



TOWN OF DAVIE UTILITIES DEPARTMENT 2008 WATER QUALITY REPORT



Introduction

We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the water quality and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water.

The Town of Davie Utilities Department routinely monitors for contaminants in your drinking water according to Federal and State laws, rules, and regulations. Except where indicated otherwise, this report is based on the results of our monitoring for the period of January 1, 2008 to December 31, 2008.

Table Notes and Definitions

1. Maximum detected level in any one sample.
2. Range of levels detected from lowest to highest.
3. Maximum Residual Disinfectant Level Goal (MRDLG) is the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of use of disinfectants to control microbial contaminants.
4. Maximum Residual Disinfectant Level (MRDL) is 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.

Picocurie per liter (**pCi/L**) – measure of the radioactivity in water.

Parts per billion (**ppb**) or Micrograms per liter ($\mu\text{g/L}$) – one part by weight of analyte to 1 billion parts by volume of the water sample.

Parts per million (**ppm**) or Milligrams per liter (mg/L) – one part by weight of analyte to 1 million parts by volume of the water sample.

Action Level (**AL**): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Maximum Contaminant Level or **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 or **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.

“**ND**” means not detected and indicates that the substance was not found by laboratory analysis.

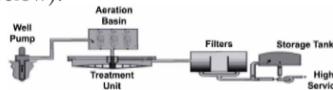
The Environmental Protection Agency (EPA) requires monitoring of over 80 drinking water contaminants. Those contaminants listed in the table below are the only contaminants detected in your drinking water.

| CONTAMINANT AND UNIT OF MEASURE | DATES OF SAMPLING (mo/yr) | MCL/AL VIOLATION Y/N | LEVEL DETECTED ⁽¹⁾ | RANGE ⁽²⁾ | MCLG | MCL | LIKELY SOURCE OF CONTAMINANT |
|---|----------------------------|----------------------|-------------------------------|------------------------------------|------------------|------------------|--|
| Radiological Contaminant | | | | | | | |
| Alpha Emitters (pCi/L) | 08/08 | N | 0.46 | 0.24-0.67 | 0 | 15 | Erosion of natural deposits |
| Radium 226 + 228 (pCi/L) | 08/08 | N | 1.22 | 0.94-1.22 | 0 | 5 | Erosion of natural deposits |
| Inorganic Contaminants | | | | | | | |
| Antimony (ppb) | 07/08 | N | 2.5 | ND-2.5 | 6 | 6 | Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder |
| Barium (ppm) | 07/08 | N | 0.037 | 0.027-0.037 | 2 | 2 | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Flouride (ppm) | 07/08 | N | 0.917 | 0.681-0.917 | 4 | 4 | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer & aluminum factories. Water additive which promotes strong teeth when optimum levels between 0.7 and 1.2 ppm. |
| Nitrite, as Nitrogen (ppm) | 07/08 | Y* | 1.14 | 0.82-1.14 | 1 | 1 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| Sodium (ppm) | 07/08 | N | 30 | 15-30 | N/A | 160 | Saltwater intrusion; leaching from soil |
| Thallium (ppb) | 07/08 | N | 0.7 | ND-0.7 | 0.5 | 2 | Leaching from ore-processing sites; discharge from electronics, glass and drug factories |
| Sythetic Organic Contaminants including Pesticides and Herbicides | | | | | | | |
| Di(2-ethylhexyl)adipate (ppb) | 07/08 | N | 0.75 | ND-0.75 | 400 | 400 | Discharge from chemical factories |
| Di(2-ethylhexyl)phthalate (ppb) | 07/08 | N | 0.54 | ND-0.54 | 0 | 6 | Discharge from rubber and chemical factories |
| TTHM's and Stage 1 Disinfectant/Disinfection By-Product (D/DBP) Contaminants | | | | | | | |
| Total Chlorine (ppm) | 01/08-12/08 | N | 1.7 | 1.0-4.0 | 4 ⁽³⁾ | 4 ⁽⁴⁾ | Water additive used to control microbes |
| Haloacetic Acids (five) (HAA5) (ppb) | 01/08, 04/08, 07/08, 10/08 | N | 30 | 0.95-100 | N/A | 60 | Byproduct of drinking water disinfection |
| TTHM's [Total trihalomethanes] (ppb) | 01/08, 04/08, 07/08, 10/08 | N | 22.4 | 2.5-162 | N/A | 80 | Byproduct of drinking water disinfection |
| CONTAMINANT AND UNIT OF MEASURE | DATES OF SAMPLING (mo/yr) | MCL/AL VIOLATION Y/N | 90th PERCENTILE RESULT | NO. OF SAMPLING SITES EXCEEDING AL | MCLG | AL | LIKELY SOURCE OF CONTAMINANT |
| Copper and Lead (Tap Water) | | | | | | | |
| Copper, tap water (ppm) | 08/07 | N | 0.12 | 0 | 1.3 | 1.3 | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives. |
| Lead, tap water (ppb) | 08/07 | N | 3.1 | 0 | 0 | 15 | Corrosion of household plumbing systems; erosion of natural deposits. |

*Nitrite. Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

Source of Water Supply

Your water source is water supply wells that draw water from the Biscayne Aquifer, an underground geologic formation where water is stored. Water is pumped from the wells to two water treatment facilities in the Town of Davie: System III (South) Water Treatment Plant and System I (North). Both water treatment plants aerate, soften, filter, disinfect with sodium hypochlorite and fluoridate water from the wells and transmit treated water into a common distribution system (See diagram below).



Source Water Assessment

In the Town of Davie, the Florida Department of Environmental Protection performed a Source Water Assessment on our system in 2004 and 2008. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp

People with Special Conditions

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. 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.

Contaminants at the Source

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:

- (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, 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 be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the 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 the 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 1-800-426-4791.

Getting Involved

We encourage our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled Water Advisory Board meetings. These are held at the Town Hall at 6591 Orange Drive. You can visit www.davie-fl.gov for dates and times.

**Town of Davie
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