2011 WATER QUALITY ANNUAL REPORT

Ensuring the Highest Quality Water for over 100 Years

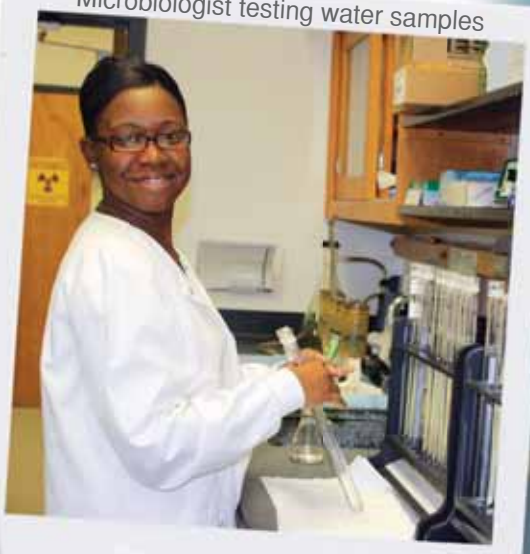
City of Tallahassee

Your Own Utilities℠

Underground Utilities
Who We Are

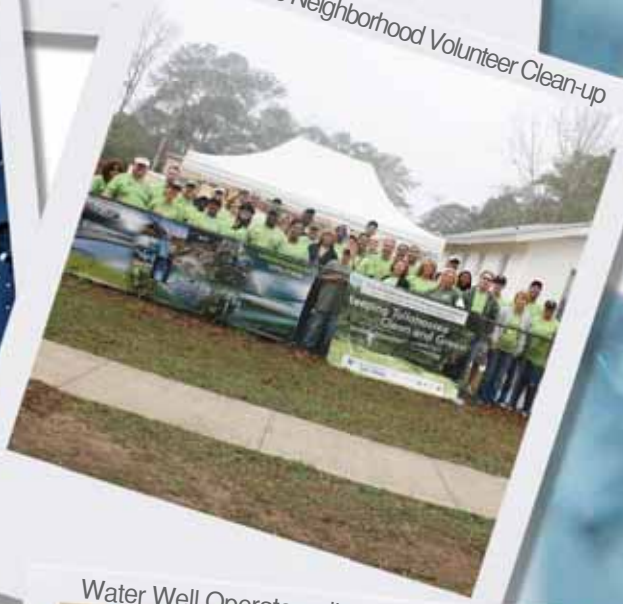
Asset Management Committee

Microbiologist testing water samples



Supplying our community with clean drinking water is hard work but we're committed to it.

Providence Neighborhood Volunteer Clean-up



Gas and Water Customer Outreach Event

Water Well Operator adjusting equipment

City of Tallahassee
Your Own Utilities℠

Clean, safe drinking water! That's what we provide.

The responsibility is great, and for more than 100 years, the City of Tallahassee has strived to provide our community with clean, safe and reliable drinking water.

Tallahassee residents can be confident our drinking water meets or exceeds all guidelines set forth by the Florida Department of Environmental Protection (DEP), the U.S. Environmental Protection Agency (EPA) and the Florida Department of Health (DOH).

To ensure the dependable delivery of our outstanding potable water, we continually perform research, rigorous testing and monitoring at our sophisticated, state-certified water quality laboratory. This dedication is one of the reasons we were voted as having the "Best Tasting Drinking Water" in Florida by the American Water Works Association.

Each year the City proudly delivers this report to its customers in response to provisions of the U.S. Environmental Protection Agency's (EPA) Safe Drinking Water Act. The following report describes the source of our water, lists the results of our tests and contains important information about water quality and health.

These state and federal standards are set at very stringent levels. Not only do we meet all the regulations, but also after a recent annual water audit, DEP commended the City's Underground Utilities on its exemplary performance and high level of professionalism.

We all live and work in this community and we care deeply about the quality of life for our families and yours. That's why Your Own Utilities is dedicated to supplying clean, safe drinking water, and we hope we're doing it for 100 more years.

Sincerely,

Mike Tadros

General Manager, Underground Utilities

Water Resources

The Floridan Aquifer

Tallahassee is situated over one of the largest and cleanest sources of ground water in the world – the Floridan Aquifer. The Floridan Aquifer underlies all of Florida and parts of Alabama, Georgia and South Carolina. Our water supply comes from 27 deep wells drilled into the aquifer and operated by the City Water Utility. As the water is pumped from the wells to the distribution system, chlorine is added for disinfection and fluoride for dental health. At a few central Tallahassee wells, water is passed through granulated activated carbon filter units to remove certain chemicals found in the aquifer in those locations. Green sand filtration is also used at one NW area well to remove iron and manganese.

Water Quality

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 our urban stomwater 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.

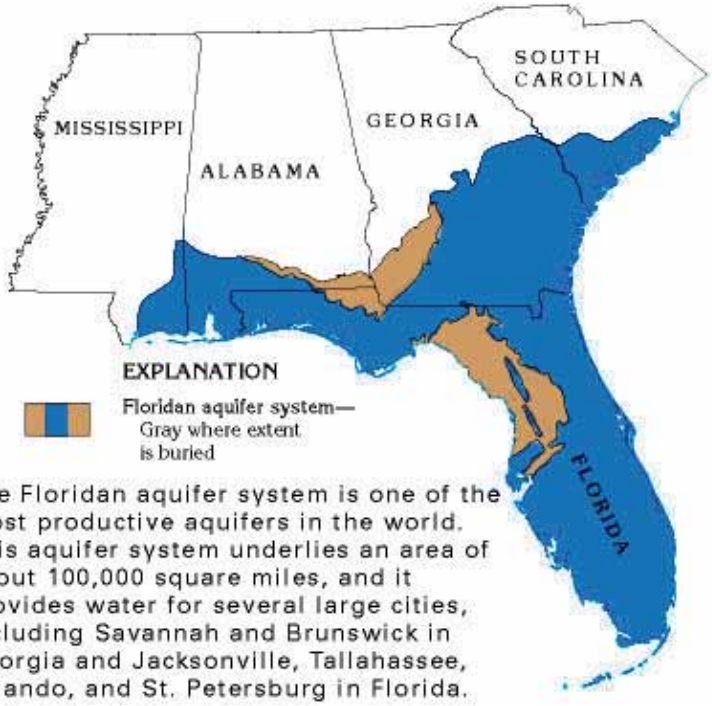
(D) Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

(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.

The City of Tallahassee 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 to December 31, 2010. Data obtained before January 1, 2010, and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations.

For citizen input, the City of Tallahassee Commission meets regularly on the second and fourth Wednesday of each month during the year. You can find out more about meetings by calling the Department of Communications at 850.891.8533 or visiting the City's Web site at **Talgov.com**. For specific questions and information about drinking water or for a copy of this report, please contact the Manager of the Water Quality Division at 850.891.1200. Copies of this report may also be downloaded from the City's Web site at **Talgov.com/YOU**.



The Floridan aquifer system is one of the most productive aquifers in the world. This aquifer system underlies an area of about 100,000 square miles, and it provides water for several large cities, including Savannah and Brunswick in Georgia and Jacksonville, Tallahassee, Orlando, and St. Petersburg in Florida.

Protection Programs

Protection Programs – In 2009, the Department of Environmental Protection 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. There are 56 potential sources of contamination identified for this system with moderate to high susceptibility levels. However, the City's Water Utility has been at the forefront of innovative protection activities for many years. In 1992, we were one of the first municipalities in the Southeast to institute a countywide Aquifer Protection Program. This helps ensure that potential pollutants are not discarded into the environment. The assessment results are available on the FDEP Source Water Assessment and Protection Program Web site at **www.dep.state.fl.us/swapp**, or they can be obtained by contacting the Water Quality Division at 850.891.1200.

To maintain the highest water quality, Your Own Utilities operates a nationally-recognized certified laboratory which performs water quality analyses with much greater frequency and stricter limits than required by government regulations. Rather than sampling once every three years as mandated, we take samples throughout the year, every year.

The City also helps preserve our drinking water supply for now and in the future by enforcing throughout Leon County an Aquifer Protection Program as mentioned above. This program ensures that businesses conduct safe practices to keep our groundwater to its current high level of quality. Similarly, the Cross Connection Control Program prevents the occurrence of hazardous materials from entering the water supply, further protecting our drinking water.

Even greater protections are ensured through the City's sophisticated computer telemetry system. This advanced technology allows for continuous, around-the-clock monitoring of the entire water distribution system, which includes more than 1,200 miles of water lines, 6,000 hydrants and 24,000 valves.

Our Water Quality Data Table

The data table contains the names of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health, the amount detected, the usual sources of such contamination, and a key to units of measurements. Maximum contaminant levels (MCL) are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a

person would have to drink two liters of water every day at the MCL level for a lifetime to have a one-in-a million chance of having the described health effects. Primary standards are those, which directly affect human health. Secondary standards concern the aesthetics of water (color, taste, odor).

Recent testing does not indicate a problem with lead in our 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 Tallahassee 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 or at **http://www.epa.gov/safewater/lead**.

Based on the water quality results, the City of Tallahassee drinking water meets all Federal and State requirements. The following information is required by EPA to be inserted by all water systems.

Immuno-Compromised Persons

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 (800-426-4791).

Definitions & Abbreviations

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

MCL - Maximum Contaminant Level: 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.

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 allow for a margin of safety.

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.

ND - Not Detected: Indicates that the substance was not found by laboratory analysis.

ppm - Parts per million (ppm) or milligrams per liter (mg/l): One part by weight of analyte to 1 million parts by weight of the water sample.

ppb - Parts per billion (ppb) or micrograms per liter (ug/l): One part by weight of analyte to 1 billion parts by weight of the water sample.

pCi/L - Picocurie per liter: Measure of the radioactivity in water

IDSE - Initial Distribution System Evaluation: An important part of the Stage 2 Disinfection Byproducts Rule (DBPR). The IDSE is a one-time study conducted by water systems to identify distribution system locations with high concentrations of trihalomethanes (THMs) and haloacetic acids (HAAs). Water systems will use results from the IDSE, in conjunction with their Stage 1 DBPR compliance monitoring data, to select compliance monitoring locations for the Stage 2 DBPR.

Water Quality Table

Microbiological Contaminants

Contaminant and Unit of Measure	Dates of Sample (Mo/Yr)	MCL Violation (Y/N)	Highest Monthly Percentage of Positive Samples	Maximum Contaminant Level Goal (MCLG)	Maximum Contaminant Level (MCL)	Likely Sources of Contamination
Total Coliform Bacteria	01/10 - 12/10	N	1.3%	0	For systems collecting at least 40 samples per month; presence of coliform bacteria in more than 5% of monthly samples	Naturally present in the environment

Lead and Copper (Tap Samples)

Contaminant and Unit of Measure	Dates of Sample (Mo/Yr)	AL Exceeded (Y/N)	90th Percentile Result	No. of Sampling Site Exceeding the AL	Maximum Contaminant Level Goal (MCLG)	AL (Action Level)	Likely Sources of Contamination
Copper (ppm) (Tap Sample)	06/10 - 09/10	N	0.62	0 out of 52	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb) (Tap Sample)	06/10 - 09/10	N	2	0 out of 52	0	15	Corrosion of household plumbing systems; erosion of natural deposits

Inorganic Contaminants

Contaminant and Unit of Measure	Dates of Sample (Mo/Yr)	MCL Violation (Y/N)	Highest Level Detected	Range of Results	Maximum Contaminant Level Goal (MCLG)	Maximum Contaminant Level (MCL)	Likely Sources of Contamination
Arsenic (ppb)	02/08 - 10/08	N	1.8	ND - 1.8	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and eletronics production wastes
Barium (ppm)	02/08 - 10/08	N	0.0173	0.001-0.0173	2	2	Discharge of drilling wastes: discharge from metal refineries; erosion of natural deposits
Beryllium (ppb)	02/08 - 10/08	N	0.1	ND - 0.1	4	4	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cadmium (ppb)	02/08 - 10/08	N	0.1	ND - 0.1	5	5	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Chromium (ppb)	02/08 - 10/08	N	2.5	ND - 2.5	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride (ppm)	02/08 - 10/08	N	1.27	0.69 - 1.27	4	4	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at optimum levels between 0.7 and 1.3 ppm
Lead (point of entry) (ppb)	02/08 - 10/08	N	1.8	ND - 1.8	0	15	Residue from man-made pollution such as auto emissions and paint; lead pipe, casing, and solder
Nitrate (as Nitrogen) (ppm)	02/10 - 10/10	N	0.64	0.04 - 0.64	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	02/08 - 10/08	N	4.88	2.33 - 4.88	NA	160	Salt water intrusion; leaching from soil

Radioactive Contaminants

Contaminant and Unit of Measure	Dates of Sample (Mo/Yr)	MCL Violation (Y/N)	Highest Level Detected	Range of Results	Maximum Contaminant Level Goal (MCLG)	Maximum Contaminant Level (MCL)	Likely Sources of Contamination
Alpha Emitters (pCi/L)	05/08 - 12/08	N	3.26	ND - 3.26	0	15	Erosion of natural deposits
Radium 226 +228 or Combined Radium (pCi/L)	05/08 - 12/08	N	1.49	ND - 1.49	0	5	Erosion of natural deposits

Volatile Organic Contaminants

Contaminant and Unit of Measure	Dates of Sample (Mo/Yr)	MCL Violation (Y/N)	Level Detected	Range of Results	Maximum Contaminant Level Goal (MCLG)	Maximum Contaminant Level (MCL)	Likely Sources of Contamination
Tetrachloroethylene (ppb)	01/10 - 10/10	N	1.3	ND - 1.49	0	3	Discharge from factories and dry cleaners

Stage 1 Disinfectants and Disinfection By-Products (D/DBP)

Disinfectant or Contaminant and Unit of Measure	Dates of Sample (Mo/Yr)	MCL or MRDL Violation (Y/N)	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Sources of Contamination
Chlorine (ppm)	01/10 - 12/10	N	0.78	0.72 - 0.82	MRDLG=4	MRDL=4.0	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (ppb)	08/10	N	2.4	ND - 6.58	NA	MCL=60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] (ppb)	08/10	N	8.2	0.42 - 23.74	NA	MCL=80	By-product of drinking water disinfection

Think About Personal Pollution

What is TAPP?

Think About Personal Pollution – TAPP – is an award-winning public information and outreach campaign administered jointly by the City's Water Resources Engineering and Environmental Policy and Energy Resources Departments. TAPP is designed to improve stormwater quality and protect the Floridan Aquifer, our area's source of drinking water. TAPP educates residents on simple ways to reduce surface water pollution and minimize stormwater runoff. Making small changes in home and yard water-use practices can help reduce the amount of stormwater runoff which will lead to cleaner lakes, streams and groundwater.

To schedule a free seminar for your neighborhood or organization or to request information, call 891.6806 or visit **www.TAPPwater.org**.

Our commitment to protecting our groundwater and environment is as important as providing clean drinking water.

Environmental Management System

Protecting our environment

The City of Tallahassee continues to expand its internationally recognized environmental stewardship initiative. By incorporating its proven Environmental Management System (EMS) to additional facets of Underground Utilities, the City has seen lower interest rates on bond sales resulting in over $100,000 cost savings annually.

The Water Quality and Wastewater Collection divisions are now implementing the international standards known as ISO 14001:2004 to further enhance the protection of the environment and the area's drinking water. Earning this certification in 2007 was a first in the state of Florida.

The elements of EMS are designed around three main concepts: pollution prevention, regulatory compliance and continual improvement. The City, through its water operations, has introduced a number of enhancements:

- Reduced chemical usage
- Pollution prevention techniques
- New recycling program

Emphasis has been placed on increased environmental awareness throughout all levels of operations with a renewed focus on safety and a concentration on continual improvement.

To find out more on the Utilities' EMS Program, please call 850.891.1200.

e+ Energy Smart Plus

Save Energy, Save Water, Save Money

What is e+? It's "Energy Smart," plus a whole lot more. It is our commitment to provide our customers and our community with programs, interactive tools, technology and information to save energy, water and money every day. From the energy and water savings to environmental benefits, becoming Energy Smart Plus will reap big dividends, both for you and our community.

Products and Services

- Free Energy Audits
- Ceiling Insulation Grants
- Natural Gas Appliance Rebates
- Energy Star Heat Pump/Air Conditioning Rebates
- Energy Star Appliance Rebates
- Energy Star Certified Home Rebates
- Solar Water Heater Rebates
- Low-Interest Loans for Energy Efficiency
- Solar Net Metering

For more information on e+ products and services, call 891.4YOU (4968) or visit us on the web at **Talgov.com/YOU**.

Natural Gas

Change Your Energy, Change Your Lifestyle

Natural gas is the most efficient, most economical energy available in Tallahassee today. Residents using natural gas appliances are enjoying unlimited hot water, instant toasty warmth, ambient fire logs, faster clothes drying time, or maybe the precision of a chef-quality range. This is a great cost-saving time to invest in natural gas appliances that can reduce utility bills, enhance lifestyles and help the market value of our homes.

What makes natural gas the thinking person's choice?

- 97% of this energy is from North America
- It's economical – about one-third less than electricity
- Using natural gas reduces personal carbon foot steps
- High efficiency performance and equipment longevity
- Rebates up to $2,000
- Free gas connection with meter

To determine if natural gas is available, go to **Talgov.com/you/GAS** or call 891.4YOU(4968).

Conservation

Preserving our Vital Resources

Did you know that only 3 percent of the world's water is fresh water? Icecaps and glaciers account for two thirds of that so only 1 percent of the water on our planet is readily available for drinking.

Fortunately, our region has a sufficient supply of drinking water underground in the Floridan Aquifer. To preserve this vital resource, Your Own Utilities encourages you to take measures to conserve and protect it.

A typical household uses about 5,300 gallons of water each month. More than half of this usage occurs in the bathroom--from toilets (24 percent), baths (9 percent) and showers (21 percent). Washing machines use a substantial amount of water, usually about 22 percent of the total. Here's the big news, leaks can waste 5-10 percent.

Water-saving tips

- Fix leaky faucets. A slow drip from a single faucet adds up to about 170 gallons of water loss each month. To put it in perspective, if your car ran on water, that 170 gallons would be enough for you to drive from Tallahassee to California... and back!
- Take shorter showers. If you reduce your daily shower by merely two minutes, you will save enough water in a year for three months of free showers.
- Water lawns and gardens early in the morning when evaporation and wind speeds are low. When you water your lawn in the middle of a hot summer day, up to 60 percent evaporates.

These simple measures, along with other water-saving techniques, will help save you money and protect our precious resources for the future.