



# Consumer Confidence Report

Data for January 1, 2017  
through December 31, 2017





Municipal Water District

A Public Agency Providing

Water

Wastewater Services

Recycled Water

Hydroelectricity

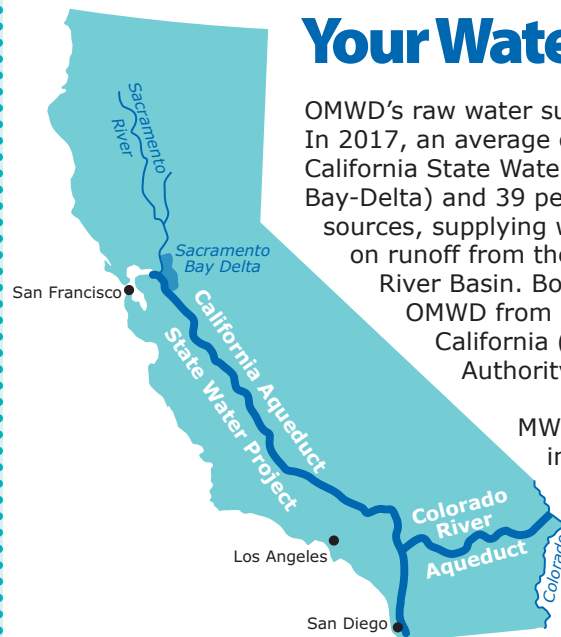
Elfin Forest Recreational Reserve

**Olivenhain Municipal Water District is required by law to distribute a Consumer Confidence Report each year**

This report explains how drinking water provided by OMWD meets or exceeds all state and federal water quality standards for your drinking water. Included within are results of water quality tests, tips on how to interpret the data, and an explanation of where your water comes from. The data presented is for January 1 through December 31, 2017. We are proud to share our results with you.



## Your Water Sources



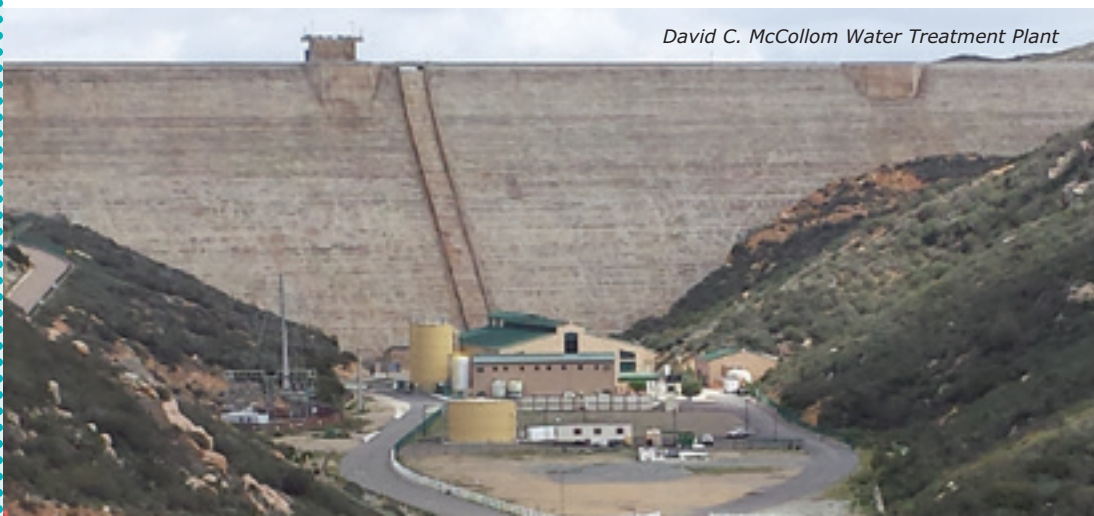
OMWD's raw water supply in 2017 was 100 percent imported. In 2017, an average of 61 percent was received from the California State Water Project (Sacramento-San Joaquin Bay-Delta) and 39 percent from the Colorado River. These sources, supplying water to all of Southern California, rely on runoff from the Sierra snowpack and the Colorado River Basin. Both of these supplies are provided to OMWD from Metropolitan Water District of Southern California (MWD) and the San Diego County Water Authority (SDCWA).

MWD maintains Lake Skinner, located in southwest Riverside County, as the untreated raw water source for San Diego County. Before water from Lake Skinner is delivered to you, it must be treated to remove pollutants and bacteria. Nearly all of the water delivered to your home or business has been treated at OMWD's David C. McCollom Water Treatment Plant.

### David C. McCollom Water Treatment Plant

In 2017, approximately 98 percent of the water delivered to OMWD customers was treated locally at the DCMWTP. The raw water received at the DCMWTP is a blend of water from the Colorado River and the State Water Project. This raw water is obtained from SDCWA, which purchases it from MWD. The remaining 2 percent of treated water delivered to OMWD customers was purchased from SDCWA and treated at either the Twin Oaks Valley Water Treatment Plant or the Claude "Bud" Lewis Carlsbad Desalination Plant.

The DCMWTP is located within the northeastern portion of OMWD's service area and uses membrane technology to produce superior quality finished water. Fewer chemicals are used in this treatment process than in conventional treatment, and the membrane process offers improved barriers against pathogens, such as *Cryptosporidium*, and bacteria, such as coliform. OMWD provides tours of the DCMWTP throughout the year; contact our Education and Conservation Coordinator for details at **760-632-4641** or **watersaver@olivenhain.com**.



David C. McCollom Water Treatment Plant

## What Is In My Water?

The tables on the following pages show how the raw water quality from Lake Skinner met health-related standards in 2017. The tables also show data specific to the treated water that flows through OMWD's distribution system. For information on the Lake Skinner source water and a source water assessment, please contact Mic Stewart with MWD at **213-217-5696** or **mstewart@mwdh2o.com**. For information on other local water treatment plants, including the Twin Oaks Valley Water Treatment Plant or the Claude "Bud" Lewis Carlsbad Desalination Plant, please contact Chris Castaing with SDCWA at **760-233-3279** or **ccastaing@sdcw.org**, or visit the SDCWA website at **www.sdcwa.org/water-quality**. For more information on OMWD's DCMWTP or distribution system, please contact David Smith, OMWD Operations Manager, at **760-415-2304** or **dsmith@olivenhain.com**.

### How Do Contaminants Get in the Water?

The sources of drinking water (both tap and bottled water alike) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife
- **Inorganic contaminants**, such as salts and metals, that can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application and septic systems
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities

In order to ensure that tap water is safe to drink, the US Environmental Protection Agency and the California State Water Resources Control Board prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. SWRCB regulations also establish limits for contaminants in bottled water that provide similar protection for public health.

### What About Lead and Copper?

There has been considerable attention regarding the lead levels found in drinking water supplies serving consumers living and working in the Flint, Michigan area. OMWD is required to test every three years for lead and copper. OMWD tested for lead and copper in 2016; 31 locations were sampled, the results, which were well below regulatory action levels, are provided in the table on page 5. Additional information about lead and copper is available at **www.olivenhain.com/leadandcopper** and from the USEPA Safe Drinking Water Hotline, **800-426-4791**.

In compliance with California's SWRCB Drinking Water Permit Amendment 2017PA-SCHOOLS and Assembly Bill 746 (2017), lead testing was performed by OMWD at seven school locations in 2017. The action level of 15 ppb was not exceeded at any location. Customers can request school lead testing results by contacting California's Division of Drinking Water at **DDW-PLU@waterboards.ca.gov** or **916-322-9602**.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. OMWD is responsible for providing high-quality drinking water, but cannot control the variety of materials used in home plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the USEPA Safe Drinking Water Hotline or at **http://www.epa.gov/safewater/lead**.

## Important Health Information

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline, **800-426-4791**.

The trace contaminants found in OMWD's water sources, along with their standards, are listed in the tables found in this report. It is important to note that drinking water standards are based on research to protect the general public and may not be sufficient to protect certain persons, as noted below.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, as well as some elderly and infants can be particularly at risk for infections. These people should seek advice about drinking water from their health care providers. USEPA/Center for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline, **800-426-4791**.



# Source Water Data

					Percent of Total Supply from State Project Water Lake Skinner		
					Range = 0%–91%	Average = 61%	
Parameter	Units	State or Federal MCL	PHG (MCLG)	State DLR	Range	Average	Major Sources in Drinking Water
LONG TERM 2 ENHANCED SURFACE WATER TREATMENT RULE (LT2ESWTR) <sup>(a)</sup>							
<i>Cryptosporidium</i>	oocysts/10 L			NA	ND	ND	Human and animal fecal waste
<i>E. coli</i>	CFU/100 mL			NA	ND–11	3	Human and animal fecal waste
Turbidity	NTU			0.1	1.0–1.2	1.1	Soil runoff
INORGANIC CHEMICALS							
Aluminum	ppb	1,000	600	50	57	57	Residue from water treatment process; erosion of natural deposits
Fluoride (naturally-occurring)	ppm	2.0	1	0.1	0.1	0.1	Erosion of natural deposits; discharge from fertilizer and aluminum factories
RADIOLOGICALS							
Gross Alpha Particle Activity	pCi/L	15	(0)	3	ND–3.7	ND	Erosion of natural deposits
Uranium	pCi/L	20	0.43	1	ND–1.3	ND	Erosion of natural deposits
SECONDARY STANDARDS – Aesthetic Standards <sup>(b)</sup>							
Aluminum	ppb	200	600	50	57	57	Residue from water treatment process; erosion of natural deposits
Chloride	ppm	500	NA	NA	52–58	55	Runoff/leaching from natural deposits; seawater influence
Color	Color Units	15	NA	NA	5–15	10	Naturally-occurring organic materials
Odor Threshold	TON	3	NA	1	10	10	Naturally-occurring organic materials
Specific Conductance	µS/cm	1,600	NA	NA	465–500	482	Substances that form ions in water; seawater influence
Sulfate	ppm	500	NA	0.5	71–77	74	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS)	ppm	1,000	NA	NA	282–284	283	Runoff/leaching from natural deposits; seawater influence
Turbidity	NTU	5	NA	0.1	1.0–1.2	1.1	Soil runoff
OTHER PARAMETERS							
MICROBIOLOGICAL							
Total Coliform Bacteria <sup>(c)</sup>	CFU/100 mL	NA	NA	NA	2–18,000	300	Naturally present in the environment
<i>E. coli</i> <sup>(c)</sup>	CFU/100 mL	NA	NA	NA	ND–11	3	Human and animal fecal waste
CHEMICAL							
Alkalinity (as CaCO <sub>3</sub> )	ppm	NA	NA	NA	70–81	76	
Boron	ppb	NL = 1,000	NA	100	110	110	Runoff/leaching from natural deposits; industrial wastes
Calcium	ppm	NA	NA	NA	29–30	30	
Hardness (as CaCO <sub>3</sub> )	ppm	NA	NA	NA	116–118	117	
Magnesium	ppm	NA	NA	NA	12	12	
pH	pH Units	NA	NA	NA	8.0–8.2	8.1	
Potassium	ppm	NA	NA	NA	2.9–3.1	3.0	
Sodium	ppm	NA	NA	NA	45–50	48	
Total Organic Carbon (TOC)	ppm	TT	NA	0.30	3.2–4.7	3.9	Various natural and man-made sources
Vanadium	ppb	NA	NA	NA	3.1	3.1	Naturally-occurring industrial waste discharge

## Footnotes

<sup>(a)</sup> Data are from samples collected during the second round of Long Term 2 Enhanced Surface Water Treatment Rule required monitoring of *Cryptosporidium* and *E. coli* in MWD’s Robert A. Skinner Treatment Plant influent. OMWD has been granted use of MWD data for compliance and reporting purposes by California’s SWRCB.

<sup>(b)</sup> State Secondary Standards apply to water supplied to the public by community water systems; annual monitoring is required for approved surface water sources or distribution system entry points of the effluent of source water treatment.

<sup>(c)</sup> Monthly median per state guidelines and recommendations.

<sup>(d)</sup> Turbidity, a measure of the cloudiness of the water, is an indicator of treatment performance. As a Primary Standard, the turbidity level for OMWD from the combined filter effluent of the membranes at DCMWTP were less than or equal to 0.1 NTU in 95% of the measurements taken each month and did not exceed 1.0 NTU at any time. 472 distribution samples were collected at OMWD; the system was in compliance with the Secondary Standard.

<sup>(e)</sup> Total Coliform and *E. coli* analysis at DCMWTP: For each day of operation the plant effluent must be analyzed for Total Coliform and *E. coli*. There were no positive results.

<sup>(f)</sup> State Total Coliform Rule (TCR): For OMWD’s distribution system, no more than 5.0% total coliform-positive samples in a month. For OMWD 1,147 samples were analyzed. One sample was positive for total coliforms and *E. coli*. Repeat samples were total coliform-negative and *E. coli*-negative. The MCL was not violated. Federal Revised Coliform Rule (rTCR): More than 5.0% total coliform-positive samples in a month triggers Level 1 assessments. No Level 1 assessments or violations occurred.

<sup>(g)</sup> State Acute TCR (*E. coli*) MCL: A positive result for fecal coliforms or *E. coli* can signify an acute MCL violation, which necessitates rapid state and public notification. One sample was *E. coli*-positive, but repeat samples were *E. coli*-negative and the MCL was not violated. Federal rTCR *E. coli* MCL and Level 2 TT assessments: Requires assessments to identify sanitary defects and outlines corrective actions if detected. One sample was *E. coli*-positive. Repeat samples were *E. coli*-negative. No MCL violations or Level 2 assessments occurred.

<sup>(h)</sup> In 2017, all OMWD distribution system samples collected had detectable total chlorine residuals and no Heterotrophic Plate Count was required. OMWD voluntarily tested for HPC in its distribution system 362 times; the range and average is provided.

<sup>(i)</sup> TTHM and HAA5 results for OMWD’s distribution system are provided. OMWD was in compliance with all provisions of the Stage 2 Disinfectants/Disinfection By-Products Rule based on the Highest LRAA.

<sup>(j)</sup> Lead and copper are regulated as a Treatment Technique under the Lead and Copper Rule, which requires water samples to be collected at the consumers’ tap. OMWD is required to test every three years for lead and copper. If action levels are exceeded in more than 10% of the consumer tap samples, water systems must take steps to reduce these contaminants. OMWD collected samples at 31 locations in 2016; results are provided.

<sup>(k)</sup> In compliance with SWRCB Permit Amendment 2017PA-SCHOOLS and Assembly Bill 746 (2017), lead testing was performed by OMWD at seven schools in 2017. The action level of 15 ppb was not exceeded at any location.

## Abbreviations & Definitions

- AI** – Aggressiveness Index
- AL** – Action Level
- Average** – Result based on arithmetic mean
- CaCO<sub>3</sub>** – Calcium Carbonate
- CFU** – Colony-Forming Units
- DBP** – Disinfection By-Products
- DLR** – Detection Limits (for purposes of) Reporting
- LRAA** – Locational Running Annual Average – *The highest LRAA is the highest of all Locational Running Annual Averages calculated as average of all samples collected within a 12-month period.*
- MCL** – Maximum Contaminant Level – *The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close as the PHGs as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.*
- MCLG** – Maximum Contaminant Level Goal – *The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the US Environmental Protection Agency.*
- mL** – Milliliter
- MRDL** – Maximum Residual Disinfectant Level – *The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.*
- MRDLG** – Maximum Residual Disinfectant Level Goal – *The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.*
- NA** – Not Applicable
- ND** – Not Detected
- NL** – Notification Level
- NRA** – No Running Average – *Single sample collected*
- NTU** – Nephelometric Turbidity Units
- pCi/L** – Picocuries per Liter
- PHG** – Public Health Goal – *The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.*
- ppb** – Parts per billion or micrograms per liter (µg/L)
- ppm** – Parts per million or milligrams per liter (mg/L)
- ppq** – Parts per quadrillion or picograms per liter (pg/L)
- ppt** – Parts per trillion or nanograms per liter (ng/L)
- RAA** – Running Annual Average – *Highest RAA is the highest of all Running Annual Averages calculated as average of all the samples collected within a 12-month period*
- Range** – Results based on minimum and maximum values
- SI** – Saturation Index (Langelier)
- SWRCB** – State Water Resources Control Board
- TON** – Threshold Odor Number
- TT** – Treatment Technique – *A required process intended to reduce the level of a contaminant in drinking water*
- µS/cm** – Microsiemens per centimeter or micromhos per centimeter (µmho/cm)

Treated Water Data

Treated Water Data					OMWD's DCMWTP		Major Sources in Drinking Water
Parameter	Units	State or Federal MCL	PHG (MCLG)	State DLR	Range	Average	
PRIMARY STANDARDS – Mandatory Health-Related Standards							
CLARITY							
Combined Filter Effluent Turbidity <sup>(d)</sup>	NTU %	TT = 1 TT <sup>(d)</sup>	NA	NA	Highest 0.098	% ≤ 0.3 100%	Soil runoff
MICROBIOLOGICAL							
Total Coliform Bacteria <sup>(e)</sup>	(e)	(e)	(0)	NA	ND	ND	Naturally present in the environment
<i>E. coli</i> <sup>(e)</sup>	(e)	(e)	(0)	NA	ND	ND	Human and animal fecal waste
<i>Cryptosporidium</i>	oocysts/ 200 L	TT	(0)	NA	TT	TT	Human and animal fecal waste
<i>Giardia</i>	cysts/ 200 L	TT	(0)	NA	TT	TT	Human and animal fecal waste
INORGANIC CHEMICALS							
Fluoride Treatment-related	ppm	2.0	1	0.1	0.26–1.01	0.69	Erosion of natural deposits; water additive that promotes strong teeth

					Distribution System		
Parameter	Units	State or Federal MCL [MRDL]	PHG (MCLG) [MRDLG]	State DLR	Range	Average	Major Sources in Drinking Water
PRIMARY STANDARDS – Mandatory Health-Related Standards							
MICROBIOLOGICAL							
Total Coliform Bacteria <sup>(f)</sup>	%	5.0	(0)	NA	ND–1.09%	ND	Naturally present in the environment
<i>E. coli</i> (Acute Total Coliform)	<sup>(g)</sup>	<sup>(g)</sup>	(0)	NA	ND–1	ND	Human and animal fecal waste
Heterotrophic Plate Count (HPC) <sup>(h)</sup>	CFU/mL	TT	NA	NA	ND–16	0.73	Naturally present in the environment
DISINFECTION BY-PRODUCTS AND DISINFECTANT RESIDUALS							
Total Trihalomethanes (TTHM) <sup>(i)</sup>	ppb	80	NA	1	31.8–109.1	Highest LRAA 62	By-product of drinking water chlorination
Haloacetic Acids (five) (HAA5) <sup>(i)</sup>	ppb	60	NA	1	13.0–47.1	Highest LRAA 23	By-product of drinking water chlorination
Total Chlorine Residual	ppm	[4.0]	[4.0]	NA	0.92–3.30	Highest RAA 2.52	Drinking water disinfectant added for treatment
INORGANIC CHEMICALS							
Copper <sup>(j)</sup> 2016	ppm	AL = 1.3	0.17	0.05	ND–0.474	90th Percentile 0.322	Internal corrosion of household pipes; erosion of natural deposits
Lead <sup>(j)</sup> 2016	ppb	AL = 15	0.2	5	ND–10	90th Percentile ND	Internal corrosion of household pipes; erosion of natural deposits
School Lead Testing <sup>(k)</sup> 2017	ppb	AL = 15	0.2	5	ND–1.1	NA	Internal corrosion of household pipes; erosion of natural deposits
SECONDARY STANDARDS – Aesthetic Standards							
Color	Units	15	NA	NA	ND–6.0	2.65	Naturally-occurring organic materials
Odor Threshold	TON	3	NA	1	ND–1.40	ND	Naturally-occurring organic materials
Turbidity <sup>(d)</sup>	NTU	5	NA	NA	ND–0.48	0.06	Soil runoff

See page 3 for Footnotes; see page 4 for Abbreviations and Definitions

About OMWD



OMWD is a municipal water district organized and operating pursuant to Water Code Sections 71000 et seq., and was incorporated on April 9, 1959, to develop an adequate water supply for landowners and residents. On June 14, 1960, residents of OMWD voted to become a member of SDCWA, thus becoming eligible to purchase water transported into San Diego County via the aqueduct systems of SDCWA and MWD. At over 48 square miles, OMWD serves approximately 86,000 customers in Encinitas, Carlsbad, San Diego, San Marcos, Solana Beach, and neighboring communities.

### We Encourage You to Get Involved

OMWD is governed by a five-member Board of Directors elected for staggered four-year terms, with each director being elected from a specific geographic area of OMWD’s service area. Board members encourage public participation in decisions affecting our community’s drinking water and any other water issues. Our board holds up to two public meetings each month. Dates and times of these meetings vary, so please check [www.olivenhain.com/meetings](http://www.olivenhain.com/meetings) for current information. The public is welcome and encouraged to attend these meetings.

For Additional Information

For more information on this report, call David Smith, OMWD Operations Manager, at **760-415-2304** or [dsmith@olivenhain.com](mailto:dsmith@olivenhain.com).

*Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien. Si tiene preguntas, llame a Eddie Rodriguez, teléfono 760-632-4220.*



Municipal Water District

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[www.olivenhain.com](http://www.olivenhain.com)



Published by Olivenhain Municipal Water District in the interest of an informed public.

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Alfred Smith, Esq.

Board Meeting Dates

Please visit our website at [www.olivenhain.com](http://www.olivenhain.com) for dates.

Mission Statement

Olivenhain Municipal Water District is a multi-functioning public agency that is dedicated and committed to serving present and future customers in a service-oriented manner by:

Water

Providing safe, reliable, high-quality drinking water while exceeding all regulatory requirements in a cost-effective and environmentally responsive manner.

Recycled Water

Providing recycled water and wastewater treatment in the most cost-effective and environmentally responsive method.

Parks

Safely operating the Elfin Forest Recreational Reserve and providing all users with a unique recreational, educational, and environmental experience.

Emergency Management

Complying with policies and procedures that adhere to local, state, and federal guidelines for national security and disaster preparedness.

Sustainable Operations

Pursuing alternative and/or renewable resources with the most sustainable, efficient, and cost-effective approach.



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Encinitas, CA 92024  
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**[www.olivenhain.com](http://www.olivenhain.com)**

A Public Agency Providing:

Water • Wastewater Services • Recycled Water • Hydroelectricity • Elfin Forest Recreational Reserve

