Consumer Confidence Report

Data for January 1, 2012
through December 31, 2012

OLIVENHAIN
Municipal Water District

An Annual Drinking Water Quality Report
Published June 2013

OLIVENHAIN
Municipal Water District

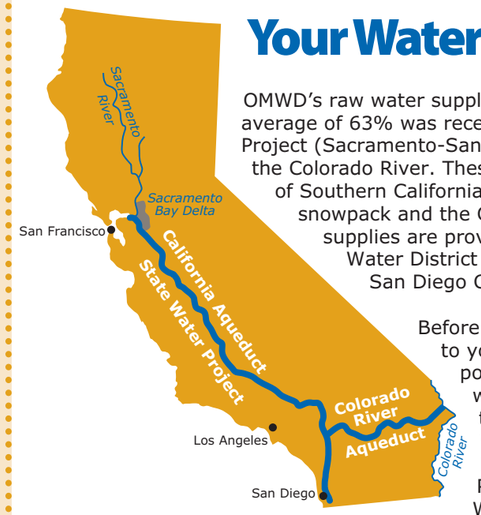
A Public Agency Providing
Water
Wastewater Services
Recycled Water
Hydroelectricity
Elfin Forest Recreational Reserve

Olivenhain Municipal Water District (OMWD) 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, 2012. We are proud to share our results with you.

Pure Excellence

Your Water Sources



OMWD's raw water supply is 100% imported. In 2012, an average of 63% was received from the California State Water Project (Sacramento-San Joaquin Bay-Delta) and 37% 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).

Before water from these sources is delivered to you, it must be treated to remove pollutants and bacteria. OMWD delivers water that has been treated at one of three sources: the David C. McCollom Water Treatment Plant (DCMWTP), MWD's Skinner Water Treatment Plant, and SDCWA's Twin Oaks Valley Water Treatment Plant.

David C. McCollom Water Treatment Plant

In 2012, approximately 68% 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 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 the Education and Conservation Coordinator for details at **watersaver@olivenhain.com**.

Skinner and Twin Oaks Valley Water Treatment Plants

The remaining 32% of the treated water delivered to OMWD customers in 2012 was obtained from SDCWA. In addition to treating water locally at SDCWA's Twin Oaks Valley WTP in San Marcos, SDCWA purchases treated water from MWD that is treated at the Skinner Water Treatment Plant in southwestern Riverside County. Like water treated at the DCMWTP, water treated by SDCWA and MWD is also a blend from the Colorado River and the State Water Project.


David C. McCollom Water Treatment Plant

What Is in My Water?

There are two tables on the following pages. The first table shows how water treated at Skinner, Twin Oaks Valley, and the DCMWTP met health-related standards in 2012. A separate table is provided that includes data specific to the 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**. For more information on the Twin Oaks Valley Water Treatment Plant, please contact Tim Suydam with SDCWA at **760-233-3283**. For more information on the DCMWTP or OMWD's distribution system, please contact Tom Kennedy at **760-445-0000**.

How Do Contaminants Get in the Water?

The sources of drinking water (both tap water and bottled water) 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 U.S. Environmental Protection Agency (USEPA) and the California Department of Public Health (CDPH) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH regulations also establish limits for contaminants in bottled water that provide similar protection for public health.

What About Lead and Copper?

OMWD is required to test every three years for lead and copper. OMWD tested for lead and copper in 2011; 30 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 from the USEPA Safe Drinking Water Hotline, **800-426-4791**.

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 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 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 (CDC) 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**.

Water Treatment Plant Data

PERCENT STATE PROJECT WATER
Skinner, Twin Oaks Valley & David C. McCollom WTPs
Range = 33%–84% Average = 63%

Parameter	Units	State or Federal MCL [MRDL]	PHG (MCLG) [MRDLG]	State DLR	Skinner WTP Range	Skinner WTP Average	Twin Oaks Valley WTP Range	Twin Oaks Valley WTP Average	David C. McCollom WTP Range	David C. McCollom WTP Average	Major Sources in Drinking Water
PRIMARY STANDARDS – Mandatory Health-Related Standards											
CLARITY											
Combined Filter Effluent Turbidity	NTU %	TT = 1 TT[a]	NA	NA	Highest 0.06	% ≤ CL 100	Highest 0.04	% ≤ CL 100	Highest 0.08	% ≤ CL 100	Soil runoff
MICROBIOLOGICAL											
Total Coliform Bacteria[b]	%	5.0	(0)	NA	ND–0.5	0.1	ND	ND	ND	ND	Naturally present in the environment
E. coli	[c]	[c]	(0)	NA	ND	ND	ND	ND	ND	ND	Human and animal fecal waste
Heterotrophic Plate Count (HPC)[d]	CFU/mL	TT	NA	NA	TT	TT	TT	TT	TT	TT	Naturally present in the environment
INORGANIC CHEMICALS											
Arsenic	ppb	10	0.004	2	ND	ND	NRA	3.6	NRA	3.7	Erosion of natural deposits, glass and electronics production wastes
Fluoride[e] (treatment-related)	ppm	2.0	1	0.1	0.7–0.9	0.8	0.2–0.9	0.7	NRA	0.18	Water additive for dental health
Nitrate (as N)[f]	ppm	10	10	0.4	ND	ND	0.3–0.5	0.4	NRA	ND	Runoff and leaching from fertilizer use; septic tank and sewage; erosion of natural deposits
RADIOLOGICALS											
Gross Alpha Particle Activity	pCi/L	15	(0)	3	ND–3	ND	ND	ND	NRA	ND	Erosion of natural deposits
Gross Beta Particle Activity[g]	pCi/L	50	(0)	4	ND–5	ND	3.4–3.5	3.4	NRA	ND	Decay of natural and man-made deposits
Radium-228	pCi/L	NA	0.019	1	ND	ND	ND	ND	NRA	1.2	Erosion of natural deposits
Uranium	pCi/L	20	0.43	1	ND–2	1	1.0–1.7	1.3	NRA	1.4	Erosion of natural deposits
DISINFECTION BY-PRODUCTS, DISINFECTANT RESIDUALS AND DISINFECTION BY-PRODUCT PRECURSORS											
Total Trihalomethanes (TTHM)[h]	ppb	80	NA	1.0	10–19	14	28–75	43	22.5–48.2	36.4	By-product of drinking water chlorination
Haloacetic Acids (five) (HAA5)[h]	ppb	60	NA	1.0	1.4–6.1	2.7	ND–5.3	3.7	1.1–12.8	10.9	By-product of drinking water chlorination
Total Chlorine Residual	ppm	[4.0]	[4.0]	NA	1.5–2.8	Highest RAA 2.3	NA	Highest RAA NA	1.51–3.03	Highest RAA 2.5	Drinking water disinfectant added for treatment
Bromate	ppb	10	0.1 (5)	1.0	1.2–11	Highest RAA 6.5	(1.6–9.1)	Highest RAA (3.5)	NRA	Highest RAA ND	By-product of drinking water ozonation
DBP Precursors Control (TOC)[i]	ppm	TT	NA	0.30	TT	TT	TT	TT	2.3–2.9	2.5	Various natural and man-made sources
SECONDARY STANDARDS – Aesthetic Standards											
Chloride	ppm	500	NA	NA	75–77	76	NRA	78	NRA	81	Runoff/leaching from natural deposits; seawater influence
Color	Units	15	NA	NA	1	1	ND	ND	NRA	3	Naturally occurring organic materials
Odor Threshold[j]	TON	3	NA	1	1–2	2	NRA	1	NRA	2	Naturally occurring organic materials
Specific Conductance	µS/cm	1,600	NA	NA	440–780	640	NRA	640	NRA	680	Substances that form ions in water; seawater influence
Sulfate	ppm	500	NA	0.5	96–120	110	NRA	96	NRA	110	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS)	ppm	1,000	NA	NA	360–400	380	NRA	370	NRA	410	Runoff/leaching from natural deposits; seawater influence
OTHER PARAMETERS – Chemical											
Alkalinity	ppm	NA	NA	NA	75–110	93	NRA	92	NRA	97	
Boron	ppb	NL = 1,000	NA	100	130	130	NRA	140	NRA	140	Runoff/leaching from natural deposits; industrial wastes
Calcium	ppm	NA	NA	NA	34–41	38	NRA	37	NRA	42	
Chlorate	ppb	NL = 800	NA	20	NRA	50	190–280	218	NA	NA	By-product of drinking water chlorination; industrial processes
Corrosivity[k] (as Aggressiveness Index)	AI	NA	NA	NA	12.2–12.3	12.2	NRA	12	NRA	13	Elemental balance in water; affected by temperature, other factors
Corrosivity[l] (as Saturation Index)	SI	NA	NA	NA	0.35–0.50	0.42	NRA	0.24	NRA	NS	Elemental balance in water; affected by temperature, other factors
Hardness	ppm	NA	NA	NA	120–220	170	NRA	160	NRA	180	
Magnesium	ppm	NA	NA	NA	15–17	16	NRA	16	NRA	18	
pH	pH Units	NA	NA	NA	8.1–8.5	8.3	NRA	7.8	NRA	7.8	
Potassium	ppm	NA	NA	NA	3.4–3.6	3.5	NRA	3.5	NRA	3.6	
Sodium	ppm	NA	NA	NA	65–66	66	NRA	68	NRA	71	
Total Organic Carbon (TOC)	ppm	TT	NA	0.30	1.8–2.3	Highest RAA 2.1	2.0–3.3	Highest RAA 2.4	2.3–2.9	Highest RAA 2.7	Various natural and man-made sources
Vanadium	ppb	NL = 50	NA	3	ND	ND	NRA	ND	NRA	12	Naturally-occurring; industrial waste discharge
N-Nitrosodimethylamine (NDMA)	ppt	NL = 10	3	2	ND–2.8	Single Sample NA	NRA	Single Sample 2.7	NA	Single Sample NA	By-product of drinking water chloramination; industrial processes

See page 5 for Footnotes

Abbreviations & Definitions

AI – Aggressiveness Index

AL – Action Level

CDPH – California Department of Public Health

CFU – Colony-Forming Units

CL – Compliance Limit

DBP – Disinfection By-Products

DLR – Detection Limits for purposes of Reporting

MBAS – Methylene Blue Active Substances

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 U.S. Environmental Protection Agency.*

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.*

N – Nitrogen

NA – Not Applicable

ND – Not Detected

NL – Notification Level

NRA – No Running Average – *Single sample collected*

NTU – Nephelometric Turbidity Units

P or ND – Positive or Not Detected

pCi/L – Picocuries per Liter

PDWS – Primary Drinking Water Standard – *MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.*

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.*

ppm – Parts per million or milligrams per liter (mg/L)

ppb – Parts per billion or micrograms per liter (µg/L)

ppt – Parts per trillion or nanograms per liter (ng/L)

ppq – Parts per quadrillion or picoograms per liter (pg/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*

SI – Saturation Index (Langelier)

TOC – Total Organic Carbon

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 micomho per centimeter (µmho/cm)

Distribution System Data

Parameter	Units	State or Federal MCL [MRDL]	PHG (MCLG) [MRDLG]	State DLR	OMWD Dist. System Range	OMWD Dist. System Average	Major Sources in Drinking Water
PRIMARY STANDARDS – Mandatory Health-Related Standards							
MICROBIOLOGICAL							
Total Coliform Bacteria[b]	%	5.0	(0)	NA	0–1.25%	0%	Naturally present in the environment
Fecal Coliform and *E. coli*	[c]	[c]	(0)	NA	0%	0%	Human and animal fecal waste
Heterotrophic Plate (HPC)[d]	CFU/mL	TT	NA	NA	0–100	0.688	Naturally present in the environment
DISINFECTION BY-PRODUCTS AND DISINFECTANT RESIDUALS							
Total Trihalomethanes (TTHM)[h]	ppb	80	NA	1	17.4–48.2	Highest RAA 40	By-product of drinking water chlorination
Haloacetic Acids (five) (HAA5)[h]	ppb	60	NA	1	1.1–18.7	Highest RAA 13	By-product of drinking water chlorination
Total Chlorine Residual	ppm	[4.0]	[4.0]	NA	1.51–3.03	Highest RAA 2.65	Drinking water disinfectant added for treatment
INORGANIC CHEMICALS							
Copper[m] 2011	ppm	AL = 1.3	0.17	0.05	0.01–0.294	90th Percentile 0.245	Internal corrosion of household pipes; erosion of natural deposits
Lead[m] 2011	ppm	AL = 0.015	2	5	ND–0.007	90th Percentile ND	Internal corrosion of household pipes; erosion of natural deposits
SECONDARY STANDARDS – Aesthetic Standards							
Color	Units	15	NA	NA	ND–6	0.075	Naturally occurring organic materials
Odor Threshold	TON	3	NA	1	ND	ND	Naturally occurring organic materials
Turbidity[a]	NTU	5	NA	NA	0–0.9	0.022	Soil runoff

See page 4 for Abbreviations and Definitions

Footnotes

[a] As a Primary Standard, the turbidity levels of the filtered water were less than or equal to the Compliance Limit of 0.3 NTU for MWD, and 0.1 NTU for SDCWA and OMWD in 95% of the online measurements taken each month, and did not exceed 1 NTU for more than one hour. Turbidity, a measure of the cloudiness of the water, is an indicator of treatment performance. The turbidity levels for grab samples at these locations were in compliance with the Secondary Standard. Per 2012 Consumer Confidence Report Guidance, the state DLR for turbidity is 0.1 NTU.

[b] Total coliform MCLs: for the distribution system, no more than 5.0% of the monthly samples may be total coliform positive. For MWD, 8,037 samples were analyzed and six samples were positive tor total coliform. For OMWD, 1,062 samples were analyzed and one sample was positive tor total coliforms. The MCL was not violated.

[c] *E. coli* MCL: The occurrence of two consecutive total coliform-positive samples, one of which contains *E. coli*, constitutes an acute MCL violation. The MCL was not violated.

[d] For MWD in 2012, all distribution samples collected had detectable total chlorine residuals and no HPC was required. In 2012, OMWD voluntarily tested for HPC in the distribution system 365 times; the range and average is provided.

[e] MWD was in compliance with all provisions of the state's fluoridation system requirements. OMWD did not fluoridate at the DCMWTP in 2012.

[f] State MCL is 45 mg/L as nitrate, which is the equivalent of 10 mg/L as N.

[g] CDPH considers 50 pCi/L to be the level of concern for beta particles; the gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ.

[h] TTHM & HAA5 results for water treatment plant effluent as well as OMWD's distribution system are provided. In 2012, MWD, SDCWA, and OMWD were in compliance with all provisions of the Stage 1 and Stage 2 Disinfectants/Disinfection By-Products Rules (D/DBP). Stage 2 D/Dbpr monitoring began in the second quarter of 2012. Compliance was based on the RAA.

[i] TOC provides a medium for the formation of DBPs. MWD and OMWD were also in compliance with the DBP precursor (TOC) control portion of the Stage 2 D/DBP regulation. For MWD, average and range for TOC were taken from weekly samples collected at the combined filter effluent. Samples were collected monthly for the DCMWTP.

[j] In May 2012, monitoring frequency for Skinner was reduced from quarterly to annual when RAA returned to <3 TON. Per CDPH requirements, quarterly monitoring was conducted following a secondary MCL exceedance in April 2008.

[k] AI <10.0 = Highly aggressive and very corrosive water. AI >12.0 = Non-aggressive water. AI (10.0–11.9) = Moderately aggressive water

[l] Positive SI index = non-corrosive; tendency to precipitate and/or deposit scale on pipes. Negative SI index = corrosive; tendency to dissolve calcium carbonate.

[m] 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. 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 in 2011; results are provided.

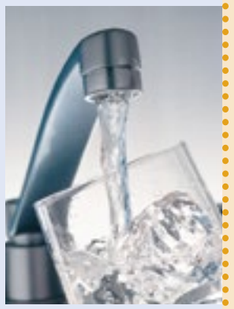
Fluoride and Your Drinking Water

Though fluoride is naturally present in some quantities in all of San Diego County's water sources, no additional fluoride was added to water treated by OMWD at the DCMWTP in 2012. OMWD did receive in 2012 a small portion of its treated drinking water from MWD and SDCWA, which is fluoridated. As a result, OMWD customers received a blended mix of fluoridated and non-fluoridated water.

California law—Health & Safety Code §§116409-116415—requires all public water systems to fluoridate their water once funds become available. OMWD will begin fluoridating its water on July 1, 2013.

Additional information about fluoridation at Olivenhain Municipal Water District is available at **olivenhain.com/fluoride**. Customers interested in fluoridation may also wish to visit CDPH's fluoridation website, where more information about fluoridation, oral health, and current issues is available: **www.cdph.ca.gov/certlic/drinkingwater/pages/fluoridation.aspx**.

Do I Need a Water Softener?



Water is considered hard when it contains high concentrations of calcium and magnesium. Though the presence of these minerals may make lathering with soap difficult or leave spots on dishes, hard water is safe to drink. These minerals can be reduced using softeners, although the reduction of these minerals does not provide any health benefits.

OMWD's potable water is imported from Northern California and the Colorado River. Due to the long distances of travel before this water reaches your tap, evaporative losses increase the hardness of the water. As a result, the water delivered by OMWD is considered to be quite hard. In 2012, our hardness values were about 180 ppm (parts per million) which is equivalent to approximately 10.5 GPG (grains per gallon). If you are setting up a dishwasher, water softener, or other appliance requiring you to indicate the hardness/softness of your water, these are the values you should use.

For Additional Information

For more information on this report, call Tom Kennedy, Olivenhain Municipal Water District Operations Manager, at **760-445-0000**.

*Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien. Si tiene preguntas, llame a Naomi Sabino, teléfono **760-632-4648**.*

We Encourage You to Get Involved

We encourage public participation in decisions affecting your community's drinking water and any other water issues. Up to two Board of Directors meetings are held each month. Dates and times of these meetings vary, so please check **olivenhain.com** for current information. The public is welcome and encouraged to attend these meetings.

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Municipal Water District

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

Board Meeting Dates
Please visit our website at **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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A Public Agency Providing:

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