



Last Resolution No. 16-997  
Last Ordinance No. 16-318

REGULAR MEETING OF THE SOLVANG CITY COUNCIL

COUNCIL CHAMBERS  
1644 OAK STREET

September 26, 2016  
6:30 p.m.

Please be advised that, pursuant to State Law, any member of the public may address the Council concerning any item on the Agenda. Please be aware that Items on the Consent Calendar are considered to be routine and are normally enacted by one vote of the Council.

**If you wish to speak on Items 3, 4, or 5 please do so during Public Communications.**  
Regular City Council meetings are broadcast live on **Channel 23** in the Santa Ynez Valley

Mayor Richardson to introduce and relinquish the meeting to Art Kaslow, serving as “Mayor for a Day”

**CALL TO ORDER**

**ROLL CALL**

**PLEDGE OF ALLEGIANCE**

**PRESENTATIONS**

Mayor Richardson will be announcing a proclamation recognizing Irma Padilla for her years of service to the City.

**CITY MANAGERS REPORT**

**1. PUBLIC COMMUNICATIONS – WRITTEN OR VERBAL**

At this time, please direct comments to the City Council regarding Consent Calendar Items or matters NOT on the agenda but within the jurisdiction of the Council. (Speakers are limited to five (5) minutes).

**2. COUNCIL COMMENTS AND REQUESTS**

Comments and requests from City Council Members. No action will be taken at this meeting.

**3. CORRESPONDENCE RECEIVED BY CITY COUNCIL**

**4. APPROVAL OF AGENDA AS PRESENTED**

**5. CITY COUNCIL MINUTES OF SEPTEMBER 12, 2016**

Approval of Draft Minutes.

**6. CONSENT AGENDA**

- a. Receive and File Sheriff's Department Report for August 2016
- b. Second Reading, by title only, of Proposed Amendment to Title 4 Chapter 10 amending Regulations for Massage Establishments
  1. Accept the Exemption to the California Environmental Quality Act pursuant to CEQA Section 15061 and adopt Ordinance No. 16-\_\_\_\_\_, on second reading by title only, an Ordinance of the City Council of the City of Solvang amending Title 4
- c. Introduction for First Reading, by title only, of Proposed Amendment to Title 9, Chapter 2 revising the Sewer Code to add Residential Water Softener Restrictions
  1. Introduce for first reading by title only Ordinance No. 16-\_\_\_\_\_, an Ordinance of the City of Solvang revising the Sewer Code; and
  2. Approve Budget Adjustment in the amount of \$20,000 for completion of conceptual City-Wide Wellhead Water Softening Study
- d. Interim Urgency Ordinance of the City of Solvang Prohibiting Manufacturing, Processing, Laboratory Testing, Labeling, Storing and Wholesale and Retail Distribution of Cannabis
  1. Adopt, on a 4/5 vote or greater, Urgency Ordinance No. 16-\_\_\_\_ prohibiting specified activities in the event that Proposition 64 passes, accept the Exemption to the California Environmental Quality Act (CEQA) pursuant to Section 15306 (Information Collection), and direct staff to file the Notice of Exemption.
- e. Resolution of Intention to approve an Amendment to the Contract between the California Public Employees Retirement System Board of Administration and the City Council of the City of Solvang and First Reading of an Ordinance to Amend Said Contract
  1. Adopt Resolution 16-\_\_\_\_, a Resolution of Intention to Approve an Amendment to the Contract between the Board of Administration of the California Public Employees' Retirement System and the City Council of the City of Solvang; and
  2. Introduce for first reading by title only Ordinance 16-\_\_\_\_, an Ordinance of the City Council of the City of Solvang authorizing an Amendment to the Contract between the Council of the City of Solvang and the Board of Administration of the California Public Employees' Retirement System
- f. Parking In-Lieu Promissory Note – 478 Fourth Place
  1. Approve and authorize City Manager to execute the Promissory Note for the Parking In Lieu fees for two (2) required spaces for the project located at 478 Fourth Place known as K'Syrah Catering.

**REGULAR AGENDA**

**7. ANNEXATION STUDY/SPHERE OF INFLUENCE UPDATE AND REVIEW OF DRAFT REQUEST FOR PROPOSALS**

Discuss and provide direction to staff on:

- a. Areas to be Studied; and
- b. Request for Proposals

**8. WASTEWATER TREATMENT PLANT (WWTP) CAPACITY ANALYSIS**

Receive update on remaining capacity at the WWTP.

**9. COUNCIL MEMBER REPORTS (Oral reports: Each Council Member will give oral reports on their activities in relation to the following committee or agencies. In addition, each member may report on items that will be included on the agenda for such committee or agency and seek guidance from the Council as a whole on such items, including on what position to take on behalf of the City)**

- Santa Barbara County Association of Governments
- Air Pollution Control Board
- Joint Wastewater Committee
- Finance Committee
- Chumash Tribe
- Indian Gaming Benefit Committee
- California Joint Powers Insurance Authority

**10. ADVANCE CALENDAR**

Informational Calendar – No Action.

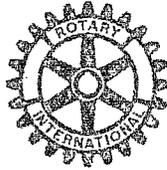
**11. ADJOURNMENT**

Copies of staff reports and supporting documentation pertaining to each item on this agenda are available for public viewing and inspection at City Hall, 1644 Oak Street, Solvang, during regular business hours and on the City's website [www.cityofsolvang.com](http://www.cityofsolvang.com), in addition, any writings relating to an open session agenda item provided to a majority of the Council that is distributed within 72 hours of the meeting, after the posting of the agenda, will be identified and available separately at City Hall and may be posted to the website.

**In Compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, you should contact the office of Administrative Services at 688-5575 or the California Relay Service. Notification 48 hours prior to the meeting would enable the City to make reasonable arrangements to ensure accessibility to this meeting.**



# Rotary



## Club Foundation Santa Ynez Valley



24 August 2016

Mayor Jim Richardson  
City of Solvang  
1644 Oak St,  
Solvang, CA 93463

Dear Mayor Jim,

Thanks to your Sponsorship contribution of \$7,000.00, our community had a very successful 4<sup>th</sup> of July Celebration provided by the Rotary Club of the Santa Ynez Valley. Enclosed is a copy of our newspaper advertisement showing our appreciation of your support.

You might like to relive the 4th of July festivities. Just click on <http://www.santaynezvalleyrotary.org> and then click "July 4<sup>th</sup> Festival Video" for an aerial view of that day's activities, closing with the Fireworks display.

We look forward to our continuing association with you.

Sincerely,

A handwritten signature in black ink that reads "Jeff Little".

Jeff Little  
President Rotary Club of Santa Ynez Valley

*The Santa Ynez Valley Rotary Club Foundation  
is a non-profit charitable organization  
No goods or services were given in exchange for all or part of the cash or property donated  
Federal Tax Identification #77-0384501*

**P.O. BOX 121, SOLVANG, CA 93464**



# Thank You!

The Santa Ynez Valley Rotary Club Wishes  
To Thank Everyone Who Made the 22nd Annual  
4th of July Fireworks Show & Festival a Resounding Success!

Without your generous contributions, support and continuing good will,  
we could not have brought this family fireworks event to our Valley.  
We Rotarians and the entire community laud the support of:

## SPONSORS

**PLATINUM SPONSORS** • City of Solvang • Santa Ynez Band of Chumash Indians

**DIAMOND SPONSORS** • Santa Ynez Valley Hotel Association • Buellton Chamber of Commerce • C&D llp

**GOLD SPONSORS** • Alisal Oaks Apts • Barca & Barca Financial Network • Edward Jones-Kelly Hunziker  
Hometown Insurance Services • Vreeland Ford • SYV Cottage Hospital

**SILVER SPONSORS** • Buellflat Rock Company • Chicago Title • Nielsen's Building Materials, Inc.  
Nielsen's Market • Owens, Jakkola and Thore • Pacific Western Bank • Pintado Pools  
Seaberry Inc dba Tower Pizza • Windmill Properties

## FRIENDS

King Frederik Inn • The Inn Group - Pea Soup Andersen's • Knight Broadcasting  
David Goldstein Architect, Inc • Home Connection • Olsen's Danish Village Bakery • Rio Vista Chevrolet  
Santa Ynez Valley Association of REALTORS • Santa Ynez Valley Hardware • Solvang Conference & Visitors  
Bureau • Stars of Santa Ynez, Inc. • Steve's Wheel & Tire • Todd Pipe & Supply • Dr. Art Kaslow D.D.S  
Gustavo Dascanio, MD • Santa Ynez Valley Medical Associates • Buellton Medical Center  
Santa Ynez Valley Vision Source Optometric Corp. • Gene Madsen • Dr. Ken Harwood

## AND OUR ENTERTAINERS

3HAB, Breaking Silence • Daniel Geiger • Jillian Garnett • Chloe Schwartz • Rachel & Jericho Guron  
Kaitlyn Chui • National Anthem-Allison Lewis • Emcee Doug Nelson of Krazy Country Radio

## AND ALL OUR VOLUNTEERS

Mike Murillo and Family • Nielsen's Building Materials • Recovery Ranch  
Santa Ynez Valley Robotics Engineering Team • SYV Rotarians-Spouses-Family members & Friends  
Solvang Fire Department • Solvang Police Department

## Contributions

If you enjoyed the fireworks, but were unable to attend, consider a contribution  
to enhance your Rotary community projects:

Santa Ynez Valley Rotary Foundation and mailed to P.O. Box 121, Solvang, CA 93463

## See You All Again Next Year!



MINUTES OF THE REGULAR MEETING OF THE  
SOLVANG CITY COUNCIL

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Council Chambers  
1644 Oak Street  
Solvang, CA 93463

September 12, 2016  
Monday  
6:30 pm

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**CALL TO ORDER:** Mayor Richardson called the meeting to order at 6:30 p.m.

**ROLL CALL:**

PRESENT: Mayor Richardson, Council Members Duus, Jamieson, Skytt, and Zimmerman

STAFF: Brad Vidro, City Manager; Roy Hanley, City Attorney; Matt van der Linden, Public Works Director, Fred Lageman, Parks and Recreation Director, Arleen Pelster, Acting Deputy City Clerk

**PLEDGE OF ALLEGIANCE:** Led by Mayor Richardson

**CITY MANAGER'S REPORT:** Informational report only

1. **PUBLIC COMMUNICATIONS – WRITTEN OR VERBAL**

Fred Kovol, Solvang Resident

- Provided weather information regarding potential rainfall
- Discussed weather forecasts and water supply matters

2. **COUNCIL COMMENTS AND REQUESTS**

None.

3. **CORRESPONDENCE RECEIVED BY COUNCIL**

Information only – no discussion.

4. **APPROVAL OF AGENDA AS PRESENTED**

Mayor Richardson noted he had invited several interested parties to speak regarding Item No. 11, and obtained Council consensus to move the item forward on the agenda due to the importance of public participation.

5. **CITY COUNCIL MINUTES OF AUGUST 22, 2016**

*Motion* was made by Council Member Jamieson to approve the minutes as written, seconded by Council Member Duus, and **carried** with a verbal response of four ayes and one abstention by Council Member Skytt.

6. **CONSENT AGENDA**

- a. Receive and File Sheriff's Department Report for July 2016
- b. Accept the Veteran's Memorial Building Lead Abatement, Painting and Windows project as complete and direct the City Manager to execute and record the Notice of Completion

*Motion* was made by Council Member Duus to approve the Consent Agenda, seconded by Council Member Zimmerman, and **carried** with a verbal response of five ayes.

**REGULAR AGENDA**

7. **TAJIGUAS RESOURCE RECOVERY PROJECT STATUS UPDATE**

Receive update from Santa Barbara County staff regarding the project.

A report and slide show was provided by Mark Schleich and Leslie Wells of the County of Santa Barbara Public Works Department. The Council discussed the project and related matters with County staff, including territory, life of post-project landfill, property ownership, financing negotiations between the City and County, fees and rates, use of transfer stations, and the cost of constructing new landfills.

Mayor Richardson opened the item for public comment at 7:21 p.m. and, seeing none, closed the item.

The Council thanked Mr. Schleich and Ms. Wells, and accepted the report.

8. **RECREATIONAL MARIJUANA URGENCY ORDINANCE**

Discussion and direction on a potential Urgency Ordinance Prohibiting Manufacturing, Processing, Laboratory Testing, Labeling, Storing, and Wholesale and Retail Distribution of Cannabis.

Staff report by Roy Hanley, City Attorney.

Mayor Richardson opened the item for public comment at 7:25 p.m. and, seeing none, closed the item.

Mayor Richardson stated he favors adoption of an urgency ordinance. Council concurred.

*Motion* was made by Council Member Skytt to direct staff to prepare an urgency ordinance, seconded by Council Member Jamieson, and **carried** with a roll call vote of 5-0.

9. **DONATION OF AN ARTIFICIAL "ALL LIGHT" DECORATIVE TREE FOR SOLVANG PARK**

Consider and provide staff direction on the potential donation of a "mega tree," an artificial Christmas tree decorated solely with strings of lights.

Staff report by Fred Lageman, Parks and Recreation Director.

Council discussed similar trees and the difficulty with keeping a live tree in acceptable condition in the planter.

Mayor Richardson opened the item for public comment at 7:31 p.m.

Tracy Farhad, Solvang Conference and Visitors Bureau

- Noted that the Solvang Conference and Visitors Bureau partners with the City on Christmas activities, and noted that the Solvang Conference and Visitors Bureau supports use of the “All Light” tree.

Mayor Richardson closed the item to public comment at 7:33 p.m.

Mayor Richardson commented that until the drought is over, this is a good solution and that he’d like to accept the donation.

Council Member Duus commented that although he is a traditionalist, he likes the idea of a 22 foot tall tree and is willing to give it a try.

*Motion was made by Council Member Duus to accept the donation of the “All Light” tree, seconded by Council Member Skytt, and carried with a roll call vote of 5-0.*

Mayor Richardson called for Item No. 11 to be considered before Item No. 10.

**11. INTRODUCTION FOR FIRST READING, BY TITLE ONLY, AN ORDINANCE REVISING THE SOLVANG MUNICIPAL CODE TITLE 9, CHAPTER 2 SEWER CODE TO ADD RESIDENTIAL WATER SOFTENER RESTRICTIONS**

Staff Report by Matt van der Linden, Public Works Director. Matt van der Linden noted that staff would be bringing 2017 water supply recommendations to the Council soon, and noted that the City is in reasonably good shape regarding water supply at this time.

Council discussed methods of reducing concentrations of sodium, chlorides, and total dissolved solids (TDS) with Matt van der Linden, and how the concentrations are affected by salt-using self regenerating water softeners. Council Member Zimmerman inquired if the 600 homes called out in the staff report were all within City limits, and Matt van der Linden replied affirmatively. Discussion ensued as to how to address concentrations in wastewater received from other agencies. Roy Hanley advised the Council that fines for violation of these discharge limits are usually very high. Matt van der Linden noted a nitrate limit will likely be imposed in the near future.

Mayor Richardson requested representatives of companies which provide water softeners to come forward as he had several questions for them.

Don Decker, Culligan Water Conditioning

- Noted many customers would be upset, as the exchange tank system runs out of soft water quickly during times of high usage, such as when guests are visiting. Costs would increase from \$39 per month to \$80-\$90. Rebate system is a positive step but follow-through is necessary. Home improvement stores sell small systems which are far worse than commercially provided systems. Noted soft water saves on overall consumption since less water is needed for household uses.

Mayor Richardson opened the item for public comment at 8:08 p.m.

Fred Koval, Solvang Resident

- Commented that the cause of the problem is the quality of City water and recommended the Council pursue development of a treatment plant. Stated no solid numbers were presented and that City is already exceeding limits.

Mark Infanti, Solvang Resident

- Inquired about effects from residences which are on septic systems, whether any consideration had been given to saltwater swimming pools since they drain to the sewer, discussed undesirable aspects of the exchange tank systems, health issues, and inquired if small drywells could alleviate the problem. Added that allowing existing systems to remain is very positive.

Gay Infanti, Solvang Resident

- Noted nitrate contamination is from agriculture uses, and inquired if the City would take the wastewater from residences in the Santa Ynez valley when they remove septic tanks systems and connect to the sewer system.

Mayor Richardson closed the item to public comment at 8:32 p.m.

Council Member Skytt noted that the City does not take wastewater from Los Olivos.

General discussion ensued regarding the need for a water treatment plant and difficulties finding an acceptable location, and the need to pursue a permanent solution in meeting the concentration limits. Council generally agreed to introduce the ordinance with some amendments, pursue a permanent solution, and reach out to Santa Ynez Community Services District to request the agency implement concentration reduction measures.

Council Member Skytt questioned how we would enforce the new ordinance. City Attorney Hanley indicated that we have a complaint generated code enforcement program and regulations for administrative citations and fines for code violations.

***Motion*** was made by Council Member Duus to:

- Introduce for first reading by title only Ordinance No. 16-\_\_\_\_\_, an ordinance of the City of Solvang revising the Sewer Code, with amendments to specify that existing salt-using self regenerating water softening systems are legal, non-conforming in nature and may remain, while no new such systems may be installed; and*
- Approve the Water Softener Rebate Program, and direct staff to implement the program for 18 months beginning January 1, 2017 with a mid-year Budget Adjustment of \$40,000; and*
- Direct staff to coordinate with Santa Ynez Community Services District requesting they implement sodium, chloride, and TDS reduction measures within their service area.*

*The motion was seconded by Council Member Jamieson, and **carried** with a roll call vote of 4-1 with Council Member Zimmerman voting No.*

## **10. REFURBISHING THE TURF AT SOLVANG PARK**

Staff report by Fred Lageman, Parks and Recreation Director.

General discussion ensued regarding the status of negotiations with the Vikings regarding park improvements, replacement of the Mayten trees, artificial turf, sod vs. seed, and time needed for installation and maturation of the grass.

Mayor Richardson opened the item for public comment at 9:08 p.m.

Fred Kovol, Resident

- Noted that Solvang Park is in the heart of the City and the installation of grass needs to be fast-tracked.

Mayor Richardson closed the item to public comment at 9:10 p.m.

*Motion was made by Council Member Jamieson to install \$12,000 worth of sod and hardscape, utilizing the funds saved from the contract with the Sheriff's Department, seconded by Council Member Zimmerman, and carried with a roll call vote of 5-0.*

12. **COUNCIL MEMBER REPORTS (Oral reports: Each Council Member will give oral reports on their activities in relation to the following committee or agencies. In addition, each member may report on items that will be included on the agenda for such committee or agency and seek guidance from the Council as a whole on such items, including on what position to take on behalf of the City)**

- Santa Barbara County Association of Governments
- Air Pollution Control Board
- Joint Wastewater Committee
- Finance Committee
- Chumash Tribe

**Mayor Richardson** discussed the funding for the expansion of the fire station and requested it be brought back on the next Council agenda.

- Indian Gaming Benefit Committee
- California Joint Powers Insurance Authority

13. **ADVANCE CALENDAR**

Informational calendar – no action.

**ADJOURNMENT:** Meeting was adjourned at 9:22 p.m.



# MEMORANDUM

**Date:** September 19, 2016  
**To:** Solvang City Council  
**From:** Senior Deputy Charlie Uhrig  
**Subject:** Solvang Statistics and Activity Report for August  
**CC:** Lt. Shawn O'Grady

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This statistics report is designed to provide a general overview of law enforcement activity in the City of Solvang for the month of August. The report highlights and describes patterns of activity, significant felonies in the city, and noteworthy performances by deputies assigned to the Solvang station.

## **Burglary:**

Three burglaries were reported in Solvang during the month of August.

On 08-03-16 (**case 16-11261**), Solvang Patrol was dispatched to the 1700 block of Mission Drive for a report of prowler on the property. While enroute, SBSO Dispatch advised that a suspect was seen in the garage on the property and attempting to gain entry into the home via the back door. Upon arrival, a subject matching the description was contacted standing in the parking lot across from the garage and home. (in close proximity). The subject told deputies he owned the property, but a check confirmed that was not the case. During the course of the investigation it was learned the suspect had taken property from inside the garage, and was still in possession of that property. It was also learned that this same subject had been on the property earlier in the day, and had caused a problem, but the staff had not reported that incident. The suspect was arrested for felony burglary, transported and booked into County Jail.

On 08-11-16 (**case 16-11723**), Solvang Patrol was dispatched to a report of a residential burglary in the 1500 block of Aalborg Way. The victims were contacted and told deputies the following: The primary owner of the residence said the home was

vacant, until she received a phone call from her son stating that his bed room and the other two bedrooms had been ransacked and some items were missing. She arrived home shortly after the call and discovered several watches and jewelry missing from the bedrooms. She also said she would provide a detailed list of items missing after doing an inventory of the residence. During the investigation, it appeared that the point of entry was a bedroom window, which she had closed but didn't lock, and was found open upon her return. She stated that possible suspect(s) could be former troubled students whom she has had in her home. The case is suspended pending further leads.

On 08-26-16 (**case 16-12450**), Solvang Patrol contacted a victim of a residential burglary in the 1600 block of Elm Avenue. The victim stated an unknown suspect(s) entered his unlocked (closed) garage and stole tools from inside his garage, and bags of recycling items from his driveway. A check of the nearby residences did not reveal any witnesses to the burglary, and the victim had no suspect information. The case is suspended pending further leads.

**Other Significant Activity:**

During the month of August deputies conducted 55 traffic stops which resulted in 17 citations written for various offenses, including 7 moving violations. There were 11 calls for alarms and 4 calls for 9-1-1 follow ups. In addition, there were 9 traffic related investigations during the month of August. There was no coroner case reported in Solvang during the month of August.

On 08-04-16 (**case 16-11338**), Solvang Patrol was dispatched to a report of Fraud. The daughter of the elderly victim was contacted and stated the following: Her elderly mother was contacted, via a phone call, and was told a relative was in jail and needed money for bail. The victim was told to obtain \$2,000 in iTunes cards, and call back with the card numbers. The reporting party said her mother called back with card numbers in the amount of \$1,500, before realizing it was a scam. She requested a report because iTunes would reimburse the victim if a police report was taken and given to them. The case is closed, unless more information is needed by iTunes.

**Murder:**

No murders were reported in Solvang for the month of August.

**Rape:**

No rapes were reported in Solvang for the month of August.

**Robbery:**

No robberies were reported in Solvang during the month of August.

### **Domestic Assault/Assault:**

There were no felony cases and only one misdemeanor domestic violence case reported for the month of August. There was one felony Assault case reported this month.

On 08-09-16 (**case 16-11576**), deputies conducted a welfare check on a local resident. During the course of the subsequent investigation, it was learned the victim had been the target of Elder Abuse, Battery, and possible Hate crimes from his roommates. The two suspects eventually admitted to the incidents. A Restraining Order was granted to the victim, and we were able to remove him from the residence and house him temporarily. The two suspects were arrested for felony Elder Abuse, Hate Crimes, Conspiracy and Battery. They were transported and booked into County Jail.

### **Grand Theft:**

Two grand thefts were reported in Solvang during the month of August.

On 08-05-16 (**case 16-11394**), Solvang Patrol was dispatched to the 1600 block of Copenhagen Drive regarding a theft from a local business. The victim was contacted and he told the following: He was alerted by his staff member regarding pocket watches stolen from a cabinet. While the employee was cleaning the glass cabinets, she noticed that the glass panels were pulled away just enough for someone to remove items from inside the locked cabinet. He said he examined the locked cabinet and noticed that someone had stolen two pocket watches from inside; one valued at \$3,500 and the other valued at \$500. The business had surveillance video which was reviewed, and a single suspect was viewed. The victim said he did not recognize the subject, and neither did the other employees. The case is closed pending further leads.

On 08-19-16 (**case 16-12103**), Solvang Patrol was dispatched to a theft of a saddle at 700 block of Mesa Drive. Upon arrival, the reporting party/victim was contacted and stated the following: She went out to her unlocked horse trailer to retrieve her saddle and tack equipment. She said she noticed the saddle, along with several bridles, were missing, and also realized that other horse related supplies had been tossed about the front portion of the trailer. She said she last saw the saddle and tack equipment approximately one month earlier, and did not know who was responsible for the theft, but suspected gardeners who frequented the neighboring properties. The saddle and tack equipment were valued at over \$3,000. A canvas of the area revealed no witnesses or possible suspects. The case is closed pending further leads.

## **Auto Theft**

No thefts of an auto were reported in Solvang during the month of August.

### **Misdemeanors/Thefts:**

There was one vandalism case, and one petty theft from an unlocked vehicle, reported during the month of August.

### **Arrests:**

During the month of August, deputies made a total of 9 arrests, including 2 felony arrests. These arrests also included the following types of Misdemeanor arrests: 1 for DUI, 2 for Public Intoxication and none for Narcotics.

On 08-03-16 (**case 16-11261**), Solvang Patrol was dispatched to the 1700 block of Mission Drive for a report of prowler on the property. While enroute, SBSO Dispatch advised that a suspect was seen in the garage on the property and attempting to gain entry into the home via the back door. Upon arrival, a subject matching the description was contacted standing in the parking lot across from the garage and home. (in close proximity). The subject told deputies he owned the property, but a check confirmed that was not the case. During the course of the investigation it was learned the suspect had taken property from inside the garage, and was still in possession of that property. It was also learned that this same subject had been on the property earlier in the day, and had caused a problem, but the staff had not reported that incident. The suspect was arrested for felony burglary, transported and booked into County Jail.

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## Monthly Activity Report for August

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This is the August end of the month report from the Solvang Community Resource Deputy. It highlights all the activities, meetings, and presentations by the Community Resource Deputy for the month of August.

### **MEETINGS:**

On August 8, I met with City Staff to discuss noise complaints in the downtown area.

On August 9, I met Goleta CRD Valadez and Isla Vista CRD McKarrell, to discuss the Explorer program.

On August 15, I met with Mission Santa Ines staff regarding a possible future presentation.

On August 17, I met with Bob Stokes of Wheels N' Windmills, and Tim Keaty from Solvang City PW, regarding the upcoming Car Show event.

On August 22, I met with Salvation Army staff and the Regional Director, in regards to changing bank accounts. I also attended and presided over our local Salvation Army quarterly meeting.

On August 23, I met with Goleta CRD Valadez, regarding homeless and transient issues, and possible solutions to housing them in Santa Barbara or Santa Maria, after law enforcement contacts. I also met with Solvang City Staff and Sheriff staff to discuss security staffing issues at the Vets Hall.

### **PRESENTATIONS:**

One presentation was given in the month of August.

On August 1, I did a presentation on "Scams and Fraud" for members of the Santa Ynez Valley Mens Forum. The presentation was at The Corque restaurant and about 30 people were in attendance.

### **ACTIVITIES:**

On August 2, 3, and 8, I worked security details for the Courts.

On August 4, 6, 7, 11, 12, and 13, I coordinated a night time Foot Patrol of the downtown area to monitor for noise complaints. No incidents or violations to report during our patrols.

On August 5, I worked a traffic detail/Foot Patrol for the Santa Barbara Fiesta parade and then with Fred Lageman for our Solvang Movies in the Park.

On August 6, I worked a security detail at the Vets Hall. I also worked a partial Patrol night shift after the event due to staffing issues.

On August 10, I worked a Drug Destruction detail.

On August 12 and 14, I assisted with the setup of the Viking Cup boxing event.

On August 17, I setup the Message Board to notify residents in the Solvang School area that school was beginning on August 22.

On August 22, 23 and 25, I worked a Solvang Patrol detail around Solvang School.

On August 24, I met with Rabobank staff regarding Salvation Army signed and notarized paperwork.

On August 26 and 27, I worked a traffic detail for the Wheels N' Windmill Car Show. Beginning at midnight, I made contact with a number of vehicle owners about moving their vehicles in the affected "No Parking" area. Consequently, we were able to avoid towing any parked vehicles. No other incidents to report.



## CITY OF SOLVANG STATISTICS 2016

ACTIVITY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD Total
Log Entries	255	282	317	340	423	351	452	410					2830
OAI Reports	45	35	34	33	65	51	54	52					369
Trfc Invest.	10	5	10	13	9	7	9	9					72
Coroner	0	0	0	2	1	0	0	0					3
Burglaries	4	1	2	1	0	4	6	2					20
Attempts	0	0	0	1	0	1	0	0					2
Residential	1	0	0	0	0	1	1	2					5
Vehicle	2	0	2	0	0	1	5	0					10
Commercial	1	1	0	1	0	2	0	0					5
Other	0	0	0	0	0	0	0	0					0
Felonies	3	5	1	4	3	7	2	4					29
Murder	0	0	0	0	0	0	0	0					0
Rape	0	0	0	0	0	0	0	0					0
Robbery	0	0	1	0	0	0	0	0					1
Assault	1	1	0	0	1	2	0	1					6
Grand Theft	1	1	0	0	0	3	0	2					7
Auto Theft	0	0	0	0	0	1	0	0					1
Other	1	3	0	4	2	1	2	1					14
Misd./Thefts	7	1	2	3	3	5	7	2					30
Arrests	12	7	3	8	16	13	14	9					82
Misd.	9	3	2	4	13	9	10	7					57
Felony	3	4	1	4	3	4	4	2					25
DUI	4	2	1	0	2	1	0	1					11
Public Intox.	0	0	0	2	4	2	8	2					18
Narcotic	1	1	1	1	2	1	2	0					9
Citations	5	8	10	14	23	16	13	17					106
Moving	1	0	1	5	4	2	4	7					24
Equipment	4	3	1	2	1	4	3	4					22
Other	0	4	8	6	16	6	5	5					50
Parking	0	1	0	1	2	4	1	1					10
Viborg Rd.	0	1	0	2	0	0	1	2					6
Skate Park	0	0	0	0	0	0	0	0					0



**CITY COUNCIL  
STAFF REPORT/CONSENT AGENDA**

**TO:** SOLVANG CITY COUNCIL MEMBERS

**FROM:** Arleen T. Pelster, AICP, Planning & Economic Development Director

**MEETING DATE:** September 26, 2016

**DATE PREPARED:** September 12, 2016

**SUBJECT: Second Reading of Proposed Amendment to Title 4 Chapter 10 Amending Regulations for Massage Establishments**

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**I. RECOMMENDATION:**

Accept the Exemption to the California Environmental Quality Act pursuant to CEQA Section 15061 and adopt Ordinance No. 16-\_\_\_\_\_, on second reading by title only, an ordinance of the City Council of the City of Solvang amending Title 4.

**II. BACKGROUND:**

State law was amended in 2015 by AB 1147 to change regulations for massage establishments. The City Council amended the Municipal Code in 2015 to reflect the provision of AB 1147. Further amendment of the Municipal Code is now recommended to address difficulties for some massage therapists in obtaining a California Massage Therapy Council (CAMTC) certificate.

On July 25, 2016, the Council directed staff to add the following language for the second reading of the ordinance:

“Notwithstanding Subsection A of this Section, the City Manager is authorized to issue Business Certificates to those persons who have had a valid Solvang business certificate since on or before 6/27/2011.”

**Ordinance Amendment – Massage Establishment Regulations**

City Council Hearing Date: September 26, 2016

Page 2 of 3

On August 8, 2016, the Council heard public testimony regarding the CAMTC and the process/qualifications required to obtain a CAMTC certificate. Council directed staff to provide additional information regarding the CAMTC, which was provided under separate cover to Council. Staff has brought the ordinance amendment back to Council as presented in draft form on August 8, 2016.

**III. DISCUSSION:**

State law was amended to restore local control over permitting for massage establishments. The recently amended regulations require that massage therapists obtain a certificate from the CAMTC prior to issuance of a Business Certificate. At the time of amendment of the code, some details were unknown regarding educational requirements for CAMTC certificates. It has come to staff's attention that the CAMTC requires 500 hours of relevant education to qualify for a certificate. Some long-term therapists fulfilled their educational requirements with 250 hours, which was the standard in the past. It would be a financial and operational burden for these therapists to obtain an additional 250 hours of schooling. Therefore, staff is proposing to include authority for the City Manager to review the credentials of therapists with less than 500 hours of education and waive the requirement for a CAMTC certificate. Language is included to specify that the certificate may not be waived solely to avoid payment of fees.

**IV. ENVIRONMENTAL REVIEW**

The proposed amendments to the Zoning Ordinance were determined to be exempt from environmental review pursuant to §15061 of the Guidelines for the Implementation of CEQA.

This section states that CEQA only applies to *“projects, which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity may have a significant effect on the environment, the activity is not subject to CEQA”*. The proposed ordinance amendments are in the interest of the general community welfare and are consistent with good zoning and planning practices. Any potential environmental impacts associated with the proposed impacts are considered insignificant. The amendments are consistent with the General Plan, the requirements of State Planning & Zoning Laws and the Solvang Municipal Code, Title 11.

**V. ALTERNATIVES:**

The City Council could provide direction and refer back to staff.

**VI. FISCAL IMPACT:**

None.

**Ordinance Amendment – Massage Establishment Regulations**

City Council Hearing Date: September 26, 2016

Page 3 of 3

**VII. ATTACHMENTS:**

1. City Council Ordinance 16-\_\_\_\_
2. Draft CEQA Notice of Exemption



**ORDINANCE NO. \_\_\_\_**

**AN ORDINANCE AMENDING TITLE 4 CHAPTER 10 OF THE MUNICIPAL CODE OF SOLVANG TO PROVIDE UPDATED REGULATIONS FOR MASSAGE THERAPY**

WHEREAS, the City Council of the City of Solvang seeks to implement AB 1147 by amending the Municipal Code to provide lawful regulations for massage therapy businesses; and

WHEREAS, it is in the interest of the health, welfare and safety of the people of Solvang to provide regulations regarding massage therapy businesses.

NOW, THEREFORE, THE PEOPLE OF THE CHARTERED CITY OF SOLVANG DO HEREBY ORDAIN AS FOLLOWS:

Section 1. Amendment.

Section 4-10-3 is hereby amended to read as follows:

4-10-3: STATE CERTIFICATION:

A. Any person practicing massage therapy in the city shall have a valid CAMTC certificate that is in full force and effect.

B. Notwithstanding subsection A of this section, any person who has in full force and effect a previously issued and valid business certificate from the city for a massage establishment shall obtain an CAMTC certificate prior to the expiration of their current valid city business certificate, except as follows. The City Manager is authorized to issue Business Certificates to those persons who have had a valid Solvang business certificate since on or before June 27, 2011. The CAMTC certificate requirement shall not be waived solely on the basis of economic hardship associated with payment of fees.

C. Massage establishments shall maintain on the premises and file at the city copies of or provide other evidence of the CAMTC certificates held by massage therapists and massage practitioners, the persons providing massage therapy at that business. (Ord. 11-295, 6-27-2011)

Section 2. Exemptions From CEQA.

The City Council finds, pursuant to Title 14 of the California Code of Regulations, section 15061 (b)(3), that this ordinance is exempt from the requirements of the California Environmental Quality Act (CEQA) in that it is not a project, which has the potential for causing a significant effect on the environment.

Section 3. Severability.

If any section, subsection, subdivision, paragraph, sentence, clause or phrase of this Ordinance, or any part thereof, is for any reason held to be unconstitutional or invalid or

ineffective by any court of competent jurisdiction, such decision shall not affect the validity or effectiveness of the remaining portions of this Ordinance. The City Council hereby declares that it would have passed each section, subsection, subdivision, paragraph, sentence, clause or phrase of this Ordinance irrespective of the fact that one or more sections, subsections, subdivisions, paragraphs, sentences, clauses or phrases be declared unconstitutional or invalid or effective. To this end the provisions of this Ordinance are declared to be severable.

Section 4. Effective Date

This Ordinance shall be in full force and shall take effect thirty (30) days after its passage.

Section 5. Publication

Solvang is a Charter City and has adopted its own rules for summarizing and posting ordinance once they are adopted. The City Attorney will prepare a summary of this ordinance. The summary will be posted in three locations after adoption as directed in the Solvang Municipal Code. The City Clerk shall keep a true and correct copy of the full ordinance together with a record of the vote of each council member.

PASSED, APPROVED, AND ADOPTED this 26th day of September, 2016.

BY: \_\_\_\_\_  
Jim Richardson, Mayor

ATTEST:

\_\_\_\_\_  
Lisa S. Martin, City Clerk

STATE OF CALIFORNIA            )  
COUNTY OF SANTA BARBARA    )  
CITY OF SOLVANG                )

I, Lisa S. Martin, City Clerk of the City of Solvang, do hereby certify that the foregoing Ordinance had its first reading on August 8, 2016 and had its second reading on September 26, 2016 and was passed by the following vote:

AYES:  
NOES:  
ABSENT:  
ABSTAIN:

BY: \_\_\_\_\_  
Lisa S. Martin, City Clerk





ATTACHMENT 2

**NOTICE OF EXEMPTION**

**To:** County Clerk  
County of Santa Barbara  
105 East Anapamu Street  
Santa Barbara, CA 93101

**Project Title:** Amendments to Title 4, Chapter 10 of the Solvang Municipal Code

**Project Description:** Review of proposed Ordinance Amendments to Title 4, Chapter 10 of the Solvang Municipal Code to Amend Regulations for Massage Establishments.

**Specific Location:** Citywide

**Name of Public Agency Approving Project:** City of Solvang

**Name of Person or Agency Carrying Out Project:** Arleen T. Pelster, Planning & Economic Development Dir.

**Exempt Status:** *(check one)*

- Ministerial [Sec. 21080(b)(1); 15268];
- Declared Emergency [Sec. 21080(b)(3); 15269(a)];
- Emergency Project [Sec. 21080(b)(4); 15269(b)(c)];
- Categorical Exemption. State type and section number:
- Statutory Exemptions. State code number:
- No Possibility of Significant Effect [Sec. 15061(b)(3)]

**Cite specific CEQA Guideline Section:** **§15061.** This section states that CEQA only applies to “projects, which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity may have a significant effect on the environment, the activity is not subject to CEQA”.

**Reasons why project is exempt:**

The environmental impacts of the proposed amendments to Title 11 are insignificant. The proposed amendments are in the interest of the general community welfare and are consistent with the General Plan, the requirements of State Planning & Zoning Laws and the Solvang Zoning Regulations. The proposed amendments to Title 11 are consistent with good zoning and planning practices.

**Lead Agency Contact/Phone:** Arleen T. Pelster / 805.688.4414

Signature: \_\_\_\_\_ Date: \_\_\_\_\_ Title: Planning Director





**CITY COUNCIL  
STAFF REPORT/CONSENT AGENDA**

**TO:** SOLVANG CITY COUNCIL MEMBERS

**FROM:** Matt van der Linden, Public Works Director/City Engineer

**MEETING DATE:** September 26, 2016

**DATE PREPARED:** September 16, 2016

**SUBJECT: INTRODUCTION FOR FIRST READING, BY TITLE ONLY,  
RESIDENTIAL WATER SOFTENER RESTRICTIONS – SEWER  
CODE REVISION**

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**I. RECOMMENDATIONS:**

1. Introduce for first reading by title only Ordinance No. 16-\_\_\_\_\_, an ordinance of the City of Solvang revising the Title 9, Chapter 2 to add Residential Water Softener Restrictions; and
2. Approve Budget Adjustment for completion of conceptual City-Wide Wellhead Water Softening Study.

**II. BACKGROUND:**

The City of Solvang Wastewater Treatment Plant (WWTP) operates under a Waste Discharge Permit from the Regional Water Quality Control Board (RWQCB). Some of the constituents that most significantly contribute to the degradation of surface water and groundwater quality include nitrogen, sodium, chloride, and total dissolved solids (TDS or hardness). In recognition of this fact, within the City's Waste Discharge Permit, RWQCB has imposed discharge limits on the concentrations of sodium, chloride, and TDS within the effluent of the Solvang WWTP.

In 2002, following the passage of State legislation, the Solvang City Council revised its Municipal Code and implemented non-residential water softener restrictions effectively prohibiting brine discharge from all non-residential land

uses within the City. This has helped the City in the past to comply with the State imposed discharge limits for the WWTP. On an annual basis, from 2002 through 2012, State water which is low in TDS, comprised a large percentage of the City's water supply. This also helped the City comply with the State imposed discharge limits for the WWTP.

During the past four years of severe drought in California, the City has had to rely more heavily on local groundwater supplies, and the sodium, chloride, and TDS concentrations in the Solvang WWTP effluent have increased to undesirable levels. The undesirable concentrations of sodium, chloride, and TDS in the WWTP effluent have the potential to result in the gradual degradation of the Santa Ynez Uplands Groundwater Basin and Santa Ynez River Alluvium upon which the City relies as two of its water supply sources.

In October 2011, the City of Solvang completed a Salt Management Study, an independent study of the sources of sodium, chloride, and TDS that reach the WWTP, and found that residential salt-using self regenerating water softeners (referred to as "automatic water softeners") are a significant contributor to the higher concentrations of sodium, chloride, and TDS in the WWTP effluent. Based on national studies, each salt-using self regenerating water softener is estimated to contribute between 20 and 30 pounds of salt each month to the Solvang WWTP. The use of sodium chloride, and/or potassium chloride both contribute to the undesirable concentrations of chloride, and TDS in the WWTP effluent. Therefore, the use of potassium chloride pellets instead of sodium chloride rock salt in salt-using self regenerating water softeners does not solve the problem.

At its regular meeting of February 22, 2016 the Solvang City Council considered revising the Sewer Code and incorporating residential water softener restrictions. However, the City Council chose not to take action at that time, and directed staff to return to City Council with this item in the future in conjunction with a Water Softener Rebate Program.

### **III. DISCUSSION:**

At its regular meeting of September 12, 2016 the Solvang City Council again considered revising the Sewer Code and incorporating residential water softener restrictions as well as a Water Softener Rebate Program. Shortly before the meeting, staff became aware of additional information and recommended a revised version of the proposed Ordinance. Also, during discussion, questions were raised regarding the impact of salt water swimming pools. Upon research it has been determined that salt water swimming pools rarely discharge to the public sewer system. Therefore, restrictions relative to salt water swimming pools are not recommended at this time.

In addition to the factors discussed in the Background section above, with the projected reduced availability of State water, the City's recently completed Water Supply Management Plan has recommended less usage of State water during periods of higher water availability, and banking this water for use during future droughts. Therefore, during typical years, larger quantities of local groundwater that is higher in TDS will be used resulting in more automatic water softener brine discharge to the sewer system. This will perpetuate the undesirable concentrations of sodium, chloride, and TDS in the WWTP effluent unless other mitigating actions are taken. In order to protect the water quality of the Santa Ynez Groundwater Basin and Santa Ynez River Alluvium for beneficial uses by the City and its neighboring agencies, staff recommends implementation of restrictions on residential water softeners as described below.

Title 9, Chapter 2 of the City of Solvang Municipal Code sets forth the Sewer Code for the City, and explains all of the laws, rules and regulations that pertain to the provision of sewer service within the City. Staff recommends that Title 9, Chapter 2, Sewer Code, Article C now be revised to mitigate degradation of the Santa Ynez Groundwater Basin and assist the Solvang WWTP in compliance with the RWQCB discharge limits on the concentrations of sodium, chloride, and TDS within the Plant effluent. Included as attachments are: the existing Code Section 9-2C-9: Water Softening and Conditioning Equipment, and proposed Revised Code Section 9-2C-9. More specifically, staff recommends "grand-fathering" in existing salt-using self regenerating water softeners, prohibiting the future installation of salt-using self regenerating water softeners, and allowing the installation of salt-free canister type ("portable exchange tank") water softeners.

During the regular meeting of September 12, 2016 the alternative of City-wide wellhead treatment/water softening was discussed. Also, during the public comment period complaints were heard from residents about the hardness of City water, and support for City-wide wellhead water softening was expressed. Council members expressed interest in studying this alternative, and directed staff to proceed with a conceptual study of water softening alternatives, and evaluate the cost ramifications in our ongoing Water & Sewer Rate Study. It was also suggested that the proposed Water Softener Rebate Program be postponed until after completion of the City-wide wellhead water softening study. To proceed with the City-Wide Wellhead Water Softening Study, a budget adjustment of \$20,000 is required. Staff recommends the City Council approve the attached budget adjustment.

It should be noted that the Solvang WWTP treats the wastewater generated from the Santa Ynez community. Our Agreement with the Santa Ynez Community Services District (SYCSD) requires that they implement water quality regulations at least equivalent to those of the City. Therefore, staff will coordinate with SYCSD as appropriate upon action by the City Council.

**IV. ALTERNATIVES:**

The City Council could direct staff to make additional changes to Title 9, Chapter 2, Article C, Section 9-2C-9: Water Softening and Conditioning Equipment prior to the second reading and adoption.

There are only two viable alternative methods for reducing sodium, chloride, and TDS from the WWTP effluent: 1) Add costly high capacity water softening at each City well, and 2) Add even more costly additional treatment at the WWTP. The cost of both alternatives is in the millions of dollars. If the budget adjustment for a City-Wide Wellhead Water Softening Study is approved staff will return upon completion with more detailed cost information.

**V. FISCAL IMPACT:**

In general there is not a significant fiscal impact to the proposed updates of Title 9, Chapter 2 Sewer Code. There is potential significant cost savings in maintaining compliance with our WWTP Waste Discharge Permit with the State. The cost to complete a conceptual City-Wide Wellhead Water Softening Study is estimated at just under \$20,000. Staff recommends the City Council approve the attached budget adjustment if they desire to proceed with this study.

**VI. ATTACHMENTS:**

1. Existing Title 9, Chapter 2, Article C – Water Softening and Conditioning Equipment (Nonresidential Brine Discharge Prohibition)
2. Title 9, Chapter 2 Sewer Code Revision Ordinance (adoption pages)
  - A. Proposed revised Title 9, Chapter 2, Article C – Water Softening and Conditioning Equipment
3. Budget Adjustment

**CITY OF SOLVANG  
MUNICIPAL CODE**

**EXISTING TITLE 9, CHAPTER 2, ARTICLE C**

**9-2C-9: WATER SOFTENING AND CONDITIONING EQUIPMENT:**

- A. Disposal Of Wastes From Nonresidential Uses: No person shall allow, permit or cause any water conditioning or softening equipment of any type to discharge its wastes into the city sewage system, nor shall any such person deposit or cause to be deposited into the city sewage system the waste product of any water softening or conditioning equipment of any type. The foregoing sentence shall not apply to the wastes or waste product of any water softening or conditioning equipment that is used exclusively for residential uses in accordance with the Health And Safety Code, article 1 of [chapter 5](#) of part 12 of division 104, section 116775 et seq.
- B. Inspection Of Equipment: Any person using, operating or maintaining water conditioning or softening equipment of any type within the boundaries of the city shall make such equipment accessible to the city inspector for inspection at such reasonable times as the city inspector may specify, and shall furnish such information concerning the operation and use of said equipment as the city inspector may reasonably request. (Ord. 16-318, 3-14-2016)



**CITY OF SOLVANG  
MUNICIPAL CODE**

**PROPOSED TITLE 9, CHAPTER 2, ARTICLE C**

**9-2C-9: WATER SOFTENING AND CONDITIONING EQUIPMENT:**

- A. Disposal Of Wastes From Nonresidential Uses: No person shall allow, permit or cause any water conditioning or softening equipment of any type to discharge its wastes into the city sewage system, nor shall any such person deposit or cause to be deposited into the city sewage system the waste product of any water softening or conditioning equipment of any type.
- B. Disposal Of Wastes From Residential Uses: No person shall install or in any manner assist in the installation of or a conversion to a water softening or conditioning system of any type that discharges its waste into the city sewage system. No person shall allow, permit or cause to be deposited into the city sewage system the waste product of any water softening or conditioning equipment of any type. This prohibition shall become effective December 1, 2016. However, this prohibition is prospective in nature and does not apply to water softening or conditioning equipment that are installed before the effective date of this Ordinance.
- C. Inspection Of Equipment: Any person using, operating or maintaining water conditioning or softening equipment of any type within the boundaries of the city shall make such equipment accessible to the city inspector for inspection at such reasonable times as the city inspector may specify, and shall furnish such information concerning the operation and use of said equipment as the city inspector may reasonably request. (Ord. 16-318, 3-14-2016)
- D. Violation Penalty: All violations of this Code shall be infractions. It is unlawful for any person to violate any mandatory provisions of or fail to comply with provisions of this Code. Any persons violating such sections shall be prosecuted as an infraction. Any infraction may be prosecuted by the city authorities in the name of the people of the state or redressed by civil action. Every violation determined to be an infraction is punishable by a fine not exceeding five hundred dollars (\$500) for each violation within one year.





## City of Solvang Budget Adjustment Request

Agenda Item	MO/YR	Number
	<b>9/16</b>	<b>17-02</b>

Dept: Wastewater Treatment Plant

### Revenue Adjustments

Decrease/ Increase	Account/ Project Name	Fund	Dept	Prog.	Object	Reason for Transaction	Current Budget	AMOUNT		Revised Budget
								Decrease	Increase	
										0
										0
										0
										0
							\$ -	\$ -	\$ -	\$ -

**Total Revenues Increase (Decrease) \$ -**

### Expense Adjustments

Decrease/ Increase	Account/ Project Name	Fund	Dept	Prog.	Object	Reason for Transaction	Current Budget	AMOUNT		Revised Budget
								Decrease	Increase	
										0
Increase	WWTP-Studies	501	5300	503	57024	City-Wide Water Softening Study	36,000		20,000	56,000
										0
										0
							\$ 36,000	\$ -	\$ 20,000	\$ 56,000

**Total Expense Increase (Decrease) \$ 20,000**

### EXPLANATION:

Budget Adjustment to proceed with Council directed conceptual City-Wide Wellhead Water Softening Study.

Prepared By: Matt van der Linden	9/16/2016
Admin. Services Director Approval:	Date
City Manager Approval:	Date
City Council Approval:	Date
Posted by:	Date





**CITY COUNCIL  
STAFF REPORT**

**TO:** SOLVANG CITY COUNCIL MEMBERS

**FROM:** Roy A. Hanley, City Attorney

**MEETING DATE:** September 26, 2016

**DATE PREPARED:** September 20, 2016

**SUBJECT: INTERIM URGENCY ORDINANCE OF THE CITY OF SOLVANG  
PROHIBITING MANUFACTURING, PROCESSING, LABORATORY  
TESTING, LABELING, STORING AND WHOLESALE AND RETAIL  
DISTRIBUTION OF CANNABIS**

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**I. RECOMMENDATION:**

Staff recommends that the City Council adopt, on a 4/5 vote or greater, the attached urgency ordinance prohibiting specified activities in the event that Proposition 64 passes, accept the Exemption to the California Environmental Quality Act (CEQA) pursuant to Section 15306 (Information Collection), and direct staff to file the Notice of Exemption.

**II. DISCUSSION:**

The Solvang Municipal Code presently prohibits medical marijuana dispensaries and cultivation, whether personal or commercial, within every zone in the City. Although dispensaries are prohibited, the code allows for the delivery of medical marijuana to qualified patients under the Compassionate Use Act.

The Code is silent regarding manufacturing, processing, laboratory testing, labeling, storing and wholesale and retail distribution of cannabis. Over the past few months, neighboring cities have received multiple inquiries from individuals seeking instruction on how to obtain permits to open manufacturing and

distribution centers. There are likely many persons interested in such operations to begin in other cities and in Solvang.

To further complicate the regulatory environment, the “Control, Regulate, and Tax Adult Use of Marijuana Initiative” (Proposition 64) has qualified for the November 8, 2016, California ballot. If passed by a majority of California voters, the measure would legalize marijuana use for those 21 years of age and over, and would establish the Bureau of Marijuana Control within the Department of Consumer Affairs to regulate and license the marijuana industry, in conflict with the authority granted to the Bureau of Medical Marijuana Regulation established when Governor Jerry Brown signed the Medical Marijuana Regulation and Safety Act into law in October 2015. A May 2016 report by the Public Policy Institute of California found 60% of California voters favored passage of Proposition 64.

Portions of Proposition 64 could take effect as soon as the day after Election Day; specifically, recreational use by adults and cultivation in private residences. Passage of Proposition 64 will have immediate implications for the City of Solvang, including revisions to the Code to bring it into conformance with law, and consideration of local regulation and taxation of components of the cannabis industry not previously contemplated by the City.

The attached urgency ordinance prohibits the manufacturing, processing, laboratory testing, labeling, storing and wholesale and retail distribution of cannabis in the City and is intended to preserve the status quo. This will allow the City Council to study the issues surrounding medical and recreational cannabis use, and give staff direction toward the development of a comprehensive regulatory scheme.

Government Code Section 65858 authorizes the City Council to adopt a moratorium as an urgency ordinance or regular ordinance to preserve the public health, safety or welfare. The urgency ordinance and regular ordinance establishing a moratorium require a four-fifths (4/5ths) vote for adoption. A temporary moratorium would prohibit the manufacturing, processing, laboratory testing, labeling, storing and wholesale and retail distribution of cannabis products in the City. The urgency ordinance would take effect immediately upon adoption. If adopted, the urgency and regular ordinances expire in 45 days from their date of adoption. After notice and a public hearing, the Council may extend the ordinance for 10 months and 15 days and subsequently extend the ordinance for one year. Any extension requires a four-fifths vote for adoption. Not more than two extensions may be adopted. Ten days prior to the expiration of the interim ordinance or any extension, City Council must issue a report describing the measures taken to alleviate the condition which led to the adoption of the ordinance.

A moratorium, whether adopted as an urgency measure or not, is a temporary zoning measure in order to preserve the status quo. A moratorium provides the Community Development Department with reasonable time to study and make recommendations for a permanent zoning ordinance.

**III. ALTERNATIVES:**

The City is not legally required to take action, may choose to not enact a ban, and may even choose to regulate and tax.

**IV. FISCAL IMPACT:**

No specific fiscal impacts are identified as part of this report.

**V. ATTACHMENTS:**

- Draft Ordinance

ORDINANCE NO. 16-\_\_\_\_\_

**AN INTERIM ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SOLVANG,  
CALIFORNIA, PROHIBITING MANUFACTURING, PROCESSING, LABORATORY  
TESTING, LABELING, STORING AND WHOLESALE AND RETAIL DISTRIBUTION  
OF CANNABIS AND DECLARING SAME TO BE AN URGENCY MEASURE TO  
TAKE EFFECT IMMEDIATELY**

The People of the Chartered City of Solvang, California, do hereby ordain as follows:

**SECTION 1.** FINDINGS.

The City Council finds and declares as follows:

**WHEREAS**, in 1996, the voters of the State of California approved Proposition 215 (codified as California Health and Safety Code § 11362.5 and entitled “The Compassionate Use Act of 1996” or “CUA”); and

**WHEREAS**, the intent of Proposition 215 was to enable critically ill Californians who are in need of marijuana for medical purposes to use it without fear of criminal prosecution under limited circumstances. The proposition further provides that “nothing in this section shall be construed to supersede legislation prohibiting persons from engaging in conduct that endangers others, or to condone the diversion of marijuana for non-medical purposes.” The ballot arguments supporting Proposition 215 expressly acknowledged that “Proposition 215 does not allow unlimited quantities of marijuana to be grown anywhere;” and

**WHEREAS**, in 2004, the Legislature enacted Senate Bill 420 (codified as California Health & Safety Code § 11362.7 et seq. and referred to as the “Medical Marijuana Program” or “MMP”) to clarify the scope of Proposition 215 and to provide qualifying patients and primary caregivers who collectively or cooperatively cultivate marijuana for medical purposes with a limited defense to certain specified State criminal statutes. Assembly Bill 2650 (2010) and Assembly Bill 1300 (2011) amended the MMP to expressly recognize the authority of cities to “[a]dopt local ordinances that regulate the location, operation, or establishment of a medical marijuana cooperative or collective” and to civilly and criminally enforce such ordinances; and

**WHEREAS**, in *City of Riverside v. Inland Empire Patients Health and Wellness Center, Inc.* (2013) 56 Cal.4th 729, the California Supreme Court held that “[n]othing in the CUA or the MMP expressly or impliedly limits the inherent authority of a local jurisdiction, by its own ordinances, to regulate the use of its land...;” and

**WHEREAS**, the Federal Controlled Substances Act, 21 U.S.C. § 801 et seq., classifies marijuana as a Schedule 1 Drug, defined as a drug or other substance that has a high potential for abuse, that has no currently accepted medical use in treatment in the United State, and has not been accepted as safe for use under medical supervision. The Federal Controlled Substances Act makes it unlawful under federal law for any person to cultivate, manufacture, distribute or dispense, or possess with intent to manufacture, distribute or dispense, marijuana. The Federal Controlled Substances Act contains no exemption for medical purposes, although there is recent

case law that raises a question as to whether the Federal Government may enforce the Act where medical marijuana is allowed; and

**WHEREAS**, on October 9, 2015, Governor Jerry Brown signed three bills into law (AB 266, AB 243, and SB 643) which collectively are known as the Medical Marijuana Regulation and Safety Act (hereinafter, the “MMRSA”). The MMRSA established a State licensing scheme for commercial medical marijuana uses while protecting local control by requiring that all such businesses must have a local license or permit to operate in addition to a State license. The MMRSA allows the City to completely prohibit commercial and private medical marijuana activities; and

**WHEREAS**, the Control, Regulate, and Tax Adult Use of Marijuana Initiative (Proposition 64) has qualified for the November 8, 2016, California ballot. If passed by a majority of California voters, the measure would legalize marijuana use for those 21 years of age and over, and would establish the Bureau of Marijuana Control within the Department of Consumer Affairs to regulate and license the marijuana industry, in conflict with the authority granted to the Bureau of Medical Marijuana Regulation established by MMRSA. Portions of Proposition 64 could take effect as soon as the day after Election Day; specifically, recreational use by adults and cultivation in private residences; and

**WHEREAS**, if passed, Proposition 64 as drafted will allow local governments to ban recreational marijuana businesses entirely. With respect to cultivation, Proposition 64 will allow local governments to reasonably regulate cultivation through zoning and other local laws, and to ban outdoor cultivation outright. Proposition 64 will, however, require local governments to allow limited indoor cultivation in private residences; and

**WHEREAS**, if the City fails to pass ordinances surrounding these issues, the City could face issues of preemption and grandfathering in the days, weeks and months after Proposition 64 passes; and

**WHEREAS**, the City Council finds there is a current and immediate threat to the health, safety, and welfare of City residents arising from the risks associated with the manufacture, processing, laboratory testing, labeling, storing and wholesale and retail distribution of cannabis, whether medical or recreational. Citywide prohibition of all activities, from cultivation to point of sale, is proper and necessary to avoid the risks of criminal activity, degradation of the natural environment, malodorous smells and indoor electrical fire hazards that may result from such activities; and

**WHEREAS**, as recognized by the Attorney General’s August 2008 Guidelines for the Security and Non-Diversion of Marijuana Grown for Medical Use, marijuana cultivation or other concentrations of marijuana in any location or premises without adequate security increases the risk that surrounding homes or businesses may be negatively impacted by nuisance activity such as loitering or crime; and

**WHEREAS**, several California cities have reported negative impacts of marijuana processing and distribution uses, including offensive odors, illegal sales and distribution of marijuana, trespassing, theft, violent robberies and attempted robbery, and fire hazards; and

**WHEREAS**, until and unless the Department of Food and Agriculture establishes a track and trace program for reporting the movement of marijuana items through the distribution chain as mandated by Business & Professions Code § 19335, the risk of crime from theft and burglary attendant to manufacturing and distribution facilities is significant. Until traceable, stolen product will have street value for sale to minors; and

**WHEREAS**, manufacturing of cannabis products can involve use of chemicals and solvents, and as a result, the manufacture of hash oil concentrate, often added to edibles, drinks and liquids, carries a significant risk of explosion due to the distillation process utilized to extract tetrahydrocannabinol. Major burn treatment centers at two hospitals in Northern California reported in 2015 that nearly 10 percent of severe burn cases were attributed to butane hash oil explosions, which was more than burn cases from car accidents and house fires combined; and

**WHEREAS**, the limited immunity from specified state marijuana laws provided by the Compassionate Use Act, Medical Marijuana Program and Proposition 64 do not confer a land use right or the right to create or maintain a public nuisance; and

**WHEREAS**, cultivation of cannabis and medical marijuana dispensaries are currently prohibited under the City's permissive zoning regulations. The City Council desires to enact this interim urgency ordinance to expressly clarify that manufacture, processing, laboratory testing, labeling, storing and wholesale and retail distribution of cannabis, whether medical or recreational, are also prohibited in all zones throughout the City; and

**WHEREAS**, the immediate ban of all commercial or industrial cannabis activities will maintain the status quo while allowing the City to investigate and research the safety and options of regulation and taxation; and

**WHEREAS**, the immediate ban of all commercial or industrial cannabis activities will enable the City to develop a comprehensive approach to cannabis, including analysis of the provisions of Proposition 64's proposed Health & Safety Code § 11362.2, if passed, as well as regulation of presently unregulated delivery services operating within the City's jurisdiction. At least 2 dispensaries advertise online delivery services to Solvang; and

**WHEREAS**, this ordinance is not a project subject to the California Environmental Quality Act (CEQA) pursuant to Section 15306 (Information Collection) because it does not have the potential to create a physical environmental effect.

**SECTION 2.** REGULATION.

The following regulation is hereby imposed. This regulation shall prevail over any conflicting provisions of the Solvang Municipal Code or the other ordinances, resolutions, policies and regulations of the City of Solvang:

1. Any commercial or industrial use involving cannabis is prohibited in every zoning district in the City, including but not limited to manufacture, processing, laboratory testing, labeling, storing and wholesale and retail distribution.

**SECTION 3.** INTERIM URGENCY ORDINANCE.

Based upon the findings set forth in Section 1, above, this is an interim urgency ordinance adopted pursuant to Government Code § 65858, and pursuant to the authority granted to the City of Solvang in Article 11, Section 7 of the California Constitution. This ordinance shall therefore take effect immediately upon adoption. This ordinance shall remain in effect for forty-five (45) days from the date of adoption; that is, September 26, 2016. This ordinance will terminate upon a determination by the City Council supported by substantial evidence that the threat to public health, safety and welfare described in Section 1 of this ordinance has been ameliorated, or by the adoption of ordinances or amendments extending or superseding this ordinance.

**SECTION 4.** SEVERANCE CLAUSE.

The City Council declares that each section, subsection, paragraph, subparagraph, sentence, clause and phrase of this ordinance is severable and independent of every other section, subsection, paragraph, subparagraph, sentence, clause and phrase of this ordinance. If any section, subsection, paragraph, subparagraph, sentence, clause or phrase of this ordinance is held invalid, the City Council declares it would have adopted the remaining provisions of this ordinance irrespective of the portion held invalid, and further declares its express intent that the remaining portions of this ordinance should remain in effect after the invalid portion has been eliminated.

**ADOPTED** at a regular meeting of the City Council held on the 26<sup>th</sup> day of September, 2016, by the following roll call vote:

AYES:

NOES:

ABSENT:

ABSTAINED:

\_\_\_\_\_  
Jim Richardson, Mayor

ATTEST:

\_\_\_\_\_  
Lisa S. Martin, City Clerk





**CITY COUNCIL  
STAFF REPORT/CONSENT AGENDA**

**TO:** SOLVANG CITY COUNCIL MEMBERS

**FROM:** Sandra Featherson, Director of Administrative Services

**MEETING DATE:** September 26, 2016

**DATE PREPARED:** September 13, 2016

**SUBJECT: RESOLUTION OF INTENTION TO APPROVE AN AMENDMENT TO THE CONTRACT BETWEEN THE CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM BD OF ADMINISTRATION AND THE CITY COUNCIL OF THE CITY OF SOLVANG AND FIRST READING OF ORDINANCE TO AMEND SAID CONTRACT**

---

**I. RECOMMENDATION:**

- 1) Adopt Resolution 16-\_\_\_\_, a Resolution of Intention to Approve an Amendment to Contract Between the Board of Administration California Public Employees' Retirement System and the City Council, City of Solvang.
- 2) Hold the first reading of Ordinance 16-\_\_\_\_, an Ordinance of the City Council of the City of Solvang Authorizing an Amendment to the Contract between the Council of the City of Solvang and the Board of Administration of the California Public Employees' Retirement System.

**II. DISCUSSION:**

At the June 27, 2016 City Council meeting, a Memorandum of Understanding (MOU) with the Teamsters Union Local 986 was approved. As part of that agreement, the current contract with California Public Employees Retirement System (CalPERS) would be amended to reflect an increase in the cost sharing by the employees, of the employer's share of the retirement contribution, from 4% to 6%.

Several steps must be taken to amend the CalPERS contract, including adopting a Resolution of Intention and enacting an ordinance authorizing the amendment. Both documents are attached in addition to the actual wording change of the contract. With the approval of these documents, a mandatory employee election will be held on September 27, 2016, followed by the final reading of the Ordinance at the City Council meeting of October 24, 2016. The final effective date of the CalPERS contract amendment will be November 28, 2016.

As a result of this contract amendment and in accordance with the MOU the following changes will take place:

	<u>Pre-Amendment/MOU</u>	<u>Post Amendment/MOU</u>
<b>Employer's CalPERS Contribution</b>	13.0860	11.0860
<b>Employee's CalPERS Contribution</b>	4%	6%

**III. ALTERNATIVES:**

The City Council could choose not to adopt the Resolution and redirect staff to not move forward with contract changes. If this were to happen, the City would be required to re-open negotiations with the bargaining unit.

**IV. FISCAL IMPACT:**

Amending the contract reduces the City contribution to CalPERS by an additional 2%. For the fiscal year 2016-17, this saves approximately \$41,000.

**V. ATTACHMENTS:**

- A. Resolution of Intention to Approve an Amendment to Contract Between the Board of Administration California Public Employees' Retirement System and the City Council, City of Solvang
- B. Ordinance authorizing the amendment
- C. Amendment to Contract Between the Board of Administration California Public Employees' Retirement System and the City Council, City of Solvang

**RESOLUTION NO. 16-\_\_\_\_\_**

**RESOLUTION OF INTENTION TO APPROVE AN AMENDMENT TO CONTRACT  
BETWEEN THE BOARD OF ADMINISTRATION CALIFORNIA PUBLIC EMPLOYEES'  
RETIREMENT SYSTEM AND THE CITY COUNCIL OF THE CITY OF SOLVANG**

**WHEREAS**, the Public Employees' Retirement Law permits the participation of public agencies and their employees in the Public Employees' Retirement System by the execution of a contract, and sets forth the procedure by which said public agencies may elect to subject themselves and their employees to amendments to said Law; and

**WHEREAS**, one of the steps in the procedures to amend this contract is the adoption by the governing body of the public agency of a resolution giving notice of its intention to approve an amendment to said contract, which resolution shall contain a summary of the change proposed in said contract; and

**WHEREAS**, the following is a statement of the proposed change:

To provide Section 20516 (Employees Sharing Additional Cost) of an additional 2% for classic local miscellaneous members.

**NOW, THEREFORE, BE IT RESOLVED** that the governing body of the above agency does hereby give notice of intention to approve an amendment to the contract between said public agency and the Board of Administration of the Public Employees' Retirement System, a copy of said amendment being attached hereto, as an "Exhibit" and by this reference made a part hereof.

**I HEREBY CERTIFY** that the foregoing Resolution of Intention was introduced and adopted at a regular meeting of the City Council on this 26<sup>th</sup> day of September, 2016, by the following roll call vote:

AYES:  
NOES:  
ABSENT:  
ABSTAIN:

By: \_\_\_\_\_  
Jim Richardson, Mayor

ATTEST:

\_\_\_\_\_  
Lisa S. Martin, City Clerk



**ORDINANCE NO. 16-\_\_\_\_**

**AN ORDINANCE OF THE COUNCIL OF THE CITY OF SOLVANG AUTHORIZING AN AMENDMENT TO THE CONTRACT BETWEEN THE COUNCIL OF THE CITY OF SOLVANG AND THE BOARD OF ADMINISTRATION OF THE CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM**

THE PEOPLE OF THE CHARTERED CITY OF SOLVANG DO HEREBY ORDAIN AS FOLLOWS:

Section 1.

That an amendment to the contract between the Council of the City of Solvang and the Board of Administration, California Public Employees' Retirement System is hereby authorized, a copy of said amendment being attached hereto, marked "Exhibit", and by such reference made a part hereof as though herein set out in full.

Section 2.

The Mayor of the Council of the City of Solvang is hereby authorized, empowered, and directed to execute said amendment for and on behalf of said Agency.

Section 3.

This Ordinance shall take effect thirty (30) days after the date of its passage.

Section 4.

Solvang is a Charter City and has adopted its own rules for posting ordinances once they are adopted. The ordinance will be posted in three locations after adoption as directed in the Solvang Municipal Code with a record of the vote of each Council Member.

**PASSED, APPROVED AND ADOPTED** this 24th day of October, 2016:

BY: \_\_\_\_\_  
Jim Richardson, Mayor  
City of Solvang

ATTEST:

\_\_\_\_\_  
Lisa S. Martin, City Clerk

STATE OF CALIFORNIA            )  
COUNTY OF SANTA BARBARA    )  
CITY OF SOLVANG                )

I, Lisa S. Martin, City Clerk of the City of Solvang, do hereby certify that the foregoing Ordinance had its first reading on September 26, 2016, and had its second reading on October 24, 2016, and was passed by the following vote:

AYES:

NOES:

ABSENT:

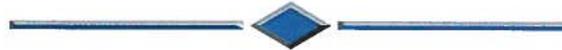
ABSTAIN:

BY: \_\_\_\_\_  
Lisa S. Martin, City Clerk



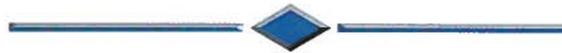
## EXHIBIT

California  
Public Employees' Retirement System



# AMENDMENT TO CONTRACT

Between the  
Board of Administration  
California Public Employees' Retirement System  
and the  
City Council  
City of Solvang



The Board of Administration, California Public Employees' Retirement System, hereinafter referred to as Board, and the governing body of the above public agency, hereinafter referred to as Public Agency, having entered into a contract effective July 1, 1985, and witnessed March 26, 1987, and as amended effective September 1, 1988, June 16, 1994, November 10, 2000, July 16, 2002, December 23, 2004, October 29, 2007 November 17, 2014 and November 2, 2015 which provides for participation of Public Agency in said System, Board and Public Agency hereby agree as follows:

- A. Paragraphs 1 through 15 are hereby stricken from said contract as executed effective November 2, 2015, and hereby replaced by the following paragraphs numbered 1 through 17 inclusive:
  - 1. All words and terms used herein which are defined in the Public Employees' Retirement Law shall have the meaning as defined therein unless otherwise specifically provided. "Normal retirement age" shall mean age 55 for classic local miscellaneous members, age 62 for new local miscellaneous members, age 50 for classic local safety members and age 57 for new local safety members.

PLEASE DO NOT SIGN "EXHIBIT ONLY"

2. Public Agency shall participate in the Public Employees' Retirement System from and after July 1, 1985 making its employees as hereinafter provided, members of said System subject to all provisions of the Public Employees' Retirement Law except such as apply only on election of a contracting agency and are not provided for herein and to all amendments to said Law hereafter enacted except those, which by express provisions thereof, apply only on the election of a contracting agency.
3. Public Agency agrees to indemnify, defend and hold harmless the California Public Employees' Retirement System (CalPERS) and its trustees, agents and employees, the CalPERS Board of Administration, and the California Public Employees' Retirement Fund from any claims, demands, actions, losses, liabilities, damages, judgments, expenses and costs, including but not limited to interest, penalties and attorney fees that may arise as a result of any of the following:
  - (a) Public Agency's election to provide retirement benefits, provisions or formulas under this Contract that are different than the retirement benefits, provisions or formulas provided under the Public Agency's prior non-CalPERS retirement program.
  - (b) Any dispute, disagreement, claim, or proceeding (including without limitation arbitration, administrative hearing, or litigation) between Public Agency and its employees (or their representatives) which relates to Public Agency's election to amend this Contract to provide retirement benefits, provisions or formulas that are different than such employees' existing retirement benefits, provisions or formulas.
  - (c) Public Agency's agreement with a third party other than CalPERS to provide retirement benefits, provisions, or formulas that are different than the retirement benefits, provisions or formulas provided under this Contract and provided for under the California Public Employees' Retirement Law.
4. Employees of Public Agency in the following classes shall become members of said Retirement System except such in each such class as are excluded by law or this agreement:
  - a. Local Fire Fighters (herein referred to as local safety members);
  - b. Employees other than local safety members (herein referred to as local miscellaneous members).
5. In addition to the classes of employees excluded from membership by said Retirement Law, the following classes of employees shall not become members of said Retirement System:
  - a. **POLICE OFFICERS; AND**
  - b. **ELECTED OFFICIALS.**

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6. This contract shall be a continuation of the benefits of the contract of the Solvang Municipal Improvement District, hereinafter referred to as "Former Agency", pursuant to Section 20567.2 of the Government Code, Former Agency having ceased to exist and having been required by law to be succeeded by Public Agency on July 1, 1985. Public Agency, by this contract, assumes the accumulated contributions and assets derived therefrom and liability for prior and current service under Former Agency's contract with respect to the Former Agency's employees. Legislation repealed said Section effective January 1, 1988.
  - a. All benefits provided under this contract shall apply to all past service for former employees of the Solvang Municipal Improvement District.
7. The percentage of final compensation to be provided for each year of credited prior and current service as a classic local miscellaneous member in employment before and not on or after October 29, 2007 shall be determined in accordance with Section 21354 of said Retirement Law subject to the reduction provided therein for Federal Social Security (2% at age 55 Modified and Full).
8. The percentage of final compensation to be provided for each year of credited prior and current service as a classic local miscellaneous member in employment on or after October 29, 2007 shall be determined in accordance with Section 21354.4 of said Retirement Law subject to the reduction provided therein for Federal Social Security (2.5% at age 55 Modified and Full).
9. The percentage of final compensation to be provided for each year of credited prior and current service as a new local miscellaneous member shall be determined in accordance with Section 7522.20 of said Retirement Law (2% at age 62 Full).
10. The percentage of final compensation to be provided for each year of credited prior and current service as a classic local safety member shall be determined in accordance with Section 21362 of said Retirement Law subject to the reduction provided therein for Federal Social Security (2% at age 50 Modified).
11. The percentage of final compensation to be provided for each year of credited prior and current service as a new local safety member shall be determined in accordance with Section 7522.25(d) of said Retirement Law (2.7% at age 57 Full).
12. Public Agency elected and elects to be subject to the following optional provisions:
  - a. Section 20965 (Credit for Unused Sick Leave).
  - b. Sections 21624 and 21626 (Post-Retirement Survivor Allowance) for local miscellaneous members only.
  - c. Section 20042 (One-Year Final Compensation) for classic members only.

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- d. Sections 21624, 21626 and 21628 (Post-Retirement Survivor Allowance) for local safety members only.
- e. Section 20903 (Two Years Additional Service Credit).
- f. Section 21024 (Military Service Credit as Public Service).
- g. Section 20516 (Employees Sharing Additional Cost):

From and after November 17, 2014 and until November 2, 2015, 2% for classic local miscellaneous members.

From and after November 2, 2015 and until the effective date of this amendment to contract, 4% for classic local miscellaneous members.

From and after the effective date of this amendment to contract, 6% for classic local miscellaneous members.

The portion of the employer's contribution that the member agrees to contribute from his or her compensation, over and above the member's normal contribution ("Cost Sharing Percentage"), shall not exceed the Employer Normal Cost Rate, as that rate is defined in the CalPERS Actuarial Valuation for the relevant fiscal year. If the Cost Sharing Percentage will exceed the relevant Employer Normal Cost Rate, the Cost Sharing Percentage shall automatically be reduced to an amount equal to, and not to exceed, the Employer Normal Cost Rate for the relevant fiscal year.

- 13. Public Agency, in accordance with Government Code Section 20834, shall not be considered an "employer" for purposes of the Public Employees' Retirement Law. Contributions of the Public Agency shall be fixed and determined as provided in Government Code Section 20834, and such contributions hereafter made shall be held by the Board as provided in Government Code Section 20834.
- 14. Public Agency shall contribute to said Retirement System the contributions determined by actuarial valuations of prior and future service liability with respect to local miscellaneous members and local safety members of said Retirement System.
- 15. Public Agency shall also contribute to said Retirement System as follows:
  - a. A reasonable amount, as fixed by the Board, payable in one installment within 60 days of date of contract to cover the costs of administering said System as it affects the employees of Public Agency, not including the costs of special valuations or of the periodic investigation and valuations required by law.

b. A reasonable amount, as fixed by the Board, payable in one installment as the occasions arise, to cover the costs of special valuations on account of employees of Public Agency, and costs of the periodic investigation and valuations required by law.

16. Contributions required of Public Agency and its employees shall be subject to adjustment by Board on account of amendments to the Public Employees' Retirement Law, and on account of the experience under the Retirement System as determined by the periodic investigation and valuation required by said Retirement Law.

17. Contributions required of Public Agency and its employees shall be paid by Public Agency to the Retirement System within fifteen days after the end of the period to which said contributions refer or as may be prescribed by Board regulation. If more or less than the correct amount of contributions is paid for any period, proper adjustment shall be made in connection with subsequent remittances. Adjustments on account of errors in contributions required of any employee may be made by direct payments between the employee and the Board.

B. This amendment shall be effective on the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

BOARD OF ADMINISTRATION  
PUBLIC EMPLOYEES' RETIREMENT SYSTEM

CITY COUNCIL  
CITY OF SOLVANG

BY \_\_\_\_\_  
CHERYL EASON  
CHIEF FINANCIAL OFFICER  
PUBLIC EMPLOYEES' RETIREMENT SYSTEM

BY \_\_\_\_\_  
PRESIDING OFFICER

\_\_\_\_\_  
Witness Date

Attest:

\_\_\_\_\_  
Clerk

PLEASE DO NOT SIGN "EXHIBIT ONLY"





**CITY COUNCIL  
STAFF REPORT/CONSENT AGENDA**

**TO:** SOLVANG CITY COUNCIL MEMBERS

**FROM:** Julie Glendinning, Finance Supervisor

**MEETING DATE:** September 26, 2016

**DATE PREPARED:** September 8, 2016

**SUBJECT: Parking In Lieu Promissory Note – 478 Fourth Place**

---

**I. RECOMMENDATION:**

Approve and authorize City Manager to execute the Promissory Note for the Parking In Lieu fees for two (2) required spaces for the project located at 478 Fourth Place known as K'Syrah Catering.

**II. DISCUSSION:**

Demetrios Loizides, owner of K'Syrah Catering, has purchased the property located at 478 Fourth Place and has undertaken a remodel of the former restaurant property. Mr. Loizides has received approval for construction of a new outdoor dining area adjacent to Fourth Place. The expansion of the dining area requires provision of two (2) additional parking spaces in accordance with Zoning Ordinance parking requirements. Space is not available on site to provide additional parking, therefore, Mr. Loizides will need to pay the in-lieu parking fee for two (2) parking spaces.

Mr. Loizides desires to finance the Parking In Lieu fees over the allowable 20 year period. Staff is recommending the note be for 20 years, at 4.50% fixed rate, which is 1% over the prime rate, currently at 3.50%.

**III. ALTERNATIVES:**

The City Council could require the applicant to pay the \$24,752.00 for Parking in Lieu fees prior to commencement of business utilizing the outdoor area.

**IV. FISCAL IMPACT:**

Upon execution of a 20-year promissory note, the AB1600 Impact Fee fund would realize principal and interest payments totaling \$36,417.93, over the course of the note. Annual payments of \$1,820.90 are due annually thereafter on November 1st. This calculation is based on the prime rate (as reported by the Wall Street Journal) plus 1%. These funds will be restricted for parking lot use only.

**V. ATTACHMENTS:**

- A. Letter from K'Syrah Catering
- B. In-Lieu Parking Fee Financing Agreement
- C. Promissory Note
- D. Loan Amortization schedule



FARM TABLE  
CATERING

August 22, 2016

City of Solvang  
Planning & Community Development  
411 Second Street  
Solvang, CA 93463

Dear City Council and Planning Department Members,

I would like to express my sincerest gratitude to the Planning and Building Departments of the City of Solvang for working with me and my team on our new K'Syrah Catering facility.

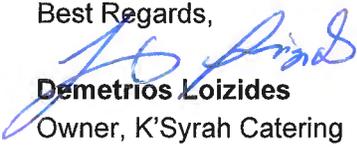
We have all put a lot of time, money and love into this project, and we are quickly approaching its completion.

The only hurdle left for us is to obtain financing for two additional parking spaces required by the City at a cost of \$12,000 each.

At this time, I am asking the City for assistance with this financing in the form of an interest-free loan for 20 years, with a payment to be paid at the end of every year.

Thank you for your time and consideration.

Best Regards,

  
**Demetrios Loizides**

Owner, K'Syrah Catering

Phone: (562) 715-6515

Email: jloizides@aol.com

RECEIVED

AUG 22 2016

CITY OF SOLVANG





## IN-LIEU PARKING FEE FINANCING AGREEMENT

THIS IN-LIEU PARKING FEE FINANCING AGREEMENT (the “Agreement”) is entered into on the date set forth below between the CITY OF SOLVANG (the “City”) and Demetrios Lozides (“developer”) and is made with reference to the following facts:

- A. Developer has applied for construction permits at a business known as K’Syrah Catering, located at 478 Fourth Place (APN 139-173-014), in the City of Solvang.
- B. The City has enacted Section 11-11-9 of the Solvang Municipal Code requiring developers of retail and general commercial projects to mitigate adverse parking impacts caused by those projects by providing 1 on-site parking space per 200 square feet of gross floor area of development.
- C. The purpose of the In-Lieu Parking Fee is to finance the construction of City-owned parking facilities to accommodate additional parking demand generated by new retail and commercial development within the City.
- D. The City has determined that the In-Lieu Parking Fee shall equal \$12,376 for each parking space that is not provided on-site.
- E. The City has further determined that the in-lieu principal fee shall be payable either (1) in full prior to the utilization of the outdoors space, or (2) in twenty (20) consecutive annual installments with interest at 4.50% per annum, with the first payment due November 1, 2016.
- F. The City and the Developer desire to enter into this Financing Agreement for the payment of the In-Lieu Parking Fee on an installment basis.

NOW, THEREFORE, the parties hereto intending to be legally bound, agree as follows:

### 1. IN-LIEU PARKING FEE

Developer shall pay an In-Lieu Parking Fee of \$24,752.00 for two (2) parking spaces, plus interest to the City of Solvang in satisfaction of Developer’s responsibility to mitigate adverse parking impacts by contributing to the cost of construction of certain public parking facilities in the City as provided for in Section 11-11-9 of the Solvang Municipal Code.

2. USE OF FEE

The fee to be paid pursuant to this Agreement shall be used to finance the construction of the Parking Facility constructed by the City in order to increase the City's parking capacity, or to reimburse the City for the Developer's share of constructing the Parking Facility.

3. INSTALLMENT PAYMENT

The Developer shall pay the In-Lieu Parking Fee in 20 annual installments with interest based upon a rate of 4.50% per annum. The Developer shall tender to the City a promissory note of even date with this Agreement for the total amount of fees plus interest. The promissory note shall be secured by a Letter of Credit or other form and shall be subject to approval of the City Attorney.

4. TERMS AND CONDITIONS

This Agreement shall be subject to all terms and conditions contained within Section 11-11-9 of the Solvang Municipal Code; Resolution No. 94-326 adopted by the City Council of the City of Solvang on October 10th, 1994 authorizing collection and payment of In-Lieu Parking Fees; and the Promissory Note and form of security provided by Developer concurrently with this Agreement.

5. TERMS AND CONDITIONS

This Agreement shall automatically terminate upon full payment of the In-Lieu Parking Fee provided for herein.

6. GENERAL PROVISIONS

6.1 Binding Effect. All rights and duties of Developer and City hereunder shall inure to the benefit of and be binding upon Developer and the City, respectively, and their respective successors and assigns.

6.2 Attorney's Fees. Should any action or proceeding be necessary to construe or enforce the terms or provisions of this Agreement or the rights of the parties hereunder, then the prevailing party in any such action or proceeding shall be entitled to recover all court costs and reasonable attorney's fees.

6.3 Governing Law. This Agreement shall be governed and construed in accordance with the laws of the State of California.

IN WITNESS WHEREOF, the parties have caused this agreement to be signed on the date(s) set forth opposite their respective names.

“CITY”

CITY OF SOLVANG, a Municipal Corporation

\_\_\_\_\_

By \_\_\_\_\_

“DEVELOPER”

\_\_\_\_\_

By \_\_\_\_\_  
Demetrios Lozides, Owner  
K'Syrah Catering





## PROMISSORY NOTE

**Date: September 26, 2016**

This promissory note is executed by and between, **Demetrios Lozides** ("Maker") and the **City of Solvang** ("Holder") for payment of parking in lieu fees incurred for a project at 478 Fourth Place (APN 139-173-014) in Solvang, California.

Maker promises to pay to Holder, per attached payment schedule, at Solvang, California, or at such place as Holder may from time to time designate in writing, the principal sum of **\$24,752.00** payable in **19** consecutive annual installments of **\$1,820.90** and **one final payment** of **\$1,820.83**. The first payment to be paid on or before **November 1, 2016** and the remaining installments to be paid annually on or before **November 1<sup>st</sup>** thereafter, with the entire unpaid principal balance due and payable in full upon a change in ownership of the project located at 478 Fourth Place, Solvang, California, 93463 or on **November 1, 2035**, whichever occurs first.

### Default

Should default be made in the payment of any amount due under this Note, or in the performance of any other obligation of Maker provided herein, or should Maker make an assignment for the benefit of creditors, the whole sum of principal shall become immediately due at the option of the Holder. Failure to exercise such option shall not constitute a waiver of the right to exercise it in the event of any subsequent default.

### Late Payment Charge

Maker acknowledges and agrees that late payment to the Holder hereof will cause the Holder to incur costs not contemplated by this Note, the exact amount of such costs being difficult and impracticable to assess. Therefore, Maker agrees that, should all or any part of any installment payable hereunder not be paid when due, Maker shall pay holder a late charge equal to ten percent (10%) of any such amount not paid by the due date, and such amount shall be deemed to be the damages of the Holder for the loss suffered by such delinquency in payment. By accepting this Note but without prejudicing any other rights or remedies of Holder hereunder, Holder agrees to accept such amount as liquidated damages on account of any such delinquency payment.

**General Provisions**

- All sums due hereunder shall be paid in lawful money of the United States of America.
- Maker agrees to pay all court costs and reasonable attorney’s fees of the Holder if counsel is engaged to assist in the collection of this Note after a default hereunder, of if any action is brought to construe or enforce this Note or any of the provisions hereof.
- In this Note, the singular shall include the plural, each gender shall include the other, and this Note shall be the joint and several obligation of each Maker.
- Maker, for itself and its legal representatives, successors and assigns, expressly waives demand, notice of nonpayment, presentment for demand, presentment for the purpose of accelerating maturity, dishonor, notice of dishonor, protest, notice of protest, notice of maturity and diligence in collection.

Date:

“HOLDER”

“MAKER”

\_\_\_\_\_  
City Manager, Brad Vidro

BY \_\_\_\_\_  
Demetrios Lozides  
Owner, K’Syrah Catering

**Initial Loan Values**

Loan Amount:	\$24,752.00	Number of Payments:	20
Annual Interest Rate:	4.5000%	Periodic Payment:	\$1,820.90
Loan Date:	11/01/2016	1st Payment Due:	11/01/2016
Payment Frequency:	Annually	Last Payment Due:	11/01/2035
Total Interest Due:	\$11,665.93	Total All Payments:	\$36,417.93

**Payment Schedule**

#/Year	Date	Payment	Interest	Principal	Balance
Loan:	11/01/2016	0.00	0.00	0.00	24,752.00
1:1	11/01/2016	1,820.90	0.00	1,820.90	22,931.10
	<i>Running Totals:</i>	<i>1,820.90</i>	<i>0.00</i>	<i>1,820.90</i>	
2:2	11/01/2017	1,820.90	1,031.90	789.00	22,142.10
	<i>Running Totals:</i>	<i>3,641.80</i>	<i>1,031.90</i>	<i>2,609.90</i>	
3:3	11/01/2018	1,820.90	996.39	824.51	21,317.59
	<i>Running Totals:</i>	<i>5,462.70</i>	<i>2,028.29</i>	<i>3,434.41</i>	
4:4	11/01/2019	1,820.90	959.29	861.61	20,455.98
	<i>Running Totals:</i>	<i>7,283.60</i>	<i>2,987.58</i>	<i>4,296.02</i>	
5:5	11/01/2020	1,820.90	920.52	900.38	19,555.60
	<i>Running Totals:</i>	<i>9,104.50</i>	<i>3,908.10</i>	<i>5,196.40</i>	
6:6	11/01/2021	1,820.90	880.00	940.90	18,614.70
	<i>Running Totals:</i>	<i>10,925.40</i>	<i>4,788.10</i>	<i>6,137.30</i>	
7:7	11/01/2022	1,820.90	837.66	983.24	17,631.46
	<i>Running Totals:</i>	<i>12,746.30</i>	<i>5,625.76</i>	<i>7,120.54</i>	
8:8	11/01/2023	1,820.90	793.42	1,027.48	16,603.98
	<i>Running Totals:</i>	<i>14,567.20</i>	<i>6,419.18</i>	<i>8,148.02</i>	
9:9	11/01/2024	1,820.90	747.18	1,073.72	15,530.26
	<i>Running Totals:</i>	<i>16,388.10</i>	<i>7,166.36</i>	<i>9,221.74</i>	
10:10	11/01/2025	1,820.90	698.86	1,122.04	14,408.22
	<i>Running Totals:</i>	<i>18,209.00</i>	<i>7,865.22</i>	<i>10,343.78</i>	
11:11	11/01/2026	1,820.90	648.37	1,172.53	13,235.69
	<i>Running Totals:</i>	<i>20,029.90</i>	<i>8,513.59</i>	<i>11,516.31</i>	
12:12	11/01/2027	1,820.90	595.61	1,225.29	12,010.40
	<i>Running Totals:</i>	<i>21,850.80</i>	<i>9,109.20</i>	<i>12,741.60</i>	
13:13	11/01/2028	1,820.90	540.47	1,280.43	10,729.97
	<i>Running Totals:</i>	<i>23,671.70</i>	<i>9,649.67</i>	<i>14,022.03</i>	
14:14	11/01/2029	1,820.90	482.85	1,338.05	9,391.92
	<i>Running Totals:</i>	<i>25,492.60</i>	<i>10,132.52</i>	<i>15,360.08</i>	
15:15	11/01/2030	1,820.90	422.64	1,398.26	7,993.66
	<i>Running Totals:</i>	<i>27,313.50</i>	<i>10,555.16</i>	<i>16,758.34</i>	

16:16	11/01/2031	1,820.90	359.71	1,461.19	6,532.47
	<i>Running Totals:</i>	<i>29,134.40</i>	<i>10,914.87</i>	<i>18,219.53</i>	
17:17	11/01/2032	1,820.90	293.96	1,526.94	5,005.53
	<i>Running Totals:</i>	<i>30,955.30</i>	<i>11,208.83</i>	<i>19,746.47</i>	
18:18	11/01/2033	1,820.90	225.25	1,595.65	3,409.88
	<i>Running Totals:</i>	<i>32,776.20</i>	<i>11,434.08</i>	<i>21,342.12</i>	
19:19	11/01/2034	1,820.90	153.44	1,667.46	1,742.42
	<i>Running Totals:</i>	<i>34,597.10</i>	<i>11,587.52</i>	<i>23,009.58</i>	
20:20	11/01/2035	1,820.83	78.41	1,742.42	0.00
	<i>Running Totals:</i>	<i>36,417.93</i>	<i>11,665.93</i>	<i>24,752.00</i>	

Calculation method: Normal, 360 days per year

financial-  
calculators.com

Last payment decreased by \$0.07 due to rounding

Print



**CITY COUNCIL  
STAFF REPORT**

**TO:** SOLVANG CITY COUNCIL MEMBERS

**FROM:** Arleen T. Pelster, AICP, Planning & Economic Development Director

**MEETING DATE:** September 26, 2016

**DATE PREPARED:** September 12, 2016

**SUBJECT:** Status Update Regarding Sphere of Influence/Annexation Study and Review of Draft Request for Proposals

---

**I. RECOMMENDATION:**

Provide direction to staff regarding:

1. Areas to be studied; and
2. Request for Proposals.

**II. BACKGROUND:**

On February 23, 2015, October 12, 2015, and August 8, 2016 the Council discussed potential amendment of the City's Sphere of Influence and annexation of properties west of the City's boundaries.

**III. DISCUSSION:**

Proposals for Study:

Staff has received two proposals to prepare a Sphere of Influence/Annexation Study. One firm has proposed a cost of \$34,555, however, the areas to the east of the City and adjacent to the Mission were not included in this proposal. The addition of other geographical areas will likely result in a cost increase; therefore, staff recommends that \$50,000 be allocated for the project. The second firm requested information regarding the level of property owner interest prior to finalizing the proposed cost of the Study.

Area of Study:

On October 12, 2015, the Council discussed the Sphere of Influence/Annexation Study and added two areas of potential study to the east of the City and adjacent to the Mission. The areas are shown on the attached maps (Attachment 1).

On August 8, 2016, the Council considered adding Janin Acres and Quail Valley to the Study. Staff recommends these areas be studied separately from the parcels which were previously identified. Consideration of annexation of developed and occupied properties is quite different from vacant land, and tends to create a high level of public interest. Addition of these areas to the Study under consideration would greatly increase the complexity and cost of the study to the detriment of the Study originally envisioned.

To date, no notices were mailed to any property owners for any City Council meetings regarding the Study. The Council directed staff to contact all affected property owners to assess the level of interest in potential annexation. Staff was also directed to proceed slowly with the Study. A table showing the responses, or lack thereof, is attached (Attachment 2).

Request for Proposals:

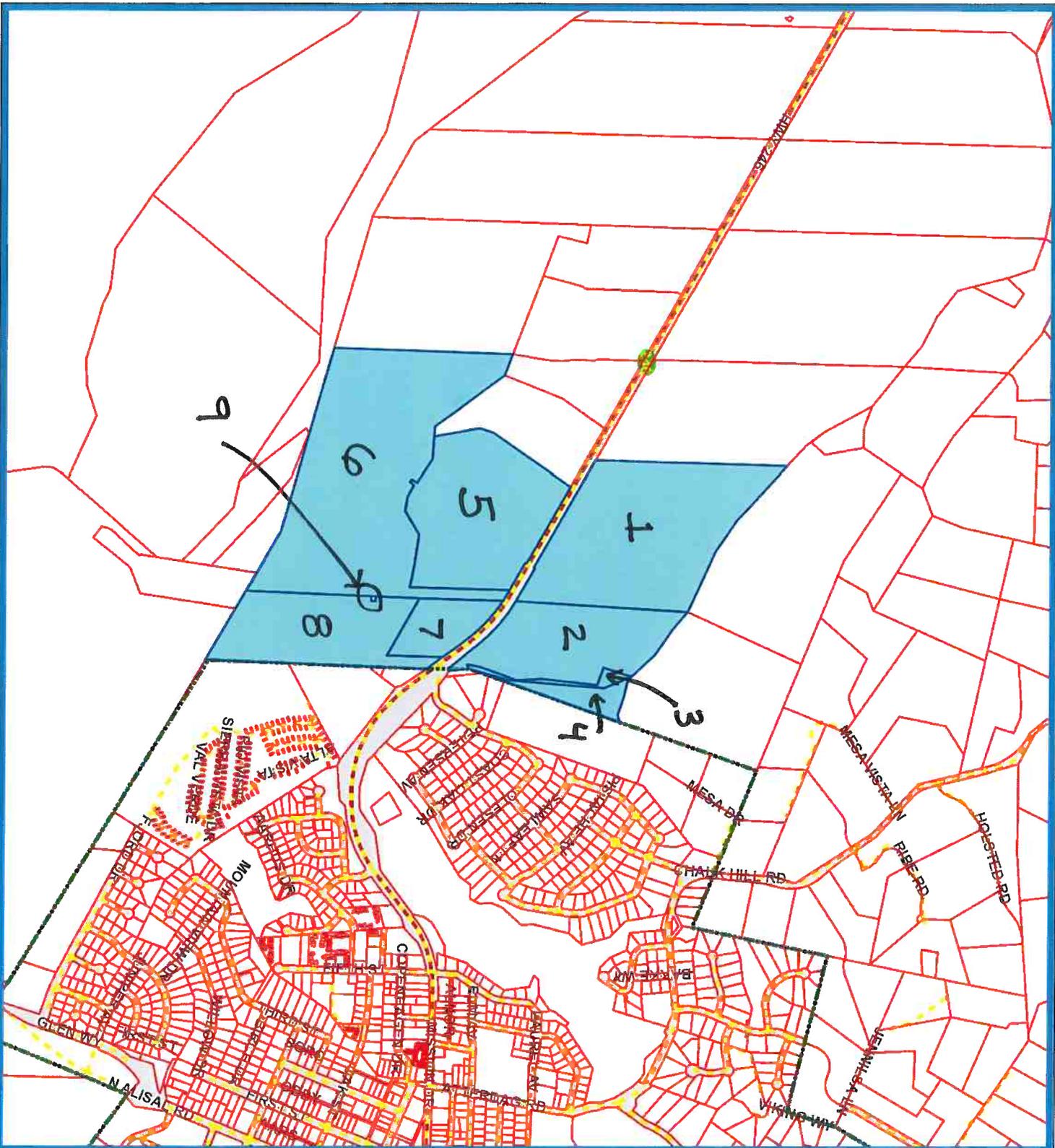
A draft Request for Proposals is attached for Council's review and comment.

**III. FISCAL IMPACT:**

The cost to the City would be in consultant fees, which is anticipated to be \$50,000. The costs associated with annexation are borne by the property owners. LAFCO filing fees for a Sphere of Influence Amendment range from \$3,500 to \$5,000 depending upon acreage. There are also mapping and environmental review costs associated with a Sphere of Influence Amendment.

**IV. ATTACHMENTS:**

1. Maps of Study Areas and SOI
2. Table of Property Owner Responses
3. Draft Request for Proposals



Key to Features

-  City Boundary
-  Tax Assessment Parcels
-  Streets
-  Tax Parcels

Western Study Area

DISCLAIMER: This map is for reference only. Although every effort has been made to ensure the accuracy of information, errors and omissions originating from physical sources or from the data used in the preparation of this map are not the responsibility of the City of Solvang. The City of Solvang is not liable for any errors or omissions. The City of Solvang is not responsible for any damages or losses resulting from the use of this map. The City of Solvang is not responsible for any damages or losses resulting from the use of this map. The City of Solvang is not responsible for any damages or losses resulting from the use of this map.

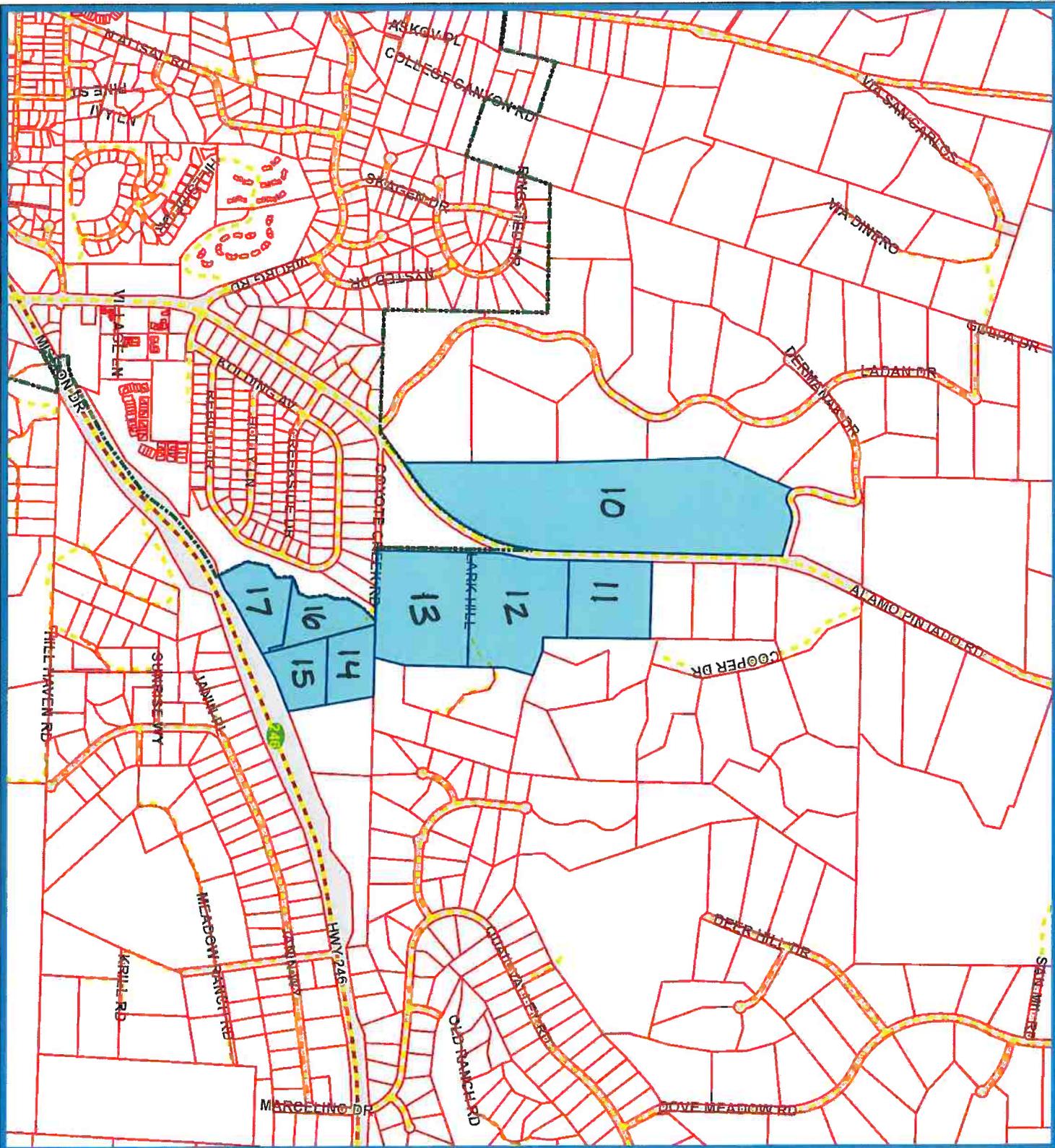


Feet

0 602

State Plane California Zone V NAD 83  
Santa Barbara County, California  
City of Solvang

Compiled on 11/11/11  
Provided by: p2w0d3j.com



**City of Solvang**

**Key to Features**

-  City Boundary
-  Tax Assessment Parcels
-  Streets
-  Tax Parcels

**Northeastern Study Area**

DISCLAIMER: This map is for reference only. Although every effort is made to ensure that the information is accurate, the City of Solvang does not warrant the accuracy of the information. The City of Solvang is not responsible for any errors or omissions. The City of Solvang is not responsible for any damages or losses resulting from the use of this map. The City of Solvang is not responsible for any actions taken based on the information provided in this map.



0 541 Feet

State Plane California Zone V NAD 83  
Santa Barbara County, California  
City of Solvang

Compiled on 08-08-11  
Provided by: zwd@solvang.com





Potential Properties for SOI/Annexation Study

Site Number On Map	General Location	Assessor Parcel Number	Property Owner Information	Response to Inquiry Letter
<b>Western Study Area</b>				
1, 2, 5	North and South of Highway 246	137-250-075, 021, 076	Dakota Smith LLC Mailing Address in La Jolla	INCLUDE
3, 4	North of Highway 246	137-120-041, 010	Petersen Family Trust Mailing Address in Solvang	NO RESPONSE
6, 8, 9	South of Highway 246	137-250-023, 025, 046	HG Petersen Family Properties Mailing Address in Solvang	NO RESPONSE
7	South of Highway 246	137-250-024	Rose Skytt LT Mailing Address in Solvang	INCLUDE

### Northeastern Study Area

10	West of Alamo Pintado	137-620-002	Latan Bypass Trust Mailing Address in Santa Barbara	INCLUDE
11	East of Alamo Pintado	137-110-041	Aguirre Family Trust Mailing Address in San Juan Capistrano	NO RESPONSE
12	East of Alamo Pintado	137-110-063	Valley Improvement Company Mailing Address in Santa Barbara	NO RESPONSE
13	East of Alamo Pintado	137-110-062	Pollard, Richard Trust Mailing Address in Solvang	INCLUDE
14, 15	Between Highway 246 and Coyote Creek Road	139-040-049, 050	Jerry McCombs Mailing Address in Solvang	DO NOT INCLUDE
16	South of Coyote Creek Road	139-040-043	FJ & L Enterprises Mailing Address in Solvang	NO RESPONSE

17	North of Highway 246	139-040-044	Heron, Paul & Betina Trust Mailing Address in Solvang	Letter returned to sender
<b>Mission Study Area</b>				
18	East of Mission	139-240-014	Santa Ynez Mission Mailing Address in Los Angeles	INCLUDE
19	East of Mission	139-250-036	State of California Mailing Address in Ventura	INCLUDE





Planning Department

ADD DIRECTOR'S NAME  
Planning & Economic Development Director  
@cityofsolvang.com

Brynda Messer, Assistant Planner  
bryndam@cityofsolvang.com

411 Second Street, Solvang, CA 93463  
(805) 688-4414 Fax: (805) 693-1070  
Fax (805) 693-1070

## REQUEST FOR PROPOSALS

-, 201

**RE: ANNEXATION AND SPHERE OF INFLUENCE AMENDMENT STUDY  
PROPOSAL ACCEPTANCE DEADLINE: ADD DATE, 4:00 P.M.**

Dear Consultant:

The City of Solvang is seeking proposals from experienced firms to assist the City with a study for potential annexations and a Sphere of Influence (SOI) amendment. Firms are invited to submit their proposals and qualifications for this project.

### ABOUT SOLVANG

Solvang is one of two incorporated communities located in the Santa Ynez Valley. Buellton, which incorporated in 1991, is located along U.S. Highway 101 and serves as the westerly gateway to the upper Santa Ynez Valley, including the City of Solvang and the towns of Ballard, Los Olivos, and Santa Ynez. An estimated 25,000 people live in the Santa Ynez Valley with 21% of the total residing in Solvang.

Solvang, with its quaint Old World architectural styles, is one of California's most unique cities. Over the past several decades, Solvang has evolved into a widely recognized tourist destination. The town's architecture and setting are well known throughout the State and nation, and the City's identity and economic vitality are now linked very closely to the aesthetic character of the community. The City is still small and compact, which contributes to its charm, beauty, and pedestrian friendly atmosphere. The City's General Plan contains goals to contribute to protecting and enhancing the City's unique qualities.

Although the City is largely built out, quality of life, land use issues and traffic problems, along with need to maintain and protect the Old World Danish-Northern European ambiance of the City's Village area continue to be important issues with residents and business owners.

## **BACKGROUND**

The City is seeking planning services to analyze a potential SOI amendment and future annexation of 19 parcels located west, east, and south of the City. Maps showing the City's current SOI and the parcels to be studied are attached.

## **SCOPE OF WORK**

A typical scope of work should include:

- Preparation of a work program for the Annexation /SOI amendment study;
- A financial assessment of projected revenues and expenses;
- Review and analysis of current and potential land uses and zoning designations;
- Review of potential urban facility and service needs for the study area for streets, sidewalks, fire protection, parks and recreation, and other public services;
- Review and analysis of the study area's natural environment features and constraints;
- Preparation of an Annexation /SOI amendment study and presentation of the final document to the Planning Commission and subsequently to the City Council

## **ENVIRONMENTAL REVIEW**

The consultant shall prepare the appropriate environmental document for the Annexation/SOI Study. The consultant will prepare all noticing documents, be the primary participant at all public hearings, and prepare a final environmental document for certification by the City Council.

## **CONSULTANT'S RESPONSE – FORMAT**

In order to facilitate the review and evaluation of the proposals, all proposals shall be organized using the outline format described below. Please submit three (3) copies of all requested materials and a reproducible copy.

1. A description of the firm's experience in preparing similar studies and resumes for key personnel, including identification of proposed project manager.
2. List the names, addresses, and telephone numbers of any additional firms you intend to use. State the names and qualifications of all persons to be assigned to the project.
3. State the approach you will use on this project, including the following information:
  - a. Overall Approach to the project
  - b. Scope of Work
  - c. Project Schedule
  - d. Project Management
  - e. Project budget. The budget should be written so that it may be incorporated, as

modified during the contract negotiation meetings, as an attachment to the consultant agreement.

4. Statement that the firm has sufficient staff resources and capability to perform the work contained within this Request for Proposal.

## **SELECTION PROCEDURE**

Proposals received will be evaluated by City staff. The selected proposal will be forwarded to the Solvang City Council for final award of contract. The following criteria are among those that will be used to evaluate the submitted proposals:

1. A high level of professional competence and experience in the preparation of Noise Elements.
2. Experience of personnel assigned to the project.
3. If a joint venture, the track record of team members' experience working together.
4. Quality of the proposal. The proposal should demonstrate the firm understands the City's overall objectives in undertaking this study.
5. Ability to produce a high quality document that is readable, and can be implemented.

## **INQUIRIES**

Direct all inquiries regarding the scope of work and the RFP process to \_\_\_\_\_, Planning & Economic Development Director, at 805.688.4414.

## **SUBMITTAL**

All proposals, whether selected or rejected, shall become the property of the City of Solvang. The City reserves the right to reject any or all proposals. The cost of preparation of the proposal will be borne by the proposer. Proposals shall be signed by a representative of the consultant who has the authority to sign contracts for the consultant. Attached is copy of the City of Solvang's Standard Professional Services Agreement, which will be utilized to engage the services of the consultant. Please review it to insure all conditions can be met.

Please include three (3) copies of all materials and proposals submitted. Your response to the RFP will be accepted until 4:00 p.m., \_\_\_\_\_, 201\_ and the proposal must be in the possession of:

\_\_\_\_\_, Planning & Economic Development Director  
City of Solvang  
411 Second Street  
Solvang, California 93463





**CITY COUNCIL  
STAFF REPORT**

**TO:** SOLVANG CITY COUNCIL MEMBERS

**FROM:** Matt van der Linden, Public Works Director/City Engineer

**MEETING DATE:** September 26, 2016

**DATE PREPARED:** September 19, 2016

**SUBJECT: SOLVANG WASTEWATER TREATMENT PLANT - AVAILABLE  
CAPACITY**

---

**I. RECOMMENDATIONS:**

1. Receive and file report on Solvang Wastewater Treatment Plant available capacity.
2. Direct staff to response to the Santa Ynez Community Services District letter dated, November 18, 2015, indicating uncertain available capacity, and decline sale of any remaining available capacity.

**II. BACKGROUND:**

The City of Solvang Wastewater Treatment Plant (WWTP) operates under a Waste Discharge Permit from the Regional Water Quality Control Board (RWQCB). The WWTP has a permitted hydraulic capacity of 1.5 MGD, and a rated treatment capacity of 275 mg/l Biological Oxygen Demand (BOD) and 300 mg/l Total Suspended Solids (TSS). The Santa Ynez Community Services District (SYCSD) owns 0.30 MGD capacity of the 1.5 MGD total, leaving 1.2 MGD capacity for the City of Solvang. A more detailed breakdown of this capacity is provided in the Discussion section below.

In February 2015, the County of Santa Barbara "Onsite Wastewater Treatment Systems - Local Agency Management Program" (LAMP) Ordinance became effective. The LAMP Ordinance was enacted to address the persistent and serious groundwater contamination problem in Los Olivos and other Santa Ynez Valley

areas caused by numerous leaking and failed private septic systems. The LAMP Ordinance established costly upgrade and replacement requirements for private septic systems. In response to this, the SYCSD has been pursuing efforts to annex additional areas into its service area to be able to provide sewer service to many existing septic system properties. In November 2015 the City received a written request from the SYCSD for an accounting of the remaining WWTP capacity, and asking if the City would be willing to sell to the District up to 120,000 gallons per day of additional capacity, if available.

Over the past 10 years the annual average influent flow to the WWTP has varied widely, and recent drought conditions have also significantly affected influent flows. In addition, influent flows vary seasonally throughout the year. Therefore, to better understand and define the true available capacity of the WWTP and respond to the SYCSD inquiry, a capacity analysis was undertaken. Cannon Corp was hired to undertake this independent evaluation. The Solvang WWTP Capacity Analysis was completed in May 2016. See Attachments below.

### **III. DISCUSSION:**

As mentioned above, the WWTP has a permitted hydraulic capacity of 1.5 MGD, and a rated treatment capacity of 275 mg/l BOD and 300 mg/l TSS. The SYCSD owns 0.30 MGD of capacity in the Plant. The City of Solvang owns the Plant and a capacity of 1.2 MGD. The City's Agreement with SYCSD requires that both agencies leave a 5% buffer and not exceed 95% of their respective capacities. This reduces the SYCSD's capacity to 0.285 MGD and Solvang's to 1.14 MGD. (It should be noted that 0.088 MGD of the SYCSD's capacity is reserved by the Santa Ynez Band of Chumash Indians under contract with the District.)

Based on the evaluation of the WWTP Capacity Analysis, from 2010 through 2015 the City's highest annual average daily flow was 0.676 MGD, and the District's highest annual average daily flow was 0.144 MGD. The average BOD and TSS strengths over this period are 239 mg/l and 168 mg/l respectively. Therefore, at first glance it would appear the Solvang WWTP has adequate hydraulic capacity and treatment capacity for the foreseeable future. However, the annual average daily flow only represents part of the picture. Since the BOD and TSS loading concentrations are below existing wastewater strength design criteria, the WWTP Capacity Analysis focused its capacity evaluation on hydraulic loading.

Through reverse engineering, evaluation of water usage, land use, and number of connections resulted in the development of "sewer duty factors." For a given land use, the sewer duty factor is the estimated amount of wastewater flow generated from a single sewer service connection in gallons per day (gpd/connection). Land uses include single family residential (SFR), multi-family residential (MFR), Commercial (CMR) and Industrial (IND). Separate sewer duty factors were developed for Solvang and SYCSD. Existing flows were evaluated as well as the

addition of planned flows at Buildout, and additional flows beyond that including each agencies sphere of influence. A spreadsheet Capacity Analysis Tool was developed to assist each agency in monitoring and tracking use of its remaining capacity.

However, annual average daily flows do not account for seasonal fluctuations. Weather and tourist activity are two big factors that can dramatically impact WWTP influent flows. Hour to hour variations typically range from +/- 60% of average on any given day of the week, and day to day flows typically range from +/- 30% from mid-week to weekend. As a result, a Maximum Month Reserve Factor is utilized to account for these fluctuations and prevent a sewage overflow/spill at the Plant. The Maximum Month Reserve Factor equals the highest Monthly Average Daily Flow divided by the Annual Average Daily Flow. Separate Maximum Month Reserve Factors were developed for Solvang and SYCSD, and are 1.17 and 1.21 respectively.

Therefore, as described in Sections 5 and 7 of the WWTP Capacity Analysis, the SYCSD only has available capacity of approximately 0.019 MGD Annual Average Daily Flow. See calculation below.

0.300	<b>SYCSD Total Capacity</b>
-0.144	Maximum Annual Average Daily Flow
-0.034	Maximum Month Reserve Factor (0.285-0.088) - (0.285-0.088)/1.21
-0.015	5% Restriction
<u>-0.088</u>	<u>Chumash Reserve</u>
0.019 MGD	Remaining Capacity

This would be inadequate capacity to add the remainder of its existing service area at Buildout. However, this is based on their historic Maximum Annual Average Daily Flow which has decreased over the past few years, and on estimated sewer duty factors that may trend down in the future. Therefore, it is possible the SYCSD may have adequate capacity to achieve Buildout.

Based on the WWTP Available Capacity study, Solvang has available capacity of 0.298 MGD Annual Average Daily Flow which is more than adequate to meet full Buildout needs. See calculation below.

1.200	<b>Solvang Total Capacity</b>
-0.676	Maximum Annual Average Daily Flow
-0.166	Maximum Month Reserve Factor (1.140 - 1.140/1.17)
<u>-0.060</u>	<u>5% Restriction</u>
0.298 MGD	Remaining Capacity

**Unfortunately**, a few recent events have thrown a twist into the completed WWTP Capacity Analysis. For starters, several years ago the water quality of the Santa Ynez River was identified as impaired. This resulted in the River being placed on the Federal list of impaired waterbodies per Section 303(d) of the Clean Water Act. In April 2016 the RWQCB published the Scoping Report to Support Development of Total Maximum Daily Loads for the Santa Ynez River Basin. The process for establishing TMDLs for the Santa Ynez River Basin began shortly thereafter. Total Maximum Daily Load (TMDL) is a term used to describe the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards. Nitrogen (as Nitrate and Ammonia) has been identified as one of the top priority pollutants in the Santa Ynez River. Fertilizer application, manure from livestock, urban runoff, and municipal wastewater are common significant sources of Nitrate.

The City's Waste Discharge Permit for the Solvang WWTP is up for renewal in 2017. In August of 2016 the RWQCB informally notified City staff that as part of the Permit renewal process, Nitrogen and Ammonia will be added to our Permit with discharge limits. The RWQCB also requested that the Wastewater Division staff experiment with adjusting our treatment process to de-nitrify the wastewater thus allowing the nitrogen to be released to the atmosphere in gaseous form and not reach the WWTP percolation ponds. Over the summer staff initiated testing and made several adjustments to our treatment process with very limited success.

We then engaged the assistance of Carollo Engineers. A strategy has been developed that we believe will result in successful de-nitrification of the WWTP effluent. New SCADA programming will begin soon to enable significant modification of the WWTP process to achieve de-nitrification. After the programming is completed, staff will begin testing the new reactor sequencing aimed to achieve de-nitrification. However, implementation of the new reactor sequencing may dramatically reduce the capacity of the WWTP. The WWTP has three reactor basins, but currently only two are needed to treat the wastewater inflow. So the third reactor basin represents available capacity. However, the adjusted process will result in a thicker biomass (mixed liquor) layer that results in more difficult settling of the sludge that may require the volume of all three (instead of two) reactors to allow for proper settlement and removal, thus eliminating the available capacity of the third currently unused reactor basin.

Until we have time to complete the necessary experimentation and adjustment of reactor sequencing we will not know how the adjusted process will impact the Plant capacity. This experimentation will take several months. Once completed, and results know, staff will return to City Council with an updated report on WWTP Available Capacity. It is recommended that City Council direct staff to respond to the SYCSD letter updating them on the situation, indicating there is uncertain available capacity at this time, and declining sale of any of the City's remaining available capacity.

**IV. ALTERNATIVES:**

None.

**V. FISCAL IMPACT:**

The WWTP Capacity Analysis cost \$11,000, and the required SCADA programming modifications are costing approximately \$15,500. There are no other significant financial impacts at this time. However, if it is determined the WWTP capacity is reduced by the de-nitrification process, the City Council may want to consider adding a capacity restoration/increasing project to the 10-Year CIP.

**VI. ATTACHMENTS:**

1. SYCSD letter dated, November 18, 2015
2. Solvang WWTP Capacity Analysis (Full Report)
3. RWQCB Santa Ynez River TMDL Fact Sheet
4. RWQCB Scoping Report – Development of TMDLs – Santa Ynez River Basin



# SANTA YNEZ COMMUNITY SERVICES DISTRICT

Mailing Address: P.O. Box 667, Santa Ynez, CA 93460-0667 • (805) 688-3008

November 18, 2015

City of Solvang  
Mayor Jim Richardson  
1644 Oak St.  
Solvang, CA 93463

Dear Mayor Richardson:

The Santa Ynez Community Services District is starting the annexation process for the 525 parcels within the District's current Sphere of Influence that are not connected to the public sewer. The District estimates that up to 120,000 gpd of additional wastewater capacity will be needed to serve these newly annexed parcels.

Pursuant to the action taken at its regular Board Meeting on November 18, 2015, the SYCSD Board of Directors is requesting, per Section 7C of the interagency agreement, the City of Solvang provide the SYCSD an accounting of the remaining capacity in the Solvang plant and also advise regarding Solvang's willingness to sell SYCSD up to 120,000 gpd, if the capacity is available.

Thank you for your attention in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read 'Barry Marks', with a long, sweeping horizontal line extending to the right.

Barry Marks  
Board President

CC: Brad Vidro, City Manager





# City of Solvang – Wastewater Treatment Plant Technical Memorandum – Remaining Capacity

*Prepared for*  
City of Solvang  
411 Second Street  
Solvang, CA 93463

*Prepared by*  
Cannon  
1050 Southwood Drive  
San Luis Obispo, CA 93401



May 12, 2016

**Acknowledgements:**

- Brad Vidro – City Manager
- Matt van der Linden, PE – Public Works Director
- Nathan Giacinto – Wastewater Division Supervisor
- Paul Matsukas – Lead Wastewater Treatment Plant Operator

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### Appendices

- A. Santa Ynez Community Services District Letter Requesting Account of Remaining Capacity
- B. City of Solvang Wastewater Treatment Plant Historical Flow Data
- C. City of Solvang Public Water System Statistics, DWR Form 38, Years 2000-2015

## **1.0 Purpose and Objectives**

Recently, Santa Ynez Community Services District (SYCSD) sent the City of Solvang (Solvang) a letter notifying of the potential annexation of 525 parcels into its service area with a potential wastewater flow of up to 120,000 gallons per day (0.12 million gallons per day). In accordance with the interagency agreement, SYCSD requested an accounting of their remaining capacity in the Solvang Wastewater Treatment Plant (Plant). Based on this request and Solvang’s need to understand and plan for the use of its own remaining capacity, Solvang retained Cannon to prepare a technical memorandum to assess existing and future flows and loads from each of the respective communities. In addition, Cannon was tasked with developing a simple spreadsheet tool that could be used by both agencies on an on-going basis to manage future requests for approval to add connections to the system.

This is not a sewer master plan or comprehensive and detailed analysis of the wastewater treatment plant or each of the communities’ sewer collection systems; rather, this is a high-level evaluation for use in managing the remaining, un-used hydraulic capacity of the Plant. As noted in the 2004 WWTP Facility Plan, there are always potential future regulatory requirements that could impact the Plant’s ability to be in compliance.

## **2.0 Background**

The City of Solvang Waste Water Treatment Plant has a design and permit capacity rating of 1.5 million gallons per day (mgd) as reported in the 2004 WWTP Facility Plan and the Waste Discharge Requirements (WDR) Order No. R3-2007-0069. The City of Solvang and Santa Ynez Community Services District currently rely on the Plant to serve their respective communities. SYCSD, through an interagency agreement with Solvang, has purchased capacity rights to 0.30 mgd (20%) of the Plant’s 1.5 mgd capacity and is restricted to using up to 95% of their purchased capacity. In addition, 0.088 mgd of SYCSD’s capacity is reserved for the Santa Ynez Band of Mission Indians (Band).

In the past 11 years, Plant staff has reported annual average wastewater flow from as low as 0.45 mgd (in 2005) to a high of 0.82 mgd (in 2011) with an 11-year average of 0.65 mgd. In the last 6-years (2010 through 2015)—as a result of the severe drought and water conservation and restrictions—wastewater flow has dropped from 0.82 mgd to 0.62 mgd. The amount of flow generated and conveyed to the Plant in the last 6 years from each agency is shown below.

**Table 2.1 Historical Solvang WWTP Flows<sup>1</sup> and Loads**

Year	Solvang, mgd	SYCSD, mgd	Total, mgd	Influent BOD mg/l	Influent TSS mg/l
2010	0.600	0.144	0.744	211	168
2011	0.676	0.143	0.819	193	158
2012	0.612	0.144	0.756	280	172
2013	0.588	0.141	0.729	221	153
2014	0.542	0.137	0.679	263	155
2015	0.510	0.118	0.628	263	202

1 – values shown represent annual average daily flows in million gallons per day

The Facility Plan estimates a future flow of 1.5 mgd consisting of 0.85 mgd (57%) from Solvang and 0.65 mgd (43%) from SYCSD. These future flow projections were based on assumptions that are not consistent with current agreements between Solvang and SYCSD which define SYCSD’s capacity of 0.30 mgd. Based on the Facility Plan, the Sequencing Batch Reactor (SBR) Plant is rated at a flow of 1.5 mgd, Biological Oxygen Demand (BOD) of 275 mg/l, and Total Suspended Solids (TSS) of 300 mg/L. The long-term average BOD and total suspended solids (TSS) strengths are approximately 239 mg/l and 168 mg/l, respectively (per WWTP staff). Therefore, the Plant appears to have adequate hydraulic capacity

(based on average annual flow) and treatment capacity (based on BOD/TSS strength) for the foreseeable future.

### **3.0 Previous Studies and Reports and Reference Documents**

The following studies, reports, permits and data were used to prepare this memorandum.

- 2004 WWTP Facility Plan
- Waste Discharge Requirements (WDR) Order No. R3-2007-0069
- 2015 City of Solvang General Plan Housing Element

The following documents were referenced in this memorandum.

- Interagency Agreements and Correspondence Regarding Capacity Rights

### **4.0 Wastewater Flows and Loading Analysis**

The purpose of this section is to summarize the historical and projected flows and loadings for the Solvang Wastewater Treatment Plant (Plant) over the past fifteen years and through full buildout and annexation of sphere of influence areas, respectively. Projected flows and loadings will be used for the accounting of remaining capacity in the Plant as required by the Interagency Agreement between Solvang and SYCSD.

#### **4.1 Sewer Service Areas**

The communities of Solvang and Santa Ynez are located along the Santa Ynez River in Santa Barbara County, California. The Solvang Wastewater Treatment Plant is located on the south side of the river near the westerly limits of the City of Solvang. Figures 4.1 and 4.2 illustrate the existing service/annexed areas and the spheres of influence for each community. Table 4.1 summarizes the estimated number of sewer connections for each community by land use type.

**Figure 4.1 City of Solvang Sewer Service Areas**

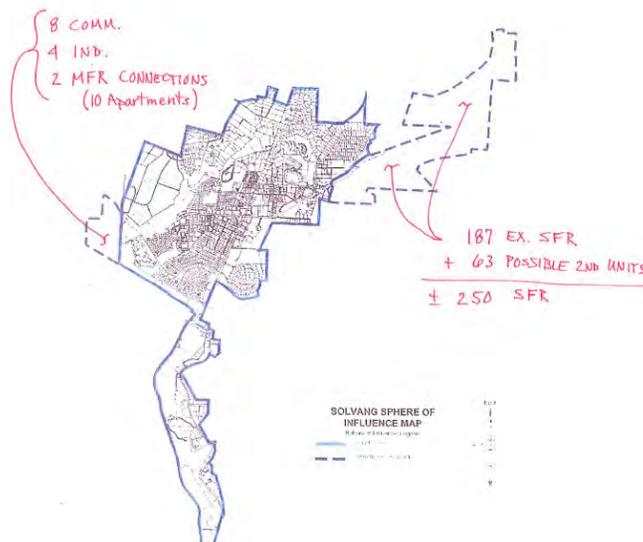


Figure 4.2 SYCSD Sewer Service Areas

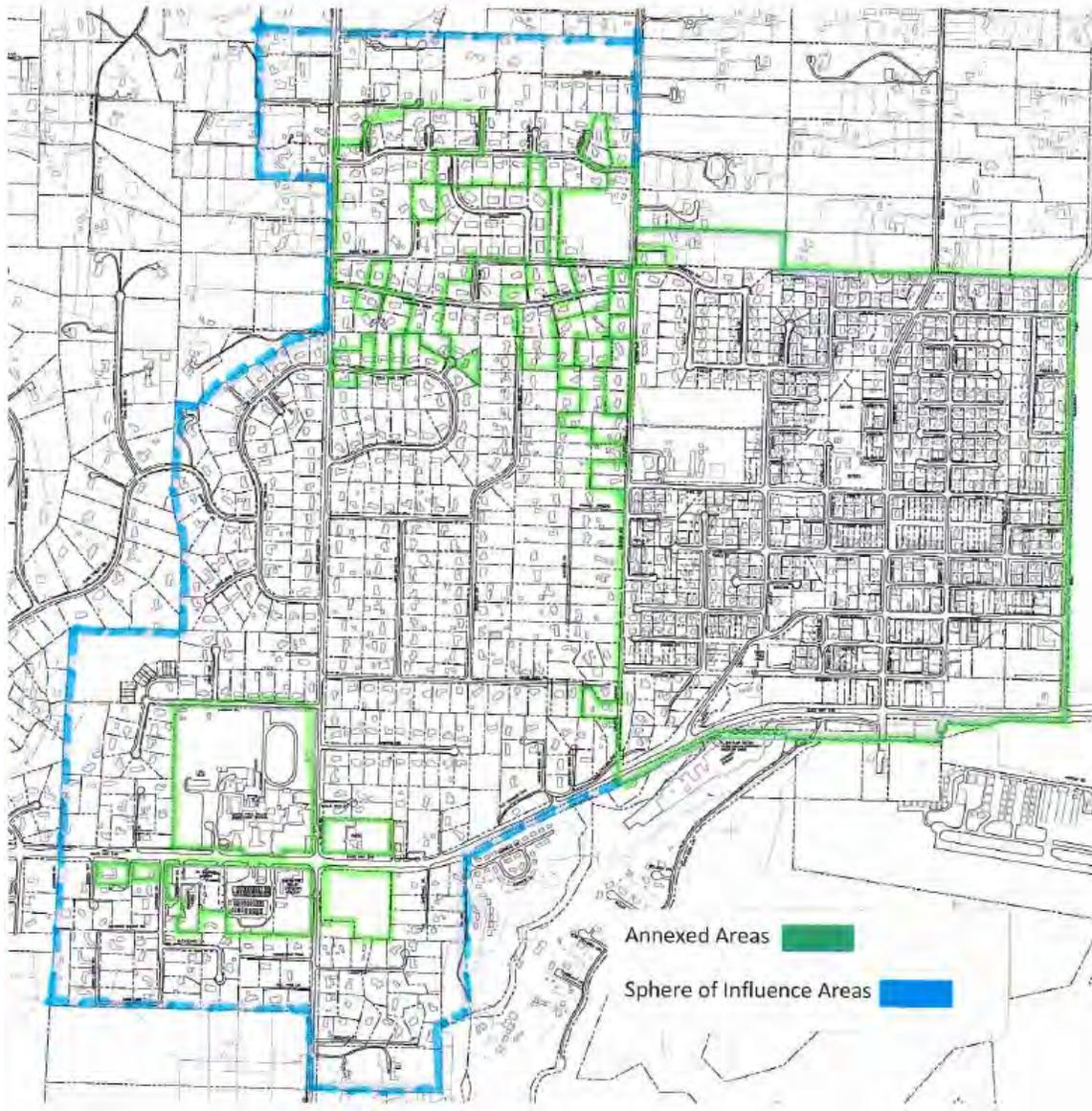


Table 4.1 Total Future Sewer Connections within Sphere of Influence

	Existing Connections				Planned Connections to achieve General Plan Buildout				Possible Future Connections from Sphere of Influence				Future Total
	SFR	MFR <sup>1</sup>	CMR	IND	SFR	MFR <sup>1</sup>	CMR	IND	SFR	MFR <sup>1</sup>	CMR	IND	
Solvang	1,723	69	222	26	186	34	10	2	250	2	8	4	2,536
SYCSD	649	42	50	5	74	21	8	1	525				1,373

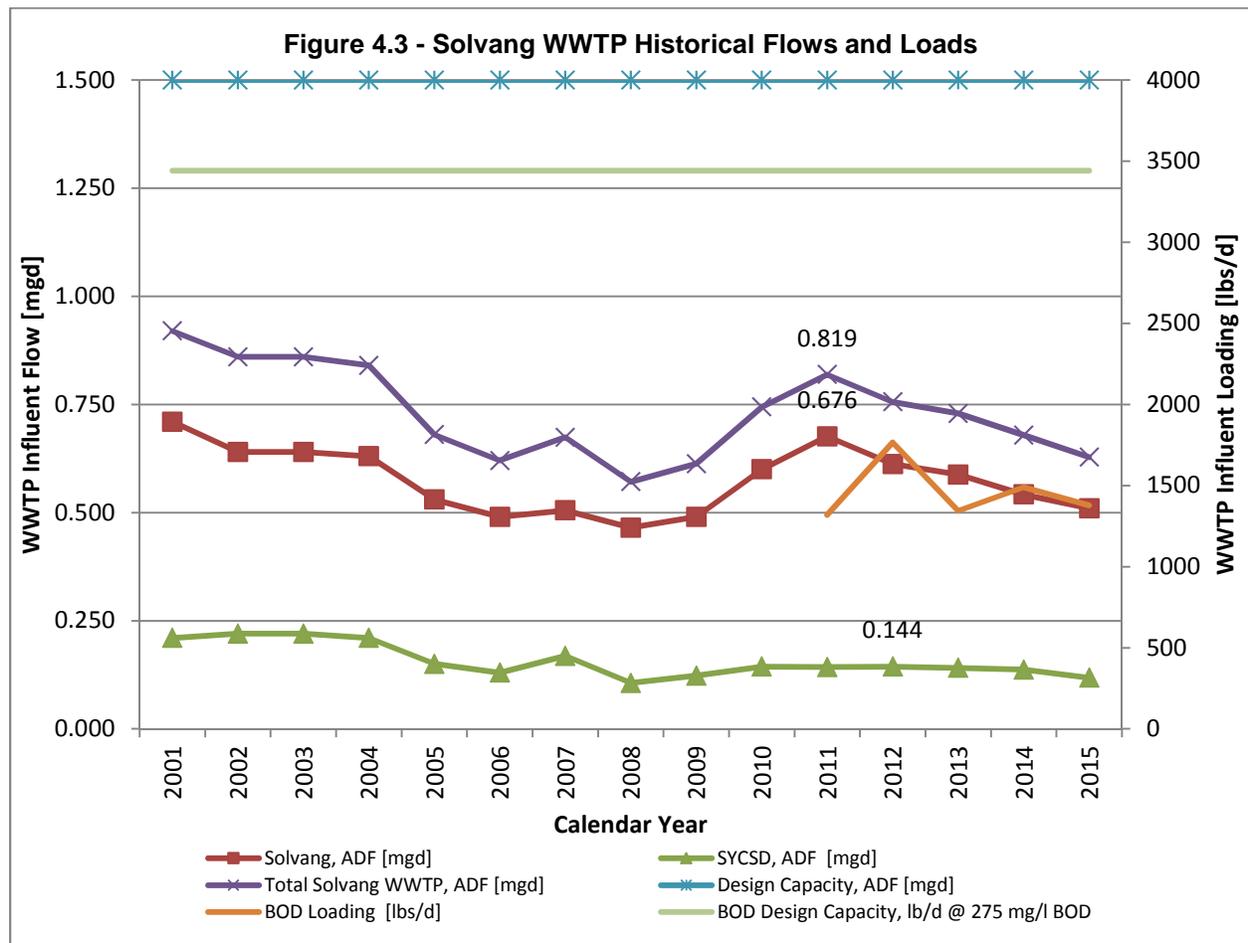
1 - Indicates MFR Connections (not Dwelling Units) and assumes 8 dwelling units per connection based on a rough count of 561 total apartment units.

**4.2 Historical Flows and Loads**

Historical flows were determined from data recorded at the metering station in Fjord Drive for both communities, Solvang and SYCSD. Wastewater strength data (BOD and TSS) are only recorded at the Plant and no separate data exists to distinguish strength between the two communities. Therefore, wastewater loadings for each community are assumed to be equal for purposes of this analysis. Furthermore, since historical flows are considerably lower than the 1.5 mgd capacity, and BOD and TSS loading concentrations are near or below existing wastewater strength design criteria (275 mg/l and 300 mg/l, respectively), subsequent analysis in this evaluation is limited to hydraulic loadings only.

Figure 4.3 illustrates the trends in hydraulic flow loading to the Plant on the left axis and BOD solids loading on the right. Annual Average Daily Flow (AADF) hydraulic loadings on the Plant in the past 5-years averaged about 0.75 mgd or 50% capacity. The peak AADF in the last 5-years occurred in 2011 with a flow of 0.819 mgd. Recent peak AADF's for Solvang occurred in 2011 at a flow of 0.676 mgd and for SYCSD in 2012 at a flow of 0.144 mgd.

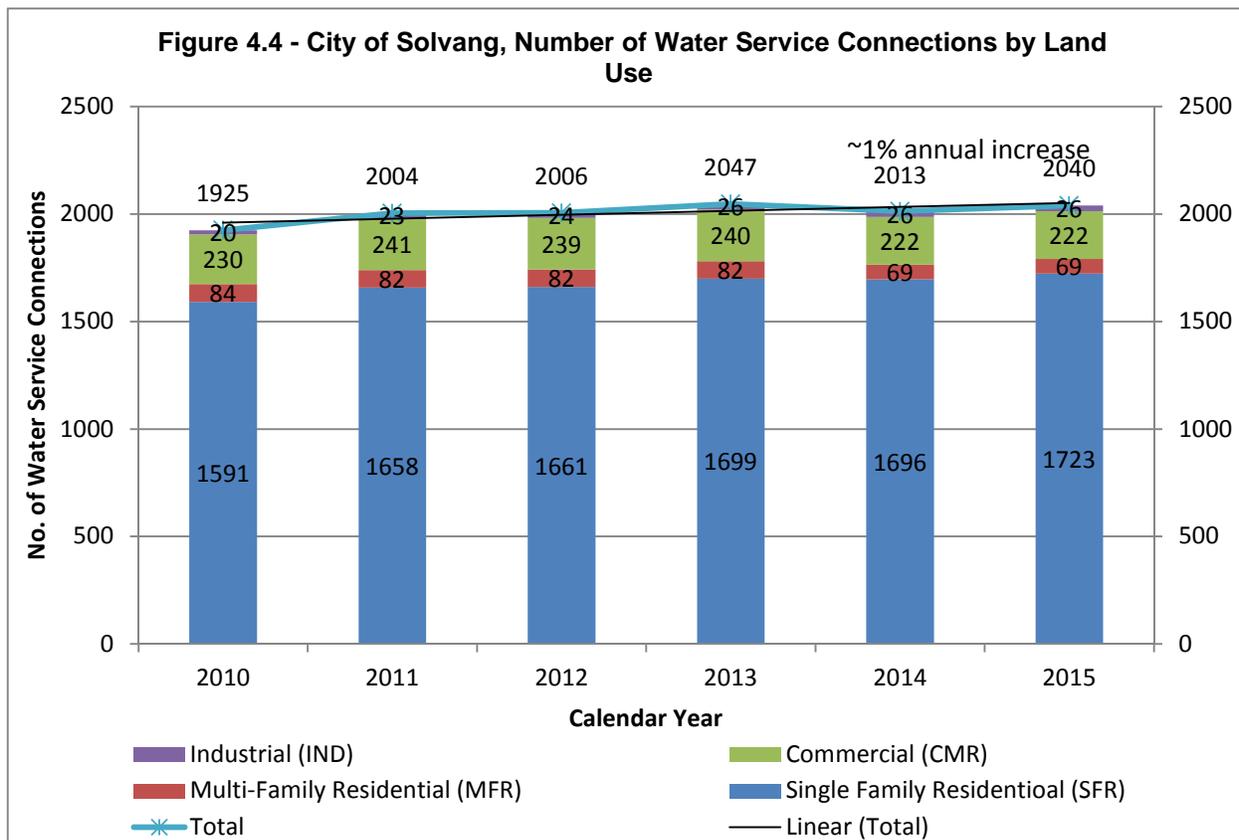
Annual Average BOD Solids loading in the past 5-years average about 1,500 lbs per day or about 44% of the Plant ability to process organic loadings of 3,440 lbs/d (8.34 x 1.5 mgd x 275 mg/l).



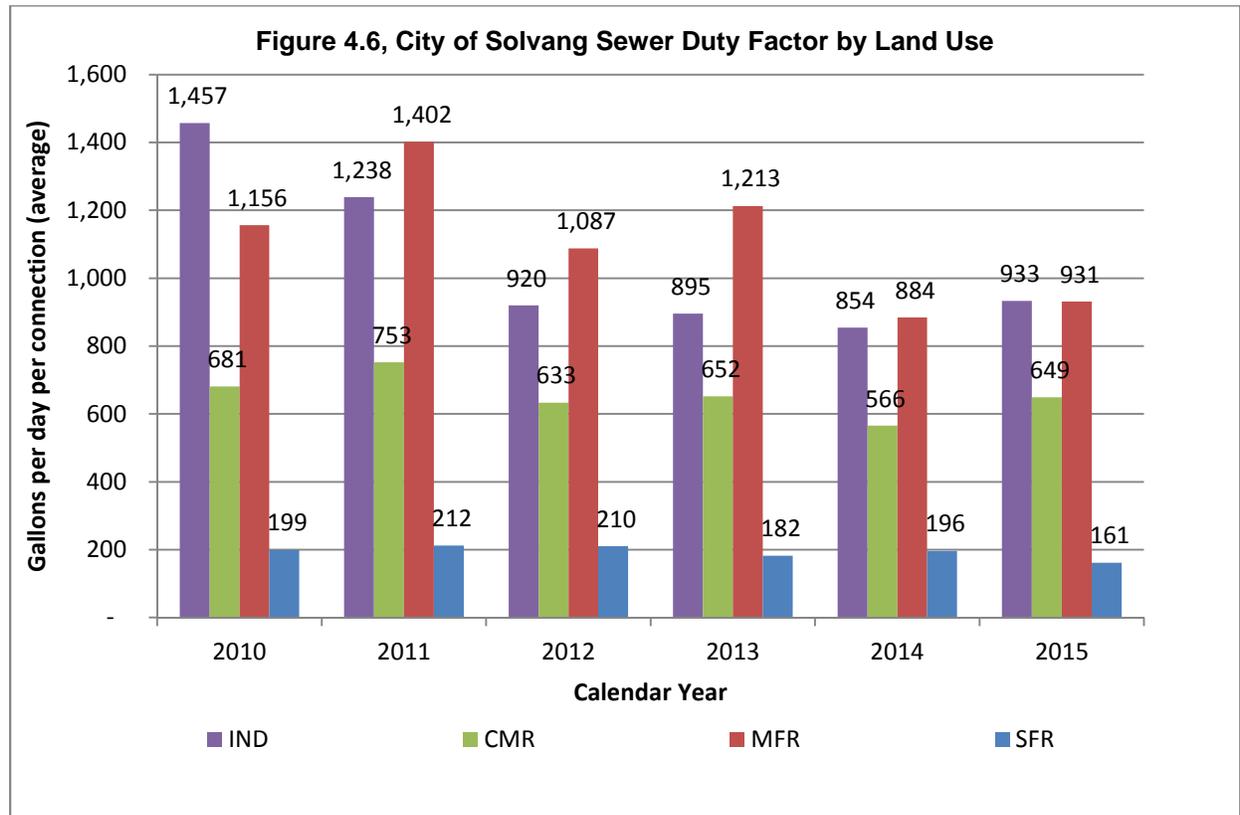
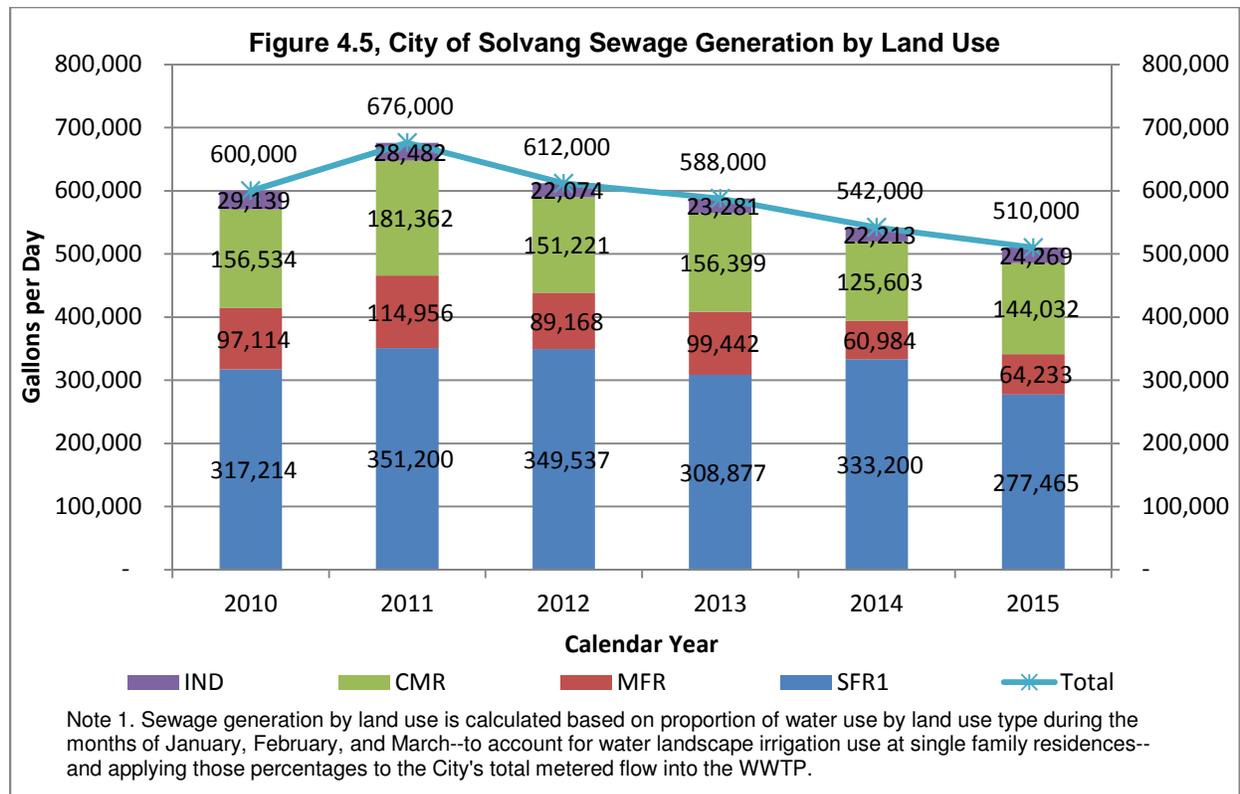
**4.3 Sewer Duty Factors**

Sewer duty factors (amount of wastewater flow generated from each sewer service connection measured in gallons per day per connection type, gpd-c) for Solvang were estimated for each of the major land use types using water usage data by Customer Class (i.e. four major land use designations, Industrial, Commercial, Multi-Family Residential, and Single Family Residential). The following assumptions were made to correlate “water flow per water service connection” to “wastewater flow per sewer service connection.” Figures 4.4, 4.5, and 4.6 show the results of this analysis.

- For each water service connection, there is one sewer service connection.
- Water usage during the months of January, February, and March reflects low domestic irrigation use and therefore best represents actual proportional distribution of water flow that generates wastewater flow.
- Wastewater flows per sewer connection are a direct proportional percentage of the water usage per water connection by land use type. (i.e. if 55% of total water usage in Solvang is from Single Family Residential (SFR), then 55% of total wastewater flow at the Plant is from SFR).
- Wastewater flow per land use type are based the total wastewater flow by land use type divided by the number of land-use type connections. (i.e. if there are 1,723 SFR connections and SFR’s generate 55% of the total metered wastewater flow of 510,000 gallons per day, then each SFR sewer connection will generate approximately 161 gallons per day ( $510,000/1723 \times 0.55$ ).
- Wastewater flow for Multi-Family Residential is based on 8 dwelling units per sewer connection. This was estimated by conducting a rough count of the number of existing apartment units in Solvang (561) and dividing by 69 connections.



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Based on the analysis described above, the following sewer duty factors were derived to estimate future flows for each community. As shown in Table 4.2, the 6-year average duty factors for SYCSD were calibrated to be 67% of Solvang’s duty factors to match SYCSD’s total wastewater flow recorded at the metering station. In order to forecast future flows in a consistent manner for both communities, the proposed duty factors are assumed to be the greater of the two communities. Based on the past 6-years of data, Solvang has the higher sewer duty factors and are therefore utilized for future flow projections.

Land Use Designation	6-yr Average Duty Factor, gallons per day per connection (gpd-c)		Proposed Duty Factors, gpd-c	
	Solvang	SYCSD <sup>1</sup>	Solvang	SYCSD
SFR	193	134	200	200
MFR <sup>2</sup>	1,112	737	1,100	1,100
CMR	655	469	700	700
IND	1,050	737	1,100	1,100

1. Values were calculated proportionally to reflect SYCSD’s recorded total wastewater flow and number of reported connections.
2. 1,100 gpd-c equates to approximately 137 gpd per apartment unit based on average of 8 apts. per connection.

**4.4 Sewer Service Connections: Existing, Planned, and Future**

The following tables summarize the number and types of sewer connections for each community based on the service areas described in Section 4.1. Table 4.3 lists the number of existing and planned connections within the existing service areas and Table 4.4 lists totals for possible future expansion within the current spheres of influence. The number of planned connections shown below in Table 4.3 is a conservative estimate for the City of Solvang as compared to the April 2015 Housing Element of the General Plan. Table 5-2 of the Housing Element shows 354 units whereas Table 4.3 below shows an equivalent 470 units (186 + (34 MFR connections x 8 apartments/connection) + 10 +2).

	Existing Connections				Planned Connections to achieve General Plan Buildout				Sub-Totals				Buildout Total
	SFR	MFR <sup>1</sup>	CMR	IND	SFR	MFR <sup>1</sup>	CMR	IND	SFR	MFR <sup>1</sup>	CMR	IND	
Solvang	1,723	69	222	26	186	34	10	2	1,909	103	232	28	2,272
SYCSD	649	42	50	5	74	21	8	1	723	63	58	6	850

1. Indicates MFR Connections (not Dwelling Units). Approximately 561 existing apartment units divided by 69 connections equals approximately 8 dwelling units per connection.

	Possible Future Connections from Sphere of Influence				Sub-Totals				Future Total
	SFR	MFR <sup>1</sup>	CMR	IND	SFR	MFR <sup>1</sup>	CMR	IND	
Solvang	250	2	8	4	2,159	105	240	32	2,536
SYCSD	525				1,248	63	58	6	1,375

- 1 - Indicates MFR Connections (not Dwelling Units). Approximately 561 existing apartment units divided by 69 connections equals approximately 8 dwelling units per connection.

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**4.5 Flow Projections**

The flow projections summarized below represent Annual Average Daily Flows for each community based on the respective planning scenario. The values shown in Tables 4.5 through 4.9 are the product of the sewer duty factors listed in Table 4.2 and the number of sewer connections in Tables 4.3 and 4.4.

**Table 4.5 Existing Flows**

	Existing Connections [I]								Subtotal	
	SFR		MFR		CMR		IND		No.	gpd
	No.	gpd	No.	gpd	No.	gpd	No.	gpd		
Solvang	1723	332,539	69	76,728	222	145,410	26	27,300	2,040	581,977
SYCSD	649	86,966	42	30,954	50	23,450	5	3,685	746	145,055
Total AADF, gpd										727,032

**Table 4.6 Planned Flows at General Plan Buildout**

	Planned Connections to achieve General Plan Buildout [II]								Subtotal	
	SFR		MFR		CMR		IND		No.	gpd
	No.	gpd	No.	gpd	No.	gpd	No.	gpd		
Solvang	186	37,200	34	37,400	10	7,000	2	2,200	232	83,800
SYCSD	74	14,800	21	23,100	8	5,600	1	1,100	104	44,600
Total AADF, gpd										128,400

**Table 4.7 Buildout Flows: Existing plus Planned**

	Buildout Sub-Totals by Customer Class [I + II]								Buildout Totals	
	SFR		MFR		CMR		IND		#	Total
	No.	gpd	No.	gpd	No.	gpd	No.	gpd	No.	gpd
Solvang	1909	369,739	103	114,128	232	152,410	28	29,500	2272	665,777
SYCSD	723	101,766	63	54,054	58	29,050	6	4,785	850	189,655
Total AADF, gpd										855,432

**Table 4.8 Sphere of Influence Flows**

	Possible Future Connections from Sphere of Influence [III]								Subtotal	
	SFR		MFR		CMR		IND		No.	gpd
	No.	gpd	No.	gpd	No.	gpd	No.	gpd		
Solvang	250	50,000	2	2,200	8	5,600	4	4,400	264	62,200
SYCSD	525	105,000		-		-		-	525	105,000
Total AADF, gpd										167,200

**Table 4.9 Total Future Flows: Existing plus Planned plus Sphere of Influence**

	Sub-Totals (Buildout + SOI) [I + II + III]								Future Total	
	SFR		MFR		CMR		IND		No.	gpd
	No.	gpd	No.	gpd	No.	gpd	No.	gpd		
Solvang	2159	419,739	105	116,328	240	158,010	32	33,900	2,536	727,977
SYCSD	1248	206,766	63	54,054	58	29,050	6	4,785	1,375	294,655
Total AADF, gpd										1,022,632

## 5.0 Remaining Capacity Discussion

The following section describes the proposed methodology for managing remaining capacity at the Solvang WWTP. The Plant is rated for an average daily flow of 1.50 mgd with Solvang and SYCSD sharing the capacity at 1.20 mgd and 0.300 mgd, respectively. Each community meters its flow at the Fjord Drive metering station with flow being monitored and recorded by Solvang’s WWTP staff. Historical flow data is kept on a monthly and annual basis and stored in a spreadsheet for compliance and billing purposes.

The proposed method for managing capacity at the Plant is to maintain an assessment of the remaining capacity by using the following Capacity Assessment Tool (CAT). It is recommended that the CAT be updated annually and prior to approval of any new development, rezoning, annexation, etc. that has the potential to add flow to the Plant within either of the communities. The CAT is built on the premise that wastewater flows do not change drastically from year to year and the “new normal” wastewater flows will reflect long-lasting water conservation trends. The following snapshot of the CAT and the description below explains how the tool can be used by both Solvang and SYCSD.

Capacity Assessment Worksheet			
	Date		
	Building Permit Application Number		
	Solvang--Average Daily Flow Projection from Development/Rezoning/Annexation, mgd		
	SYCSD--Average Daily Flow Projection from Development/Rezoning/Annexation, mgd		
<b>WDR Permit Capacity</b>			
1.5 million gallons per day, mgd			
		SYCSD	Solvang
			Total
	Flow Capacity Allocation (Average Dry Weather Flow (ADWF), mgd)	0.300	1.200
			1.500
	Maximum Annual Average Daily Flow (MAADF) within past 5 years	(0.144)	(0.676)
			(0.820)
	Tribe Reserve Flow	(0.088)	
			(0.088)
	5% Restriction per Agreement	(0.015)	(0.060)
			(0.075)
	Pending Development/Rezoning/Annexation Allocation (ADWF)		
	Utilized Capacity, mgd	(0.247)	(0.736)
			(0.983)
	Remaining Capacity, mgd	0.053	0.464
			0.517
	Remaining Capacity, %	17.67%	38.67%
			34.47%
	Utilized Capacity, %	82.33%	61.33%
			65.53%
<b>Seasonal Peaking Considerations</b>			
1.17	Solvang Maximum Month Reserve Factor, Max Month/Average Month (within the past 5 years)		
1.21	SYCSD Maximum Month Reserve Factor, Max. Month/Ave. Month (within the past 5 years)		
	Maximum Month Reserve (MAADF x Max. Month Factor - MAADF)	(0.030)	(0.115)
			(0.145)
	Potential Peak Monthly Average Daily Flow	(0.174)	(0.791)
			(0.965)

Prior to approval of the Land Use Application or Conditional Use Permit, the Applicant must submit the calculation of maximum daily wastewater flow in million gallons per day based on their proposed project. The calculation will generally consist of multiplying the number of proposed sewer connections times the sewer duty factor for the appropriate land use type. The Solvang WWTP will then input that data into the CAT to determine if there is adequate capacity at the Plant to handle to proposed addition. If there is adequate capacity, the project can then be approved. If there's not, the project will not receive approval until either the Plant is expanded or the approving agency obtains the additional capacity rights to cover the deficit.

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Numerical values shown in the table below the “WDR Permit Capacity” row in the CAT are prepared by Plant Staff and represent calculations and/or agreements as described therein. These values represent annual average daily flows to stay consistent with permits, agreements, and capacity allocations. Further discussion about seasonal fluctuations is provided below and intended to be used by both agencies to assist in managing their respective flow fluctuations as they relate to capacity allocations and daily Plant flow.

Annual Average Daily Flows described in Sections 1 through 4 above do not account for seasonal fluctuation throughout the year. Wastewater flow at a wastewater treatment plant inherently varies from hour to hour, day to day, month to month, and year to year. Hour to hour variations typically range from  $\pm 60\%$  of average on any given day of the week. Day to Day flows typically vary  $\pm 30\%$  from a mid-week day to a weekend day. And Month to Month daily average flows vary  $\pm 15\%$  depending on wet-weather and/or heavy tourist periods.

The following method was chosen to provide both agencies an indication of how their respective capacity allocations could be impacted by prolonged trends of daily flow increases. The Maximum Month Reserve Factor is calculated using the values shown in Table 5.1 as described below.

Annual Average Daily Flows are adjusted by a Maximum Month Reserve Factor, which is simply the highest (Maximum) Monthly Average Daily Flow for the year divided by the Annual Average Daily Flows. Table 5.1 summarizes the Reserve Factor for each community. The value used in the CAT is the highest ratio in the last 5-years for each entity—in this case, 1.17 for Solvang and 1.21 for SYCSD.

Year	Solvang			SYCSD		
	Annual Average Daily Flow, mgd	Max Month Daily Flow, mgd	Max Month/Annual Average	Annual Average Daily Flow, mgd	Max Month Daily Flow, mgd	Max Month/Annual Average
2010	0.601	0.668	1.11	0.144	0.173	1.20
2011	0.676	0.787	1.17	0.144	0.174	1.21
2012	0.612	0.650	1.06	0.144	0.159	1.10
2013	0.588	0.614	1.04	0.141	0.150	1.06
2014	0.542	0.580	1.07	0.137	0.151	1.10
2015	0.507	0.530	1.05	0.118	0.137	1.16

Using the Annual Average Flow projections from Section 4 and the CAT model, the “Buildout” and “Sphere of Influence” scenarios were computed as shown below. Based on this analysis, the overall Plant has adequate capacity for the foreseeable future on an annual average daily flow basis; however, SYCSD will need additional capacity allotment prior to bringing on additional areas within the sphere of influence. Furthermore, seasonal fluctuations could result in extended periods of daily averages approaching allotted capacities—this will need to be monitored and discussed by both agencies on an on-going basis.

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Capacity Assessment Worksheet (General Plan at Buildout)			
	Date		
	Building Permit Application Number		
0.084	Solvang--Average Daily Flow Projection from Development/Rezoning/Annexation, mgd		
0.045	SYCSD--Average Daily Flow Projection from Development/Rezoning/Annexation, mgd		
<b>WDR Permit Capacity</b>			
1.5 million gallons per day, mgd			
		SYCSD	Solvang
			Total
	Flow Capacity Allocation (Average Dry Weather Flow (ADWF), mgd)	0.300	1.200
			1.500
	Maximum Annual Average Daily Flow (MAADF) within past 5 years	(0.144)	(0.676)
			(0.820)
	Tribe Reserve Flow	(0.088)	
			(0.088)
	5% Restriction per Agreement	(0.015)	(0.060)
			(0.075)
	Pending Development/Rezoning/Annexation Allocation (ADWF)	(0.045)	(0.084)
			(0.128)
	Utilized Capacity, mgd	(0.292)	(0.820)
			(1.111)
	Remaining Capacity, mgd	0.008	0.380
			0.389
	Remaining Capacity, %	2.80%	31.68%
			25.91%
	Utilized Capacity, %	97.20%	68.32%
			74.09%
<b>Seasonal Peaking Considerations</b>			
1.17	Solvang Maximum Month Reserve Factor, Max Month/Average Month (within the past 5 years)		
1.21	SYCSD Maximum Month Reserve Factor, Max. Month/Ave. Month (within the past 5 years)		
	Maximum Month Reserve (MAADF x Max. Month Factor - MAADF)	(0.084)	(0.213)
			(0.297)
	Potential Peak Monthly Average Daily Flow	(0.228)	(0.889)
			(1.117)

Capacity Assessment Worksheet (Buildout plus Spheres of Influence)			
	Date		
	Building Permit Application Number		
0.146	Solvang--Average Daily Flow Projection from Development/Rezoning/Annexation, mgd		
0.150	SYCSD--Average Daily Flow Projection from Development/Rezoning/Annexation, mgd		
<b>WDR Permit Capacity</b>			
1.5 million gallons per day, mgd			
		SYCSD	Solvang
			Total
	Flow Capacity Allocation (Average Dry Weather Flow (ADWF), mgd)	0.300	1.200
			1.500
	Maximum Annual Average Daily Flow (MAADF) within past 5 years	(0.144)	(0.676)
			(0.820)
	Tribe Reserve Flow	(0.088)	
			(0.088)
	5% Restriction per Agreement	(0.015)	(0.060)
			(0.075)
	Pending Development/Rezoning/Annexation Allocation (ADWF)	(0.150)	(0.146)
			(0.296)
	Utilized Capacity, mgd	(0.397)	(0.882)
			(1.279)
	Remaining Capacity, mgd	(0.097)	0.318
			0.221
	Remaining Capacity, %	-32.20%	26.50%
			14.76%
	Utilized Capacity, %	132.20%	73.50%
			85.24%
<b>Seasonal Peaking Considerations</b>			
1.17	Solvang Maximum Month Reserve Factor, Max Month/Average Month (within the past 5 years)		
1.21	SYCSD Maximum Month Reserve Factor, Max. Month/Ave. Month (within the past 5 years)		
	Maximum Month Reserve (MAADF x Max. Month Factor - MAADF)	(0.211)	(0.286)
			(0.497)
	Potential Peak Monthly Average Daily Flow	(0.355)	(0.962)
			(1.317)

## **6.0 Regional Water Quality Control Board**

The existing capacity of the Solvang WWTP is 1.5 mgd. Based on the requirements of the RWQCB (Item C(9) of the WDR Standard Provisions), upon determination by the City of Solvang that the WWTP monthly average daily flow has reached 80% of design capacity or will reach the design capacity within 4 years, the City must within 120 days submit a report to the RWQCB estimating when the monthly average daily flow will equal the design capacity, and provide a schedule for studies, design, and other steps needed to provide additional capacity before the wastewater flow equals the existing capacity. The intent is to have additional treatment capacity constructed and operational before the existing capacity is reached or exceeded.

Thus the most significant trigger point when the Solvang WWTP can no longer accept additional flow, or must begin significant planning and engineering for expansion, is when the monthly average daily flow has reached 1.2 mgd or when the City anticipates reaching 1.5 mgd within 4 years, whichever occurs first.

## **7.0 Conclusions**

There is adequate capacity in the Solvang Wastewater Treatment Plant for both communities under existing and general plan (existing service area) build-out areas as defined by the Capacity Assessment methodology described above and the likely trend toward long-term water conservation. Solvang has sufficient capacity in the Plant to accommodate addition of its current sphere of influence. However, the SYCSD does not have sufficient capacity to accommodate addition of its entire existing sphere of influence. Although, a portion of SYCSD's existing sphere of influence could be added with their limited available capacity. SYCSD would need to purchase a portion of Solvang's capacity allocation to handle addition of the 525 SFR connections within its sphere of influence area in order to accommodate the increase in wastewater flow. SYCSD's request to purchase an additional 120,000 gpd (0.120 mgd) capacity is a reasonable estimate of their future capacity needs (to serve the 525 SFR connections) given current trends of water conservation and resulting lower per capita and connection flows.

It should be noted that a factor of safety for maximum monthly flow fluctuations, as described in Section 5.0, has not been included in the Capacity Assessment tables at the end of Section 5.0 or the analysis below. Consideration of this should be given by both agencies as they track their remaining available capacities.

Using the CAT to evaluate 2015, SYCSD and Solvang have the utilized and remaining capacity as shown below.

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2015

<b>WDR Permit Capacity</b>				
1.5 million gallons per day, mgd				
		SYCSD	Solvang	Total
Flow Capacity Allocation (Average Dry Weather Flow (ADWF), mgd)		0.300	1.200	1.500
Maximum Annual Average Daily Flow (MAADF) within past 5 years		(0.144)	(0.676)	(0.820)
Tribe Reserve Flow		(0.088)		(0.088)
5% Restriction per Agreement		(0.015)	(0.060)	(0.075)
Pending Development/Rezoning/Annexation Allocation (ADWF)				
	Utilized Capacity, mgd	(0.247)	(0.736)	(0.983)
	Remaining Capacity, mgd	0.053	0.464	0.517
	Remaining Capacity, %	17.67%	38.67%	34.47%
	Utilized Capacity, %	82.33%	61.33%	65.53%

Hypothetical General Plan Buildout + SOI with SYCSD purchase of 0.120 mgd capacity

<b>WDR Permit Capacity</b>				
1.5 million gallons per day, mgd				
		SYCSD	Solvang	Total
Flow Capacity Allocation (Average Dry Weather Flow (ADWF), mgd)		0.420	1.080	1.500
Maximum Annual Average Daily Flow (MAADF) within past 5 years		(0.144)	(0.676)	(0.820)
Tribe Reserve Flow		(0.088)		(0.088)
5% Restriction per Agreement		(0.021)	(0.054)	(0.075)
Pending Development/Rezoning/Annexation Allocation (ADWF)		(0.150)	(0.146)	(0.296)
	Utilized Capacity, mgd	(0.403)	(0.876)	(1.279)
	Remaining Capacity, mgd	0.017	0.204	0.221
	Remaining Capacity, %	4.14%	18.89%	14.76%
	Utilized Capacity, %	95.86%	81.11%	85.24%

## **APPENDICES**

The following appendices are included:

- A. Santa Ynez Community Services District Letter Requesting Account of Remaining Capacity
- B. City of Solvang Wastewater Treatment Plant Historical Flow Data
- C. City of Solvang Public Water System Statistics, DWR Form 38, Years 2000-2015

APPENDIX A:

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# SANTA YNEZ COMMUNITY SERVICES DISTRICT

Mailing Address: P.O. Box 667, Santa Ynez, CA 93460-0667 • (805) 688-3008

November 18, 2015

City of Solvang  
Mayor Jim Richardson  
1644 Oak St.  
Solvang, CA 93463

Dear Mayor Richardson:

The Santa Ynez Community Services District is starting the annexation process for the 525 parcels within the District's current Sphere of Influence that are not connected to the public sewer. The District estimates that up to 120,000 gpd of additional wastewater capacity will be needed to serve these newly annexed parcels.

Pursuant to the action taken at its regular Board Meeting on November 18, 2015, the SYCSD Board of Directors is requesting, per Section 7C of the interagency agreement, the City of Solvang provide the SYCSD an accounting of the remaining capacity in the Solvang plant and also advise regarding Solvang's willingness to sell SYCSD up to 120,000 gpd, if the capacity is available.

Thank you for your attention in this matter.

Sincerely,



Barry Marks  
Board President

CC: Brad Vidro, City Manager

APPENDIX B:

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## Solvang WWTP - Flows and Loads Summary

YEAR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	AVERAGE	Max Month
SOL.'15	0.50521	0.50101	0.51219	0.50650	0.50368	0.51065	0.53048	0.52940	0.49932	0.50097	0.48897	0.49684	0.50710	0.53048
S.Y. '15	0.13677	0.13011	0.13121	0.12364	0.12137	0.11096	0.09726	0.10569	0.10781	0.11496	0.11511	0.11659	0.11762	0.13677
SOL.'14	0.54688	0.55099	0.58002	0.55550	0.54527	0.55862	0.57035	0.55388	0.51247	0.49935	0.50967	0.52638	0.54245	0.58002
S.Y. '14	0.15080	0.13962	0.14788	0.13986	0.13673	0.13466	0.12872	0.13345	0.12615	0.13275	0.13124	0.13900	0.13674	0.15080
SOL.'13	0.59133	0.57956	0.59922	0.60374	0.60350	0.60661	0.61361	0.60491	0.56191	0.55439	0.56959	0.56554	0.58783	0.61361
S.Y. '13	0.14343	0.14263	0.14458	0.14309	0.14162	0.13874	0.13562	0.12070	0.14011	0.14677	0.14435	0.14986	0.14096	0.14986
SOL.'12	0.57694	0.57176	0.59859	0.61701	0.61519	0.64004	0.65002	0.64131	0.61349	0.59958	0.60936	0.61150	0.61207	0.65002
S.Y. '12	0.15007	0.14876	0.15475	0.15903	0.14380	0.13734	0.13614	0.13856	0.14153	0.14400	0.13765	0.14148	0.14442	0.15903
SOL.'11	0.60814	0.61244	0.78747	0.67661	0.76334	0.63409	0.63076	0.62002	0.59167	0.71984	0.73175	0.73221	0.67569	0.78747
S.Y. '11	0.13382	0.13818	0.17427	0.13922	0.13474	0.14086	0.14289	0.13483	0.13743	0.14323	0.14844	0.15479	0.14356	0.17427
SOL.'10	0.65271	0.64101	0.59442	0.58891	0.57742	0.57237	0.58253	0.57814	0.54886	0.53942	0.66714	0.66786	0.60090	0.66786
S.Y.'10	0.17331	0.15500	0.14174	0.14461	0.14131	0.13744	0.13432	0.13869	0.13980	0.13468	0.12984	0.16035	0.14426	0.17331

APPENDIX C:

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Public Water System Statistics

1. General Information

Please follow the guidelines on the back of this form.

Contact: Craig Martin  
 Title: Water Supervisor  
 Phone: 805-688-5575  
 Fax: 805-686-2049  
 Communities served: Solvang  
 County: SANTA BARBARA  
 Population served: 5,233

2. Active Service Connections 1888

Customer Class	Recycled Water		Potable Water		Inside City Limits		Outside City Limits	
	Metered	Unmetered	Metered	Unmetered	Metered	Unmetered	Metered	Unmetered
Single Family Residential					1469			
Multi-family Residential					80			
Commercial/Institutional					220			
Industrial					23			
Landscape Irrigation					96			
Other								
Agricultural Irrigation								
<b>TOTAL</b>								

Solvang, City of  
 Craig Martin  
 WATER SUPERVISOR  
 P. O. BOX 107  
 SOLVANG

CA 93464

3. Total Water Into the System - Units of production:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Well surface	88.4	53.7	65.9	91.0	108.8	124.6	125.0	139.9	131.9	108.9	92.8	98.5	1228.6
Purchased <sup>1/</sup>	5.7	15.2	21.3	25.0	43.6	48.4	56.3	50.8	34.3	19.9	4.8	1.9	327.2
Total Potable	94.1	68.9	87.2	116.0	152.4	173.0	181.3	189.9	166.2	128.8	97.6	100.4	1555.8
Recycled <sup>2/</sup>													

1/ Potable wholesale supplier(s): \_\_\_\_\_

2/ Recycled wholesale supplier(s): \_\_\_\_\_

Level of treatment: \_\_\_\_\_

4. Metered Water Deliveries - Units of delivery:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	19505	13522	11947	34774	36156	38913	44135	44560	50783	34867	22019	19228	370409
B. Multi-family Residential	3925	3806	3207	4628	5149	5378	5846	5243	6112	4729	4418	3569	84880
C. Commercial/Institutional	6392	6736	5666	9167	9587	10156	11649	10565	11881	17887	9056	6669	115411
D. Industrial	1242	1267	958	1740	1930	3524	2213	1833	2698	2166	1948	1243	22763
E. Landscape Irrigation	3801	2475	1240	4485	5456	7899	8490	8391	11090	15385	2559	2791	74062
F. Other													
<b>Total Urban Retail (A thru F)</b>													667525
Agricultural Irrigation													
Wholesale (to other agencies)													

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State of California

MAR 18 2002

Solvang, City of  
Craig Martin  
PO BOX 107  
SOLVANG CA 93464

4210013

Department of Water Resources

The Resources Agency

PUBLIC WATER SYSTEM STATISTICS

Calendar Year 2001

CITY GENERAL INFORMATION

Please follow the guidelines on the back of this form.

Contact: CRAIG MARTIN  
Title: WATER SUPERVISOR  
Phone: 805-688-5575  
Fax: 805-686-2049  
E-mail: craigmartinwater@aol.com  
Website:

Communities served: SOLVANG

County: SANTA BARBARA  
Population served 5,383

2. Active Service Connections

Table with columns: Customer Class, Recycled Water, Potable Water (Metered/Unmetered), Inside City Limits (Metered/Unmetered), Outside City Limits (Metered/Unmetered). Rows include Single Family Residential, Multi-family Residential, Commercial/Institutional, Industrial, and Landscaping Irrigation.

3. Total Water Into the System - Units of production:

Table showing units of production by month (Jan-Dec) for Wells, Surface, Purchased, Total Potable, and Recycled. Includes checkboxes for acre-feet and million gallons.

1/ Potable wholesale supplier(s):

2/ Recycled wholesale supplier(s):

Level of treatment:

4. Metered Water Deliveries - Units of delivery:

Table showing metered water deliveries by month (Jan-Dec) for various categories: Single Family Residential, Multi-family residential, Commercial/Institutional, Industrial, Landscaping Irrigation, Other, Total, and Agricultural Irrigation.

CITY OF SOLVANG  
 P.O. BOX 107  
 SOLVANG CA 93463  
 4210013 SD

**PUBLIC WATER SYSTEM STATISTICS**

Calendar Year **2002**

**1. General Information**

Please follow the guidelines on the back of this form.

Contact : Craig Martin  
 Title: Water Supervisor  
 Phone: 805-688-5575  
 Fax: 805-686-2049  
 E-mail: dianar@cityofsolvang.com  
 Website: cityofsolvang.com  
 Communities served: Solvang  
 County: Santa Barbara  
 Population served 3,383

**2. Active Service Connections**

Customer Class	Recycled Water		Potable Water		Inside City Limits		Outside City Limits	
	Metered	Unmetered	Metered	Unmetered	Metered	Unmetered	Metered	Unmetered
Single Family Residential	1549							
Multi-family Residential	89							
Commercial/Institutional	218							
Industrial	24							
Landscape Irrigation	23							
Other								
Agricultural Irrigation								
<b>TOTAL</b>	<b>1903</b>							

Complete this portion if the system serves all or part of an incorporated city

**COPY**

**3. Total Water Into the System - Units of production:**

Wells	Units of production:												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Potable	69.59	83.15	103.04	136.81	135.15	143.71	155.93	83.31	35.74	32.84	50.09	12.66	1042.02
Surface Purchased <sup>1/</sup>								94.13	139.65	112.82	64.7	63.63	474.93
<b>Total Potable</b>	<b>69.59</b>	<b>83.15</b>	<b>103.04</b>	<b>136.81</b>	<b>135.15</b>	<b>143.71</b>	<b>155.93</b>	<b>177.44</b>	<b>175.39</b>	<b>145.66</b>	<b>114.79</b>	<b>76.29</b>	<b>1516.95</b>
Recycled <sup>2/</sup>													

acre-feet  million gallons  hundred cubic feet

1/ Potable wholesale supplier(s): \_\_\_\_\_

2/ Recycled wholesale supplier(s): \_\_\_\_\_

Level of treatment: \_\_\_\_\_

**4. Metered Water Deliveries - Units of delivery.**

A. Single Family Residential	Units of delivery.												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
A. Single Family Residential	17219	16895	21775	33764	39991	40286	48656	45783	53753	30876	23051	25093	397342
B. Multi-family Residential	3634	3711	3726	5739	4600	4818	6355	4736	6169	4219	3891	3656	55254
C. Commercial/Institutional	8895	6529	6301	8905	8285	9283	11987	10483	10474	17441	7057	6391	112031
D. Industrial	1236	1085	1452	1933	1899	2004	2863	2736	2521	1905	2054	1917	23605
E. Landscape Irrigation	1091	2345	2135	5895	8109	9915	9952	10293	8815	7798	4168	3277	73793
F. Other													
<b>Total Urban Retail (A thru F)</b>	<b>32075</b>	<b>30565</b>	<b>35389</b>	<b>56236</b>	<b>62884</b>	<b>66306</b>	<b>80013</b>	<b>74031</b>	<b>81732</b>	<b>62239</b>	<b>40221</b>	<b>40334</b>	<b>662025</b>
Agricultural Irrigation													
Wholesale (to other agencies)													

acre-feet  million gallons  hundred cubic feet

City of Solvang  
 Craig Martin, Water Supervisor  
 PO BOX 107  
 Solvang CA 93464

pws#4210013

# PUBLIC WATER SYSTEM STATISTICS

Calendar Year 2003

## 1. General Information

Please follow the guidelines on the back of this form.

Contact : Craig Martin  
 Title: Water Supervisor  
 Phone: 805-688-5575  
 Fax: 805-686-2049  
 E-mail: [ciamar@cityofsolvang.com](mailto:ciamar@cityofsolvang.com)  
 Website: [cityofsolvang.com](http://cityofsolvang.com)  
 Communities served:  
 Solvang  
 County: Santa Barbara  
 Population served 5,383

## 2. Active Service Connections

Customer Class	Recycled Water		Potable Water		Inside City Limits		Outside City Limits	
	Metered	Unmetered	Metered	Unmetered	Metered	Unmetered	Metered	Unmetered
Single Family Residential			1561					
Multi-family Residential			87					
Commercial/Institutional			214					
Industrial			17					
Landscape Irrigation			22					
Other								
Agricultural Irrigation								
<b>TOTAL</b>			1901					

Complete this portion if the system serves all or part of an incorporated city

## 3. Total Water Into the System - Units of production:

acre-feet  million gallons  hundred cubic feet

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Potable	23	26	51	37	40	32	35	26	18	18	67	18	391
Wells Surface	56	44	33	65	81	125	135	140	158	137	17	63	1054
Purchased <sup>1/</sup>	0.31	0.37	0.36	0.21	3.18	1.1	1.1	0.54	0.25	0.24	2.89	0.33	9.78
<b>Total Potable</b>	79.31	70.37	84.36	102.21	124.18	158.1	170	166.54	176.25	155.24	86.89	81.33	1454.78
Recycled <sup>2/</sup>													

1/ Potable wholesale supplier(s): SYRWCD & CCWA

2/ Recycled wholesale supplier(s):

Level of treatment:

## 4. Metered Water Deliveries - Units of delivery:

acre-feet  million gallons  hundred cubic feet

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	16227	20463	13166	23479	34994	38756	45784	44897	50065	36215	22207	19035	365288
B. Multi-family Residential	4008	3915	3306	5712	5712	4499	5472	5057	5510	4239	3803	3081	54314
C. Commercial/Institutional	7281	5646	5300	7621	7840	8213	10579	9565	10625	9109	8026	7028	96833
D. Industrial	1415	1435	1140	1598	2064	1836	3446	1989	2550	1786	1762	1596	22617
E. Landscape Irrigation	1325	2070	1474	3102	3203	3024	10949	11240	11872	8129	4397	2451	63236
F. Other													
<b>Total Urban Retail (A thru F)</b>	30256	33529	24386	41512	53813	56328	76230	72748	80622	59478	40195	33191	602288
Agricultural Irrigation													
Wholesale(to other agencies)													

City of Solvang  
 P.O. Box 107  
 Solvang CA 93464  
 4210013 SD

# PUBLIC WATER SYSTEM STATISTICS

Calendar Year 2004

## 1. General Information

Please follow the guidelines on the back of this form.

Contact : Craig Martin  
 Title: Water Supervisor  
 Phone: 805-688-5575  
 Fax: 805-686-2049  
 E-mail: [djanar@cityofsolvang.com](mailto:djanar@cityofsolvang.com)  
 Website: [cityofsolvang.com](http://cityofsolvang.com)  
 Communities served:  
 Solvang  
 County: Santa Barbara  
 Population served 5,383

## 2. Active Service Connections

Customer Class	Recycled Water		Potable Water		Inside City Limits		Outside City Limits	
	Metered	Unmetered	Metered	Unmetered	Metered	Unmetered	Metered	Unmetered
Single Family Residential	1561							
Multi-family Residential	87							
Commercial/Institutional	214							
Industrial	17							
Landscape Irrigation	22							
Other								
Agricultural Irrigation								
<b>TOTAL</b>				1901				

Complete this portion if the system serves all or part of an incorporated city

## 3. Total Water Into the System - Units of production:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wells	10.51	10	24.91	29.39	23.28	46.32	63.54	63.99	51.79	37.58	61.54	69.57	492.42
Surface													
Purchased <sup>1/</sup>	68.03	64	81.19	115.6	145.99	130	128	125.66	116.9	79.29	17.88	11	1083.54
<b>Total Potable</b>	78.54	74	106.1	144.99	169.27	176.32	191.54	189.65	168.69	116.87	79.42	80.57	1575.96
Recycled <sup>2/</sup>													

acre-feet     million gallons     hundred cubic feet

1/ Potable wholesale supplier(s): SYRWCD & CCWA    2/ Recycled wholesale supplier(s):

Level of treatment:

## 4. Metered Water Deliveries - Units of delivery:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	17705	17527	19526	30352	43271	47071	44189	52561	42104	36405	17660	15762	384133
B. Multi-family Residential	3532	3320	3731	3882	4963	5012	4855	5857	4731	4473	4027	3246	51629
C. Commercial/Institutional	7939	7265	7306	7991	9097	10795	9351	12304	8983	7911	7608	6180	102730
D. Industrial	1546	1325	1468	1528	2131	1842	2050	1922	1860	1872	1624	1671	20839
E. Landscape Irrigation	1767	1905	2580	5419	10012	10852	10589	13555	10442	7572	1675	2141	78509
F. Other													
<b>Total Urban Retail (A thru F)</b>	32489	31342	34611	49172	69474	75572	71034	86199	68120	58233	32594	29000	637840
Agricultural Irrigation													
Wholesale (to other agencies)													

acre-feet     million gallons     hundred cubic feet

City of Solvang  
 P.O. Box 107  
 Solvang CA 93464  
 4210013 SD

# PUBLIC WATER SYSTEM STATISTICS

Calendar Year 2005

## 1. General Information

Please follow the guidelines on the back of this form.

Contact : Craig Martin  
 Title: Water Supervisor  
 Phone: 805-688-5575  
 Fax: 805-686-2049  
 E-mail: [dianar@cityofsolvang.com](mailto:dianar@cityofsolvang.com)  
 Website: [cityofsolvang.com](http://cityofsolvang.com)  
 Communities served:  
 Solvang  
 County: Santa Barbara  
 Population served 5,383

## 2. Active Service Connections

Customer Class	Recycled Water	Potable Water		Inside City Limits		Outside City Limits	
		Metered	Unmetered	Metered	Unmetered	Metered	Unmetered
Single Family Residential		1566					
Multi-family Residential		87					
Commercial/Institutional		214					
Industrial		17					
Landscape Irrigation		23					
Other							
Agricultural Irrigation							
<b>TOTAL</b>			1907				

Complete this portion if the system serves all or part of an incorporated city

## 3. Total Water Into the System - Units of production:

acre-feet     million gallons     hundred cubic feet

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wells	8	25.7	18.75	19.4	16	4.9	12	15	14.6	20.5	21.3	16.9	193.05
Surface													
Purchased <sup>1/</sup>	45.8	40.2	52.05	85	117.3	151.3	172	175	149	119	83.3	71	1260.95
<b>Total Potable</b>	53.8	65.9	70.8	104.4	133.13	156.2	184	190	163.6	139.5	104.6	87.9	1454
Recycled <sup>2/</sup>													

1/ Potable wholesale supplier(s): SYRWCD & CCWA

2/ Recycled wholesale supplier(s):

Level of treatment:

## 4. Metered Water Deliveries - Units of delivery:

acre-feet     million gallons     hundred cubic feet

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	14985	13443	11708	20450	30840	41244	44906	50785	36745	38201	25519	19047	347873
B. Multi-family Residential	3709	3616	2767	3608	4036	5048	5210	6179	4975	5230	4510	3720	52608
C. Commercial/Institutional	6983	7282	6137	8235	7984	9276	10300	11662	8706	9544	8082	6595	100786
D. Industrial	1540	1185	1147	1459	1519	1877	1921	2353	1748	1522	1796	1496	19573
E. Landscape Irrigation	1201	1563	772	2630	4783	8537	9931	12300	9559	8901	4573	2902	67652
F. Other						1305	1266	1188	714	714	258	41	5486
<b>Total Urban Retail (A thru F)</b>	28418	27089	22531	36392	49162	67287	73534	84467	62447	64112	44738	33801	593978
Agricultural Irrigation													
Wholesale (to other agencies)													

City of Solvang  
 P.O. Box 107  
 Solvang, CA 93463  
 4210013 SD

# PUBLIC WATER SYSTEM STATISTICS

Calendar Year **2006**

## 1. General Information

Please follow the guidelines on the back of this form.

Contact : Craig Martin  
 Title: Water Supervisor  
 Phone: 805-688-5575  
 Fax: 805-686-2049  
 E-mail: [WaterDept@cityofsolvang.com](mailto:WaterDept@cityofsolvang.com)  
 Website: [cityofsolvang.com](http://cityofsolvang.com)  
 Communities served:  
 Solvang  
 County: Santa Barbara  
 Population served 5434

## 2. Active Service Connections

Customer Class	Recycled Water	Potable Water		Inside City Limits		Outside City Limits	
		Metered	Unmetered	Metered	Unmetered	Metered	Unmetered
Single Family Residential	1577						
Multi-family Residential	87						
Commercial/Institutional	214						
Industrial	17						
Landscape Irrigation	26						
Other							
Agricultural Irrigation							
<b>TOTAL</b>	<b>1921</b>						

Complete this portion if the system serves all or part of an incorporated city

## 3. Total Water Into the System - Units of production:

acre-feet  million gallons  hundred cubic feet

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wells	19.0	26.4	5.2	7.3	11.7	17.9	20.1	14.3	9.4	15.0	40.4	13.8	200.51
Surface													
Purchased <sup>1/</sup>	53.8	57.55	59.68	58.97	110.62	148.61	175.98	175.88	160.65	128.25	87.23	72.74	1289.96
Total Potable	72.84	83.9	64.89	66.31	122.29	166.51	196.12	190.2	170.02	143.2	127.63	86.56	1490.47
Recycled <sup>2/</sup>													

1/ Potable wholesale supplier(s): \_\_\_\_\_

2/ Recycled wholesale supplier(s): \_\_\_\_\_

Level of treatment: \_\_\_\_\_

## 4. Metered Water Deliveries - Units of delivery:

acre-feet  million gallons  hundred cubic feet

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	15898	20630	11733	13020	23737	34843	47175	49719	42345	34950	30794	15898	340742
B. Multi-family Residential	3719	4101	3195	4013	4292	4964	6046	5833	5731	4766	4826	3719	55205
C. Commercial/Institutional	7263	7496	5712	7225	8403	8547	10817	11430	9919	9401	8827	7263	102303
D. Industrial	1355	1371	1080	1621	1488	1542	1984	1716	1912	1646	1560	1355	18630
E. Landscape Irrigation	1824	2389	1233	1159	3322	5202	9853	14674	22999	8469	7162	1824	80110
F. Other	51	86	4	15	28	116						51	351
<b>Total Urban Retail (A thru F)</b>	<b>30110</b>	<b>36073</b>	<b>22957</b>	<b>27053</b>	<b>41270</b>	<b>55214</b>	<b>75875</b>	<b>83372</b>	<b>82906</b>	<b>59232</b>	<b>53169</b>	<b>30110</b>	<b>597341</b>
Agricultural Irrigation													
Wholesale (to other agencies)													

City of Solvang  
 P.O. Box 107  
 Solvang, CA 93463  
 4210013 SD

**PUBLIC WATER SYSTEM STATISTICS**

Calendar Year 2007

**1. General Information**

Please follow the guidelines on the back of this form.

Contact: Craig Martin  
 Title: Water Supervisor  
 Phone: 805-688-5575  
 Fax: 805-686-2049  
 E-mail: waterdept@cityofsolvang.com  
 Website: cityofsolvang.com  
 Communities served:  
 Solvang  
 County: Santa Barbara  
 Population served: 5434

**2. Active Service Connections**

Customer Class	Recycled Water		Potable Water		Inside City Limits		Outside City Limits	
	Water	Unmetered	Metered	Unmetered	Metered	Metered	Unmetered	
Single Family Residential	1598							
Multi-family Residential	87							
Commercial/Institutional	214							
Industrial	17							
Landscape Irrigation	32							
Other								
Agricultural Irrigation								
<b>TOTAL</b>			0	0	0	0	0	

Complete this portion if the system serves all or part of an incorporated city

**3. Total Water Into the System - Units of production:**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wells	11.1	14.2	40.6	39.9	53.0	28.7	32.4	28.5	19.0	19.3	50.5	6.4	343.6
Surface													0
Purchased <sup>1/</sup>	80.2	52.3	68.0	88.0	107.6	144.0	164.0	174.0	154.2	127.6	81.0	92.3	1333.2
<b>Total Potable</b>	91.3	66.5	108.6	127.9	160.6	172.7	196.4	202.5	173.2	146.9	131.5	98.7	1676.80
Recycled <sup>2/</sup>													0

<sup>1/</sup> Potable wholesale supplier(s):

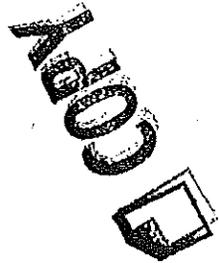
<sup>2/</sup> Recycled wholesale supplier(s):

Level of treatment:

**4. Metered Water Deliveries - Units of delivery:**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	20484	14218	18702	30903	35063	41161	47334	46650	42374	35591	34115	18655	385250
B. Multi-family Residential	4441	3455	3782	4664	4963	5252	5984	8282	5280	5062	4635	3598	57398
C. Commercial/Institutional	8907	6026	6649	9404	8960	9306	10333	11395	10599	9265	11651	9561	112056
D. Industrial	1243	840	1139	1399	1390	1616	1620	1752	1965	1229	1410	967	17070
E. Landscape Irrigation	2372	1513	2905	5832	7510	9397	11888	15901	12330	8663	5327	2550	86189
F. Other	0	0	0	41	10	0	0	0	0	0	0	0	51
<b>Total Urban Retail (A thru F)</b>	37447	26052	33177	52743	57896	66732	77150	81980	72548	59810	57138	35331	658014
Agricultural Irrigation													0
Wholesale (to other agencies)													0

DWR 38 (Rev. 4/05)



City of Solvang  
1644 Oak St.  
Solvang, CA  
93463

**PUBLIC WATER SYSTEM STATISTICS**

Calendar Year 2008

**1. General Information**

Please follow the provided instructions.

Contact : Craig Martin  
Title: Water Supervisor  
Phone: 805-688-5575 X229  
Fax: 805-688-2049  
E-mail: waterdept@cityofsolvang.com  
Website: cityofsolvang.com  
County: Santa Barbara  
Population served: 5434  
Names of communities served: 1

**2. Active Service Connections**

Customer Class	Potable Water		Recycled Water	
	Metered	Unmetered	Metered	Unmetered
Single Family Residential	1593			
Multi-family Residential	85			
Commercial/Institutional	213			
Industrial	17			
Landscape Irrigation	50			
Other				
Agricultural Irrigation				
<b>TOTAL</b>	<b>1958</b>			

**3. Total Water Into the System - Units of production:**

acre-feet  million gallons  hundred cubic feet

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wells	14.49	15.13	19.55	19.14	12.96	29.64	32.18	24.37	17.04	29.07	88.94	71.46	373.97
Surface													
Purchased <sup>1/</sup>	55.00	47.00	83.00	109.00	145.00	144.00	154.00	163.00	150.80	124.81	0.00	23.44	1199.05
<b>Total Potable</b>	<b>69.49</b>	<b>62.13</b>	<b>102.55</b>	<b>128.14</b>	<b>157.96</b>	<b>173.64</b>	<b>186.18</b>	<b>187.37</b>	<b>167.84</b>	<b>153.88</b>	<b>88.94</b>	<b>94.9</b>	<b>1573.02</b>
Untreated Water													
Recycled <sup>2/</sup>													

1/ Potable wholesale supplier(s):

2/ Recycled wholesale supplier(s):

Level of treatment:

**4. Metered Water Deliveries - Units of delivery:**

if recycled is included, ✓ box ↓  acre-feet  million gallons  hundred cubic feet

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	17154	12531	19701	30697	38176	44959	45152	44550	49340	35379	31006	18581	387226
B. Multi-family Residential	4617	3735	3975	4647	4777	5257	5982	4206	6091	5010	4475	3671	56443
C. Commercial/Institutional	7967	6110	8141	8755	8696	9746	10941	9863	10261	7849	7131	6640	102100
D. Industrial	1207	896	1214	992	1270	1459	1604	1340	1555	1200	1185	1051	14973
E. Landscape Irrigation	1778	1359	3091	5961	9315	10312	10883	11019	12507	9161	7181	2898	85465
F. Other													
<b>Total Urban Retail (A thru F)</b>	<b>32723</b>	<b>24631</b>	<b>36122</b>	<b>51052</b>	<b>62234</b>	<b>71733</b>	<b>74562</b>	<b>70978</b>	<b>79754</b>	<b>58599</b>	<b>50978</b>	<b>32841</b>	<b>646207</b>
Agricultural Irrigation													
Wholesale (to other agencies)													

**PUBLIC WATER SYSTEM STATISTICS**

Calendar Year **2009**

4210013 SRO

**1. General Information**

Please follow the provided instructions.

Contact: Craig Martin  
 Title: Water Supervisor  
 Phone: 805-688-5575 x229  
 Fax: 805-686-2049  
 E-mail: waterdept@cityofsolvang.com  
 Website: cityofsolvang.com  
 County: Santa Barbara  
 Population served: 5434  
 Names of communities served: Solvang

**2. Active Service Connections**

Customer Class	Potable Water		Recycled Water	
	Metered	Unmetered	Metered	Unmetered
Single Family Residential	1593			
Multi-family Residential	85			
Commercial/Institutional	233			
Industrial	20			
Landscape Irrigation	30			
Other				
Agricultural Irrigation				
<b>TOTAL</b>	<b>1961</b>			

**3. Total Water Into the System - Units of production:**

**AF** (Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wells	23.43	7.99	25.75	28.54	31.06	28.72	37.02	31.79	28.27	25.34	67.79	33.21	368.91
Surface													
Purchased <sup>1/</sup>	59.83	52.04	61.51	92.85	125.8	132.96	147.19	156.37	138.23	100.83	48.25	42.13	1157.99
<b>Total Potable</b>	<b>83.26</b>	<b>60.03</b>	<b>87.26</b>	<b>121.39</b>	<b>156.86</b>	<b>161.68</b>	<b>184.21</b>	<b>188.16</b>	<b>166.5</b>	<b>126.17</b>	<b>116.04</b>	<b>75.34</b>	<b>1526.9</b>
Untreated Water													
Recycled <sup>2/</sup>													

1/ Potable wholesale supplier(s):

2/ Recycled wholesale supplier(s):

Level of treatment:

**4. Metered Water Deliveries - Units of delivery:**

**CCF** (Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	18775	14578	14912	26775	37086	38782	47952	42671	42374	31032	30478	20586	366000
B. Multi-family Residential	4309	4188	3972	4720	5166	5283	5648	5415	5390	4634	4106	4207	57038
C. Commercial/Institutional	7022	6031	6104	7719	8092	6872	10073	9422	10499	6916	7934	6551	93235
D. Industrial	1154	1032	925	1143	1293	1407	1653	1515	1955	1195	2017	1173	16462
E. Landscape Irrigation	1999	1627	1299	4569	7835	6380	12714	10558	12033	7337	5443	3676	75470
F. Other													
<b>Total Urban Retail (A thru F)</b>	<b>33299</b>	<b>27456</b>	<b>27212</b>	<b>44926</b>	<b>59472</b>	<b>58724</b>	<b>76864</b>	<b>69581</b>	<b>72251</b>	<b>51114</b>	<b>49978</b>	<b>36192</b>	<b>608205</b>
Agricultural Irrigation													
Wholesale (to other agencies)													

City of Solvang 4210013 SR

**PUBLIC WATER SYSTEM STATISTICS**

Calendar Year 2010

**1. General Information**

Please follow the provided instructions.

Contact: Craig Martin  
 Title: Water Supervisor  
 Phone: 805-688-5575 Ext. 229  
 Fax: 805-686-2049  
 E-mail: craigm@cityofsolvang.com  
 Website: cityofsolvang.com  
 County: Santa Barbara  
 Population served: 5434  
 Names of communities served: Solvang

**2. Active Service Connections**

Customer Class	Potable Water		Recycled Water	
	Metered	Unmetered	Metered	Unmetered
Single Family Residential	1591			
Multi-family Residential	84			
Commercial/Institutional	230			
Industrial	20			
Landscape Irrigation	26			
Other				
Agricultural Irrigation				
<b>TOTAL</b>	<b>1951</b>			

**3. Total Water Into the System - Units of production: AF** (Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wells	56.64	9.57	29.13	22.96	34.24	27.71	23.93	20.62	23.43	18.31	44.93	7	318.47
Surface													
Purchased <sup>1/</sup>	12.27	42.9	58.34	69.93	102.8	133.56	151.39	159.32	144.7	103.5	44.01	62.07	1084.79
<b>Total Potable</b>	<b>68.91</b>	<b>52.47</b>	<b>87.47</b>	<b>92.89</b>	<b>137.04</b>	<b>161.27</b>	<b>175.32</b>	<b>179.94</b>	<b>168.13</b>	<b>121.81</b>	<b>88.94</b>	<b>69.07</b>	<b>1403.26</b>
Untreated Water													
Recycled <sup>2/</sup>													

1/ Potable wholesale supplier(s): \_\_\_\_\_

2/ Recycled wholesale supplier(s): \_\_\_\_\_

Level of treatment: \_\_\_\_\_

**4. Metered Water Deliveries - Units of delivery: CCF** (Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	10986	12623	23325	28876	42461	43344	42460	42478	33751	22345	14744	14680	332073
B. Multi-family Residential	3597	3023	4448	4759	5814	5142	5765	5796	5608	4879	4019	4625	57475
C. Commercial/Institutional	6004	5943	7567	7964	8544	9125	10306	9274	7806	7402	5265	7441	92641
D. Industrial	1094	981	1267	1410	1640	1730	1707	1653	2711	1029	1006	1017	17245
E. Landscape Irrigation	909	1455	4393	5467	8379	9980	10468	11577	8033	4929	2033	1793	69416
F. Other													
<b>Total Urban Retail (A thru F)</b>	<b>22590</b>	<b>24025</b>	<b>41000</b>	<b>48476</b>	<b>66838</b>	<b>69321</b>	<b>70706</b>	<b>70778</b>	<b>57909</b>	<b>40584</b>	<b>27067</b>	<b>29556</b>	<b>568850</b>
Agricultural Irrigation													
Wholesale (to other agencies)													

City of Solvang  
 1644 Oak St.  
 Solvang, CA 93463  
 (805) 688-5575  
 Mailing Label 4210013-SR

**PUBLIC WATER SYSTEM STATISTICS**

Calendar Year **2011**

**1. General Information**

Please follow the provided instructions.

Contact : **Craig Martin**  
 Title: **Water Supervisor**  
 Phone: **(805) 688-1724**  
 Fax: **(805) 686-2049**  
 E-mail: **craigm@cityofsolvang.com**  
 Website: **www.cityofsolvang.com**  
 County: **Santa Barbara**  
 Population served: **5289**  
 Names of communities served: **Solvang**

**2. Active Service Connections**

Customer Class	Potable Water		Recycled Water	
	Metered	Unmetered	Metered	Unmetered
Single Family Residential	1658			
Multi-family Residential	82			
Commercial/Institutional	241			
Industrial	23			
Landscape Irrigation	113			
Other	7			
Agricultural Irrigation				
<b>TOTAL</b>	<b>2124</b>			

**3. Total Water Into the System - Units of production:**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wells	6.03	4.11	17.35	14.4	14.32	17.61	19.36	13.54	12.35	14.61	16.06	9.97	159.71
Surface													
Purchased <sup>1/</sup>	67.62	65.41	55.08	89.12	128.39	128.47	152.07	164.12	145.71	121.34	67.12	69.9	1254.35
<b>Total Potable</b>	<b>73.65</b>	<b>69.52</b>	<b>72.43</b>	<b>103.52</b>	<b>142.71</b>	<b>146.08</b>	<b>171.43</b>	<b>177.66</b>	<b>158.06</b>	<b>135.95</b>	<b>83.18</b>	<b>79.87</b>	<b>1414.06</b>
Untreated Water													
Recycled <sup>2/</sup>													

(Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)

1/ Potable wholesale supplier(s): \_\_\_\_\_

2/ Recycled wholesale supplier(s): \_\_\_\_\_

Level of treatment: \_\_\_\_\_

**4. Metered Water Deliveries - Units of delivery:**

If recycled is included, X box ↓	Level of treatment:												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	14680	16339	13492	17310	34191	31924	40351	46344	39236	26160	25471	14744	320242
B. Multi-family Residential	4625	3952	3839	4001	6016	4663	5557	6573	5482	4431	5120	4019	58278
C. Commercial/Institutional	7441	6102	5826	6822	8563	7901	9546	11068	8811	7299	7299	5265	91943
D. Industrial	1017	1011	923	1529	1421	1234	1421	1882	1519	738	738	1006	14439
E. Landscape Irrigation	1793	3105	1701	339	7510	17137	8970	11226	9616	5483	5486	2033	74399
F. Other													
<b>Total Urban Retail (A thru F)</b>	<b>29556</b>	<b>30509</b>	<b>25781</b>	<b>30001</b>	<b>57701</b>	<b>62859</b>	<b>65845</b>	<b>77093</b>	<b>64664</b>	<b>44111</b>	<b>44114</b>	<b>27067</b>	<b>559301</b>
Agricultural Irrigation													
Wholesale (to other agencies)													

(Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)

**PUBLIC WATER SYSTEM STATISTICS**

Calendar Year **2012**

**Solvang, City of**  
 Craig, Martin, Water Supervisor  
 1644 Oak Street  
 Solvang, CA 93463  
 PWS# 4210013 SRO

**1. General Information**

Please follow the provided instructions.

Contact :	Craig Martin
Title:	Water Supervisor
Phone:	(805) 688-1724
Fax:	(805) 686-2049
E-mail:	craigm@cityofsolvang.com
Website:	www.cityofsolvang.com
County:	Santa Barbara
Population served:	5283
Names of communities served:	Solvang

**2. Active Service Connections**

Customer Class	Potable Water		Recycled Water	
	Metered	Unmetered	Metered	Unmetered
Single Family Residential	1661			
Multi-family Residential	82			
Commercial/Institutional	239			
Industrial	24			
Landscape Irrigation	113			
Other	10			
Agricultural Irrigation				
<b>TOTAL</b>	<b>2129</b>			

**3. Total Water Into the System - Units of production:**

	AF (Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wells	17.4	13.4	15.4	16.6	39.3	29.4	30	24.8	17.4	37.8	31.4	14.4	287.3
Surface													
Purchased <sup>1/</sup>	66	62	78	70	110	128	143	150	143	109	34	53	1146
<b>Total Potable</b>	<b>83.4</b>	<b>75.4</b>	<b>93.4</b>	<b>86.6</b>	<b>149.3</b>	<b>157.4</b>	<b>173</b>	<b>174.8</b>	<b>160.4</b>	<b>146.8</b>	<b>65.4</b>	<b>67.4</b>	<b>1433.3</b>
Untreated Water													
Recycled <sup>2/</sup>													

1/ Potable wholesale supplier(s):

2/ Recycled wholesale supplier(s):

Level of treatment:

**4. Metered Water Deliveries - Units of delivery:**

	CCF (Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	20406	17362	19852	20090	27026	40045	43046	41337	42851	38399	26783	15616	352813
B. Multi-family Residential	4167	4093	4018	4669	4501	5552	5621	5584	5841	6138	4315	4297	58796
C. Commercial/Institutional	7385	6786	6413	8289	7505	9154	11182	10017	9637	8816	7414	7115	99713
D. Industrial	1594	1001	883	1083	1011	1236	1467	1099	1167	2193	1028	793	14555
E. Landscape Irrigation	2576	2311	3973	3806	5434	8818	9529	10788	11691	9109	6431	1794	76260
F. Other						6	55	14	14	84	12	12	183
<b>Total Urban Retail (A thru F)</b>	<b>36128</b>	<b>31553</b>	<b>35139</b>	<b>37937</b>	<b>45477</b>	<b>64805</b>	<b>70851</b>	<b>68880</b>	<b>71201</b>	<b>64739</b>	<b>45983</b>	<b>29627</b>	<b>602320</b>
Agricultural Irrigation													
Wholesale (to other agencies)													

If recycled is included, X box ↓

**PUBLIC WATER SYSTEM STATISTICS**

Calendar Year **2013**

Solvang, City of  
 Craig Martin, Water Supervisor  
 1644 Oak Street  
 Solvang, CA 93463  
 PWS# 4210013 SRO

**1. General Information**

Please follow the provided instructions.

Contact:	CRAIG MARTIN
Title:	WATER SUPERVISOR
Phone:	805-688-1724
Fax:	805-686-2049
E-mail:	CRAIGM@CITYOF SOLVANG.COM
Website:	WWW.CITYOF SOLVANG.COM
County:	SANTA BARBARA
Population served:	5292
Names of communities served:	SOLVANG

**2. Active Service Connections**

Customer Class	Potable Water		Recycled Water	
	Metered	Unmetered	Metered	Unmetered
Single Family Residential	1699			
Multi-family Residential	82			
Commercial/Institutional	240			
Industrial	26			
Landscape Irrigation	124			
Other				
Agricultural Irrigation				
<b>TOTAL</b>	<b>2171</b>			

**3. Total Water Into the System - Units of production:**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wells	15.3	18.4	33.7	57.2	61.7	42.3	29.3	37.8	22.7	18.7	44.4	53.1	434.6
Surface													
Purchased <sup>1/</sup>	54.7	50.1	69.9	73.1	97.2	128.8	157.9	146.2	143.7	131.6	67.3	39.8	1160.3
<b>Total Potable</b>	<b>70</b>	<b>68.5</b>	<b>103.6</b>	<b>130.3</b>	<b>158.9</b>	<b>171.1</b>	<b>187.2</b>	<b>184</b>	<b>166.4</b>	<b>150.3</b>	<b>111.7</b>	<b>92.9</b>	<b>1594.9</b>
Untreated Water													
Recycled <sup>2/</sup>													

**AF** (Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)

1/ Potable wholesale supplier(s): \_\_\_\_\_

2/ Recycled wholesale supplier(s): \_\_\_\_\_

Level of treatment: \_\_\_\_\_

**4. Metered Water Deliveries - Units of delivery:**

	If recycled is included, X box ↓												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	14576	13561	19081	32317	33879	41122	45306	42240	46042	33918	28208	22134	372384
B. Multi-family Residential	3714	3610	3991	5327	5121	6027	6013	5709	6627	5180	5088	4400	60807
C. Commercial/Institutional	7078	6098	6799	8954	7523	8842	8998	10567	9895	7669	6401	6811	95635
D. Industrial	2233	1015	799	1060	895	1843	1095	1150	1207	980	1064	895	14236
E. Landscape Irrigation	1105	1540	3438	6790	8535	7936	11178	12554	13208	9570	7233	2803	85890
F. Other	901	10	13	1022	17	8	608	647	13	7	617	14	3877
<b>Total Urban Retail (A thru F)</b>	<b>29607</b>	<b>25834</b>	<b>34121</b>	<b>55470</b>	<b>55970</b>	<b>65778</b>	<b>73198</b>	<b>72867</b>	<b>76992</b>	<b>57324</b>	<b>48611</b>	<b>37057</b>	<b>632829</b>
Agricultural Irrigation													
Wholesale (to other agencies)													

**CCF** (Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)

**PUBLIC WATER SYSTEM STATISTICS**

Calendar Year **2014**

**1. General Information**

Please follow the provided instructions.

Contact: **KEVIN HARMER**

Title: **WATER SUPERVISOR**

Phone: **805-688-1724**

Fax: **805-686-2049**

E-mail: **KEVINH@CITYOF SOLVANG.COM**

Website: **WWW.CITYOF SOLVANG.COM**

County: **SANTA BARBARA**

Population served: **5401**

Names of communities served: **SOLVANG**

**2. Active Service Connections**

Customer Class	Potable Water		Recycled Water	
	Metered	Unmetered	Metered	Unmetered
Single Family Residential	1696			
Multi-family Residential	69			
Commercial/Institutional	222			
Industrial	26			
Landscape Irrigation	86			
Other				
Agricultural Irrigation				
<b>TOTAL</b>	<b>2099</b>			

**3. Total Water Into the System - Units of production:**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wells	51.19	49.23	43.37	48.11	54.62	55.08	51.53	29.09	14.6	38.11	54.83	52.29	542.05
Surface													
Purchased <sup>1/</sup>	46.28	22.01	40.26	53.11	93.46	95.1	106.29	107.58	102.7	74.3	5.9	0	746.99
<b>Total Potable</b>	<b>97.47</b>	<b>71.24</b>	<b>83.63</b>	<b>101.22</b>	<b>148.08</b>	<b>150.18</b>	<b>157.82</b>	<b>136.67</b>	<b>117.3</b>	<b>112.41</b>	<b>60.73</b>	<b>52.29</b>	<b>1289.04</b>
Untreated Water													
Recycled <sup>2/</sup>													

(Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)

1/ Potable wholesale supplier(s):

2/ Recycled wholesale supplier(s):

Level of treatment:

**4. Metered Water Deliveries - Units of delivery:**

	If recycled is included, X box ↓												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	23489	20276	18816	19169	30435	38172	32423	31576	31244	22829	21004	13359	302792
B. Multi-family Residential	4017	3541	3629	3289	4157	4564	3986	4110	4423	3477	3771	2852	45816
C. Commercial/Institutional	6801	5929	7450	7110	7917	9978	8899	9919	9090	7042	8068	6159	94362
D. Industrial	1081	892	855	905	1530	2082	1972	2303	1861	1427	1052	728	16688
E. Landscape Irrigation	3290	2782	2278	3419	7201	9558	9402	8909	8016	5432	3714	1476	65477
F. Other			209	615	1070	665	72	123	196	233	99	3	3285
<b>Total Urban Retail (A thru F)</b>	<b>38678</b>	<b>33420</b>	<b>33237</b>	<b>34507</b>	<b>52310</b>	<b>65019</b>	<b>56754</b>	<b>56940</b>	<b>54830</b>	<b>40440</b>	<b>37708</b>	<b>24577</b>	<b>528420</b>
Agricultural Irrigation													
Wholesale (to other agencies)													

(Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)

# PUBLIC WATER SYSTEM STATISTICS

Calendar Year **2015**

## 1. General Information

Please follow the provided instructions.

Contact: KEVIN HARMER

Title: WATER SUPERVISOR

Phone: 805-688-1724

Fax: 805-686-2049

E-mail: KEVINH@CITYOFSOLVANG.COM

Website: WWW.CITYOFSOLVANG.COM

County: SANTA BARBARA

Population served: 5401

Names of communities served: SOLVANG

SOLVANG, CITY OF KEVIN HARMER, WATER SUPERVISOR  
1644 OAK STREET SOLVANG, CA  
93463 PWS#4210013 SRO

## 2. Active Service Connections

Customer Class	Potable Water		Recycled Water	
	Metered	Unmetered	Metered	Unmetered
Single Family Residential	1723			
Multi-family Residential	69			
Commercial/Institutional	222			
Industrial	26			
Landscape Irrigation	85			
Other				
Agricultural Irrigation				
<b>TOTAL</b>	<b>2125</b>			

## 3. Total Water Into the System - Units of production:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wells	58.42	40.68	51.48	46.68	48.21	61.96	55.36	44.94	20.78	22.39	76.14	70.93	597.97
Surface													
Purchased <sup>1/</sup>	6.81	25.83	34.53	42.17	43.14	40.45	50.3	61.36	79.41	76.94	4.04	0.02	465
<b>Total Potable</b>	<b>65.23</b>	<b>66.51</b>	<b>86.01</b>	<b>88.85</b>	<b>91.35</b>	<b>102.41</b>	<b>105.66</b>	<b>106.3</b>	<b>100.19</b>	<b>99.33</b>	<b>80.18</b>	<b>70.95</b>	<b>1062.97</b>
Untreated Water													
Recycled <sup>2/</sup>													

(Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)

1/ Potable wholesale supplier(s):

2/ Recycled wholesale supplier(s):

Level of treatment:

## 4. Metered Water Deliveries - Units of delivery:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single-family Residential	12479	14416	16742	20289	21126	24386	22432	26609	24508	22162	20005	16410	241564
B. Multi-family Residential	3311	3291	3128	3438	3170	3649	3293	3743	3848	3223	3202	3112	40408
C. Commercial/Institutional	7214	6846	6257	7493	7135	8714	8152	9162	8651	7181	7310	6493	90608
D. Industrial	758	751	808	1417	1345	1663	1415	1643	1792	1499	1389	787	15267
E. Landscape Irrigation	957	1219	2138	3630	3982	4119	3793	4617	5304	4584	3364	1906	39613
F. Other	12	137	129	150	183	21	25	15	33	70	73	0	848
<b>Total Urban Retail (A thru F)</b>	<b>24731</b>	<b>26660</b>	<b>29202</b>	<b>36417</b>	<b>36941</b>	<b>42552</b>	<b>39110</b>	<b>45789</b>	<b>44136</b>	<b>38719</b>	<b>35343</b>	<b>28708</b>	<b>428308</b>
Agricultural Irrigation													
Wholesale (to other agencies)													

If recycled is included, X box ↓ (Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)



Central Coast Regional Water Quality Control Board

# FACT SHEET

## Development of Total Maximum Daily Loads for Nutrients in Streams of the Santa Ynez River Basin

### What is a Total Maximum Daily Load (TMDL)?

Simply put, [TMDLs](#) are plans to improve water quality and are required by the federal Clean Water Act. Section 303(d) of the Clean Water Act requires states to evaluate the water quality of their streams, lakes, and estuaries and to maintain a list of waterbodies that are considered “impaired” because the water does not meet water quality standards. For each waterbody on the central coast’s [“303\(d\) List of Impaired Waterbodies”](#) the Central Coast Regional Water Quality Control Board (Central Coast Water Board) must develop and implement a plan to reduce pollutants so that the waterbody is no longer impaired and can be “de-listed”.

“Total Maximum Daily Load” (TMDL) is a term used to describe the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards. More broadly, a TMDL report can be described as an action plan to improve water quality. The TMDL report identifies the probable sources of pollution, establishes the maximum amount of pollution a waterbody can receive and still meet water quality standards, and identifies the regulatory and/or non-regulatory actions that must be taken to improve water quality.

### Location and Watershed Description

The Santa Ynez River basin is an east-west trending drainage encompassing 897 square miles of Santa Barbara County. The natural hydrology of the Santa Ynez River is modified by dams and reservoirs; major tributaries of the river are Salsipuedes, Cachuma, Santa Cruz, and Indian creeks. Urbanized lands, cultivated cropland, coastal scrub and coastal oak woodland characterize the landscapes of the lower reaches of the river basin. Middle and upper reaches of the river basin are typically characterized by annual grasslands, chamise-redshank chaparral, coastal oak woodland, and some areas of montane-hardwood conifer woodlands<sup>1</sup>. The river basin has a semi-arid Mediterranean-type climate with basin-wide rainfall averaging 26.2 inches per year<sup>2</sup>.

### Why Do We Need a Nutrients TMDL for the Santa Ynez River Basin?

TMDLs are required by federal law<sup>3</sup> to implement state water quality standards and rectify identified surface water quality impairments. [California's water quality standards](#) designate [beneficial uses](#) for each waterbody (e.g., drinking water supply, agricultural supply, aquatic life support, recreation, etc.) and the scientific criteria to support those uses.



Santa Ynez River Basin

[Nutrient pollution](#) refers to excessive amounts of nitrate and phosphorus in our water resources. Nutrient pollution of the lower reaches of the Santa Ynez River has long been recognized as a problem<sup>4</sup>. Nutrient pollution can degrade municipal and domestic water supply, and may degrade irrigation water quality for sensitive crops. Nutrient pollution can also result in a cascade of adverse environmental impacts in streams such as excessive [nuisance algae](#), disruption of the natural dissolved oxygen balance, and disruption of the aquatic food web.

Furthermore, from the water quality management perspective, it is not enough to improve impaired waters – protection of existing high quality waters and prevention of any further water quality degradation should be identified as a high priority goal. TMDLs are justified in considering improved protection of high quality waters and addressing anti-degradation concerns, as well as focusing on improving impaired stream reaches. Notable is that the Central Coast Water Board considers *preventing* impairment of waterbodies to be as important a priority as *correcting* impairments of waterbodies<sup>5</sup>.

<sup>1</sup> Department of Forestry and Fire Protection, CalVEG dataset.

<sup>2</sup> PRISM 1980-2010 precipitation dataset, Oregon State University.

<sup>3</sup> Clean Water Act Section 303(d).

<sup>4</sup> See: 1998 California Clean Water Act Section 303(d) List

<sup>5</sup> See staff report for agenda item 3, July 11, 2012 Central Coast Water Board meeting

Also worth noting, the U.S. Environmental Protection Agency recently reported that nitrogen and phosphorus pollution, and the associated degradation of drinking and environmental water quality, has the potential to become one of the costliest and most challenging environmental problems the nation faces<sup>6</sup>. Nitrate drinking water standard violations have doubled nationwide in eight years. Algal blooms, resulting from the biostimulatory effects of nutrients, are steadily on the rise nationwide and the related toxins have potentially serious health and ecological effects. Over the past 15 years, monitoring of streams and drainages in the lower Santa Ynez River basin have locally indicated high levels of nitrate. It should be noted that in recent years nitrate levels appear to be decreasing in the lowermost Santa Ynez River.

Central Coast Water Board staff anticipate developing a nutrients TMDL for the Santa Ynez River basin intended to address nutrient and nutrient-related water quality impairments beginning in late 2015 and continuing into 2016. This fact sheet is the first step in our public outreach to stakeholders. As we engage in TMDL development more intensively for the Santa Ynez River basin, we anticipate engaging with interested parties through public meetings, workshops, and other informal contacts.

### What are the Sources of Nutrient Pollution?

Source analysis is a key component of TMDL development. Treated municipal wastewater effluent has historically been a major source of nitrate in the lower Santa Ynez River downstream of Lompoc. There are also [many possible nutrient sources](#) within any given watershed; in general the following can potentially be significant sources of nutrient loads:

- Municipal wastewater
- Urban runoff
- Fertilizer application
- Stormwater runoff
- Manure from livestock and domestic animals
- Natural sources
- Atmospheric deposition
- Groundwater inputs to streams

### The TMDL Process & Public Participation

A TMDL is developed by Central Coast Water Board staff and must go through a hierarchy of approvals before it can go into effect. Most TMDLs must be approved by the Central Coast Water Board, the State Water Resources Control Board, and the California Office of Administrative Law.

Public participation is an element of TMDL development. Central Coast Water Board staff notify interested parties of opportunities for public participation through public meetings/workshops, we solicit public comments, and we encourage other forms of public participation through correspondence, email, and other informal contacts.

To be notified of updates and meetings regarding the Santa Ynez River basin nutrients TMDL project please subscribe to the Central Coast Water Board's [Santa Ynez River basin nutrient TMDL email subscription list](#).



Photo: Mary Hamilton

*Santa Ynez River downstream of Lake Cachuma, Oct. 2008.*

### For More Information

The Central Coast Water Board encourages interest and involvement in TMDL projects from stakeholders, interested parties, and the general public. Please refer to the Central Coast Water Board's [Santa Ynez River basin nutrients TMDL](#) webpage at:

[http://www.waterboards.ca.gov/centralcoast/water\\_issues/programs/tmdl/docs/santa\\_ynez/nutrient/index.shtml](http://www.waterboards.ca.gov/centralcoast/water_issues/programs/tmdl/docs/santa_ynez/nutrient/index.shtml)

<b>Staff contact:</b>	Peter Osmolovsky Central Coast Water Board TMDL Unit (805) 549-3699 <a href="mailto:pete.osmolovsky@waterboards.ca.gov">pete.osmolovsky@waterboards.ca.gov</a>
-----------------------	--

<sup>6</sup> U.S. Environmental Protection Agency: Memorandum from Acting Assistant Administrator Nancy K. Stoner. March 16, 2011. Subject: "Working in Partnership with States to Address Phosphorus and Nitrogen Pollution through Use of a Framework for State Nutrient Reductions".

**Scoping Report**  
*to Support Development of*  
**Total Maximum Daily Loads**  
**Addressing Nutrient Pollution**  
**in Streams of the Santa Ynez River Basin**  
*Santa Barbara County, California*



**Santa Ynez River Basin**  
**TMDL Scoping Report**  
**April 2016**



EDMUND G. BROWN JR.  
GOVERNOR

MATTHEW RODRIGUEZ  
SECRETARY FOR  
ENVIRONMENTAL PROTECTION

California Environmental Protection Agency  
State Water Resources Control Board

*prepared by*

Central Coast Regional Water Quality Control Board

895 Aerovista Place, Suite 101  
San Luis Obispo, California 93401

<http://www.waterboards.ca.gov/centralcoast/>

staff contact: Peter Osmolovsky  
(805) 549-3699

[Pete.Osmolovsky@waterboards.ca.gov](mailto:Pete.Osmolovsky@waterboards.ca.gov)

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## 1. Preface

The purpose of this scoping report is to present information to support development of a [total maximum daily loads](#) (TMDLs) project addressing nutrient-related water quality in streams<sup>1</sup> of the Santa Ynez River basin. Data, information, and narrative contained in this document are a draft work in progress, and thus are subject to revision and change during the course of TMDL development.

Practically speaking, TMDLs are water quality improvement plans, and thus a TMDL report is a type of planning document. The [California Water Plan](#) characterizes TMDLs as “*action plans...to improve water quality.*” Similarly, The U.S. Environmental Protection Agency states that:

*“A TMDL serves as a planning tool and potential starting point for restoration or protection activities with the ultimate goal of attaining or maintaining water quality standards.”*

From: U.S. Environmental Protection Agency, Implementing Clean Water Action Section 303(d): Impaired Waters and Total Maximum Daily Loads (TMDLs) – webpage accessed April 2016 <https://www.epa.gov/tmdl>

A TMDL allows stakeholders to determine how best to reach a TMDL’s water quality improvement goals<sup>2</sup>. The state and the Regional Water Quality Control Boards help achieve those goals and regulatory requirements by establishing scientifically-based numeric water quality targets, by providing oversight, support, and money for watershed improvement projects<sup>3</sup>.

## 2. TMDL Project Location & Watershed Delineation

This anticipated TMDL project concerns the Santa Ynez River basin. Figure 2-1 illustrates the Santa Ynez River basin. The river basin is an east-west trending structural depression between hills and mountains of the Transverse Ranges in southern Santa Barbara County. The river basin’s drainage encompasses 896 square miles. Major tributaries of the Santa Ynez River are Salsipuedes, Cachuma, Santa Cruz, and Indian creeks (see Figure 2-1).

The first Europeans to visit and name the river were the Spaniards of the [Portolá expedition](#)<sup>4</sup>. These explorers camped near the river mouth on August 30, 1769. Expedition member [Juan Crespi](#) wrote in his diary that the river at this point was more than 100 yards wide, “full of fresh water,” and separated from the ocean by a sand bar. According to the U.S. Geological Survey, [historical variants](#) of the river’s name were La Purisima River, Rio De Calaguasa, and Rio de San Bernardo, among others.

An early attempt to assess the water resources of this river basin was published by the U.S. Geological Survey in 1951, in [Water Supply Paper 1107](#) entitled “Geology and Water Resources of the Santa Ynez River Basin, Santa Barbara County, California.” Since the mid-20<sup>th</sup> century, the natural hydrology of the Santa Ynez River has been modified by dams and reservoirs.

The upper Santa Ynez River basin remains in a relatively natural and undisturbed state within the Los Padres National Forest, with an ecosystem characterized by chamise-redshank chaparral, oak woodlands, and some areas of montane-hardwood conifer woodlands<sup>5</sup>.

The lower Santa Ynez River basin, below Cachuma Dam, has a more significant human footprint. Landscapes there are characterized by urbanized/developed lands, cultivated cropland, coastal oak woodland, and coastal scrub<sup>6</sup>.

<sup>1</sup> In the context of this TMDL project “streams” refer to any body of running water (such as a river, creek, brook, slough, canal, ditch, ephemeral drainage) which flows on the earth’s surface within the area shown on Figure 2-1.

<sup>2</sup> See State Water Resources Control Board videos webpage, <http://www.waterboards.ca.gov/videos/> : [What is a TMDL?](#)

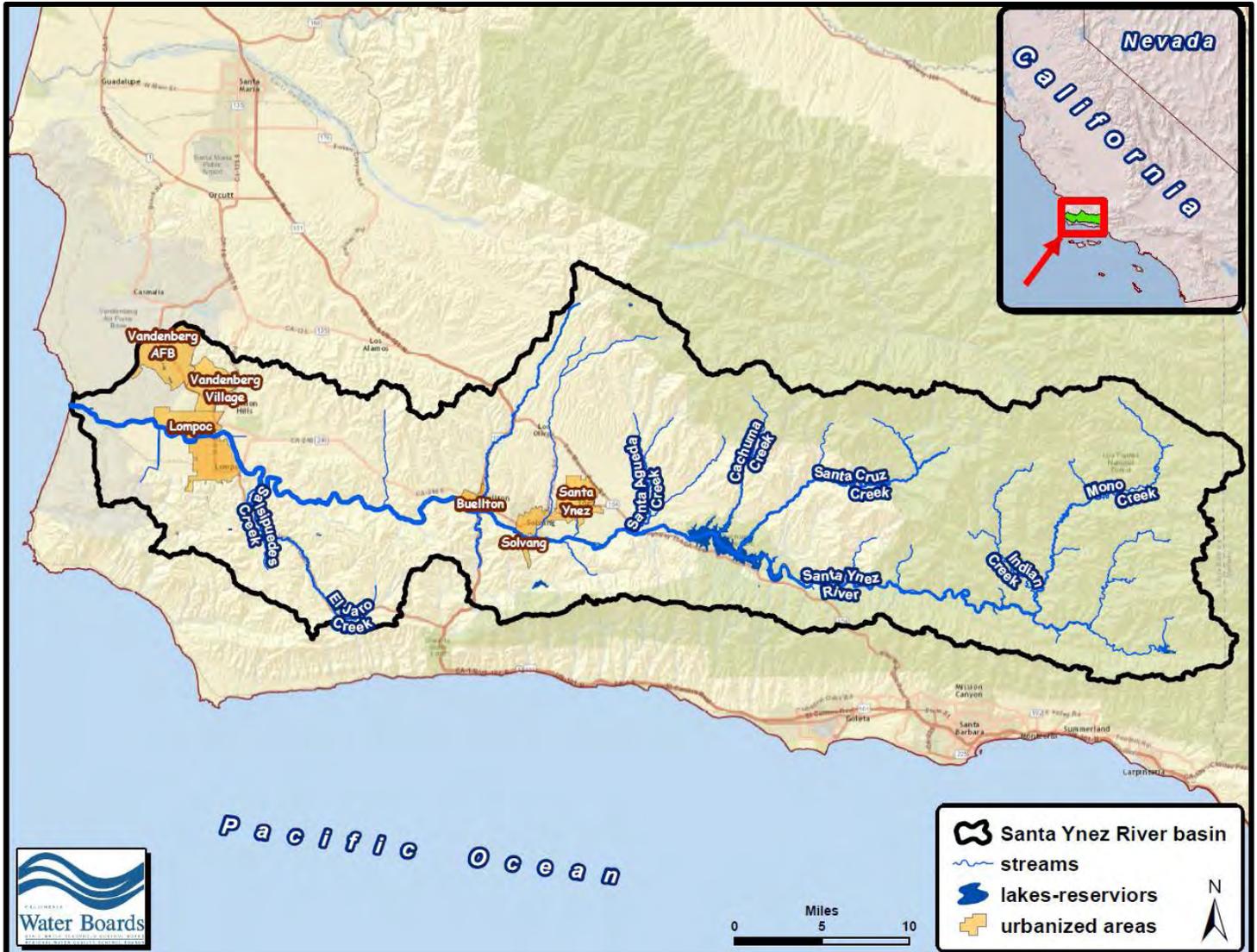
<sup>3</sup> *Ibid*

<sup>4</sup> The Portolá expedition was the first recorded European land exploration of the present-day state of California during 1769-1770 and led to the founding of the Spanish colony of Alta California.

<sup>5</sup> Source: California Department of Forestry and Fire Protection, 1980 - CALVEG vegetation attributes database.

<sup>6</sup> *Ibid*

Figure 2-1. Map of the Santa Ynez River basin.



Delineation of watershed drainage boundaries is a necessary part of TMDL development. Drainage boundaries of the conterminous United States are delineated based on the Watershed Boundary Dataset<sup>7</sup>, which contain digital hydrologic unit boundary layers organized based on Hydrologic Unit Codes. Hydrologic Unit Codes (HUCs) were developed by the United States Geological Survey to identify all the drainage basins of the United States.

Watersheds range in all sizes depending on how the drainage area of interest is spatially defined, if drainage areas are nested, and on the nature and focus of a particular hydrologic study. Watersheds within the Santa Ynez River basin can be characterized by a hierarchy as presented in Table 2-1.

<sup>7</sup> The [Watershed Boundary Dataset](#) (WBD) is developed by federal agencies and national associations. WBD contains watershed boundaries that define the areal extent of surface water drainage to a downstream outlet. WBD watershed boundaries are determined solely upon science-based principles, not favoring any administrative boundaries. The WBD is considered by federal agencies to be the [authoritative dataset](#) for hydrologic unit boundaries for the nation.

Table 2-1. Watershed hierarchy<sup>A</sup> (basins, watersheds, subwatersheds) for the Santa Ynez River basin.

Hydrologic Unit	Approx. Drainage Area (square miles)	Example(s)	Spatial Data Source
basin	Generally more than 800 square miles	Santa Ynez River basin (896 square miles)	Watershed Boundary Dataset HUC-8 shapefiles available from: U.S. Geological Survey & Natural Resource Conservation Service
watershed	Generally >60 square miles to <250 square miles	Mono Creek watershed (123 square miles) Santa Cruz Creek watershed (76 square miles)	Watershed Boundary Dataset HUC-10 shapefiles available from: U.S. Geological Survey & Natural Resource Conservation Service
subwatershed	Generally >15 square miles to <60 square miles	Nojoqui Creek subwatershed (16 square miles) Zaca Creek subwatershed (40 square miles)	Watershed Boundary Dataset HUC-12 shapefiles available from: U.S. Geological Survey & Natural Resource Conservation Service

<sup>A</sup> Based on adaptation from Jonathan Brant, PhD, and Gerald J. Kauffman, MPA, PE (2011) Water Resources and Environmental Depth Reference Manual for the Civil PE Exam.

The Santa Ynez River basin is delineated at the HUC-8 hydrologic unit scale (HUC 18060010) – refer back to Figure 2-1 which highlights the Santa Ynez River basin in map view.

Individual watersheds at the HUC-10 hydrologic unit scale which are nested within the Santa Ynez River basin were delineated by digitally clipping HUC-10 watershed shapefiles using the Santa Ynez River basin HUC-8 shapefile as a mask. Based on HUC-10 delineations, there are seven distinct watersheds nested within the Santa Ynez River basin as tabulated in Table 2-2 and shown in map view in Figure 2-2.

At a higher resolution hydrologic scale, there are 28 distinct subwatersheds, delineated at the HUC-12 scale, nested within the Santa Ynez River basin as shown in map view in Figure 2-2 and tabulated in Table 2-3.

Table 2-2. TMDL watershed hierarchy (basins, watersheds, and subwatersheds).

Name	Hydrologic Scale	Spatial Data Source	Drainage Area (square miles)
Santa Ynez River basin	<b>basin</b>	WBD 8-digit Hydrologic Unit Code HUC # 18060010	897
Mono Creek	<b>watershed</b> <i>within the Santa Ynez River basin</i>	WBD 10-digit Hydrologic Unit Code HUC # 1806001001	124
Headwaters Santa Ynez River	<b>watershed</b> <i>within the Santa Ynez River basin</i>	WBD 10-digit Hydrologic Unit Code HUC # 1806001002	78
Santa Cruz Creek	<b>watershed</b> <i>within the Santa Ynez River basin</i>	WBD 10-digit Hydrologic Unit Code HUC # 1806001003	76
Redrock Canyon-Santa Ynez River	<b>watershed</b> <i>within the Santa Ynez River basin</i>	WBD 10-digit Hydrologic Unit Code HUC # 1806001004	102
Alamo Pintado Creek-Santa Ynez River	<b>watershed</b> <i>within the Santa Ynez River basin</i>	WBD 10-digit Hydrologic Unit Code HUC # 1806001005	231
Zaca Creek-Santa Ynez River	<b>watershed</b> <i>within the Santa Ynez River basin</i>	WBD 10-digit Hydrologic Unit Code HUC # 1806001006	125

Name	Hydrologic Scale	Spatial Data Source	Drainage Area (square miles)
Salsipuedes Creek-Santa Ynez River	<b>watershed</b> <i>within the Santa Ynez River basin</i>	WBD 10-digit Hydrologic Unit Code HUC # 1806001007	161
Subwatersheds of the Santa Ynez River basin	<b>subwatersheds</b>	WBD 12-digit Hydrologic Unit Codes See Figure 2-2 and Table 2-3 for subwatershed information	

Figure 2-2. Map of watersheds and subwatersheds in the Santa Ynez River basin. The subwatersheds in this map have associated numeric identifiers and the subwatershed names are tabulated in Table 2-3.

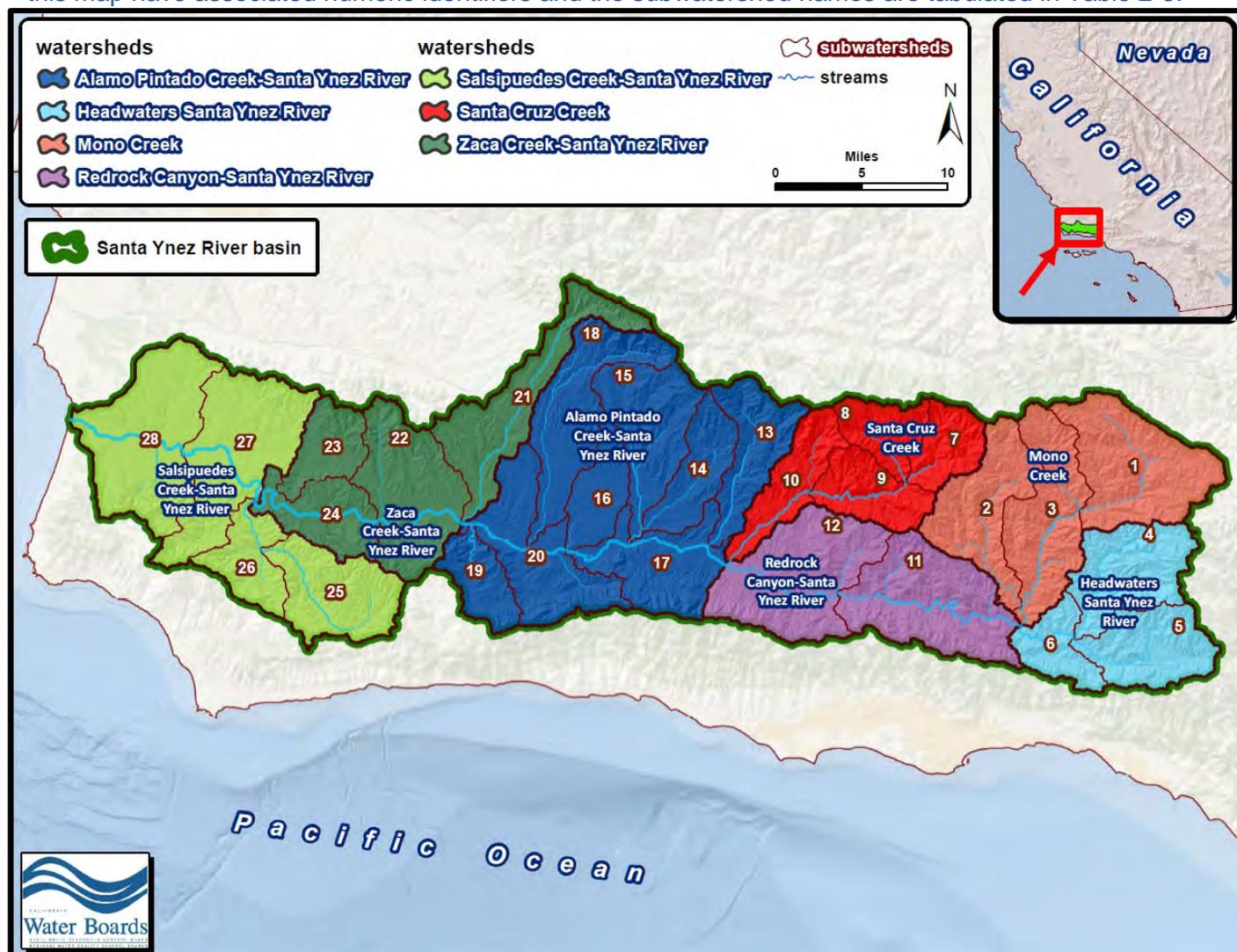


Table 2-3. Tabular summary of subwatersheds of the Santa Ynez River basin. The subwatershed locations and their associated numeric identifiers are shown in map view in Figure 2-2.

Numeric ID	Subwatershed Name	hydrologic unit code (HUC-12)	Hydrologic modifications <sup>A</sup>	Area (mi <sup>2</sup> )
1	Upper Mono Creek	180600100101	no modifications	48
2	Indian Creek	180600100102	no modifications	35
3	Lower Mono Creek	180600100103	reservoir	41
4	Agua Caliente Canyon	180600100201	aqueduct	34
5	Juncal Canyon-Santa Ynez River	180600100202	aqueduct	29

Numeric ID	Subwatershed Name	hydrologic unit code (HUC-12)	Hydrologic modifications <sup>A</sup>	Area (mi <sup>2</sup> )
6	Blue Canyon-Santa Ynez River	180600100203	dam at outlet, aqueduct	16
7	East Fork Santa Cruz Creek	180600100301	no modifications	16
8	West Fork Santa Cruz Creek	180600100302	no modifications	16
9	Upper Santa Cruz Creek	180600100303	reservoir	21
10	Lower Santa Cruz Creek	180600100304	reservoir	22
11	Gibraltar Reservoir-Santa Ynez River	180600100401	dam at outlet, aqueduct	50
12	Kelly Creek-Santa Ynez River	180600100402	reservoir, aqueduct	52
13	Cachuma Creek	180600100501	reservoir	26
14	Happy Canyon	180600100502	dam at outlet, aqueduct	21
15	Santa Agueda Creek	180600100503	no modifications	35
16	Zanja de Cota Creek	180600100504	no modifications	18
17	Calabazal Creek-Santa Ynez River	180600100505	no modifications	33
18	Alamo Pintado Creek	180600100506	no modifications	41
19	Nojoqui Creek	180600100507	no modifications	16
20	Alisal Creek-Santa Ynez River	180600100508	no modifications	40
21	Zaca Creek	180600100601	no modifications	40
22	Santa Rosa Creek-Santa Ynez River	180600100602	no modifications	44
23	Santa Rita Valley	180600100603	no modifications	17
24	Canada De La Vina-Santa Ynez River	180600100604	no modifications	23
25	El Jaro Creek	180600100701	mining activity	33
26	Salsipuedes Creek	180600100702	mining activity	19
27	San Miguelito Creek-Santa Ynez River	180600100703	mining activity, general canal/ditch	52
28	Santa Lucia Canyon-Santa Ynez River	180600100704	general canal/ditch	57

<sup>A</sup> This is an attribute field found in the Watershed Boundary Dataset which identifies any type of modifications to natural overland flow present in the HUC-12 subwatershed. The attribute field lists from most significant to least significant modification(s).

### 3. Water Quality: Clean Water Act Section 303(d) Listings

The purpose of this section of the report is to highlight nutrient and nutrient-related water quality issues associated with [California's 2008-2010 Clean Water Act section 303\(d\) assessment](#).

Under section 303(d) of the Clean Water Act, states, territories, and authorized tribes are required to submit lists of [impaired waters](#), frequently called "303(d) lists." These are waters that are too polluted or otherwise degraded to meet water quality standards. Section 303(d) of the Clean Water Act states:

*"Each State shall establish for the waters identified in paragraph (1)(A) of this subsection, and in accordance with the priority ranking, the total maximum daily load, for those pollutants which the Administrator identifies under section 1314(a)(2) of this title as suitable for such calculation. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality."*

The state complies with this requirement by periodically assessing the conditions of our rivers, lakes, and bays and identifying them as impaired if they do not meet water quality standards. These waters, and the pollutant or condition causing the impairment, are placed on the 303(d) list. The Clean Water Act also requires that the states develop TMDLs for these waters.

303(d) listings in the Santa Ynez River basin from California's 2008-2010 303(d) list are tabulated in Table 3-1. This TMDL project is anticipated to assess and address nutrient-related impairments in the

river basin, specifically nitrate and low dissolved oxygen. Nutrient pollution refers to excessive amounts of nitrate and phosphorus in our water resources. Nutrient pollution of the lower reaches of the Santa Ynez River has long been recognized as a problem with respect to nitrate pollution. Nutrient pollution can degrade municipal and domestic water supply, and may degrade irrigation water quality for sensitive crops. Nutrient pollution can also result in a cascade of adverse environmental impacts in streams such as excessive nuisance algae, disruption of the natural dissolved oxygen balance, and disruption of the aquatic food web.

As a matter of efficiency and staff resource allocation, salinity impairments in the river basin may be addressed on a case by case basis in this TMDL project. Further, any additional nutrient-related water quality impairments not currently on the 303(d) list but identified during our TMDL assessment may be addressed through the TMDL development and approval process<sup>8</sup>.

Also worth noting, the data used in the 2008-2010 303(d) assessment is now a decade or more, older. The most recent data used in the 2008-2010 assessment was from the year 2006, and most of the water quality data used was even older than 2006. Consequently, this TMDL project will endeavor to incorporate and assess all available water quality data, including recent data for the river basin.

Table 3-1. 2008-2010 303(d) listings in the Santa Ynez River basin. This TMDL study will focus on nitrate and dissolved oxygen impairments (see bolded), and may address select salt listings on a case by case basis as a matter of staff resource efficiency.

Water Body Name	Pollutant	Pollutant Category	Final Listing Decision
Santa Ynez River (Cachuma Lake to below city of Lompoc)	Sedimentation/Siltation	Sediment	List on 303(d) list
Santa Ynez River (Cachuma Lake to below city of Lompoc)	Sodium	Salinity	List on 303(d) list
Santa Ynez River (Cachuma Lake to below city of Lompoc)	Temperature, water	Miscellaneous	List on 303(d) list
Santa Ynez River (Cachuma Lake to below city of Lompoc)	Total Dissolved Solids	Salinity	List on 303(d) list
Santa Ynez River (below city of Lompoc to Ocean)	Chloride	Salinity	List on 303(d) list
Santa Ynez River (below city of Lompoc to Ocean)	Escherichia coli (E. coli)	Pathogens	List on 303(d) list
Santa Ynez River (below city of Lompoc to Ocean)	Fecal Coliform	Pathogens	List on 303(d) list
Santa Ynez River (below city of Lompoc to Ocean)	<b>Low Dissolved Oxygen</b>	<b>Nutrients</b>	List on 303(d) list
Santa Ynez River (below city of Lompoc to Ocean)	<b>Nitrate</b>	<b>Nutrients</b>	Do Not Delist from 303(d) list
Santa Ynez River (below city of Lompoc to Ocean)	Sedimentation/Siltation	Sediment	List on 303(d) list
Santa Ynez River (below city of Lompoc to Ocean)	Sodium	Salinity	List on 303(d) list
Santa Ynez River (below city of Lompoc to Ocean)	Temperature, water	Miscellaneous	List on 303(d) list
Santa Ynez River (below city of Lompoc to Ocean)	Total Dissolved Solids	Salinity	List on 303(d) list

## 4. River Basin Setting

An assessment of the physical setting and existing conditions of any given watershed is a necessary step in TMDL development. This section of the scoping report presents cursory highlights of the physical, climatic, and hydrologic setting of the Santa Ynez River basin. As appropriate, additional information on the river basin setting will be compiled during TMDL development.

### 4.1 Land Use & Land Cover

Land use and land cover are an integral part of TMDL development. Pollutant transport and fate are frequently related to land cover in any given watershed. We evaluated land use and land cover in the Santa Ynez River basin using digital data from the [National Land Cover Database \(2011 Edition\)](#). For this TMDL scoping report, we provide a cursory summary of land cover in the river basin.

<sup>8</sup> The State Water Resources Control Board's Office of Chief Counsel reports that the California Court of Appeals has made clear that a regional board may simultaneously identify an impaired waterbody and establish a TMDL for it (*City of Arcadia v. State Water Resources Control Board* (2006) 135 Cal. App. 4<sup>th</sup>, 1418-19).

Figure 4-1 illustrates a map view of land use-land cover in the Santa Ynez River basin. The river basin's land use-land cover are tabulated in Table 4-1, while Table 4-2 provides additional detail on the attributes of land cover categories.

The upper Santa Ynez River basin remains in a relatively natural and undisturbed state within the Los Padres National Forest, with an ecosystem characterized by chamise-redshank chaparral, oak woodlands, and some areas of montane-hardwood conifer woodlands.

The lower Santa Ynez River basin, below Cachuma Dam, has a more significant human footprint where landscapes are characterized by urbanized/developed lands, cultivated cropland, coastal oak woodland and coastal scrub.

During TMDL development we will further assess land cover in the river basin as appropriate.

Figure 4-1. Land use–land cover (year 2011) in the Santa Ynez River basin (source: National Land Cover Dataset, 2011).

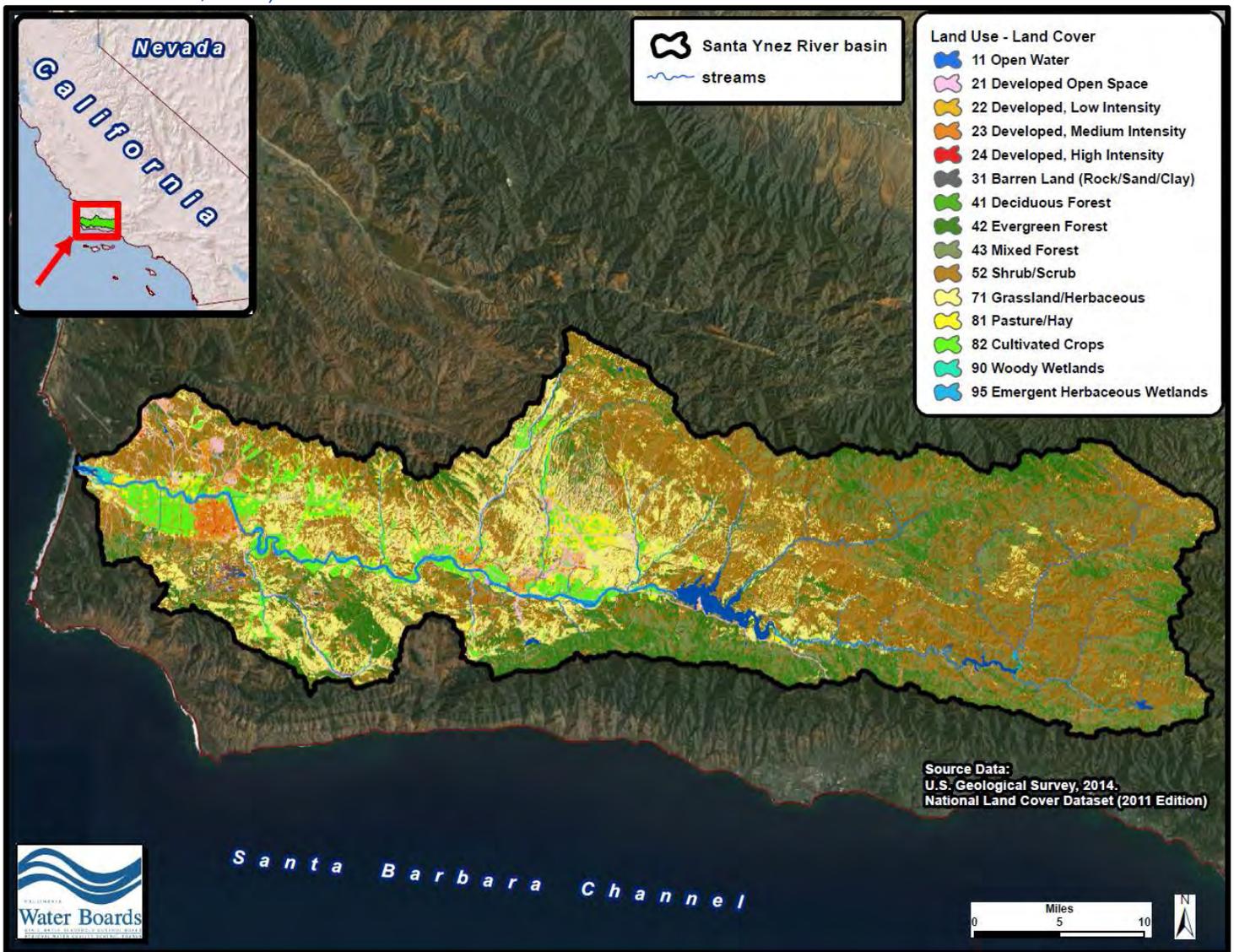


Table 4-1. Land use-land cover in the Santa Ynez River basin (source: National Land Cover Dataset, 2011).

Land cover category with numeric code	Acres	Percent of river basin (%)
11 Open Water	3,266	0.6%
21 Developed Open Space	23,510	4.1%
22 Developed, Low Intensity	5,546	1.0%
23 Developed, Medium Intensity	3,897	0.7%
24 Developed, High Intensity	246	0.0%
31 Barren Land (Rock/Sand/Clay)	1,547	0.3%
41 Deciduous Forest	12	0.0%
42 Evergreen Forest	90,899	15.8%
43 Mixed Forest	77,372	13.5%
52 Shrub/Scrub	236,661	41.2%
71 Grassland/Herbaceous	90,204	15.7%
81 Pasture/Hay	10,356	1.8%
82 Cultivated Crops	23,663	4.1%
90 Woody Wetlands	2,958	0.5%
95 Emergent Herbaceous Wetlands	3,684	0.6%
Total acres	573,821	

Table 4-2. Detailed descriptions of National Land Cover Database land cover categories.

Land cover category code	Description
11	All areas of open water, generally with less than 25% cover or vegetation or soil.
21	Includes areas with a mixture of some constructed materials, but mostly vegetation in the form of lawn grasses. Impervious surfaces account for less than 20% of total cover. These areas most commonly include large-lot single-family housing units, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes.
22	Includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 20-49 percent of total cover. These areas most commonly include single-family housing units.
23	Includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 50-79 percent of the total cover. These areas most commonly include single-family housing units.
24	Includes highly developed areas where people reside or work in high numbers. Examples include apartment complexes, row houses and commercial/industrial. Impervious surfaces account for 80 to 100 percent of the total cover.
31	Barren areas of bedrock, desert pavement, scarps, talus, slides, volcanic material, glacial debris, sand dunes, strip mines, gravel pits and other accumulations of earthen material. Generally, vegetation accounts for less than 15% of total cover.
41	Areas dominated by trees generally greater than 5 meters tall, and greater than 20% of total vegetation cover. More than 75 percent of the tree species shed foliage simultaneously in response to seasonal change.
42	Areas dominated by trees generally greater than 5 meters tall, and greater than 20% of total vegetation cover. More than 75 percent of the tree species maintain their leaves all year. Canopy is never without green foliage.

Land cover category code	Description
43	Areas dominated by trees generally greater than 5 meters tall, and greater than 20% of total vegetation cover. Neither deciduous nor evergreen species are greater than 75 percent of total tree cover.
52	Areas dominated by shrubs; less than 5 meters tall with shrub canopy typically greater than 20% of total vegetation. This class includes true shrubs, young trees in an early successional stage or trees stunted from environmental conditions.
71	Areas dominated by grammanoid or herbaceous vegetation, generally greater than 80% of total vegetation. These areas are not subject to intensive management such as tilling, but can be utilized for grazing.
81	Areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops, typically on a perennial cycle. Pasture/hay vegetation accounts for greater than 20 percent of total vegetation.
82	Areas used for the production of annual crops, such as corn, soybeans, vegetables, tobacco, and cotton, and also perennial woody crops such as orchards and vineyards. Crop vegetation accounts for greater than 20 percent of total vegetation. This class also includes all land being actively tilled
90	Areas where forest or shrub land vegetation accounts for greater than 20 percent of vegetative cover and the soil or substrate is periodically saturated with or covered with water.
95	Areas where perennial herbaceous vegetation accounts for greater than 80 percent of vegetative cover and the soil or substrate is periodically saturated with or covered with water.

## 4.2 Hydrography

Assessing the hydrology of a watershed is an important step in evaluating the magnitude and nature of nutrient transport and loading in waterbodies. This section of the scoping report presents some cursory information concerning the hydrography of the Santa Ynez River basin. More hydrologic data will be assessed as necessary during TMDL development.

The Santa Ynez River is a large and important river on California's central coast, with a length of 75 miles, and a drainage area of nearly 900 square miles. Since the mid-20<sup>th</sup> century, the natural hydrology of the Santa Ynez River has been modified by dams and reservoirs. Major tributaries of the Santa Ynez River are Salsipuedes, Cachuma, Santa Cruz, and Indian creeks.

Figure 4-2 illustrates some regional hydrographic features and hydrologic characteristics within the Santa Ynez River basin. Table 4-3 presents flow statistics for select stream reaches in the Santa Ynez River basin based on U.S. Geological Survey stream gage data.

Owing to the [Mediterranean-type](#) climate of Santa Barbara County, the hydrology of the river basin is generally characterized by flashy runoff associated with wet-season storms, and depletion of surface flows, or intermittent flows in the dry season. Since the construction of dams in the early to mid-20<sup>th</sup> century, substantial amounts of surface runoff in the river basin are impounded in reservoirs, resulting in regulated flows in the lower Santa Ynez River.

The Santa Ynez River begins in the uplands of the Santa Ynez Mountains, and then flows to Gibraltar Reservoir which is reportedly nearly filled with silt (Palmer, 2012). The river then flows to the Cachuma Reservoir where some water is diverted by tunnel to Santa Barbara. Below Cachuma Dam, the river channel winds through lowlands of the river basin toward the Pacific Ocean west of the Lompoc, and through one of California's larger tidal marshes (Palmer, 2012).

As appropriate, further information on the hydrology of the Santa Ynez River basin will be assessed in the course of TMDL development.

Figure 4-2. Generalized hydrographic features of the Santa Ynez River basin.



Table 4-3. Flow statistics from U.S. Geological Survey stream gages in the Santa Ynez River basin (flow units = cubic feet per second; drainage area units = square miles; BFI = base flow index).

Station No.	U.S. Geological Survey Station Name	Period of Record	Ave. Flow	MIN	P10	P25	P50	P75	P90	P95	P99	Max Flow	BFI	Drain Area
11121000	SANTA YNEZ R A JAMESON LK NR MONTECITO CA	1988-2000	22.9	0	0.0	0.0	0.0	0.0	40.0	95.0	571.0	2,660	0.27	NR
11121010	JAMESON LK RELEASE WEIR A JAMESON LAKE CA	1970-2000	2.0	0	1.0	1.2	1.9	2.7	3.5	3.8	4.4	7	0.85	NR
11121900	GIBRALTAR DAM DIV WEIR A GIBRALTAR DAM CA	1970-2000	7.3	0	0.0	3.0	8.2	11.0	13.0	14.0	22.0	90	0.79	NR
11122000	SANTA YNEZ R AB GIBRALTAR DAM NR SANTA BARB CA	1904-1918	126.3	0	0.4	2.0	9.0	44.0	181.0	430.0	2,362.2	19,000	0.31	216
11122010	GIBRALTER DAM REL WR A GIBRALTER DAM CA	1988-2000	0.8	0	0.0	0.0	0.0	0.0	0.0	10.0	15.0	16	0.71	NR
11123000	SANTA YNEZ R BL GIBRALTAR DAM NR SNTA BRB C CA	1933-2000	66.5	0	0.0	0.0	0.1	6.1	81.0	253.0	1,250.0	26,600	0.30	216
11123500	SANTA YNEZ R BL LOS LAURLS CYN NR SNTA YNEZ CA	1947-2000	89.5	0	0.0	0.0	0.1	8.6	95.0	311.2	1,746.3	33,700	0.27	277
11124000	SANTA CRUZ C AB STUKE CN NR SANTA YNEZ CA	1947-1952	10.1	0	0.1	0.2	0.5	3.9	15.0	43.0	211.2	850	NR	65
11124500	SANTA CRUZ C NR SANTA YNEZ CA	1941-2000	20.5	0	0.0	0.0	1.3	8.6	34.0	83.0	330.0	5,000	0.43	74
11125000	CACHUMA C NR SANTA YNEZ CA	1950-1962	3.7	0	0.0	0.0	0.1	1.0	4.3	10.0	69.0	782	0.38	24

Station No.	U.S. Geological Survey Station Name	Period of Record	Ave. Flow	MIN	P10	P25	P50	P75	P90	P95	P99	Max Flow	BFI	Drain Area
11126000	SANTA YNEZ R NR SANTA YNEZ CA	1929-2000	69.2	0	0.0	0.0	1.3	12.0	68.0	183.4	1,320.0	38,900	0.30	422
11126500	SANTA AGUEDA C NR SANTA YNEZ CA	1940-1978	3.6	0	0.0	0.0	0.1	0.5	1.8	4.1	64.4	1,760	0.22	56
11127000	SAN LUCAS C NR SANTA YNEZ CA	1952-1954	0.1	0	0.0	0.0	0.0	0.0	0.2	0.3	0.8	5	NR	NR
11127500	ZANJA DE COTA C NR SANTA YNEZ CA	1954-1961	1.9	0	0.2	0.7	1.3	2.4	3.0	3.4	8.9	115	0.67	14
11128000	SANTA YNEZ R A GA NR SANTA YNEZ CA	1954-1965	15.9	0	0.0	0.6	2.2	4.9	13.0	53.0	362.3	1,370	0.46	513
11128250	ALAMO PINTADO C NR SOLVANG CA	1970-2000	2.7	0	0.0	0.0	0.0	0.8	3.2	5.5	49.0	1,150	0.17	29
11128400	ALISAL C NR SOLVANG CA	1954-1972	5.6	0	0.0	0.0	0.0	0.4	5.0	15.0	117.6	2,040	0.16	12
11128500	SANTA YNEZ R A SOLVANG CA	1928-1999	95.7	0	0.0	0.0	3.5	11.0	63.0	240.0	1,762.7	40,000	0.38	579
11129000	NOJOQUI C NR BUELLTON CA	1952-1954	0.8	0	0.0	0.0	0.0	0.3	1.5	3.5	11.8	74	NR	15
11129500	SANTA YNEZ R A BUELLTON CA	1954-1959	38.1	0	0.0	0.0	1.1	7.6	46.9	159.2	828.9	3,970	0.23	611
11129800	ZACA C NR BUELLTON CA	1963-2000	1.7	0	0.0	0.0	0.0	0.0	1.0	4.3	30.0	598	0.08	33
11130000	ZACA C A BUELLTON CA	1941-1963	0.9	0	0.0	0.0	0.0	0.0	0.0	0.2	21.0	358	0.02	39
11130500	SANTA YNEZ R NR BUELLTON CA	1952-1974	61.8	0	0.0	0.0	1.3	12.0	47.0	136.6	1,000.0	42,000	0.48	668
11131000	SANTA YNEZ R AT SANTA ROSA DAMSITE NR BUELLTON CA	1954-1964	31.6	0	0.0	0.0	0.1	3.4	25.0	115.0	644.1	4,400	0.38	700
11131500	SANTA YNEZ R A COOPERS REEF NR LOMPOC CA	1954-1976	73.4	0	0.0	0.1	0.4	12.0	58.0	203.0	1,331.3	38,000	0.43	708
11132000	SANTA YNEZ R BL SANTA RITA C NR LOMPOC CA	1954-1962	37.2	0	0.0	0.1	0.2	2.6	40.0	177.4	800.0	4,800	0.32	733
11132500	SALSIPUEDES C NR LOMPOC CA	1941-2000	11.8	0	0.1	0.3	1.5	3.7	12.0	30.0	201.3	5,390	0.38	47
11133000	SANTA YNEZ R A NARROWS NR LOMPOC CA	1952-2000	124.6	0	0.0	0.0	1.9	21.0	115.0	450.0	2,109.7	38,000	0.36	789
11133500	SANTA YNEZ R NR LOMPOC CA	1906-1998	220.7	0	0.0	0.2	16.0	79.0	356.0	914.4	3,731.4	32,500	0.36	790
11133700	PURISIMA C NR LOMPOC CA	1970-1975	0.1	0	0.0	0.0	0.0	0.0	0.0	0.3	2.8	72	0.01	5
11134000	SANTA YNEZ R A H ST NR LOMPOC CA	1946-2000	47.5	0	0.0	0.0	0.0	0.0	40.0	156.8	849.5	19,600	0.18	815
11134500	SANTA YNEZ R A V STREET NR LOMPOC CA	1954-1975	78.9	0	0.0	0.0	0.0	0.0	65.0	260.0	1,358.5	38,000	0.15	820
11134800	MIGUELITO C A LOMPOC CA	1970-2000	2.4	0	0.0	0.1	0.4	1.2	2.9	6.9	36.0	1,170	0.35	12
11135000	SANTA YNEZ R A PINE CYN NR LOMPOC CA	1940-1983	185.4	0	0.3	1.3	4.2	34.0	262.5	820.5	3,009.0	38,400	0.35	844
11135200	RODEO-SAN PASQUAL C NR LOMPOC CA	1970-1972	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	3	NR	8
11135500	SANTA YNEZ R A BARRIER NR SURF CA	1946-1965	41.5	0	0.0	0.0	0.0	0.5	13.0	120.0	753.1	21,900	0.31	895

Data source: U.S. Geological Survey, 2003. *Flow characteristics at U.S. Geological Survey stream gages in the conterminous United States*. Open File Report 03-146.

P = percentiles, for example the P10 attribute is the 10<sup>th</sup> percentile of daily streamflow values for the period of record.

NR = not reported

BFI = base flow index

### 4.3 Climate & Atmospheric Deposition

We conducted a brief and cursory review of climatic data for this scoping report. Precipitation is often considered in the development of TMDLs. Precipitation is directly related to a number of watershed hydrologic functions, such as surface runoff, groundwater recharge, and water table elevations.

The Santa Ynez River basin and California's central coast are characterized by a [Mediterranean-type climate](#), with the vast majority of precipitation falling between November and April (see monthly rain gage data found in Table 4-4).

Table 4-4. Rainfall gage records in the Santa Ynez River basin (units = inches).

Station	Elevation (ft.)	Period of Record	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean Annual Rainfall
Alisal Ranch <sup>A</sup>	479	1966-2014	NR	24.30											
Buellton <sup>A</sup>	364	1955-2015	NR	16.80											

Station	Elevation (ft.)	Period of Record	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean Annual Rainfall
Burton Mesa fire station <sup>A</sup>	344	1962-2014	NR	14.51											
Cachuma Lake <sup>B</sup>	783	1952-2015	4.39	4.65	3.47	1.54	0.38	0.04	0.01	0.03	0.21	0.66	1.93	3.09	20.39
El Deseo Ranch <sup>A</sup>	3993	1967-2014	NR	36.45											
Figueroa Mountain <sup>A</sup>	4520	1961-2015	NR	21.42											
Gibraltar Dam <sup>A</sup>	1404	1920-2015	NR	26.45											
Jameson Dam <sup>A</sup>	2227	1926-2013	NR	29.36											
Lompoc <sup>B</sup>	112	1917-2015	3.07	3.09	2.55	1.14	0.26	0.03	0.02	0.02	0.17	0.53	1.53	2.24	14.67
Lompoc City Hall <sup>A</sup>	112	1955-2015	NR	14.51											
Miguelito Canyon <sup>A</sup>	433	1947-2014	NR	22.78											
Nojoqui Falls <sup>A</sup>	1099	1966-2014	NR	27.47											
Rancho San Julian <sup>A</sup>	620	1920-2014	NR	24.03											
Salsipuedes gaging stn <sup>B</sup>	255	1948-2014	3.84	4.17	3.09	1.48	0.33	0.05	0.00	0.03	0.17	0.62	1.88	2.88	18.54
San Marcos Pass <sup>A</sup>	2217	1966-2015	NR	34.21											
Santa Ynez fire station <sup>A</sup>	607	1951-2015	NR	15.81											
Solvang <sup>A</sup>	502	Average Precipitation (inches)	NR	18.78											

A: County of Santa Barbara Department of Public Works rain gage station.

B: Western U.S. COOP weather station (Source: NOAA Western Regional Climate Center).

NR = not reported

It is important to recognize that rainfall gauging stations have limited spatial distribution, and that gauging stations tend to be located in lower elevations where people live. Consequently, these locations can bias estimates of regional rainfall towards climatic conditions at lower elevations. The topography of the California central coast region however, can result in significant orographic enhancement of rainfall (i.e., enhancement of rainfall due to topographic relief and mountainous terrain).

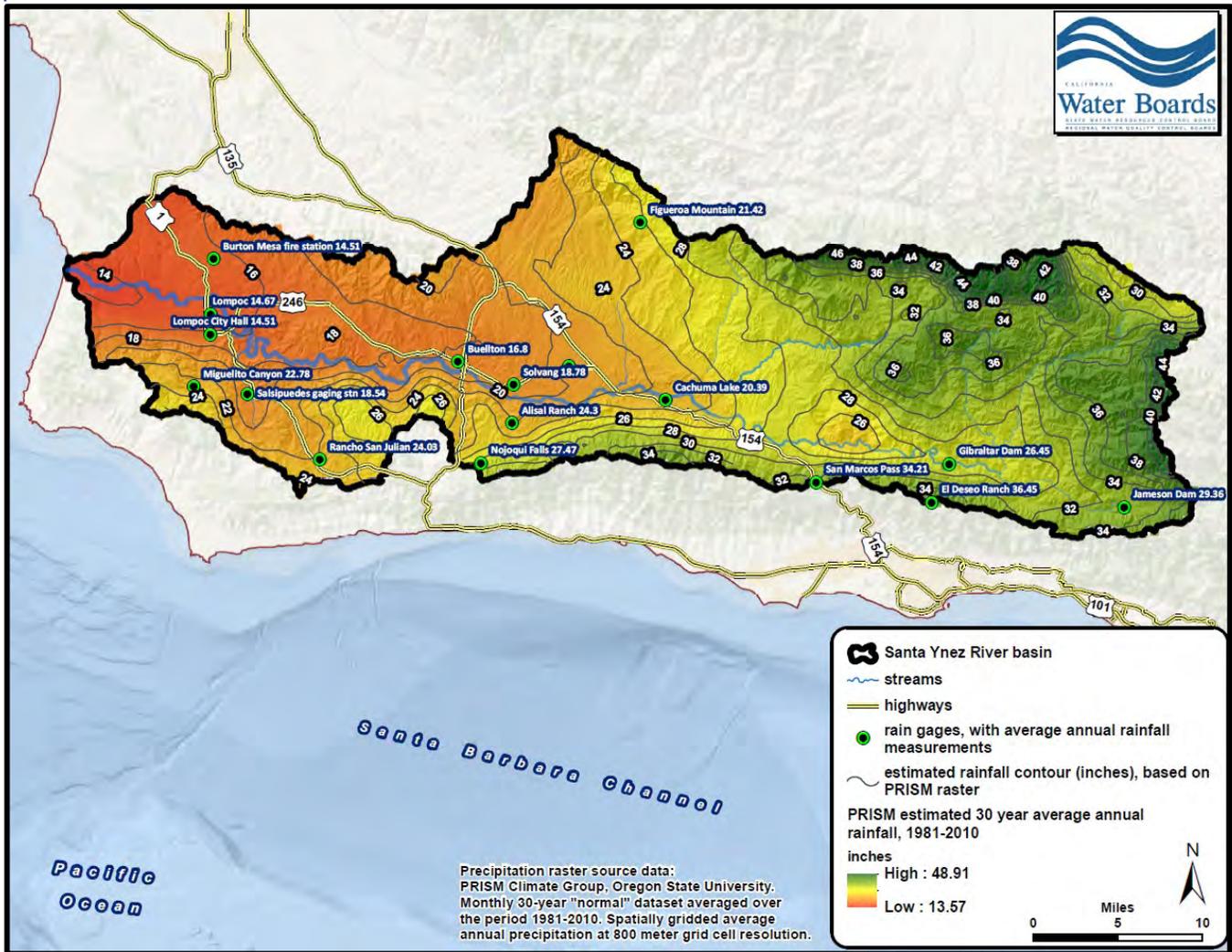
Therefore, due to climatic spatial variability, mean annual precipitation estimates for the Santa Ynez River basin may be assessed using the Parameter-elevation Regressions on Independent Slopes Model (PRISM)<sup>9</sup>. PRISM is a climate mapping system that accounts for orographic climatic effects and is widely used in watershed studies and TMDL projects to make projections of precipitation into rural or mountainous areas where rain gage data is often absent, or sparse. PRISM is the U.S. Department of Agriculture's official climatological dataset and PRSIM is used by the U.S. National Weather Service to

<sup>9</sup> The PRISM dataset was developed by researchers at Oregon State University, and uses point measurements of precipitation, temperature, and other climatic factors to produce continuous, digital grid estimates of climatic parameters. The dataset incorporates a digital elevation model, and expert knowledge of climatic variation, including rain shadows, coastal effects, and orographic effects. Online linkage: <http://www.prism.oregonstate.edu/>

spatially interpolate rainfall frequency estimates. PRISM is also used by private consultants engaged in watershed studies<sup>10</sup>.

Figure 4-3 presents a color gradient map illustrating modeled 30 year mean annual rainfall in the Santa Ynez River basin averaged over the period 1981-2010. The precipitation range estimates shown in Figure 4-3 comport reasonably well with historical regional rainfall range estimates reported by the U.S. Geological Survey and with estimates reported by the County of Santa Barbara<sup>11</sup>.

Figure 4-3. Color gradient display illustrating modeled 30 year mean annual rainfall averaged over the period of 1981-2010 in the Santa Ynez River basin.



Text Box 4-1. Santa Ynez River basin mean annual precipitation for the 30 year period 1981-2010 based on PRISM estimates.

Estimated mean annual precipitation within the Santa Ynez River basin for the period 1981-2010 ranged from less than 14 inches per year near the coast, to around 19 inches per year at Solvang, to about 35 or 40 inches on the higher mountains in the eastern areas of the river basin. Taken as a whole, basin-wide average annual precipitation from 1981-2010 is estimated to be 26 inches.

<sup>10</sup> For example: Tetra Tech, November 2015. *Salinas River Watershed Area Salt Modeling report*.

<sup>11</sup> The U.S. Geological Survey (1951), Water Supply Paper 1107 states that “mean annual rainfall ranges from about 14 inches on the coast to 35 or 40 inches on the higher mountains” (Water Supply Paper 1107. Geology and Water Resources of the Santa Ynez River Basin, Santa Barbara County, California). The County of Santa Barbara Public Works Departments [webpage](#) reports that rainfall is typically “over 36 inches at the apex of the Santa Ynez Mountains” (webpage accessed Sept. 29, 2015).

Table 4-5. Estimated 30 year mean annual rainfall<sup>A</sup> averaged over the period of 1981-2010 within subwatersheds of the Santa Ynez River basin.

ID Number	Subwatershed Name <sup>B</sup>	Mean Annual Precipitation (Inches) 1981-2010	ID Number	Subwatershed Name <sup>B</sup>	Mean Annual Precipitation (Inches) 1981-2010
1	Upper Mono Creek	34.15	15	Santa Agueda Creek	24.38
2	Indian Creek	35.50	16	Zanja de Cota Creek	21.52
3	Lower Mono Creek	34.36	17	Calabazal Creek-Santa Ynez River	25.45
4	Agua Caliente Canyon	36.65	18	Alamo Pintado Creek	22.28
5	Juncal Canyon-Santa Ynez River	34.83	19	Nojoqui Creek	24.94
6	Blue Canyon-Santa Ynez River	30.88	20	Alisal Creek-Santa Ynez River	22.98
7	East Fork Santa Cruz Creek	36.14	21	Zaca Creek	20.47
8	West Fork Santa Cruz Creek	35.37	22	Santa Rosa Creek-Santa Ynez River	19.26
9	Upper Santa Cruz Creek	31.90	23	Santa Rita Valley	17.67
10	Lower Santa Cruz Creek	29.47	24	Canada De La Vina-Santa Ynez River	19.05
11	Gibraltar Reservoir-Santa Ynez River	29.96	25	El Jaro Creek	23.49
12	Kelly Creek-Santa Ynez River	28.61	26	Salsipuedes Creek	20.87
13	Cachuma Creek	28.54	27	San Miguelito Creek-Santa Ynez River	17.38
14	Happy Canyon	25.54	28	Santa Lucia Canyon-Santa Ynez River	15.77

<sup>A</sup> Source data: PRISM Climate Group, Oregon State University, 30-arcsec annual precipitation grid, 1981-2010. PRISM precipitation zonal statistics were extracted for subwatersheds using the ArcMap 10.1™ Spatial Analyst extension.

<sup>B</sup> Refer back to Figure 2-2 and Table 2-3 for a map and tabulation of subwatersheds within the Santa Ynez River basin.

It should be reiterated that the PRISM model represents average precipitation conditions over a 30 year period. California has been experiencing extreme drought conditions in recent years. Consequently, solutions and timeframes for water quality improvements and monitoring aimed at achieving pollutant load reductions in the Santa Ynez River may need to consider assumptions about water quality conditions under extreme drought conditions.

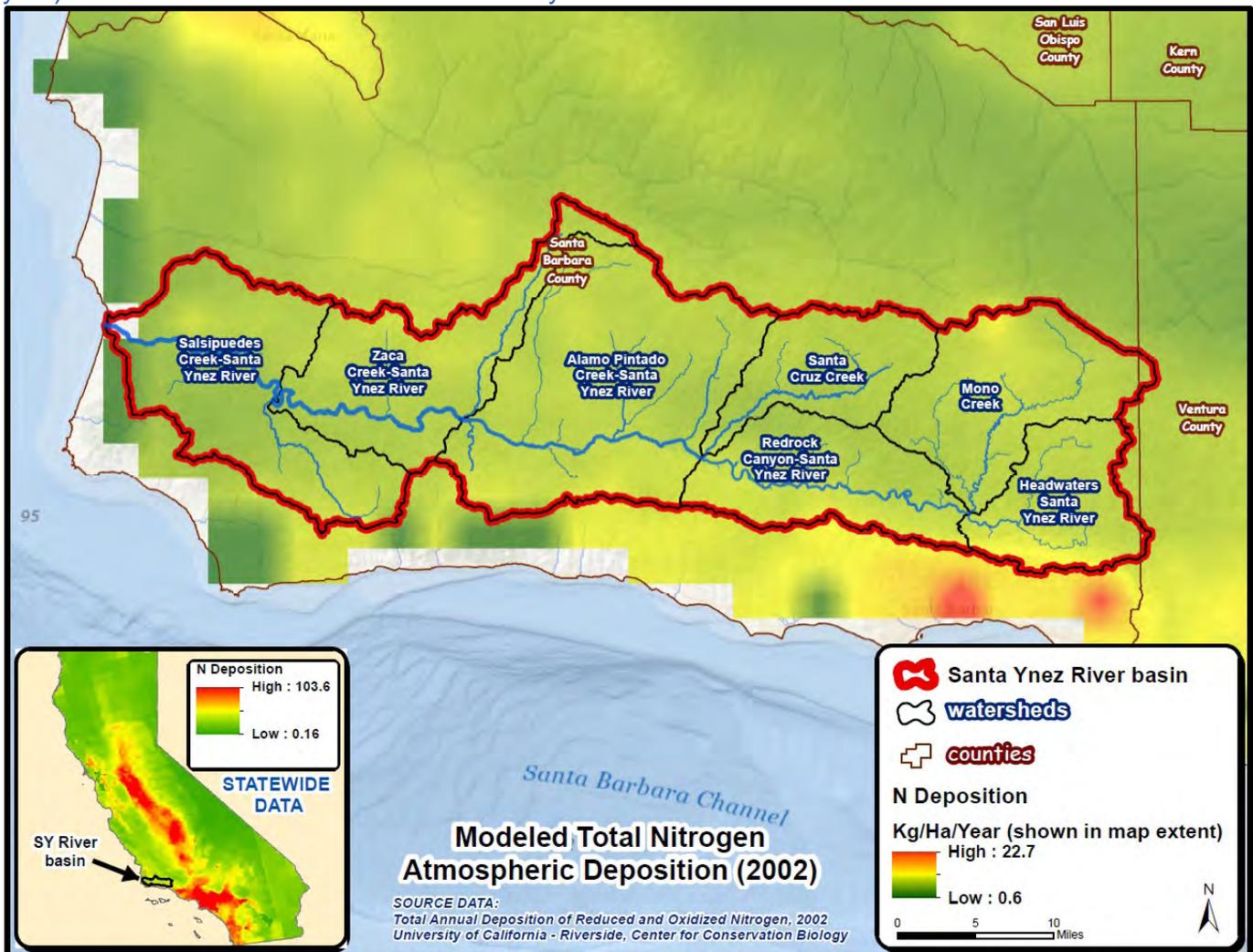
Other climatic parameters may be considered during TMDL development. Atmospheric deposition of nitrogen and phosphorus is often considered in watershed assessments of nutrient pollution. Deposition of nutrients by rainfall can locally be a significant source of loading to surface waters in any given watershed. Because nitrogen can exist as a gaseous phase (while phosphorus cannot), nitrogen is more prone to atmospheric transport and deposition. Phosphorus associated with fine-grained airborne particulate matter can also exist in the atmosphere (U.S. Environmental Protection Agency, 1999).

Additionally, atmospheric deposition of nitrogen compounds is generally most prevalent downwind of large urban areas, near point sources of combustion (like coal burning power plants), or in mixed urban/agricultural areas characterized by substantial vehicular combustion contributions to local air quality (Westbrook and Edinger-Marshall, 2014).

Figure 4-4 presents estimated total nitrogen atmospheric deposition for the year 2002 in the Santa Ynez River basin and vicinity based on a deposition model developed by the University of California-Riverside Center for Conservation Biology<sup>12</sup>.

Based on summary statistics of the California statewide nitrogen deposition raster data, the 25th percentile of data values is 2.5 kilogram (kg) of nitrogen per hectare (Ha)<sup>13</sup> and the median value is 3.7 kg/hectare. These values (2.5 to 3.7 kg/Ha) presumably could represent a plausible range for lightly-impacted or natural ambient atmospheric deposition conditions in California. Estimated atmospheric deposition of nitrogen in the Santa Ynez River basin (5.0 kg/Ha, refer to Table 4-6) is marginally higher than the aforementioned ambient condition. However, atmospheric nitrogen deposition in the river basin is substantially lower than in highly developed areas of southern California such as the Los Angeles Basin and the Santa Ana Basin, which generally can range to above 20 kg/Ha of nitrogen deposition annually based on the raster dataset.

Figure 4-4. Estimated annual atmospheric deposition of total nitrogen as N (units=kilograms/hectare per year) in the Santa Ynez River basin and vicinity.



<sup>12</sup> Tonnesen, G., Z. Wang, M. Omary, and C. J. Chien. 2007. University of California-Riverside. Assessment of Nitrogen Deposition: Modeling and Habitat Assessment. California Energy Commission, PIER Energy-Related Environmental Research. CEC-500-2006-032.

<sup>13</sup> One hectare is equal to 2.47 acres.

Table 4-6. Estimated annual atmospheric deposition of total nitrogen as N in watersheds of the Santa Ynez River basin (units = kilograms/hectare per year).

Watershed	Min	Max	Mean
Mono Creek	5.2	8.6	6.0
Headwaters Santa Ynez River	5.7	9.5	6.8
Santa Cruz Creek	4.5	5.9	5.4
Redrock Canyon-Santa Ynez River	4.5	8.1	6.3
Alamo Pintado Creek-Santa Ynez River	4.9	7.8	6.0
Zaca Creek-Santa Ynez River	5.0	6.7	5.6
Salsipuedes Creek-Santa Ynez River	1.2	7.1	5.1
Basin-wide mean atmospheric deposition rate (Santa Ynez River basin)			5.0

Based on the University of California-Riverside atmospheric deposition model, average annual atmospheric deposition of total nitrogen across the Santa Ynez River basin can be estimated as shown in Text Box 4-2.

**Text Box 4-2. Estimated atmospheric deposition of total nitrogen as N in the Santa Ynez River basin.**

The average annual atmospheric deposition of nitrogen as N in the Santa Ynez River basin is: 5.0 kilograms total nitrogen (N) per hectare per year.

#### 4.4 Groundwater

We conducted a cursory review of groundwater data for this scoping report. TMDLs do not directly address pollution of groundwater by controllable sources. However, shallow groundwater inflow to streams may be considered in the context of TMDL development. Groundwater and surface water are not closed systems that act independently from each other; it is well known that groundwater inflow to surface waters can be a source of nutrients or salts to any given surface waterbody. The physical interconnectedness of surface waters and groundwater is widely recognized by scientific agencies, researchers, and resource professionals, as highlighted below:

*“Traditionally, management of water resources has focused on surface water or ground water as separate entities....Nearly all surface-water features (streams, lakes reservoirs, wetlands, and estuaries) interact with groundwater. Pollution of surface water can cause degradation of ground-water quality and conversely pollution of ground water can degrade surface water. Thus, effective land and water management requires a clear understanding of the linkages between ground water and surface water as it applies to any given hydrologic setting.”*

From: U.S. Geological Survey, 1998. Circular 1139: “Groundwater and Surface Water – A Single Resource.”

*“While ground water and surface water are often treated as separate systems, they are in reality highly interdependent components of the hydrologic cycle. Subsurface interactions with surface waters occur in a variety of ways. Therefore, the potential pollutant contributions from ground water to surface waters should be investigated when developing TMDLs.”*

From: U.S. Environmental Protection Agency, Guidance for Water Quality-Based Decisions: The TMDL Process – Appendix B. EPA 440/4-91-001.

*“Although surface water and groundwater appear to be two distinct sources of water, they are not. Surface water and groundwater are basically one singular source of water connected physically in the hydrologic cycle...Effective management requires consideration of both water sources as one resource.”*

From: California Department of Water Resources: Relationship between Groundwater and Surface Water [http://www.water.ca.gov/groundwater/groundwater\\_basics/gw\\_sw\\_interaction.cfm](http://www.water.ca.gov/groundwater/groundwater_basics/gw_sw_interaction.cfm).

*“The popular misconception in U.S. western culture appears to be that groundwater and surface water are two separate sources of water. This bimodal legal approach to managing what is one resource – water – has not resulted in rational water management in California...whether the water is above the land surface or below the land surface, it is the same water. Labeling it “groundwater” or “surface water” is a human construct that represents where the water is at that moment in time. They are not different sources.”*

From: Carl Hauge, retired Chief Hydrologist for the California Department of Water Resources, in Groundwater Resources Association of California, web seminar entitled “No Surface Water = No Groundwater”, October 2015.

*“Surface water and ground water are increasingly viewed as a single resource within linked reservoirs. The movement of water from streams to aquifers and from aquifers to streams influences both the quantity and quality of available water within both reservoirs”*

From: C. Ruehl, A. Fisher, C. Hatch, M. Los Huertos, G. Stemler, and C. Shennan (2006), *Differential gauging and tracer tests resolve seepage fluxes in a strongly-losing stream*. Journal of Hydrology, volume 330, pp. 235-248.

*“Surface water bodies are hydraulically connected to ground water in most types of landscapes...Even if a surface water body is separated from the ground-water system by an unsaturated zone, seepage from the surface water may recharge the ground water. Because of the interchange of water between these two components of the hydrologic cycle, development or contamination of one commonly affects the other.”*

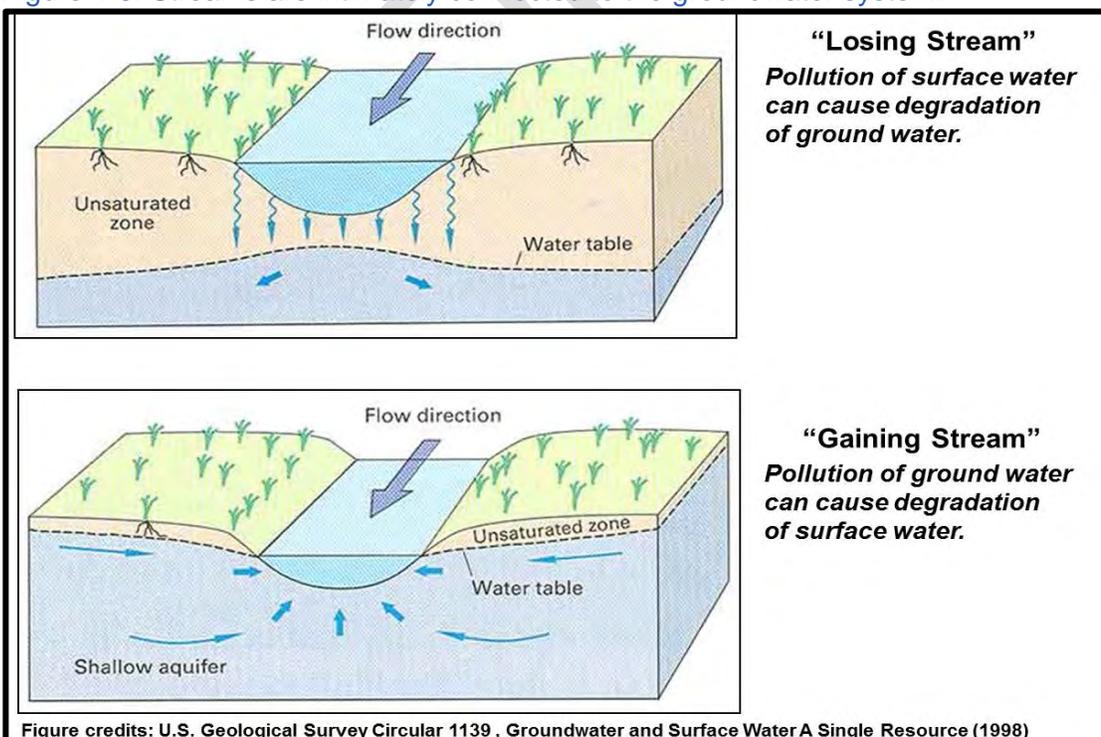
From: Thomas C. Winter, U.S. Geological Survey Water Resources Division (2000). *Interaction of Ground Water and Surface Water*. Proceedings of the Ground-Water/Surface-Water Interactions Workshop, 2000, pp. 15-20. EPA/542/R-00/007

*“It’s a myth that groundwater is separate from surface water and also a myth that it’s difficult to legally integrate the two....California’s groundwater and surface water are often closely interconnected and sometimes managed jointly.”*

From: Buzz Thompson, Professor of Natural Resources Law, Stanford University Law School, quoted in *Managing California’s Groundwater*, by Gary Pitzer in Western Water January/February 2014, and from Public Policy Institute of California, *California Water Myths*, www.ppic.org.

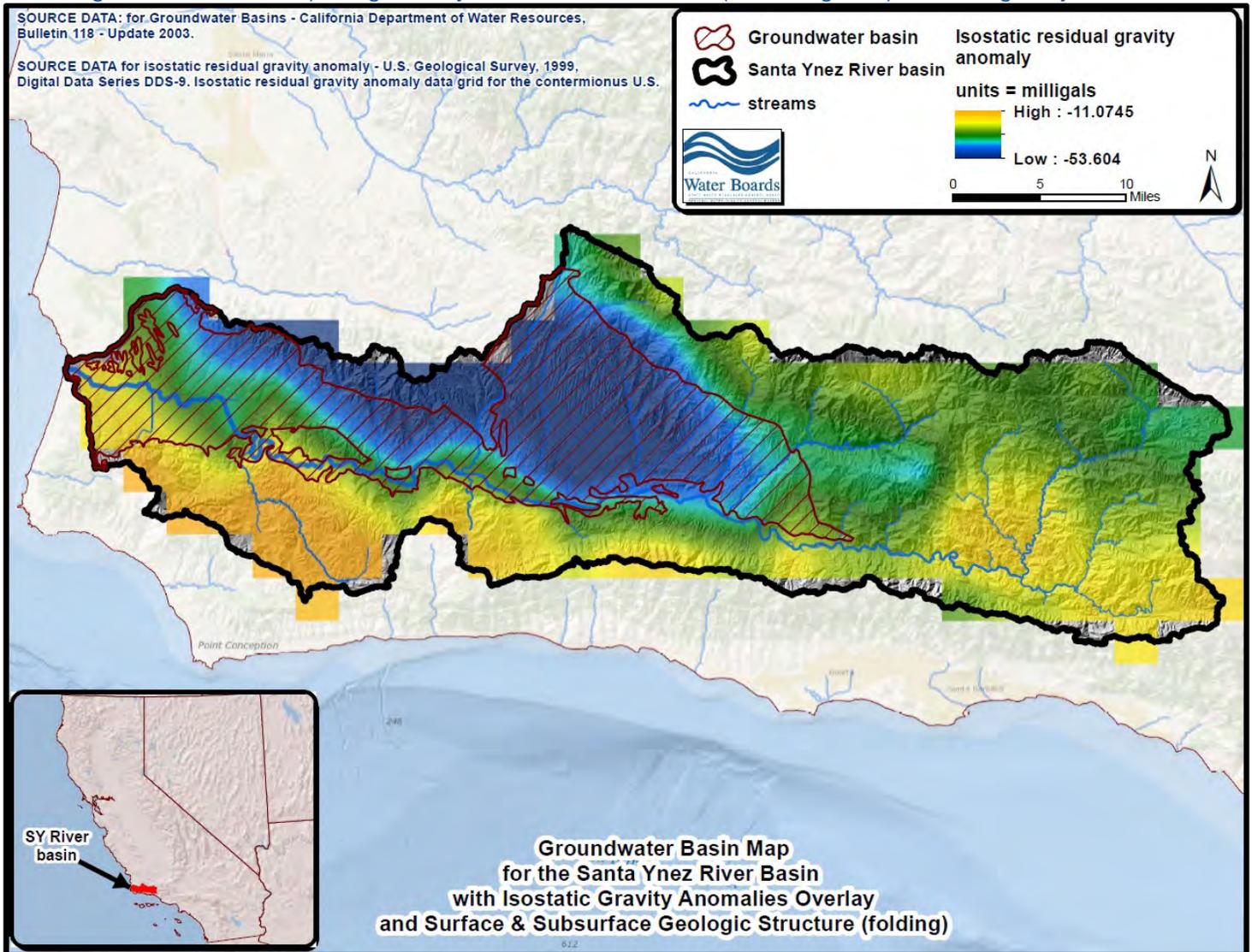
The range of information discussed above is illustrated conceptually in Figure 4-5.

Figure 4-5. Streams are intimately connected to the groundwater system.



As with any watershed study, it is worth being cognizant of the distribution of alluvial groundwater basins located within the Santa Ynez River basin. Alluvial groundwater basins in the Santa Ynez River basin, with an isostatic residual gravity anomalies overlay<sup>14</sup>, are presented in Figure 4-6. Note that groundwater basins are three-dimensional in architecture, and gravity data can thus give some insight into the shape and distribution of alluvial basins.

Figure 4-6. Map illustrating the Santa Ynez River basin, the Santa Ynez River Valley groundwater basin, and an isostatic residual gravity color gradient overlay. Lower density geologic materials (i.e., alluvial fill and groundwater basins) are generally associated with lower (more negative) isostatic gravity values.

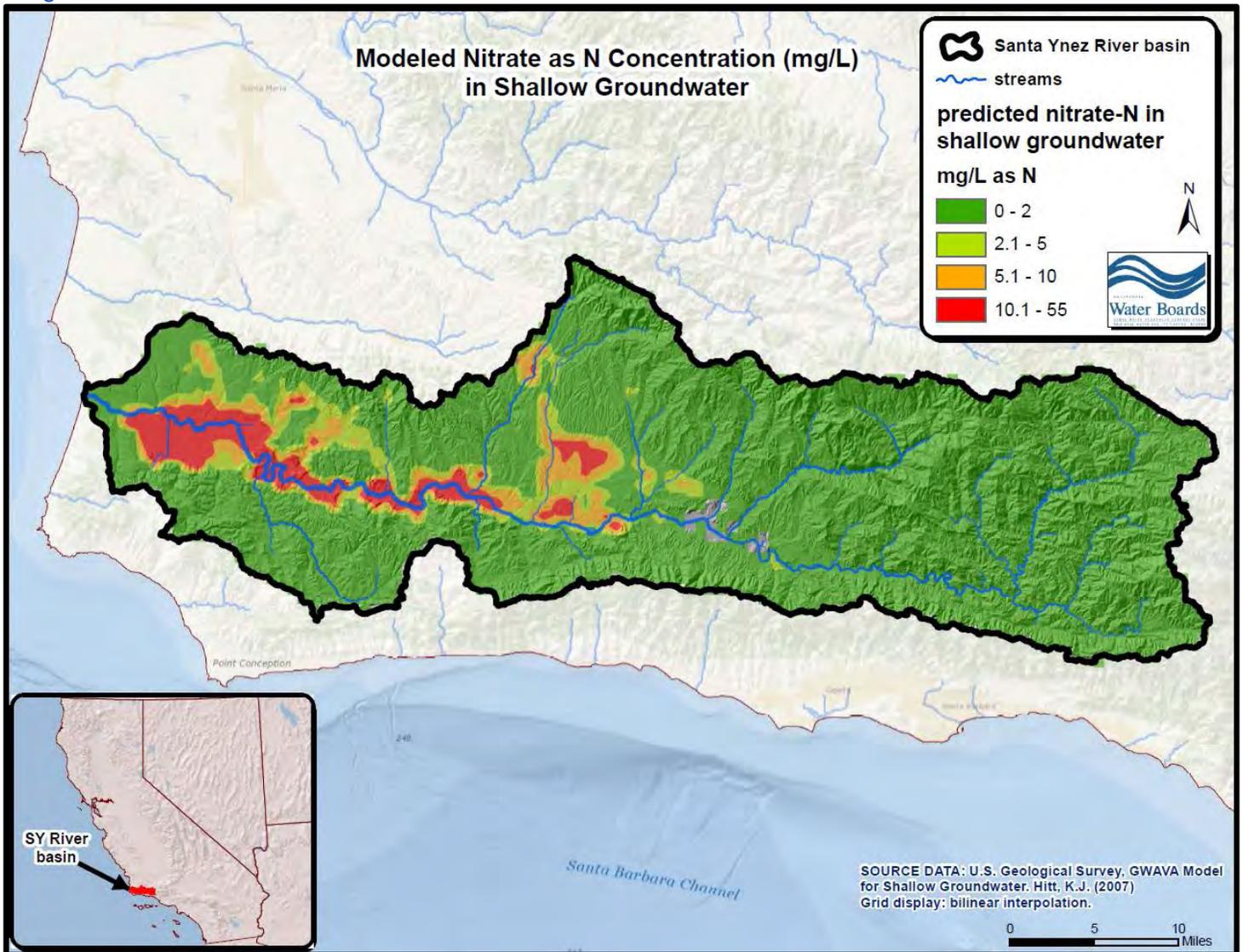


Estimated nitrate as N concentrations in shallow, recently-recharged groundwater are available from the U.S. Geological Survey. Figure 4-7 illustrates estimated nitrate as nitrogen concentrations in shallow, recently-recharged groundwater in the Santa Ynez River basin (data source: U.S. Geological Survey

<sup>14</sup> Isostatic residual gravity anomaly data are a geophysical attribute that represents density contrasts, and can be used as a proxy to assess the presence and the depth or thickness of alluvial fill. Caution and professional judgment must be used, because gravity anomalies can also be associated with subsurface geologic structure, faults, and rapid changes in lithology (rock types). Isostatic residual gravity data source: U.S. Geological Survey (1999), *Isostatic residual gravity anomaly data grid for the conterminous U.S.*

GWAVA model<sup>15</sup>). Shallow, recently recharged groundwater is defined by the U.S. Geological Survey in the GWAVA dataset as groundwaters generally less than 5 meters below ground surface. This dataset indicates that nitrate concentrations are highest in the shallow groundwaters of the alluvial fill of the lower (western) reaches of the river basin.

Figure 4-7. Map illustrating estimated nitrate as N concentrations in shallow, recently recharged groundwater of the Santa Ynez River basin.



#### 4.5 Soils

Soils have physical and hydrologic characteristics which may have a significant influence on the transport and fate of nutrients. Watershed researchers and TMDL projects often assess soil characteristics in conjunction with other physical watershed parameters to estimate the risk and magnitude of nutrient loading to waterbodies (Mitsova-Boneva and Wang, 2008; McMahon and Roessler, 2002; Kellog et al., 2006). The relationship between nutrient export (loads) and soil texture is illustrated in Figure 4-8 and Figure 4-9. Generally, fine-textured soils with lower capacity for infiltration of precipitation/water are more prone to runoff and are consequently typically associated with a higher risk of nutrient loads to surface waters.

<sup>15</sup> The GWAVA (Ground Water Vulnerability Assessment) dataset represents predicted nitrate concentration in shallow, recently recharged groundwater in the conterminous United States, and was generated by a national nonlinear regression model based on 14 input parameters.

Figure 4-8. Median annual Total N and Total P export for various soil textures.

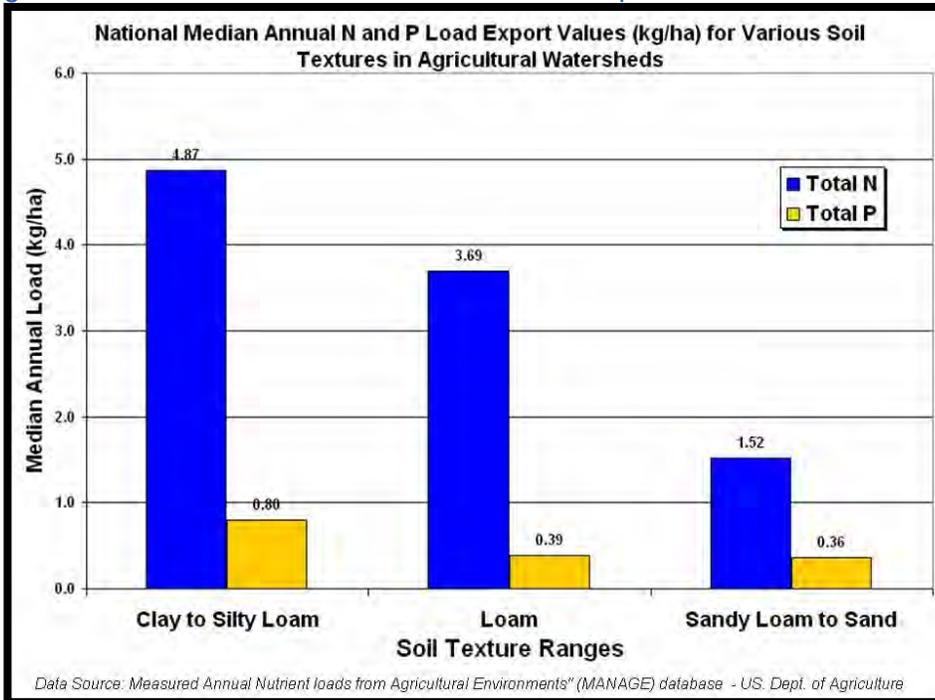
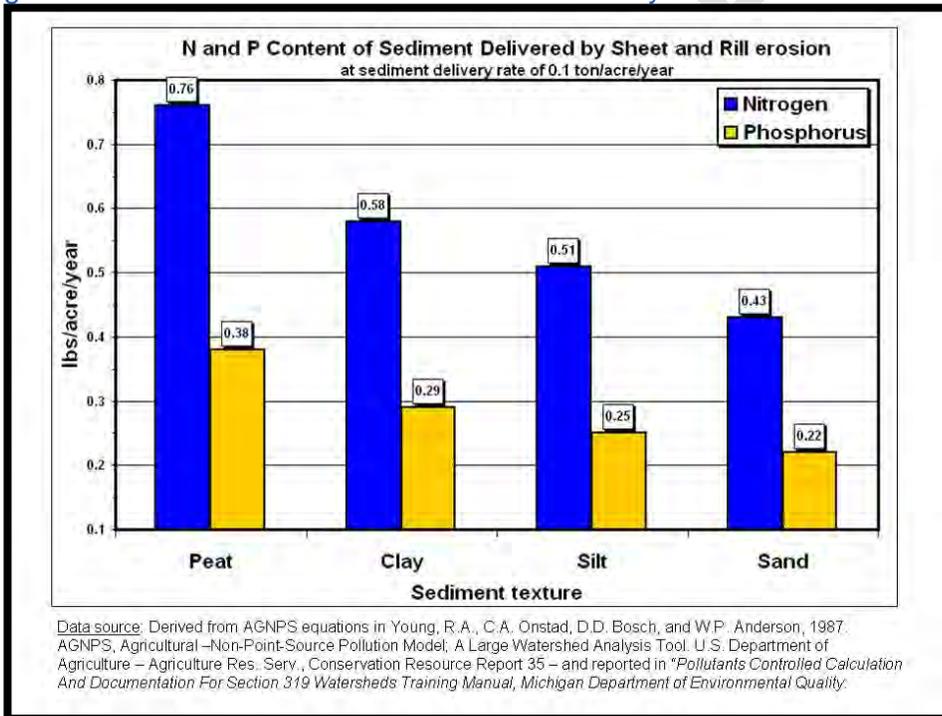
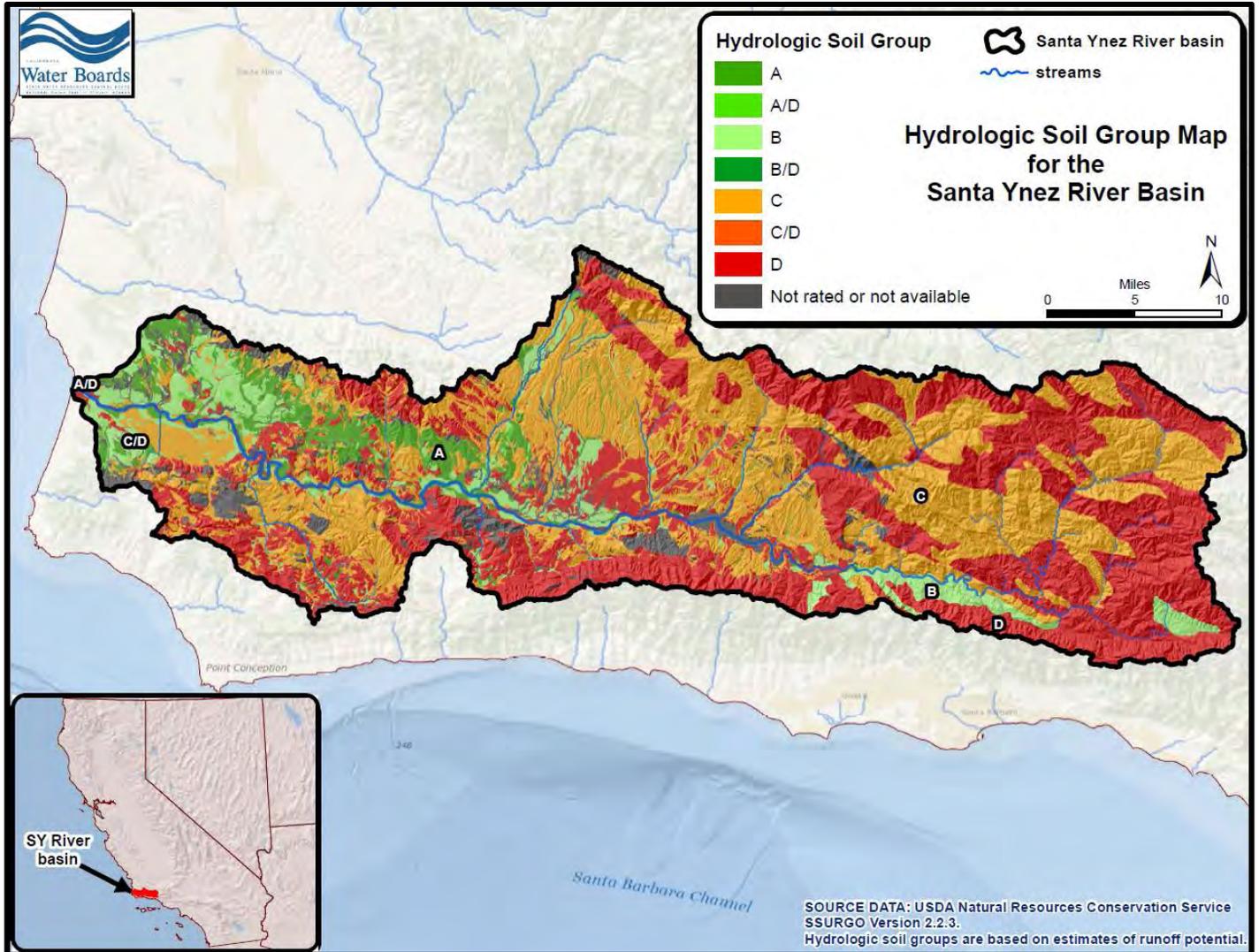


Figure 4-9. N and P content of sediment delivered by sheet and rill erosion.



Soils play a key role in drainage, runoff, and subsurface infiltration in any given watershed. The U.S. Department of Agriculture National Resources Conservation Service's compiled soil survey by counties is available online under the title of Soil Survey Geographic (SSURGO) Database. SSURGO has been updated with extensive soil attribute data, including Hydrologic Soil Groups. Hydrologic Soil Groups are a soil attribute associated with a mapped soil unit, which indicates the soil's infiltration rate and potential for runoff. Figure 4-10 illustrates the distribution of hydrologic soil groups in the Santa Ynez River basin along with a tabular description of the soil group's hydrologic properties.

Figure 4-10. Hydrologic soils groups (HSGs) in the Santa Ynez River basin.



**Hydrologic Soil Group Descriptions**

<b>A</b>	Well drained to excessively drained sands or gravelly sands.
<b>B</b>	Moderately well drained or well drained soils having moderately fine to moderately coarse texture.
<b>C</b>	Soils having a slow infiltration rate when thoroughly wet; moderately fine or fine texture.
<b>D</b>	Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays, soils which have a high water table, soils that have a claypan or clay layer near the surface, and soils that overlie a shallow, nearly impervious surface.
<b>A/D</b>	If a soil is assigned a dual hydrologic group, the first letter is for drained areas and the second is for undrained areas.

## 4.6 Geology

Geology can have a significant influence on natural, background concentrations of nutrients and other inorganic constituents in stream waters. The linkage between geologic conditions and stream water chemistry has long been recognized (for example, U.S. Geological Survey, 1910 and U.S. Geological Survey, 1985).

Stein and Kyonga-Yoon (2007) reported that catchment geology was the most influential environmental factor on water quality variability from undeveloped stream reaches in lightly-disturbed, natural areas located in Ventura, Los Angeles, and Orange counties, California. Stein and Kyonga-Yoon (2007) concluded that catchments underlain by sedimentary rock had higher stream flow concentrations of metals, nutrients, and total suspended solids, as compared to areas underlain by igneous rock.

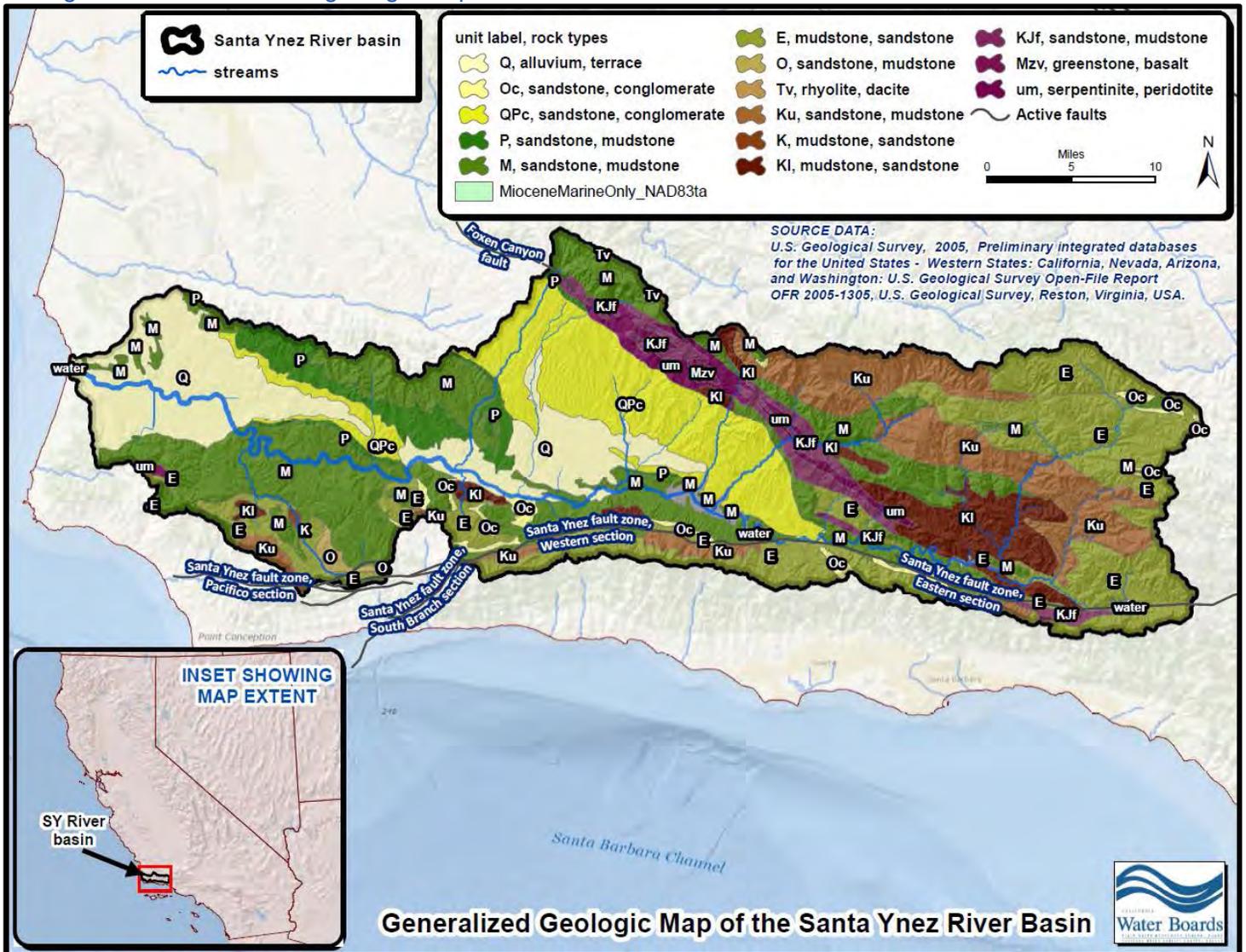
Additionally, the Utah Geological Survey hypothesized that organic-rich marine sedimentary rocks in the Cedar Valley of southern Utah may locally contribute to elevated nitrate observed in groundwater (Utah Geological Survey, 2001). Nitrogen found in the organic material of these rock strata are presumed by the Utah Geological Survey researchers to be capable of oxidizing to nitrate and may subsequently leach to groundwater.

Further, the Las Virgenes Municipal Water District (LVMWD, 2012) recently reported that high background levels of biostimulatory substances (nitrogen and phosphate) in the Malibu Creek Watershed appear to be associated with exposures of the Monterey/Modelo Formation.

Also worth noting, Domagalski (2013) states that knowledge about natural and geologic sources of phosphorus in watersheds are important for developing nutrient management strategies.

Consequently, in evaluating the effect of anthropogenic activities on nutrient loading to waterbodies in a TMDL project, it may also be relevant to consider the potential impact on nutrient water quality which might result from local geology. We conducted a brief and cursory review of geologic data for this scoping report. Figure 4-11 presents an illustration of the geology of the Santa Ynez River basin and vicinity.

Figure 4-11. Generalized geologic map of the Santa Ynez River basin.

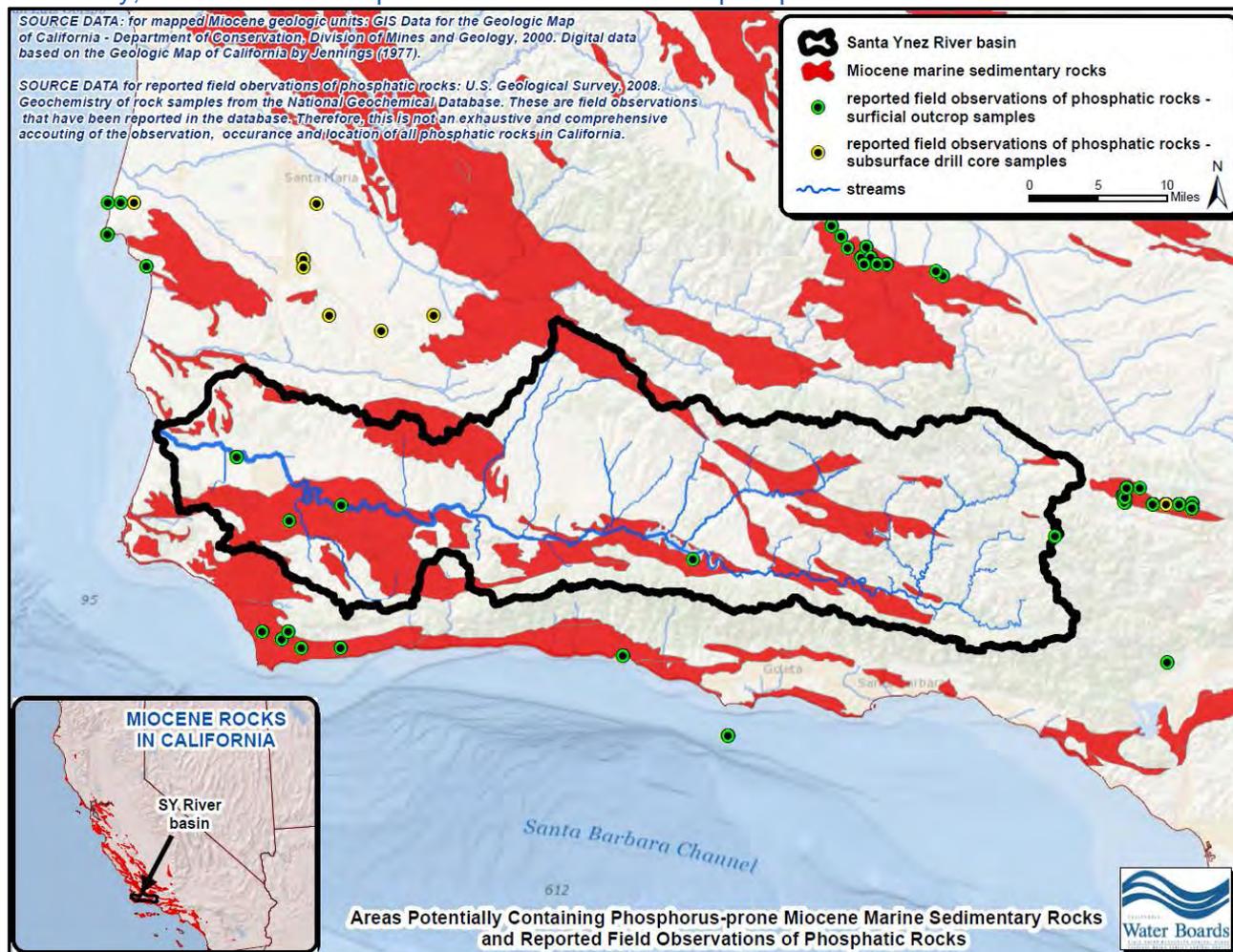


Rocks and natural phosphatic deposits are the main natural reservoirs of phosphorus inputs to aquatic systems (U.S. Environmental Protection Agency, 1999). Phosphorus-prone geologic materials in the Santa Ynez River basin may locally be associated with Upper Tertiary (Miocene) mudstones. Figure 4-12 illustrates the location of mapped Miocene-aged sedimentary rock bodies, and the locations of reported field observations of phosphatic rocks. It is important to recognize that *reported field observations* undoubtedly constitute only a small subset of all existing phosphatic rock locations.

Also worth noting, some of the phosphatic rock field observation locations illustrated in Figure 4-12 represent subsurface drill core samples. Thus, while some of these drill core field observations may not overlay the polygons representing outcrops of Miocene marine sedimentary rocks in map view, the core samples often represent subsurface sampling of Miocene rock strata at depth.

If warranted, we will review additional geologic information as TMDL development progresses.

Figure 4-12. Map of outcropping Miocene-age marine sedimentary rock in the Santa Ynez River basin and vicinity, and locations of reported field observations of phosphatic rocks.



## 5. Water Quality Standards

TMDLs are requirements pursuant to the federal Clean Water Act. The broad objective of the federal Clean Water Act is to “restore and maintain the chemical, physical and biological integrity of the Nation’s waters<sup>16</sup>.” Water quality standards are provisions of state and federal law intended to implement the federal Clean Water Act. In accordance with state and federal law, California’s water quality standards consist of:

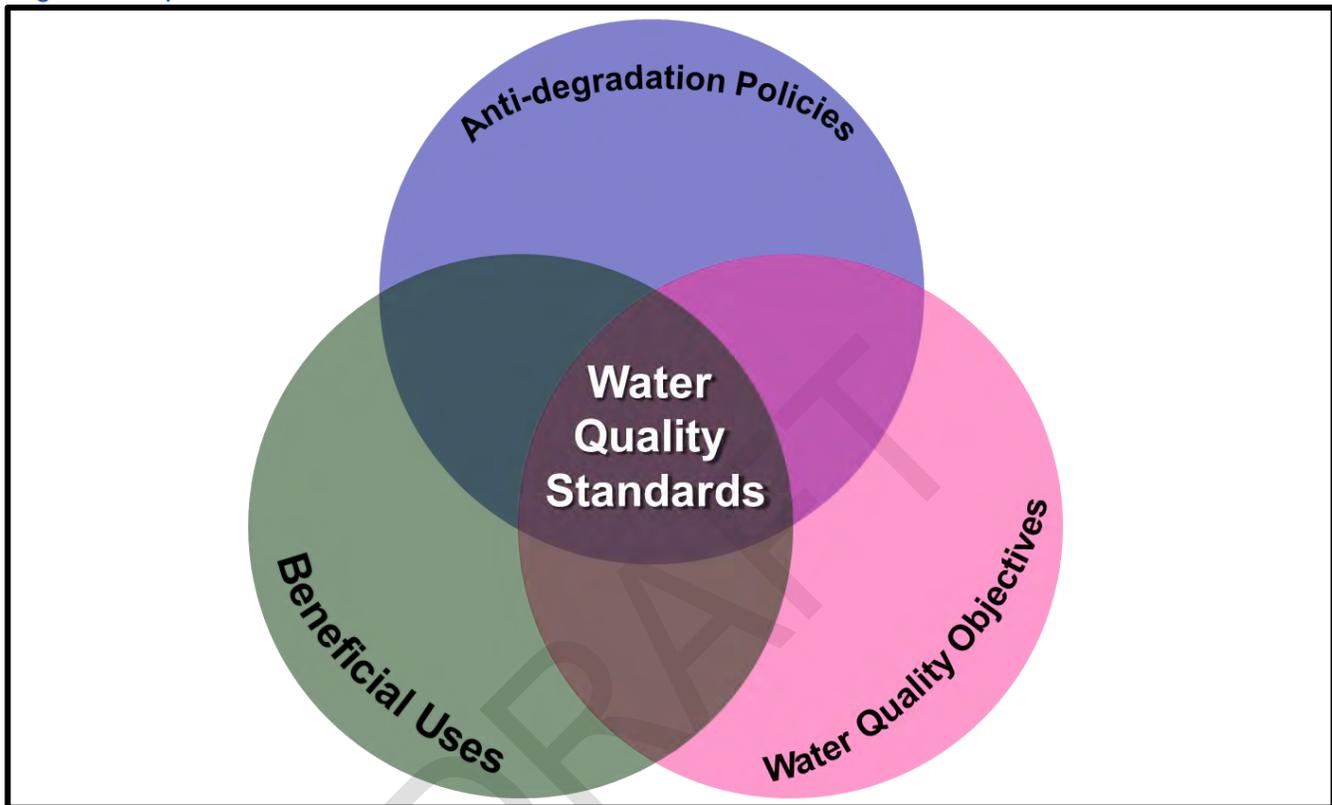
- Beneficial uses, which refer to legally-designated uses of waters of the state that may be protected against water quality degradation (e.g., drinking water supply, recreation, aquatic habitat, agricultural supply, etc.).
- Water quality objectives, which refer to limits or levels (numeric or narrative) of water quality constituents or characteristics that provide for the reasonable protection of beneficial uses of waters of the state.
- Anti-degradation policies, which are implemented to maintain and protect existing water quality, and high quality waters. Anti-degradation policies are consistent with the intent and goals of the federal [Clean Water Act](#), especially the clause that states: “The objective of this Act is to restore and *maintain* the chemical, physical, and biological integrity of the Nation’s water”<sup>17</sup> (emphasis added).

<sup>16</sup> Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.) Title 1, Section 101(a)

<sup>17</sup> *Ibid*

Therefore, beneficial uses, water quality objectives, and anti-degradation policies [collectively constitute water quality standards](#)<sup>18</sup> (see Figure 5-1). Beneficial uses, relevant water quality objectives, and anti-degradation requirements that potentially pertain to this TMDL project are presented below in Section 5.1 Section 5.2 , and Section 5.3, respectively.

Figure 5-1. TMDLs are action plans to assist the states in implementing their water quality standards<sup>19</sup>, and California's water quality standards consist of beneficial uses, water quality objectives, and anti-degradation policies.



### 5.1 Beneficial Uses

California's water quality standards designate [beneficial uses](#) for each waterbody (e.g., drinking water supply, aquatic life support, recreation, etc.) and the scientific criteria to support that use. The Central Coast Regional Water Quality Control Board (Central Coast Water Board) is required under both state and federal law to protect and regulate beneficial uses of waters of the state.

The [2016 Water Quality Control Plan for the Central Coastal Basin](#) (Basin Plan) identifies beneficial uses for waterbodies of California's central coast region. Beneficial uses for surface waters in the Santa Ynez River basin are presented in Table 5-1. The Basin Plan also states that surface water bodies within the region that do not have beneficial uses specifically designated for them are assigned the beneficial uses of "municipal and domestic water supply" and "protection of both recreation and aquatic life." The Central Coast Water Board has interpreted this general statement of beneficial uses to encompass the beneficial uses of REC-1, REC-2, and MUN, along with all beneficial uses associated with aquatic life. The finding comports with the Clean Water Act's national interim goal of water quality [CWA Section 101(a)(2)] which provides for the protection and propagation of fish, shellfish, and wildlife.

<sup>18</sup> See 40 CFR Ch. 1 §131

<sup>19</sup> Theodore Olson, Solicitor General of the United States, et al., 2002, Supreme Court of the United States Brief No. 02-1186, Guido A. Pronsolino et al, v. Wayne Nastri, Regional Administrator, U.S. Environmental Protection Agency, Region 9, et al.

Table 5-1. Beneficial uses of surface waters in the Santa Ynez River basin

Waterbody Names	MUN	AGR	PRO	IND	GWR	REC1	REC2	WILD	COLD	WARM	MIGR	SPWN	BIOL	RARE	EST	FRESH	NAV	POW	COMM	AQUA	SAL	SHELL
<b>SANTA YNEZ HYDROLOGIC UNIT</b>																						
Santa Ynez River Estuary						X	X	X		X	X	X	X	X	X				X			X
Santa Ynez River, downstream	X	X	X	X	X	X	X	X	X	X	X	X		X		X			X			
Graves Wetland						X	X	X		X		X							X			
Lompoc Canyon	X	X		X	X	X	X	X		X									X			
La Salle Canyon Creek	X	X			X	X	X	X		X									X			
Sloans Canyon Creek	X				X	X	X	X		X									X			
San Miguelito Creek	X	X			X	X	X	X	X	X		X							X			
Salsipuedes Creek	X	X		X	X	X	X	X	X	X	X	X							X			
El Jaro Creek	X	X		X	X	X	X	X	X	X	X	X							X			
El Callejon Creek	X				X	X	X	X		X									X			
Llanito Creek	X				X	X	X	X		X									X			
Yrdisis Creek	X	X			X	X	X	X		X		X							X			
Canada de la Vina	X	X			X	X	X	X		X									X			
Nojoqui Creek	X	X			X	X	X	X	X	X		X							X			
Alamo Pintado Creek	X	X		X	X	X	X	X		X									X			
Zaca Creek	X	X			X	X	X	X	X	X					X				X			
Zaca Lake	X					X	X	X	X	X		X		X					X			
Santa Rosa Creek	X	X			X	X	X	X	X	X	X	X							X			
Santa Rita Creek	X	X		X	X	X	X	X		X									X			
Davis Creek	X				X	X	X	X		X									X			
Santa Lucia Canyon Creek	X	X			X	X	X	X		X									X			
Oak Canyon Creek	X	X		X	X	X	X	X		X			X						X			
Hilton Creek	X	X			X	X	X	X	X		X	X							X			
Cachuma Reservoir	X	X	X		X	X	X	X	X	X		X		X		X	X		X			
Santa Ynez River, upstream	X	X	X	X	X	X	X	X	X	X	X	X		X		X			X			
Gibraltar Reservoir	X	X	X	X	X	X	X	X	X	X		X		X		X	X		X			
Jameson Reservoir	X	X	X		X	X	X	X	X	X		X		X		X	X		X			
Agua Caliente Canyon	X	X		X	X	X	X	X	X	X		X		X					X			
Mono Creek	X	X		X	X	X	X	X	X	X	X	X		X					X			
Indian Creek	X	X		X	X	X	X	X	X	X	X	X	X	X					X			
Santa Cruz Creek	X	X		X	X	X	X	X	X	X	X	X		X					X			
Cachuma Creek	X				X	X	X	X	X	X	X	X		X					X			

MUN: Municipal and domestic water supply  
 AGR: Agricultural supply  
 PRO: Industrial process supply  
 IND: Industrial service supply  
 GWR: Groundwater recharge  
 REC1: Water contact recreation  
 REC2: Non-Contact water recreation  
 WILD: Wildlife habitat

COLD: Cold freshwater habitat  
 WARM: Warm fresh water habitat  
 MIGR: Migration of aquatic organisms  
 SPWN: Spawning, reproduction, and/or early development of fish  
 BIOL: Preservation of biological habitats of special significance  
 RARE: Rare, threatened or endangered species

EST: Estuarine habitat  
 FRESH: Freshwater replenishment  
 NAV: Navigation  
 COMM: Commercial and sport fishing  
 SHELL: Shellfish harvesting

A narrative description of the designated beneficial uses in the Santa Ynez River basin which are most likely to be at risk of impairment by water column nutrient pollution are presented below.

### 5.1.1 Municipal & Domestic Water Supply (MUN)

This beneficial use is defined in section II.A. of the Basin Plan as follows:

*Uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply. According to State Board Resolution No. 88- 63, "Sources of Drinking Water Policy" all surface waters are considered suitable, or potentially suitable, for municipal or domestic water supply except where*

- a. *TDS exceeds 3000 mg/l (5000 uS/cm electrical conductivity);*
- b. *Contamination exists, that cannot reasonably be treated for domestic use;*
- c. *The source is not sufficient to supply an average sustained yield of 200 gallons per day;*
- d. *The water is in collection or treatment systems of municipal or industrial wastewaters, process waters, mining wastewaters, or storm water runoff; and*
- e. *The water is in systems for conveying or holding agricultural drainage waters.*

The nitrate numeric water quality objective protective of the MUN beneficial use is legally established as 10 mg/L<sup>20</sup> nitrate as nitrogen (see Basin Plan, Table 3-2). This level is established to protect public health. The [adverse health effects](#) of nitrate in drinking water has been documents and published by state and federal health agencies.

### 5.1.2 Ground Water Recharge (GWR)

This beneficial use is defined in section II.E. of the Basin Plan as follows:

*Uses of water for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers. Ground water recharge includes recharge of surface water underflow (emphasis added).*

The groundwater recharge (GWR) beneficial use is recognition by the state of the fundamental nature of the hydrologic cycle, and that surface waters and groundwater are not closed systems that act independently from each other. Underlying groundwaters are, in effect, receiving waters for stream waters that infiltrate and recharge the subsurface water resource. Most surface waters and ground waters of the central coast region are both designated with the MUN (drinking water) and AGR (agricultural supply) beneficial uses. The MUN nitrate water quality objective (10 mg/L) therefore applies to *both* the surface waters, and to the underlying groundwater. This numeric water quality objective and the MUN and AGR designations of underlying groundwater are relevant to the extent that portions of Santa Ynez River basin streams recharge the underlying groundwater resource.

### 5.1.3 Agricultural Supply (AGR)

This beneficial use is defined in section II.B. of the Basin Plan as follows:

*Uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.*

In accordance with the Basin Plan, interpretation of the amount of nitrate which adversely effects the agricultural supply beneficial uses of waters of the state shall be derived from the University of California Agricultural Extension Service guidelines, which are found in Basin Plan Table 3-3. Accordingly, severe problems for sensitive crops could occur for irrigation water exceeding 30 mg/L<sup>21</sup>. It should be noted that

<sup>20</sup> This value is equivalent to, and may be expressed as, 45 mg/L nitrate as NO<sub>3</sub>.

<sup>21</sup> The University of California Agricultural Extension Service guideline values are flexible, and may not necessarily be appropriate due to local conditions or special conditions of crop, soil, and method of irrigation. 30 mg/L nitrate as nitrogen is the recommended uppermost threshold concentration for nitrate in irrigation supply water as identified by the University of California Agricultural Extension Service which potentially cause severe problems for sensitive crops (see Table 3-3 in the Basin Plan).

(footnote continued on next page)

the University of California Agricultural Extension Service guideline values are flexible, and may not necessarily be appropriate due to local conditions or special conditions of crop, soil, and method of irrigation.

Further, the Basin Plan provides water quality objectives for nitrate which are protective of the AGR beneficial uses for livestock watering. While nitrate ( $\text{NO}_3$ ) itself is relatively non-toxic to livestock, ingested nitrate is broken down to nitrite ( $\text{NO}_2$ ); subsequently nitrite enters the bloodstream where it converts blood hemoglobin to methemoglobin. This greatly reduces the oxygen-carrying capacity of the blood, and the animal suffers from oxygen starvation of the tissues<sup>22</sup>. Death can occur when blood hemoglobin has fallen to one-third normal levels. Resource professionals<sup>23</sup> report that nitrate can reach dangerous levels for livestock in streams, ponds, or shallow wells that collect drainage from highly fertilized fields. Accordingly, the Basin Plan identifies the safe threshold of nitrate as N for purposes of livestock watering at 100 mg/L<sup>24</sup>.

#### **5.1.4 Aquatic Habitat (WARM, COLD, MIGR, SPWN, WILD, BIOL, RARE, EST)**

These beneficial uses are defined in Chapter 2 of the Basin Plan as follows:

*WARM: Uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.*

*COLD: Uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, including invertebrates.*

*MIGR: Uses of water that support habitats necessary for migration or other temporary activities by aquatic organisms, such as anadromous fish.*

*SPWN: Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish.*

*WILD: Uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.*

*BIOL: Uses of water that support designated areas or habitats, such as established refuges, parks, sanctuaries, ecological reserves, or Areas of Special Biological Significance (ASBS), where the preservation or enhancement of natural resources requires special protection.*

*RARE: Uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.*

*EST: Uses of water that support estuarine ecosystems including, but not limited to, preservation or enhancement of estuarine habitats, vegetation, fish, shellfish, or wildlife (e.g., estuarine mammals, waterfowl, shorebirds). An estuary is generally described as a semi-enclosed body of water having a free connection with the open sea, at least part of the year and within which the seawater is diluted at least seasonally with fresh water drained from the land. Included are water bodies which would naturally fit the definition if not controlled by tidegates or other such devices.*

The Basin Plan water quality objectives protective of aquatic habitat beneficial uses and which are most relevant to nutrient pollution<sup>25</sup> are the biostimulatory substances objective and dissolved oxygen objectives for aquatic habitat. The biostimulatory substances objective is a narrative water quality objective that states

*(footnote continued from previous page)*

Selecting the least stringent threshold (30 mg/L) therefore conservatively identifies exceedances which could detrimentally impact the AGR beneficial uses for irrigation water.

<sup>22</sup> New Mexico State University, Cooperative Extension Service. Nitrate Poisoning of Livestock. Guide B-807.

<sup>23</sup> University of Arkansas, Division of Agriculture - Cooperative Extension. "Nitrate Poisoning in Cattle". Publication FSA3024.

<sup>24</sup> 100 mg/L nitrate as nitrogen is the Basin Plan's water quality objective protective of livestock watering, and is based on National Academy of Sciences-National Academy of Engineering guidelines (see Table 3-3 in the Basin Plan).

<sup>25</sup> Nutrients, such as nitrate, do not by themselves necessarily directly impair aquatic habitat beneficial uses. Rather, they cause indirect impacts by promoting algal growth and low dissolved oxygen that impair aquatic habitat uses.

*Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.*

Narrative water quality objectives do not explicitly identify numeric water quality criteria to implement the narrative objective. Worth noting here is that U.S. Environmental Protection Agency reported that total nitrogen as N concentrations in streams which are protective against biostimulatory effects should generally be expected to be in an acceptable range of 2 mg/L to 6 mg/L (see Text Box 5-1 below).

[Text Box 5-1. U.S. Environmental Protection Agency information on generally acceptable ranges of total nitrogen in streams to protect aquatic habitat.](#)

*“(A)n excess amount of nitrogen in a waterway may lead to low levels of oxygen and negatively affect various plant life and organisms...An acceptable range of total nitrogen is **2 mg/L to 6 mg/L\***, though it is recommended to check tribal, state, or federal standards...”*

From U.S. Environmental Protection Agency, 2013a, “Total Nitrogen” fact sheet, revised June 4, 2013

\*emphasis added by Central Coast Water Board staff

The Basin Plan also requires that in waterbodies designated for WARM habitat, dissolved oxygen concentrations shall not be depressed below 5 mg/L and that in waterbodies designated for COLD and SPWN, dissolved oxygen shall not be depressed below 7 mg/L.

Further, since un-ionized ammonia is highly toxic to aquatic species, the Basin Plan requires that the discharge of waste shall not cause concentrations of unionized ammonia (NH<sub>3</sub>) to exceed 0.025 mg/L (as N) in receiving waters.

### **5.1.5 Water Contact Recreation (REC-1)**

This beneficial use is defined in section II.B. of the Basin Plan as follows:

*Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, or use of natural hot springs.*

The Basin Plan water quality objective protective of water contact recreation beneficial uses which is most relevant to nutrient pollution is the general toxicity objective for all inland surface waters, enclosed bays, and estuaries (Basin Plan Chapter 3, section II.A.2.a). The general toxicity objective is a narrative water quality objective that states:

*All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in, human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods as specified by the Regional Board.*

Depending on local environmental conditions in any given watershed, [harmful algal blooms](#) can be associated with elevated nutrient concentrations in surface waters. Because illnesses are considered detrimental physiological responses in humans, the narrative toxicity objective applies to algal toxins, such as [cyanobacteria associated with blue-green algae](#).

Possible health effects of exposure to blue-green algae blooms and their toxins can include rashes, skin and eye irritation, allergic reactions, gastrointestinal upset, and other effects including poisoning. Note that microcystins are toxins produced by cyanobacteria (blue-green algae) and are associated with algal blooms, elevated nutrients, and biostimulation in surface waterbodies.

The State of California Office of Environmental Health Hazard Assessment (OEHHA) has published peer-reviewed public health action-level guidelines for algal cyanotoxins (microcystins) in recreational

water uses; this public health action-level for microcystins is 0.8 µg/L<sup>26</sup> (OEHHA, 2012). This public health action level can therefore be used to assess attainment or non-attainment of the Basin Plan's general toxicity objective and to ensure that REC-1 designated beneficial uses are being protected and supported.

## 5.2 Water Quality Objectives & Numeric Criteria

The Basin Plan contains specific water quality objectives that apply to nutrients and nutrient-related parameters. In addition, the Central Coast Water Board uses established, scientifically-defensible numeric criteria to implement narrative water quality objectives, and for use in Clean Water Act Section 303(d) Listing assessments. These water quality objectives and numeric criteria are established to protect beneficial uses and are compiled in Table 5-2.

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<sup>26</sup> Includes microcystins LR, RR, YR, and LA.

Table 5-2. Compilation of Basin Plan water quality objectives and numeric criteria for nutrients and nutrient-related parameters.

Constituent Parameter	Source of Water Quality Objective/Criteria	Numeric Target	Primary Use Protected
<b>Un-ionized Ammonia as N</b>	Basin Plan numeric objective	0.025 mg/L	General Objective for all Inland Surface Waters, Enclosed Bays, and Estuaries ( <i>toxicity objective</i> )
<b>Nitrate as N</b>	Basin Plan numeric objective	10 mg/L	MUN, GWR (Municipal/Domestic Supply; Groundwater Recharge)
<b>Nitrate as N</b>	Basin Plan numeric criteria (Table 3-3 in Basin Plan)	5 – 30 mg/L <i>California Agricultural Extension Service guidelines</i>	AGR (Agricultural Supply – irrigation water) "Severe" problems for sensitive crops at greater than 30 mg/L "Increasing problems" for sensitive crops at 5 to 30 mg/L
<b>Nitrate (NO<sub>3</sub>-N) plus Nitrite (NO<sub>2</sub>-N)</b>	Basin Plan numeric objective (Table 3-4 in Basin Plan)	100 mg/L <i>National Academy of Sciences-National Academy of Engineers guidelines</i>	AGR (Agricultural Supply - livestock watering)
<b>Nitrite (NO<sub>2</sub>-N)</b>	Basin Plan numeric objective (Table 3-4 in Basin Plan)	10 mg/L <i>National Academy of Sciences-National Academy of Engineers guidelines</i>	AGR (Agricultural Supply - livestock watering)
<b>Dissolved Oxygen</b>	General Inland Surface Waters numeric objectives	For waters not mentioned by a specific beneficial use, dissolved oxygen shall not be depressed below 5.0 mg/L Median values should not fall below 85% saturation.	General Objective for all Inland Surface Waters, Enclosed Bays, and Estuaries
	Basin Plan numeric objective WARM, COLD, SPWN	Dissolved Oxygen shall not be depressed below 5.0 mg/L (WARM) Dissolved Oxygen shall not be depressed below 7.0 mg/L (COLD, SPWN)	Cold Freshwater Habitat, Warm Freshwater Habitat, Fish Spawning
	Basin Plan numeric objective AGR	Dissolved Oxygen shall not be depressed below 2.0 mg/L	AGR (Agricultural Supply)
<b>pH</b>	General Inland Surface Waters numeric objective	pH value shall not be depressed below 7.0 or raised above 8.5	General Objective for all Inland Surface Waters, Enclosed Bays, and Estuaries
	Basin Plan numeric objective MUN, AGR, REC-1, REC-2	The pH value shall neither be depressed below 6.5 nor raised above 8.3	Municipal/Domestic Supply, Agricultural Supply, Water Recreation
	Basin Plan numeric objective WARM, COLD	pH value shall not be depressed below 7.0 or raised above 8.5	Cold Freshwater Habitat, Warm freshwater habitat
<b>Biostimulatory Substances</b>	Basin Plan narrative objective <sup>A</sup>	pending	General Objective for all Inland Surface Waters, Enclosed Bays, and Estuaries ( <i>biostimulatory substances objective</i> ) -- (e.g., WARM, COLD, REC, WILD, EST)
<b>Chlorophyll a</b>	Basin Plan narrative objective <sup>A</sup>	40 µg/L <i>North Carolina Administrative Code, Title 151, Subchapter 2B, Rule 0211</i>	Numeric listing criteria to implement the Basin Plan biostimulatory substances objective for purposes of Clean Water Act section 303(d) listing assessments.
<b>Microcystins</b> (includes <i>Microcystins LA, LR, RR, and YR</i> )	Basin Plan narrative objective <sup>B</sup>	0.8 µg/L <i>California Office of Environmental Health Hazard Assessment Suggested Public Health Action Level</i>	REC-1 (water contact recreation)

<sup>A</sup> The Basin Plan biostimulatory substances narrative objective states: "Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses." (*Biostimulatory Substances Objective, Basin Plan, Chapter 3*)

<sup>B</sup> The Basin Plan toxicity narrative objective states: "All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in, human, plant, animal, or aquatic life." (*Toxicity Objective, Basin Plan, Chapter 3*)

### 5.3 Anti-degradation Policy

According to the U.S. Environmental Agency, an anti-degradation policy is one of the minimum elements required to be included in a state's water quality standards<sup>27</sup>. Anti-degradation policies are consistent with the intent and goals of the federal [Clean Water Act](#), especially the clause that states: "The objective of this Act is to restore and *maintain* the chemical, physical, and biological integrity of the Nation's water"<sup>28, 29</sup> (emphasis added).

Accordingly, section II.A of the Basin Plan, states that wherever the existing quality of water is better than the quality of water established in the Basin Plan as objectives, **such existing quality shall be maintained** unless otherwise provided by provisions of the state anti-degradation policy. Practically speaking, this means that where water quality is *better* than necessary to support designated beneficial uses, such existing high water quality shall be maintained, and further lowering of water quality is not allowed except under conditions provided for in the anti-degradation policy.

The U.S. Environmental Protection Agency has also issued detailed guidelines for implementation of federal anti-degradation regulations for surface waters (40 CFR 131.12). The State Water Resources Control Board (State Water Board) has interpreted Resolution No. 68-16 (i.e., the state anti-degradation policy) to incorporate the federal anti-degradation policy to ensure consistency. It is important to note that federal policy only applies to surface waters, while state policy applies to both surface and ground waters.

For purposes of the anti-degradation policy, "high quality waters" are defined on a pollutant-by-pollutant basis. From the water quality management perspective, it is simply not enough to improve impaired waters – protection of existing high quality waters and prevention of any further water quality degradation should be identified as a high priority goal<sup>30</sup>. Simply put, TMDL implementation efforts are justified in considering improved protection of high quality waters and addressing anti-degradation concerns, as well as focusing on improving impaired waterbodies.

Indeed, the U.S. Environmental Protection Agency recognizes the validity of using TMDLs as a tool for implementing anti-degradation goals:

*Identifying opportunities to protect waters that are not yet impaired: TMDLs are typically written for restoring impaired waters; however, states can prepare TMDLs geared towards maintaining a "better than water quality standard" condition for a given waterbody-pollutant combination, and they can be a useful tool for high quality waters.*

From: U.S. Environmental Protection Agency, 2014a. Opportunities to Protect Drinking Water Sources and Advance Watershed Goals Through the Clean Water Act: A Toolkit for State, Interstate, Tribal and Federal Water Program Managers. November 2014.

Similarly, the U.S. Environmental Protection Agency makes clear that TMDLs can serve as planning tools not only for *restoring* water quality, but also for *protecting* and *maintaining* water quality consistent with the goals of anti-degradation policies:

*"A TMDL serves as a planning tool and potential starting point for restoration or **protection** activities with the ultimate goal of attaining or **maintaining** water quality standards." (emphasis added)*

U.S. Environmental Protection Agency, Implementing Clean Water Action Section 303(d): Impaired Waters and Total Maximum Daily Loads (TMDLs) – webpage accessed April 2016 <https://www.epa.gov/tmdl>

<sup>27</sup> U.S. Environmental Protection Agency, "Questions & Answers on: Antidegradation" EPA/811/1985.5, Office of Water Regulations and Standards, August 1985.

<sup>28</sup> *Ibid*

<sup>29</sup> Federal Water Pollution Control Act (Clean Water Act), Sec. 101(a)

<sup>30</sup> The Central Coast Water Board considers *preventing* impairment of waterbodies to be as important a priority as *correcting* impairments of waterbodies (see the [staff report](#) for agenda item 3, July 11, 2012 Central Coast Water Board meeting).

## 6. Water Quality Data Sources

The following is a preliminary list of anticipated water quality data sources that could be used in watershed assessment and TMDL development. As appropriate, Central Coast Water Board staff will work with stakeholders to identify additional sources of data.

1. Central Coast Ambient Monitoring Program (CCAMP). The CCAMP is the Central Coast Water Board's regionally scaled water quality and assessment program<sup>31</sup>.
2. California Environmental Data Exchange Network (CEDEN). CEDEN is the State Water Board's data system for surface water quality in California.
3. Cooperative Monitoring Program (CMP). CMP is the surface water quality monitoring program conducted by Central Coast Water Quality Preservation, Inc. for growers enrolled in the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Agricultural Order)<sup>32</sup>.
4. Cachuma Operation and Maintenance Board water quality data.
5. U.S. Geological Survey's National Water Information System.
6. U.S. Environmental Protection Agency's STORET data retrieval system.
7. GeoTracker groundwater data. GeoTracker is the State Water Board's data management system for sites that impact groundwater.
8. California Integrated Water Quality System Project (CIWQS). Effluent water quality is available from CIWQS. CIWQS is a database system used by the Regional Water Quality Control Boards to track information about places of environmental interest and it allows online submittal of data by Permittees within certain programs.
9. Storm Water Multiple Application and Report Tracking System (SMARTS). Water quality data associated with NPDES<sup>33</sup> permitted stormwater discharges are available from SMARTS, which is an online database for documents and data from stormwater discharges.

Central Coast Water Board staff anticipate that key stakeholders and local resource professionals will be knowledgeable about available water quality data for Santa Ynez River basin, and we will endeavor to engage these professionals during TMDL development and associated public meetings.

Stakeholders and interested members of the public may submit any information and data to Central Coast Water Board staff which they think could be relevant to a TMDL study for nutrient pollution in the Santa Ynez River basin. Examples include, but are not limited to:

1. Data, photos, personal knowledge about the river basin, knowledge about potential nutrient and nutrient-related water quality problems, and/or about recent or historic land use practices;
2. Environmental success stories, such as improvement of management practices to reduce nutrient loading to the watershed;
3. Previous studies or reports that may be relevant to a TMDL study of the Santa Ynez River basin; and
4. Feedback, written or informal, on draft reports Central Coast Water Board staff make available.

## 7. Potential Nutrient Sources

There are [many possible nutrient sources](#) within any given watershed; in general the following can potentially be significant sources of nutrient loading to water resources:

- Municipal wastewater
- Urban runoff
- Fertilizer application
- Stormwater runoff
- Manure from livestock and domestic animals

<sup>31</sup> CCAMP water quality data was used in [California's 2008-2010 Clean Water Act section 303\(d\) assessment](#)

<sup>32</sup> CMP water quality data was used in [California's 2008-2010 Clean Water Act section 303\(d\) assessment](#)

<sup>33</sup> NPDES = [National Pollutant Discharge Elimination System](#)

- Natural sources
- Atmospheric deposition

Treated municipal wastewater effluent has historically been a major source of nitrate in the lower Santa Ynez River downstream of the City of Lompoc Regional Wastewater Treatment Plant. Nitrogen is a common pollutant in municipal wastewater effluent.

Worth noting is that the City of Lompoc completed major upgrades to the regional wastewater treatment plant in November 2009. According to reporting by the Central Coast Ambient Monitoring Program, nitrate plus nitrite as N concentrations have generally improved in the Lower Santa Ynez River during the period 2009 to 2014.

Source analysis will be an important component of watershed assessment moving forward. A significant amount of environmental and water quality data exists for the river basin which has not yet been assessed by Central Coast Water Board staff. Local stakeholders are encouraged to contribute any insight or information concerning probable nutrient sources in the river basin to us.

## 8. Public Outreach & Public Participation

[Public outreach](#) is a part of the TMDL development process. Leveraging knowledge about the Santa Ynez River basin from local residents, resource professionals, public agency staff, land owners, and land operators is very helpful to the Central Coast Water Board. Public outreach and public participation will be an ongoing element of TMDL development activities.

A subscription email list has been created for this TMDL project and is used to notify interested parties of public meetings and progress regarding this TMDL project. As of March 28, 2016, there are 260 email subscribers on the [Santa Ynez River basin subscription email database](#).

## 9. Existing Plans to Improve Water Quality & Aquatic Habitat

Protecting California's water resources depends on the proactive engagement of citizens, land owners, researchers, and businesses. Proactive efforts by citizens in the Santa Ynez River basin that may result in improved water quality protection are commendable and should be recognized. Regional stakeholders have been participating in efforts to protect and improve water quality, water supply, and aquatic habitat in the Santa Ynez River basin. Reported activities include:

- The [Santa Barbara Countywide Integrated Regional Water Management \(IRWM\) Plan \(2013\)](#), with cooperating partners City of Lompoc, City of Solvang, and City of Buellton, is the main integrated regional water management planning document for the county and the Santa Ynez River basin. The objectives addressed in the plan focus on improving water quality, protecting water supply, and maintaining and enhancing water infrastructure.
- The Santa Barbara Countywide IRWM Plan (2013) published [a summary of water resource management plans and programs](#) that exist in the county and in the Santa Ynez River basin<sup>34</sup>, including Urban Water Management Plans, Groundwater Management Plans, stormwater management programs, clean water, and annual bioassessment programs.
- The [Cachuma Resource Conservation District reports](#) that local landowners and groups throughout Santa Barbara County implement conservation projects related to water quality, irrigation and nutrient management, and habitat restoration.
- Dr. Timothy Robinson, senior scientist with the Cachuma Operation and Maintenance Board reported recently that monitoring and restoration projects for the threatened southern steelhead are underway along the Santa Ynez River downstream of Lake Cachuma.

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<sup>34</sup> The Santa Barbara County Wide IRWM Plan (2013) does not provide adoption dates associated with the myriad plans and programs reported. However, additional details of the plans and programs can be accessed by clicking the hyperlink provided.

## 10. Anticipated Next Steps

According to the 2008-2010 303(d) list, the lower Santa Ynez River is impaired by nitrate and low dissolved oxygen levels. Levels on nitrate are well in excess of natural background conditions, thus indicating that controllable conditions may be causing or contributing to the water quality impairment. A broader review of nutrient surface water quality data, and a look at possible water quality improvements in the river is merited. Consequently, Central Coast Water Board staff anticipates conducting a watershed assessment of the river basin. This assessment will potentially include developing a total maximum daily loads report consistent with the State Water Board's [Water Quality Control Policy for Addressing Impaired Waters](#), and with federal and state anti-degradation policies (refer back to report Section 5.3).

Generally, TMDL studies could result in several types of outcomes, as outlined below:

- 1) TMDL studies are planning tools that can recommend or propose new or additional regulatory measures for discharges contributing to a water quality impairment.
- 2) TMDL studies can recommend that existing regulatory measures are sufficient to achieve water quality objectives.
- 3) TMDL studies can conclude that water quality objectives are being met in waters previously identified as impaired, and could consider articulating and establishing protection goals for the maintenance of existing water quality in waterbodies not currently impaired (anti-degradation policy: refer back to report section 5.3, and refer to section II.A. of the [Basin Plan](#) ).
- 4) TMDLs studies may conclude that natural sources are the cause of a water quality impairment, and recommend a revision of applicable state water quality standards.

We will also assess whether or not nutrient TMDLs need to be formally added to the Basin Plan for this river basin. If so, adoption of a TMDL into the Basin Plan through a [basin plan amendment process](#) would be necessary. A basin plan amendment process requires TMDLs to be approved by the Central Coast Water Board, as well as to receive approvals from the State Water Board, the California Office of Administrative Law.

## 11. References

- Costanso, M. 1911. The Portola expedition of 1769-1770, diary of Miguel Costanso in Volume 2, Issue 4 of Publications of the Academy of Pacific Coast History. University of California. p. 307.
- Domagalski, J.L. 2013. Identification of Geologic and Anthropogenic Sources of Phosphorus to Streams in California and Portions of Adjacent States, U.S.A., Using SPARROW Modeling. American Geophysical Union, Fall Meeting 2013, abstract #H43J-06. Published December, 2013.
- LVMWD (Las Virgenes Municipal Water District). 2012. Water Quality in the Malibu Creek Watershed, 1971–2010. Revised 06/13/2012. Report submitted by the Joint Powers Authority of the Las Virgenes Municipal Water District and the Triunfo Sanitation District to the Los Angeles Regional Water Quality Control Board in compliance with Order No. R4-2010-0165.
- McMahon, G. and Roessler, C. 2002. A Regression-Based Approach To Understand Baseline Total Nitrogen Loading for TMDL Planning. National TMDL Science and Policy 2002 Specialty Conference.
- Mitsova-Boneva, D. and Wang, X. 2008. A Cell-based Model for Identifying Contributing Areas of Nitrogen Loadings to Surface Water. Published by the American Society of Agricultural and Biological Engineers, St. Joseph, Michigan.
- Palmer, T. 2012. Field Guide to California Rivers. 1<sup>st</sup> Edition. California Natural History Guide Series No. 105, University of California Press.
- Stein, E and Kyonga-Yoon, V. 2007. Assessment of Water Quality Concentrations and Loads from Natural Landscapes. Southern California Coastal Water Research Project, Technical Report 500.

U.S. Environmental Protection Agency, 1999. Protocol for Developing Nutrient TMDLs. EPA 841-B-99-007. <http://www.epa.gov/owow/tmdl/nutrient/pdf/nutrient.pdf>

Utah Geological Survey. 2001. Evaluation of Potential Geologic Sources of Nitrate Contamination in Ground Water, Cedar Valley, Iron County, Utah with Emphasis on the Enoch Area. Special Study 100. By Mike Lowe and Janae Wallace.

Westbrook, J. and S. Edinger Marshall. 2014. Stewarding Soil: promoting soil quality to meet management objectives on California Rangelands. Accessed Sept. 30, 2014 at [http://www.elkhornsloughctp.org/uploads/files/1412025080Westbrook%20Marshall\\_Stewarding%20Soil%20July%2018%202014%20FINAL.pdf](http://www.elkhornsloughctp.org/uploads/files/1412025080Westbrook%20Marshall_Stewarding%20Soil%20July%2018%202014%20FINAL.pdf)

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September 20, 2016

## ADVANCE CALENDAR

Below is an Advance Calendar of anticipated agenda items. The dates are tentative but reflect an overview of items to come. Items on this advance calendar are subject to change. Final agendas will be available on-line and at City Hall at least 72 hours prior to the meeting date.

MEETING DATE	AGENDA ITEM	ACTION
OCTOBER 10, 2016	Fiscal Year 2015-16 Financial Review	Review
	Notice of Completion, Pavement Maintenance Project	Approve
	PG&E Proclamation	Present
	Veterans Hall Econ Report	Receive
	SCVB Crisis Communication Plan- Consent	Receive
	Award Fire Station Construction Contract & Funding Agrmt	Approve
	Water Softener Restriction Ord Amendment 2 <sup>nd</sup> Reading- Consent	Approve
	Merkantile Project Land Development Agreement	Approve
OCTOBER 24, 2016	Proclamation Honoring Law Enforcement Personnel (Sheriff/CHP)	Present
	Economic Development Strategic Plan Update	Receive
	Vacation Rental Ordinance 1 <sup>st</sup> Reading	Approve
	CalPERS Contract Ord Amendment 2 <sup>nd</sup> Reading- Consent	Approve
NOVEMBER 14, 2016	Mayor for a Day- Linda Johansen	N/A
	California Building Code Ordinance Update	Approve
	Review and Adopt the Investment Policy	Adopt
	Hazard Mitigation Plan Update	Approve
NOVEMBER 28, 2016	Halloween Haunted House Donation	Accept
DECEMBER 2016	Results of Election and Installation of New Mayor/Councilmembers	Accept
	Appointment to Boards and Commissions	Approve
JANUARY 2017	Investment Report	Receive
FEBRUARY 2017	2015-16 Comprehensive Annual Financial Report (CAFR)	Receive
MARCH 2017		
<i>*Public Notice Required</i>	Measure A 5-Year Local Program of Projects (2 <sup>nd</sup> Mtg in March 2017)	Approve
	Solvang Mesa LLMD Resolution of Intent (1 <sup>st</sup> Mtg in March 2017)	Adopt
APRIL 2017		
<i>*Public Notice Required</i>	Solvang Mesa LLMD Resolution of Assessment (1 <sup>st</sup> Mtg in Apr 2017)	Adopt
MAY 2017		
<i>*Public Notice Required</i>	Amend Appropriation Limit for FY 2016-17 (2 <sup>nd</sup> Mtg in May)	Approve

<u>Unscheduled</u>		
	Resolution of Intent re: Installment Sale Water Revenue Bonds	
	Ordinance Amendment-Water Softeners & Snowbird Meter Fees	
	Storm Water Resource Plan	
	Sphere of Influence/Annexation Study	
	Marijuana Cultivation & Delivery Ordinance First Reading	
<i>*Public Notice Required</i>	Building Code/Fee revisions, California Code Check Agreement	
	Wireless Telecommunication Facilities Regulations	
	Findings of SYCSD Recycled Water Planning Study	
	Resolution of Support for SBCAG Regional Bike & Ped Plan	
	NPDES Permit Trash Amendment Summary	
	Conflict of Interest Code Review (June 2018)	Discuss
	<i>Warrant Register (1<sup>st</sup> meeting of each month)</i>	<i>Approve</i>
	<i>Sheriff's Department Report (2<sup>nd</sup> meeting of each month)</i>	<i>Receive</i>
	<i>SCVB Report (2<sup>nd</sup> meeting of each month &amp; biennial report)</i>	<i>Receive</i>
	<i>Fire Department Report (Quarterly)</i>	<i>Receive</i>
	<i>VisitSYV Report (Quarterly)</i>	<i>Receive</i>