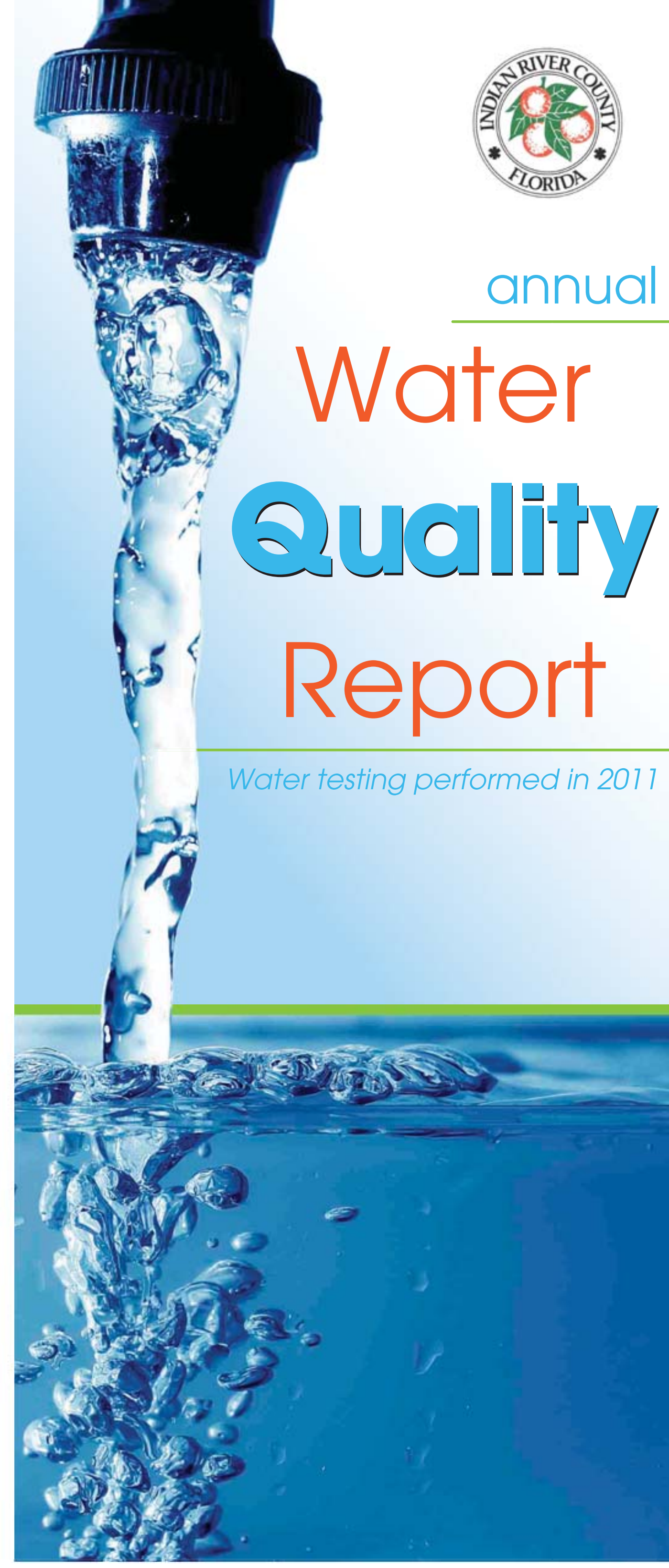

annual

Water Quality Report

Water testing performed in 2011

Meeting the Challenge

We are once again proud to present to you our annual water quality report. This edition covers all testing completed from January 1 through December 31, 2011. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal drinking water standards. We continually strive to adopt new and better methods for delivering the best quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please share with us your thoughts about the information in this report. After all, well-informed customers are our best allies.

Where Does My Water Come From?

Indian River County customers are fortunate because they enjoy an abundant groundwater supply from two treatment plants: the South County Water Treatment Plant and the Hobart Water Treatment Plant, which is located in the north section of the county. Both plants draw water from the Floridan Aquifer, which averages 750 feet deep, and both are treated by reverse osmosis process. Combined, our treatment facilities provide roughly 3.1 billion gallons of clean drinking water every year. Our constant goal is to provide you with a safe and dependable supply of drinking water.

In 2011 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 to our wells. There are 8 unique potential contaminant sources, with 10 moderate levels of petroleum storage tank sites, and 10 low levels of Industrial and Hazardous waste sites. 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 from the Indian River County Utilities.

Water Conservation

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.

Turn off the tap when brushing your teeth.

Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.

Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you can save more than 30,000 gallons a year.

Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

Substances That Could Be in Water

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:

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, or farming;

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 gas stations, urban stormwater runoff, and septic systems;

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 U.S. 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 (800) 426-4791.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

Questions?

For more information about this report, or for any questions relating to your drinking water, please call Michael K. Vernon at (772) 770-5068.

Sampling Results

During the year 2011 we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. We feel it is important that you know exactly what was detected and how much was present in the water. The State of Florida allows us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently in these cases, the most recent sample data are included along with the year in which the sample was taken.

PRIMARY REGULATED CONTAMINANTS

Microbiological Contaminants

CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	MCL VIOLATION (YES/NO)	HIGHEST MONTHLY PERCENTAGE	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Total Coliform Bacteria (% positive samples)	9/1/2011	No	0.97	0	Presence of coliform bacteria in % of monthly samples	Naturally present in the environment

Radiological Contaminants

CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	MCL VIOLATION (YES/NO)	LEVEL DETECTED[1]	RANGE OF RESULTS[1]	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Radium 226 + 228 [Combined Radium] (pCi/L)	9/13/11	No	2.8	ND-2.8	0	15.49	Erosion of natural deposits
Inorganic Contaminants							
Asbestos (MFL)	3/1/11	No	0.51	0.20-0.51	7	7	Decay of asbestos cement water mains, erosion of natural deposits
Barium (ppm)	2/7/11	No	0.0071	0.0051-0.0071	2	2	Discharge of drilling water, discharge from metal refineries; erosion of natural deposits
Chromium (ppm)	2/11 - 9/11	No	0.0077	ND-0.0077	0.1499	0.1499	Discharge from steel and pulp mills. Erosion of natural deposits
Fluoride (ppm)	2/7/11	No	0.8	0.71-0.80	4	4	Erosion of natural deposits, discharge from fertilizer and aluminum factories, water additive that promotes strong teeth when at optimum levels between 0.7 and 1.3 ppm
Nickel (ppm)	2/1/11	No	0.0036	0.0006-0.0036	0.1	0.1	Pollution from mining and refining operations. Natural occurrence in soil.
Nitrate [as Nitrogen] (ppm)	2/7/11	No	0.092	0.014-0.0092	10	10	Run-off from fertilizer use; leaching from septic tanks sewage, erosion of natural deposits.
Volatile Organic Contaminants							
Dichloromethane (ppb)	3/7/11	No	0.43	ND - 0.43	5	5	Discharge from industrial chemical factories

Stage 1 Disinfectants and Disinfection By-Products

CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	MCL VIOLATION (YES/NO)	LEVEL DETECTED[2]	RANGE OF RESULTS[2]	MCLG OR [MRDLG]	MCL OR [MRDL]	LIKELY SOURCE OF CONTAMINATION
Chlorine (ppm)	1/11-12/11	No	1.56	1.46-1.68	4	4	Water additive used to control microbes
Haloacetic Acids (five) [HAA5] (ppb)	2011 Quarterly	No	4.59	1.65-8.14	NA	60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] (ppb)	2011 Quarterly	No	39.02	16.49-64.3	NA	80	By-product of drinking water disinfection

Lead and Copper (Tap water samples were collected from sites throughout the community)

CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	AL VIOLATION (YES/NO)	90TH PERCENTILE RESULT	NO. OF SAMPLING SITES EXCEEDING THE AL	MCLG	AL (ACTION LEVEL)	LIKELY SOURCE OF CONTAMINATION
Copper [tap water] (ppm)	8/11	No	0.016	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead [tap water] (ppb)	8/11	No	1.9	0	0	15	Corrosion of household plumbing systems; erosion of natural deposits

SECONDARY CONTAMINANTS

CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	MCL VIOLATION (YES/NO)	HIGHEST RESULT	RANGE OF RESULTS	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Aluminum (ppm)	2/11	No	0.0024	0-0.0024	NA	0.02	Natural occurrence from soil leaching
Chlorides (ppm)	2/11	No	110	93-110	NA	250	Natural occurrence from soil leaching
Copper (ppm)	2/11	No	0.0056	0-0.0056	NA	1	Corrosion by-product, and natural occurrence from soil leaching
Fluoride (ppm)	2/11	No	0.8	0.71-0.80	NA	2	Erosion of natural deposits, discharge from fertilizer and aluminum factories, water additive that promotes strong teeth when at optimum levels between 0.7 and 1.3 ppm
Color (CU)	2/11	No	2	0-2	NA	15	Naturally occuring organics
Iron (ppm)	2/11	No	0.091	0-0.091	NA	0.3	Natural occurrence from soil leaching
Manganese (ppm)	2/11	No	0.001	0-0.001	NA	0.05	Natural occurrence from soil leaching
Sulfate (ppm)	2/11	No	74	56-74	NA	250	Natural occurrence from soil leaching
Total Dissolved Solids (ppm)	2/11	No	330	310-330	NA	500	Natural occurrence from soil leaching
Zinc (ppm)	2/11	No	0.45	0.19-0.45	NA	5	Natural occurrence from soil leaching
Odor* (TON)	2/11-11/11	Yes	3.5	1.2-3.5	NA	3	Naturally occuring organics

***Although Indian River County Utilities has a reading of 3.5 TON for odor which exceeds the MCL, several additional samples were taken from February of 2011 and November 2011. The average of these seven (7) additional samples was 2.39 TON which is under the MCL of 3 for odor.**

Footnotes:

[1] Results in the Level Detected column for radiological, inorganic and volatile organic contaminants are the highest average at any of the sampling points or the highest detected level at any sampling point, depending on the sampling frequency.

[2] For chlorine, the level detected is the the highest running annual average (RAA), computed quarterly, of monthly averages of all samples collected. For haloacetic acids or TTHM, the level detected is the highest RAA, computed quarterly, of quarterly averages of all samples collected if the system is monitoring quarterly or is the average of all samples taken during the year if the system monitors less frequently than quarterly. Range of Results is the range of individual sample results (lowest to highest) for all monitoring locations, including Initial Distribution System Evaluation (IDSE) results as well as Stage 1 compliance results.

Definitions

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

C.U. (Color Units)

IDSE (Initial Distribution System Evaluation): An important part of the Stage 2 Disinfection Byproducts Rule (DBPR). The IDSE is a onetime 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.

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.

MFL (million fibers per liter): A measure of the presence of asbestos fibers that are longer than 10 micrometers.

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.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

TON (Threshold Odor Number): A measure of odor in water.

What's Your Water Footprint?

You may have some understanding about your carbon footprint, but how much do you know about your water footprint? The water footprint of an individual, community, or business is the total volume of freshwater used to produce the goods and services that an individual or community consumes or that a business provides. For example, 11 gallons of water are needed to irrigate and wash the fruit in one half-gallon container of orange juice. Thirty-seven gallons of water are used to grow, produce, package, and ship the beans in that morning cup of coffee. Two hundred and sixty-four gallons of water are required to produce one quart of milk, and 4,200 gallons of water are required to produce two pounds of beef.

According to the U.S. EPA, the average American uses about 100 gallons of water daily. In fact, in the developed world, one flush of a toilet uses as much water as the average person in the developing world allocates for an entire day's cooking, washing, cleaning, and drinking. The annual American per capita water footprint is about 8,000 cubic feet; that is twice the global per capita average. With water use increasing six-fold in the past century, our demands for freshwater are rapidly outstripping what the planet can replenish.

To check out your own water footprint, go to www.h2oconserve.org, or visit www.waterfootprint.org to see how the water footprints of other nations compare.

Lead and Drinking 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. We are 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 www.epa.gov/safewater/lead.