

APPENDIX B: eCCR Certification Form (Suggested Format)

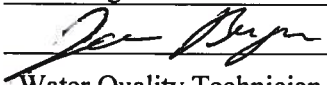
Consumer Confidence Report Certification Form

(To be submitted with a copy of the CCR)

Water System Name: City of Garden Grove

Water System Number: 3010062

The water system named above hereby certifies that its Consumer Confidence Report was distributed on 6/27/19 to customers (and appropriate notices of availability have been given). Further, the system certifies that the information contained in the report is correct and consistent with the compliance monitoring data previously submitted to the State Water Resources Control Board, Division of Drinking Water (DDW).

Certified by: Name: Jan Berger
Signature: 
Title: Water Quality Technician
Phone Number: (714) 741-5897 Date: 9/10/19

To summarize report delivery used and good-faith efforts taken, please complete this page by checking all items that apply and fill-in where appropriate:

- ☐ CCR was distributed by mail or other direct delivery methods (attach description of other direct delivery methods used).
- ☒ CCR was distributed using electronic delivery methods described in the Guidance for Electronic Delivery of the Consumer Confidence Report (water systems utilizing electronic delivery methods must complete the second page).
- ☒ "Good faith" efforts were used to reach non-bill paying consumers. Those efforts included the following methods:
 - ☒ Posting the CCR at the following URL: www.ggcity.org/ccr
 - ☐ Mailing the CCR to postal patrons within the service area (attach zip codes used)
 - ☐ Advertising the availability of the CCR in news media (attach copy of press release)
 - ☐ Publication of the CCR in a local newspaper of general circulation (attach a copy of the published notice, including name of newspaper and date published)
 - ☒ Posted the CCR in public places (attach a list of locations)
 - ☐ Delivery of multiple copies of CCR to single-billed addresses serving several persons, such as apartments, businesses, and schools
 - ☐ Delivery to community organizations (attach a list of organizations)
 - ☐ Publication of the CCR in the electronic city newsletter or electronic community newsletter or listserv (attach a copy of the article or notice)
 - ☒ Electronic announcement of CCR availability via social media outlets (attach list of social media outlets utilized)
 - ☐ Other (attach a list of other methods used)
- ☒ *For systems serving at least 100,000 persons:* Posted CCR on a publicly-accessible internet site at the following URL: www.ggcity.org/ccr
- ☐ *For privately-owned utilities:* Delivered the CCR to the California Public Utilities Commission

Consumer Confidence Report Electronic Delivery Certification

Water systems utilizing electronic distribution methods for CCR delivery must complete this page by checking all items that apply and fill-in where appropriate.

- ☒ Water system mailed a notification that the CCR is available and provides a direct URL to the CCR on a publicly available website where it can be viewed (attach a copy of the mailed CCR notification). URL: www.ggcity.org/ccr
- ☐ Water system emailed a notification that the CCR is available and provides a direct URL to the CCR on a publicly available site on the Internet where it can be viewed (attach a copy of the emailed CCR notification). URL: www._____
- ☐ Water system emailed the CCR as an electronic file email attachment.
- ☐ Water system emailed the CCR text and tables inserted or embedded into the body of an email, not as an attachment (attach a copy of the emailed CCR).
- ☐ *Requires prior DDW review and approval.* Water system utilized other electronic delivery method that meets the direct delivery requirement.

Provide a brief description of the water system's electronic delivery procedures and include how the water system ensures delivery to customers unable to receive electronic delivery.

CUSTOMERS CAN REQUEST A HARD COPY OF THE CCR BY CALLING OR EMAILING A REQUEST. THE CCR IS ALSO AVAILABLE AT THE CITY FACILITIES.

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper appears to be a standard notebook page.

This form is provided as a convenience and may be used to meet the certification requirement of section 64483(c) of the California Code of Regulations.

List of locations where the CCR was posted

- 13802 Newhope St, Garden Grove, CA 92843 (Garden Grove Public Works Department)
- 11222 Acacia Pkwy, Garden Grove, CA 92840 (Garden Grove City Hall)
- 11300 Stanford Ave, Garden Grove, CA 92840 (H. Louis Lake Senior Center)

CCR Availability via Social Media

-Facebook

-Instagram



Dear Resident:

Your 2019 City of Garden Grove Water Consumer Confidence Report will be available July 1, 2019. This year's report contains information about the source and quality of your drinking water. To view the report, visit ggcity.org/ccr. Please note, Adobe Acrobat Reader must be installed onto your computer to view the report. If you would like the report mailed to you, call (714) 741-5395 or email wqdata@ggcity.org.

Sincerely,

City of Garden Grove
Water Services Division



Estimado Residente:

El **2019** Informe de la Confianza del Consumidor de Agua de la Ciudad de Garden Grove estará disponible el 1 de julio del 2019. Este informe contiene noticias sobre las fuentes y calidad de su agua potable. Vea el 2019 informe en el sitio de web www.ggcity.org/ccr.

Se necesita tener Adobe Acrobat Reader instalado en su computadora para ver el informe. Si prefiere una copia impresa del informe, llame al (714) 741-5395 o mande un correo electrónico a wqdata@ggcity.org.

Atentamente,

La División de Servicios de Agua de Garden Grove

Kính gửi các cư dân:

Bản Báo Cáo Cần Mật cho Người Tiêu Thụ Nước của Thành Phố Garden Grove **2019** sẽ có sẵn vào ngày 1 tháng 7, 2019. Báo cáo năm nay bao gồm các thông tin về nguồn và chất lượng nước uống của quý vị.

Hãy truy cập vào www.ggcity.org/ccr.

Quý vị phải có Adobe Acrobat Reader cài đặt trên máy vi tính để xem bản báo cáo. Nếu quý vị muốn có một bản báo cáo gửi đến nhà, xin vui lòng gọi (714) 741-5395 hoặc email wqdata@ggcity.org.

Cám ơn quý vị,

Bộ phận phục vụ cung cấp nước của
Thành Phố Garden Grove

주민들에게 알려드립니다:

2019 년도 가든 그로브시 수질 보고서가 2019년 7월 1일부터 제공될 예정입니다. 올해 보고서에는 식수의 출처와 수질에 대한 정보가 포함되어 있습니다.

보고서를 보시려면 ggcity.org/ccr를 방문하십시오.

보고서를 보시려면 Adobe Acrobat Reader가 컴퓨터에 설치되어 있어야 합니다. 보고서를 우편으로

받아보시길 원하시면 (714) 741-5395로 전화 하시거나 wqdata@ggcity.org로 이메일을 보내 주십시오.

감사합니다,

가든 그로브 시
수도 서비스



2019 WATER QUALITY REPORT

GARDEN GROVE
Water Services Division



*Snowcapped
Southern California Mountains*

DATA FOR 2018

Your 2019 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 2018 drinking water quality testing and reporting.**

The City of Garden Grove Water Services Division (City) vigilantly safeguards its water supply and, as in years past, 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 goes beyond what is required by testing for unregulated chemicals that may have known health risks but do not have drinking water standards. For example, the Orange County Water District (OCWD), which manages the groundwater basin, and the Metropolitan Water District of Southern California (MWDSC), which supplies imported treated surface water to the City test for unregulated chemicals in our water supply. Unregulated chemical monitoring helps



USEPA and DDW determine where certain chemicals occur and whether new standards need to be established for those chemicals to protect public health.

Through drinking water quality testing programs carried out

by OCWD for groundwater, MWDSC for treated surface water and the City for the water 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.

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

Este informe contiene información importante sobre su agua potable.
Para mas información o traducción, favor contactar a nuestro representantes de servicio.

Questions about your water? Contact us for answers.

For information about this report, or your water quality in general, please contact the Water Quality Staff at (714) 741-5395.

Public City Council meetings are held on the second and fourth Tuesdays of each month at 6:45 p.m. in the Council Chambers at the Community Meeting Center, 11300 Stanford Avenue, Garden Grove, California. You may also contact our City Clerk's Office, Garden Grove City Hall, 11222 Acacia Parkway, Garden Grove, CA 92840 or call (714) 741-5040 for information about Garden Grove City Council meetings. Please feel free to participate in these meetings.

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

يحتوي هذا التقرير على معلومات هامة عن نوعية ماء الشرب في منطقتك يرجى ترجمته أو البحث للتقرير مع جليلك لك بفهم هذه المعلومات جيداً

这份报告含有重要的信息，讲到关于您所在社区的水的品质。请您找人翻译一下，或者请能看懂这份报告的朋友给您解释一下。

この資料には、あなたの飲料水についての大切な情報が書かれています。内容をよく理解するために、日本語に翻訳して読むか説明を受けてください。

이 보고서는 귀하가 거주하는 지역의 수질에 관한 중요한 정보가 들어 있습니다. 이것을 번역하거나 충실히 이해하시는 친구와 상의하십시오.

Bản báo cáo có ghi những chỉ tiết quan trọng về phẩm chất nước trong cộng đồng quý vị. Hãy nhờ người thông dịch, hoặc hỏi một người bạn biết rõ về văn đề này.

The Quality of Your Water is Our Primary Concern

Sources of Supply

Your drinking water is a blend of mostly groundwater from 12 wells in the Orange County groundwater basin and also surface water imported by MWDSC. MWDSC's imported water sources are a blend of State Water Project water from Northern California and water from the Colorado River Aqueduct. Your groundwater comes from a natural underground reservoir managed by the Orange County Water District (OCWD) that stretches from the Prado Dam and fans across the northwestern portion of Orange County, excluding the communities of Brea and La Habra, and stretching as far south as the El Toro 'Y.'

Last year, as in years past, your tap water met all USEPA and state drinking water health standards. The City vigilantly safeguards its water supplies and once again, we are proud to report that our system has never violated a maximum contaminant level (MCL) or any other water quality standard. This brochure is a snapshot of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to federal and state standards.

Depend On Us to Deliver Quality Water

Turn the tap and the water flows, as if by magic. Or so it seems. The reality is considerably different, however. Delivering high-quality drinking water to our customers is a scientific and engineering feat that requires considerable effort and talent to ensure the water is always there, always safe to drink.



Because tap water is highly regulated by state and federal laws, water treatment and distribution operators must be licensed and are required to complete on-the-job training and technical education before becoming a state certified operator.

Our licensed water professionals have an understanding of a wide range of subjects, including mathematics, biology, chemistry, physics, and engineering. Some of the tasks they complete on a regular basis include:

- Operating and maintaining equipment to purify and clarify water;
- Monitoring and inspecting machinery, meters, gauges, and operating conditions;
- Conducting tests and inspections on water and evaluating the results;
- Documenting and reporting test results and system operations to regulatory agencies; and
- Serving our community through customer support, education, and outreach.

So, the next time you turn on your faucet, think of the skilled professionals who stand behind every drop

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.
- **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or result from urban stormwater 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.
- **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, 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.

In order 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.

Federal and State Water Quality Regulations

— Water Quality Issues that Could Affect Your Health —

Immuno-Compromised People



Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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, some elderly persons, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

Cryptosporidium

Cryptosporidium is a microscopic organism that, when ingested, can cause diarrhea, fever, and other gastrointestinal symptoms. The organism comes from animal and/or human wastes and may be in surface water. MWDSC tested its source water and treated surface water for *Cryptosporidium* in 2018, but did not detect it. If it ever is detected, *Cryptosporidium* is eliminated by an effective treatment combination including sedimentation, filtration, and disinfection.

The USEPA and the federal 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 between 10 a.m. and 4 p.m. Eastern Time (7 a.m. to 1 p.m. in California).

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 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 at: www.epa.gov/safewater/lead.

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, MWDSC joined a majority of the nation's public water suppliers in adding fluoride to drinking water in order to prevent tooth decay. In line with recommendations from the DDW, as well as the U.S. Centers for Disease Control and Prevention, MWDSC adjusted the natural fluoride level in imported treated water from the Colorado River and State Project water to the optimal range for dental health of 0.6 to 1.2 parts per million. Our local water is not supplemented with fluoride. Fluoride levels in drinking water are limited under California state regulations at a maximum dosage of 2 parts per million.



Nitrate Advisory

At times, nitrate in your tap water may have exceeded one-half the MCL, but it was never greater than the MCL of 10 milligrams per liter (mg/L). Nitrate in your drinking water in 2018 ranged from 2.2 to 5.5 mg/L. The following advisory is issued because in 2018 we recorded nitrate measurements in the drinking water supply which exceeded one-half the nitrate MCL.

Nitrate in drinking water at levels above 10 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

For Your Information...

Disinfection: Water provided by the City contains chlorine used for disinfection and chloramines used by MWDSC, also for disinfection purposes. Customers on kidney dialysis should consult their physicians.

Fish or Amphibians: If you have fish or amphibians, make sure to remove any chloramines and chlorine before changing or adding water to the tanks. Remember, allowing drinking water to stand will not remove chloramines. Consult your local aquarium store for products that will remove the disinfectants.



2018 Metropolitan Water District of Southern California Treated Surface Water

Chemical	MCL	PHG, or (MCLG)	Average Amount	Range of Detections	MCL Violation?	Typical Source of Contaminant
Inorganic Chemicals – Tested in 2018						
Aluminum (ppm)	1	0.6	0.124	ND – 0.31	No	Treatment Process Residue, Natural Deposits
Barium (ppm)	1	2	0.117	0.117	No	Refinery Discharge, Erosion of Natural Deposits
Bromate (ppb)	10	0.1	2	ND – 4.7	No	Byproduct of Drinking Water Disinfection
Fluoride (ppm) treatment-related	2	1	0.7	0.6 – 0.9	No	Water Additive for Dental Health
Secondary Standards* – Tested in 2018						
Aluminum (ppb)	200*	600	124	ND – 310	No	Treatment Process Residue, Natural Deposits
Chloride (ppm)	500*	n/a	94	92 – 95	No	Runoff or Leaching from Natural Deposits
Color (color units)	15*	n/a	ND	ND – 1	No	Naturally-occurring Organic Materials
Odor (threshold odor number)	3*	n/a	2	1 – 4	No	Naturally-occurring Organic Materials
Specific Conductance (µmho/cm)	1,600*	n/a	906	852 – 961	No	Substances that Form Ions in Water
Sulfate (ppm)	500*	n/a	199	178 – 220	No	Runoff or Leaching from Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	565	523 – 607	No	Runoff or Leaching from Natural Deposits
Unregulated Chemicals – Tested from 2014 – 2018						
Alkalinity, total as CaCO ₃ (ppm)	Not Regulated	n/a	106	99 – 114	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	58	52 – 65	n/a	Runoff or Leaching from Natural Deposits
Chromium, Total (ppb)**	50	(100)	0.5	0.5	n/a	Erosion of Natural Deposits; Industrial Discharge
Germanium (ppb)	Not Regulated	n/a	0.1	ND – 0.4	n/a	Erosion of Natural Deposits; Industrial Discharge
Hardness, total as CaCO ₃ (ppm)	Not Regulated	n/a	240	219 – 262	n/a	Runoff or Leaching from Natural Deposits
Hardness, total (grains/gallon)	Not Regulated	n/a	14	13 – 15	n/a	Runoff or Leaching from Natural Deposits
Manganese (ppb)***	50*	n/a	2.23	0.8 – 3.3	n/s	Erosion of Natural Deposits
Magnesium (ppm)	Not Regulated	n/a	23	21 – 25	n/a	Runoff or Leaching from Natural Deposits
Molybdenum, Total (ppb)	Not Regulated	n/a	5	5	n/a	Erosion of Natural Deposits
pH (pH units)	Not Regulated	n/a	8.1	8.1	n/a	Hydrogen Ion Concentration
Potassium (ppm)	Not Regulated	n/a	4.4	4.0 – 4.8	n/a	Runoff or Leaching from Natural Deposits
Sodium (ppm)	Not Regulated	n/a	92	86 – 98	n/a	Runoff or Leaching from Natural Deposits
Strontium, Total (ppb)	Not Regulated	n/a	1,070	1,070	n/a	Erosion of Natural Deposits
Total Organic Carbon (ppm)	TT	n/a	2.4	2.1 – 2.7	n/a	Various Natural and Man-made Sources
Vanadium, Total (ppb)	NL=50	n/a	2.3	2.3	n/a	Erosion of Natural Deposits; Industrial Discharge

ppb = parts per billion; ppm = parts per million; µmho/cm = micromhos per centimeter; ND = not detected.

MCL = Maximum Contaminant Level; (MCLG) = federal MCL Goal; PHG = California Public Health Goal

NL = Notification Level; n/a = not applicable; TT = treatment technique

*Chemical is regulated by a secondary standard.

**Total chromium is regulated with an MCL of 50 ppb but was not detected, based on the detection limit for purposes of reporting of 10 ppb. Total chromium was included as part of the unregulated chemicals requiring monitoring.

***Manganese is regulated with a secondary standard 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.

Turbidity – combined filter effluent Metropolitan Water District Diemer Filtration Plant	Treatment Technique	Turbidity Measurements	TT Violation?	Typical Source of Contaminant
1) Highest single turbidity measurement	0.3 NTU	0.07	No	Soil Runoff
2) Percentage of samples less than 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.

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.

NTU = nephelometric turbidity units

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.

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)

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 chart in this report includes 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.

2018 City of Garden Grove Groundwater Quality

Chemical	MCL	PHG (MCLG)	Average Amount	Range of Detections	MCL Violation?	Most Recent Sampling Date	Typical Source of Contaminant
Radiologicals							
Gross Alpha (pCi/L)	15	(0)	<3	ND – 5.2	No	2018	Erosion of Natural Deposits
Uranium (pCi/L)	20	0.43	<1	5.39 – 13.5	No	2018	Erosion of Natural Deposits
Inorganic Chemicals							
Arsenic (ppb)	10	0.004	<2	ND – 2.4	No	2018	Erosion of Natural Deposits
Barium (ppm)	1	2	<1	ND – 0.112	No	2018	Erosion of Natural Deposits
Fluoride (ppm)	2	1	0.45	0.41 – 0.49	No	2018	Erosion of Natural Deposits
Nitrate (ppm as N)	10	10	3.7	2.2 – 5.5	No	2018	Fertilizers, Septic Tanks
Nitrate+Nitrite (ppm as N)	10	10	3.7	2.2 – 5.5	No	2018	Fertilizers, Septic Tanks
Perchlorate (ppb)	6	1	<4	ND – 4.6	No	2018	Industrial Discharge
Secondary Standards*							
Chloride (ppm)	500*	n/a	74.6	38 – 119	No	2018	Erosion of Natural Deposits
Iron (ppb)	300*	n/a	<100	ND – 206	No	2018	Erosion of Natural Deposits
Manganese (ppb)	50*	n/a	<20	ND – 20.8	No	2018	Erosion of Natural Deposits
Specific Conductance (µmho/cm)	1,600*	n/a	866	590 – 1,200	No	2018	Erosion of Natural Deposits
Sulfate (ppm)	500*	n/a	122	73.4 – 174	No	2018	Erosion of Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	554	360 – 746	No	2018	Erosion of Natural Deposits
Turbidity (NTU)	5*	n/a	0.14	ND – 0.8	No	2018	Erosion of Natural Deposits
Unregulated Constituents							
Alkalinity, total (ppm as CaCO ₃)	Not Regulated	n/a	183	164 – 234	n/a	2018	Erosion of Natural Deposits
Boron (ppm)	NL = 1	n/a	<0.1	ND – 0.26	n/a	2018	Erosion of Natural Deposits
Bromide (ppm)	Not Regulated	n/a	0.23	0.11 – 0.62	n/a	2018	Industrial Discharge
Calcium (ppm)	Not Regulated	n/a	101	67 – 124	n/a	2018	Erosion of Natural Deposits
Chromium, Hexavalent (ppb)	Not Regulated	0.02	1.4	ND – 1.8	No	2018	Erosion of Natural Deposits; Industrial Discharge
Germanium (ppb)	Not Regulated	n/a	0.04	ND – 0.3	n/a	2018	Erosion of Natural Deposits; Industrial Discharge
Hardness, total (grains/gal)	Not Regulated	n/a	19	13 – 24	n/a	2018	Erosion of Natural Deposits
Hardness, total (ppm as CaCO ₃)	Not Regulated	n/a	325	214 – 413	n/a	2018	Erosion of Natural Deposits
Magnesium (ppm)	Not Regulated	n/a	18	11.3 – 24.9	n/a	2018	Erosion of Natural Deposits
Manganese (ppb)**	50*	n/a	0.23	ND – 1.8	n/a	2018	Erosion of Natural Deposits
pH (pH units)	Not Regulated	n/a	7.8	7.7 – 8	n/a	2018	Acidity, hydrogen ions
Potassium (ppm)	Not Regulated	n/a	3.9	3.1 – 5.5	n/a	2018	Erosion of Natural Deposits
Total Organic Carbon (Unfiltered)(ppm)	Not Regulated	n/a	0.27	0.17 – 0.45	n/a	2018	Various Natural and Man-made Sources
Sodium (ppm)	Not Regulated	n/a	52.5	35.4 – 90.4	n/a	2018	Erosion of Natural Deposits
Vanadium, Total (ppb)	NL=50	n/a	<3	ND – 4.3	n/a	2018	Erosion of Natural Deposits; Industrial Discharge

ppb = parts-per-billion; ppm = parts-per-million; ppt = parts per trillion; pCi/L = picoCuries per liter; NTU = nephelometric turbidity units; ND = not detected; n/a = not applicable
 < = average is less than the detect on limit for reporting purposes; MCL = Maximum Contaminant Level; (MCLG) = federal MCL Goal; PHG = California Public Health Goal
 µmho/cm = micromho per centimeter *Contaminant is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).

**Manganese was included as part of the unregulated constituents requiring monitoring.

2018 City of Garden Grove Distribution System Water Quality

Disinfection Byproducts	MCL (MRDL/MRDLG)	Average Amount	Range of Detections	MCL Violation?	Typical Source of Contaminant
Total Trihalomethanes (ppb)	80	20	ND – 46	No	Byproducts of Chlorine Disinfection
Haloacetic Acids (ppb)	60	9	ND – 24	No	Byproducts of Chlorine Disinfection
Chlorine Residual (ppm)	(4 / 4)	1.09	0.2 – 2.48	No	Disinfectant Added for Treatment
Aesthetic Quality					
Color (color units)	15*	0.48	ND – 14	No	Erosion of Natural Deposits
Turbidity (NTU)	5*	< 0.1	ND – 0.253	No	Erosion of Natural Deposits

Eight locations in the distribution system are tested quarterly for total trihalomethanes and haloacetic acids; 33 locations are tested each month for color, odor and turbidity. Odor was not detected in 2018.

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)	Health Goal	90 th Percentile Value	Sites Exceeding AL / Number of Sites	AL Violation?	Typical Source of Contaminant
Lead (ppb)	15	0.2	ND<5	0 / 52	No	Corrosion of Household Plumbing
Copper (ppm)	1.3	0.3	0.25	0 / 52	No	Corrosion of Household Plumbing

Every three years, at least 50 residences are tested for lead and copper at-the-tap. The most recent set of samples was collected in 2016. Lead was not detected. Copper was detected above the reporting level in 46 samples, but none of the samples exceeded the copper Action Level. A regulatory Action Level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

In 2018, no school submitted a request to be sampled for lead.

Unregulated Chemicals Requiring Monitoring

Constituent	Notification Level	PHG	Average Amount	Range of Detections	Most Recent Sampling Dates
Dibromoacetic Acid (ppb)	n/a	n/a	0.64	0.4 – 0.9	2018

Source Water Assessments

Imported (MWDSC) Water Assessment

Every five years, MWDSC 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 watershed sanitary surveys of its source water supplies from the Colorado River was updated in 2015 and the State Water Project was updated in 2016.

Water from the Colorado River is considered to be most vulnerable to contamination from recreation, urban/stormwater 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 MWDSC to complete one Source Water Assessment (SWA) that utilizes information collected in the watershed sanitary surveys. MWDSC 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 MWDSC at (800) CALL-MWD (225-5693).

Groundwater Assessment

An assessment of the drinking water sources for the City was completed in December 2002. The groundwater sources are considered most vulnerable to the following activities associated with contaminants detected in the water supply: known contaminant plumes, historic agricultural activities and application of fertilizers, and parks. The groundwater sources are considered most vulnerable to the following activities not associated with detected contaminants: confirmed leaking underground storage tanks, dry cleaners, gas stations, and photo processing/printing.

A copy of the complete assessment is available at State Water Resources Control Board, Division of Drinking Water, 605 W. Santa Ana Boulevard, Building 28, Room 325, Santa Ana, California 92701. You may request a summary of the assessment by contacting the City at (714) 741-5395.