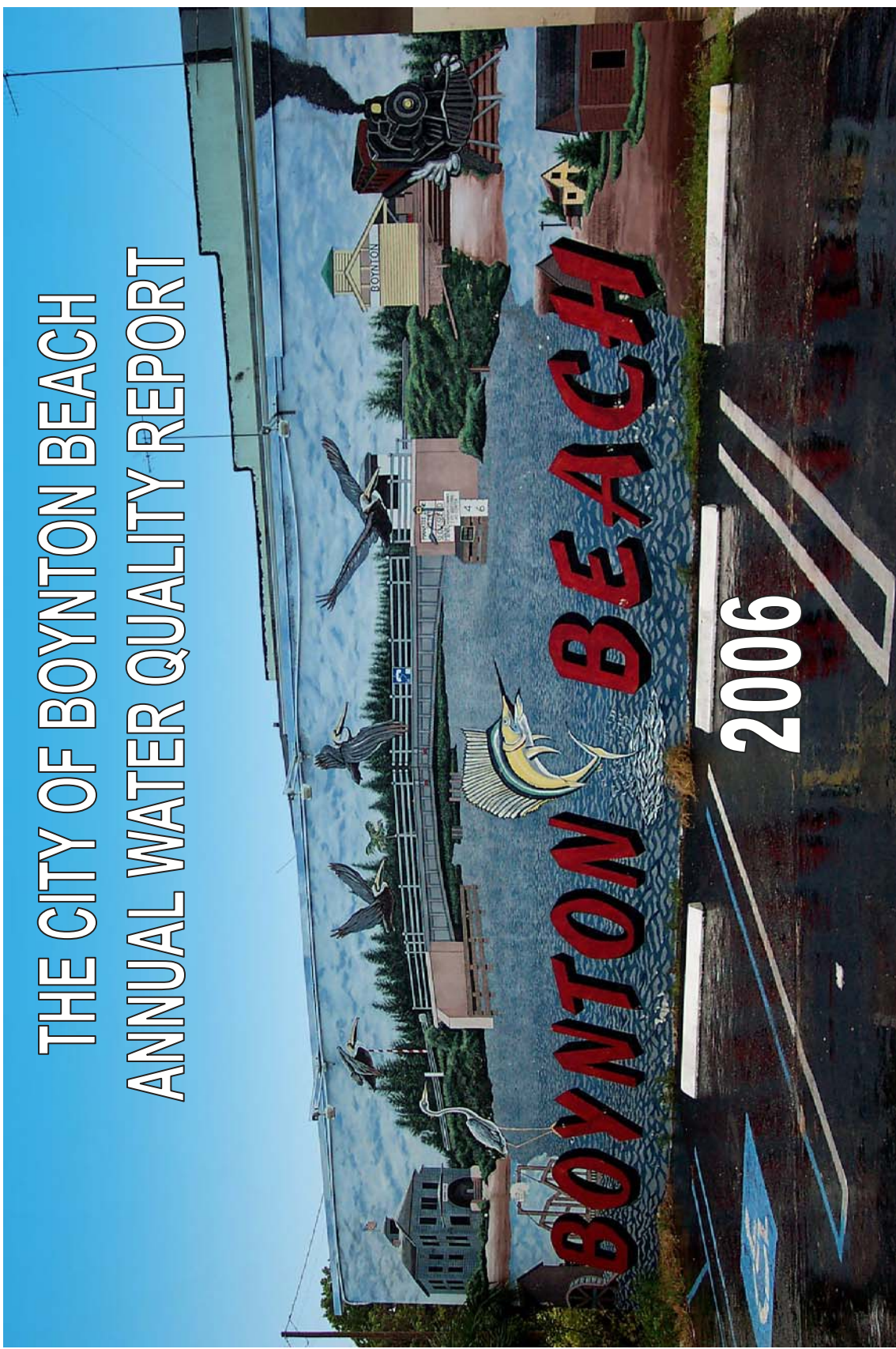


# THE CITY OF BOYNTON BEACH ANNUAL WATER QUALITY REPORT



## Director's Message

I am once again pleased to report that the drinking water supplied to your tap in 2006 met or exceeded all standards for quality. This is something that we never take for granted. We have been working hard to ensure the quality, quantity and reliability of your water supply, while keeping the cost of water very affordable. We believe that clean



Kofi Boateng, Utilities Director

water provided to every customer is a wonderful value; we hope you agree. Despite our past successes, there are many challenges ahead. We are pressed to find alternative sources to meet future demands. These new sources are likely to be more difficult to treat and thus more expensive to treat than our current source. Yes, the cost of water will be increasing as a result of this, and also due to the increasing cost of maintaining an aging system. However, by practicing simple conservation measures such as reducing lawn watering, landscaping with drought tolerant native plants, and installing water saving fixtures in your home, you will minimize any impact on your monthly bill. With your help and our continued diligence, we will maintain the priceless value of drinking water for current and future customers.

### **A History of Building a Better Community Through Technology and Human Ingenuity**

We continue to invest in our system to ensure that we provide an efficient and reliable service to our customers. The following projects are ongoing or have been completed since the last annual report. The East Water Plant has a new back-up generator with the additional capacity to meet current demands for both the water plant and the City's Emergency Operations Center. We are also in the final stages of commissioning a new Aquifer Storage and Recovery well (ASR 2) to enable us to store additional

*Cover and other photos by Charlie Crawford*

water during the rainy season for use during the winter and spring. Our current ASR well provided nearly 100 million gallons of drinking water during the current drought. At the West Water Plant, we are replacing the gaseous chlorine disinfection system with an onsite hypochlorite generation system and also installing an



Aquifer Storage and Recovery well # 2

additional back-up generator. Hypochlorite is basically similar to normal household bleach and is used to ensure that your drinking water is safe. Looking to the future, we have commenced design work on an extension to our existing water reuse system. This line will come east of I-95 for the first time and provide irrigation water to additional large scale users, including the cemetery and ball fields off Woolbright Road.

We opened our Wastewater Division Pump Shop on August 18, 2006. The Wastewater Pump Shop has been instrumental in the development of a pro-active maintenance program. The program allows staff to participate in the refurbishment of lift station submersible pumps and panels, as well as assembling new panels, refurbishing generators and the rehabilitation of lift stations. The accomplishment of an equipment servicing & repair program as well as "In-House" lift station projects has been very successful. We intend to expand on our pump shop operation and continue to provide a cost effective, preventive maintenance program to our wastewater collection system.

### **The Source of Your Drinking Water**

In general, the sources of drinking water, both tap and bottled water, include rivers, lakes, streams, ponds, reservoirs, springs and wells. At the Boynton Beach Utilities, we use wells, ranging from 50 to 250 feet deep, to collect the raw water that supplies our treatment plants. These wells draw water from

surficial aquifers, or underground formations, which are replenished by rainwater. South Florida's topography creates a very effective purification system by filtering water through many feet of soil, sand, and rock. This natural system assures that the very source of our drinking water is protected from harmful organisms, such as *Cryptosporidium* and *Giardia*, even before the water is purified at the water treatment facility.

### **Ensuring Clean, Healthy Water From Every Tap**

We operate two water treatment plants to provide safe, plentiful water to your tap. Our East Water Treatment Plant is located at 1620 Seacrest Boulevard and has a daily capacity of 19 million gallons. The plant cleans water using a conventional treatment system referred to as lime softening. This process reduces the water's mineral content or hardness, and removes iron, and color. The treatment system also uses filtration to remove particles and disinfection to kill bacteria.

Our West Water Treatment Plant, located at 5469 W. Boynton Beach Boulevard, uses a highly innovative treatment system known as membrane softening. This purification process produces some of the cleanest drinking water in the nation. The plant purifies 8.34 million gallons of source water daily by pumping water through state-of-the-art membranes to remove minerals, salts, iron, and color. This facility also disinfects the water to kill bacteria.

### **How Do Contaminants Get Into Our Water?**



Routine sampling ensures water quality

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.



East Water Treatment Plant

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 Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration establishes limits for contaminants in bottled water that must provide the same protection for public health.

All 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.

### **Our Commitment to Your Quality of Life**

The Utilities Department provides water to more than 97,000 residents and approximately 5,300 local businesses. We are dedicated to serving you and your family in a friendly, efficient, and healthy way. To ensure the cleanest, safest water possible, **we test your water every day in our state-certified laboratory.** If for any reason you encounter a problem, we will test the quality of your water—free of charge. Please call us at 561-742-6964 to set up an appointment.



Your Water Quality Team

***In addition to being the “Gateway to the Gulfstream,” Boynton Beach is a community leading the way in producing high-quality, healthy water that sets the standard for the nation.***

## Hurricane Preparedness

The Utilities Department has a very aggressive emergency operations plan to maintain services to our customers during storms. In 2005, Hurricane Wilma hit our area with winds estimated up to 125 MPH. The fast response of Utilities staff and deployment of emergency equipment minimized any damages and we never lost water or sewer services to our customers.



Boynton Beach Ocean Front Park

At each of our water treatment plants and some of our raw water wells, we have emergency back-up generator power to maintain operations during power outages. Each of our six master wastewater pumping stations in various locations around the city also have emergency back-up generator power.

In our most recent evaluation of our emergency operations plan we have identified additional key raw water wells and wastewater pumping stations that would benefit from having these generators or pumps permanently installed. For example, some key wastewater pumping stations that would supply services near our emergency shelters, fire and police stations, the hospital and assisted living facilities, just recently had either generators or self-priming pumps stationed there for stand-by emergency power. The remainder of the

system is prioritized by criticality and portable equipment is deployed to those locations as soon as the storm has cleared and winds have subsided. Our Emergency Operations Center keeps track of the entire system and can arrange to move equipment around the service area as needed.

Another program just recently developed is a shared cost in the purchase and installation of emergency equipment. This equipment would provide power to our wastewater pumping station as well as power to a clubhouse or similar facility that may be used by the community for shelter during a storm or for refuge after a storm. This arrangement has been approved by the City Commission and managed by the Utilities Department.



Emergency Bypass Pump

We have a strong commitment to explore new ideas for emergency operations and will continue to provide the best service we can to our customers.

### Conservation Corner



A WaterWise conservation kit

Greetings from Steve Evans, your Water Conservation Coordinator. A number of exciting water conservation initiatives were begun last year. We implemented a program called *WaterWise* in the public schools. This grass roots program educates 5th grade students and their families on how to save water, not only for cost savings, but as a long term benefit to the community and the environment. Indoor water conservation kits are now available, free of charge, to water customers. Just

present your water bill at City Hall, City Hall in the Mall or Utilities Administration, 124 E. Woolbright Road, to receive your free kit and start saving water today! We also have a low flow, drip irrigation garden in the planning stages. The garden, to be located at Utilities Administration will showcase the beauty of native and other low maintenance plants. Thank you for your continuing conservation efforts.

### **Need More Information?**

We want you to be informed about your water utility and the high-quality drinking water delivered to your homes and businesses. We also encourage community participation and feedback.

If you have any questions about this report, or if you would like a copy of our water system's complete source water assessment, call 561-742-6400. For additional information about water quality, call the EPA's Safe Drinking Water Hotline at (800) 426-4791.

### **For Customers With Special Health Concerns**

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, elderly people, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Center for Disease Control 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.

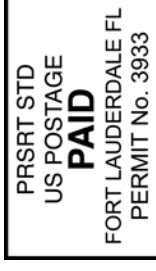
**Sa-a se yon mesaj ki pale de kalite dlo nan  
Boynton Beach. Si ou genyen kesyon tanpri  
telefone 561-742-6300.**

**Este es el Informe Anual De Calidad De Agua Potable  
de la Ciudad de Boynton Beach. Para información  
en español por favor llame al teléfono 561-742-6960.**



City of Boynton Beach  
100 E. Boynton Beach Boulevard  
Boynton Beach, Florida 33435  
[www.boynton-beach.org](http://www.boynton-beach.org)  
[www.cbbutilities.org](http://www.cbbutilities.org)

Jerry Taylor, Mayor  
Jose Rodriguez, Vice Mayor, District III  
Ronald Weiland, Commissioner, District I  
Mack McCray, Commissioner, District II  
Carl McKoy, Commissioner, District IV  
Kurt Bressner, City Manager  
Kofi Boateng, Utilities Director



City Commission meetings, 1<sup>st</sup> and  
3<sup>rd</sup> Tuesdays of the month, 6:30 pm

Water Quality Division	561-742-6964
City Hall Customer Service	561-742-6300
Utilities Department	561-742-6400
After Hours/Emergency	561-742-6430
Information Line	561-742-6467

**:s 2006**

					LG	MCL	Likely Source of Contamination
					0	4.0	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
					0	10.0	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
					0	1.0	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
					1	160	Salt water intrusion; leaching from soil.
						AL = 1300	Corrosion of household plumbing system; erosion of natural deposit; leaching from wood preservatives.
					0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits.

**Total Trihalomethanes and Disinfectant/Disinfection by Products (D/DBP)**

Chloramines (ppm)	Jan., April, July, Oct. 2006	No	3.44 *	0.2-4.8	4.0	4.0	Water additive used to control microbes.
Haloacetic Acids (HAA 5), ppb, Running Annual Average (RAA)	Jan., May, Aug., Nov. 2006	No	13 *	0.79-21.8	NA	60	By-product of drinking water chlorination.
Total Trihalomethanes (TTHM), ppb, Running Annual Average(RAA)	Jan., May, Aug., Nov. 2006	No	14 *	ND-39.1	NA	80	By-product of drinking water chlorination.

**Radiological Contaminants**

Gross Alpha, pCi/l	Nov. 03	No	9.0	6-9	0	15	Erosion of natural deposits.
Radium 226, pCi/l	Nov. 03	No	0.7	0.2-0.7	0	5	Erosion of natural deposits.
Radium 228, pCi/l	Nov. 03	No	0.5	ND-0.5	0	5	Erosion of natural deposits.

**Microbiological Contaminants**

Contaminants and Unit of Measurement	Date of Sampling (Mo/Yr)	MCL Violation (Y/N)	High Monthly Percentage Number	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria, Monthly sampling	Sept. 06	No	2.55	0	Presence of coliform bacteria in 5.0% of monthly samples	Naturally present in the environment.

**Important Definitions**

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

**ND** – Not Detected.

**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 below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**ppb** – parts per billion. A unit of measurement equal to one part by weight of a contaminant in 1 billion parts by weight of water.

This could be compared to 1 second in 11,500 days or 1 inch in 15,800 miles.

**ppm** – parts per million. A unit of measurement equal to one part by weight of a contaminant in 1 million parts by weight of water. This could be compared to 1 second in 11.5 days or in 1 inch in 15.8 miles.

**pCi/l** – picocurie per liter. A measure of radioactivity in water.

**RAA** – running annual average. The average of the most recent four quarters of test results.

**TTHM** – Total Trihalomethanes. Some people who drink water containing trihalomethanes in excess of MCL over many years may

experience problems with their liver, kidneys, or central nervous

is the concentration of these contaminants or old. is higher.