



City of Dunedin 2011 Annual Water Quality Report



Award Winning Water: During 2011, your Dunedin drinking water won the Region IV American Water Works Association "Best Tasting Drinking Water" competition.

The City of Dunedin Water Division is pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. The report also includes information about conservation, services we provide and other things you should know about your drinking water. Our constant goal is to provide a safe and dependable supply of drinking water and to continually improve the water treatment process. We are committed to ensuring the quality of the water you drink and the protection of our ground water, which is the source of our water. Our drinking water originates in the Floridan aquifer and is pumped out of the ground by wells located throughout the City of Dunedin. The untreated water is transmitted through a network of underground pipes to our Reverse Osmosis Water Treatment Plant where it is purified, chlorinated for disinfection purposes, and fluoridated for dental health purposes before it is distributed to customers.

CITY OF DUNEDIN DRINKING WATER MEETS ALL STATE AND FEDERAL STANDARDS

Important Health Information

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, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. Environmental Protection Agency/Center for Disease Control (EPA/CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline at 800-426-4791.

Source Water Assessment

In 2011 the Florida Department of Environmental Protection (FDEP) performed a Source Water Assessment on our system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of our wells. According to the assessment, there are 31 potential sources of contamination identified for our system, with susceptibility levels ranging from low to high. The potential sources of contamination include petroleum storage tanks and dry cleaning facilities. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp or they can be obtained from the City of Dunedin Water Division located at 1401 County Road 1, Dunedin, FL 34698 or by calling 727-298-3100.

General Contaminate Source Information

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. The source of the City's drinking water is ground water. Ground water is one part of the hydrologic cycle. 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 human activity.

Contaminants that may be present in source water include:

- (A) Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- (B) 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, or farming.
- (C) Pesticides and Herbicides, which may come from a variety of sources such as agriculture, fertilizers, urban stormwater runoff, and residential uses.
- (D) Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.
- (E) Radioactive Contaminants, which can be naturally occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which 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 Environmental Protection Agency's Safe Drinking Water Hotline at 800-426-4791.

Water Conservation

In 2011, your Water Division distributed 1.15 billion gallons of water to City of Dunedin customers. That is an average of 3.2 million gallons per day, or 66.0 gallons per person per day calculated by taking the total number of single family accounts multiplied by 2.31 persons per household and the total number of multi-family accounts multiplied by 1.31 persons per household and divided into the total metered water usage by these customers. The City of Dunedin has replaced thousands of feet of water mains to ensure water quality, water pressure, and reduce leakage in the distribution system. During the next year, the City of Dunedin will continue this waterline replacement program. Leaks are the biggest water waster. Even a small faucet leak can waste 300 or more gallons of water per month! Take a few minutes to find out if you have a leak in your home; [call us if you need help](#).

Use your water meter to check for leaks

1. Turn off all faucets and water-using appliances and make sure no one uses water during the testing period. Remember to wait for the hot water heater and ice cube makers to refill, and for regeneration of water softeners.
2. Go to your water meter and record the current reading. Wait 30 minutes. (Remember: no water should be used during this period.)
3. Read the meter again. If the reading has changed, you have a leak.
4. If you cannot find the leak, you should consult a plumber.

Indoor water conservation check list

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| <input type="checkbox"/> Have you checked all faucets & toilets for leaks?
Drop food coloring in the toilet water tank, if color comes out in the bowl you have a leak. | <input type="checkbox"/> Do you wash your hands thoroughly, but quickly? |
| <input type="checkbox"/> Have you installed low flow or dual flush toilets? | <input type="checkbox"/> Do you shut off the water when you brush your teeth or shave? |
| <input type="checkbox"/> Do you use low flow shower heads and keep your showers shorter than 5 minutes? | <input type="checkbox"/> Do you only run the dishwasher and washing machine when they are full? |
| | <input type="checkbox"/> Do you fill a container with water and refrigerate it for a cold drink- instead of running the water until it's cool? |
| | <input type="checkbox"/> Do you monitor your utility bill for high usage, indicating a possible leak? |

Typically, **outdoor water use accounts for up to 50 percent of water consumed** by households. You can reduce water consumption by taking a few simple steps. Periodically, check irrigation system timer performance and effectiveness and avoid overspray. Adjust your irrigation timer when you change your clocks. Upon request the City will set irrigation timers to the watering schedule for your address. Utilize Florida-friendly and drought-tolerant landscaping. Don't water during the heat of the day. Skip a week of watering during the winter months to make your yard more drought-tolerant.

Outdoor water saving tips

Visit Dunedin's website to view the latest water use restrictions

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| Keep your grass at least 3-4 inches high between mowings | Use shutoff devices or drip irrigation for watering |
| Sweep/blow off sidewalks and driveways rather than hosing them off | Avoid watering on windy days |
| Collect rain water with a rain barrel or other catchment to irrigate plants | Use 2-3 inches of mulch around trees and flowerbeds |

Contact Information

The City of Dunedin Commission meets at 6:30 p.m. on the first and third Thursday of each month at City Hall, 542 Main Street. For more information, visit the City's Web Site, www.dunedingov.com or call (727) 298-3001. For information regarding this report, arrange a water plant tour, or to obtain this report in a different format, please contact the Water Division at (727) 298-3100.

How to Read This Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Over 80 compounds are evaluated for the Annual Water Quality Report. Although all of these tests were performed, only those substances listed below in the Water Quality Table were found. The level of contaminants found in our drinking water were below the maximum contaminant level (MCL) allowed by the EPA. This report is based on the results of our monitoring for the period January 1 to December 31, 2011 for the City of Dunedin Public Water System (PWS) ID# 6520486. As authorized and approved by the United States Environmental Protection Agency (USEPA), the State has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. In this table, you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

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 Dunedin's Water 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 at 800-426-4791 or at <http://www.epa.gov/safewater/lead>.

Lead and Copper (Tap Water)								
Contaminant	Unit	Action Level	MCLG	90th Percentile Result	No. of sample sites exceeding the AL	Source of Contaminant	Action Level Violation Y/N	Date Sampled
Lead (1) (Tap Water)	ppb	15	0	0.81	0	Corrosion of household plumbing systems Corrosion of natural deposits	No	8/2011
Copper (2) (Tap Water)	ppm	1.3	1.3	0.036	0	Corrosion of household plumbing systems Dissolving of natural deposits Leaching of wood preservatives	No	8/2011
Inorganic Contaminants								
Contaminant	Unit	MCL	MCLG	Detected Level	Range	Source of Contaminant	MCL Violation Y/N	Date Sampled
Antimony	ppb	6	6	4.7	N/A (5)	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder	No	5/6/2011
Arsenic	ppb	10	0	3.7	N/A (5)	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production waste	No	5/6/2011
Barium	ppm	2	2	0.0067	N/A (5)	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	No	5/6/2011
Chromium	ppb	100	100	3.2	N/A (5)	Discharge from steel and pulp mills; erosion of natural deposits	No	5/6/2011
Fluoride (3)	ppm	4	4	0.58	N/A (5)	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at optimum levels between 0.7 & 1.3 ppm.	No	5/6/2011
Nickel	ppb	100	N/A	1.5	N/A (5)	Pollution from mining and refining operations. Natural occurrence in soil	No	5/6/2011
Nitrate	ppm	10	10	0.09	N/A (5)	Run off from fertilizer use Leaching from septic tanks, sewage Erosion of natural deposits	No	5/6/2011
Selenium	ppb	50	50	6.1	N/A (5)	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines	No	5/6/2011
Sodium	ppm	160	N/A	49	N/A (5)	Dissolving of natural deposits beneath the land surface Salt water intrusion	No	5/6/2011
Radioactive Contaminants								
Contaminant	Unit	MCL	MCLG	Detected Level	Range	Source of Contaminant	MCL Violation Y/N	Date Sampled
Radium-226	pCi/L	5	0	0.4	N/A (5)	Erosion of natural deposits	No	5/6/2011
Uranium	ug/L	30	0	0.11	N/A (5)	Erosion of natural deposits	No	5/6/2011
TTHMs and Stage 1 Disinfectant/Disinfection By-Product (D/DBP) Parameters								
For the following parameters monitored under stage 1 D/DBP regulations, the level detected is the annual average of the quarterly averages: chlorine, haloacetic acids, and / or TTHM(MCL 80 ppb). Range of results is the range of results (lowest to highest) at the individual sampling sites.								
Contaminant	Unit	MCL or MRDL	MCLG or MRDLG	Detected Level	Range	Source of Contaminant	MCL Violation Y/N	Date Sampled
Chlorine	ppm	MRDL=4	MRDLG=4	1.0	0.6 - 1.4	Water additive used to control microbes	No	1/11-12/11
Haloacetic Acids(Five)	ppb	MCL=60	MCLG=0	7.9	5.39-10.99	By-product of drinking water chlorination	No	(4)
Total Trihalomethanes	ppb	MCL=80	MCLG=0	55	43.9-61.8	By-product of drinking water chlorination	No	(4)
Microbiological Contaminants								
Total coliform bacteria: Highest Monthly Percentage/Number is the highest monthly percentage of positive samples for systems collecting at least 40 samples per month								
Contaminant	MCL	MCLG	Highest Monthly Percentage / Number	Range	Likely Source of Contaminant	MCL Violation Y/N	Date Sampled	
Total Coliform Bacteria	For systems collecting at least 40 samples per month: presence of coliform bacteria in 5% of monthly	0	7/2011 2 of 56=3.57%	0	Naturally present in the environment	No	1/11-12/11	

Definitions and Terms

- Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- 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 allow for a margin of safety.
- Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- Picocuries per Liter (pCi/L):** A measure of radioactivity in water.
- Parts per Million (ppm) or Milligrams per liter (mg/l):** One part by weight of analyte to one million parts by weight of the water sample.
- Parts per Billion (ppb) or Micrograms per liter (µg/l):** One part by weight of analyte to one billion parts by weight of the water sample.
- 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.
- 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.

Footnotes

- (1) 0.81 ppb lead represents the 90th percentile of samples collected. The range is the number of samples above the Action Level (AL). Sampled triennially. The next triennial sampling will be done in the Summer of 2014.
- (2) 0.036 ppm copper represents the 90th percentile of samples collected. The range is the number of samples above the Action Level (AL). Sampled triennially. The next triennial sampling will be done in the Summer of 2014.
- (3) In 2011 ground water pumped from the City of Dunedin water supply wells had a natural fluoride level of 0.2 ppm. This level was elevated to achieve FDEP's optimum level of 0.7 ppm.
- (4) Total Trihalomethanes (TTHM) and Haloacetic Acids (Five) (HAA5) samples were taken on a quarterly schedule in the months of February, May, August, and November.
- (5) N/A means that this sample was the only sample taken for that constituent.