

2023 Drinking Water Quality Report

Data from 2022



The City of
SEAL BEACH
Utilities Division

This report contains important information about your drinking water.
Translate or speak with someone who understands it.

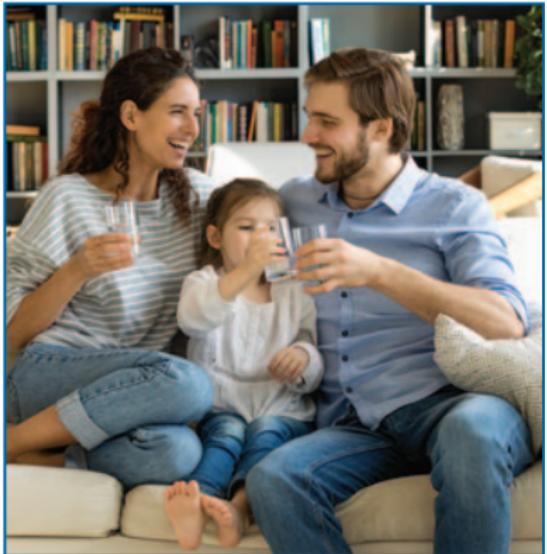
Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

Your 2023 Water Quality Report

Since 1990, California public water utilities have been providing an annual Water Quality Report to their customers. **This year's report covers calendar year 2022 drinking water quality testing and reporting.**

Your City of Seal Beach Utilities Division vigilantly safeguards its water supply and ensures that the water delivered to your home meets the quality standards required by federal and state regulatory agencies. The U.S. Environmental Protection Agency (USEPA) and the State Water Resources Control Board, Division of Drinking Water (DDW) are the agencies responsible for establishing and enforcing drinking water quality standards.

In some cases, the City, the Orange County Water District (OCWD), which manages the groundwater basin, and the Metropolitan Water District of Southern California (MWD), which supplies treated imported surface water to the City, go beyond what is



required by testing for unregulated chemicals that may have known health risks, but do not have drinking water standards. Unregulated chemical monitoring helps the USEPA and DDW determine where certain chemicals occur and whether new standards need to be established for those chemicals.

Through drinking water quality testing programs carried out by OCWD for groundwater, MWD for treated surface water, and the Seal Beach Utilities Division for the distribution system, your drinking water is constantly monitored from source to tap for regulated and unregulated constituents.

The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently.

Some of our data, though representative, are more than one year old.

Constant Monitoring Ensures Continued Excellence

Sources of Supply

Your water supply is a blend of groundwater pumped from two local wells by the City of Seal Beach Utilities Division and water imported from Northern California and the Colorado River by the Municipal Water District of Orange County (MWDOC) via the MWD.



Englebright Dam on the Yuba River

Groundwater comes from a natural underground aquifer that is replenished with water from the Santa Ana River, local rainfall, imported water, and the Groundwater Replenishment System. The groundwater basin is 350 square miles and lies beneath north and central Orange County from Irvine to the Los Angeles County border and from Yorba Linda to the Pacific Ocean. More than 20 cities and retail water districts draw from the basin to provide water to homes and businesses.

Orange County's Water Future

For years, Orange County has enjoyed an abundant, seemingly endless, supply of high-quality water. However, as water demand continues to increase statewide, we must be even more conscientious about our water supply and maximize the efficient use of this precious natural resource.



OCWD, MWDOC, and the City of Seal Beach work cooperatively to evaluate new and innovative water management and supply development programs, including water reuse and recycling, wetlands expansion, recharge facility construction, ocean and brackish water desalination, surface storage, and water use efficiency programs. These efforts are helping to enhance long-term countywide water reliability and water quality.

A healthy water future for Orange County rests on finding and developing new water supplies, as well as protecting and improving the quality of the water that we have today. Your local and regional water agencies are committed to making the necessary investments in new water management projects today

to ensure an abundant and high-quality water supply for our future.

Basic Information About Drinking Water Contaminants

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 land or through the layers of the ground it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animal and human activity.

Contaminants that may be present in source water include:

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



To ensure that tap water is safe to drink, USEPA and the DDW prescribe regulations that limit the amount of certain contaminants in water provided by public water systems.

The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that must provide the same protection for public health. 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 at (800) 426-4791, or online at www.epa.gov/safewater.

About Lead in Tap Water

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. The City of



Seal Beach Utilities Division 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 2 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, (800) 426-4791, or on the web at: www.epa.gov/safewater/lead.

We Invite You to Learn More About this Report and the Quality of Your Municipal Water

For information about this report, or your water quality in general, please contact Darrick Escobedo at (562) 431-2527 ext. 1409.

For more information about the health effects of the listed contaminants in the following tables, call the USEPA hotline at (800) 426-4791.

We Comply with All State & Federal Water Quality Regulations

Disinfectants and Disinfection Byproducts

Disinfection of drinking water was one of the major public health advances in the 20th century. Disinfection was a major factor in reducing waterborne disease epidemics caused by pathogenic bacteria and viruses and it remains an essential part of drinking water treatment today.



Chlorine disinfection has almost completely eliminated from our lives the risks of microbial waterborne diseases. Chlorine is added to your drinking water at the source of supply (groundwater well or surface water treatment plant). Enough chlorine is added so that it does not completely dissipate through the distribution system pipes. This “residual” chlorine helps to prevent the growth of bacteria in the pipes that carry drinking water from the source into your home.

However, chlorine can react with naturally-occurring materials in the water to form unintended chemical byproducts, called disinfection byproducts (DBPs), which may pose health risks. A major challenge is how to balance the risks from microbial pathogens and DBPs. It is important to provide protection from these microbial pathogens

while simultaneously ensuring decreasing health risks from disinfection byproducts. The Safe Drinking Water Act requires the USEPA to develop rules to achieve these goals.

Trihalomethanes (THMs) and Haloacetic Acids (HAAs) are the most common and most studied DBPs found in drinking water treated with chlorine. In 1979, the USEPA set the maximum amount of total THMs allowed in drinking water at 100 parts per billion as an annual running average. Effective in January 2002, the Stage 1 Disinfectants / Disinfection Byproducts Rule lowered the total THM maximum annual average level to 80 parts per billion and added HAAs to the list of regulated chemicals in drinking water. Your drinking water complies with the Stage 1 Disinfectants / Disinfection Byproducts Rule.

Stage 2 of the regulation was finalized by the USEPA in 2006, which further controls allowable levels of DBPs in drinking water without compromising disinfection itself. A required distribution system evaluation was completed in 2008 and a Stage 2 monitoring plan has been approved by DDW. Full Stage 2 compliance began in 2012.

Immunocompromised People

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised people, such as those with cancer who are undergoing chemotherapy, persons who have had organ transplants, people with HIV/AIDS or other immune system disorders, and some elderly persons and infants can be particularly at risk to infection.



2022 Metropolitan Water District of Southern California Treated Surface Water

Chemical	MCL	PHG (MCLG)	Average Amount	Range of Detections	MCL Violation?	Typical Source of Chemical
Radiologicals – Tested in 2020 and 2022						
Gross Alpha Particle Activity (pCi/L)	15	(0)	ND	ND – 3	No	Erosion of Natural Deposits
Gross Beta Particle Activity (pCi/L)	50	(0)	6	ND – 9	No	Decay of Natural and Man-made Deposits
Uranium (pCi/L)	20	0.43	2	1 – 3	No	Erosion of Natural Deposits
Inorganic Chemicals – Tested in 2022						
Aluminum (ppm)	1	0.6	0.14	0.085 – 0.21	No	Treatment Process Residue, Natural Deposits
Barium (ppm)	1	2	0.107	0.107	No	Refinery Discharge, Erosion of Natural Deposits
Fluoride (ppm)	2	1	0.7	0.7 – 0.8	No	Water Additive for Dental Health
Secondary Standards* – Tested in 2022						
Aluminum (ppb)	200*	600	140	85 – 210	No	Treatment Process Residue, Natural Deposits
Chloride (ppm)	500*	n/a	101	98 – 104	No	Runoff or Leaching from Natural Deposits
Color (Color Units)	15*	n/a	1	1	No	Naturally-occurring Organic Materials
Odor (Threshold Odor Number)	3*	n/a	3	3	No	Naturally-occurring Organic Materials
Specific Conductance (µmho/cm)	1,600*	n/a	988	965 – 1,010	No	Substances that Form Ions in Water
Sulfate (ppm)	500*	n/a	221	213 – 229	No	Runoff or Leaching from Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	628	608 – 648	No	Runoff or Leaching from Natural Deposits
Unregulated Chemicals – Tested in 2022						
Alkalinity, total as CaCO ₃ (ppm)	Not Regulated	n/a	126	125 – 127	n/a	Runoff or Leaching from Natural Deposits
Boron (ppm)	NL = 1	n/a	0.13	0.13	n/a	Runoff or Leaching from Natural Deposits
Calcium (ppm)	Not Regulated	n/a	68	66 – 70	n/a	Runoff or Leaching from Natural Deposits
Hardness, total as CaCO ₃ (ppm)	Not Regulated	n/a	278	275 – 281	n/a	Runoff or Leaching from Natural Deposits
Hardness, total (grains/gallon)	Not Regulated	n/a	16	16	n/a	Runoff or Leaching from Natural Deposits
Magnesium (ppm)	Not Regulated	n/a	25	24 – 26	n/a	Runoff or Leaching from Natural Deposits
pH (pH units)	Not Regulated	n/a	8.1	8.1	n/a	Hydrogen Ion Concentration
Potassium (ppm)	Not Regulated	n/a	4.6	4.4 – 4.8	n/a	Runoff or Leaching from Natural Deposits
Sodium (ppm)	Not Regulated	n/a	98	95 – 102	n/a	Runoff or Leaching from Natural Deposits
Total Organic Carbon (ppm)	TT	n/a	2.5	2.3 – 2.6	n/a	Various Natural and Man-made Sources

ppb = parts per billion; ppm = parts per million; pCi/L = picoCuries per liter; µmho/cm = micromhos per centimeter; ND = not detected; n/a = not applicable; MCL = Maximum Contaminant Level; (MCLG) = federal MCL Goal; PHG = California Public Health Goal; NL = Notification Level; TT = treatment technique

*Chemical is regulated by a secondary standard.

Turbidity – combined filter effluent	Treatment Technique	Turbidity Measurements	TT Violation?	Typical Source of Chemical
Metropolitan Water District Diemer Filtration Plant				
1) Highest single turbidity measurement (NTU)	0.3	0.03	No	Soil Runoff
2) Percentage of samples less than or equal to 0.3 NTU	95%	100%	No	Soil Runoff

Turbidity is a measure of the cloudiness of the water, an indication of particulate matter, some of which might include harmful microorganisms. NTU = nephelometric turbidity units
Low turbidity in Metropolitan's treated water is a good indicator of effective filtration. Filtration is called a "treatment technique" (TT).
A treatment technique is a required process intended to reduce the level of chemicals in drinking water that are difficult and sometimes impossible to measure directly.

Unregulated Chemicals Requiring Monitoring

Chemical	Notification Level	PHG	Average Amount	Range of Detections	Most Recent Sampling Date
Germanium (ppb)	n/a	n/a	0.1	ND – 0.4	2018
Manganese (ppb)**	SMCL = 50	n/a	1.7	0.8 – 2.5	2018

SMCL = Secondary MCL **Manganese is regulated with a secondary standard of 50 ppb but was not detected, based on the detection limit for purposes of reporting of 20 ppb. Manganese was included as part of the unregulated chemicals requiring monitoring.

Chart Legend

What are Water Quality Standards?

Drinking water standards established by USEPA and DDW set limits for substances that may affect consumer health or aesthetic qualities of drinking water. The charts in this report show the following types of water quality standards:

- ◆ **Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible.
- ◆ **Maximum Residual Disinfectant Level (MRDL):** 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.
- ◆ **Secondary MCLs** are set to protect the odor, taste, and appearance of drinking water.
- ◆ **Primary Drinking Water Standard:** MCLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.
- ◆ **Regulatory Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

What is a Water Quality Goal?

In addition to mandatory water quality standards, USEPA and DDW have set voluntary water quality goals for some contaminants. Water quality goals are often set at such low levels that they are not achievable in practice and are not directly measurable. Nevertheless, these goals provide useful guideposts and direction for water management practices. The charts in this report include three types of water quality goals:

- ◆ **Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by USEPA.
- ◆ **Maximum Residual Disinfectant Level Goal (MRDLG):** 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.
- ◆ **Public Health Goal (PHG):** 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.

How are Contaminants Measured?

Water is sampled and tested throughout the year. Contaminants are measured in:

- ◆ parts per million (ppm) or milligrams per liter (mg/L)
- ◆ parts per billion (ppb) or micrograms per liter (µg/L)
- ◆ parts per trillion (ppt) or nanograms per liter (ng/L)

These people should seek advice about drinking water from their health care providers.

The USEPA and the national Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from USEPA's Safe Drinking Water Hotline at (800) 426-4791, or the web at www.epa.gov/safewater.



Drinking Water Fluoridation

Fluoride has been added to U.S. drinking water supplies since 1945. Of the 50 largest cities in the U.S., 43 fluoridate their drinking water. In December 2007, MWD joined a majority of the nation's public water suppliers in adding fluoride to drinking water in order to prevent tooth decay. MWD was in compliance with all provisions of the State's fluoridation system requirements.

Our two local groundwater wells are not supplemented with fluoride; they have naturally occurring fluoride levels of 0.44 parts per million or less.

Fluoride levels in drinking water are limited under California state regulations at a maximum dosage of 2 parts per million.

Additional information about the fluoridation of drinking water is available on these websites:

**U.S. Centers
for Disease Control and Prevention:**
www.cdc.gov/fluoridation/

**State Water Resources
Control Board,
Division of Drinking Water**
www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.html

For more information about MWD's fluoridation program, please contact Edgar G. Dymally at (213) 217-5709 or by email at edymally@mwdh2o.com.

Source Water Assessments

Imported (MWDSC) Water Assessment

Every five years, MWD is required by DDW to examine possible sources of drinking water contamination in its State Water Project and Colorado River source waters.

The most recent surveys for MWD's source waters are the Colorado River Watershed Sanitary Survey – 2020 Update, and the State Water Project Watershed Sanitary Survey – 2021 Update.

Water from the Colorado River is considered to be most vulnerable to contamination from recreation, urban/ storm-water runoff, increasing urbanization in the watershed, and wastewater. Water supplies from Northern California's State Water Project are most vulnerable to contamination from urban/stormwater runoff, wildlife, agriculture, recreation, and wastewater.

USEPA also requires MWD to complete one Source Water Assessment (SWA) that utilizes information collected in the watershed sanitary surveys. MWD completed its SWA in December 2002. The SWA is used to evaluate the vulnerability of water sources to contamination and helps determine whether more protective measures are needed.

A copy of the most recent summary of either Watershed Sanitary Survey or the SWA can be obtained by calling MWD at (800) CALL-MWD (225-5693).

Groundwater Assessment

An assessment of the drinking water sources for the City of Seal Beach was completed in December 2002 and updated in June 2007 for the addition of a new drinking water source well (Lampson Well). The groundwater sources are considered most vulnerable to the following activities not associated with detected contaminants: sewer collection systems, military installations, irrigated crops, golf courses, housing — high density, and wells — water supply.

A copy of the complete assessment is available at State Water Resources Control Board, Division of Drinking Water, 2 MacArthur Place, Suite 150, Santa Ana, California 92707. You may request a summary of the assessment by contacting the City of Seal Beach Utilities Division at (562) 431-2527 ext. 1409.

2022 City of Seal Beach Groundwater Quality

Chemical	MCL	PHG (MCLG)	Average Amount	Range of Detections	MCL Violation?	Most Recent Sampling Date	Typical Source of Contaminant
Radiologicals							
Uranium (pCi/L)	20	0.43	2.18	ND – 4.35	No	2019	Erosion of Natural Deposits
Inorganic Chemicals							
Fluoride (ppm)	2	1	0.42	0.39 – 0.44	No	2020	Erosion of Natural Deposits
Secondary Standards*							
Chloride (ppm)	500*	n/a	12.3	12.2 – 12.3	No	2022	Erosion of Natural Deposits
Specific Conductance (µmho/cm)	1,600*	n/a	362	316 – 406	No	2022	Erosion of Natural Deposits
Sulfate (ppm)	500*	n/a	33.1	30.6 – 35.6	No	2020	Erosion of Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	233	216 – 250	No	2020	Erosion of Natural Deposits
Unregulated Chemicals							
Alkalinity, total (ppm as CaCO ₃)	Not Regulated	n/a	138	134 – 142	n/a	2022	Erosion of Natural Deposits
Bicarbonate (ppm as HCO ₃)	Not Regulated	n/a	156	138 – 173	n/a	2022	Erosion of Natural Deposits
Calcium (ppm)	Not Regulated	n/a	20.6	13.4 – 27.7	n/a	2022	Erosion of Natural Deposits
Hardness, total (ppm as CaCO ₃)	Not Regulated	n/a	61.6	23.1 – 100	n/a	2020	Erosion of Natural Deposits
Hardness, total (grains/gallon)	Not Regulated	n/a	3.6	1.3 – 5.8	n/a	2020	Erosion of Natural Deposits
Magnesium (ppm)	Not Regulated	n/a	2.7	ND – 5.4	n/a	2020	Erosion of Natural Deposits
pH (pH units)	Not Regulated	n/a	8.4	8.2 – 8.5	n/a	2022	Acidity, hydrogen ions
Potassium (ppm)	Not Regulated	n/a	1	0.7 – 1.8	n/a	2020	Erosion of Natural Deposits
Sodium (ppm)	Not Regulated	n/a	59.9	47.4 – 72.3	n/a	2020	Erosion of Natural Deposits

ppb = parts-per-billion; ppm = parts-per-million; µmho/cm = micromhos per centimeter; pCi/L = picoCuries per liter; ND = not detected; n/a = not applicable; MCL = Maximum Contaminant Level; PHG = California Public Health Goal

*Contaminant is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).

Unregulated Chemicals Requiring Monitoring

Chemical	Notification Level	PHG	Average Amount	Range of Detections	Most Recent Sampling Date
Bromide (ppm)	n/a	n/a	0.05	0.036 – 0.083	2019
Germanium (ppb)	n/a	n/a	0.13	ND – 0.4	2019
Manganese (ppb)**	SMCL = 50	n/a	1.7	ND – 5.8	2019
Total Organic Carbon (Unfiltered) (ppm)	n/a	n/a	0.31	0.08 – 0.65	2019

SMCL = Secondary MCL **Manganese is regulated with a secondary standard of 50 ppb but was not detected, based on the detection limit for purposes of reporting of 20 ppb. Manganese was included as part of the unregulated chemicals requiring monitoring.

2022 City of Seal Beach Distribution System Water Quality

Disinfection Byproducts	MCL (MRDL/MRDLG)	Average Amount	Range of Detections	MCL Violation?	Typical Source of Contaminant
Total Trihalomethanes (ppb)	80	28	6.6 – 40	No	Byproducts of chlorine disinfection
Haloacetic Acids (ppb)	60	8	ND – 13	No	Byproducts of chlorine disinfection
Chlorine Residual (ppm)	(4 / 4)	1.27	0.35 – 3.02	No	Disinfectant added for treatment
Aesthetic Quality					
Turbidity (NTU)	5*	0.24	ND – 1.2	No	Erosion of natural deposits

Four locations in the distribution system are tested quarterly for total trihalomethanes and haloacetic acids; Eighteen locations are tested monthly for color, odor and turbidity. Color and odor were not detected in 2022.

MRDL = Maximum Residual Disinfectant Level; MRDLG = Maximum Residual Disinfectant Level Goal

*Contaminant is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).

Lead and Copper Action Levels at Residential Taps

	Action Level (AL)	Public Health Goal	90 th Percentile Value	Sites Exceeding AL / Number of Sites	AL Violation?	Typical Source of Contaminant
Lead (ppb)	15	0.2	ND	0 / 31	No	Corrosion of household plumbing
Copper (ppm)	1.3	0.3	0.21	0 / 31	No	Corrosion of household plumbing

Every three years, at least 30 residences are tested for lead and copper at-the-tap. The most recent set of samples was collected in 2021.

Copper was found in 15 homes; none exceeded the regulatory action level. Lead was not found in any home.

The regulatory action level is the concentration of lead or copper which, if exceeded in more than ten percent of the homes tested, triggers treatment or other requirements that a water system must follow.

Unregulated Chemicals Requiring Monitoring in the Distribution System

Chemical	Notification Level	PHG	Average Amount	Range of Detections	Most Recent Sampling Date
Bromochloroacetic Acid (ppb)	n/a	n/a	2.8	1.1 – 4.6	2019
Bromodichloroacetic Acid (ppb)	n/a	n/a	1.2	0.7 – 2.1	2019
Chlorodibromoacetic Acid (ppb)	n/a	n/a	0.72	ND – 1.3	2019
Dibromoacetic Acid (ppb)	n/a	n/a	1.5	0.4 – 2.8	2019
Dichloroacetic Acid (ppb)	n/a	MCLG = 0	4.8	1.2 – 8.8	2019
Monobromoacetic Acid (ppb)	n/a	n/a	0.07	ND – 0.4	2019
Trichloroacetic Acid (ppb)	n/a	MCLG = 20	1.9	0.7 – 4.2	2019

Every Drop is Golden...

"And it never failed that during the dry years the people forgot about the rich years, and during the wet years they lost all memory of the dry years. It was always that way."

~ JOHN STEINBECK, 1952

Plentiful rains. A Sierra snowpack over 200% of normal. Blizzards in Southern California! For those of us weary of drought, this Winter's storms were a welcome relief. But gratifying as the season proved, we need to continue our conservation efforts to safeguard our natural resources. For even with full reservoirs and slowly replenishing aquifers, the cyclical nature of California's water fortunes, coupled with our arid climate, guarantees a return to drought in years to come.

Much has changed since Steinbeck's day. Water conservation has become a way of life. No longer seen as a temporary patch for times of drought, conservation's role as protector of our shared waters is engrained in our behavior. We recognize it doesn't mean we must use less water, only that we not waste the water we have. By saving water today, we ensure we'll have it tomorrow — for every drop is golden!



City of Seal Beach

Utilities Division

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