part of that connection. Some respondents felt that the connection fees were a significant barrier to a decision to switch to sewer system service if it was available in their area. Some respondents felt that maintenance of the septic system was, in the long run, more economical than sewer service.

The respondents were cooperative and appreciative of receiving information to assist them in the operation and maintenance of their systems. Most respondents serviced their systems in response to problems (i.e., slow flushing toilets, plumbing backups), and about 50% practiced some type of proactive service program.

#### 3.3.1 City of Yorba Linda

Of the 20 contacts made in the city of Yorba Linda, 12 fully responded to the questionnaire, seven homeowners only acknowledged owning a septic system, and one homeowner had switched to sewer system service. Generally, respondents who had recently purchased the residence (within the last 5 years) had little or no knowledge about the system. The median age of the surveyed systems in Yorba Linda was 41 years. Eleven of the 12 participants were not original owners, and three of those 11 did not know the age of their septic system. Three of the 12 survey participants had experienced sewage backup (without surface flow); those who experienced a backup had a septic tank service frequency of about once every 1 to 8 years.

One of the other participants had experienced problems whenever a large storm event occurred; the problems had been resolved by increasing the frequency of septic tank service. Only one participant had had a new septic system installed because the old one was "clogged." The 12 participants had their septic tanks serviced on an average of once every 5 years, and all participants knew where their septic system was located (9 in the front yard and 3 in the backyard). No failure (surface runoff/discharge) was mentioned by the owners or observed by the investigator in this target area.

#### 3.3.2 <u>City of Tustin and the Adjacent Unincorporated Area</u>

Of the 23 surveys conducted in the city of Tustin and the adjacent unincorporated area, 14 homeowners answered all of the questions in the survey, five homeowners only acknowledged owning a septic system, and five<sup>1</sup> homeowners had switched to sewer system service. Three more surveys than the necessary amount were conducted because of the unusually high number of residents in the database who had switched to sewer system service. The median age of the 14 homes for which all questions in the survey were completed was 45 years. Twelve of the 14 participants were not original owners, and four of those twelve did not know the age of their septic system. Three of the 14 full survey participants had experienced sewage backup, and those three had a septic tank service frequency of about once every 10 months. Two of the 14 participants had collapsed "pits," and one of the two owners mentioned that he plans to switch service to the sewer system. The 14 respondents had their septic tanks serviced on an average of once every 5 years, and all participants knew where their septic systems were located (13 in the front yard; 1 in the backyard). One homeowner reported a previous failure (with surface runoff/discharge) that resulted from a broken pipe.

Seven of the 14 participants have never had their septic tank serviced, and median and average septic tank service frequency for the remaining participants was once every 2.5 years and 3.5 years, respectively. Three of the seven who never had their septic serviced had just moved to the residences within the last three years, but the remaining four participants had resided at their current locations for the last 26 to 46 years. One of these four participants had not had any problems, while the other three had experienced some problems that may or may not be related to lack of septic tank maintenance. No system failures were noted by the investigator in this target area.

#### 3.3.3 City of Anaheim

Of the 20 surveys conducted in the city of Anaheim, 10 homeowners fully answered the survey questions, eight only acknowledged owning a septic system, and two homeowners had switched to sewer service. The median age of the 10 homes that responded to the questions in the survey was 27 years. Eight of the 10 participants were not original owners, and six of those eight participants did not know the age of their septic systems. Two of the 10 survey participants had experienced sewage backup (both due to a plugged drainfield), and each of them had a septic tank service about once every 2 years. A failure of one septic system was noted during this survey; the owner indicated that a new drainfield was required, and surface flow was noted at the time of the survey; however, the surface flow was infiltrated on the property prior to the effluent reaching a conveyance system. The median and average septic tank service frequencies for the participants were once every 2.8 years and 4.6 years, respectively. All but one of the 10 respondents knew where their septic systems were located (5 in the front yard; 4 in the backyard).

 $<sup>^{\</sup>rm 1}$  One homeowner had switched to sewer services, but participated in the survey based on previous ownership.
#### 3.3.4 <u>City of Orange and the Adjacent Unincorporated Area</u>

Of the 20 surveys conducted in the city of Orange and the adjacent unincorporated area, 16 homeowners answered the survey questions completely, three acknowledged owning a septic system, and one homeowner had switched to the sewer service. The median age of the 16 homes was 45 years old. Eleven of the 16 participants were not original owners, and seven of those 11 participants did not know the age of their septic system. Five of the 16 survey participants had experienced sewage backup, and those five participants had a septic tank service frequency ranging from about once every 2 months to 3 years. Four participants had never serviced their septic tanks, but none had reported any problems. The four participants who had not had their septic systems serviced had lived in their homes from less than 1 year to more than 40 years. The median and average septic tank service frequency for the remaining 12 participants was once every 3 years. All but one participant knew where their septic systems were located (15 in the front yard; none in the backyard). No system failures were noted by the investigator in this target area.

#### 3.4 Failure Rate Analysis

The failure rate for septic systems in Orange County was estimated from the data obtained in the field investigation. Eighty septic system owners were contacted via field inspection over a period of about 3 weeks from December  $23^{rd}$  to January 10<sup>th</sup>. During the survey, one system failure was noted out of the 80 contacts made. This represents a failure rate of about 1.25%. Using N = 80 and F = 1.25% in the equation shown below (representing one case of active failure during the inspection), the 95% confidence interval for failure is computed to be 2.5%. The confidence range then for failure based on the survey is from 0 to about 4%. Using a midrange value, this means that at any given time, about 2% of the systems are failing via surface discharge.

A 2% failure rate is consistent with the findings of King et al. (2002) who reported a 1.3% failure rate in a more extensive analysis in Oregon where 389 system were surveyed (failure in the study by King et al. was defined as the observance of surface flow, consistent with the definition in this study). The investigators indicate the calculated failure rate was modest, but consistent with the results of a previous study (Lindbo, et al., 1998) where failure rates were documented at  $\leq 5\%$ .

The 95% confidence interval for the failure rate of the septic systems determined by the field survey may be estimated as:

$$CI_{95} = \sqrt{\frac{\% F(\% S)}{N}} (2)$$

Where:

=	95% confidence interval
=	Percent failing
=	Percent successful
=	Total number of samples
	= = =

#### 3.4.1 <u>Age</u>

Due to design and construction improvements over the last few decades, septic systems installed before the 1970s "... may be inadequately designed by today's standards." (Mancl et al., n.d.). There was no correlation between age and failure of the systems in this survey; however, the number of surveys completed relative to the total number of systems was small (80 of about 2,775 total systems). The Anaheim target area reported the fewest surveyed toilet backups despite a reportedly modest septic tank service frequency.

#### 3.4.2 Soil Type

Some septic system failures can be avoided if the soil depth and permeability is evaluated prior to installation. King et al. (2002) reached a conclusion that highly accurate soil assessments during septic system permitting was one of the important factors that contributed to the low failure rates. The survey in this study focused on soil types C and D because of their low permeability. This focus would tend to conservatively bias the results; however, much of the area where septic systems are concentrated is within Group C and D soil categories (see Figure 1-2).

#### 3.5 Loading Model Approach

A loading analysis was conducted to estimate the contribution of constituents of concern of failed septic systems to the total load in the watershed. Using the results of this analysis, it can be determined whether or not additional measures are needed to control the effects of failed septic systems on receiving water quality. The analysis compares the constituent loads from the failed septic systems (that are conveyed to the receiving water) to that of the receiving water load at locations where the beneficial use is of special concern. Historic monitoring data from the County of Orange stormwater program was used to calculate ambient receiving water loads for the selected constituents. Discharge volumes at the selected points of interest were also computed from stormwater program monitoring data for 'average' gauged storm events and for dry weather flow.

In the Proposed 2002 Clean Water Act (CWA) Section 303(d) List of Water Quality Limited Segments, Santa Ana River (Reach 3 and 4) and San Diego Creek (Reach 1 and 2) were listed for pathogens and fecal coliform, pesticides, and metals, respectively. Of the pollutant/stressors listed, only pathogens would be expected to be exported in significant quantities from a failed septic system. There is currently a Total Maximum Daily Load (TMDL) in place for pathogens and nutrients in Upper Newport Bay (downstream of San Diego Creek). Total Kjeldahl Nitrogen (TKN), total coliform and fecal coliform were selected for the load analysis to estimate the potential impact of septic systems on the quality of receiving waters.

Two locations were selected for the loading estimate. For the Santa Ana River watershed, the Santa Ana River at its discharge into the Pacific Ocean was selected since the river mouth is located near a popular swimming beach. For the San Diego Creek watershed, San Diego Creek near Campus Drive was selected because it is at a point near the Creek's discharge into Upper Newport Bay. (See Figure 1-2 for the selected analysis locations.) Upper Newport Bay is impaired for pathogens that have impacted shellfish harvesting. Portions of Upper Newport Bay (Dunes area) are also used for body contact recreation.

Section 4 provides a discussion of the predicted pollutant loadings from failed septic systems within each of the two watersheds. Section 5 discusses the ambient constituent loadings within the two watersheds and compares the septic system loadings to that of the total pollutant loading in the watersheds.

#### 4 SEPTIC SYSTEM POLLUTANT LOADINGS

#### 4.1 Background and Loading Estimation

A conventional soil absorption septic system is estimated to last a minimum of 30 years when properly designed and maintained (Hallahan, 2002). Poorly designed or unmaintained systems can fail or partially fail and introduce pollutants via surfacing and overland flow to surface waters. This section describes the steps taken to estimate the load of TKN and pathogen indicators (total and fecal coliform) from failed septic systems to receiving waters.

#### 4.1.1 Analysis of Septic System Constituent Loading

Overall, the septic system failure rate was assumed to be 2% in any one year (taken as the average of the computed 95% confidence interval from the results of this study).

For the purpose of calculating a load to the receiving water, surface flow from the failed systems was assumed constant with a flow generated for the assumed number of failed systems as previously described. There are 1272 septic systems inventoried in the Santa Ana River watershed and 292 septic systems inventoried in the San Diego Creek watershed (see Appendix F for listing of systems). A 2% hypothetical septic system failure rate translates to 25.4 septic system failures per year in the Santa Ana River watershed and 5.8 per year in the San Diego Creek watershed (See Table 4-1).

The average daily discharge ( $Q_s$ ) from a failed septic system was assumed to be one-half of the estimated daily per-capita water consumption of the dwelling, assuming three persons per dwelling and excluding consumption for landscape (see Table 4-2). The daily per capita flow from the failed septic system was reduced by half to account for the fact that the septic system would probably only partially fail.

Santa Ana River (SAR) Watershed	San Diego Creek (SDC) Watershe	d	
Failure rate at any one year	2%	Failure rate at any one year	2 %
No. of septic system in SAR watershed	1272	No. of septic system in SDC watershed	292
No. of failed septic systems in 1 year	25.4	No. of failed septic systems in 1 year	<b>5.8</b>

**Table 4-1 Estimated Number of Failed Septic Systems** 

Table 4-2 Estimated Daily	Wastewater Flows	for a Sing	le-Family	<b>Dwelling</b>

Per capita water consumption*	75			
Using 3 persons per dwelling	225			
Assume a failed septic system only discharges 50% of the per capita				
daily water usage ( $oldsymbol{Q}$ )	112.5			

\* Goldstein and Moberg, 1973

Two assessment scenarios, representing the dry season and wet season, were examined in the load analysis. During the dry season (May 1st through September 30th), it was assumed that the discharge from the failed septic systems would be different (reduced flow to the receiving water) as compared to the wet season: infiltration and evaporation of surface discharge would be significantly higher during the dry season as compared to the wet season. Accordingly, for dry weather load assessment, 50% of the surface flow from a failed septic system is assumed to infiltrate and evaporate prior to reaching the primary receiving water. This reduction accounts for the fact that most systems surveyed were in turfed areas, often with often 10 or more feet of buffer area, before reaching a street or other impervious conveyance. During the wet season (October 1<sup>st</sup> through April 30<sup>th</sup>), the reduction for infiltration and evaporation was conservatively assumed to be zero, reflecting the potential for saturated soils and consequent relatively efficient runoff to transport the constituent load to a lined conveyance. The constituents of concern used in the analysis reflected the 303(d) list (list of impaired water bodies) and REC-1 beneficial use for the receiving waters. TKN, total coliform (TC), and fecal coliform (FC) were selected for a load analysis. Characteristics of septic system surface effluent are shown in Table 4-3.

Mean Values of Septic System Pollutant, Po			
Total Coliform (per 100mL)	10 <sup>5.57</sup>		
Fecal Coliform (per 100mL)*	104.57		
TKN (mg/L) *	44.2		
* U.S. EPA, 2002.			

Table 4-3 Mean Pollutant C	oncentration Uti	ilized in Load	Calculation
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Finally, a die-off of bacteria indicators was assumed from the time the effluent was discharged from the failed septic system until it reached the ocean outfall or point of interest. The function used to estimate the die-off was the exponential bacteria decay rate equation:

$$P = P_o * e^{(-kt)}$$

Where:

k	=	bacterial decay rate constant, day-1 or d-1
t	=	time, day or d
$P_o$	=	initial bacterial population
Р	=	bacterial population after time t

A conservative decay rate constant (*k*) of 0.590/day for TC and FC in fresh water was used. This was calculated using a median value of 3.9 days for 90% die-off, and then solved for *k* with  $P/P_o = 0.10$  or 90% die-off (Bartram, et al.).

Travel time for the pathogens to be transported from the failed septic systems to the receiving water and then into the ocean is assumed in both the dry and the wet season to be 14.7 and 7.6 hours for SAR and SDC, respectively. When the travel times are applied to the decay function, a reduction of 30 and 17% in bacterial population is obtained for SAR and SDC, respectively. The travel time is for average conditions (distances) within

the watersheds from the center of mass of the septic system locations and the points of interest in the receiving water, at a velocity of 2 ft/s. The travel velocity of 2 ft/s is a conservative assumption when compared to the results of Southern California Coastal Water Research Project (SCCWRP's) travel time study in Tustin, which was as high as 1.15 ft/s (see Appendix G). Given the uncertainty in the number of hours the pathogens might spend under the sunlight, no additional bacterial die-off function (such as die-off caused sunlight exposure) was applied.

A monthly pollutant-loading model for each of the two seasonal conditions described was developed using the following equation:

$$L = (1 - D) \times (1 - R) \times Q_s \times t \times N \times C \times 3785.412 \times 10^6$$

where:

L	=	monthly pollutant load (# of TC/FC or mg of TKN)
D	=	% bacterial decay (enter 0 for non-bacterial analysis)
R	=	% discharge volume removal by infiltration & evaporation
		(dry season only)
$Q_s$	=	a failed system's partial daily discharge for 3
		persons/dwelling (gal/d)
t	=	time (d; 30 days is used to represent a month)
N	=	the number of failed septic system in a watershed (#)
С	=	mean pollutant concentration (TC/100mL, FC/100mL, or
		TKN mg/L)
3785.412	=	units conversion factor from $gal/d$ to $mL/d$ .
10 <sup>a</sup>	=	units conversion factor from mL/d to L/d, where $a = -3$
		for TKN and 0 otherwise

#### 4.2 Failed Septic System Loading Rates

The loading equation and parameters were used to obtain the results listed in Table 4-4 for the Santa Ana River (SAR) assessment location and the San Diego Creek (SDC) assessment location (see Figure 1-1).

Table 4-4 Monthly	Constituent Load	for Wet and Dry Seasons
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	S	AR	SDC		
<b>Constituent/Indicator</b>	Dry	Wet	Dry	Wet	
TC	4.2 x 10 <sup>11</sup>	8.5 x 10 <sup>11</sup>	1.2 x 10 <sup>11</sup>	2.3 x 10 <sup>11</sup>	
(MPN/100mL/month)					
FC	4.2 x 10 <sup>10</sup>	8.5 x 10 <sup>10</sup>	1.2 x 10 <sup>10</sup>	2.3 x 10 <sup>10</sup>	
(MPN/100mL/month)					
TKN (mg/month)	7.2 x 10 <sup>4</sup>	1.4 x 10 <sup>5</sup>	1.6x 10 <sup>4</sup>	3.3 x 10 <sup>4</sup>	

#### 5 WATERSHED IMPACT ASSESSMENT

#### 5.1 Watershed Constituent Contribution

The Water Quality section of the County of Orange Health Care Agency was the source for bacterial monitoring data for each of the two study watersheds. A stream gage and a bacterial sampling station at the intersection of Santa Ana River and Imperial Highway provided the local data for the Santa Ana watershed. The local monitoring data for the San Diego Creek watershed for stream flow and indicator bacteria were collected at the intersection of San Diego Creek and Campus Drive from an existing sampling station. The mean value for each month was determined and then grouped for the analysis as either 'dry' or 'wet' season. Various mean monthly parameters for the dry and wet seasons are shown in Table 5-1.

Mean Monitoring Data	SAR <sup>1</sup>		SDC <sup>2</sup>	
	Dry	Wet	Dry	Wet
Avg. stream flow (cfs)	80	303	13.3	64.2
Avg. TC (MPN/100mL/month) <sup>3</sup>	100466	38155	18141	13245
Avg. FC (MPN/100mL/month) <sup>3</sup>	275	1025	389	1322
Avg. TKN (mg/L/month)	0.63	0.93	1.68	2.04

Table	5-1	Mean	Monthly	Monitoring	Data
Lanc	<b>J</b> - <b>I</b>	IVICall	within	Montoring	Data

<sup>1</sup>Based on 1998-1999 Orange County Water District (OCWD) data

<sup>2</sup>Based on 2001 TMDL report from the County and co-permittee.

<sup>3</sup>SAR is 303(d) listed for pathogens within Reach 3 (Prado Dam to Mission Blvd. in Riverside County).

#### 5.1.1 Watershed Load

Given the average monthly concentrations in dry and wet seasons (Table 5-1) for the indicators/constituents, a watershed load was calculated for SAR and SDC watersheds (see Table 5-2). The values given in Table 5-2 were computed based on average discharges from monitoring data during the years 1998-1999 for SAR and 2000-2001 for SDC, multiplied by the concentrations shown in Table 5-1.

#### Table 5-2 Watershed Load for Selected Constituents – Santa Ana River Watershed and San Diego Creek Watershed

	SA	R	SDC		
Watershed Loading	Dry	Wet	Dry	Wet	
Total Coliform	5.9 x 10 <sup>15</sup>	8.5 x 10 <sup>15</sup>	1.8 x 10 <sup>14</sup>	6.2 x 10 <sup>14</sup>	
Fecal Coliform	1.6 x 10 <sup>13</sup>	2.3 x 10 <sup>14</sup>	3.8 x 10 <sup>12</sup>	6.2 x 10 <sup>13</sup>	
TKN (mg)	3.7 x 10 <sup>9</sup>	2.1 x 10 <sup>10</sup>	1.6 x 10 <sup>9</sup>	9.6 x 10 <sup>9</sup>	

Note: Coliform units in MPN/100 ml.

#### 5.2 Septic System Loading Analysis

The loads computed in Table 4-4 (failed septic system loads) were divided by the estimated total watershed load provided in Table 5-2 to determine the relative contribution of the septic systems to the overall watershed load for the selected constituents/indicators. Table 5-3 provides the results of this comparison.

Table 5-3 Estimated Failed Septic System Loads as a Percentage of Total Watershed
Load for Selected Constituents

	SA	AR	SDC		
Constituent	<b>Dry</b> , %	Wet, %	<b>Dry</b> , %	Wet, %	
Total Coliform	0.007	0.010	0.065	0.037	
Fecal Coliform	0.262	0.037	0.304	0.037	
TKN (mg)	0.002	0.001	0.001	0.0003	

Note: Coliform units in MPN/100 ml.

Table 5-3 shows that overall failed septic systems are not a significant source of pathogen indicator loading to the watersheds that were studied. Dry season pollutant/indicator contribution may be slightly higher than in the wet season because of a reduced receiving water flow. The contribution of TKN to the San Diego Creek and Santa Ana River watersheds from failing systems is shown not to be significant.

The assumptions used in this analysis may be considered conservative, particularly the estimates of flow from a failed septic system. Nevertheless, it is reasonable to assume that failed septic systems can contribute to pathogen indicator loading when septic system failures occur in Orange County watersheds.

Additional investigation relative to the rate of discharge from failed septic systems, the rate of discharge from a failed system that reaches an impervious conveyance, and the quality of surface discharge from a failed septic system would be desirable. The results of the Orange County assessment could be better interpreted with more systematic research data on septic system failures. Finally, a prompt response by the appropriate public health jurisdiction and subsequent septic system site-specific corrections are required regardless of the septic system total loading findings, since septic system failures constitute a direct localized human health concern.

#### **6** CONCLUSIONS

The objectives of this study were to develop an inventory/database of the septic systems in Orange County, and to assess the potential impact of failing septic systems on receiving water quality. Septic systems are widely dispersed throughout Orange County but are located in the highest concentrations in the Santa Ana River watershed. The potential impact of failing septic systems was assessed at the mouth of the Santa Ana River with the Pacific Ocean, and in Upper Newport Bay where impacts to REC-1 beneficial use and shellfish harvesting are of particular practical significance.

The final inventory/database lists over 2776 active septic systems in Orange County. The failure rate for septic systems in Orange County was estimated through field investigation. Failure of a septic system was defined as the observance of surface flow during the inspection. Other information was also gathered from the homeowners during the field survey, and an educational pamphlet regarding operation and maintenance of septic system was left with each homeowner who was contacted.

Of the eighty field surveys that were conducted, one failed system was noted, or 1.25% of the systems surveyed. The findings were very similar to those from other more comprehensive surveys found in a literature review. King et al (2002) surveyed performance of 389 septic systems in Oregon based on on a similar surface flow criterion of failure, and reported a 1.3% failure rate.

King et al. further evaluated each of the failed systems to determine the cause of failure using a system first established by Adams et al., (1988). The analysis determined that he observed failures were primarily due to poor operation and maintenance (O&M) at the sites. Excessive water use (or insufficient system capacity) was also determined to be a potential contributing factor, but the authors stressed that inadequate O&M at the sites was the primary failure mechanism.

A load model was developed for two Orange County watersheds to estimate the relative contribution (load) of pathogen indicators in the receiving waters. Two cases were evaluated in each watershed: dry and wet weather. The results of the analysis show that the load from the failed septic systems in any given year is a very marginal contributor for pathogen indicators and is insignificant for TKN.

The estimated relative contribution of pathogen indicators to receiving waters from septic systems is an indication that this source may be considered a low priority for the implementation of management practices. However, this finding does not diminish the need for effective on-site corrections in those instances where seepage of inadequately treated effluent is observed leaving the property and constitutes a clear and immediate public health hazard. Correction of these situations would also effectively serve to secondarily protect eh beneficial uses of potential downstream receiving waters.

The database developed for this study could be used by the County and co-permittees to initiate a direct-mail education program to homeowners who use septic systems. As

noted by King et al., lack of O&M by the homeowner was determined to be the primary cause of failure. The information handout developed as a part of this study describing O&M tips may be used as a part of the information included in the mailer. Other potential handout information would include the appropriate agency contact to determine if sewer system service is available to the homeowner, and a discussion relative to the system connection cost and annual fee associated with the service. It is estimated that such an information al program might reduce system failure incidence by 50%.

Finally, the information provided to homeowners could also include a method by which they can notify the County or permittee if they connect to the sewer system. With this information, the septic system database can be maintained and the number of systems tracked as an analysis tool. An option would be to forward an information package to septic system owners biannually to serve as a reminder for the homeowner for septic system maintenance, keep pace with change of ownership, and better maintain the septic system database.

A more aggressive inspection and enforcement program could include the following elements:

- Identify locations of all systems on individual properties.
- Regularly inspect each system for integrity and function.
- Review pumping records.
- Require upgrades to bring older systems into compliance with current codes.
- Establish minimum setbacks from streams.
- Establish maintenance requirements (pumping).
- Require leak alarms.
- Establish enforcement schedules and penalties.

However, such an inspection and enforcement program is not recommended at this time unless a location in Orange County is identified where septic systems are a larger contributor to the overall load in a specific stream segment than was revealed in the survey. Further, as sewer system service reaches rural areas and as homeowners connect to the County's sewer system where service is available, the number of septic system failures would be expected to decline.

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#### GLOSSARY

#### • Best Management Practice

Best practical and economically achievable measures to control the addition of pollutants to the waters of the United States through the application of pollution control practices, technologies, processes, siting criteria, operating methods, or other alternatives.

#### • Clean Water Act and Amendments

The Federal Pollution Control Act (Public Law 92-500), as amended (33 U.S.C. 1251 et seq.). Federal regulation mandating a National Pollutant Discharge Elimination System permit for discharges into the Waters of the United States. The goals of the act are to restore and maintain the chemical, physical and biological integrity of the nation's waters.

#### • Constituent

A substance found in dissolved, colloidal, or particulate form in water that can be measured as a concentration.

#### Constituent Load

The quantity of a constituent found in runoff expressed in mass per unit of time. Loads are commonly expressed in units of tons/year or pounds/year.

#### • Hydrologic soil type

Based on the runoff potential, soils are grouped into four hydrologic soil types (A, B, C, or D); soil type A has the lowest runoff potential, while soil type D has the highest.

#### National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit

A provision of the CWA, section 402, that identifies municipal stormwater as a point source subject to regulation under the NPDES Permits.

#### NPDES Stormwater Program

The program designed by the Orange County Permittees for compliance with the NPDES permits.

#### • Permittees

The cities of Anaheim, Brea, Buena Park, Costa Mesa, Cypress, Dana Point, Fountain Valley, Fullerton, Garden Grove, Huntington Beach, Irvine, Laguna Beach, Laguna Hills, Laguna Niguel, Laguna Woods, La Habra, La Palma, Lake Forest, Los Alamitos, Mission Viejo, Newport Beach, Orange, Placentia, Rancho Santa Margarita, San Clemente, San Juan Capistrano, Santa Ana, Seal Beach, Stanton, Tustin, Villa Park, Westminster, and Yorba Linda; the County of Orange; and the Orange County Flood Control District and any subsequently incorporated cities that become subject to the NPDES permit. Each Permittee is individually responsible for the implementation of the program elements within its jurisdiction.

#### • Principal Permittee

The County of Orange is the Permittee designated with the responsibility to manage the NPDES Municipal Stormwater Program on behalf of the Permittees.

#### • **REC-1**

Water contact recreation (REC -1) defines waters that are used for recreational activities involving body contact with water where ingestion of water is reasonably possible (e.g. fishing, surfing, swimming, water-skiing, whitewater activities, etc.).

#### • Regional Water Quality Control Boards

The Santa Ana and San Diego Regional Water Quality Control Boards are agencies that implement and enforce Clean Water Act Section 402(p) NPDES permit requirements, and are issuers and administrators of these permits on behalf of EPA within Orange County.

#### • Septic System

A typical septic system includes a septic tank that traps solids and a soil drain field or leach field that purifies and disperses liquid effluent.

#### • Septic system failure

Observed surface flow at the time of the survey

#### • State Water Resources Control Board

State agency that sets statewide policy for the nine Regional Water Quality Control Boards.

#### Target Areas [Selected Areas]

The four target areas chosen for field assessment of septic systems, including the City of Yorba Linda, City of Orange and adjacent unincorporated area; City of Anaheim; and City of Tustin and the adjacent unincorporated area.

#### • Total Kjeldahl nitrogen (TKN)

An analytical method for determining total organic nitrogen and ammonia.

#### • Total Maximum Daily Loads (TMDL)

A written, quantitative plan and analysis for attaining and maintaining water quality standards in all seasons for a specific waterbody and pollutant.

#### Total Watershed Load

An estimation of the contribution of constituents of concern (i.e., of failed septic systems) to the total load in the watershed.

### APPENDIX A

### Survey Forms

#### **County of Orange Septic System Survey**

The proposed survey is presented below: Questions will be asked verbally and the answers recorded later. The property address and ARN will be recorded.

Introductory Statement

Introduce ourselves to resident as representatives from RBF Consulting, working for Orange County with the knowledge and concurrence of the local jurisdiction. We are conducting a survey of septic systems in Orange County in order to determine the extent to which systems are currently meeting homeowner/resident treatment and reliability needs. Along with the survey, we are also providing some operation and maintenance tips.

(We will have our own business cards, as well as those of County's project manager, and of the local jurisdiction representative, should residents wish to learn more about the survey.)

Responses to the survey will be kept anonymous, and the survey will take just a few minutes to complete.

Q1	Do you own a septic system? (Y or N)
Q2	What is the approximate age of your septic system?
Q3a	Have you had problems with your septic system? (Y or N)
Q3b	(If no to Q3a, then skip to Q6) Could you describe the problem?
Q3c	(If no to Q3a, then skip to Q6) Were repairs or upgrades required? (Y or N)
<b>Q</b> 4	When was the last time you serviced your septic tank?
<b>Q</b> 5	Where is your septic tank or drainfield located? (Front or backyard)
<b>Q6</b>	How long have you lived here?
Reco	rd property address and APN:

Record property address and APIN:

### APPENDIX B

### Public Education Material

### Septic System Maintenance

If you own a septic system, it is important that it be properly maintained. On-site septic systems have proven to be a reliable, inexpensive, and long-term method of wastewater treatment as long as homeowners follow a few simple, but important, steps to protect and maintain them. The failure to take these measures may result in reduced treatment performance and potential long-term damage to the system. Following are some maintenance tips for your system.

#### Septic Tank Pumping

A typical septic system includes a septic tank that traps solids and a soil drain field or leach field that purifies and disperses liquid effluent. It is critical that solids buildup in the tank do not exceed your septic tank's design level, or else solids overflow will damage the leach field. How often you need to pump the solids out of your septic tank depends on three major factors:

- 1. The number of people in your household;
- 2. The amount of wastewater generated (based on the number of people in the household and the amount of water used); and
- 3. The volume of solids in the wastewater (e.g., using a garbage disposal will increase the amount of solids).

Depending on the factors listed above, a maintenance frequency could range anywhere from several months to years, with a typical range being 1 - 5 years. If you do not know the frequency at which your septic tank should be pumped to remove the solids or how to check for solids buildup, please contact your septic system manufacturer or a licensed provider listed in your local Yellow Pages under *Septic Tanks & Systems*. If you experience problems between pump-outs, more frequent maintenance may be necessary, or changes may be needed to your system.

#### **Other Maintenance**

Although your septic tank leach field generally does not require maintenance, you should adhere to the following rules to protect and prolong its functional life:

- 1. Do not drive over the leach field with cars, trucks, or heavy equipment.
- 2. Do not plant trees or shrubbery in the leach field area, because the roots can get into the lines and plug them.
- 3. Do not cover the leach field with hard surfaces, such as concrete or asphalt. Grass is the best cover, because it will help prevent erosion and help remove excess water.
- 4. Do divert surface runoff water from roofs, patios, driveways, and other areas away from the leach field.
- 5. Do not pave, build over, or otherwise limit relatively straightforward access to the septic tank.

Homeowners wanting to take good care of their septic systems should make note of the certain items that should never be flushed down the drain or toilet.

The following items can clog pumps (if you have them, most systems do not) and pipes or can overtax/destroy the biological processes taking place within your septic system:

- hair combings
- coffee grounds
- dental floss
- disposable diapers
- kitty litter
- sanitary napkins

- tampons
- cigarette butts
- condoms
- gauze bandages
- fat, grease, or oil
- paper towels

### APPENDIX C

## Survey Results

CITY OF YORBA LINDA									
Street Number/Name	Zip Code	Yr_bult	Q1	Q2	Q3	Q3b;Q3c	Q4	Q5	Q6
18911 VIA SERENO	92886	1975	Switched						
5388 OHIO	92886	1966	Y						
5279 TEDFORD	92886	1980	Y						
18911 CAMINO VERDE	92886	1956	Y	NA	Y	Sewage backup	3	Front	8
5442 CHERRYLEE	92886	1957	Y	50	Ν		25	Back	25
18880 VIA SERENO	92886	1960	Y						
18901 CAMINO VERDE	92886	1961	Y	35	N		2	Front	35
5141 LOS ALTOS	92886	1961	Y	NA	N		2.5	Back	2.5
5571 FIRCREST	92886	1961	Y						
5522 PEBBLE BEACH	92886	1961	Y						
5531 PEBBLE BEACH	92886	1961	Y						
5532 PEBBLE BEACH	92886	1961	Y	45	N		7	Front	22
5531 TAMMARISK	92886	1961	Y	40	Y	Sewage backup	1	Front	12
5552 TAMMA RISK	92886	1961	У						
5561 TAMMARISK	92886	1961	Y	5	Y	Clogged; new system installed	3	Front	6
5562 TAMMARISK	92886	1961	Y	40	Y	Backup in '94; installed pump access	8	Front	12
5192 MOUNTAIN VIEW	92886	1962	Y	40	Y	Large storms flooded the septic system; increased pump frequency	3	Back	40
5521 TAMMARISK	92886	1963	Y						
18891 VIA ENCANTO	92886	1966	Y	37	N		2.5	Front	3
18856 VIA SERENO	92886	1975	Y	38	N		1	Front	1
5230 TEDFORD	92886	1976	Y	NA	Ν		2	Front	2
5583 PEBBLE BEACH	92886	1959	Y						

CITY OF TUSTIN AND UNINCORPORATED AREAS										
Street_Number/Street Name	City	Zip code	Yr_bult	Q1	Q2	Q3	Q3b;Q3c	Q4	Q5	Q6
1371 KENNETH	TUSTIN	92780	1954	switched	40	Y	Sewage backup in toilets; switched	never	Front	46
18121 THEODORA	TUSTIN	92780	1955	switched						
17921 BIGELOW	TUSTIN	92780	1959	switched						
1432 CAMEO	TUSTIN	92780		switched						
18151 BENETA	TUSTIN	92780		switched						
18211 LEON	TUSTIN	92780	1953	Y	50	Ν		2	Front	0.25
1431 KENNETH	TUSTIN	92780	1954	Y	NA	Ν		never	Front	3
13032 RED HILL	TUSTIN	92780	1954	Y	40	Ν		3	Front	8
14721 LIVINGSTON	TUSTIN	92780	1955	Y						
17651 FIESTA		92780	1955	Y	45	Y	Pit collapsed; going to switch to sewer	never	Front	41
17962 THEODORA	TUSTIN	92780	1955	Y						
18132 NORWOOD PARK	TUSTIN	92780	1955	Y	40	Ν		5	Back	10
1832 IRVINE	TUSTIN	92780	1957	Y	40	Y	Sewage backup in toilets	0.833	Front	15
13062 RED HILL	TUSTIN	92780	1957	Y	45	Ν		never	Front	3
14562 LIVINGSTON	TUSTIN	92780	1957	Y						
14172 LAMBETH		92780	1958	Y						
17821 WELLINGTON	TUSTIN	92780	1958	Y	45	Y	Clogged/sewage backup	9	Front	18
17965 WELLINGTON	TUSTIN	92780	1960	Y	40	Ν		NA	NA	10
1661 MELVIN	TUSTIN	92780	1961	Y	41	Y	Lid of the tank collapsed	never	Front	0.33
1452 LANCE	TUSTIN	92780	1962	Y	40	Y	Surface flow from broken pipe at front yard; repaired	never	Front	26
14361 CLARISSA	TUSTIN	92780	1962	Y	40	N		2	Front	15
14082 MATRYCE	TUSTIN	92780	1963	Y	40	Ν	(switched in Oct, 2002)	never	Front	40
14342 CLARISSA	TUSTIN	92780	1963	Y						

#### Attachment F

#### **CITY OF ANAHEIM** Street Number/Street Name Zip Code Yr\_bult Q1 Q2 Q3 Q3b;Q3c Q4 Q5 Q6 181 POSSUM HOLW 92808 1976 switched 123 DERBY 1979 switched 1998 92808 7707 AUTRY 92808 1965 Υ Υ 7710 AUTRY 92808 Drainfield plugged 0.5years ago; new one soon; surface flow 25 **109 EUCALYPTUS** 92808 1964 Υ Υ 2.5 Front 3.0 noticed 136 EUCALYPTUS 1979 Υ 92808 142 EUCALYPTUS 92808 1980 Υ Υ 157 EUCALYPTUS 92808 1979 162 EUCALYPTUS 92808 1980 Υ 165 EUCALYPTUS 92808 1978 Υ NA Ν 8 16.0 Back **195 EUCALYPTUS** 92808 1948 Υ 200 EUCALYPTUS 1990 Υ 12 8.5 92808 Ν Never NA 202 EUCALYPTUS 92808 1978 Y 4.5 Ν 2 Back 4.5 Υ 3 150 MOHLER 92808 1957 NA Ν Back 3.0 160 MOHLER 92808 1952 Υ 55 Ν New drainfield installed by old owners before selling Never Back 1.5 180 POSSUM HOLW 1975 Υ 27 Υ Drainfield a bit plugged 2 27.0 92808 Front 190 POSSUM HOLW 92808 1976 Υ 25 Ν 3 25.0 Front 191 POSSUM HOLW 92808 1976 Υ Υ 100 SADDLEBACK 92808 1979 NA Ν 2.5 Back 2.5 Υ Υ 7695 SILVER DOLLAR 92808 1964 NA 14 Front 18.0 Septic tank collapsed when a drive way was paved

#### Attachment F

#### Attachment F

CITY OF ORANGE									
Street_No/Street_Name	Zip Code	Yr built	Q1	Q2	Q3	Q3b;Q3c	Q4	Q5	Q6
726 Cumberland	City Orng	1957	Switched	NA	Y	Clogged in 2000; service needed	2	NA	3
16382 HEIM	92865	1956	Y	NA	Y	Sewage backup; pump service req'd	0.5	Front	40
16372 HEIM	92865	1955	Y	48	N		5	Front	48
16342 HEIM	92865	1955	Y	1	N	New septic system installed during remodeling	3	Front	15
16322 HEIM	92865	1953	Y	48	Y	Ground saturated/backup; serviced	3	Front	48
16331 FELLOWS	92865	1956	Y	40	N		Never	Front	41
16332 FELLOWS	92865	1959	Y	3	Y	Drainfield issues; new one installed 3yr ago	3	Front	43
16311 FELLOWS	92865	1961	Y						
16316 FELLOWS	92865	1963	Y	NA	N		Never	Front	16
16322 FELLOWS	92865	1960	Y						
16392 HEIM	92865	1955	Y						
16422 HEIM	92865	1955	Y	5	N	40yr old system replaced	3	Front	23
16522 HEIM	92865	1949	Y	NA	N		6	Front	25
519 CUMBERLAND	92865	1962	Y	NA	N	last serviced yr 2000	5	Front	7
703 Cumberland	City Orng	1961	Y	NA	Y	Sewage backup in toilets (Yr 1999)	3	F	19
727 Cumberland	City Orng	1960	Y						
849 Cumberland	City Orng	1958	Y	40	N		Never	F	0.25
910 Cumberland	City Orng	1958	Y	50	N		5	F	16
935 Cumberland	City Orng	1958	Y	47	Y	Clogged; service needed	0.17	F	47
1142 Cumberland	City Orng	1959	Y	NA	N		Never	F	0.25

### APPENDIX D

### Septic System Inventory/Database

# Table D.1Septic System Location Data Dictionary(ArcView shapefile name: septictankaprl03final.shp)

Attribute	Septic System Identifications
JURISDICTI	City name
STREET_NO	Street number
NAME	Street name
APN	Assessor Parcel Number
WATERSHED_	Watershed name

(Note: 24"x36" septic system location map is placed at the end of this report)

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
ANAHEIM	7707	AUTRY	358-321-07	Lower Santa Ana River
ANAHEIM	7710	AUTRY	358-321-08	Lower Santa Ana River
ANAHEIM	2380	BROADWAY	127-121-34	Carbon Creek
ANAHEIM	221	BROOKHURST	071-181-07	Carbon Creek
ANAHEIM	518	CHERRY TREE	083-020-32	Carbon Creek
ANAHEIM	519	CHERRY TREE	083-020-22	Carbon Creek
ANAHEIM	426	COUNTRY HILL	356-131-06	Lower Santa Ana River
ANAHEIM	341	COYOTE	356-101-16	Lower Santa Ana River
ANAHEIM	350	COYOTE	356-101-14	Lower Santa Ana River
ANAHEIM	5324	CRESTHILL	343-242-09	Lower Santa Ana River
ANAHEIM	5336	CRESTHILL	343-431-03	Lower Santa Ana River
ANAHEIM	5386	CRESTHILL	343-431-11	Lower Santa Ana River
ANAHEIM	5392	CRESTHILL	343-431-12	Lower Santa Ana River
ANAHEIM	135	DALE	126-012-13	Carbon Creek
ANAHEIM	101	EUCALYPTUS	358-301-03	Lower Santa Ana River
ANAHEIM	108	EUCALYPTUS	358-321-06	Lower Santa Ana River
ANAHEIM	109	EUCALYPTUS	358-301-02	Lower Santa Ana River
ANAHEIM	132	EUCALYPTUS	356-221-37	Lower Santa Ana River
ANAHEIM	136	EUCALYPTUS	356-221-38	Lower Santa Ana River
ANAHEIM	142	EUCALYPTUS	356-221-35	Lower Santa Ana River
ANAHEIM	148	EUCALYPTUS	356-221-36	Lower Santa Ana River
ANAHEIM	152	EUCAL YPTUS	356-221-53	Lower Santa Ana River
ANAHEIM	157	EUCALYPTUS	356-221-31	Lower Santa Ana River
ANAHEIM	162	FUCALYPTUS	356-221-52	Lower Santa Ana River
	165		356-221-30	Lower Santa Ana River
	175		356-221-32	Lower Santa Ana River
	185		356-221-33	Lower Santa Ana River
	105		356-221-34	Lower Santa Ana River
	200		256 221 56	Lower Santa Ana River
	200		256 221 07	Lower Santa Ana River
	202		350-221-07	Lower Santa Ana River
	202		350-221-57	Lower Santa Ana River
	222	EUCALYPTUS	356-221-08	Lower Santa Ana River
	242	EUCALYPTUS	356-221-10	Lower Santa Ana River
ANAHEIM	7690	EUCALYPTUS	358-321-12	Lower Santa Ana River
ANAHEIM	111	GRAND	135-283-06	Carbon Creek
ANAHEIM	2850	GREITA	344-061-16	Lower Santa Ana River
ANAHEIM	300	HENNING	356-261-07	Lower Santa Ana River
ANAHEIM	361	HENNING	356-401-02	Lower Santa Ana River
ANAHEIM	365	HENNING	356-401-03	Lower Santa Ana River
ANAHEIM	381	HENNING	356-401-05	Lower Santa Ana River
ANAHEIM	391	HENNING	356-401-11	Lower Santa Ana River
ANAHEIM	1845	HOLBROOK	343-201-01	Lower Santa Ana River
ANAHEIM	6591	JEFFERSON	345-161-04	Lower Santa Ana River
ANAHEIM	1920	KELLOGG	343-231-04	Lower Santa Ana River
ANAHEIM	2323	MANCHESTER	137-451-24	Los Alamitos/East Garden Grove/Bolsa Chica
ANAHEIM	6991	MARTINEZ	356-311-07	Lower Santa Ana River
ANAHEIM	1631	MELLS	129-361-21	Los Alamitos/East Garden Grove/Bolsa Chica
ANAHEIM	150	MOHLER	358-124-05	Lower Santa Ana River
ANAHEIM	150	MOHLER	356-311-11	Lower Santa Ana River
ANAHEIM	160	MOHLER	356-311-10	Lower Santa Ana River
ANAHEIM	170	MOHLER	356-311-09	Lower Santa Ana River
ANAHEIM	1825	ORANGE	128-121-17	Carbon Creek
ANAHEIM	1825	ORANGE	128-121-02	Carbon Creek
ANAHEIM	1825	ORANGE	128-121-14	Carbon Creek
ANAHEIM	1825	ORANGE	128-121-16	Carbon Creek
ANAHEIM	2820	ORANGE	126-152-02	Carbon Creek
ANAHEIM	3000	ORANGETHORPE	070-751-01	San Gabriel River/Coyote Creek
ANAHEIM	4501	ORANGETHORPE	343-351-60	Lower Santa Ana River
ANAHEIM	1516	ORANGEWOOD	090-514-24	Los Alamitos/East Garden Grove/Bolsa Chica
ANAHEIM	5191	PASEO DE GRACE	343-231-67	Lower Santa Ana River
ANAHEIM	411	PERALTA HILLS	361-252-02	Lower Santa Ana River
ANAHEIM	515	PERALTA HILLS	361-242-04	Lower Santa Ana River
ANAHEIM	531	PERALTA HILLS	361-242-02	Lower Santa Ana River
ANAHEIM	561		361-171-07	I ower Santa Ana River
ANAHEIM	571	PERALTA HILLS	361-232-01	Lower Santa Ana River
ANAHEIM	777	PERALTA HILLS	361-202-27	Lower Santa Ana River
	190	POSSUM	356-221-17	Lower Santa Ana River
	100		1000 221-11	

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
ANAHEIM	191	POSSUM	356-221-18	Lower Santa Ana River
ANAHEIM	180	POSSUM HOLW	356-221-16	Lower Santa Ana River
ANAHEIM	100	SADDLEBACK	358-301-04	Lower Santa Ana River
ANAHEIM	7655	SILVER DOLLAR	358-301-07	Lower Santa Ana River
ANAHEIM	7665	SILVER DOLLAR	358-321-16	Lower Santa Ana River
ANAHEIM	7685	SILVER DOLLAR	358-321-14	Lower Santa Ana River
ANAHEIM	7695	SILVER DOLLAR	358-321-13	Lower Santa Ana River
ANAHEIM	3180	TYLER	135-221-01	Carbon Creek
ANAHEIM	623	WESTERN	079-631-27	Carbon Creek
ANAHEIM	851	WESTERN	079-441-10	Carbon Creek
ANAHEIM	905	WESTERN	079-441-11	Carbon Creek
ANAHEIM	241	WIIDAN	356-071-23	Lower Santa Ana River
BREA	1361	BEXLEY	304-191-12	San Gabriel River/Coyote Creek
BREA	1362	BEXLEY	304-191-25	San Gabriel River/Coyote Creek
BREA	1381	BEXLEY	304-191-13	San Gabriel River/Coyote Creek
BREA	1382	BEXLEY	304-191-24	San Gabriel River/Coyote Creek
BREA	1402	BEXLEY	304-191-23	San Gabriel River/Coyote Creek
BREA	1421	BEXLEY	304-191-14	San Gabriel River/Coyote Creek
BREA	1431	BEXLEY	304-191-15	San Gabriel River/Coyote Creek
BREA	1440	BEXLEY	304-191-21	San Gabriel River/Coyote Creek
BREA	1441	BEXLEY	304-191-07	San Gabriel River/Coyote Creek
BREA	1444	BEXLEY	304-191-22	San Gabriel River/Coyote Creek
BREA	1462	BEXLEY	304-191-16	San Gabriel River/Coyote Creek
BREA	6751	CARBON CANYON	315-091-06	Lower Santa Ana River
BREA	7351	CARBON CANYON	312-031-02	Lower Santa Ana River
BREA	3730	MAUNA LOA	322-022-03	Lower Santa Ana River
BREA	1190	PUENTE	304-202-29	San Gabriel River/Coyote Creek
BREA	No NO	UNKNOWN ADDRESS	304-202-28	San Gabriel River/Coyote Creek
BREA	12551	WHITTIER	304-191-17	San Gabriel River/Coyote Creek
BREA	12571	WHITTIER	304-191-18	San Gabriel River/Coyote Creek
BREA	12583	WHITTIER	304-191-20	San Gabriel River/Coyote Creek
BREA	12585	WHITTIER	304-191-31	San Gabriel River/Covote Creek
BREA	12591	WHITTIER	304-191-33	San Gabriel River/Covote Creek
BUENA PARK	8401	PIERCE	135-051-03	Carbon Creek
BUENA PARK	6851	STANTON	276-322-23	San Gabriel River/Covote Creek
COSTA MESA	1010	18TH	424-331-07	Talbert Channel/Greenville Banning
COSTA MESA	2515	ELDEN	439-171-38	East Costa Mesa/Newport Beach
COSTA MESA	492	FLOWER	117-341-19	East Costa Mesa/Newport Beach
COSTA MESA	2191	RURAL	426-121-24	San Diego Creek
DANA POINT	34311	COAST	682-165-01	San Juan Creek
DANA POINT	34363	DANA STRAND	672-291-04	San Juan Creek
DANA POINT	32741	DEL OBISPO	673-191-02	San Juan Creek
DANA POINT	No NO	PROJECT 931-54	672-291-06	San Juan Creek
DANA POINT	No NO	PROJECT 933-60	672-291-05	San Juan Creek
DANA POINT	No NO	PROJECT 933-60	672-291-39	San Juan Creek
DANA POINT	No NO	UNKNOWN ADDRESS	672-291-40	San Juan Creek
FOUNTAIN VALLEY	17235	NEWHOPE	169-391-01	Talbert Channel/Greenville Banning
FULLERTON	1830	ACACIA	285-181-04	San Gabriel River/Covote Creek
FULLERTON	508	GREEN ACRE	028-472-32	San Gabriel River/Covote Creek
FULLERTON	1061	LA MESA	028-091-02	San Gabriel River/Covote Creek
FULLERTON	1077	LAMESA	028-091-01	San Gabriel River/Covote Creek
FULLERTON	1085	LAMESA	028-081-23	San Gabriel River/Covote Creek
FULLERTON	1113		028-120-02	San Gabriel River/Covote Creek
FULLERTON	3110		293-271-25	San Gabriel River/Covote Creek
FULLERTON	3120		293-271-24	San Gabriel River/Coyote Creek
FULLERTON	400		203-271-24	San Gabriel River/Coyote Creek
FULLERTON	900		202-371-11	San Gabriel River/Coyote Creek
	1220		292-371-11	San Gabriel River/Coyote Creek
	1220	PAGE	071-502-01	San Gabriel River/Covote Creek
	1000	PAGE	071-502-01	San Gabriel River/Coyote Creek
	10/0		07 1-302-14	San Gabriel River/Coyote Creek
	1311		029-133-17	San Gabriel River/Covete Creek
	1314		029-302-02	San Gabriel River/Coyote Creek
	1109		020-001-33	San Gabriel River/Coyole Creek
	1165		028-081-37	San Gabriel River/Coyote Creek
	1167		028-081-21	San Gabriel River/Coyote Creek
	1349		031-331-16	San Gabriel River/Coyote Creek
FULLERION	1215	WEST VALLEY VIEW DR	028-081-40	San Gabriel River/Coyote Creek

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
GARDEN GROVE	10071	15TH	099-173-50	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	10132	CHAPMAN	089-432-32	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	9041	CHAPMAN	132-442-29	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	9081	CHAPMAN	132-442-32	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	9101	CHAPMAN	132-442-33	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	12421	EL RANCHO	231-423-11	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	12431	EL RANCHO	231-423-12	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	12441	EL RANCHO	231-423-13	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	12451	EL RANCHO	231-423-14	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	12442	EL REY	231-423-04	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	13871	ELLIOTT	097-302-12	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	13881	ELLIOTT	097-302-11	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	11811	EUCLID	089-531-15	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	13261	FAIRVIEW	101-322-16	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	13271	FAIRVIEW	101-322-15	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	13291	FAIRVIEW	101-322-14	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	13301	FAIRVIEW	101-322-13	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	13531	FAIRVIEW	101-652-04	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	13551	FAIRVIEW	101-652-05	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	13581	FAIRVIEW	101-652-06	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	14052	FLOWER	099-162-05	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	14062	FLOWER	099-162-06	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	14121	FLOWER	099-173-51	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	8231	LAMPSON	131-462-16	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	12781	LEROY	133-421-06	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	12782	LEROY	133-421-03	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	12791	LEROY	133-421-55	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	12792	LEROY	133-421-04	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	12771	LEWIS	231-041-29	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	13411	LILLY	101-302-04	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	9032	MARYLEE	132-442-23	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	12931	PALM	231-423-15	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	8771	ROCKY	097-302-10	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	8772	ROCKY	097-302-06	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	8781	ROCKY	097-302-09	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	8782	ROCKY	097-302-07	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	8792	ROCKY	097-302-08	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	8782	TRASK	097-281-35	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	8802	TRASK	097-281-33	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	10412	VIC	089-272-42	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	10422	VIC	089-272-41	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	10432	VIC	089-272-40	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	10442	VIC	089-272-39	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	12912	VILLAGE	133-382-04	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	10222	WESTMINSTER	099-162-28	Los Alamitos/East Garden Grove/Bolsa Chica
GARDEN GROVE	10222	WESTMINSTER	099-162-28	Los Alamitos/East Garden Grove/Bolsa Chica
HUNTINGTON BEACH	19471	BEACH	025-180-21	Talbert Channel/Greenville Banning
HUNTINGTON BEACH	17082	BOLSA CHICA	163-123- <mark>01</mark>	Los Alamitos/East Garden Grove/Bolsa Chica
HUNTINGTON BEACH	6901	ELLIS	110-180-16	Los Alamitos/East Garden Grove/Bolsa Chica
HUNTINGTON BEACH	815	GENEVA	024-231-38	Talbert Channel/Greenville Banning
HUNTINGTON BEACH	80	HUNTINGTON	024-291-16	Talbert Channel/Greenville Banning
HUNTINGTON BEACH	5431	OLD PIRATE	146-201-08	Los Alamitos/East Garden Grove/Bolsa Chica
HUNTINGTON BEACH	5451	OLD PIRATE	146-201-06	Los Alamitos/East Garden Grove/Bolsa Chica
HUNTINGTON BEACH	17121	PALMDALE	111-024-07	Los Alamitos/East Garden Grove/Bolsa Chica
HUNTINGTON BEACH	4811	SANDY	178-201-38	Los Alamitos/East Garden Grove/Bolsa Chica
HUNTINGTON BEACH	4831	SANDY	178-201-36	Los Alamitos/East Garden Grove/Bolsa Chica
HUNTINGTON BEACH	4832	SANDY	178-201-40	Los Alamitos/East Garden Grove/Bolsa Chica
HUNTINGTON BEACH	7622	SLATER	165-291-09	Los Alamitos/East Garden Grove/Bolsa Chica
HUNTINGTON BEACH	7632	SLATER	165-291-10	Los Alamitos/East Garden Grove/Bolsa Chica
HUNTINGTON BEACH	18792	STEWART	111-110-01	Los Alamitos/East Garden Grove/Bolsa Chica
LA HABRA	1930	CRISTI	303-021-31	San Gabriel River/Coyote Creek
LA HABRA	1931	CRISTI	303-021-25	San Gabriel River/Coyote Creek
LA HABRA	1940	CRISTI	303-021-30	San Gabriel River/Coyote Creek
LA HABRA	1941	CRISTI	303-021-26	San Gabriel River/Coyote Creek
LA HABRA	1060	CYPRESS	303-101-10	San Gabriel River/Coyote Creek
LA HABRA	1325	EUCLID	017-271-07	San Gabriel River/Coyote Creek
LA HABRA	1341	EUCLID	017-271-05	San Gabriel River/Coyote Creek

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
LA HABRA	1401	EUCLID	017-271-03	San Gabriel River/Coyote Creek
LA HABRA	1241	HENSEL	303-081-18	San Gabriel River/Coyote Creek
LA HABRA	641	HENSEL	303-081-04	San Gabriel River/Coyote Creek
LA HABRA	700	HENSEL	303-081-17	San Gabriel River/Coyote Creek
LA HABRA	701	HENSEL	303-081-03	San Gabriel River/Coyote Creek
LA HABRA	751	HENSEL	303-081-02	San Gabriel River/Coyote Creek
LA HABRA	114	HIDDEN	017-271-15	San Gabriel River/Coyote Creek
LA HABRA	124	HIDDEN	017-271-16	San Gabriel River/Coyote Creek
LA HABRA	1340	HIDDEN	017-271-25	San Gabriel River/Coyote Creek
LA HABRA	141	HIDDEN	017-271-22	San Gabriel River/Coyote Creek
LA HABRA	1420	HIDDEN	017-271-28	San Gabriel River/Coyote Creek
LA HABRA	151	HILLSIDE	017-271-37	San Gabriel River/Coyote Creek
LA HABRA	181	HILLSIDE	017-271-36	San Gabriel River/Coyote Creek
LA HABRA	227	HILLSIDE	017-271-35	San Gabriel River/Coyote Creek
LA HABRA	1411	IDAHO	017-161-32	San Gabriel River/Coyote Creek
LA HABRA	1930	JENNIE	303-021-23	San Gabriel River/Coyote Creek
LA HABRA	12112	LAMBERT	296-352-09	San Gabriel River/Coyote Creek
LA HABRA	1414	ORANGE	017-311-41	San Gabriel River/Coyote Creek
LA HABRA	1530	WALNUT	017-231-11	San Gabriel River/Coyote Creek
LA HABRA	980	WALNUT	017-240-33	San Gabriel River/Coyote Creek
LA HABRA	2501	WHITTIER	017-033-20	San Gabriel River/Coyote Creek
LAGUNA BEACH	20881	CASTLE ROCK	632-061-09	Laguna Canyon Channel
LAGUNA BEACH	20882	CASTLE ROCK	632-061-22	Laguna Canyon Channel
LAGUNA BEACH	20902	CASTLE ROCK	632-061-40	Laguna Canyon Channel
LAGUNA BEACH	20912	CASTLE ROCK	632-061-51	Laguna Canvon Channel
LAGUNA BEACH	20920	CASTLE ROCK	632-061-50	Laguna Canvon Channel
LAGUNA BEACH	20938	CASTLE ROCK	632-061-45	Laguna Canvon Channel
LAGUNA BEACH	21121	CASTLE ROCK	632-061-21	Laguna Canyon Channel
	21162		632-061-15	Laguna Canyon Channel
	21172		632-061-19	Laguna Canyon Channel
	220	CASTLE ROCK	632-061-23	Laguna Canyon Channel
	31106	COAST	056-240-50	Aliso Creek
	31106	COAST	056-240-00	Aliso Creek
	31106	COAST	056-240-48	Aliso Creek
	21261	COAST	056 022 06	Aliso Creek
	22005	COAST	050-052-00	Aliso Creek
	951		644 202 15	Allso Cleek
	001		644-303-15	
	2404		050-122-02	
	2401		000-131-01	Laguna Canyon Channel
	20862		032-001-20	Laguna Canyon Channel
	20368		629-041-31	Laguna Canyon Channel
	24401		588-162-03	San Diego Creek
	24361	MUIRLANDS	617-280-07	San Diego Creek
MISSION VIEJO	26692	AVERY	740-013-35	San Juan Creek
NEWPORT BEACH	1500	DOROTHY	117-503-14	East Costa Mesa/Newport Beach
NEWPORT BEACH	2128	MESA	439-061-14	East Costa Mesa/Newport Beach
NEWPORT BEACH	2140	MESA	439-061-04	East Costa Mesa/Newport Beach
NEWPORT BEACH	2214	SANTIAGO	426-111-10	East Costa Mesa/Newport Beach
NEWPORT BEACH	1455	SUPERIOR	424-011-19	East Costa Mesa/Newport Beach
ORANGE	129	151	383-093-14	Lower Santa Ana River
ORANGE	135	IST	383-093-15	Lower Santa Ana River
ORANGE	143	1ST	383-093-02	Lower Santa Ana River
ORANGE	191	1ST	383-093-01	Lower Santa Ana River
ORANGE	4525	AGUA	094-503-33	San Diego Creek
ORANGE	4525	AGUA	094-503-34	San Diego Creek
ORANGE	4605	AGUA	094-503-40	San Diego Creek
ORANGE	4609	AGUA	094-503-39	San Diego Creek
ORANGE	4629	AGUA	094-503-41	San Diego Creek
ORANGE	1442	ALBION	390-533-07	Lower Santa Ana River
ORANGE	1503	ALBION	390-533-03	Lower Santa Ana River
ORANGE	3540	AUSTIN	094-444-31	Lower Santa Ana River
ORANGE	2172	BATAVIA	374-751-25	Lower Santa Ana River
ORANGE	2175	BATAVIA	374-451-03	Lower Santa Ana River
ORANGE	2176	BATAVIA	374-751-24	Lower Santa Ana River
ORANGE	2180	BATAVIA	374-751-23	Lower Santa Ana River
ORANGE	2184	BATAVIA	374-751-22	Lower Santa Ana River
ORANGE	2188	BATAVIA	374-751-21	Lower Santa Ana River

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
ORANGE	2192	BATAVIA	374-751-20	Lower Santa Ana River
ORANGE	2260	BATAVIA	374-751-12	Lower Santa Ana River
ORANGE	2270	BATAVIA	374-751-11	Lower Santa Ana River
ORANGE	2280	BATAVIA	374-751-10	Lower Santa Ana River
ORANGE	2323	BATAVIA	374-622-01	Lower Santa Ana River
ORANGE	2336	BATAVIA	374-751-06	Lower Santa Ana River
ORANGE	2339	BATAVIA	374-621-13	Lower Santa Ana River
ORANGE	2351	BATAVIA	374-621-12	Lower Santa Ana River
ORANGE	2365	BATAVIA	374-621-10	Lower Santa Ana River
ORANGE	2367	BATAVIA	374-621-09	Lower Santa Ana River
ORANGE	2369	BATAVIA	374-621-08	Lower Santa Ana River
ORANGE	2372	BATAVIA	374-751-04	Lower Santa Ana River
ORANGE	2372	BATAVIA	374-751-05	Lower Santa Ana River
ORANGE	2387	BATAVIA	374-621-07	Lower Santa Ana River
ORANGE	2396	BATAVIA	374-751-02	Lower Santa Ana River
ORANGE	2401	BATAVIA	374-621-06	Lower Santa Ana River
ORANGE	2410	BATAVIA	374-751-01	Lower Santa Ana River
ORANGE	2425	BATAVIA	374-621-04	Lower Santa Ana River
ORANGE	9100	BATAVIA	374-621-03	Lower Santa Ana River
ORANGE	1622	CAMBRIDGE	375-071-05	Lower Santa Ana River
ORANGE	855	CAMBRIDGE	386-281-04	Lower Santa Ana River
ORANGE	864	CAMBRIDGE	386-261-04	Lower Santa Ana River
ORANGE	874	CAMBRIDGE	386-261-03	Lower Santa Ana River
ORANGE	886	CAMBRIDGE	386-261-02	Lower Santa Ana River
ORANGE	890	CAMBRIDGE	386-261-01	Lower Santa Ana River
ORANGE	922	CAMBRIDGE	375-212-25	Lower Santa Ana River
ORANGE	934	CAMBRIDGE	375-212-23	Lower Santa Ana River
ORANGE	944	CAMBRIDGE	375-212-22	Lower Santa Ana River
ORANGE	956	CAMBRIDGE	375-212-21	Lower Santa Ana River
ORANGE	966	CAMBRIDGE	375-212-20	Lower Santa Ana River
ORANGE	978	CAMBRIDGE	375-212-19	Lower Santa Ana River
ORANGE	988	CAMBRIDGE	375-212-18	Lower Santa Ana River
ORANGE	3308	CASSELLE	094-354-21	San Diego Creek
ORANGE	3331	CASSELLE	094-353-03	San Diego Creek
ORANGE	3024	CENTER	383-091-04	Lower Santa Ana River
ORANGE	3038	CENTER	383-091-05	Lower Santa Ana River
ORANGE	3044	CENTER	383-091-06	Lower Santa Ana River
ORANGE	3400	CHAPMAN	094-491-21	Lower Santa Ana River
ORANGE	3827	CHAPMAN	137-463-40	Los Alamitos/East Garden Grove/Bolsa Chica
ORANGE	4402	CHAPMAN	392-181-17	San Diego Creek
ORANGE	4009		093-372-14	Lower Santa Ana River
ORANGE	4021	CHARTER OAK	093-372-15	Lower Santa Ana River
ORANGE	4520		094-503-35	San Diego Creek
ORANGE	433		039-012-19	Lower Santa Ana River
ORANGE	2915	COLLINS	378-394-10	Lower Santa Ana River
ORANGE	710	COLLINS	386-261-21	Lower Santa Ana River
	720		386-261-23	Lower Santa Ana River
	809		375-212-10	Lower Santa Ana River
	810		386-261-25	Lower Santa Ana River
	815		375-212-27	Lower Santa Ana River
	825		375-212-28	Lower Santa Ana River
	2809		372-571-18	Lower Santa Ana River
	2825		372-571-13	Lower Santa Ana River
	2839		372-371-13	Lower Santa Ana River
	2840	COLORADO	372-371-10	Lower Santa Ana River
ORANGE	4238		392-192-20	San Diego Creek
	10/11		374-011-19	Lower Santa Ana River
	531		374-011-18	Lower Santa Ana River
ORANGE	543		374-611-17	Lower Santa Ana River
	015		3/4-011-15	Lower Santa Ana River
	027		374-011-14	Lower Santa Ana River
	1009		374-011-13	Lower Santa Ana River
	1000		374-144-01	
	1021		374-142-02	Lower Santa Ana River
	1045		374-142-04	Lower Santa Ana River
	1106		374-144-05	Lower Santa Ana River
UKANGE	0110	CUMBERLAND	3/4-144-06	Lower Santa Ana River

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
ORANGE	1130	CUMBERLAND	374-144-07	Lower Santa Ana River
ORANGE	1142	CUMBERLAND	374-144-08	Lower Santa Ana River
ORANGE	1143	CUMBERLAND	374-142-08	Lower Santa Ana River
ORANGE	1204	CUMBERLAND	374-144-09	Lower Santa Ana River
ORANGE	1216	CUMBERLAND	374-144-10	Lower Santa Ana River
ORANGE	519	CUMBERLAND	374-131-02	Lower Santa Ana River
ORANGE	528	CUMBERLAND	374-132-03	Lower Santa Ana River
ORANGE	531	CUMBERLAND	374-131-03	Lower Santa Ana River
ORANGE	605	CUMBERLAND	374-131-05	Lower Santa Ana River
ORANGE	617	CUMBERLAND	374-131-06	Lower Santa Ana River
ORANGE	628	CUMBERLAND	374-132-07	Lower Santa Ana River
ORANGE	629	CUMBERLAND	374-131-07	Lower Santa Ana River
ORANGE	703	CUMBERLAND	374-131-09	Lower Santa Ana River
ORANGE	727	CUMBERLAND	374-131-11	Lower Santa Ana River
ORANGE	801	CUMBERLAND	374-131-13	Lower Santa Ana River
ORANGE	824	CUMBERLAND	374-132-15	Lower Santa Ana River
ORANGE	836	CUMBERLAND	374-143-01	Lower Santa Ana River
ORANGE	848	CUMBERLAND	374-143-02	Lower Santa Ana River
ORANGE	849	CUMBERLAND	374-141-02	Lower Santa Ana River
ORANGE	910	CUMBERLAND	374-143-03	Lower Santa Ana River
ORANGE	934	CUMBERLAND	374-143-05	Lower Santa Ana River
ORANGE	935	CUMBERLAND	374-141-05	Lower Santa Ana River
ORANGE	181	DUNAS	094-491-11	Lower Santa Ana River
ORANGE	190	DUNAS	094-492-02	Lower Santa Ana River
ORANGE	205	DUNAS	094-491-09	Lower Santa Ana River
ORANGE	225	DUNAS	094-491-07	Lower Santa Ana River
ORANGE	658	EARLHAM	093-344-25	Lower Santa Ana River
ORANGE	870	ECKHOFF	386-521-10	Lower Santa Ana River
ORANGE	3918	EL CARMEN	093-374-11	Lower Santa Ana River
ORANGE	2542	EL SERENO	372-582-02	Lower Santa Ana River
ORANGE	2615	EL SERENO	372-581-04	Lower Santa Ana River
ORANGE	295	ESPANITA	094-503-25	San Diego Creek
ORANGE	201	ESPLANADE	392-192-12	Lower Santa Ana River
ORANGE	207	ESPLANADE	392-192-13	Lower Santa Ana River
ORANGE	217	ESPLANADE	392-192-14	Lower Santa Ana River
ORANGE	4045	FAIRHAVEN	094-121-56	San Diego Creek
ORANGE	6314	FRANK	379-481-02	Lower Santa Ana River
ORANGE	6315	FRANK	379-451-03	Lower Santa Ana River
ORANGE	6337	FRANK	379-451-11	Lower Santa Ana River
ORANGE	6348	FRANK	379-481-03	Lower Santa Ana River
ORANGE	1490	GLASSELL	375-262-07	Lower Santa Ana River
ORANGE	19001	GLEN ALBYN	379-311-23	Lower Santa Ana River
ORANGE	4933	GLEN ARRAN	379-311-12	Lower Santa Ana River
ORANGE	4934	GLEN ARRAN	379-311-22	Lower Santa Ana River
ORANGE	5006	GLEN ARRAN	379-311-21	Lower Santa Ana River
ORANGE	5021	GLEN ARRAN	379-311-13	Lower Santa Ana River
ORANGE	5028	GLEN ARRAN	379-311-20	Lower Santa Ana River
ORANGE	5041	GLEN ARRAN	379-311-54	Lower Santa Ana River
ORANGE	5108	GLEN ARRAN	379-311-18	Lower Santa Ana River
ORANGE	5111	GLEN ARRAN	379-311-16	Lower Santa Ana River
ORANGE	5117	GLEN ARRAN	379-311-14	Lower Santa Ana River
ORANGE	5119	GLEN ARRAN	379-311-56	Lower Santa Ana River
ORANGE	5121	GLEN ARRAN	379-311-55	Lower Santa Ana River
ORANGE	601	GLENROSE	093-344-07	Lower Santa Ana River
ORANGE	642	GLENROSE	093-344-02	Lower Santa Ana River
ORANGE	147	GRANT	233-113-11	Los Alamitos/East Garden Grove/Bolsa Chica
ORANGE	147	GRANT	233-113-12	Los Alamitos/East Garden Grove/Bolsa Chica
ORANGE	6439	GRAY	379-481-04	Lower Santa Ana River
ORANGE	6440	GRAY	379-481-11	Lower Santa Ana River
ORANGE	6501	GRAY	379-481-05	Lower Santa Ana River
ORANGE	6508	GRAY	379-481-10	Lower Santa Ana River
ORANGE	6523	GRAY	379-481-06	Lower Santa Ana River
ORANGE	6542	GRAY	379-481-08	Lower Santa Ana River
ORANGE	6545	GRAY	379-481-07	Lower Santa Ana River
ORANGE	1960	GREENGROVE	374-033-42	Lower Santa Ana River
ORANGE	872	GREENGROVE	390-532-16	Lower Santa Ana River
ORANGE	603	HEATHERSTONE	093-373-06	Lower Santa Ana River

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
ORANGE	615	HEATHERSTONE	093-373-05	Lower Santa Ana River
ORANGE	653	HEATHERSTONE	093-373-01	Lower Santa Ana River
ORANGE	603	HEIM	374-511-02	Lower Santa Ana River
ORANGE	188	HEWES	392-182-02	San Diego Creek
ORANGE	256	HEWES	392-182-10	San Diego Creek
ORANGE	259	HEWES	094-502-09	San Diego Creek
ORANGE	283	HEWES	094-503-27	San Diego Creek
ORANGE	288	HEWES	392-172-01	San Diego Creek
ORANGE	296	HEWES	392-172-02	San Diego Creek
ORANGE	304	HEWES	392-172-18	San Diego Creek
ORANGE	309	HEWES	094-503-28	San Diego Creek
ORANGE	321	HEWES	094-503-29	San Diego Creek
ORANGE	329	HEWES	094-503-30	San Diego Creek
ORANGE	423	HEWES	393-341-42	San Diego Creek
ORANGE	429	HEWES	393-341-41	San Diego Creek
ORANGE	441	HEWES	393-341-39	San Diego Creek
ORANGE	447	HEWES	393-341-38	San Diego Creek
ORANGE	467	HEWES	393-341-35	San Diego Creek
ORANGE	473	HEWES	393-341-34	San Diego Creek
ORANGE	497	HEWES	393-341-30	San Diego Creek
ORANGE	505	HEWES	393-341-29	San Diego Creek
ORANGE	12501		393-341-17	San Diego Creek
ORANGE	421		303-342-03	San Diego Creek
ORANGE	421		393-342-00	San Diego Creek
ORANGE	421		202 241 12	San Diego Creek
ORANGE	400		202 242 11	San Diego Creek
ORANGE	409		202 242 14	San Diego Creek
	400		393-342-14	San Diego Creek
	491		393-342-15	Sall Diego Creek
	1292		379-401-12	Lower Santa Ana River
	1000		379-421-24	Lower Santa Ana River
	120		094-552-02	Lower Santa Ana River
	160	KATHLEEN	094-552-05	Lower Santa Ana River
ORANGE	10282	KENNYMEAD	093-241-18	Lower Santa Ana River
ORANGE	10282	KENNYMEAD	093-241-04	Lower Santa Ana River
ORANGE	1387	KENNYMEAD	093-241-25	Lower Santa Ana River
ORANGE	1425	KENNYMEAD	093-241-26	Lower Santa Ana River
ORANGE	1463	KENNYMEAD	093-241-37	Lower Santa Ana River
ORANGE	1515	KENNYMEAD	093-241-22	Lower Santa Ana River
ORANGE	1537	KENNYMEAD	093-241-21	Lower Santa Ana River
ORANGE	1571	KENNYMEAD	093-241-19	Lower Santa Ana River
ORANGE	656	LA NAE	093-371-17	Lower Santa Ana River
ORANGE	665	LA NAE	093-371-11	Lower Santa Ana River
ORANGE	666	LA NAE	093-371-16	Lower Santa Ana River
ORANGE	678	LA NAE	093-371-15	Lower Santa Ana River
ORANGE	963	LAUREL	378-394-16	Lower Santa Ana River
ORANGE	147	LINCOLN	360-241-07	Lower Santa Ana River
ORANGE	300	LINCOLN	374-291-04	Lower Santa Ana River
ORANGE	410	LINCOLN	374-273-01	Lower Santa Ana River
ORANGE	500	LINCOLN	374-301-38	Lower Santa Ana River
ORANGE	516	LINCOLN	374-301-04	Lower Santa Ana River
ORANGE	802	LINCOLN	374-491-03	Lower Santa Ana River
ORANGE	805	LINCOLN	386-302-18	Lower Santa Ana River
ORANGE	900	LINCOLN	374-491-09	Lower Santa Ana River
ORANGE	332	MAGNOLIA	386-122-20	Lower Santa Ana River
ORANGE	344	MAGNOLIA	386-122-43	Lower Santa Ana River
ORANGE	348	MAGNOLIA	386-122-22	Lower Santa Ana River
ORANGE	375	MAGNOLIA	386-123-04	Lower Santa Ana River
ORANGE	3412	MAPLE	093-361-06	Lower Santa Ana River
ORANGE	3514	MAPLE	093-361-11	Lower Santa Ana River
ORANGE	4121	MARMON	392-192-27	Lower Santa Ana River
ORANGE	4417	MARMON	392-172-16	San Diego Creek
ORANGE	131	MCPHERSON	383-092-01	Lower Santa Ana River
ORANGE	185	MCPHERSON	383-091-01	Lower Santa Ana River
ORANGE	10831	MEADS	379-421-05	Lower Santa Ana River
ORANGE	1377	MEADS	379-084-14	Lower Santa Ana River
ORANGE	1560	MEADS	379-581-01	Lower Santa Ana River
ORANGE	896	MEADS	379-421-28	Lower Santa Ana River
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JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
ORANGE	926	MEADS	379-421-02	Lower Santa Ana River
ORANGE	928	MEADS	379-421-03	Lower Santa Ana River
ORANGE	930	MEADS	379-421-23	Lower Santa Ana River
ORANGE	4612	MONTGOMERY	393-341-02	San Diego Creek
ORANGE	4618	MONTGOMERY	393-341-03	San Diego Creek
ORANGE	4626	MONTGOMERY	393-341-04	San Diego Creek
ORANGE	4638	MONTGOMERY	393-341-06	San Diego Creek
ORANGE	1060	MORADA	379-421-07	Lower Santa Ana River
ORANGE	1443	NUBIAN	390-533-10	Lower Santa Ana River
ORANGE	6705	OAK	370-051-01	Lower Santa Ana River
ORANGE	6719	OAK	370-051-02	Lower Santa Ana River
ORANGE	241	OLYMPIA	093-361-15	Lower Santa Ana River
ORANGE	242	OLYMPIA	093-362-15	Lower Santa Ana River
ORANGE	2026	ORANGE GROVE	386-173-02	Lower Santa Ana River
ORANGE	2035	ORANGE GROVE	386-172-30	Lower Santa Ana River
ORANGE	1250	ORANGE PARK	379-441-11	Lower Santa Ana River
ORANGE	1272	ORANGE PARK	379-441-10	Lower Santa Ana River
ORANGE	1290	ORANGE PARK	379-441-09	Lower Santa Ana River
ORANGE	1328	ORANGE PARK	379-481-09	Lower Santa Ana River
ORANGE	198	PARK	392-184-28	San Diego Creek
ORANGE	203	PARK	392-182-19	San Diego Creek
ORANGE	211	PARK	392-182-18	San Diego Creek
ORANGE	219	PARK	392-182-17	San Diego Creek
ORANGE	230	PARK	392-184-24	San Diego Creek
ORANGE	230		202 102 16	San Diego Creek
	230		392-102-10	San Diego Creek
	242		392-104-22	San Diego Creek
	240		392-104-21	San Diego Creek
	259	PARK	392-182-13	San Diego Creek
	266	PARK	392-184-19	San Diego Creek
ORANGE	527	PARK	386-173-11	Lower Santa Ana River
ORANGE	539	PARK	386-173-12	Lower Santa Ana River
ORANGE	3720	PARK CENTRAL	231-283-04	Lower Santa Ana River
ORANGE	2934	PEARL	383-092-02	Lower Santa Ana River
ORANGE	2942	PEARL	383-092-03	Lower Santa Ana River
ORANGE	3003	PEARL	383-091-02	Lower Santa Ana River
ORANGE	3004	PEARL	383-092-04	Lower Santa Ana River
ORANGE	3014	PEARL	383-092-05	Lower Santa Ana River
ORANGE	3015	PEARL	383-091-03	Lower Santa Ana River
ORANGE	3022	PEARL	383-092-06	Lower Santa Ana River
ORANGE	3023	PEARL	383-091-09	Lower Santa Ana River
ORANGE	3034	PEARL	383-092-07	Lower Santa Ana River
ORANGE	3035	PEARL	383-091-08	Lower Santa Ana River
ORANGE	3042	PEARL	383-092-08	Lower Santa Ana River
ORANGE	3043	PEARL	383-091-07	Lower Santa Ana River
ORANGE	4627	PHILLIPS	393-341-25	San Diego Creek
ORANGE	4645	PHILLIPS	393-341-24	San Diego Creek
ORANGE	4402	PHILO	392-172-09	San Diego Creek
ORANGE	4410	PHILO	392-172-12	San Diego Creek
ORANGE	4416	PHILO	392-172-17	San Diego Creek
ORANGE	4505	PHILO	094-502-08	San Diego Creek
ORANGE	4515	PHILO	094-502-07	San Diego Creek
ORANGE	4529	PHILO	094-502-06	San Diego Creek
ORANGE	4543	PHILO	094-502-10	San Diego Creek
ORANGE	4615	PHILO	094-502-11	San Diego Creek
ORANGE	11863	PROSPECT	383-093-06	Lower Santa Ana River
ORANGE	156	PROSPECT	383-093-08	Lower Santa Ana River
ORANGE	170	PROSPECT	383-093-07	Lower Santa Ana River
ORANGE	215	PROSPECT	094-493-19	Lower Santa Ana River
ORANGE	259	PROSPECT	094-493-15	Lower Santa Ana River
ORANGE	285	PROSPECT	094-493-13	Lower Santa Ana River
ORANGE	716	PROSPECT	094-385-41	San Diego Creek
ORANGE	724	PROSPECT	094-385-44	San Diego Creek
ORANGE	724	PROSPECT	094-385-13	San Diego Creek
ORANGE	736	PROSPECT	094-385-15	San Diego Creek
ORANGE	1065	RANCHO SANTIAGO	379-311-11	Lower Santa Ana River
ORANGE	1079	RANCHO SANTIAGO	379-311-10	Lower Santa Ana River
ORANGE	1087	RANCHO SANTIAGO	379-311-02	Lower Santa Ana River
0101102	.001		010 011-02	

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
ORANGE	1089	RANCHO SANTIAGO	379-311-03	Lower Santa Ana River
ORANGE	394	RANCHO SANTIAGO	383-061-10	Lower Santa Ana River
ORANGE	656	RICK	093-371-04	Lower Santa Ana River
ORANGE	692	RICK	093-371-01	Lower Santa Ana River
ORANGE	938	RIDGELINE	379-173-02	Lower Santa Ana River
ORANGE	2633	RIDING	372-582-09	Lower Santa Ana River
ORANGE	2710	RIDING	372-583-04	Lower Santa Ana River
ORANGE	2734	RIDING	372-583-01	Lower Santa Ana River
ORANGE	7843	SANDBERG	370-111-08	Lower Santa Ana River
ORANGE	1425	SANTIAGO	370-231-08	Lower Santa Ana River
ORANGE	2215	SANTIAGO	372-581-01	Lower Santa Ana River
ORANGE	6938	SANTIAGO CANYON	379-581-02	Lower Santa Ana River
ORANGE	7729	SANTIAGO CANYON	093-250-48	Lower Santa Ana River
ORANGE	7837	SANTIAGO CANYON	370-111-12	Lower Santa Ana River
ORANGE	8001	SANTIAGO CANYON	093-160-24	Lower Santa Ana River
ORANGE	2000	SHAFFER	374-431-14	Lower Santa Ana River
ORANGE	2217	SHAFFER	374-132-02	Lower Santa Ana River
ORANGE	180	SHASTA	094-493-01	Lower Santa Ana River
ORANGE	181	SHASTA	094-492-22	Lower Santa Ana River
ORANGE	215	SHASTA	094-492-19	Lower Santa Ana River
ORANGE	221	SHASTA	093-362-06	Lower Santa Ana River
ORANGE	237	SHASTA	093-362-04	Lower Santa Ana River
ORANGE	248	SHASTA	094-493-07	Lower Santa Ana River
ORANGE	258	SHASTA	094-493-08	Lower Santa Ana River
ORANGE	284	SHASTA	094-493-10	Lower Santa Ana River
ORANGE	295	SHASTA	094-492-12	Lower Santa Ana River
ORANGE	3321	STEARNS	094-354-05	San Diego Creek
ORANGE	542	SWIDLER	094-444-04	San Diego Creek
ORANGE	545	SWIDLER	094-443-04	Lower Santa Ana River
ORANGE	559	SWIDLER	094-443-05	San Diego Creek
ORANGE	595	SWIDLER	094-443-09	San Diego Creek
ORANGE	3529	TILDEN	094-444-29	Lower Santa Ana River
ORANGE		UNKNOWN ADDRESS	370-111-09	Lower Santa Ana River
ORANGE	No NO	UNKNOWN ADDRESS	374-611-20	Lower Santa Ana River
ORANGE	No NO		379-171-02	Lower Santa Ana River
ORANGE	No NO	UNKNOWN ADDRESS	379-311-01	Lower Santa Ana River
ORANGE	No NO		379-421-25	Lower Santa Ana River
ORANGE	No NO		379-481-13	Lower Santa Ana River
ORANGE	No NO		302-183-02	San Diego Creek
ORANGE	No NO		370-101-10	Lower Santa Ana River
ORANGE	No NO		370-231-06	Lower Santa Ana River
ORANGE	No NO		370-231-00	Lower Santa Ana River
ORANGE	No NO		202 172 15	San Diago Crook
ORANGE			303-342-02	San Diego Creek
ORANGE			003-250-26	Lower Santa Ana River
ORANGE			093-230-20	San Diago Crook
	NO NO		094-503-31	San Diego Creek
ORANGE	No NO		202 221 07	Sall Diego Cleek
	110 110		004 502 42	Lower Salita Aria River
	4505		094-503-15	San Diego Creek
	4531		094-503-15	San Diego Creek
	4538		094-502-03	San Diego Creek
ORANGE	4604	VIA LARDO	094-502-04	San Diego Creek
ORANGE	4615	VIA LARDO	094-503-18	San Diego Creek
ORANGE	2442		372-572-01	Lower Santa Ana River
ORANGE	2529		372-571-04	Lower Santa Ana River
ORANGE	2544		372-572-05	Lower Santa Ana River
ORANGE	1275	WALNUI	386-215-06	Lower Santa Ana River
OKANGE	137	WALNUI	039-133-13	Lower Santa Ana River
ORANGE	912	WANDA	378-394-09	Lower Santa Ana River
ORANGE	932	WANDA	378-394-08	Lower Santa Ana River
ORANGE	962	WANDA	378-394-05	Lower Santa Ana River
ORANGE	990	WANDA	378-394-03	Lower Santa Ana River
ORANGE	18521	WASHINGTON	392-191-16	Lower Santa Ana River
ORANGE	4310	WASHINGTON	392-184-05	San Diego Creek
ORANGE	4317	WASHINGTON	392-183-08	San Diego Creek
ORANGE	4332	WASHINGTON	392-184-02	San Diego Creek
ORANGE	4340	WASHINGTON	392-184-01	San Diego Creek

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
ORANGE	1666	WINDES	370-051-06	Lower Santa Ana River
ORANGE	1672	WINDES	370-063-03	Lower Santa Ana River
ORANGE	1758	WINDES	370-063-02	Lower Santa Ana River
ORANGE	1782	WINDES	370-063-04	Lower Santa Ana River
ORANGE	1808	WINDES	370-063-09	Lower Santa Ana River
ORANGE	1852	WINDES	370-063-10	Lower Santa Ana River
ORANGE	991	WONDER VIEW	379-311-19	Lower Santa Ana River
ORANGE	811	WOODBURY	390-533-28	Lower Santa Ana River
ORANGE	821	WOODBURY	390-533-29	Lower Santa Ana River
ORANGE	866	WOODBURY	390-533-23	Lower Santa Ana River
ORANGE	880	WOODBURY	390-533-22	Lower Santa Ana River
	896		390-533-21	Lower Santa Ana River
ORANGE	897		390-533-34	Lower Santa Ana River
ORANGE	10002	WRIGHTWOOD	379-441-01	Lower Santa Ana River
	18202	17TH	401-441-03	San Diego Creek
ORANGE CO	20361		8/2-112-25	San Juan Creek
ORANGE CO	20301		8/2-112-23	San Juan Creek
ORANGE CO	20302	ADKINSON	842-112-38	San Juan Creek
ORANGE CO	20381	ADKINSON	842-112-39	San Juan Creek
ORANGE CO	20395	ADKINSON	842-112-22	San Juan Creek
ORANGE CO	20241	AMAPOLA	379-211-03	Lower Santa Ana River
ORANGE CO	1141	APPIAN	502-242-22	San Diego Creek
ORANGE CO	1192	APPIAN	502-231-04	San Diego Creek
ORANGE CO	31752	APUESTO	804-181-04	San Juan Creek
ORANGE CO	31852	APUESTO	804-181-03	San Juan Creek
ORANGE CO	18957	ARTNELL	393-301-42	San Diego Creek
ORANGE CO	22451	AVENA	804-171-05	San Juan Creek
ORANGE CO	19202	AVENIDA PALMAR	379-294-02	Lower Santa Ana River
ORANGE CO	1211	BALDWIN	017-043-02	San Gabriel River/Coyote Creek
ORANGE CO	1231	BALDWIN	017-043-03	San Gabriel River/Coyote Creek
ORANGE CO	1241	BALDWIN	017-043-04	San Gabriel River/Coyote Creek
ORANGE CO	1271	BALDWIN	017-043-06	San Gabriel River/Coyote Creek
ORANGE CO	1321	BALDWIN	017-044-16	San Gabriel River/Coyote Creek
ORANGE CO	1332	BALDWIN	017-044-06	San Gabriel River/Coyote Creek
ORANGE CO	1342	BALDWIN	017-044-18	San Gabriel River/Coyote Creek
ORANGE CO	1351	BALDWIN	017-044-14	San Gabriel River/Coyote Creek
ORANGE CO	1352	BALDWIN	017-044-19	San Gabriel River/Coyote Creek
ORANGE CO	19318	BARRETT	393-191-01	San Diego Creek
ORANGE CO	19368	BARRETT	393-181-04	San Diego Creek
ORANGE CO	18831	BARRY	393-011-11	San Diego Creek
ORANGE CO	18231	BENEIA	401-473-13	San Diego Creek
ORANGE CO	10591		104-290-16	San Diego Creek
ORANGE CO	1022		302-312-10	San Diego Creek
	10102		395-343-06	San Diego Creek
ORANGE CO	10060		393-352-01	San Diego Creek
ORANGE CO	19202		303-081-08	San Gabriel River/Covote Creek
ORANGE CO	11122	BRENDA	303-081-09	San Gabriel River/Covote Creek
ORANGE CO	11152	BRENDA	303-081-10	San Gabriel River/Covote Creek
ORANGE CO	11153	BRENDA	303-081-13	San Gabriel River/Covote Creek
ORANGE CO	11171	BRENDA	303-081-12	San Gabriel River/Covote Creek
ORANGE CO	11172	BRENDA	303-081-11	San Gabriel River/Covote Creek
ORANGE CO	9823	BRENTWOOD	503-281-03	Lower Santa Ana River
ORANGE CO	12932	BRITTANY WOODS	103-394-02	San Diego Creek
ORANGE CO	10161	BROADVIEW	503-551-02	San Diego Creek
ORANGE CO	10472	BROADVIEW	503-705-10	San Diego Creek
ORANGE CO	10361	BROOKHURST	127-392-14	Los Alamitos/East Garden Grove/Bolsa Chica
ORANGE CO	16780	BUENA VISTA	360-362-01	Lower Santa Ana River
ORANGE CO	17462	BURDIE	392-143-15	San Diego Creek
ORANGE CO	28202	BYTHA	876-035-01	Lower Santa Ana River
ORANGE CO	17342	CALVO	395-191-04	San Diego Creek
ORANGE CO	14098	CAMERON	401-081-08	San Diego Creek
ORANGE CO	8831	CANAL	374-472-40	Lower Santa Ana River
ORANGE CO	8841	CANAL	374-472-39	Lower Santa Ana River
ORANGE CO	8851	CANAL	374-472-38	Lower Santa Ana River
ORANGE CO	8871	CANAL	374-472-37	Lower Santa Ana River

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
ORANGE CO	8891	CANAL	374-472-36	Lower Santa Ana River
ORANGE CO	11042	CANASTA	017-320-21	San Gabriel River/Coyote Creek
ORANGE CO	11061	CANASTA	017-320-61	San Gabriel River/Coyote Creek
ORANGE CO	11102	CANASTA	017-320-22	San Gabriel River/Coyote Creek
ORANGE CO	30041	CANYON	856-041-27	San Juan Creek
ORANGE CO	30061	CANYON	856-041-29	San Juan Creek
ORANGE CO	30062	CANYON	856-041-42	San Juan Creek
ORANGE CO	30081	CANYON	856-041-30	San Juan Creek
ORANGE CO	30122	CANYON	856-041-22	San Juan Creek
ORANGE CO	19081	CENTER	093-311-07	San Diego Creek
ORANGE CO	19091	CENTER	093-311-08	San Diego Creek
ORANGE CO	19911	CHAPMAN	393-291-06	Lower Santa Ana River
ORANGE CO	19931	CHAPMAN	393-291-05	Lower Santa Ana River
ORANGE CO	1111	CHARWOOD	502-101-27	San Diego Creek
ORANGE CO	1131	CITRUS	017-396-01	San Gabriel River/Coyote Creek
ORANGE CO	1182	CITRUS	017-173-02	San Gabriel River/Coyote Creek
ORANGE CO	1231	CITRUS	017-174-02	San Gabriel River/Coyote Creek
ORANGE CO	1241	CITRUS	017-174-04	San Gabriel River/Coyote Creek
ORANGE CO	1261	CITRUS	017-174-07	San Gabriel River/Coyote Creek
ORANGE CO	1271	CITRUS	017-174-08	San Gabriel River/Coyote Creek
ORANGE CO	1359	CITRUS	017-174-11	San Gabriel River/Coyote Creek
ORANGE CO	1365	CITRUS	017-174-12	San Gabriel River/Coyote Creek
ORANGE CO	1371	CITRUS	017-174-13	San Gabriel River/Coyote Creek
ORANGE CO	14211	CLARISSA	401-121-18	San Diego Creek
ORANGE CO	14242	CLARISSA	401-121-08	San Diego Creek
ORANGE CO	14271	CLARISSA	401-121-13	San Diego Creek
ORANGE CO	14342	CLARISSA	401-121-24	San Diego Creek
ORANGE CO	14361	CLARISSA	401-121-30	San Diego Creek
ORANGE CO	31741	CONTIJO	804-181-07	San Juan Creek
ORANGE CO	10261	CRAWFORD CANYON	393-462-12	San Diego Creek
ORANGE CO	10262	CRAWFORD CANYON	393-101-03	San Diego Creek
ORANGE CO		CRYSTAL COVE STATE PARK	NO APN	Los Trancos/Muddy Creek
ORANGE CO	15521	CULLY	374-611-04	Lower Santa Ana River
ORANGE CO	15531	CULLY	374-611-05	Lower Santa Ana River
ORANGE CO	15592		374-612-11	Lower Santa Ana River
OBANGE CO	15602		374-612-12	Lower Santa Ana River
ORANGE CO	15612		374-612-13	Lower Santa Ana River
OBANGE CO	15662		374-612-17	Lower Santa Ana River
ORANGE CO	1003	CYPRESS	017-311-37	San Gabriel River/Covote Creek
ORANGE CO	1042	CYPRESS	017-320-69	San Gabriel River/Coyote Creek
ORANGE CO	1052	CYPRESS	017-320-03	San Gabriel River/Coyote Creek
ORANGE CO	1122	CYPRESS	017-320-03	San Gabriel River/Coyote Creek
ORANGE CO	1160		017-320-02	San Gabriel River/Coyote Creek
	1222		017-320-20	San Gabriel River/Coyote Creek
ORANGE CO	20252		420 272 12	San Diago Crock
ORANGE CO	20302	CIFRESS	439-372-12	San Diego Creek
	10001	DALL	395-412-03	San Diego Creek
	13701		306-204 05	San Diego Creek
ORANGE CO	13792	DEODAR	396-304-05	San Diego Creek
	12042		206 214 04	San Diago Crook
	13002	DEODAR	390-314-01	San Diego Creek
ORANGE CO	13871	DEODAR	396-313-10	San Diego Creek
	13911	DEODAR	396-313-08	San Diego Creek
	12941		094-354-34	San Diego Creek
ORANGE CO	18751		093-332-26	Lower Santa Ana River
ORANGE CO	12832	ELIZABETH	501-072-07	San Diego Creek
ORANGE CO	19741	ESPERANZA	349-071-25	Lower Santa Ana River
URANGE CO	13011	ETON	395-053-02	San Diego Creek
URANGE CO	13981	ETON	395-4/4-07	San Diego Creek
URANGE CO	13982	EION	395-474-06	San Diego Creek
ORANGE CO	12451	EVENINGSIDE	104-332-07	San Diego Creek
ORANGE CO	18231	FAIRHAVEN	094-365-06	San Diego Creek
ORANGE CO	12612	FAIRMONT	392-142-02	San Diego Creek
ORANGE CO	13411	FAIRMONT	395-252-44	San Diego Creek
ORANGE CO	13431	FAIRMONT	395-252-45	San Diego Creek
ORANGE CO	16311	FELLOWS	374-091-09	Lower Santa Ana River
ORANGE CO	16312	FELLOWS	374-091-21	Lower Santa Ana River
	16316	FELLOWS	374-091-23	Lower Santa Ana River
JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
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ORANGE CO	16322	FELLOWS	374-091-18	Lower Santa Ana River
ORANGE CO	16331	FELLOWS	374-091-10	Lower Santa Ana River
ORANGE CO	16332	FELLOWS	374-091-17	Lower Santa Ana River
ORANGE CO	16381	FELLOWS	374-091-13	Lower Santa Ana River
ORANGE CO	16382	FELLOWS	374-091-14	Lower Santa Ana River
ORANGE CO	16402	FELLOWS	374-101-26	Lower Santa Ana River
ORANGE CO	17966	FIESTA	401-413-10	San Diego Creek
ORANGE CO	1262	FLAMINIAN	502-233-04	San Diego Creek
ORANGE CO	20301	FLANAGAN	842-161-03	San Juan Creek
ORANGE CO	20302	FLANAGAN	842-161-04	San Juan Creek
ORANGE CO	20331	FLANAGAN	842-161-02	San Juan Creek
ORANGE CO	20342	FLANAGAN	842-161-05	San Juan Creek
ORANGE CO	20371	FLANAGAN	842-161-01	San Juan Creek
ORANGE CO	13592	FLINT	395-281-06	San Diego Creek
ORANGE CO	1092	FOOTHILL	502-223-05	San Diego Creek
ORANGE CO	1802	FOUTHILL	502-431-03	San Diego Creek
ORANGE CO	11591		502-222-12	San Diego Creek
ORANGE CO	18872	FOWLER	393-301-29	San Diego Creek
	18955		094-192-58	San Diego Creek
ORANGE CO	10892		503-452-09	San Diego Creek
ORANGE CO	9161	GORDON	017-022-08	San Gabriel River/Coyole Creek
ORANGE CO	9102	GORDON	017-023-04	San Gabriel River/Coyote Creek
	9101	CORDON	017-022-07	San Gabriel River/Coyote Creek
	0102	CORDON	017-023-03	San Gabriel River/Coyote Creek
ORANGE CO	9192	GORDON	017-023-02	San Gabriel River/Coyote Creek
ORANGE CO	9212	GORDON	017-023-01	San Gabriel River/Coyote Creek
ORANGE CO	9201	GOBDON	017-032-07	San Gabriel River/Coyote Creek
ORANGE CO	9251	GOBDON	017-043-01	San Gabriel River/Coyote Creek
ORANGE CO	9281	GORDON	017-052-00	San Gabriel River/Covote Creek
ORANGE CO	9291	GORDON	017-052-10	San Gabriel River/Covote Creek
ORANGE CO	9292	GORDON	017-041-03	San Gabriel River/Covote Creek
ORANGE CO	9311	GORDON	017-052-12	San Gabriel River/Covote Creek
ORANGE CO	9312	GORDON	017-041-02	San Gabriel River/Covote Creek
ORANGE CO	9322	GORDON	017-041-01	San Gabriel River/Covote Creek
ORANGE CO	10391	GREENBRIER	503-681-04	San Diego Creek
ORANGE CO	1181	HACIENDA	017-102-45	San Gabriel River/Coyote Creek
ORANGE CO	30854	HAMILTON	856-151-06	San Juan Creek
ORANGE CO	29199	HAZEL BELL	105-133-31	Lower Santa Ana River
ORANGE CO	16292	HEIM	374-091-50	Lower Santa Ana River
ORANGE CO	16322	HEIM	374-091-05	Lower Santa Ana River
ORANGE CO	16342	HEIM	374-091-04	Lower Santa Ana River
ORANGE CO	16352	HEIM	374-091-03	Lower Santa Ana River
ORANGE CO	16372	HEIM	374-091-02	Lower Santa Ana River
ORANGE CO	16382	HEIM	374-091-01	Lower Santa Ana River
ORANGE CO	16392	HEIM	374-101-01	Lower Santa Ana River
ORANGE CO	16402	HEIM	374-101-03	Lower Santa Ana River
ORANGE CO	16422	HEIM	374-101-04	Lower Santa Ana River
ORANGE CO	16472	HEIM	374-101-06	Lower Santa Ana River
ORANGE CO	16502	HEIM	374-101-07	Lower Santa Ana River
ORANGE CO	16522	HEIM	374-101-08	Lower Santa Ana River
ORANGE CO	16542	HEIM	374-101-09	Lower Santa Ana River
ORANGE CO	1291	HENSEL	303-081-15	San Gabriel River/Coyote Creek
ORANGE CO	1301	HENSEL	303-081-14	San Gabriel River/Coyote Creek
ORANGE CO	19782	HIGH TOP	379-421-31	Lower Santa Ana River
ORANGE CO	10012	HIGHCLIFF	503-301-05	San Diego Creek
ORANGE CO	10012	HIGHCLIFF	503-301-04	San Diego Creek
	10055		503-311-15	Lower Santa Ana Kiver
	10060		203-671-05	Lower Santa Ana River
	2000 I		319-341-13	Lower Santa Ana Kiver
	12031		393-121-03	San Diego Crook
	14042		+01-002-03	San Cabriel River/Covota Crock
	1101		017-/15-07	San Gabriel River/Covote Creek
	111/		017-306-09	San Gabriel River/Covote Creek
ORANGE CO	1272		017-17/-32	San Gabriel River/Covote Creek
ORANGE CO	1302		017-17/-20	San Gabriel River/Covote Creek
	1002		011-114-23	San Sabiler River/Objole Oleek

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
ORANGE CO	1322	IDAHO	017-174-28	San Gabriel River/Coyote Creek
ORANGE CO	1362	IDAHO	017-174-27	San Gabriel River/Coyote Creek
ORANGE CO	1382	IDAHO	017-174-24	San Gabriel River/Coyote Creek
ORANGE CO	18252	IMPALA	401-441-09	San Diego Creek
ORANGE CO	1832	IRVINE	103-363-26	San Diego Creek
ORANGE CO	1972	IRVINE	103-376-07	San Diego Creek
ORANGE CO	10932	IVY	093-452-15	Lower Santa Ana River
ORANGE CO	1431	KENNETH	103-342-07	San Diego Creek
ORANGE CO	1621	KENSING	502-081-13	San Diego Creek
ORANGE CO	7082	KERMORE	079-752-09	Los Alamitos/East Garden Grove/Bolsa Chica
ORANGE CO	7092	KERMORE	079-752-17	Los Alamitos/East Garden Grove/Bolsa Chica
ORANGE CO	7102	KERMORE	079-752-18	Los Alamitos/East Garden Grove/Bolsa Chica
ORANGE CO	7121	KERMORE	079-751-05	Los Alamitos/East Garden Grove/Bolsa Chica
ORANGE CO	7131	KERMORE	079-751-13	Los Alamitos/East Garden Grove/Bolsa Chica
ORANGE CO	7142	KERMORE	079-752-12	Los Alamitos/East Garden Grove/Bolsa Chica
ORANGE CO	7161	KERMORE	079-751-14	Los Alamitos/East Garden Grove/Bolsa Chica
ORANGE CO	7162	KERMORE	079-752-13	Los Alamitos/East Garden Grove/Bolsa Chica
ORANGE CO	7171	KERMORE	079-751-11	Los Alamitos/East Garden Grove/Bolsa Chica
ORANGE CO	/181	KERMORE	079-751-08	Los Alamitos/East Garden Grove/Bolsa Chica
ORANGE CO	1311	KOOPMANS	017-033-13	San Gabriel River/Coyote Creek
URANGE CO	1321	KOOPMANS	017-033-14	San Gabriel River/Coyote Creek
ORANGE CO	1322	KOOPMANS	017-034-02	San Gabriel River/Coyote Creek
ORANGE CO	1341	KOOPMANS	017-033-15	San Gabriel River/Coyote Creek
ORANGE CO	1342	KOOPMANS	017-034-03	San Gabriel River/Coyote Creek
ORANGE CO	1352	KOOPMANS	017-034-04	San Gabriel River/Coyote Creek
ORANGE CO	1342		103-142-29	San Diego Creek
ORANGE CO	1957	LA CUESTA	502-353-05	San Diego Creek
ORANGE CO	2052	LA CUESTA	502-352-06	San Diego Creek
ORANGE CO	2151	LA CUESTA	502-333-05	San Diego Creek
ORANGE CO	1141		502-232-08	San Diego Creek
ORANGE CO	10311	LADERA SENDA	503-102-28	San Diego Creek
ORANGE CO	14172	LAMBETH	401-433-04	San Diego Creek
ORANGE CO	19302	LAMBROSE CANYON	856-031-16	San Juan Creek
ORANGE CO	19391	LAMBROSE CANYON	856-031-12	San Juan Creek
ORANGE CO	19431	LAMBROSE CANYON	856-031-13	San Juan Creek
ORANGE CO	1241		502-121-11	San Diego Creek
ORANGE CO	18002		094-403-06	San Diego Creek
ORANGE CO	13322		395-223-15	San Diego Creek
ORANGE CO	17792		395-282-12	San Diego Creek
	19301		856-032-90	San Juan Creek
	1831		503-491-20	San Diego Creek
ORANGE CO	1862		503-491-28	San Diego Creek
	1890		502-362-16	San Diego Creek
	1901		502-381-02	San Diego Creek
ORANGE CO	1901		502-381-03	San Diego Creek
	1902		502-341-06	San Diego Creek
	2121 10011		JUZ-401-UJ	San Diego Crook
	203/1		+U1-401-42	Jan Diego Cleek
ORANGE CO	20341		093-270-29	Lower Santa Ana River
	20301		093-210-30	Lower Santa Ana River
ORANGE CO	20391		093-270-22	Lower Santa Ana River
	20401	I EWIS	003-270-07	Lower Santa Ana Diver
	20411		956 021 01	Alico Crook
	19041		856-031-15	Allso Cleek San Juan Crook
	19201		856-031-18	San Juan Creek
	10471		956 021 17	San Juan Creek
	19475		856-041-21	San Juan Creek
ORANGE CO	19501		856-041-24	San Juan Creek
	19531		856-041-39	San Juan Creek
	19602		856-042-00	San Juan Creek
ORANGE CO	19092		856-041-25	San Juan Creek
ORANGE CO	19735		856-041-26	San Juan Creek
	10737		856-0/1-13	San Juan Creek
ORANGE CO	19730		856-0/1-25	San Juan Creek
ORANGE CO	19741		856-041-11	San Juan Creek
	20272		856-052 20	San Juan Creek
	20212		000-002-20	San Juan Cleek

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
ORANGE CO	20352	LIVE OAK CANYON	856-052-21	San Juan Creek
ORANGE CO	20482	LIVE OAK CANYON	856-052-23	San Juan Creek
ORANGE CO	No NO	LIVE OAK CANYON	856-031-11	San Juan Creek
ORANGE CO	19038	LIVE OAK CYN	856-141-01	San Juan Creek
ORANGE CO	14562	LIVINGSTON	401-472-01	San Diego Creek
ORANGE CO	14721	LIVINGSTON	401-482-03	San Diego Creek
ORANGE CO	10991	MADRID	093-441-29	Lower Santa Ana River
ORANGE CO	11057	MAGDA	303-101-06	San Gabriel River/Coyote Creek
ORANGE CO	11058	MAGDA	303-101-05	San Gabriel River/Coyote Creek
ORANGE CO	11061	MAGDA	017-320-33	San Gabriel River/Coyote Creek
ORANGE CO	11062	MAGDA	303-101-08	San Gabriel River/Coyote Creek
ORANGE CO	11072	MAGDA	303-101-07	San Gabriel River/Coyote Creek
ORANGE CO	11081	MAGDA	017-320-35	San Gabriel River/Coyote Creek
ORANGE CO	11091	MAGDA	017-320-36	San Gabriel River/Coyote Creek
ORANGE CO	11092	MAGDA	303-101-02	San Gabriel River/Coyote Creek
ORANGE CO	11111	MAGDA	017-320-37	San Gabriel River/Coyote Creek
ORANGE CO	11112	MAGDA	303-101-01	San Gabriel River/Coyote Creek
ORANGE CO	12861	MALENA	094-332-07	San Diego Creek
ORANGE CO	12951	MALENA	094-332-12	San Diego Creek
ORANGE CO	31662	MANZANA	804-171-09	San Juan Creek
ORANGE CO	11641	MARBLE ARCH	502-231-06	San Diego Creek
ORANGE CO	19418	MARCY	393-201-33	San Diego Creek
ORANGE CO	14082	MATRYCE	401-402-12	San Diego Creek
ORANGE CO	1945	MAVERICK	502-391-01	San Diego Creek
ORANGE CO	10381	MEADS	379-561-02	Lower Santa Ana River
ORANGE CO	10591	MEADS	379-551-03	Lower Santa Ana River
ORANGE CO	10686	MEADS	379-131-06	Lower Santa Ana River
ORANGE CO	10692	MEADS	379-131-07	Lower Santa Ana River
ORANGE CO	10782	MEADS	379-061-03	Lower Santa Ana River
ORANGE CO	10821	MEADS	093-451-17	Lower Santa Ana River
ORANGE CO	10939	MEADS	093-451-34	Lower Santa Ana River
ORANGE CO	11041	MEADS	093-442-02	Lower Santa Ana River
ORANGE CO	11103	MEADS	093-442-13	Lower Santa Ana River
ORANGE CO	11107	MEADS	093-442-14	Lower Santa Ana River
ORANGE CO	11124	MEADS	093-441-33	Lower Santa Ana River
ORANGE CO	11155	MEADS	093-433-19	Lower Santa Ana River
ORANGE CO	17152	MEDFORD	396-303-03	San Diego Creek
ORANGE CO	17162	MEDFORD	396-303-02	San Diego Creek
ORANGE CO	1661	MELVIN	103-223-05	San Diego Creek
ORANGE CO	2291	MESA	439-372-05	East Costa Mesa/Newport Beach
ORANGE CO	2362	MESA	439-051-03	East Costa Mesa/Newport Beach
ORANGE CO	2600	MESA	439-051-05	East Costa Mesa/Newport Beach
ORANGE CO	2612	MESA	439-051-06	East Costa Mesa/Newport Beach
ORANGE CO	10001	MIRAMAR	503-671-01	Lower Santa Ana River
ORANGE CO	13352	MONTAGNE	395-342-09	San Diego Creek
ORANGE CO	13362	MONTAGNE	395-342-10	San Diego Creek
	10542	MORADA	379-441-04	Lower Santa Ana River
	10655		3/9-421-12	Lower Santa Ana River
	20632		842-091-20	San Juan Creek
ORANGE CO	20642		842-091-27	San Juan Creek
	20661		842-101-55	San Juan Creek
ORANGE CO	20661		842-101-56	San Juan Creek
ORANGE CO	20671		842-101-04	San Juan Creek
ORANGE CO	20672	MOUNTAIN VIEW	842-091-44	San Juan Creek
ORANGE CO	20681		842-101-47	San Juan Creek
ORANGE CO	20682		842-091-43	San Juan Creek
	20692		842-091-33	San Juan Creek
	20701		842-101-51	San Juan Creek
	20/11		842-101-53	San Juan Creek
URANGE CO	20721		842-101-54	San Juan Creek
	20/31		842-101-50	San Juan Creek
	20741		042-101-67	San Juan Creek
	31102		842-091-50	San Juan Creek
	31107		842-091-16	San Juan Creek
	31112		842-091-48	San Juan Creek
	31116		842-091-47	San Juan Creek
UKANGE CU	31122	MOUNTAIN VIEW	842-091-46	San Juan Creek

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
ORANGE CO	31132	MOUNTAIN VIEW	842-091-56	San Juan Creek
ORANGE CO	31142	MOUNTAIN VIEW	842-091-55	San Juan Creek
ORANGE CO	31151	MOUNTAIN VIEW	842-091-53	San Juan Creek
ORANGE CO	31181	MOUNTAIN VIEW	842-091-57	San Juan Creek
ORANGE CO	31201	MOUNTAIN VIEW	842-091-58	San Juan Creek
ORANGE CO	5592	MOUNTAIN VIEW	348-104-03	Lower Santa Ana River
ORANGE CO	5596	MOUNTAIN VIEW	348-104-05	Lower Santa Ana River
ORANGE CO	5641	MOUNTAIN VIEW	348-112-27	Lower Santa Ana River
ORANGE CO	8471	N COAST	NO APN	Los Trancos/Muddy Creek
ORANGE CO	11622	NEWPORT	502-221-12	San Diego Creek
ORANGE CO	20272	NORTH	842-111-01	San Juan Creek
ORANGE CO	18132	NORWOOD PARK	401-463-09	San Diego Creek
ORANGE CO	28	OAK	842-101-32	San Juan Creek
ORANGE CO	30142	OAK	105-171-59	Lower Santa Ana River
ORANGE CO	30191	OAK	105-171-78	Lower Santa Ana River
ORANGE CO	18262	OAK RIDGE	395-361-03	San Diego Creek
ORANGE CO	18751	OAK RIDGE	395-502-07	San Diego Creek
ORANGE CO	8582	OCEANVIEW	360-361-09	Lower Santa Ana River
ORANGE CO	8621	OCEANVIEW	360-364-03	Lower Santa Ana River
ORANGE CO	31072	OLIVE	842-101-25	San Juan Creek
ORANGE CO	12971		094-364-01	San Diego Creek
ORANGE CO	9812	ORANGE	127-231-49	Carbon Creek
ORANGE CO	9092		374-091-08	Lower Santa Ana River
ORANGE CO	9162	ORANGE OLIVE	374-091-20	Lower Santa Ana River
ORANGE CO	0	ORANGE PARK	NO APN	Lower Santa Ana River
ORANGE CO	11062	ORANGE PARK	379-412-01	Lower Santa Ana River
ORANGE CO	11443	ORANGE PARK	093-433-21	Lower Santa Ana River
ORANGE CO	28672	ORTEGA	125-162-12	Prima Deshecha/Segunda Deshecha
ORANGE CO	31101	ORTEGA	125-161-11	San Juan Creek
ORANGE CO	31641	ORTEGA	125-161-03	San Juan Creek
ORANGE CO	10102	OVERHILL	503-171-01	San Diego Creek
ORANGE CO	10112	OVERHILL	503-171-05	San Diego Creek
ORANGE CO	1820	PAGE	071-511-17	San Gabriel River/Coyote Creek
ORANGE CO	1830	PAGE	071-511-16	San Gabriel River/Coyote Creek
ORANGE CO	1840	PAGE	071-511-15	San Gabriel River/Coyote Creek
ORANGE CO	1861	PAGE	071-501-01	San Gabriel River/Coyote Creek
ORANGE CO	1900	PAGE	071-502-13	San Gabriel River/Coyote Creek
ORANGE CO	1232	PALM	303-061-03	San Gabriel River/Coyote Creek
ORANGE CO	1245	PALM	303-021-04	San Gabriel River/Coyote Creek
ORANGE CO	8631	PALM	360-372-01	Lower Santa Ana River
ORANGE CO	13751	PASADENA	396-303-12	San Diego Creek
ORANGE CO	13752	PASADENA	396-303-14	San Diego Creek
ORANGE CO	13762	PASADENA	396-303-15	San Diego Creek
ORANGE CO	13771	PASADENA	396-303-10	San Diego Creek
ORANGE CO	13772	PASADENA	396-303-16	San Diego Creek
ORANGE CO	13792	PASADENA	396-303-17	San Diego Creek
ORANGE CO	13802	PASADENA	396-303-18	San Diego Creek
ORANGE CO	13812	PASADENA	396-303-19	San Diego Creek
ORANGE CO	13822	PASADENA	396-303-20	San Diego Creek
ORANGE CO	13831	PASADENA	396-303-05	San Diego Creek
ORANGE CO	13841	PASADENA	396-303-04	San Diego Creek
ORANGE CO	12753	PERIWINKLE	393-071-20	San Diego Creek
ORANGE CO	20392	PINE	842-111-31	San Juan Creek
ORANGE CO	20421	PINE	842-111-33	San Juan Creek
ORANGE CO	20431	PINE	842-111-34	San Juan Creek
ORANGE CO	20442	PINE	842-111-35	San Juan Creek
ORANGE CO	20482	PINE	842-111-68	San Juan Creek
	20502		842-111-73	San Juan Creek
	13862		396-313-01	San Diego Creek
ORANGE CO	12652	PROSPECI	094-402-22	San Diego Creek
ORANGE CO	13361	PROSPECI	395-222-27	San Diego Creek
	13402	PROSPECI	395-331-20	San Diego Creek
	13532	PROSPECT	395-335-08	San Diego Creek
ORANGE CO	13591	PROSPECI	395-281-05	San Diego Creek
	17391	RAINER	395-251-04	San Diego Creek
	1/962		395-324-03	San Diego Creek
ORANGE CO	11052	KANCHO SANTIAGO	379-141-37	Lower Santa Ana River

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
ORANGE CO	11821	RANCHO SANTIAGO	383-082-19	Lower Santa Ana River
ORANGE CO	12822	RANCHWOOD	104-474-10	San Diego Creek
ORANGE CO	9002	RANDALL	017-033-01	San Gabriel River/Coyote Creek
ORANGE CO	9021	RANDALL	017-031-02	San Gabriel River/Coyote Creek
ORANGE CO	9022	RANDALL	017-033-02	San Gabriel River/Coyote Creek
ORANGE CO	9031	RANDALL	017-031-03	San Gabriel River/Coyote Creek
ORANGE CO	9032	RANDALL	017-033-03	San Gabriel River/Coyote Creek
ORANGE CO	9041	RANDALL	017-031-04	San Gabriel River/Coyote Creek
ORANGE CO	9042	RANDALL	017-033-04	San Gabriel River/Coyote Creek
ORANGE CO	9061	RANDALL	017-031-05	San Gabriel River/Coyote Creek
ORANGE CO	9062	RANDALL	017-033-05	San Gabriel River/Coyote Creek
ORANGE CO	9071	RANDALL	017-031-06	San Gabriel River/Coyote Creek
ORANGE CO	9081	RANDALL	017-031-07	San Gabriel River/Coyote Creek
ORANGE CO	9082	RANDALL	017-033-07	San Gabriel River/Coyote Creek
ORANGE CO	9101	RANDALL	017-031-08	San Gabriel River/Coyote Creek
ORANGE CO	9102	RANDALL	017-033-08	San Gabriel River/Coyote Creek
ORANGE CO	9112	RANDALL	017-033-09	San Gabriel River/Coyote Creek
ORANGE CO	9121	RANDALL	017-031-09	San Gabriel River/Coyote Creek
ORANGE CO	9132	RANDALL	017-033-10	San Gabriel River/Coyote Creek
ORANGE CO	9142	RANDALL	017-033-11	San Gabriel River/Coyote Creek
ORANGE CO	9161	RANDALL	017-032-02	San Gabriel River/Coyote Creek
ORANGE CO	9162	RANDALL	017-033-12	San Gabriel River/Coyote Creek
ORANGE CO	9241	RANDALL	017-043-07	San Gabriel River/Coyote Creek
ORANGE CO	9242	RANDALL	017-044-17	San Gabriel River/Coyote Creek
ORANGE CO	9261	RANDALL	017-042-06	San Gabriel River/Coyote Creek
ORANGE CO	9262	RANDALL	017-044-05	San Gabriel River/Coyote Creek
ORANGE CO	9281	RANDALL	017-042-07	San Gabriel River/Coyote Creek
ORANGE CO	9282	RANDALL	017-044-04	San Gabriel River/Coyote Creek
ORANGE CO	9291	RANDALL	017-042-08	San Gabriel River/Coyote Creek
ORANGE CO	9292	RANDALL	017-044-03	San Gabriel River/Coyote Creek
ORANGE CO	9311	RANDALL	017-042-09	San Gabriel River/Coyote Creek
ORANGE CO	9312	RANDALL	017-044-02	San Gabriel River/Coyote Creek
ORANGE CO	9321	RANDALL	017-042-10	San Gabriel River/Coyote Creek
ORANGE CO	9732	RANGEVIEW	503-271-05	San Diego Creek
ORANGE CO	11976	RED HILL	502-011-05	San Diego Creek
ORANGE CO	13032	RED HILL	103-471-03	San Diego Creek
ORANGE CO	13062	RED HILL	103-471-05	San Diego Creek
ORANGE CO	2011	REDBERRY	104-444-18	San Diego Creek
ORANGE CO	1302	RISA	502-021-08	San Diego Creek
ORANGE CO	20151	ROGERS	379-061-27	Lower Santa Ana River
ORANGE CO	20191	ROGERS	379-061-28	Lower Santa Ana River
ORANGE CO	14711	ROMANZA	401-481-26	San Diego Creek
ORANGE CO	13092	ROSALIND	395-202-08	San Diego Creek
ORANGE CO	20091	ROSE CANYON	842-122-16	San Juan Creek
ORANGE CO	9272	RUSSELL	017-052-04	San Gabriel River/Coyote Creek
ORANGE CO	9292	RUSSELL	017-052-03	San Gabriel River/Coyote Creek
ORANGE CO	31081	SAGE	842-111-50	San Juan Creek
ORANGE CO	17431	SANTA CLARA	395-252-15	San Diego Creek
ORANGE CO	18042	SANTA CLARA	395-335-01	San Diego Creek
ORANGE CO	20022	SANTIAGO CANYON	379-571-12	Lower Santa Ana River
ORANGE CO	20649	SANTIAGO CANYON	093-242-82	Lower Santa Ana River
ORANGE CO	20657	SANTIAGO CANYON	093-242-77	Lower Santa Ana River
ORANGE CO	20661	SANTIAGO CANYON	093-242-52	Lower Santa Ana River
ORANGE CO	31062	SHADY	842-101-20	San Juan Creek
ORANGE CO	11811	SHADYCREST	303-021-07	San Gabriel River/Coyote Creek
ORANGE CO	11812	SHADYCREST	303-021-12	San Gabriel River/Coyote Creek
ORANGE CO	11890	SHADYCREST	303-021-11	San Gabriel River/Coyote Creek
ORANGE CO	11931	SHADYCREST	303-021-02	San Gabriel River/Coyote Creek
ORANGE CO	9021	SHARON	017-033-47	San Gabriel River/Coyote Creek
ORANGE CO	9022	SHARON	017-033-26	San Gabriel River/Coyote Creek
ORANGE CO	9041	SHARON	017-033-45	San Gabriel River/Coyote Creek
ORANGE CO	9061	SHARON	017-033-44	San Gabriel River/Coyote Creek
ORANGE CO	9062	SHARON	017-033-29	San Gabriel River/Coyote Creek
ORANGE CO	9071	SHARON	017-033-43	San Gabriel River/Coyote Creek
ORANGE CO	9072	SHARON	017-033-30	San Gabriel River/Coyote Creek
ORANGE CO	9082	SHARON	017-033-31	San Gabriel River/Coyote Creek
ORANGE CO	9101	SHARON	017-033-41	San Gabriel River/Coyote Creek

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
ORANGE CO	9111	SHARON	017-033-40	San Gabriel River/Coyote Creek
ORANGE CO	9112	SHARON	017-033-33	San Gabriel River/Coyote Creek
ORANGE CO	9131	SHARON	017-033-39	San Gabriel River/Coyote Creek
ORANGE CO	9132	SHARON	017-033-34	San Gabriel River/Coyote Creek
ORANGE CO	9142	SHARON	017-033-35	San Gabriel River/Coyote Creek
ORANGE CO	9145	SHARON	017-033-37	San Gabriel River/Coyote Creek
ORANGE CO	9146	SHARON	017-033-36	San Gabriel River/Coyote Creek
ORANGE CO	1171	SHARPLESS	017-021-39	San Gabriel River/Coyote Creek
ORANGE CO	1172	SHARPLESS	017-022-02	San Gabriel River/Coyote Creek
ORANGE CO	1191	SHARPLESS	017-021-07	San Gabriel River/Coyote Creek
ORANGE CO	1201	SHARPLESS	017-021-08	San Gabriel River/Coyote Creek
ORANGE CO	1221	SHARPLESS	017-021-09	San Gabriel River/Coyote Creek
ORANGE CO	1231	SHARPLESS	017-021-10	San Gabriel River/Coyote Creek
ORANGE CO	1762	SIERRA ALTA	103-512-02	San Diego Creek
ORANGE CO	11670	SKYLINE	502-441-07	San Diego Creek
ORANGE CO	12051	SKYLINE	502-312-08	San Diego Creek
ORANGE CO	12122	SKYLINE	502-311-04	San Diego Creek
ORANGE CO	1282	SKYLINE	103-154-22	San Diego Creek
ORANGE CO	1596	SKYLINE	103-501-51	San Diego Creek
ORANGE CO	12181	SKYWAY	502-301-02	San Diego Creek
ORANGE CO	1032	SMOKE TREE	502-252-02	San Diego Creek
ORANGE CO	1052	SMOKE TREE	502-252-03	San Diego Creek
ORANGE CO	1241	SMOKE TREE	502-271-16	San Diego Creek
ORANGE CO	1262	SMOKE TREE	502-271-11	San Diego Creek
ORANGE CO	1091	ST JOHN	502-261-16	San Diego Creek
ORANGE CO	1112	STJOHN	502-251-02	San Diego Creek
ORANGE CO	1131	STJOHN	502-261-14	San Diego Creek
ORANGE CO	1111		502-261-09	San Diego Creek
ORANGE CO	1112		502-261-12	San Diego Creek
ORANGE CO	1132		502-261-13	San Diego Creek
ORANGE CO	14052	STRATION	401-072-07	San Diego Creek
ORANGE CO	10041	SUNRISE	503-631-09	San Diego Creek
ORANGE CO	159	SYCAMORE	842-111-23	San Juan Creek
ORANGE CO	201	SYCAMORE	842-101-45	San Juan Creek
ORANGE CO	20276	SYCAMORE	842-111-03	San Juan Creek
ORANGE CO	20281	SYCAMORE	842-111-62	San Juan Creek
ORANGE CO	20282	SYCAMORE	842-111-04	San Juan Creek
ORANGE CO	20292	SYCAMORE	842-111-05	San Juan Creek
ORANGE CO	20292	SYCAMORE	842-111-06	San Juan Creek
	20301	SYCAMORE	842-111-70	San Juan Creek
	20311	SYCAMORE	042-111-75	San Juan Crook
	20322	STCAMORE	042-111-04	San Juan Creek
	20331	SYCAMORE	042-111-70	San Juan Creek
	20341	SYCAMORE	042-111-04	San Juan Creek
	20352	STCAMORE	042-111-09	San Juan Creek
	20401	SYCAMORE	042-111-30	San Juan Creek
	20411	SYCAMORE	8/2-111-29	San Juan Creek
ORANGE CO	20421	SYCAMORE	842-111-13	San Juan Creek
ORANGE CO	20422	SYCAMORE	842-111-16	San Juan Creek
	20422	SYCAMORE	842-111-10	San Juan Creek
ORANGE CO	20431	SYCAMORE	842-111-17	San Juan Creek
	20431	SYCAMORE	842-111-27	San Juan Creek
	20452	SYCAMORE	842-111-10	San Juan Creek
	20402	SYCAMORE	8/2-111-15	San Juan Creek
	20471	SYCAMORE	8/2-111-20	San Juan Creek
ORANGE CO	20492	SYCAMORE	842-111-20	San Juan Creek
ORANGE CO	20532	SYCAMORE	842-101-44	San Juan Creek
ORANGE CO	20551	SYCAMORE	842-101-96	San Juan Creek
ORANGE CO	20571	SYCAMORE	842-101-20	San Juan Creek
ORANGE CO	20572	SYCAMORE	842-101-27	San Juan Creek
ORANGE CO	20581	SYCAMORE	842-101-23	San Juan Creek
ORANGE CO	20592	SYCAMORE	842-101-58	San Juan Creek
	20601	SYCAMORE	8/2-101-30	San Juan Creek
ORANGE CO	20611	SYCAMORE	842-101-29	San Juan Creek
ORANGE CO	20631	SYCAMORE	842-101-30	San Juan Creek
	20031	SYCAMORE	8/2-101-40	San Juan Creek
	20002		042-101-21	Gan Suan Orden

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
ORANGE CO	20552	SYCAMORE GULCH	842-101-61	San Juan Creek
ORANGE CO	1762	TERRY LYNN	503-491-14	San Diego Creek
ORANGE CO	17962	THEODORA	401-312-16	San Diego Creek
ORANGE CO	18001	THEODORA	401-311-30	San Diego Creek
ORANGE CO	30892	TRABUCO CANYON	125-035-03	San Juan Creek
ORANGE CO	30892	TRABUCO CANYON	125-035-09	San Juan Creek
ORANGE CO	31041	TRABUCO CANYON	842-091-52	San Juan Creek
ORANGE CO	20021	TRABUCO OAKS	842-121-01	San Juan Creek
ORANGE CO	20022	TRABUCO OAKS	842-122-01	San Juan Creek
ORANGE CO	20051	TRABUCO OAKS	842-121-03	San Juan Creek
ORANGE CO	20061		842-121-07	San Juan Creek
	20072		842-122-02	San Juan Creek
ORANGE CO	20142		842-122-04	San Juan Crook
ORANGE CO	20221		842-121-00	San Juan Creek
ORANGE CO	20222	TRABLICO OAKS	842-111-02	San Juan Creek
ORANGE CO	20251	TRABLICO OAKS	842-112-37	San Juan Creek
ORANGE CO	20292	TRABLICO OAKS	842-111-61	San Juan Creek
ORANGE CO	20302	TRABUCO OAKS	842-111-77	San Juan Creek
ORANGE CO	20311	TRABUCO OAKS	842-112-04	San Juan Creek
ORANGE CO	20312	TRABUCO OAKS	842-111-74	San Juan Creek
ORANGE CO	20322	TRABUCO OAKS	842-111-58	San Juan Creek
ORANGE CO	20332	TRABUCO OAKS	842-111-55	San Juan Creek
ORANGE CO	20341	TRABUCO OAKS	842-112-29	San Juan Creek
ORANGE CO	20352	TRABUCO OAKS	842-111-52	San Juan Creek
ORANGE CO	20358	TRABUCO OAKS	842-111-49	San Juan Creek
ORANGE CO	20362	TRABUCO OAKS	842-111-51	San Juan Creek
ORANGE CO	20371	TRABUCO OAKS	842-112-34	San Juan Creek
ORANGE CO	20382	TRABUCO OAKS	842-111-48	San Juan Creek
ORANGE CO	20391	TRABUCO OAKS	842-112-10	San Juan Creek
ORANGE CO	20392	TRABUCO OAKS	842-111-47	San Juan Creek
ORANGE CO	20401	TRABUCO OAKS	842-112-11	San Juan Creek
ORANGE CO	20402	TRABUCO OAKS	842-111-46	San Juan Creek
ORANGE CO	20431	TRABUCO OAKS	842-112-14	San Juan Creek
ORANGE CO	20432	TRABUCO OAKS	842-111-63	San Juan Creek
ORANGE CO	20441		842-112-15	San Juan Creek
ORANGE CO	20442		842-111-42	San Juan Creek
ORANGE CO	20451		042-112-10	San Juan Creek
	20401		842-112-17	San Juan Creek
ORANGE CO	20402		842-112-18	San Juan Creek
ORANGE CO	20401	TRABUCO OAKS	842-111-39	San Juan Creek
ORANGE CO	20491	TRABLICO OAKS	842-112-19	San Juan Creek
ORANGE CO	20502	TRABUCO OAKS	842-111-38	San Juan Creek
ORANGE CO	20511	TRABUCO OAKS	842-112-20	San Juan Creek
ORANGE CO	20512	TRABUCO OAKS	842-111-37	San Juan Creek
ORANGE CO	20521	TRABUCO OAKS	842-102-01	San Juan Creek
ORANGE CO	20531	TRABUCO OAKS	842-102-02	San Juan Creek
ORANGE CO	20551	TRABUCO OAKS	842-102-21	San Juan Creek
ORANGE CO	20562	TRABUCO OAKS	842-101-64	San Juan Creek
ORANGE CO	20571	TRABUCO OAKS	842-102-04	San Juan Creek
ORANGE CO	20576	TRABUCO OAKS	842-101-63	San Juan Creek
ORANGE CO	20582	TRABUCO OAKS	842-101-36	San Juan Creek
ORANGE CO	20591	TRABUCO OAKS	842-102-05	San Juan Creek
ORANGE CO	20602	TRABUCO OAKS	842-101-34	San Juan Creek
ORANGE CO	20612	TRABUCO OAKS	842-101-33	San Juan Creek
ORANGE CO	20641	TRABUCO OAKS	842-102-08	San Juan Creek
	20662		842-101-19	San Juan Creek
ORANGE CO	20672	TRABUCO OAKS	842-101-18	San Juan Creek
	20685		042-102-24	San Juan Creek
	20000		042-102-25	San Juan Creek
	20092		8/2-101-17	San Juan Creek
ORANGE CO	20700		842-102-22	San Juan Creek
ORANGE CO	20712	TRABLICO OAKS	842-101-15	San Juan Creek
ORANGE CO	20721	TRABUCO OAKS	842-102-22	San Juan Creek
ORANGE CO	20722	TRABUCO OAKS	842-101-14	San Juan Creek
			12.2	

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
ORANGE CO	20731	TRABUCO OAKS	842-102-13	San Juan Creek
ORANGE CO	20741	TRABUCO OAKS	842-102-14	San Juan Creek
ORANGE CO	20742	TRABUCO OAKS	842-101-12	San Juan Creek
ORANGE CO	20751	TRABUCO OAKS	842-102-15	San Juan Creek
ORANGE CO	20762	TRABUCO OAKS	842-101-11	San Juan Creek
ORANGE CO	20782	TRABUCO OAKS	842-101-57	San Juan Creek
ORANGE CO	31071	TRABUCO OLIVE	842-111-72	San Juan Creek
ORANGE CO	1132	TRIUMPHAL	502-242-02	San Diego Creek
ORANGE CO	1192	TRIUMPHAL	502-242-05	San Diego Creek
ORANGE CO	1221	TRIUMPHAL	502-241-22	San Diego Creek
ORANGE CO	1251	TRIUMPHAL	502-241-20	San Diego Creek
ORANGE CO	1022	TURNDELL	017-320-02	San Gabriel River/Coyote Creek
ORANGE CO	1031	TURNDELL	017-320-59	San Gabriel River/Coyote Creek
ORANGE CO	1082	TURNDELL	017-320-05	San Gabriel River/Coyote Creek
ORANGE CO	1091	TURNDELL	017-320-45	San Gabriel River/Coyote Creek
ORANGE CO	1092	TURNDELL	017-320-06	San Gabriel River/Coyote Creek
ORANGE CO	1102	TURNDELL	017-320-38	San Gabriel River/Coyote Creek
ORANGE CO	1181	TURNDELL	017-320-28	San Gabriel River/Coyote Creek
ORANGE CO	1182	TURNDELL	017-320-25	San Gabriel River/Coyote Creek
ORANGE CO	1188	TURNDELL	017-320-26	San Gabriel River/Coyote Creek
ORANGE CO	1192	TURNDELL	017-320-27	San Gabriel River/Covote Creek
ORANGE CO	No NO	UNKNOWN ADDRESS	856-061-24	San Juan Creek
ORANGE CO	No NO	UNKNOWN ADDRESS	856-052-03	San Juan Creek
ORANGE CO	No NO	UNKNOWN ADDRESS	842-101-06	San Juan Creek
ORANGE CO	1942	VALENCIA	308-021-03	San Gabriel River/Covote Creek
ORANGE CO	10012	VECINO	017-174-31	San Gabriel River/Covote Creek
ORANGE CO	10041	VECINO	017-174-03	San Gabriel River/Covote Creek
ORANGE CO	12862		393-032-11	San Diego Creek
ORANGE CO	12871		393-032-07	San Diego Creek
	31801		804-201-13	San Juan Creek
	31812		804-201-13	San Juan Creek
	21022		804-191-09	San Juan Creek
	11171		502 241 24	San Diago Crook
	12201		004 201 02	San Diego Creek
	12301		094-201-03	San Diego Creek
	1242	WALKER	303-081-05	San Gabriel River/Coyole Creek
ORANGE CO	1271		303-101-03	San Gabriel River/Coyole Creek
	1272	WALKER	303-081-06	San Gabriel River/Coyole Creek
	9141	WALLACE	017-023-06	San Gabriel River/Coyole Creek
	9142	WALLACE	017-023-14	San Gabriel River/Coyote Creek
	9161	WALLACE	017-023-07	San Gabriel River/Coyote Creek
	9181	WALLACE	017-023-08	San Gabriel River/Coyote Creek
ORANGE CO	9182	WALLACE	017-023-12	San Gabriel River/Coyote Creek
ORANGE CO	9281	WALLACE	017-041-07	San Gabriel River/Coyote Creek
ORANGE CO	9282	WALLACE	017-042-04	San Gabriel River/Coyote Creek
ORANGE CO	9291	WALLACE	017-041-08	San Gabriel River/Coyote Creek
ORANGE CO	18590	WARREN	401-211-30	San Diego Creek
ORANGE CO	17821	WELLINGTON	401-412-21	San Diego Creek
ORANGE CO	17961	WELLINGTON	401-413-14	San Diego Creek
ORANGE CO	17965	WELLINGTON	401-413-15	San Diego Creek
ORANGE CO	18392	WELLINGTON	401-121-07	San Diego Creek
ORANGE CO	17922	WHITNEY	395-322-09	San Diego Creek
ORANGE CO	17942	WHITNEY	395-322-08	San Diego Creek
ORANGE CO	9882	WINDES	370-061-02	Lower Santa Ana River
ORANGE CO	9942	WINDES	370-061-06	Lower Santa Ana River
ORANGE CO	9962	WINDES	370-061-05	Lower Santa Ana River
ORANGE CO	1	WINDY RIDGE	842-122-12	San Juan Creek
ORANGE CO	2	WINDY RIDGE	842-122-14	San Juan Creek
ORANGE CO	3	WINDY RIDGE	842-122-13	San Juan Creek
ORANGE CO	5	WINDY RIDGE	842-122-18	San Juan Creek
PLACENTIA	830	BERKENSTOCK	336-483-29	Lower Santa Ana River
PLACENTIA	2232	CALIFORNIA	336-291-34	Lower Santa Ana River
PLACENTIA	2243	CALIFORNIA	336-293-11	Lower Santa Ana River
PLACENTIA	2251	CALIFORNIA	336-293-12	Lower Santa Ana River
PLACENTIA	506	FEE ANA	346-241-01	Lower Santa Ana River
PLACENTIA	1049	GOLDEN	334-021-03	Lower Santa Ana River
PLACENTIA	1111	GOLDEN	334-021-04	Lower Santa Ana River
PLACENTIA	1941	HARTE	336-352-02	Lower Santa Ana River
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JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
PLACENTIA	1947	HARTE	336-352-01	Lower Santa Ana River
PLACENTIA	1950	HARTE	336-351-04	Lower Santa Ana River
PLACENTIA	1956	HARTE	336-351-03	Lower Santa Ana River
PLACENTIA	1962	HARTE	336-351-02	Lower Santa Ana River
PLACENTIA	636	HEMINGWAY	336-361-14	Lower Santa Ana River
PLACENTIA	664	LEMKE	336-356-04	Lower Santa Ana River
PLACENTIA	2084	MCCORMACK	336-083-30	Lower Santa Ana River
PLACENTIA	2102	MCCORMACK	336-083-28	Lower Santa Ana River
PLACENTIA	2108	MCCORMACK	336-083-27	Lower Santa Ana River
PLACENTIA	2114	MCCORMACK	336-083-26	Lower Santa Ana River
PLACENTIA	2130	MCCORMACK	336-083-22	Lower Santa Ana River
PLACENTIA	2136	MCCORMACK	336-083-21	Lower Santa Ana River
PLACENTIA	2142	MCCORMACK	336-083-20	Lower Santa Ana River
PLACENTIA	2154	MCCORMACK	336-292-01	Lower Santa Ana River
PLACENTIA	2160	MCCORMACK	336-292-02	Lower Santa Ana River
PLACENTIA	2238	MCCORMACK	336-293-03	Lower Santa Ana River
PLACENTIA	2244	MCCORMACK	336-293-02	Lower Santa Ana River
PLACENTIA	17711	ORCHARD	343-681-02	Lower Santa Ana River
			939-58-001 to	
PLACENTIA	2001-	ORCHARD	939-58-020	Lower Santa Ana River
PLACENTIA	990	PLACENTIA	344-131-02	Carbon Creek
PLACENTIA	550	PORTER	339-081-12	Carbon Creek
PLACENTIA	560	PORTER	339-081-24	Carbon Creek
PLACENTIA	818	RICHFIELD	346-041-09	Lower Santa Ana River
PLACENTIA	2407	ROSE	322-071-05	Lower Santa Ana River
PLACENTIA	2413	ROSE	322-071-04	Lower Santa Ana River
PLACENTIA	2419	ROSE	322-071-03	Lower Santa Ana River
PLACENTIA	2425	ROSE	322-071-02	Lower Santa Ana River
PLACENTIA	2501	ROSE	322-023-26	Lower Santa Ana River
PLACENTIA	2509	ROSE	322-023-27	Lower Santa Ana River
PLACENTIA	2525	ROSE	322-023-05	Lower Santa Ana River
PLACENTIA	No NO	UNKNOWN ADDRESS	343-541-30	Lower Santa Ana River
	541	VAN BUREN	346-164-01	Lower Santa Ana River
RANCHO SANTA MARGARITA	32671	DEERHOLLOW	842-153-42	San Juan Creek
	32672	DEERHOLLOW	842-153-43	San Juan Creek
RANCHO SANTA MARGARITA	32681	DEERHOLLOW	842-153-41	San Juan Creek
RANCHO SANTA MARGARITA	32682	DEERHOLLOW	842-153-44	San Juan Creek
	32691	DEERHOLLOW	842-153-40	
RANCHO SANTA MARGARITA	32692		842-153-45	San Juan Creek
	21021		842-144-03	San Juan Creek
	21025		842-144-04	San Juan Creek
	21031		842-144-05	San Juan Creek
	21041		042-144-00	San Juan Crock
	20831		842-144-07	San Juan Creek
	20031		042-153-01	San Juan Creek
	20041		842-153-02	San Juan Creek
RANCHO SANTA MARGARITA	20861		842-153-03	San Juan Creek
RANCHO SANTA MARGARITA	20871	MAYFAIR	842-153-05	San Juan Creek
RANCHO SANTA MARGARITA	20881	MAYEAIR	842-153-06	San Juan Creek
RANCHO SANTA MARGARITA	20891	MAYFAIR	842-153-00	San Juan Creek
RANCHO SANTA MARGARITA	20001	MAYEAIR	842-153-08	San Juan Creek
RANCHO SANTA MARGARITA	20071	MAYEAIR	842-153-09	San Juan Creek
RANCHO SANTA MARGARITA	20931	MAYEAIR	842-153-10	San Juan Creek
RANCHO SANTA MARGARITA	20941	MAYEAIR	842-153-11	San Juan Creek
RANCHO SANTA MARGARITA	20951	MAYEAIR	842-153-12	San Juan Creek
RANCHO SANTA MARGARITA	32692	MEADOWPARK	842-143-02	San Juan Creek
RANCHO SANTA MARGARITA	32696	MEADOWPARK	842-143-03	San Juan Creek
RANCHO SANTA MARGARITA	32702	MEADOWPARK	842-143-04	San Juan Creek
RANCHO SANTA MARGARITA	32712	MEADOWPARK	842-143-05	San Juan Creek
RANCHO SANTA MARGARITA	32722	MEADOWPARK	842-143-06	San Juan Creek
RANCHO SANTA MARGARITA	32732	MEADOWPARK	842-143-07	San Juan Creek
RANCHO SANTA MARGARITA	32742	MEADOWPARK	842-143-08	San Juan Creek
RANCHO SANTA MARGARITA	32752	MEADOWPARK	842-143-09	San Juan Creek
RANCHO SANTA MARGARITA	32756	MEADOWPARK	842-143-10	San Juan Creek
RANCHO SANTA MARGARITA	32762	MEADOWPARK	842-143-11	San Juan Creek
RANCHO SANTA MARGARITA	32772	MEADOWPARK	842-143-17	San Juan Creek
	02112		0-12-1-10-12	oun oudir Oreek

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
RANCHO SANTA MARGARITA	32782	MEADOWPARK	842-143-13	San Juan Creek
RANCHO SANTA MARGARITA	32792	MEADOWPARK	842-143-14	San Juan Creek
RANCHO SANTA MARGARITA	32796	MEADOWPARK	842-143-15	San Juan Creek
RANCHO SANTA MARGARITA	32802	MEADOWPARK	842-143-16	San Juan Creek
RANCHO SANTA MARGARITA	32806	MEADOWPARK	842-143-17	San Juan Creek
RANCHO SANTA MARGARITA	20881	MORNINGSIDE	842-154-08	San Juan Creek
RANCHO SANTA MARGARITA	20891	MORNINGSIDE	842-154-09	San Juan Creek
RANCHO SANTA MARGARITA	20902	MORNINGSIDE	842-154-07	San Juan Creek
RANCHO SANTA MARGARITA	20911	MORNINGSIDE	842-154-10	San Juan Creek
RANCHO SANTA MARGARITA	20912	MORNINGSIDE	842-154-06	San Juan Creek
RANCHO SANTA MARGARITA	20916	MORNINGSIDE	842-154-05	San Juan Creek
RANCHO SANTA MARGARITA	20922	MORNINGSIDE	842-154-04	San Juan Creek
RANCHO SANTA MARGARITA	20932	MORNINGSIDE	842-154-03	San Juan Creek
RANCHO SANTA MARGARITA	20942	MORNINGSIDE	842-154-02	San Juan Creek
RANCHO SANTA MARGARITA	20951	MORNINGSIDE	842-132-05	San Juan Creek
RANCHO SANTA MARGARITA	20952	MORNINGSIDE	842-154-01	San Juan Creek
RANCHO SANTA MARGARITA	20961	MORNINGSIDE	842-132-06	San Juan Creek
RANCHO SANTA MARGARITA	20962	MORNINGSIDE	842-131-01	San Juan Creek
RANCHO SANTA MARGARITA	20971	MORNINGSIDE	842-132-07	San Juan Creek
RANCHO SANTA MARGARITA	20972	MORNINGSIDE	042-131-02	San Juan Creek
	20901	MORNINGSIDE	042-132-00	San Juan Crock
	20902	MORNINGSIDE	042-131-03 942-122-00	San Juan Crock
	20991	MORNINGSIDE	842-132-09	San Juan Creek
	21001	MORNINGSIDE	842-131-04	San Juan Creek
	21002	MORNINGSIDE	842-137-04	San Juan Creek
RANCHO SANTA MARGARITA	21011	MORNINGSIDE	842-132-11	San Juan Creek
RANCHO SANTA MARGARITA	21012	MORNINGSIDE	842-137-03	San Juan Creek
RANCHO SANTA MARGARITA	21021	MORNINGSIDE	842-132-12	San Juan Creek
RANCHO SANTA MARGARITA	21032	MORNINGSIDE	842-131-06	San Juan Creek
RANCHO SANTA MARGARITA	21041	MORNINGSIDE	842-132-14	San Juan Creek
RANCHO SANTA MARGARITA	21042	MORNINGSIDE	842-131-07	San Juan Creek
RANCHO SANTA MARGARITA	21051	MORNINGSIDE	842-132-15	San Juan Creek
RANCHO SANTA MARGARITA	21052	MORNINGSIDE	842-131-08	San Juan Creek
RANCHO SANTA MARGARITA	21061	MORNINGSIDE	842-132-16	San Juan Creek
RANCHO SANTA MARGARITA	20532	PORTER RANCH	842-152-18	San Juan Creek
RANCHO SANTA MARGARITA	20541	PORTER RANCH	842-152-19	San Juan Creek
RANCHO SANTA MARGARITA	20542	PORTER RANCH	842-152-17	San Juan Creek
RANCHO SANTA MARGARITA	20546	PORTER RANCH	842-152-16	San Juan Creek
RANCHO SANTA MARGARITA	20551	PORTER RANCH	842-152-20	San Juan Creek
RANCHO SANTA MARGARITA	20552	PORTER RANCH	842-152-15	San Juan Creek
RANCHO SANTA MARGARITA	20561	PORTER RANCH	842-152-21	San Juan Creek
RANCHO SANTA MARGARITA	20562	PORTER RANCH	842-152-14	San Juan Creek
RANCHO SANTA MARGARITA	20571	PORTER RANCH	842-152-22	San Juan Creek
RANCHO SANTA MARGARITA	20572	PORTER RANCH	842-152-13	San Juan Creek
RANCHO SANTA MARGARITA	20581	PORTER RANCH	842-152-23	San Juan Creek
RANCHO SANTA MARGARITA	20591	PORTER RANCH	842-152-24	San Juan Creek
RANCHO SANTA MARGARITA	20592	PORTER RANCH	842-152-12	San Juan Creek
RANCHO SANTA MARGARITA	20612	PORTER RANCH	842-152-11	San Juan Creek
RANCHO SANTA MARGARITA	20622	PORTER RANCH	842-152-10	San Juan Creek
RANCHO SANTA MARGARITA	20632	PORTER RANCH	842-152-09	San Juan Creek
RANCHO SANTA MARGARITA	20641	PORTER RANCH	842-152-51	San Juan Creek
RANCHO SANTA MARGARITA	20642	PORTER RANCH	842-152-08	San Juan Creek
RANCHO SANTA MARGARITA	20651	PORTER RANCH	842-152-52	San Juan Creek
RANCHO SANTA MARGARITA	20652	PORTER RANCH	842-152-07	San Juan Creek
RANCHO SANTA MARGARITA	20656	PORTER RANCH	842-152-06	San Juan Creek
RANCHU SANTA MARGARITA	20661		842-152-53	San Juan Creek
RANCHO SANTA MARGARITA	20662		042-152-05	San Juan Creek
RAINCHO SANTA MARGARITA	20671		042-152-54	San Juan Creek
RANCHO SANTA MARGARITA	20681		042-152-55	San Juan Creek
RAINCHO SANTA MARGARITA	20682		042-152-04	San Juan Creek
	20091		042-152-50	San Juan Creek
	20092		042-102-03	San Juan Crook
	20701		042-152-57	San Juan Creek
	20702		842-152-02	San Juan Creek
RANCHO SANTA MARGARITA	20712		842-152-00	San Juan Creek
	20112		0+2-102-01	Can Judii Cieck

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
RANCHO SANTA MARGARITA	20721	PORTER RANCH	842-152-59	San Juan Creek
RANCHO SANTA MARGARITA	20731	PORTER RANCH	842-154-25	San Juan Creek
RANCHO SANTA MARGARITA	20741	PORTER RANCH	842-154-26	San Juan Creek
RANCHO SANTA MARGARITA	20761	PORTER RANCH	842-154-27	San Juan Creek
RANCHO SANTA MARGARITA	20771	PORTER RANCH	842-154-28	San Juan Creek
RANCHO SANTA MARGARITA	20772	PORTER RANCH	842-154-24	San Juan Creek
RANCHO SANTA MARGARITA	20781	PORTER RANCH	842-154-29	San Juan Creek
RANCHO SANTA MARGARITA	20782	PORTER RANCH	842-154-23	San Juan Creek
RANCHO SANTA MARGARITA	20791	PORTER RANCH	842-154-30	San Juan Creek
RANCHO SANTA MARGARITA	20792	PORTER RANCH	842-154-22	San Juan Creek
RANCHO SANTA MARGARITA	20801	PORTER RANCH	842-154-31	San Juan Creek
RANCHO SANTA MARGARITA	20802	PORTER RANCH	842-154-21	San Juan Creek
RANCHO SANTA MARGARITA	20811	PORTER RANCH	842-154-32	San Juan Creek
RANCHO SANTA MARGARITA	20812	PORTER RANCH	842-154-20	San Juan Creek
RANCHO SANTA MARGARITA	20821	PORTER RANCH	842-154-33	San Juan Creek
RANCHO SANTA MARGARITA	20831	PORTER RANCH	842-154-34	San Juan Creek
RANCHO SANTA MARGARITA	20841	PORTER RANCH	842-154-35	San Juan Creek
RANCHO SANTA MARGARITA	20851	PORTER RANCH	842-154-36	San Juan Creek
RANCHO SANTA MARGARITA	20855	PORTER RANCH	842-154-37	San Juan Creek
RANCHO SANTA MARGARITA	20861	PORTER RANCH	842-154-38	San Juan Creek
RANCHO SANTA MARGARITA	20871	PORTER RANCH	842-154-39	San Juan Creek
RANCHO SANTA MARGARITA	20881	PORTER RANCH	842-154-40	San Juan Creek
RANCHO SANTA MARGARITA	20891	PORTER RANCH	842-154-41	San Juan Creek
RANCHO SANTA MARGARITA	20901	PORTER RANCH	842-154-42	San Juan Creek
RANCHO SANTA MARGARITA	32542	QUICKSILVER	842-132-01	San Juan Creek
RANCHO SANTA MARGARITA	32552	QUICKSILVER	842-132-02	San Juan Creek
RANCHO SANTA MARGARITA	32562	QUICKSILVER	842-132-03	San Juan Creek
RANCHO SANTA MARGARITA	32572	QUICKSILVER	842-132-04	San Juan Creek
RANCHO SANTA MARGARITA	20742	RAINTREE	842-153-33	San Juan Creek
RANCHO SANTA MARGARITA	20751	RAINTREE	842-153-34	San Juan Creek
RANCHO SANTA MARGARITA	20752	RAINTREE	842-153-32	San Juan Creek
RANCHO SANTA MARGARITA	20756	RAINTREE	842-153-31	San Juan Creek
RANCHO SANTA MARGARITA	20761	RAINTREE	842-153-35	San Juan Creek
RANCHO SANTA MARGARITA	20762	RAINTREE	842-153-30	San Juan Creek
RANCHO SANTA MARGARITA	20772	RAINTREE	842-153-29	San Juan Creek
RANCHO SANTA MARGARITA	20781	RAINTREE	842-153-36	San Juan Creek
RANCHO SANTA MARGARITA	20782	RAINTREE	842-153-28	San Juan Creek
RANCHO SANTA MARGARITA	20791	RAINTREE	842-153-37	San Juan Creek
RANCHO SANTA MARGARITA	20792	RAINTREE	842-153-27	San Juan Creek
RANCHO SANTA MARGARITA	20811	RAINTREE	842-153-38	San Juan Creek
RANCHO SANTA MARGARITA	20812		842-153-20	San Juan Creek
RANCHO SANTA MARGARITA	20031		042-155-59	
RANCHO SANTA MARGARITA	20832		842-153-25	San Juan Creek
RANCHO SANTA MARGARITA	20842	RAINTREE	842-153-24	San Juan Creek
RANCHO SANTA MARGARITA	20052		042-155-25	
RANCHO SANTA MARGARITA	20872	RAINTREE	842-153-22	San Juan Creek
RANCHO SANTA MARGARITA	20882	RAINTREE	842-153-21	San Juan Creek
	20000		042-103-20 842-152 46	San Juan Creek
	20091		042-153-40	San Juan Creek
	20092		042-155-19	San Juan Creek
	20901		042-100-47	San Juan Creek
	20902		042-153-10	San Juan Creek
RANCHO SANTA MARGARITA	20911		842-153-48	San Juan Creek
RANCHO SANTA MARGARITA	20912	RAINTREE	842-153-17	San Juan Creek
RANCHO SANTA MARGARITA	20921	RAINTREE	842-153-49	San Juan Creek
	20922		042-153-10	San Juan Creek
	20931		842-152-30 842-152 15	San Juan Creek
	20932		042-155-15	San Juan Creek
	20301		042-100-01	San Juan Crook
	20901		042-103-02	San Juan Creek
	20971	RAINTREE	842-153-53	San Juan Creek
	20001	RAINTREE	8/2-153-54	San Juan Creek
	20991		842-153-33	San Juan Creek
	20801		042-104-19 842-152 50	San Juan Creek
	20002		842-152-20	San Juan Creek
	20000		042-102-49 842-152 05	San Juan Creek
RANGHU SANTA MARGARITA	20011		042-102-20	San Judii Cieek

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
RANCHO SANTA MARGARITA	20612	SHADOW ROCK	842-152-48	San Juan Creek
RANCHO SANTA MARGARITA	20615	SHADOW ROCK	842-152-26	San Juan Creek
RANCHO SANTA MARGARITA	20621	SHADOW ROCK	842-152-27	San Juan Creek
RANCHO SANTA MARGARITA	20622	SHADOW ROCK	842-152-47	San Juan Creek
RANCHO SANTA MARGARITA	20625	SHADOW ROCK	842-152-28	San Juan Creek
RANCHO SANTA MARGARITA	20631	SHADOW ROCK	842-152-29	San Juan Creek
RANCHO SANTA MARGARITA	20632	SHADOW ROCK	842-152-46	San Juan Creek
RANCHO SANTA MARGARITA	20635	SHADOW ROCK	842-152-30	San Juan Creek
RANCHO SANTA MARGARITA	20641	SHADOW ROCK	842-152-31	San Juan Creek
RANCHO SANTA MARGARITA	20642	SHADOW ROCK	842-152-45	San Juan Creek
RANCHO SANTA MARGARITA	20651	SHADOW ROCK	842-152-32	San Juan Creek
RANCHO SANTA MARGARITA	20652	SHADOW ROCK	842-152-44	San Juan Creek
RANCHO SANTA MARGARITA	20661	SHADOW ROCK	842-152-33	San Juan Creek
RANCHO SANTA MARGARITA	20662	SHADOW ROCK	842-152-43	San Juan Creek
RANCHO SANTA MARGARITA	20671	SHADOW ROCK	842-152-34	San Juan Creek
RANCHO SANTA MARGARITA	20672	SHADOW ROCK	842-152-42	San Juan Creek
RANCHO SANTA MARGARITA	20681		842-152-35	San Juan Creek
RANCHO SANTA MARGARITA	20692	SHADOW ROCK	842-152-41	San Juan Creek
RANCHO SANTA MARGARITA	20701		842-152-36	San Juan Creek
RANCHO SANTA MARGARITA	20702		842-152-40	San Juan Creek
RANCHO SANTA MARGARITA	20711		842-152-37	San Juan Creek
RANCHO SANTA MARGARITA	20712		842-152-39	San Juan Creek
	20721		042-152-30	San Juan Creek
	20722		042-104-00	San Juan Creek
	20731		042-104-01	San Juan Crock
	20732	SHADOW ROCK	042-104-09	San Juan Crock
	20741		042-104-02	San Juan Crock
	20742	SHADOW ROCK	842-154-50	San Juan Creek
RANCHO SANTA MARGARITA	20752		842-154-05	San Juan Creek
RANCHO SANTA MARGARITA	20761	SHADOW ROCK	842-154-64	San Juan Creek
RANCHO SANTA MARGARITA	20762	SHADOW ROCK	842-154-56	San Juan Creek
RANCHO SANTA MARGARITA	20771	SHADOW ROCK	842-154-65	San Juan Creek
RANCHO SANTA MARGARITA	20772	SHADOW ROCK	842-154-55	San Juan Creek
RANCHO SANTA MARGARITA	20776	SHADOW ROCK	842-154-54	San Juan Creek
RANCHO SANTA MARGARITA	20781	SHADOW ROCK	842-154-66	San Juan Creek
RANCHO SANTA MARGARITA	20782	SHADOW ROCK	842-154-53	San Juan Creek
RANCHO SANTA MARGARITA	20791	SHADOW ROCK	842-154-67	San Juan Creek
RANCHO SANTA MARGARITA	20792	SHADOW ROCK	842-154-52	San Juan Creek
RANCHO SANTA MARGARITA	20801	SHADOW ROCK	842-154-68	San Juan Creek
RANCHO SANTA MARGARITA	20802	SHADOW ROCK	842-154-51	San Juan Creek
RANCHO SANTA MARGARITA	20811	SHADOW ROCK	842-154-69	San Juan Creek
RANCHO SANTA MARGARITA	20812	SHADOW ROCK	842-154-50	San Juan Creek
RANCHO SANTA MARGARITA	20821	SHADOW ROCK	842-154-70	San Juan Creek
RANCHO SANTA MARGARITA	20822	SHADOW ROCK	842-154-49	San Juan Creek
RANCHO SANTA MARGARITA	20825	SHADOW ROCK	842-154-71	San Juan Creek
RANCHO SANTA MARGARITA	20831	SHADOW ROCK	842-154-72	San Juan Creek
RANCHO SANTA MARGARITA	20832	SHADOW ROCK	842-154-48	San Juan Creek
RANCHO SANTA MARGARITA	20841	SHADOW ROCK	842-154-73	San Juan Creek
RANCHO SANTA MARGARITA	20842	SHADOW ROCK	842-154-47	San Juan Creek
RANCHO SANTA MARGARITA	20851	SHADOW ROCK	842-154-74	San Juan Creek
RANCHO SANTA MARGARITA	20861	SHADOW ROCK	842-154-75	San Juan Creek
RANCHO SANTA MARGARITA	20862	SHADOW ROCK	842-154-46	San Juan Creek
RANCHO SANTA MARGARITA	20871	SHADOW ROCK	842-154-76	San Juan Creek
RANCHO SANTA MARGARITA	20872	SHADOW ROCK	842-154-45	San Juan Creek
RANCHO SANTA MARGARITA	20881	SHADOW ROCK	842-154-77	San Juan Creek
RANCHO SANTA MARGARITA	20882		842-154-44	San Juan Creek
RANCHO SANTA MARGARITA	20891		842-154-78	San Juan Creek
RANCHO SANTA MARGARITA	20892		042-154-43	San Juan Creek
RANCHO SANTA MARGARITA	20911		042-154-80	San Juan Creek
	20931		042-133-01	San Juan Creek
	20941		042-100-UZ	San Juan Creek
	20942		042-132-30	San Juan Crook
	20901		042-133-U3 812-132 20	San Juan Creek
	20952		812-132-01	San Juan Creek
	20001		812-133-04	San Juan Creek
	20302		042-132-20	Gan Suan Orden

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
RANCHO SANTA MARGARITA	20971	SHADOW ROCK	842-133-05	San Juan Creek
RANCHO SANTA MARGARITA	20972	SHADOW ROCK	842-132-27	San Juan Creek
RANCHO SANTA MARGARITA	20981	SHADOW ROCK	842-133-06	San Juan Creek
RANCHO SANTA MARGARITA	20982	SHADOW ROCK	842-132-26	San Juan Creek
RANCHO SANTA MARGARITA	20991	SHADOW ROCK	842-133-07	San Juan Creek
RANCHO SANTA MARGARITA	20992	SHADOW ROCK	842-132-25	San Juan Creek
RANCHO SANTA MARGARITA	21001	SHADOW ROCK	842-133-08	San Juan Creek
RANCHO SANTA MARGARITA	21012	SHADOW ROCK	842-132-24	San Juan Creek
RANCHO SANTA MARGARITA	21021	SHADOW ROCK	842-133-09	San Juan Creek
RANCHO SANTA MARGARITA	21022	SHADOW ROCK	842-132-23	San Juan Creek
RANCHO SANTA MARGARITA	21031	SHADOW ROCK	842-133-10	San Juan Creek
RANCHO SANTA MARGARITA	21041	SHADOW ROCK	842-133-11	San Juan Creek
RANCHO SANTA MARGARITA	21042	SHADOW ROCK	842-132-22	San Juan Creek
RANCHO SANTA MARGARITA	21051	SHADOW ROCK	842-133-12	San Juan Creek
RANCHO SANTA MARGARITA	21052	SHADOW ROCK	842-132-21	San Juan Creek
RANCHO SANTA MARGARITA	21061	SHADOW ROCK	842-133-13	San Juan Creek
RANCHO SANTA MARGARITA	21062	SHADOW ROCK	842-132-20	San Juan Creek
RANCHO SANTA MARGARITA	21071	SHADOW ROCK	842-133-14	San Juan Creek
RANCHO SANTA MARGARITA	21081	SHADOW ROCK	842-133-15	San Juan Creek
RANCHO SANTA MARGARITA	21082	SHADOW ROCK	842-132-19	San Juan Creek
RANCHO SANTA MARGARITA	21085	SHADOW ROCK	842-133-16	San Juan Creek
RANCHO SANTA MARGARITA	21086	SHADOW ROCK	842-132-18	San Juan Creek
RANCHO SANTA MARGARITA	21091	SHADOW ROCK	842-133-17	San Juan Creek
RANCHO SANTA MARGARITA	21092	SHADOW ROCK	842-132-17	San Juan Creek
RANCHO SANTA MARGARITA	20961	SKY COUNTRY	842-142-02	San Juan Creek
RANCHO SANTA MARGARITA	20971	SKY COUNTRY	842-142-03	San Juan Creek
RANCHO SANTA MARGARITA	20975	SKY COUNTRY	842-142-04	San Juan Creek
RANCHO SANTA MARGARITA	20981	SKY COUNTRY	842-142-05	San Juan Creek
RANCHO SANTA MARGARITA	20991	SKY COUNTRY	842-142-06	San Juan Creek
RANCHO SANTA MARGARITA	20995	SKY COUNTRY	842-142-07	San Juan Creek
RANCHO SANTA MARGARITA	21001	SKY COUNTRY	842-142-08	San Juan Creek
RANCHO SANTA MARGARITA	21005	SKY COUNTRY	842-142-09	San Juan Creek
RANCHO SANTA MARGARITA	21011	SKY COUNTRY	842-142-10	San Juan Creek
RANCHO SANTA MARGARITA	21012	SKY COUNTRY	842-141-01	San Juan Creek
RANCHO SANTA MARGARITA	21012	SKY COUNTRY	8/2-1/2-11	San Juan Creek
RANCHO SANTA MARGARITA	21013	SKY COUNTRY	8/2-1/2-12	San Juan Creek
	31301		121-070-60	San Juan Creek
SAN JUAN CAPISTRANO	31/01	AGUACATE	121-070-00	San Juan Creek
	31521		649-101-01	San Juan Creek
	21522		649-101-01	San Juan Crock
	31527		649-311-15	San Juan Creek
	21520		649-311-15	San Juan Crock
	31529		649-311-10	San Juan Creek
	31531		649-311-17	San Juan Creek
	31381		649-101-09	San Juan Creek
	31583		649-101-10	
	31585		649-101-11	San Juan Creek
	31741		049-321-04	San Juan Creek
	31751	AGUACATE	649-091-07	San Juan Creek
SAN JUAN CAPISTRANO	31761	AGUACATE	649-091-31	San Juan Creek
SAN JUAN CAPISTRANO	31765	AGUACATE	649-091-05	San Juan Creek
SAN JUAN CAPISTRANO	31769	AGUACATE	649-311-20	San Juan Creek
SAN JUAN CAPISTRANO	31781	AGUACATE	649-321-03	San Juan Creek
SAN JUAN CAPISTRANO	31892	AGUACATE	649-291-24	San Juan Creek
SAN JUAN CAPISTRANO	31902	AGUACATE	649-291-15	San Juan Creek
SAN JUAN CAPISTRANO	32641	ALTA PINE	121-442-16	San Juan Creek
SAN JUAN CAPISTRANO	32642	ALTA PINE	121-442-15	San Juan Creek
SAN JUAN CAPISTRANO	32651	ALTA PINE	121-442-17	San Juan Creek
SAN JUAN CAPISTRANO	32652	ALTA PINE	121-442-14	San Juan Creek
SAN JUAN CAPISTRANO	32661	ALTA PINE	121-442-18	San Juan Creek
SAN JUAN CAPISTRANO	32662	ALTA PINE	121-442-13	San Juan Creek
SAN JUAN CAPISTRANO	32672	ALTA PINE	121-442-12	San Juan Creek
SAN JUAN CAPISTRANO	28121	ASCOT	650-331-14	San Juan Creek
SAN JUAN CAPISTRANO	31441	AVENIDA DE LA VISTA	121-070-03	San Juan Creek
SAN JUAN CAPISTRANO	31461	AVENIDA DE LA VISTA	649-111-01	San Juan Creek
SAN JUAN CAPISTRANO	31050	AVENIDA LOS CERRITO	650-552-05	San Juan Creek
SAN JUAN CAPISTRANO	31311	AVENIDA LOS CERRITO	650-152-05	San Juan Creek
SAN JUAN CAPISTRANO	31312	AVENIDA LOS CERRITO	650-152-03	San Juan Creek

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
SAN JUAN CAPISTRANO	31331	AVENIDA LOS CERRITO	650-152-06	San Juan Creek
SAN JUAN CAPISTRANO	31332	AVENIDA LOS CERRITO	650-152-02	San Juan Creek
SAN JUAN CAPISTRANO	31352	AVENIDA LOS CERRITO	650-152-07	San Juan Creek
SAN JUAN CAPISTRANO	31354	AVENIDA LOS CERRITO	650-152-01	San Juan Creek
SAN JUAN CAPISTRANO	31451	AVENIDA LOS CERRITO	650-151-14	San Juan Creek
SAN JUAN CAPISTRANO	31531	AVENIDA LOS CERRITO	650-151-15	San Juan Creek
SAN JUAN CAPISTRANO	31551	AVENIDA LOS CERRITO	650-151-16	San Juan Creek
SAN JUAN CAPISTRANO	31601	AVENIDA LOS CERRITO	650-151-17	San Juan Creek
SAN JUAN CAPISTRANO	25961	CALLE ASPERO	649-082-07	San Juan Creek
SAN JUAN CAPISTRANO	26560	CALLE LORENZO	649-052-08	San Juan Creek
SAN JUAN CAPISTRANO	32421	CALLE PERFECTO	668-501-07	San Juan Creek
SAN JUAN CAPISTRANO	32701	CALLE PERFECTO	668-501-02	San Juan Creek
SAN JUAN CAPISTRANO	26162	CALLE ROBERTO	649-311-23	San Juan Creek
SAN JUAN CAPISTRANO	33555	CAMINO CA[ISTRANO	121-240-19	San Juan Creek
SAN JUAN CAPISTRANO	29931	CAMINO CAPISTRANO	121-050-02	San Juan Creek
SAN JUAN CAPISTRANO	31721	CAMINO CAPISTRANO	121-141-09	San Juan Creek
SAN JUAN CAPISTRANO	31792	CAMINO CAPISTRANO	124-160-20	San Juan Creek
SAN JUAN CAPISTRANO	33741	CAMINO CAPISTRANO	121-254-19	San Juan Creek
SAN JUAN CAPISTRANO	28442	CAMINO LA RONDA	664-211-04	San Juan Creek
SAN JUAN CAPISTRANO	32501	CARRETERRA	121-431-01	San Juan Creek
SAN JUAN CAPISTRANO	32511	CARRETERRA	121-431-02	San Juan Creek
SAN JUAN CAPISTRANO	32521	CARRETERRA	121-431-03	San Juan Creek
SAN JUAN CAPISTRANO	32531	CARRETERRA	121-431-04	San Juan Creek
SAN JUAN CAPISTRANO	32541	CARRETERRA	121-431-05	San Juan Creek
SAN JUAN CAPISTRANO	32551	CARRETERRA	121-431-06	San Juan Creek
SAN JUAN CAPISTRANO	32561	CARRETERRA	121-434-01	San Juan Creek
SAN JUAN CAPISTRANO	32571	CARRETERRA	121-434-02	San Juan Creek
SAN JUAN CAPISTRANO	32581	CARRETERRA	121-434-03	San Juan Creek
SAN JUAN CAPISTRANO	32591	CARRETERRA	121-434-04	San Juan Creek
SAN JUAN CAPISTRANO	32601	CARRETERRA	121-441-01	San Juan Creek
SAN JUAN CAPISTRANO	32611	CARRETERRA	121-441-02	San Juan Creek
SAN JUAN CAPISTRANO	32621	CARRETERRA	121-441-03	San Juan Creek
SAN JUAN CAPISTRANO	32622	CARRETERRA	121-442-26	San Juan Creek
SAN JUAN CAPISTRANO	32631	CARRETERRA	121-441-04	San Juan Creek
SAN JUAN CAPISTRANO	32632	CARRETERRA	121-442-25	San Juan Creek
SAN JUAN CAPISTRANO	32641	CARRETERRA	121-441-05	San Juan Creek
SAN JUAN CAPISTRANO	32642	CARRETERRA	121-442-24	San Juan Creek
SAN JUAN CAPISTRANO	32651	CARRETERRA	121-441-06	San Juan Creek
SAN JUAN CAPISTRANO	32652	CARRETERRA	121-442-23	San Juan Creek
SAN JUAN CAPISTRANO	32661	CARRETERRA	121-441-07	San Juan Creek
SAN JUAN CAPISTRANO	32662	CARRETERRA	121-442-22	San Juan Creek
SAN JUAN CAPISTRANO	32671	CARRETERRA	121-441-08	San Juan Creek
SAN JUAN CAPISTRANO	32672	CARRETERRA	121-442-21	San Juan Creek
SAN JUAN CAPISTRANO	32681	CARRETERRA	121-441-09	San Juan Creek
SAN JUAN CAPISTRANO	32691	CARRETERRA	121-441-10	San Juan Creek
SAN JUAN CAPISTRANO	25412	CHARRO	121-441-11	San Juan Creek
SAN JUAN CAPISTRANO	25422	CHARRO	121-441-12	San Juan Creek
SAN JUAN CAPISTRANO	25432	CHARRO	121-441-13	San Juan Creek
SAN JUAN CAPISTRANO	25442	CHARRO	121-441-14	San Juan Creek
SAN JUAN CAPISTRANO	25451	CHARRO	121-442-20	San Juan Creek
SAN JUAN CAPISTRANO	25462	CHARRO	121-441-15	San Juan Creek
SAN JUAN CAPISTRANO	25471	CHARRO	121-442-19	San Juan Creek
SAN JUAN CAPISTRANO	25472	CHARRO	121-441-16	San Juan Creek
SAN JUAN CAPISTRANO	25482	CHARRO	121-441-17	San Juan Creek
SAN JUAN CAPISTRANO	25502	CHARRO	121-441-18	San Juan Creek
SAN JUAN CAPISTRANO	25522	CHARRO	121-441-19	San Juan Creek
SAN JUAN CAPISTRANO	25531	CHARRO	121-442-11	San Juan Creek
SAN JUAN CAPISTRANO	25532	CHARRO	121-441-20	San Juan Creek
SAN JUAN CAPISTRANO	25551	CHARRO	121-442-10	San Juan Creek
SAN JUAN CAPISTRANO	25552	CHARRO	121-441-21	San Juan Creek
SAN JUAN CAPISTRANO	25562	CHARRO	121-441-22	San Juan Creek
SAN JUAN CAPISTRANO	25571	CHARRO	121-441-31	San Juan Creek
SAN JUAN CAPISTRANO	25572	CHARRO	121-441-23	San Juan Creek
SAN JUAN CAPISTRANO	25581	CHARRO	121-441-30	San Juan Creek
SAN JUAN CAPISTRANO	25582	CHARRO	121-441-24	San Juan Creek
SAN JUAN CAPISTRANO	25591	CHARRO	121-441-29	San Juan Creek
SAN JUAN CAPISTRANO	25592	CHARRO	121-441-25	San Juan Creek

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
SAN JUAN CAPISTRANO	25601	CHARRO	121-441-28	San Juan Creek
SAN JUAN CAPISTRANO	25602	CHARRO	121-441-26	San Juan Creek
SAN JUAN CAPISTRANO	25612	CHARRO	121-441-27	San Juan Creek
SAN JUAN CAPISTRANO	32221	COOK	673-061-46	San Juan Creek
SAN JUAN CAPISTRANO	32241	COOK	673-061-44	San Juan Creek
SAN JUAN CAPISTRANO	25501	DANA MESA	121-435-14	San Juan Creek
SAN JUAN CAPISTRANO	25502	DANA MESA	121-442-01	San Juan Creek
SAN JUAN CAPISTRANO	25511	DANA MESA	121-435-13	San Juan Creek
SAN JUAN CAPISTRANO	25512	DANA MESA	121-442-02	San Juan Creek
SAN JUAN CAPISTRANO	25521	DANA MESA	121-435-12	San Juan Creek
SAN JUAN CAPISTRANO	25522	DANA MESA	121-442-03	San Juan Creek
SAN JUAN CAPISTRANO	25531	DANA MESA	121-435-11	San Juan Creek
SAN JUAN CAPISTRANO	25532	DANA MESA	121-442-04	San Juan Creek
SAN JUAN CAPISTRANO	25541	DANA MESA	121-435-10	San Juan Creek
SAN JUAN CAPISTRANO	25542	DANA MESA	121-442-05	San Juan Creek
SAN JUAN CAPISTRANO	25551	DANA MESA	121-435-09	San Juan Creek
SAN JUAN CAPISTRANO	25552	DANA MESA	121-442-06	San Juan Creek
SAN JUAN CAPISTRANO	25561	DANA MESA	121-435-08	San Juan Creek
SAN JUAN CAPISTRANO	25562	DANA MESA	121-442-07	San Juan Creek
SAN JUAN CAPISTRANO	25591	DANA MESA	121-432-26	San Juan Creek
SAN JUAN CAPISTRANO	25601	DANA MESA	121-432-27	San Juan Creek
SAN JUAN CAPISTRANO	25602	DANA MESA	121-441-34	San Juan Creek
SAN JUAN CAPISTRANO	25611	DANA MESA	121-432-28	San Juan Creek
SAN JUAN CAPISTRANO	25612	DANA MESA	121-441-35	San Juan Creek
	25621		121-432-29	San Juan Creek
	25622		121-432-23	San Juan Creek
	25631		121-441-30	San Juan Creek
	25051		121-432-30	San Juan Creek
	20032		121-441-37	San Juan Creek
	20041		121-432-31	San Juan Creek
	20042		121-441-38	San Juan Creek
	32602	DEADWOOD	121-441-33	
	32631	DEADWOOD	121-442-08	San Juan Creek
SAN JUAN CAPISTRANO	32642	DEADWOOD	121-441-32	San Juan Creek
SAN JUAN CAPISTRANO	32651	DEADWOOD	121-442-09	San Juan Creek
SAN JUAN CAPISTRANO	31938	DEL OBISPO	668-151-09	San Juan Creek
SAN JUAN CAPISTRANO	32011	DEL OBISPO	649-082-20	San Juan Creek
SAN JUAN CAPISTRANO	32015	DEL OBISPO	649-082-19	San Juan Creek
SAN JUAN CAPISTRANO	32151	DEL OBISPO	673-111-17	San Juan Creek
SAN JUAN CAPISTRANO	32221	DEL OBISPO	673-111-21	San Juan Creek
SAN JUAN CAPISTRANO	32285	DEL OBISPO	121-171-19	San Juan Creek
SAN JUAN CAPISTRANO	32341	DEL OBISPO	673-061-01	San Juan Creek
SAN JUAN CAPISTRANO	32351	DEL OBISPO	673-061-09	San Juan Creek
SAN JUAN CAPISTRANO	32382	DEL OBISPO	121-182-53	San Juan Creek
SAN JUAN CAPISTRANO	32395	DEL OBISPO	673-061-08	San Juan Creek
SAN JUAN CAPISTRANO	33955	DOHENY PARK	121-254-26	San Juan Creek
SAN JUAN CAPISTRANO	31612	EL CAMINO REAL	124-170-11	San Juan Creek
SAN JUAN CAPISTRANO	31776	EL CAMINO REAL	124-160-55	San Juan Creek
SAN JUAN CAPISTRANO	30701	FOX RUN	650-351-10	San Juan Creek
SAN JUAN CAPISTRANO	27081	GLENARIFF	675-271-22	San Juan Creek
SAN JUAN CAPISTRANO	33781	GLOCAMORA	675-273-23	San Juan Creek
SAN JUAN CAPISTRANO	27791	GOLDEN RIDGE	650-581-11	San Juan Creek
SAN JUAN CAPISTRANO	27871	GOLDEN RIDGE	650-581-12	San Juan Creek
SAN JUAN CAPISTRANO	29901	HILLSIDE	650-271-11	San Juan Creek
SAN JUAN CAPISTRANO	30500	HILLTOP	650-171-01	San Juan Creek
SAN JUAN CAPISTRANO	30522	HILLTOP	650-171-24	San Juan Creek
SAN JUAN CAPISTRANO	30532	HILLTOP	650-181-16	San Juan Creek
SAN JUAN CAPISTRANO	30702	HILLTOP	650-181-09	San Juan Creek
SAN JUAN CAPISTRANO	30741	HILLTOP	650-181-11	San Juan Creek
SAN JUAN CAPISTRANO	32962	HWY 101	666-301-02	San Juan Creek
SAN JUAN CAPISTRANO	31378		664-231-01	San Juan Creek
	31308		664-231-07	San Juan Creek
SAN ILIAN CAPISTRANO	31412		664-231-02	San Juan Creek
	31//5		664-231-11	San Juan Creek
	31/98		664-231-11	San Juan Creek
	32522		121-122 1-01	San Juan Creek
	32542		121-402-10	San Juan Creek
	32342		121-432-10	San Juan Crook
SAN JUAN CAPISTRANU	32302		121-432-17	San Judii Cieek

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
SAN JUAN CAPISTRANO	32582	LA CALMA	121-432-18	San Juan Creek
SAN JUAN CAPISTRANO	32592	LA CALMA	121-432-19	San Juan Creek
SAN JUAN CAPISTRANO	32602	LA CALMA	121-432-20	San Juan Creek
SAN JUAN CAPISTRANO	31421	LA MATANZA	124-203-21	San Juan Creek
SAN JUAN CAPISTRANO	31825	LOS RIOS	121-160-28	San Juan Creek
SAN JUAN CAPISTRANO	31875	LOS RIOS	121-160-13	San Juan Creek
SAN JUAN CAPISTRANO	30302	MARBELLA VISTA	650-612-34	San Juan Creek
SAN JUAN CAPISTRANO	30911	MARBELLA VISTA	650-641-15	San Juan Creek
SAN JUAN CAPISTRANO	30921	MARBELLA VISTA	650-641-16	San Juan Creek
SAN JUAN CAPISTRANO	27361	ORTEGA	650-201-10	San Juan Creek
SAN JUAN CAPISTRANO	27401	ORTEGA	650-201-12	San Juan Creek
SAN JUAN CAPISTRANO	27762	ORTEGA	666-191-18	San Juan Creek
SAN JUAN CAPISTRANO	27851	ORTEGA	650-621-02	San Juan Creek
SAN JUAN CAPISTRANO	28241	ORTEGA	650-171-14	San Juan Creek
SAN JUAN CAPISTRANO	28341	ORTEGA	650-171-10	San Juan Creek
SAN JUAN CAPISTRANO	28650	ORTEGA	664-041-10	San Juan Creek
SAN JUAN CAPISTRANO	5	PALM HILL	650-171-13	San Juan Creek
SAN JUAN CAPISTRANO	32782	PARKSIDE WAY	668-492-03	San Juan Creek
SAN JUAN CAPISTRANO	32802	PARKSIDE WAY	668-492-01	San Juan Creek
SAN JUAN CAPISTRANO	32400	PASEO ADELANTO	668-101-03	San Juan Creek
SAN JUAN CAPISTRANO	31801		649-232-13	San Juan Creek
SAN JUAN CAPISTRANO	31802		649-232-14	San Juan Creek
SAN JUAN CAPISTRANO	31812		649-232-15	San Juan Creek
	31821		6/0-232-13	San Juan Creek
	31832		640-232-16	San Juan Creek
	318/1		640-232-10	San Juan Creek
	31861		640-232-10	San Juan Creek
	21072		640 222 10	San Juan Creek
	21001		640 222 20	San Juan Creek
	31001	PASEO ALTO PLANO	649-232-20	San Juan Creek
	31002		649-232-19	San Juan Crook
	31091		049-232-27	San Juan Creek
	31485		124-071-21	San Juan Creek
	31851	PASEO CIELO	649-232-25	San Juan Creek
	31862	PASEO CIELO	649-082-02	San Juan Creek
	31892		649-082-04	San Juan Creek
	31922		649-082-06	San Juan Creek
	30728		650-392-09	San Juan Creek
	30729		650-392-13	San Juan Creek
	2/221		000-241-00	San Juan Creek
	318/1	PASEO MONTE VISTA	649-082-13	San Juan Creek
	31882	PASEO MONTE VISTA	649-082-14	San Juan Creek
	31091		049-062-12	San Juan Creek
	31911	PASEO MONTE VISTA	649-082-11	San Juan Creek
	31922	PASEO MONTE VISTA	649-082-16	San Juan Creek
	31931		049-062-10	San Juan Creek
	31962	PASEO MONTE VISTA	649-082-17	San Juan Creek
	31964	PASEO MONTE VISTA	649-082-18	San Juan Creek
	31971	PASEO MONTE VISTA	649-082-08	San Juan Creek
	31972	PASEO SAGRADO	664-101-18	San Juan Creek
	31831		649-352-01	San Juan Creek
SAN JUAN CAPISTRANO	32031		649-352-11	San Juan Creek
SAN JUAN CAPISTRANO	31801	PEPPERIREE BND	649-342-09	San Juan Creek
SAN JUAN CAPISTRANO	31894	PLAZA DR	668-241-23	San Juan Creek
SAN JUAN CAPISTRANO	NO NO	PROJECT 939-61	668-421-09	San Juan Creek
SAN JUAN CAPISTRANO	25501	PURPLE SAGE	121-433-24	San Juan Creek
SAN JUAN CAPISTRANO	25502	PURPLE SAGE	121-435-01	San Juan Creek
SAN JUAN CAPISTRANO	25511	PURPLE SAGE	121-433-23	San Juan Creek
SAN JUAN CAPISTRANO	25512		121-435-02	San Juan Creek
SAN JUAN CAPISTRANO	25521	PURPLE SAGE	121-433-22	San Juan Creek
SAN JUAN CAPISTRANO	25522	PURPLE SAGE	121-435-03	San Juan Creek
SAN JUAN CAPISTRANO	25531	PURPLE SAGE	121-433-21	San Juan Creek
SAN JUAN CAPISTRANO	25532	PURPLE SAGE	121-435-04	San Juan Creek
SAN JUAN CAPISTRANO	25541	PURPLE SAGE	121-433-20	San Juan Creek
SAN JUAN CAPISTRANO	25542	PURPLE SAGE	121-435-05	San Juan Creek
SAN JUAN CAPISTRANO	25561	PURPLE SAGE	121-433-19	San Juan Creek
SAN JUAN CAPISTRANO	25562	PURPLE SAGE	121-435-06	San Juan Creek
SAN JUAN CAPISTRANO	25571	PURPLE SAGE	121-433-18	San Juan Creek

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
SAN JUAN CAPISTRANO	25572	PURPLE SAGE	121-435-07	San Juan Creek
SAN JUAN CAPISTRANO	25591	PURPLE SAGE	121-433-17	San Juan Creek
SAN JUAN CAPISTRANO	25601	PURPLE SAGE	121-433-16	San Juan Creek
SAN JUAN CAPISTRANO	25602	PURPLE SAGE	121-432-25	San Juan Creek
SAN JUAN CAPISTRANO	25611	PURPLE SAGE	121-433-15	San Juan Creek
SAN JUAN CAPISTRANO	25612	PURPLE SAGE	121-432-24	San Juan Creek
SAN JUAN CAPISTRANO	25621	PURPLE SAGE	121-433-14	San Juan Creek
SAN JUAN CAPISTRANO	25622	PURPLE SAGE	121-432-23	San Juan Creek
SAN JUAN CAPISTRANO	25631	PURPLE SAGE	121-433-13	San Juan Creek
SAN JUAN CAPISTRANO	25632	PURPLE SAGE	121-432-22	San Juan Creek
SAN JUAN CAPISTRANO	25642	PURPLE SAGE	121-432-21	San Juan Creek
SAN JUAN CAPISTRANO	31600	RAMOS	121-143-02	San Juan Creek
SAN JUAN CAPISTRANO	30280	RANCHO VIEJO	650-162-14	San Juan Creek
SAN JUAN CAPISTRANO	31654	RANCHO VIEJO	666-261-13	San Juan Creek
SAN JUAN CAPISTRANO	31506	SAN JUAN CREEK	124-671-11	San Juan Creek
SAN JUAN CAPISTRANO	32391	SAN JUAN CREEK	666-011-23	San Juan Creek
SAN JUAN CAPISTRANO	33413	SAN JUAN CREEK	666-011-16	San Juan Creek
SAN JUAN CAPISTRANO	26232	SANDCASTLE	650-073-66	San Juan Creek
SAN JUAN CAPISTRANO	29301	SPOTTED BULL	650-031-05	San Juan Creek
SAN JUAN CAPISTRANO	29311	SPOTTED BULL	650-031-04	San Juan Creek
SAN JUAN CAPISTRANO	29312	SPOTTED BULL	650-031-06	San Juan Creek
SAN JUAN CAPISTRANO	29322	SPOTTED BULL	650-031-07	San Juan Creek
SAN JUAN CAPISTRANO	29341	SPOTTED BULL	650-031-03	San Juan Creek
SAN JUAN CAPISTRANO	29342	SPOTTED BULL	650-031-08	San Juan Creek
SAN JUAN CAPISTRANO	29361	SPOTTED BULL	650-031-02	San Juan Creek
SAN JUAN CAPISTRANO	29362	SPOTTED BULL	650-031-09	San Juan Creek
SAN JUAN CAPISTRANO	29392	SPOTTED BULL	650-031-10	San Juan Creek
SAN JUAN CAPISTRANO	29421	SPOTTED BULL	650-031-01	San Juan Creek
SAN JUAN CAPISTRANO	29422	SPOTTED BULL	650-031-11	San Juan Creek
SAN JUAN CAPISTRANO	29482	SPOTTED BULL	650-021-28	San Juan Creek
SAN JUAN CAPISTRANO	29502	SPOTTED BULL	650-021-42	San Juan Creek
SAN JUAN CAPISTRANO	29512	SPOTTED BULL	650-021-30	San Juan Creek
SAN JUAN CAPISTRANO	29520	SPOTTED BULL	650-021-44	San Juan Creek
SAN JUAN CAPISTRANO	29522	SPOTTED BULL	650-021-04	San Juan Creek
SAN JUAN CAPISTRANO	29532	SPOTTED BULL	650-021-45	San Juan Creek
SAN JUAN CAPISTRANO	29536	SPOTTED BULL	650-021-39	San Juan Creek
SAN JUAN CAPISTRANO	29542	SPOTTED BULL	650-021-24	San Juan Creek
SAN JUAN CAPISTRANO	29546	SPOTTED BULL	650-021-38	San Juan Creek
SAN JUAN CAPISTRANO	29552	SPOTTED BULL	650-021-05	San Juan Creek
SAN JUAN CAPISTRANO	29570	SPOTTED BULL	650-021-23	San Juan Creek
SAN JUAN CAPISTRANO	29572	SPOTTED BULL	650-021-14	San Juan Creek
SAN JUAN CAPISTRANO	29582	SPOTTED BULL	650-011-27	San Juan Creek
SAN JUAN CAPISTRANO	29614	SPOTTED BULL	650-021-12	San Juan Creek
SAN JUAN CAPISTRANO	29614	SPOTTED BULL	650-021-13	San Juan Creek
SAN JUAN CAPISTRANO	30772	STEEPLECHASE	650-341-06	San Juan Creek
SAN JUAN CAPISTRANO	1	STRAWBERRY	650-171-04	San Juan Creek
SAN JUAN CAPISTRANO	2	STRAWBERRY	650-171-22	San Juan Creek
SAN JUAN CAPISTRANO	29891	SUMMER WALK	650-073-72	San Juan Creek
SAN JUAN CAPISTRANO	29902	SUMMER WALK	650-073-67	San Juan Creek
SAN JUAN CAPISTRANO	29912	SUMMER WALK	650-073-68	San Juan Creek
SAN JUAN CAPISTRANO	29582	TRABUCO CREEK	650-441-04	San Juan Creek
SAN JUAN CAPISTRANO	No NO	UNKNOWN ADDRESS	668-391-02	San Juan Creek
SAN JUAN CAPISTRANO	No NO	UNKNOWN ADDRESS	650-594-13	San Juan Creek
SAN JUAN CAPISTRANO	No NO	UNKNOWN ADDRESS	650-593-21	San Juan Creek
SAN JUAN CAPISTRANO	No NO	UNKNOWN ADDRESS	650-602-30	San Juan Creek
SAN JUAN CAPISTRANO	32802	VALLE	666-292-05	San Juan Creek
SAN JUAN CAPISTRANO	33132	VALLE	6/5-331-12	San Juan Creek
SAN JUAN CAPISTRANO	33511	VALLE	675-331-09	San Juan Creek
SAN JUAN CAPISTRANO	33512	VALLE	675-331-10	San Juan Creek
SAN JUAN CAPISTRANO	33521	VALLE	675-331-08	San Juan Creek
SAN JUAN CAPISTRANO	33522	VALLE	675-331-13	San Juan Creek
SAN JUAN CAPISTRANO	33531	VALLE	b/5-331-07	San Juan Creek
SAN JUAN CAPISTRANO	33532	VALLE	675-331-14	San Juan Creek
SAN JUAN CAPISTRANO	33536	VALLE	6/5-331-11	San Juan Creek
SAN JUAN CAPISTRANO	33541	VALLE	675-331-06	San Juan Creek
SAN JUAN CAPISTRANO	33542	VALLE	b/5-331-15	San Juan Creek
SAN JUAN CAPISTRANO	33548	VALLE	075-331-16	San Juan Creek

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
SAN JUAN CAPISTRANO	33552	VALLE	675-331-17	San Juan Creek
SAN JUAN CAPISTRANO	33562	VALLE	675-341-02	San Juan Creek
SAN JUAN CAPISTRANO	33571	VALLE	675-331-03	San Juan Creek
SAN JUAN CAPISTRANO	33572	VALLE	675-341-01	San Juan Creek
SAN JUAN CAPISTRANO	33582	VALLE	675-341-03	San Juan Creek
SAN JUAN CAPISTRANO	33622	VALLE	675-341-04	San Juan Creek
SAN JUAN CAPISTRANO	33642	VALLE	675-351-09	San Juan Creek
SAN JUAN CAPISTRANO	33646	VALLE	675-351-08	San Juan Creek
SAN JUAN CAPISTRANO	33751	VALLE	675-351-10	San Juan Creek
SAN JUAN CAPISTRANO	33761	VALLE	675-351-11	San Juan Creek
SAN JUAN CAPISTRANO	33781	VALLE	675-351-05	San Juan Creek
SAN JUAN CAPISTRANO	33801	VALLE	675-351-04	San Juan Creek
SAN JUAN CAPISTRANO	33811	VALLE	675-351-03	San Juan Creek
SAN JUAN CAPISTRANO	33812	VALLE	675-341-05	San Juan Creek
SAN JUAN CAPISTRANO	33821	VALLE	675-351-02	San Juan Creek
SAN JUAN CAPISTRANO	30981	VIA CRISTAL	664-031-26	San Juan Creek
SAN JUAN CAPISTRANO	26300	VIA ESCOLAR	650-011-25	San Juan Creek
SAN JUAN CAPISTRANO	30422	VIA FESTIVO	650-613-29	San Juan Creek
SAN JUAN CAPISTRANO	25501	VIA INEZ	121-432-01	San Juan Creek
SAN JUAN CAPISTRANO	25502	VIA INEZ	121-433-01	San Juan Creek
SAN JUAN CAPISTRANO	25511	VIA INEZ	121-432-02	San Juan Creek
SAN JUAN CAPISTRANO	25512		121-433-02	San Juan Creek
SAN JUAN CAPISTRANO	25521		121-432-03	San Juan Creek
SAN JUAN CAPISTRANO	25522	VIA INEZ	121-433-03	San Juan Creek
SAN JUAN CAPISTRANO	25531		121-432-04	San Juan Creek
SAN JUAN CAPISTRANO	25532		121-432-04	San Juan Creek
SAN JUAN CAPISTRANO	25541		121-432-04	San Juan Creek
	25542		121-432-05	San Juan Creek
SAN JUAN CAPISTRANO	25551		121-432-06	San Juan Creek
SAN JUAN CAPISTRANO	25552		121-432-00	San Juan Creek
SAN JUAN CAPISTRANO	25561		121-432-00	San Juan Creek
	25562		121-432-07	San Juan Creek
	25571		121-433-07	San Juan Creek
	25572		121-432-00	San Juan Creek
	25591		121-433-00	San Juan Creek
	25501		121-432-09	San Juan Crock
	25501		121-433-09	San Juan Creek
	25502		121-432-10	San Juan Creek
	25592		121-433-10	San Juan Creek
	25602		121-432-11	San Juan Creek
	25611		121-433-11	San Juan Creek
	25622		121-432-12	San Juan Creek
	25631		121-432-12	San Juan Creek
	256/1		121-432-13	San Juan Creek
	27811		666-341-07	San Juan Creek
	31201		640-321-17	San Juan Creek
	3225		108-281-12	Los Alamitos/East Garden Grove/Bolsa Chica
	3225	5TH	190-201-12	Los Alamitos/East Garden Grove/Bolsa Chica
	1906	7TH	100-241-25	Los Alamitos/East Garden Grove/Bolsa Chica
	1628		100-241-20	San Diego Creek
	1020		400-201-30	San Diego Creek
	1920	GEORGINE	108-022-31	Los Alamitos/East Garden Grove/Bolsa Chica
	2020		190-022-31	Son Diago Crock
	1318		308-182-16	San Diego Creek
	5010		100 222 01	Jac Alamitas/East Cardon Grove/Polea Chica
	2220		100-222-01	Son Diago Crock
	2320		109-091-55	San Diego Creek
	2320		100-001-59	San Diego Creek
	1226		100-22/-02	Los Alamitos/East Garden Grove/Bolea Chica
	207		100-224-03	Los Alamitos/East Garden Grove/Polisa Chica
	301		100-201-20	Los Alamitos/East Garden Grove/Bolsa Chica
	158/		396-052-14	San Diago Creek
SANTA ANA	5225	SILVER	099-212-14	Los Alamitos/Fast Garden Grove/Rolea Chica
	5507		000-212-10	Los Alamitos/East Garden Grove/Bolsa Oliloa
	1/17	SUSAN	108-211-02	Los Alamitos/East Garden Grove/Bolsa Chica
SANTA ANA	1424	SUSAN	198-211-02	Los Alamitos/East Garden Grove/Bolsa Chica
	1501	SUSAN	108-101-07	Los Alamitos/East Garden Grove/Polisa Chica
	1001	OUGAN	100101	LUS MIAITIILUS/LASI GATUEIT GIUVE/DUISA UTILIA

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
SANTA ANA	515	SUSAN	144-271-08	Lower Santa Ana River
SANTA ANA	1901	TRASK	101-042-30	Lower Santa Ana River
SANTA ANA	1729	VALENCIA	003-164-23	Lower Santa Ana River
SANTA ANA	3530	WASHINGTON	198-102-03	Los Alamitos/East Garden Grove/Bolsa Chica
STANTON	8081	BEVER	131-242-07	Los Alamitos/East Garden Grove/Bolsa Chica
STANTON	10820	DALE	126-532-13	Los Alamitos/East Garden Grove/Bolsa Chica
STANTON	10211	FERN	126-282-19	Los Alamitos/East Garden Grove/Bolsa Chica
STANTON	10221	FERN	126-282-18	Los Alamitos/East Garden Grove/Bolsa Chica
STANTON	10231	FERN	126-282-17	Los Alamitos/East Garden Grove/Bolsa Chica
STANTON	10572	LEXINGTON	079-313-06	Los Alamitos/East Garden Grove/Bolsa Chica
STANTON	9002	PACIFIC	127-463-08	Los Alamitos/East Garden Grove/Bolsa Chica
TUSTIN	235	A	401-562-10	San Diego Creek
TUSTIN	14681	BROOKLINE	401-032-04	San Diego Creek
TUSTIN	17651	FIESTA	401-382-14	San Diego Creek
TUSTIN	13611	GREEN VALLEY	500-081-15	San Diego Creek
TUSTIN	1542	KALUA	103-523-03	San Diego Creek
TUSTIN	1551	KALUA	103-522-33	San Diego Creek
TUSTIN	1571	KALUA	103-522-32	San Diego Creek
TUSTIN	1452	LANCE	500-082-13	San Diego Creek
TUSTIN	17552	LAURIE	395-264-03	San Diego Creek
TUSTIN	13532	MALENA	395-271-03	San Diego Creek
TUSTIN	17341	MCEADDEN	402-331-16	San Diego Creek
TUSTIN	180	MYRTI F	401-541-06	San Diego Creek
TUSTIN	12741	NEWPORT	401-211-57	San Diego Creek
TUSTIN	14532	PEPPER TREE	432-451-07	San Diego Creek
	13662		305-263-13	San Diego Creek
	13672	ROSALIND	395-203-13	San Diego Creek
	12542		500 004 02	San Diego Creek
	13542		500-094-03	San Diego Creek
	13002		500-094-02	San Diego Creek
	13002		300-061-27 432 461 25	San Diego Creek
	1004		432-101-23	San Diego Creek
	18281		401-122-17	San Diego Creek
	17002	VODDA	401-035-06	San Diego Creek
	13031		395-011-20	San Diego Creek
	14891		401-302-15	San Diego Creek
	3002		272 561 04	Lower Santa Ana River
	19332		272 151 02	Lower Santa Ana River
	10051		372-131-03	Lower Santa Ana River
	10202		279 071 06	Lower Santa Ana River
	10232		279 421 01	Lower Santa Ana River
	0516		272 201 01	Lower Santa Ana River
	9510		372-201-01	Lower Santa Ana River
	10252		272 521 06	Lower Santa Ana River
	10332		272 442 14	Lower Santa Ana River
	19102		372-442-14	Lower Santa Ana River
	9042	CRESTVIEW	272 462 04	Lower Santa Ana River
	9040	CRESTVIEW	272 462 06	Lower Santa Ana River
	10141		372-402-00	Lower Santa Ana River
	19161		378-0/1 17	Lower Santa Ana River
	19160		279 041-17	Lower Santa Ana River
	10109		272 442 04	Lower Santa Ana River
	9062		372-442-01	Lower Santa Ana River
	9121		372-731-02	Lower Santa Ana River
	9131		372-731-03	Lower Santa Ana River
	9141		372-731-04	Lower Santa Ana River
	9101		372-731-05	Lower Santa Ana River
	910Z		312-303-09	Lower Santa Ana River
	0221		372-722 44	Lower Santa Ana River
	9221		272 544 00	Lower Santa Ana River
	30/ I		312-341-08	Lower Santa Ana Kiver
	19624	MESA	312-491-01	Lower Santa Ana River
	10021	MESA	312-491-03	Lower Santa Ana River
	10002	MEGA	312-231-01	
	10910	MESA	312-451-04	Lower Santa Ana River
	109/0	MESA	312-451-20	Lower Santa Ana River
	19112		312-401-10	
VILLA PARK	19122	INIESA	312-401-11	Lower Santa Ana River

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
VILLA PARK	19132	MESA	372-461-12	Lower Santa Ana River
VILLA PARK	19162	MESA	372-461-16	Lower Santa Ana River
VILLA PARK	19364	MESA	372-562-08	Lower Santa Ana River
VILLA PARK	17926	MORROW	378-231-36	Lower Santa Ana River
VILLA PARK	17932	MORROW	378-231-35	Lower Santa Ana River
VILLA PARK	19401	NORTH MESA	372-561-07	Lower Santa Ana River
VILLA PARK	18361	SANTIAGO	372-071-34	Lower Santa Ana River
VILLA PARK	18422	SANTIAGO	378-071-33	Lower Santa Ana River
VILLA PARK	9782	SANTIAGO	372-221-03	Lower Santa Ana River
VILLA PARK	18161	SERRANO	372-161-09	Lower Santa Ana River
VILLA PARK	18181	SERBANO	372-161-10	Lower Santa Ana River
	18191	SERBANO	372-161-12	Lower Santa Ana River
	18201	SHARON	378-052-25	Lower Santa Ana River
	18202	SHARON	378-052-20	Lower Santa Ana River
	18222	SHARON	378-052-21	Lower Santa Ana River
	18231	SHARON	378-052-24	Lower Santa Ana River
	18251	SHARON	378-052-26	Lower Santa Ana River
	18262	SHARON	378-052-23	Lower Santa Ana River
	18671		372-402-13	Lower Santa Ana River
	18962	VALLEY	372-302-75	Lower Santa Ana River
	18081	VALLEY	372-332-23	Lower Santa Ana River
	17022		378-231-37	Lower Santa Ana River
	17922		270 221 01	Lower Santa Ana River
	17942		279 201 02	Lower Santa Ana River
	7002		006 225 00	Lower Salita And River
WESTMINSTER	1902		090-325-09	Los Alamitos/East Garden Grove/Bolsa Chica
WESTMINSTER	7042		203-561-01	Los Alamitos/East Garden Grove/Bolsa Chica
WESTMINSTER	7042		203-431-01	Los Alamitos/East Garden Grove/Bolsa Chica
WESTMINSTER	14611		097-341-05	Los Alamitos/East Garden Grove/Bolsa Chica
	18551		323-231-09	Lower Santa Ana River
	18597		323-231-18	Lower Santa Ana River
	18602		323-231-19	Lower Santa Ana River
	17861		343-111-18	Lower Santa Ana River
	17866		343-111-06	Lower Santa Ana River
	1///5	APPALOOSA	343-551-26	Lower Santa Ana River
	18622	ARC	343-661-15	Lower Santa Ana River
	18401	ARROYO	323-322-06	Lower Santa Ana River
YORBA LINDA	4240	AVOCADO	323-031-14	Lower Santa Ana River
	4285	AVOCADO	323-281-06	Lower Santa Ana River
YORBA LINDA	4291	AVOCADO	323-281-04	Lower Santa Ana River
YORBA LINDA	4293	AVOCADO	323-281-10	Lower Santa Ana River
	4295	AVOCADO	323-281-03	Lower Santa Ana River
	4297	AVOCADO	323-281-02	Lower Santa Ana River
YORBA LINDA	4303	AVOCADO	323-281-11	Lower Santa Ana River
	4307	AVOCADO	323-281-09	Lower Santa Ana River
	4309	AVOCADO	323-281-08	Lower Santa Ana River
YORBA LINDA	4311	AVOCADO	323-281-13	Lower Santa Ana River
	4642	AVOCADO	323-251-01	Lower Santa Ana River
	4652	AVOCADO	323-251-02	Lower Santa Ana River
	4659	AVOCADO	323-221-07	Lower Santa Ana River
	4661	AVOCADO	323-221-05	Lower Santa Ana River
	4662	AVOCADO	323-251-03	Lower Santa Ana River
	4663	AVOCADO	323-221-06	Lower Santa Ana River
	4672	AVOCADO	323-251-04	Lower Santa Ana River
YORBA LINDA	4682	AVOCADO	323-251-05	Lower Santa Ana River
	4692	AVOCADO	323-251-06	Lower Santa Ana River
	4792	AVOCADO	323-261-13	Lower Santa Ana River
YORBA LINDA	4956	AVOCADO	323-271-42	Lower Santa Ana River
	4962	AVOCADO	323-271-13	Lower Santa Ana River
YORBA LINDA	4972	AVOCADO	323-271-14	Lower Santa Ana River
	18041	AVOLINDA	323-131-22	Lower Santa Ana River
	18042	AVOLINDA	323-133-03	Lower Santa Ana River
	18061	AVOLINDA	323-131-23	Lower Santa Ana River
YORBA LINDA	18062	AVOLINDA	323-133-04	Lower Santa Ana River
YORBA LINDA	18081	AVOLINDA	323-131-24	Lower Santa Ana River
YORBA LINDA	18082	AVOLINDA	323-133-05	Lower Santa Ana River
YORBA LINDA	18101	AVOLINDA	323-131-25	Lower Santa Ana River
YORBA LINDA	18102	AVOLINDA	323-133-06	Lower Santa Ana River

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
YORBA LINDA	18272	AVOLINDA	323-243-03	Lower Santa Ana River
YORBA LINDA	16629	BASTANCHURY	334-041-03	Lower Santa Ana River
YORBA LINDA	16941	BASTANCHURY	334-341-04	Lower Santa Ana River
YORBA LINDA	17222	BASTANCHURY	334-213-01	Lower Santa Ana River
YORBA LINDA	17611	BASTANCHURY	323-141-33	Lower Santa Ana River
YORBA LINDA	18101	BASTANCHURY	323-181-06	Lower Santa Ana River
YORBA LINDA	18103	BASTANCHURY	323-181-05	Lower Santa Ana River
YORBA LINDA	18105	BASTANCHURY	323-171-03	Lower Santa Ana River
YORBA LINDA	18141	BASTANCHURY	323-181-04	Lower Santa Ana River
YORBA LINDA	18161	BASTANCHURY	323-181-03	Lower Santa Ana River
	18241	BASTANCHURY	323-191-08	Lower Santa Ana River
	18245	BASTANCHURY	323-191-06	Lower Santa Ana River
	18251		323-191-07	Lower Santa Ana River
	18272		323-111-01	Lower Santa Ana River
	10471		323-201-03	Lower Santa Ana River
	10002		323-221-10	Lower Santa Ana River
	18732		323-221-09	Lower Santa Ana River
	180/2		3/3-561-11	Lower Santa Ana River
YORBALINDA	18062	BLAIR	343-561-07	Lower Santa Ana River
YORBALINDA	18063	BLAIR	343-561-03	Lower Santa Ana River
YORBALINDA	18092	BLAIR	343-561-06	Lower Santa Ana River
YORBA LINDA	18093	BLAIR	343-561-05	Lower Santa Ana River
YORBA LINDA	4802	BRIARHILL	334-301-27	Lower Santa Ana River
YORBA LINDA	17591	BUENA VISTA	341-261-09	Lower Santa Ana River
YORBA LINDA	17732	BUENA VISTA	343-151-14	Lower Santa Ana River
YORBA LINDA	17736	BUENA VISTA	343-151-12	Lower Santa Ana River
YORBA LINDA	17774	BUENA VISTA	343-151-05	Lower Santa Ana River
YORBA LINDA	18161	BUENA VISTA	343-601-02	Lower Santa Ana River
YORBA LINDA	18171	BUENA VISTA	343-601-03	Lower Santa Ana River
YORBA LINDA	18175	BUENA VISTA	343-601-04	Lower Santa Ana River
YORBA LINDA	18181	BUENA VISTA	343-601-05	Lower Santa Ana River
YORBA LINDA	18182	BUENA VISTA	343-291-09	Lower Santa Ana River
YORBA LINDA	18191	BUENA VISTA	343-601-06	Lower Santa Ana River
YORBA LINDA	18211	BUENA VISTA	343-611-09	Lower Santa Ana River
YORBA LINDA	18249	BUENA VISTA	343-611-10	Lower Santa Ana River
YORBA LINDA	18251	BUENA VISTA	343-611-11	Lower Santa Ana River
YORBA LINDA	18261	BUENA VISTA	343-611-12	Lower Santa Ana River
YORBA LINDA	18271	BUENA VISTA	343-611-14	Lower Santa Ana River
YORBA LINDA	18361	BUENA VISTA	343-611-19	Lower Santa Ana River
	18365	BUENA VISTA	343-611-20	Lower Santa Ana River
	18431	BUENA VISTA	343-611-21	Lower Santa Ana River
	18451		343-411-02	Lower Santa Ana River
	18452		343-401-13	Lower Santa Ana River
	18401		343-411-03	Lower Santa Ana River
	18561		343-411-04	Lower Santa Ana River
	18652		348-351-01	Lower Santa Ana River
YORBA LINDA	18662	BUENA VISTA	348-351-02	Lower Santa Ana River
YORBALINDA	18666	BUENA VISTA	348-351-03	Lower Santa Ana River
YORBALINDA	18672	BUENA VISTA	348-351-04	Lower Santa Ana River
YORBA LINDA	18682	BUENA VISTA	348-351-05	Lower Santa Ana River
YORBA LINDA	18691	BUENA VISTA	348-291-32	Lower Santa Ana River
YORBA LINDA	18692	BUENA VISTA	348-351-06	Lower Santa Ana River
YORBA LINDA	18701	BUENA VISTA	348-291-31	Lower Santa Ana River
YORBA LINDA	16601	CAMILLE	334-151-26	Lower Santa Ana River
YORBA LINDA	16662	CAMILLE	334-151-30	Lower Santa Ana River
YORBA LINDA	16701	CAMILLE	334-151-18	Lower Santa Ana River
YORBA LINDA	16721	CAMILLE	334-151-17	Lower Santa Ana River
YORBA LINDA	18851	CAMINO VERDE	348-211-11	Lower Santa Ana River
YORBA LINDA	18872	CAMINO VERDE	348-211-13	Lower Santa Ana River
YORBA LINDA	18891	CAMINO VERDE	348-211-12	Lower Santa Ana River
YORBA LINDA	18892	CAMINO VERDE	348-211-14	Lower Santa Ana River
YORBA LINDA	18901		348-211-10	Lower Santa Ana River
YORBA LINDA	18902		348-211-20	Lower Santa Ana River
YORBA LINDA	18911		348-211-21	Lower Santa Ana River
YORBA LINDA	5412	CHERRYLEE	348-291-03	Lower Santa Ana River

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
YORBA LINDA	5441	CHERRYLEE	348-281-14	Lower Santa Ana River
YORBA LINDA	5442	CHERRYLEE	348-291-02	Lower Santa Ana River
YORBA LINDA	5471	CHERRYLEE	348-281-15	Lower Santa Ana River
YORBA LINDA	5472	CHERRYLEE	348-291-01	Lower Santa Ana River
YORBA LINDA	16881	CHESTNUT	322-111-41	Lower Santa Ana River
YORBA LINDA	16901	CHESTNUT	322-111-44	Lower Santa Ana River
YORBA LINDA	18245	CITRUS	323-191-05	Lower Santa Ana River
YORBA LINDA	18871	COUNTRY CLUB	348-151-04	Lower Santa Ana River
	19350	COUNTRYWOOD	323-411-10	Lower Santa Ana River
YORBA LINDA	19365	COUNTRYWOOD	323-411-16	Lower Santa Ana River
	19370	COUNTRYWOOD	323-411-11	Lower Santa Ana River
	4501		323-442-32	Lower Santa Ana River
	4502		323-442-33	Lower Santa Ana River
	4532		323-442-34	Lower Santa Ana River
	4001		222 442-21	Lower Santa Ana River
	4302		323-442-35	Lower Santa Ana River
	4571		323-442-30	Lower Santa Ana River
	4501		323-442-29	Lower Santa Ana River
	4508		323-442-30	Lower Santa Ana River
	5352		3/3-601-26	Lower Santa Ana River
YORBALINDA	5372		343-601-23	Lower Santa Ana River
YORBALINDA	5381	DANZA PLAZA	343-601-24	Lower Santa Ana River
YORBALINDA	18751		323-271-01	Lower Santa Ana River
YORBA LINDA	18762	DE VILLE	323-271-10	Lower Santa Ana River
YORBA LINDA	18773	DE VILLE	323-271-03	Lower Santa Ana River
YORBA LINDA	18782	DE VILLE	323-271-09	Lower Santa Ana River
YORBA LINDA	18793	DE VILLE	323-271-04	Lower Santa Ana River
YORBA LINDA	18802	DE VILLE	323-271-08	Lower Santa Ana River
YORBA LINDA	18822	DE VILLE	323-271-07	Lower Santa Ana River
YORBA LINDA	18852	DE VILLE	323-271-06	Lower Santa Ana River
YORBA LINDA	0	DEVILLE	NO APN	Lower Santa Ana River
YORBA LINDA	18793	DEVILLE	323-271-04	Lower Santa Ana River
YORBA LINDA	18321	DOS CASAS	343-391-02	Lower Santa Ana River
YORBA LINDA	18331	DOS CASAS	343-391-01	Lower Santa Ana River
YORBA LINDA	5320	DOUGLAS	348-201-02	Lower Santa Ana River
YORBA LINDA	5323	DOUGLAS	348-201-03	Lower Santa Ana River
YORBA LINDA	5330	DOUGLAS	348-201-05	Lower Santa Ana River
YORBA LINDA	5331	DOUGLAS	348-201-04	Lower Santa Ana River
YORBA LINDA	5340	DOUGLAS	348-201-06	Lower Santa Ana River
YORBA LINDA	5345	DOUGLAS	348-201-10	Lower Santa Ana River
YORBA LINDA	5350	DOUGLAS	348-201-09	Lower Santa Ana River
	5374	DOUGLAS	348-201-20	Lower Santa Ana River
	19342	EASY	323-431-01	Lower Santa Ana River
	19350	EAST	323-431-03	Lower Santa Ana River
	19353	EASY	323-421-12	Lower Santa Ana River
	19303	EAST	323-421-11	Lower Santa Ana River
	19309	EAST	323-421-10	Lower Santa Ana River
	17388		334-251-07	Lower Santa Ana River
YORBALINDA	17451	EL CAJON	334-221-44	Lower Santa Ana River
YORBALINDA	17472		334-251-01	Lower Santa Ana River
YORBALINDA	4262	FUREKA	323-091-26	Lower Santa Ana River
YORBALINDA	4852	FUREKA	334-411-08	Lower Santa Ana River
YORBA LINDA	5039	EUREKA	343-571-02	Lower Santa Ana River
YORBA LINDA	5041	EUREKA	343-571-03	Lower Santa Ana River
YORBA LINDA	5111	EUREKA	343-571-04	Lower Santa Ana River
YORBA LINDA	5112	EUREKA	343-561-10	Lower Santa Ana River
YORBA LINDA	5115	EUREKA	343-571-05	Lower Santa Ana River
YORBA LINDA	5121	EUREKA	343-571-08	Lower Santa Ana River
YORBA LINDA	5571	FIRCREST	348-291-10	Lower Santa Ana River
YORBA LINDA	5575	FIRCREST	348-291-11	Lower Santa Ana River
YORBA LINDA	5577	FIRCREST	348-291-12	Lower Santa Ana River
YORBA LINDA	5579	FIRCREST	348-291-13	Lower Santa Ana River
YORBA LINDA	5581	FIRCREST	348-291-14	Lower Santa Ana River
YORBA LINDA	4696	FREDRICK	323-251-31	Lower Santa Ana River
YORBA LINDA	4712	FREDRICK	323-251-33	Lower Santa Ana River

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
YORBA LINDA	4881	GEM	334-151-22	Lower Santa Ana River
YORBA LINDA	4882	GEM	334-151-19	Lower Santa Ana River
YORBA LINDA	4892	GEM	334-151-20	Lower Santa Ana River
YORBA LINDA	4901	GEM	334-151-21	Lower Santa Ana River
YORBA LINDA	4921	GEM	334-151-31	Lower Santa Ana River
YORBA LINDA	4922	GEM	334-151-34	Lower Santa Ana River
YORBA LINDA	4931	GEM	334-151-32	Lower Santa Ana River
YORBA LINDA	4941	GEM	334-151-45	Lower Santa Ana River
	4942	GEM	334-151-44	Lower Santa Ana River
	4945		334-151-43	Lower Santa Ana River
	5122		348-131-28	Lower Santa Ana River
	5225		240-141-00	Lower Santa Ana River
	5335		348-141-08	Lower Santa Ana River
	5369	GRANDVIEW	348-141-05	Lower Santa Ana River
YORBALINDA	5373	GRANDVIEW	348-141-04	Lower Santa Ana River
YORBALINDA	5375	GRANDVIEW	348-141-09	Lower Santa Ana River
YORBALINDA	5402	GRANDVIEW	348-012-02	Lower Santa Ana River
YORBALINDA	5501	GRANDVIEW	348-291-22	Lower Santa Ana River
YORBA LINDA	5512	GRANDVIEW	348-371-01	Lower Santa Ana River
YORBA LINDA	5521	GRANDVIEW	348-291-23	Lower Santa Ana River
YORBA LINDA	5531	GRANDVIEW	348-291-24	Lower Santa Ana River
YORBA LINDA	5532	GRANDVIEW	348-371-02	Lower Santa Ana River
YORBA LINDA	5551	GRANDVIEW	348-291-25	Lower Santa Ana River
YORBA LINDA	5562	GRANDVIEW	348-371-03	Lower Santa Ana River
YORBA LINDA	5571	GRANDVIEW	348-291-26	Lower Santa Ana River
YORBA LINDA	5581	GRANDVIEW	348-291-27	Lower Santa Ana River
YORBA LINDA	5592	GRANDVIEW	348-371-04	Lower Santa Ana River
YORBA LINDA	5601	GRANDVIEW	348-291-28	Lower Santa Ana River
YORBA LINDA	5642	GRANDVIEW	348-371-22	Lower Santa Ana River
YORBA LINDA	5653	GRANDVIEW	348-402-04	Lower Santa Ana River
YORBA LINDA	5663	GRANDVIEW	348-402-05	Lower Santa Ana River
YORBA LINDA	5670	GRANDVIEW	348-361-02	Lower Santa Ana River
YORBA LINDA	5673	GRANDVIEW	348-402-06	Lower Santa Ana River
YORBA LINDA	5678	GRANDVIEW	348-361-04	Lower Santa Ana River
	5682	GRANDVIEW	348-361-16	Lower Santa Ana River
	5683	GRANDVIEW	348-402-07	Lower Santa Ana River
	5693		348-402-08	Lower Santa Ana River
	5729		348-391-18	Lower Santa Ana River
	5771 6061		340-391-17	Lower Santa Ana River
	18751		323-261-01	Lower Santa Ana River
YORBALINDA	18752	HAVEN	323-261-10	Lower Santa Ana River
YORBALINDA	18761	HAVEN	323-261-02	Lower Santa Ana River
YORBALINDA	18762	HAVEN	323-261-09	Lower Santa Ana River
YORBA LINDA	18781	HAVEN	323-261-03	Lower Santa Ana River
YORBA LINDA	18782	HAVEN	323-261-08	Lower Santa Ana River
YORBA LINDA	18791	HAVEN	323-261-04	Lower Santa Ana River
YORBA LINDA	18792	HAVEN	323-261-07	Lower Santa Ana River
YORBA LINDA	18801	HAVEN	323-261-05	Lower Santa Ana River
YORBA LINDA	18802	HAVEN	323-261-06	Lower Santa Ana River
YORBA LINDA	5145	HIGHLAND	343-582-04	Lower Santa Ana River
YORBA LINDA	5191	HIGHLAND	343-582-11	Lower Santa Ana River
YORBA LINDA	5211	HIGHLAND	343-582-10	Lower Santa Ana River
YORBA LINDA	5212	HIGHLAND	343-581-13	Lower Santa Ana River
YORBA LINDA	5216	HIGHLAND	343-591-22	Lower Santa Ana River
YORBA LINDA	5221	HIGHLAND	343-582-09	Lower Santa Ana River
	5222	HIGHLAND	343-591-20	Lower Santa Ana River
YORBA LINDA	5531	HIGHLAND	343-551-21	Lower Santa Ana River
	56/1	HIGHLAND	343-111-12	Lower Santa Ana River
	5681		343-111-14	Lower Santa Ana River
	5702		343-111-17	Lower Santa Ana River
	5795		343-311-23	Lower Santa Ana River
	5799		3/3-121-04	Lower Santa Ana River
	5811		343-121-06	Lower Santa Ana River
YORBALINDA	5922	HIGHLAND	343-321-14	Lower Santa Ana River

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
YORBA LINDA	6012	HIGHLAND	343-331-01	Lower Santa Ana River
YORBA LINDA	6062	HIGHLAND	343-331-03	Lower Santa Ana River
YORBA LINDA	6082	HIGHLAND	343-331-05	Lower Santa Ana River
YORBA LINDA	18792	HUMMINGBIRD	323-251-08	Lower Santa Ana River
YORBA LINDA	18801	HUMMINGBIRD	323-251-10	Lower Santa Ana River
YORBA LINDA	18802	HUMMINGBIRD	323-251-11	Lower Santa Ana River
YORBA LINDA	18142	HUTCHINGS	343-591-24	Lower Santa Ana River
YORBA LINDA	17651	IMPERIAL	323-051-23	Lower Santa Ana River
YORBA LINDA	17691	IMPERIAL	323-051-08	Lower Santa Ana River
	4546	JAMESTOWN	334-323-13	Lower Santa Ana River
	5582	JEFFERSON	341-104-33	Lower Santa Ana River
	5650	KELLOGG	348-381-07	Lower Santa Ana River
	5652	KELLOGG	340-301-07	Lower Santa Ana River
	5652	KELLOGG	340-301-00	Lower Santa Ana River
	5771	KELLOGG	348-361-07	Lower Santa Ana River
YORBALINDA	5801	KELLOGG	348-361-08	Lower Santa Ana River
YORBALINDA	5831	KELLOGG	348-261-02	Lower Santa Ana River
YORBALINDA	5833	KELLOGG	348-261-03	Lower Santa Ana River
YORBA LINDA	5843	KELLOGG	348-261-07	Lower Santa Ana River
YORBA LINDA	5871	KELLOGG	348-261-10	Lower Santa Ana River
YORBA LINDA	19110	LA PRADERA	323-371-11	Lower Santa Ana River
YORBA LINDA	19111	LA PRADERA	323-371-01	Lower Santa Ana River
YORBA LINDA	19120	LA PRADERA	323-371-10	Lower Santa Ana River
YORBA LINDA	19121	LA PRADERA	323-371-02	Lower Santa Ana River
YORBA LINDA	19131	LA PRADERA	323-371-03	Lower Santa Ana River
YORBA LINDA	19140	LA PRADERA	323-371-09	Lower Santa Ana River
YORBA LINDA	19141	LA PRADERA	323-371-04	Lower Santa Ana River
YORBA LINDA	19151	LA PRADERA	323-371-05	Lower Santa Ana River
YORBA LINDA	19172	LA PRADERA	323-371-08	Lower Santa Ana River
YORBA LINDA	5811	LAKE SHORE	343-421-29	Lower Santa Ana River
YORBA LINDA	5819	LAKE SHORE	343-421-28	Lower Santa Ana River
YORBA LINDA	5831	LAKE SHORE	343-421-27	Lower Santa Ana River
YORBA LINDA	5841		343-421-26	Lower Santa Ana River
	4242		323-281-01	Lower Santa Ana River
	4296		323-281-18	Lower Santa Ana River
	4322		323-281-14	Lower Santa Ana River
	4332		323-281-15	Lower Santa Ana River
	4341		323-111-04	Lower Santa Ana River
	4350		323-341-22	Lower Santa Ana River
YORBA LINDA	4632		323-231-04	Lower Santa Ana River
YORBALINDA	4672		323-231-08	Lower Santa Ana River
YORBALINDA	4682	LAKEVIEW	323-231-07	Lower Santa Ana River
YORBA LINDA	4802		323-231-15	Lower Santa Ana River
YORBA LINDA	4861	LAKEVIEW	323-321-04	Lower Santa Ana River
YORBA LINDA	4881	LAKEVIEW	323-321-06	Lower Santa Ana River
YORBA LINDA	4891	LAKEVIEW	323-321-07	Lower Santa Ana River
YORBA LINDA	5142	LAKEVIEW	343-642-15	Lower Santa Ana River
YORBA LINDA	5152	LAKEVIEW	343-642-03	Lower Santa Ana River
YORBA LINDA	5172	LAKEVIEW	343-642-04	Lower Santa Ana River
YORBA LINDA	5184	LAKEVIEW	343-642-05	Lower Santa Ana River
YORBA LINDA	5192	LAKEVIEW	343-631-01	Lower Santa Ana River
YORBA LINDA	5202	LAKEVIEW	343-631-02	Lower Santa Ana River
YORBA LINDA	5212	LAKEVIEW	343-631-03	Lower Santa Ana River
YORBA LINDA	5222	LAKEVIEW	343-631-28	Lower Santa Ana River
	5232		343-631-29	Lower Santa Ana River
	5242		343-631-05	Lower Santa Ana River
	5314		343-631-09	Lower Santa Ana River
	5320		343-631-10	Lower Santa Ana River
	534Z		343-621-02	Lower Santa Ana River
	030 I 5352		343-491-01	Lower Santa Ana River
	5361		3/3-601-27	Lower Santa Ana River
	5362		343-621-05	Lower Santa Ana River
YORBALINDA	5391		343-601-21	Lower Santa Ana River
YORBALINDA	5422	IAKEVIEW	343-621-08	Lower Santa Ana River

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
YORBA LINDA	5426	LAKEVIEW	343-621-11	Lower Santa Ana River
YORBA LINDA	5428	LAKEVIEW	343-621-09	Lower Santa Ana River
YORBA LINDA	5432	LAKEVIEW	343-611-01	Lower Santa Ana River
YORBA LINDA	5434	LAKEVIEW	343-611-04	Lower Santa Ana River
YORBA LINDA	5441	LAKEVIEW	343-601-13	Lower Santa Ana River
YORBA LINDA	5442	LAKEVIEW	343-611-02	Lower Santa Ana River
YORBA LINDA	5452	LAKEVIEW	343-611-17	Lower Santa Ana River
YORBA LINDA	5462	LAKEVIEW	343-611-03	Lower Santa Ana River
YORBA LINDA	5464		343-611-15	Lower Santa Ana River
YORBA LINDA	5466		343-611-16	Lower Santa Ana River
	5482		343-611-05	Lower Santa Ana River
	5502		343-611-06	Lower Santa Ana River
	5505		343-601-54	Lower Santa Ana River
	5542		343-011-07	Lower Santa Ana River
	5551		242-011-00	Lower Santa Ana River
	5641		343-001-40	Lower Santa Ana River
	5881		343-321-06	Lower Santa Ana River
	5883		3/3-321-00	Lower Santa Ana River
YORBALINDA	5883	IAKEVIEW	343-321-05	Lower Santa Ana River
YORBALINDA	5885	IAKEVIEW	343-321-04	Lower Santa Ana River
YORBALINDA	5893	LAKEVIEW	343-321-09	Lower Santa Ana River
YORBA LINDA	5951	LAKEVIEW	343-321-10	Lower Santa Ana River
YORBA LINDA	5971		343-321-30	Lower Santa Ana River
YORBA LINDA	5981	LAKEVIEW	343-321-32	Lower Santa Ana River
YORBA LINDA	6000	LAKEVIEW	343-391-29	Lower Santa Ana River
YORBA LINDA	6006	LAKEVIEW	343-391-30	Lower Santa Ana River
YORBA LINDA	6032	LAKEVIEW	343-391-25	Lower Santa Ana River
YORBA LINDA	6050	LAKEVIEW	343-391-26	Lower Santa Ana River
YORBA LINDA	4417	LARO	334-181-09	Lower Santa Ana River
YORBA LINDA	4437	LARO	334-181-08	Lower Santa Ana River
YORBA LINDA	4441	LARO	334-181-10	Lower Santa Ana River
YORBA LINDA	4480	LARO	334-181-05	Lower Santa Ana River
YORBA LINDA	4482	LARO	334-181-06	Lower Santa Ana River
YORBA LINDA	16631	LATHROP	334-031-06	Lower Santa Ana River
YORBA LINDA	16631	LATHROP	334-031-07	Lower Santa Ana River
YORBA LINDA	16641	LATHROP	334-031-05	Lower Santa Ana River
YORBA LINDA	16651	LATHROP	334-031-04	Lower Santa Ana River
YORBA LINDA	17832	LERENE	334-101-10	Lower Santa Ana River
YORBA LINDA	5362	LINDFORD	348-201-22	Lower Santa Ana River
	5368	LINDFORD	348-201-21	Lower Santa Ana River
	16661		334-071-01	Lower Santa Ana River
	16732		334-072-10	Lower Santa Ana River
	17745		341-251-07	Lower Santa Ana River
	10000		343-401-09	Lower Santa Ana River
	5111		243-401-02	Lower Santa Ana River
	5116		348-101-07	Lower Santa Ana River
YORBA LINDA	5141		348-191-07	Lower Santa Ana River
YORBALINDA	5146	LOS ALTOS	348-191-26	Lower Santa Ana River
YORBALINDA	5170	LOS ALTOS	348-191-29	Lower Santa Ana River
YORBA LINDA	5182	LOS ALTOS	348-191-30	Lower Santa Ana River
YORBA LINDA	5194	LOS ALTOS	348-191-25	Lower Santa Ana River
YORBA LINDA	5201	LOS ALTOS	348-191-09	Lower Santa Ana River
YORBA LINDA	5206	LOS ALTOS	348-191-24	Lower Santa Ana River
YORBA LINDA	5211	LOS ALTOS	348-191-08	Lower Santa Ana River
YORBA LINDA	5291	LOS ALTOS	348-191-16	Lower Santa Ana River
YORBA LINDA	19005	LYNN	323-081-26	Lower Santa Ana River
YORBA LINDA	19010	LYNN	323-081-32	Lower Santa Ana River
YORBA LINDA	4722	MAIN	323-311-13	Lower Santa Ana River
YORBA LINDA	4732	MAIN	323-311-15	Lower Santa Ana River
YORBA LINDA	4865	MAIN	323-304-17	Lower Santa Ana River
YORBA LINDA	4897	MAIN	323-304-12	Lower Santa Ana River
YORBA LINDA	4901	MAIN	323-304-11	Lower Santa Ana River
YORBA LINDA	16651	MALCOLM	334-151-05	Lower Santa Ana River
YORBA LINDA	16686	MALCOLM	334-151-12	Lower Santa Ana River
YORBA LINDA	17122	MARDA	322-172-06	Lower Santa Ana River

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
YORBA LINDA	18031	MARIPOSA	343-331-06	Lower Santa Ana River
YORBA LINDA	17812	MEADOWVIEW	334-371-05	Lower Santa Ana River
YORBA LINDA	17832	MEADOWVIEW	334-371-06	Lower Santa Ana River
YORBA LINDA	17852	MEADOWVIEW	334-371-07	Lower Santa Ana River
YORBA LINDA	4122	MERIENDA	334-341-09	Lower Santa Ana River
YORBA LINDA	4142	MERIENDA	334-341-08	Lower Santa Ana River
YORBA LINDA	4162	MERIENDA	334-341-07	Lower Santa Ana River
YORBA LINDA	4182	MERIENDA	334-341-06	Lower Santa Ana River
YORBA LINDA	4202	MERIENDA	334-341-05	Lower Santa Ana River
YORBA LINDA	19320	MICKEL	323-421-09	Lower Santa Ana River
YORBA LINDA	19373	MICKEL	323-421-04	Lower Santa Ana River
YORBA LINDA	19382	MICKEL	323-421-08	Lower Santa Ana River
	19384	MICKEL	323-421-07	Lower Santa Ana River
	19388	MICKEL	323-431-07	Lower Santa Ana River
	19390	MICKEL	323-421-14	Lower Santa Ana River
	19390		323-421-14	Lower Santa Ana River
	5071		343-581-12	Lower Santa Ana River
	5162		343-381-01	Lower Santa Ana River
	5102		240-191-43	Lower Santa Ana River
	5192		240-191-39	Lower Santa Ana River
	5751		348-271-10	Lower Santa Ana River
	5253		348-271-15	Lower Santa Ana River
YORBA LINDA	5263		348-271-16	Lower Santa Ana River
	5282		3/8-101-17	Lower Santa Ana River
YORBALINDA	5295		348-271-17	Lower Santa Ana River
YORBALINDA	5302		348-191-18	Lower Santa Ana River
YORBALINDA	5350	MOUNTAIN VIEW	348-201-08	Lower Santa Ana River
YORBA LINDA	5361	MOUNTAIN VIEW	348-281-10	Lower Santa Ana River
YORBA LINDA	5371	MOUNTAIN VIEW	348-281-09	Lower Santa Ana River
YORBA LINDA	5372	MOUNTAIN VIEW	348-201-23	Lower Santa Ana River
YORBA LINDA	5373	MOUNTAIN VIEW	348-281-11	Lower Santa Ana River
YORBA LINDA	5377	MOUNTAIN VIEW	348-281-12	Lower Santa Ana River
YORBA LINDA	5411	MOUNTAIN VIEW	348-281-13	Lower Santa Ana River
YORBA LINDA	5421	MOUNTAIN VIEW	348-291-04	Lower Santa Ana River
YORBA LINDA	5441	MOUNTAIN VIEW	348-292-01	Lower Santa Ana River
YORBA LINDA	5552	MOUNTAIN VIEW	348-012-08	Lower Santa Ana River
YORBA LINDA	5565	MOUNTAIN VIEW	348-371-35	Lower Santa Ana River
YORBA LINDA	5571	MOUNTAIN VIEW	348-371-10	Lower Santa Ana River
YORBA LINDA	5575	MOUNTAIN VIEW	348-371-11	Lower Santa Ana River
YORBA LINDA	5582	MOUNTAIN VIEW	348-012-37	Lower Santa Ana River
YORBA LINDA	16831	NIGHTINGALE	334-181-03	Lower Santa Ana River
YORBA LINDA	16882	NIGHTINGALE	334-181-04	Lower Santa Ana River
YORBA LINDA	16892	NIGHTINGALE	334-191-07	Lower Santa Ana River
YORBA LINDA	16932	NIGHTINGALE	334-191-08	Lower Santa Ana River
	5221	NORCRIS	348-201-29	Lower Santa Ana River
	5226	NORCRIS	348-201-30	Lower Santa Ana River
	5241	NORCRIS	348-201-28	Lower Santa Ana River
	5261		340-201-31	Lower Santa Ana River
	5266		240-201-27	Lower Santa Ana River
	5286	NOPCRIS	348-201-32	Lower Santa Ana River
	5206	NOPCRIS	348-201-35	Lower Santa Ana River
	6099	NUTMEG	3/3-331-22	Lower Santa Ana River
YORBALINDA	4382		323-381-25	Lower Santa Ana River
YORBALINDA	4511		323-451-21	Lower Santa Ana River
YORBALINDA	4731	ОНЮ	323-251-21	Lower Santa Ana River
YORBA LINDA	4779	оню	323-261-16	Lower Santa Ana River
YORBA LINDA	4862	ОНЮ	323-081-14	Lower Santa Ana River
YORBA LINDA	4872	ОНІО	323-081-15	Lower Santa Ana River
YORBA LINDA	4884	ОНІО	323-081-16	Lower Santa Ana River
YORBA LINDA	4888	ОНЮ	323-081-17	Lower Santa Ana River
YORBA LINDA	4912	ОНЮ	323-081-18	Lower Santa Ana River
YORBA LINDA	4932	ОНЮ	323-081-19	Lower Santa Ana River
YORBA LINDA	4942	OHIO	323-081-20	Lower Santa Ana River
YORBA LINDA	5122	OHIO	348-121-25	Lower Santa Ana River
YORBA LINDA	5132	OHIO	348-141-41	Lower Santa Ana River

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
YORBA LINDA	5241	OHIO	348-211-29	Lower Santa Ana River
YORBA LINDA	5311	OHIO	348-201-14	Lower Santa Ana River
YORBA LINDA	5382	OHIO	348-141-11	Lower Santa Ana River
YORBA LINDA	5388	ОНЮ	348-141-10	Lower Santa Ana River
YORBA LINDA	5400	OHIO	348-151-33	Lower Santa Ana River
YORBA LINDA	5401	OHIO	348-201-25	Lower Santa Ana River
YORBA LINDA	5531	OHIO	348-351-09	Lower Santa Ana River
YORBA LINDA	5541	OHIO	348-351-08	Lower Santa Ana River
	5781	OHIO	343-421-16	Lower Santa Ana River
	5801	OHIO	343-421-17	Lower Santa Ana River
	5802		343-511-02	Lower Santa Ana River
	582 I		343-421-18	Lower Santa Ana River
	5901		343-421-19	Lower Santa Ana River
	5001		343-661-00	Lower Santa Ana River
	5972		343-661-25	Lower Santa Ana River
YORBALINDA	6092		343-661-19	Lower Santa Ana River
YORBALINDA	5757	ORCHARD	348-361-10	Lower Santa Ana River
YORBALINDA	5802	ORCHARD	348-381-17	Lower Santa Ana River
YORBALINDA	18552	ORIENTE	323-231-03	Lower Santa Ana River
YORBALINDA	18582	ORIENTE	323-231-01	Lower Santa Ana River
YORBA LINDA	18771	ORIENTE	323-442-26	Lower Santa Ana River
YORBA LINDA	18781	ORIENTE	323-442-27	Lower Santa Ana River
YORBA LINDA	18782	ORIENTE	323-251-09	Lower Santa Ana River
YORBA LINDA	18811	ORIENTE	323-442-28	Lower Santa Ana River
YORBA LINDA	18812	ORIENTE	323-251-13	Lower Santa Ana River
YORBA LINDA	18820	ORIENTE	323-251-14	Lower Santa Ana River
YORBA LINDA	18982	ORIENTE	323-251-44	Lower Santa Ana River
YORBA LINDA	18991	ORIENTE	323-451-34	Lower Santa Ana River
YORBA LINDA	18995	ORIENTE	323-371-24	Lower Santa Ana River
YORBA LINDA	19051	ORIENTE	323-371-14	Lower Santa Ana River
YORBA LINDA	19076	ORIENTE	323-361-02	Lower Santa Ana River
YORBA LINDA	19077	ORIENTE	323-371-15	Lower Santa Ana River
YORBA LINDA	19087	ORIENTE	323-371-16	Lower Santa Ana River
YORBA LINDA	19111	ORIENTE	323-371-17	Lower Santa Ana River
YORBA LINDA	19136	ORIENTE	323-361-04	Lower Santa Ana River
	19141	ORIENTE	323-371-18	Lower Santa Ana River
	19151	ORIENTE	323-371-20	Lower Santa Ana River
	19152	ORIENTE	323-361-34	Lower Santa Ana River
	19162		323-361-33	Lower Santa Ana River
	19171		323-371-19	Lower Santa Ana River
	10211	ORIENTE	323-371-21	Lower Santa Ana River
YORBA LINDA	19277	ORIENTE	323-361-08	Lower Santa Ana River
YORBALINDA	19235	ORIENTE	323-371-23	Lower Santa Ana River
YORBALINDA	19311	ORIENTE	323-401-20	Lower Santa Ana River
YORBALINDA	19321	ORIENTE	323-401-14	Lower Santa Ana River
YORBA LINDA	19414	ORIENTE	323-411-03	Lower Santa Ana River
YORBA LINDA	19416	ORIENTE	323-411-02	Lower Santa Ana River
YORBA LINDA	19420	ORIENTE	323-411-05	Lower Santa Ana River
YORBA LINDA	19421	ORIENTE	323-401-11	Lower Santa Ana River
YORBA LINDA	19424	ORIENTE	323-411-04	Lower Santa Ana River
YORBA LINDA	19441	ORIENTE	323-401-10	Lower Santa Ana River
YORBA LINDA	19452	ORIENTE	323-411-06	Lower Santa Ana River
YORBA LINDA	19031	ORO VERDE	323-361-19	Lower Santa Ana River
YORBA LINDA	19032	ORO VERDE	323-361-22	Lower Santa Ana River
YORBA LINDA	19082	ORO VERDE	323-361-25	Lower Santa Ana River
YORBA LINDA	4282	OSMOND	334-213-02	Lower Santa Ana River
YORBA LINDA	4342	OSMOND	334-213-04	Lower Santa Ana River
YORBA LINDA	4372	OSMOND	334-213-06	Lower Santa Ana River
YORBA LINDA	4392	OSMOND	334-361-16	Lower Santa Ana River
	4400	OSMOND	334-361-15	Lower Santa Ana River
	1/011	PACIFIC	322-164-28	Lower Santa Ana River
	4431	PALM	323-381-05	Lower Santa Ana River
	4452		323-391-01	Lower Santa Ana River
	4458		323-391-13	Lower Santa Ana River
	4401	FALIVI	323-381-06	Lower Santa Ana River

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
YORBA LINDA	4482	PALM	323-391-02	Lower Santa Ana River
YORBA LINDA	4502	PALM	323-391-04	Lower Santa Ana River
YORBA LINDA	4561	PALM	323-371-22	Lower Santa Ana River
YORBA LINDA	4562	PALM	323-401-16	Lower Santa Ana River
YORBA LINDA	4721	PALM	323-361-11	Lower Santa Ana River
YORBA LINDA	4732	PALM	323-421-02	Lower Santa Ana River
YORBA LINDA	4741	PALM	323-351-01	Lower Santa Ana River
YORBA LINDA	4742	PALM	323-421-03	Lower Santa Ana River
YORBA LINDA	4745	PALM	323-351-02	Lower Santa Ana River
YORBA LINDA	4751	PALM	323-351-03	Lower Santa Ana River
YORBA LINDA	4761	PALM	323-351-04	Lower Santa Ana River
YORBA LINDA	4771	PALM	323-351-08	Lower Santa Ana River
YORBA LINDA	4771	PALM	323-351-08	Lower Santa Ana River
YORBA LINDA	4773	PALM	323-351-07	Lower Santa Ana River
	4773	PALM	323-351-07	Lower Santa Ana River
	4779	PALM	323-351-06	Lower Santa Ana River
	4822	PALM	323-421-01	Lower Santa Ana River
	4950		323-431-02	Lower Santa Ana River
	19185		323-351-17	Lower Santa Ana River
	4376	PALOMINO	334-301-20	Lower Santa Ana River
	4431		334-301-21	Lower Santa Ana River
	4431		334-301-22	Lower Santa Ana Diver
	4027		334-403-03	Lower Santa Ana River
	4901 5501		249 202 00	Lower Santa Ana River
	5522		348-292-09	Lower Santa Ana River
	5531		3/8-292-08	Lower Santa Ana River
	5532		3/8-201-10	Lower Santa Ana River
YORBALINDA	5551		348-292-07	Lower Santa Ana River
YORBALINDA	5552	PEBBLE BEACH	348-291-18	Lower Santa Ana River
YORBALINDA	5561	PEBBLE BEACH	348-292-06	Lower Santa Ana River
YORBALINDA	5562	PEBBLE BEACH	348-291-17	Lower Santa Ana River
YORBALINDA	5583	PEBBLE BEACH	348-291-15	Lower Santa Ana River
YORBA LINDA	5584	PEBBLE BEACH	348-291-16	Lower Santa Ana River
YORBA LINDA	4301	PLUMOSA	323-101-54	Lower Santa Ana River
YORBA LINDA	4361	PLUMOSA	323-101-08	Lower Santa Ana River
YORBA LINDA	4742	PLUMOSA	323-311-03	Lower Santa Ana River
YORBA LINDA	3811	PROSPECT	322-121-02	Lower Santa Ana River
YORBA LINDA	4102	PROSPECT	322-164-27	Lower Santa Ana River
YORBA LINDA	4121	PROSPECT	334-341-10	Lower Santa Ana River
YORBA LINDA	4171	PROSPECT	334-341-11	Lower Santa Ana River
YORBA LINDA	4381	PROSPECT	334-191-03	Lower Santa Ana River
YORBA LINDA	4411	PROSPECT	334-191-06	Lower Santa Ana River
YORBA LINDA	4471	PROSPECT	334-191-25	Lower Santa Ana River
YORBA LINDA	4611	PROSPECT	334-192-12	Lower Santa Ana River
YORBA LINDA	4619	PROSPECT	334-192-09	Lower Santa Ana River
YORBA LINDA	4632	PROSPECT	334-231-39	Lower Santa Ana River
YORBA LINDA	5050	RICHFIELD	343-251-35	Lower Santa Ana River
YORBA LINDA	5072	RICHFIELD	343-251-34	Lower Santa Ana River
YORBA LINDA	5300	RICHFIELD	343-591-02	Lower Santa Ana River
YORBA LINDA	5392	RICHFIELD	343-591-07	Lower Santa Ana River
YORBA LINDA	5441	RICHFIELD	341-261-01	Lower Santa Ana River
YORBA LINDA	6112	RIDGE	343-532-02	Lower Santa Ana River
YORBA LINDA	6112	RIDGE	343-532-17	Lower Santa Ana River
	3512	ROSE	322-061-19	Lower Santa Ana River
	3516	ROSE	322-061-01	Lower Santa Ana River
	3542	ROSE	322-061-14	Lower Santa Ana River
	ა <b>ე</b> 22		322-061-15	Lower Santa Ana KiVer
	3002	RUSE	322-001-10	Lower Santa Ana River
	3010 2620		322-001-18	Lower Santa Ana River
	2706		322-001-17	Lower Santa Ana Kiver
	1551	POSE	324-081 20	Lower Santa Ana River
	4575	ROSE	33/-081-41	Lower Santa Ana Niver
	4622	ROSE	334-001-41	Lower Santa Ana River
	4839	ROSE	334-151-15	Lower Santa Ana River
YORBALINDA	4841	BOSE	334-151-16	Lower Santa Ana River
		NOOL	00-101-10	

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
YORBA LINDA	4911	ROSE	334-151-36	Lower Santa Ana River
YORBA LINDA	4931	ROSE	334-151-38	Lower Santa Ana River
YORBA LINDA	4941	ROSE	334-151-39	Lower Santa Ana River
YORBA LINDA	5852	SANDRA	343-661-07	Lower Santa Ana River
YORBA LINDA	5951	SANDRA	343-661-01	Lower Santa Ana River
YORBA LINDA	5961	SANDRA	343-661-02	Lower Santa Ana River
YORBA LINDA	5962	SANDRA	343-661-05	Lower Santa Ana River
YORBA LINDA	5971	SANDRA	343-661-03	Lower Santa Ana River
YORBA LINDA	5972	SANDRA	343-661-04	Lower Santa Ana River
YORBA LINDA	4641	SANTA FE	334-231-06	Lower Santa Ana River
YORBA LINDA	4862	SCHOOL	323-322-07	Lower Santa Ana River
YORBA LINDA	4871	SCHOOL	323-324-03	Lower Santa Ana River
YORBA LINDA	18451	SHADY	343-642-11	Lower Santa Ana River
YORBA LINDA	18452	SHADY	343-642-06	Lower Santa Ana River
YORBA LINDA	18461	SHADY	343-642-09	Lower Santa Ana River
YORBA LINDA	18472	SHADY	343-642-14	Lower Santa Ana River
YORBA LINDA	4852	SHAW	334-403-14	Lower Santa Ana River
YORBA LINDA	4872	SHAW	334-403-13	Lower Santa Ana River
YORBA LINDA	4911	SHAW	334-403-09	Lower Santa Ana River
YORBA LINDA	4921	SHAW	334-403-10	Lower Santa Ana River
YORBA LINDA	18222	SHOOK	343-491-03	Lower Santa Ana River
YORBA LINDA	18291	SHOOK	343-491-09	Lower Santa Ana River
YORBA LINDA	5841	SHORT	343-661-28	Lower Santa Ana River
YORBA LINDA	6011	SHORT	343-521-06	Lower Santa Ana River
YORBALINDA	6012	SHORT	343-511-14	Lower Santa Ana River
YORBA LINDA	6021	SHORT	343-521-07	Lower Santa Ana River
YORBA LINDA	6022	SHORT ST	343-522-01	Lower Santa Ana River
YORBALINDA	5032	SIESTA	343-571-11	Lower Santa Ana River
YORBALINDA	5061	SIESTA	343-571-14	Lower Santa Ana River
YORBALINDA	5062	SIESTA	343-571-10	Lower Santa Ana River
YORBALINDA	5081	SIESTA	343-571-15	Lower Santa Ana River
YORBALINDA	5082	SIESTA	343-571-09	Lower Santa Ana River
YORBALINDA	5111	SIESTA	343-571-16	Lower Santa Ana River
YORBALINDA	5121	SIESTA	343-571-17	Lower Santa Ana River
	51/1	SIESTA	3/3-571-19	Lower Santa Ana River
YORBALINDA	19141	SKYVIEW	323-361-27	Lower Santa Ana River
YORBALINDA	19151	SKYVIEW	323-361-14	Lower Santa Ana River
YORBA LINDA	19171	SKYVIEW	323-361-13	Lower Santa Ana River
YORBA LINDA	19172	SKYVIEW	323-361-28	Lower Santa Ana River
YORBA LINDA	19182	SKYVIEW	323-361-29	Lower Santa Ana River
YORBA LINDA	19191	SKYVIEW	323-361-12	Lower Santa Ana River
YORBA LINDA	19192	SKYVIEW	323-361-30	Lower Santa Ana River
YORBA LINDA	19198	SKYVIEW	323-361-31	Lower Santa Ana River
YORBA LINDA	5362	SOUTH OHIO	348-141-42	Lower Santa Ana River
YORBA LINDA	4777	SOUTH PALM	323-351-05	Lower Santa Ana River
YORBA LINDA	5282	SUNSET	348-281-07	Lower Santa Ana River
YORBA LINDA	5300	SUNSET	348-281-08	Lower Santa Ana River
YORBA LINDA	5501	TAMMARISK	348-291-05	Lower Santa Ana River
YORBA LINDA	5521	TAMMARISK	348-291-06	Lower Santa Ana River
YORBA LINDA	5522	TAMMARISK	348-292-02	Lower Santa Ana River
YORBA LINDA	5531	TAMMARISK	348-291-07	Lower Santa Ana River
YORBA LINDA	5532	TAMMARISK	348-292-03	Lower Santa Ana River
YORBA LINDA	5551	TAMMARISK	348-291-08	Lower Santa Ana River
YORBA LINDA	5552	TAMMARISK	348-292-04	Lower Santa Ana River
YORBA LINDA	5561	TAMMARISK	348-291-09	Lower Santa Ana River
YORBA LINDA	5562	TAMMARISK	348-292-05	Lower Santa Ana River
YORBA LINDA	5216	TEDFORD	348-191-05	Lower Santa Ana River
YORBA LINDA	5221	TEDFORD	348-191-43	Lower Santa Ana River
YORBA LINDA	5225	TEDFORD	348-191-41	Lower Santa Ana River
YORBA LINDA	5230	TEDFORD	348-191-11	Lower Santa Ana River
YORBA LINDA	5231	TEDFORD	348-191-06	Lower Santa Ana River
YORBA LINDA	5241	TEDFORD	348-191-10	Lower Santa Ana River
YORBA LINDA	5275	TEDFORD	348-191-13	Lower Santa Ana River
YORBALINDA	5279	TEDEORD	348-191-12	I ower Santa Ana River
YORBALINDA	5202	TIKI TORCH	343-631-16	Lower Santa Ana River
YORBALINDA	5222	TIKI TORCH	343-631-17	Lower Santa Ana River
YORBALINDA	5236	TIKI TORCH	343-631-13	Lower Santa Ana River

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
YORBA LINDA	5244	TIKI TORCH	343-631-18	Lower Santa Ana River
YORBA LINDA	5254	TIKI TORCH	343-631-12	Lower Santa Ana River
YORBA LINDA	5264	TIKI TORCH	343-631-19	Lower Santa Ana River
YORBA LINDA	18221	TIMBERLANE	343-391-19	Lower Santa Ana River
YORBA LINDA	18242	TIMBERLANE	343-391-20	Lower Santa Ana River
YORBA LINDA	18251	TIMBERLANE	343-391-18	Lower Santa Ana River
YORBA LINDA	18252	TIMBERLANE	343-391-21	Lower Santa Ana River
YORBA LINDA	18262	TIMBERLANE	343-391-22	Lower Santa Ana River
YORBA LINDA	18271	TIMBERLANE	343-391-17	Lower Santa Ana River
YORBA LINDA	18272	TIMBERLANE	343-391-23	Lower Santa Ana River
YORBA LINDA	18281	TIMBERLANE	343-391-16	Lower Santa Ana River
YORBA LINDA	18282	TIMBERLANE	343-391-15	Lower Santa Ana River
YORBA LINDA	18291	TIMBERLANE	343-391-03	Lower Santa Ana River
YORBA LINDA	18292	TIMBERLANE	343-391-14	Lower Santa Ana River
YORBA LINDA	18312	TIMBERLANE	343-391-13	Lower Santa Ana River
YORBA LINDA	18315	TIMBERLANE	343-391-05	Lower Santa Ana River
YORBA LINDA	18320	TIMBERLANE	343-391-09	Lower Santa Ana River
YORBA LINDA	18322	TIMBERLANE	343-391-04	Lower Santa Ana River
YORBA LINDA	18334	TIMBERLANE	343-391-11	Lower Santa Ana River
YORBA LINDA	No NO	UNKNOWN ADDRESS	334-251-06	Lower Santa Ana River
YORBA LINDA	0	UNKNOWN HIGHLAND	NO APN	Lower Santa Ana River
YORBA LINDA	4581	VALLECITO	323-451-37	Lower Santa Ana River
YORBA LINDA	4082	VALLEY VIEW	323-011-45	Lower Santa Ana River
YORBA LINDA	4232	VALLEY VIEW	323-012-14	Lower Santa Ana River
YORBA LINDA	4631	VALLEY VIEW	334-251-02	Lower Santa Ana River
YORBA LINDA	4725	VALLEY VIEW	334-251-05	Lower Santa Ana River
YORBA LINDA	17965	VIA BUENA VIDA	343-571-31	Lower Santa Ana River
YORBA LINDA	17995	VIA BUENA VIDA	343-571-25	Lower Santa Ana River
YORBA LINDA	19332	VIA DE LA CIELO	323-391-05	Lower Santa Ana River
YORBA LINDA	19352	VIA DE LA CIELO	323-391-06	Lower Santa Ana River
YORBA LINDA	19372	VIA DE LA CIELO	323-391-07	Lower Santa Ana River
YORBALINDA	19152		323-381-10	I ower Santa Ana River
YORBALINDA	19161		323-381-03	Lower Santa Ana River
YORBALINDA	19162		323-381-11	Lower Santa Ana River
	19175		323-381-08	Lower Santa Ana River
	10181		323-381-00	Lower Santa Ana River
	1018/		323-371-06	Lower Santa Ana River
	10185		323-381-07	Lower Santa Ana River
	10404		222 401 01	Lower Santa Ana River
	19404		323-401-01	Lower Santa Ana River
	19400		222 401 02	Lower Santa Ana River
	19410		222 201 09	Lower Santa Ana River
	19419		323-391-00	Lower Santa Ana River
	19420		323-401-04	Lower Santa Ana River
	19429		323-391-09	Lower Santa Ana River
	19430		323-401-05	
	19439		323-391-10	Lower Santa Ana River
	19444		323-401-06	Lower Santa Ana River
	19449		323-391-11	Lower Santa Ana River
	19459		323-391-12	
	19464		323-401-08	Lower Santa Ana River
	18891		348-201-19	Lower Santa Ana River
	18892		348-201-16	Lower Santa Ana River
	18911		348-201-18	Lower Santa Ana River
YORBA LINDA	17962	VIA RANCHERO	343-121-16	Lower Santa Ana River
YORBA LINDA	17972	VIA RANCHERO	343-121-15	Lower Santa Ana River
YORBA LINDA	17982	VIA RANCHERO	343-121-21	Lower Santa Ana River
	18847	VIA SERENO	348-211-05	Lower Santa Ana River
YORBA LINDA	18856	VIA SERENO	348-211-01	Lower Santa Ana River
YORBA LINDA	18860	VIA SERENO	348-211-16	Lower Santa Ana River
YORBA LINDA	18871	VIA SERENO	348-211-15	Lower Santa Ana River
YORBA LINDA	18880	VIA SERENO	348-211-17	Lower Santa Ana River
YORBA LINDA	18902	VIA SERENO	348-211-18	Lower Santa Ana River
YORBA LINDA	18931	VIA SERENO	348-211-27	Lower Santa Ana River
YORBA LINDA	18932	VIA SERENO	348-211-30	Lower Santa Ana River
YORBA LINDA	18961	VILLA	323-451-25	Lower Santa Ana River
YORBA LINDA	18971	VILLA	323-451-24	Lower Santa Ana River
YORBA LINDA	18991	VILLA	323-451-23	Lower Santa Ana River

JURISDICTI	STREET_NO	NAME	APN	WATERSHED_
YORBA LINDA	18321	VISTA DEL LAGO	343-401-16	Lower Santa Ana River
YORBA LINDA	18331	VISTA DEL LAGO	343-401-08	Lower Santa Ana River
YORBA LINDA	18372	VISTA DEL LAGO	343-401-04	Lower Santa Ana River
YORBA LINDA	18381	VISTA DEL LAGO	343-401-09	Lower Santa Ana River
YORBA LINDA	18921	VISTA REAL	348-131-24	Lower Santa Ana River
YORBA LINDA	18940	VISTA REAL	348-131-18	Lower Santa Ana River
YORBA LINDA	16882	WABASH	322-111-38	Lower Santa Ana River
YORBA LINDA	18711	WINDY KNOLL	348-121-04	Lower Santa Ana River
YORBA LINDA	18721	WINDY KNOLL	348-121-01	Lower Santa Ana River
YORBA LINDA	4662	WOODHAVEN	334-371-11	Lower Santa Ana River
YORBA LINDA	4652	YORBA	323-251-15	Lower Santa Ana River
YORBA LINDA	4666	YORBA	323-251-16	Lower Santa Ana River
YORBA LINDA	4671	YORBA	323-251-12	Lower Santa Ana River
YORBA LINDA	4701	YORBA	323-251-26	Lower Santa Ana River
YORBA LINDA	4702	YORBA	323-251-25	Lower Santa Ana River
YORBA LINDA	4712	YORBA	323-251-24	Lower Santa Ana River
YORBA LINDA	4722	YORBA	323-251-23	Lower Santa Ana River
YORBA LINDA	4727	YORBA	323-251-27	Lower Santa Ana River
YORBA LINDA	4732	YORBA	323-251-28	Lower Santa Ana River
YORBA LINDA	4741	YORBA	323-251-30	Lower Santa Ana River
YORBA LINDA	4742	YORBA	323-251-29	Lower Santa Ana River
YORBA LINDA	17897	YORBA LINDA	334-111-30	Lower Santa Ana River
YORBA LINDA	18022	YORBA LINDA	343-561-20	Lower Santa Ana River
YORBA LINDA	18052	YORBA LINDA	343-561-21	Lower Santa Ana River
YORBA LINDA	18562	YORBA LINDA	348-162-13	Lower Santa Ana River
YORBA LINDA	18862	YORBA LINDA	348-211-07	Lower Santa Ana River
YORBA LINDA	18881	YORBA LINDA	323-271-44	Lower Santa Ana River
YORBA LINDA	19045	YORBA LINDA	323-081-34	Lower Santa Ana River
YORBA LINDA	19111	YORBA LINDA	323-081-36	Lower Santa Ana River
YORBA LINDA	19401	YORBA LINDA	323-431-11	Lower Santa Ana River

# Appendix E

## Referenced Data

### Attachment F



### Attachment F



### Attachment F



**APPENDIX V: Silverado Creek Aerial Map with Property Identification**


Sheet 1 of 18









260 Feet

Orange County Public Works





Project: 126380

Sheet 5 of 18



























#### June 2018

#### ASSESSMENT NO OBJECTID 105-280-07 518016 518049 105-193-18 518054 105-193-15 518056 105-193-14 518059 105-193-17 518060 105-193-16 518072 105-193-13 518080 105-194-10 518083 105-193-12 518085 105-193-11 518086 105-102-36 518087 105-102-43 518098 105-194-13 518100 105-194-06 518101 105-194-16 518103 105-171-52 518105 105-193-07 518106 105-193-10 518107 105-194-07 518108 #N/A 518111 105-193-08 518116 #N/A 518118 105-194-12 518119 105-194-08 518120 105-192-26 518122 105-171-53 518125 105-171-39 518130 105-193-09 105-171-65 518131 518132 105-171-43 518134 105-191-16 518136 105-171-26 518138 105-171-64 518139 #N/A 518140 105-171-76 518143 105-192-27 #N/A 518145 518147 105-060-16 518150 105-180-49 518152 105-171-59 518153 105-194-14 518156 105-180-50 518157 105-191-15 518158 105-180-06 518159 105-180-07 518162 105-171-27

ASSESSIVIENT_NO	OBJECTID
518163	105-180-08
518165	105-191-14
518167	105-194-15
518169	105-060-02
518171	105-180-34
518172	105-171-41
518173	105-171-51
518174	105-180-42
518175	105-171-42
518176	#N/A
518178	105-191-13
518179	105-192-16
518180	105-171-68
518183	105-171-78
518184	105-171-70
518185	105-180-33
518187	105-171-71
518189	105-192-14
518190	105-171-57
518192	105-191-17
518193	105-191-12
518195	105-352-09
518196	105-180-45
518198	105-171-84
518201	105-194-01
518202	#N/A
518203	105-060-23
518204	105-352-03
518209	105-180-25
518214	105-180-03
518215	105-171-23
518217	105-194-11
518220	105-171-75
518221	105-352-01
518222	105-171-83
518223	105-352-02
518224	105-171-82
518230	105-102-64
518231	105-180-28
518232	105-171-81
518234	876-052-36
518235	105-171-62
518238	105-171-46
518240	105-171-80
518240	105-180-09
518242	105-191-31
510243	103-131-31

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**ASSESSMENT NO** OBJECTID 105-171-79 518244 518245 105-192-13 518246 105-102-59 518247 876-052-10 518251 105-171-54 518252 105-171-61 518253 105-171-19 518254 105-171-09 518257 105-192-12 518258 876-051-60 518259 105-171-35 518261 105-192-09 518263 105-191-30 518264 105-180-51 876-052-37 518266 518268 105-180-23 518269 105-171-67 518270 876-052-38 518271 876-052-39 518274 105-171-34 518275 876-052-17 518276 876-052-18 518280 105-180-26 518282 105-171-07 518283 105-171-08 518284 876-052-09 518285 876-052-49 518288 105-180-44 518289 105-180-05 518292 105-180-38 518295 105-192-10 518297 876-051-33 518299 105-192-08 518300 105-180-37 518301 105-180-02 518302 105-160-38 105-122-04 518304

105-122-05

105-122-45

105-102-63

105-172-24

105-122-06

105-172-10

105-180-20

105-191-19

105-172-11

518305

518306

518308

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518311

518312

518313

518315

ASSESSMENT_NO	OBJECTID
518316	105-172-25
518318	876-052-40
518319	105-122-09
518320	876-051-17
518321	876-051-32
518323	105-101-40
518327	105-102-62
518328	105-122-44
518330	105-180-04
518331	105-133-56
518335	105-191-20
518336	105-122-12
518338	105-142-65
518341	105-180-40
518342	105-122-01
518343	105-160-14
518344	105-142-66
518345	#N/A
518346	876-051-18
518347	876-051-31
518348	876-051-39
518349	105-142-71
518351	105-133-35
518353	105-192-06
518354	105-142-07
518355	876-052-07
518356	105-142-08
518357	876-052-05
518358	#N/A
518359	105-101-23
518360	105-142-70
518361	105-142-67
518362	105-191-11
518364	105-160-15
518365	#N/A
518366	105-192-11
518367	#N/A
518369	105-142-56
518371	105-101-07
518372	105-142-10
518375	105-133-36
518376	876-051-16
518377	876-051-72
518378	105-133-51
518379	876-051-40
518380	876-051-30

Silverado Canyon Unincorporated Parcels within 200 fo Assessment Number (Assessment\_No) and Object ID (OBJECT ID)

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ASSESSMENT_NO	OBJECTID
518381	105-133-29
518383	105-160-16
518384	876-052-04
518385	#N/A
518386	105-192-07
518387	105-192-05
518390	105-133-37
518391	#N/A
518392	105-133-54
518393	105-191-22
518394	105-160-17
518395	105-152-19
518396	105-101-43
518397	876-051-15
518398	876-051-21
518399	876-051-29
518400	876-051-71
518401	105-142-12
518402	105-101-19
518403	105-172-12
518405	105-142-44
518406	105-142-13
518409	105-172-13
518410	105-133-30
518411	105-152-18
518412	105-133-55
518413	105-172-14
518414	105-172-18
518415	105-160-18
518416	105-152-16
518417	876-051-14
518418	876-033-24
518419	105-180-41
518420	105-192-15
518421	105-191-21
518422	876-051-28
518423	105-121-18
518424	105-180-16
518425	105-060-28
518426	876-052-47
518427	876-051-13
518429	105-133-31
518430	105-172-22
518432	105-172-21
518433	105-191-09
518434	876-033-21

ASSESSMENT_NO	OBJECTID
518435	105-172-20
518436	105-141-15
518437	105-133-33
518438	105-060-27
518439	105-133-27
518440	105-112-22
518441	105-192-24
518442	105-133-28
518443	105-152-02
518444	105-160-19
518445	105-102-09
518446	105-141-22
518447	105-141-23
518448	#N/A
518449	105-141-21
518450	105-122-18
518453	876-051-23
518454	105-102-06
518455	105-060-20
518456	876-052-41
518457	#N/A
518459	105-133-49
518460	105-122-19
518461	876-052-43
518462	#N/A
518463	105-152-20
518464	105-192-04
518466	105-133-22
518467	#N/A
518468	#N/A
518469	105-102-05
518471	876-051-12
518472	876-051-27
518473	876-051-24
518474	105-133-53
518477	105-180-15
518478	105-133-21
518479	105-122-50
518480	#N/A
518481	105-112-16
518482	105-121-17
518483	#N/A
518484	876-052-48
518485	105-133-05
518487	105-133-44
518489	105-141-36

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ASSESSMENT NO	OBJECTID
518490	#N/A
518491	105-112-17
518492	105-122-43
518493	105-180-32
518494	105-160-20
518405	105-101-22
518455	105-131-23
518490	876.052.44
518457 519409	105 122 50
516496	105-155-50
518499	#IN/A
518500	105-133-20
518501	105-111-15
518502	105-141-12
518503	105-111-13
518504	876-033-17
518505	#N/A
518506	105-180-13
518507	105-180-31
518509	105-121-16
518511	105-192-25
518513	876-052-45
518514	876-051-06
518516	105-112-10
518517	105-060-10
518518	105-133-47
518519	105-122-51
518520	105-192-02
518521	105-141-13
518523	876-051-05
518524	105-111-12
518525	876-051-25
518526	105-191-24
518527	105-152-21
518528	#N/A
518529	876-052-42
518531	876-051-22
518532	105-160-21
518532	±NI/Δ
518535	105-1/11-1/
518535	<u>+νι/ν</u>
510530	
	105-112-09
510558	105-133-10
510533	105-133-19
518541	105-111-11
518545	105-152-04
518546	105-191-32

ASSESSMENT_NO	OBJECTID
518547	105-133-48
518548	876-052-46
518549	105-122-37
518550	105-122-26
518551	105-141-37
518552	#N/A
518553	105-121-15
518556	876-033-16
518557	876-051-11
518558	105-133-17
518559	876-051-26
518560	105-192-01
518562	105-160-39
518564	105-191-38
518566	105-133-11
518567	105-122-48
518568	876-051-10
518569	105-122-47
518570	105-133-12
518571	#N/A
518572	105-121-24
518573	105-133-13
518574	105-122-23
518575	876-051-04
518576	105-122-49
518577	#N/A
518578	#N/A
518579	105-133-14
518580	105-111-14
518581	#N/A
518583	876-033-15
518584	105-191-35
518585	105-111-10
518586	105-133-52
518587	105-122-30
518588	#N/A
518590	105-152-05
518592	876-051-09
518593	105-112-18
518595	#N/A
518596	876-033-25
518600	#N/A
518601	105-121-19
518604	105-130-11
518605	105-112-06
518606	#N/A

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ASSESSMENT_NO	OBJECTID
518607	105-152-22
518608	876-034-19
518611	#N/A
518613	105-121-22
518614	#N/A
518616	876-051-03
518618	876-035-02
518619	105-140-03
518620	105-111-09
518621	105-122-25
518622	105-121-26
518623	#N/A
518624	105-102-26
518625	105-140-04
518626	105-191-41
518627	105-121-10
518630	#N/A
518631	#N/A
518632	105-160-25
518633	105-122-24
518636	105-140-05
518637	876-034-13
518638	876-035-01
518639	105-121-23
518640	105-121-21
518642	105-191-39
518645	105-102-68
518646	105-152-23
518647	105-140-07
518648	105-111-20
518650	105-121-25
518652	105-140-06
518654	105-351-13
518655	876-051-08
518656	105-111-08
518657	105-111-21
518658	105-191-29
518659	105-111-31
518660	105-160-26
518661	876-034-20
518663	#N/A
518665	105-111-27
518666	105-191-05
518667	#N/A
518668	105-111-16
518670	105-140-14

ASSESSMENT_NO	OBJECTID
518672	105-112-05
518674	105-140-09
518676	105-351-12
518681	105-140-10
518683	105-111-07
518685	105-111-22
518686	#N/A
518687	876-051-02
518688	105-112-04
518689	876-034-21
518691	105-351-04
518692	105-112-20
518693	105-140-11
518694	105-351-03
518695	105-152-07
518696	105-102-60
518697	105-191-03
518698	876-034-12
518699	105-351-10
518700	#N/A
518701	105-140-12
518703	105-351-11
518704	105-160-27
518705	105-121-04
518706	#N/A
518707	105-101-41
518708	#N/A
518709	#N/A
518710	#N/A
518713	105-191-04
518714	105-121-08
518716	105-121-29
518717	105-121-03
518718	105-111-06
518720	105-140-13
518721	105-060-29
518722	876-051-07
518723	105-121-02
518724	876-033-11
518725	105-121-28
518726	105-191-02
518727	105-111-24
518728	105-060-33
518729	105-112-21
518730	105-121-01
518731	105-152-24

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ASSESSMENT_NO	OBJECTID
518733	876-051-01
518735	105-111-05
518736	105-191-01
518737	105-152-11
518738	876-033-10
518740	105-111-23
518741	876-033-08
518742	876-033-09
518743	105-351-16
518745	#N/A
518747	876-034-11
518748	105-101-15
518749	105-111-04
518750	105-111-25
518751	105-112-01
518754	105-111-03
518755	105-152-12
518757	105-102-69
518758	105-102-05
518758	105-121-03
518701	105-131-03
510/02	105-111-50
518704	10E 102 6E
518705	105-102-05
518707	105-131-04
518768	105-160-32
518769	105-070-85
518770	876-033-07
5187/1	8/6-033-01
518//5	105-172-23
518776	105-152-25
518779	#N/A
518781	#N/A
518783	#N/A
518784	105-160-33
518785	#N/A
518786	105-102-08
518788	105-102-07
518789	105-060-15
518790	876-033-02
518791	105-102-04
518792	105-111-29
518793	105-102-03
518795	876-034-08
518796	876-034-09
518798	105-070-86
518802	105-111-28

ASSESSMENT_NO	OBJECTID
518807	876-033-06
518808	876-033-03
518811	105-051-84
518814	105-070-44
518816	876-034-07
518818	105-051-85
518821	105-131-24
518822	105-070-60
518823	105-131-22
518824	876-033-04
518826	876-034-06
518827	105-070-59
518828	105-101-27
518829	876-033-05
518832	876-032-06
518835	876-032-05
518836	876-034-01
518837	876-034-02
518838	876-034-03
518840	876-034-05
518842	876-034-04
518843	105-060-30
518845	105-070-94
518848	#N/A
518849	#N/A
518850	105-070-09
518851	876-062-06
518853	576-013-07
518861	105-051-44
518862	105-070-03
518875	105-070-93
518877	105-051-83
518900	105-280-05
518901	105-280-04
518902	105-051-43
518910	#N/A
518936	105-033-02
518946	105-033-01
518949	105-020-66
1788461	105-180-48
1788462	105-180-47
2157780	105-132-33
2158579	105-132-29
2158580	105-132-39
2158581	105-132-16
2158582	105-132-15

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ASSESSMENT_NO	OBJECTID
2158583	105-132-10
2158584	#N/A
2158585	105-132-14
2158586	105-132-12
2158587	105-132-11
2158588	#N/A
2158589	105-132-13
2160180	105-131-21
2160314	105-132-17
2160315	#N/A
2160317	#N/A
2160318	#N/A
2160319	#N/A
2160320	#N/A
2160321	#N/A
2160322	#N/A
2160323	105-132-35
2160324	#N/A
2160325	105-132-28
2160326	#N/A
2160327	105-132-04
2160328	#N/A
2160329	105-132-36
2160330	#N/A
2160331	#N/A
2160332	#N/A
2160333	105-132-18
2160334	#N/A
2160335	#N/A
2160336	#N/A
2160337	#N/A
2160338	#N/A
2160340	105-132-38
2160341	#N/A
2160342	105-132-27
2160343	#N/A
2160344	#N/A
2160345	#N/A
2160346	#N/A
2160347	105-132-25
2160348	105-132-30
2160350	105-132-31
2160351	105-141-10
2160352	105-132-19
2160353	#N/A
2160354	#N/A

ASSESSMENT_NO	OBJECTID
2160355	105-141-09
2160356	#N/A
2160357	#N/A
2160358	#N/A
2160359	#N/A
2160360	#N/A
2160361	#N/A
2160362	#N/A
2160363	#N/A
2160364	#N/A
2160367	105-132-21
2160368	105-132-20
2160369	105-132-22
2160370	#N/A
2160371	#N/A
2160372	#N/A
2160373	#N/A
2160374	#N/A
2160375	#N/A
2160376	105-141-02
2160377	#N/A
2160378	105-141-07
2160379	105-141-08
2160380	#N/A
2160381	#N/A
2160382	#N/A
2160383	105-141-32
2160384	#N/A
2160385	105-141-03
2160386	105-141-04
2160387	#N/A
2160388	#N/A
2160389	#N/A
2162179	#N/A
2162180	105-141-28
2162181	#N/A
2162182	105-141-39
2162184	105-141-31
2162188	#N/A
2162190	#N/A
2165379	#N/A
2165380	#N/A
2165381	#N/A
2165382	#N/A
2165383	#N/A
2165384	#N/A

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Silverado Canyon Unincorporated Parcels within 200 fo Attractments Hback Assessment Number (Assessment\_No) and Object ID (OBJECT ID)

ASSESSMENT_NO	OBJECTID
2165385	#N/A
2165386	105-132-37
2165389	#N/A
2169379	105-140-15
2170579	105-101-13
2170580	105-151-33
2170581	105-101-25
2181380	105-151-37
2181381	105-151-12
2181382	105-151-16
2181383	105-151-05
2181384	105-151-06
2181385	105-151-07
2181386	105-151-39
2181387	105-151-32
2181389	105-151-34
2181779	105-102-02
2181780	105-160-37
2181782	105-151-01
2181783	105-160-36
2181785	105-051-15
2181786	105-051-13
2181787	105-151-02
2181788	105-151-03
2181789	105-051-14
2182979	105-160-11
2182980	105-160-08
2182981	105-160-10
2182982	105-160-09
2182983	105-160-07
2182984	105-151-04
2182985	105-151-38
2182986	105-151-28
2182987	#N/A
2182988	#N/A
2182989	105-160-04
2182990	105-151-30
2182991	#N/A
2182992	105-151-27
2182993	105-160-34
2182994	105-151-26
2182995	105-151-29
2182996	105-151-25
2182997	105-151-21
2182998	105-160-30
2183000	105-151-19

ASSESSMENT_NO	OBJECTID
2183001	105-151-18
2183002	105-151-17
2183007	105-160-40
2183008	105-151-13
2183009	105-151-20
2185780	105-160-13
2185781	#N/A