



# TOWN OF HIGHLAND BEACH

# WATER QUALITY REPORT

## 2015

## ANNUAL WATER QUALITY REPORT

The Town of Highland Beach is pleased to present our Water Quality Report for 2015. Publication of this report allows us the opportunity to keep you informed about the excellent water services we have delivered over the past year.

Our goal has always been to provide our residents with a safe and dependable supply of drinking water. The source of the raw water is from wells drawn from the Floridan Aquifer. By using this Aquifer the Town remains unaffected during droughts and thus is not subject to watering restrictions. We do, however, request that citizens practice sensible conservation measures whenever possible due to the expense associated with pumping and processing water that is used.

The Town of Highland Beach Water Treatment Plant uses a state-of-the-art method of Reverse Osmosis to treat the water that is pumped from the aquifer. This process removes minerals and other contaminants from the water but does not eliminate dissolved gases. A degasification system and two air scrubbers are used to remove unwanted gases from the water. The water is then

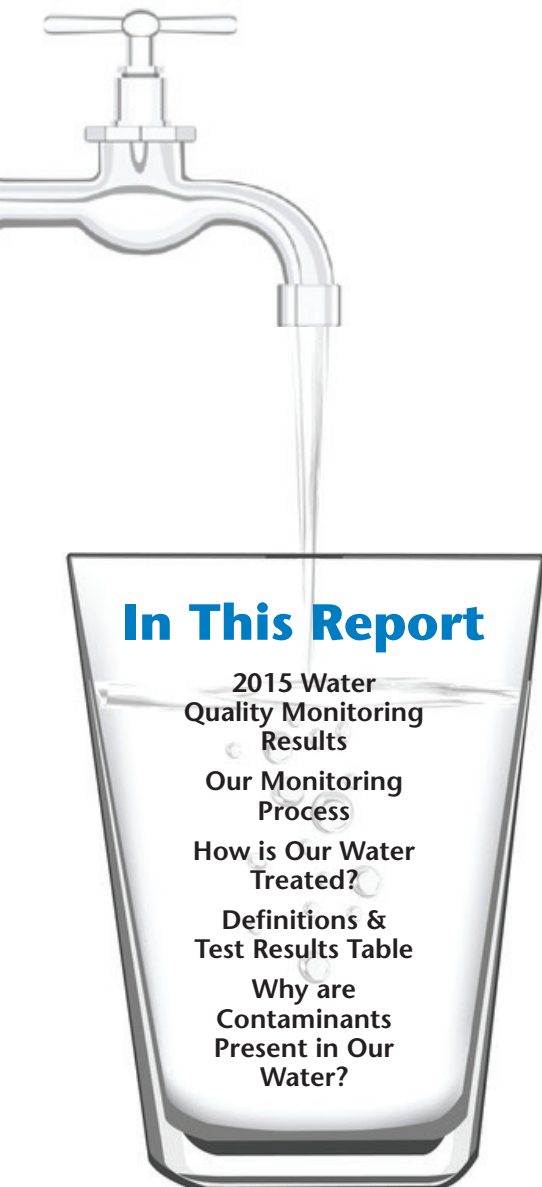
treated to add hardness, alkalinity and for disinfection.

This improves the taste of the water, reduces the corrosivity, and keeps it safe to drink.

The Water Department diligently operates and maintains the treatment facility to ensure the delivery of reliable, safe and high quality water to our customers. The Town also has the ability to provide you with water through interconnections with the Cities of Delray Beach or Boca Raton in case of an emergency or for maintenance that requires our plant to be shut down.

We want our valued customers to be informed about your water utility and encourage you to attend Town Commission Meetings or view them on line at [www.highlandbeach.us](http://www.highlandbeach.us). Meetings are held at 1:30 p.m. on the first and last Tuesday of each month at the Town Hall Commission Chambers, 3614 South Ocean Boulevard.

If you have any questions or concerns about this information or to learn more about your water utility, please contact Edward Soper, Public Works Director or Robert Ailstock, Water Plant Superintendent at 561-243-2084.



## Definitions

In the test result table you may find terms and abbreviations you might not be familiar with. To help you better understand these terms, we have provided the following definitions:

**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 Residual Disinfectant Level or MRDL** - The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**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.

**Maximum Residual Disinfectant Level Goal or 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.

**N/A** - Not applicable.

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

**Parts per billion (ppb) or Micrograms per liter (µg/L)** – one part by weight of analyte to 1 billion parts by weight 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 weight of the water sample.

## Our Monitoring Process

The Town of Highland Beach Water Treatment plant routinely monitors for many contaminants in your drinking water according to Federal and State Laws; however, only those detected are included in the table below. As water travels over the land or underground it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances.

All drinking water, including bottled drinking water, may be reasonably expected to contain at least trace amounts of some contaminants. It's important to remember that the presence of these contaminants does not necessarily pose a health risk.

The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Therefore, some of our data, although representative, is more than one year old.

## Test Results

<b>Lead and Copper</b>			
<b>Contaminant and Unit of Measure</b>	<b>Dates of Sampling (mo./yr.)</b>	<b>Action Level Exceedance Y/N</b>	<b>Percentile Result 90th</b>
Copper (ppm)	10/14	N	0.15
Lead (ppm)	10/14	N	0.0017
<b>Inorganic Chemicals</b>			
<b>Contaminant and Unit of Measure</b>	<b>Dates of Sampling (mo./yr.)</b>	<b>MCL Violations Y/N</b>	<b>Level Detected</b>
Fluoride (ppm)	12/14	N	0.047
Sodium (ppm)	12/14	N	94.0
<b>Stage 1 Disinfectants and Disinfection</b>			
Trihalomethanes (ppb)	8/15	N	1.11 (Avg.)
Haloacetic Acids (PPB)	8/15	N	0.37 (Avg.)
Chlorine (ppm)	Monthly	N	1.5 (Avg.)
<b>Microbiological</b>			
<b>Contaminant and Unit of Measure</b>	<b>Dates of Sampling (mo./yr.)</b>	<b>Non-Acute MCL Violations Y/N</b>	<b>Highest Monthly Percentage/Number</b>
Total Coliform Bacteria (Positive Samples)	3/15	Y	5%

Note: Total Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful bacteria may be present. Two out of ten bacteriological samples taken on March 18, 2015 tested positive for total coliform. Because this result was >5% of the samples taken, the non-acute MCL for Total Coliform was violated. As required by the Palm Beach County Health Department, additional samples were taken upstream and downstream of the sites that tested positive for two consecutive days. These samples tested negative for Total Coliform, thus the positive

## How Is Our Water Treated?

Highland Beach's water plant uses the process of reverse osmosis to treat our water. The water plant utilizes the Floridan aquifer, and draws water from wells that are 1,200 feet deep. Although raw water is quite pristine, it is high in salinity (salt content).

To remove the salinity and other impurities, the raw well water passes through a series of membranes. The system uses 300 horse power pumps that force the water through the membranes at very high pressures, in excess of 350 pounds per square inch (psi). An anti-scalant is used in order to protect the membranes from a build-up of solids that would result in clogging, and phosphate is used as a corrosion inhibitor as protection for the piping.

Before the finished water enters the distribution system, acid and sodium hydroxide are added for pH adjustment, and chlorine is used as a disinfectant. The end result is that Highland Beach residents enjoy very pure water that is crystal clear.

## Results Table

Water (Tap Water)			
No. of Sampling Sites Exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits.
0	0	15	
Inorganic Contaminants			
Range of Results	MRDLG or MCLG	MRDL or MCL	Likely Source of Contamination
N/A	N/A	2.0	Erosion of natural deposits. Discharge from fertilizer and aluminum factories.
N/A	N/A	160	Salt water intrusion; leaching from soil.
By-Products - Inorganic Contaminants			
0.92 - 1.30	N/A	80	By-product of drinking water disinfection.
.037	N/A	60	By-product of drinking water disinfection.
1.0 - 2.9	4.0	4.0	Water additive used to control microbes.
Lead Contaminants			
No. of Samples	MCLG	MCL	Likely Source of Contamination
0		1 positive sample	Naturally Present in the Environment; Sample or test error

These results were most likely an anomaly due to unsterile sample bottles, an error in sampling technique or a laboratory error. Since the chlorine residual was 1.6 mg/l at the time the samples were determined to be positive, it further reinforces the likelihood of the erroneous positive sample results. Corrective actions included replacing all old sample bottles with new ones, review of sampling and handling techniques with operating staff and switching to a different state-certified laboratory. To date, there has been no further positive Total Coliform results.

## Why are Contaminants Present in Our 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:

(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 storm water 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 storm water 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 storm water runoff, and septic systems.

(E) **Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

F) **Lead**, 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 Town of Highland Beach 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>.

## Town of Highland Beach

3614 South Ocean Blvd.  
Highland Beach, FL 33487

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Highland Beach FL 33487

### Water Dept. Hours

Monday-Friday - 7:00 a.m. to 4 p.m.

### Water Quality Questions

Contact: Edward Soper,  
Public Works Director  
or Robert Ailstock,  
Water Plant Superintendent  
561/243-2084  
www.highlandbeach.us

### Additional Contacts

Environmental Protection Agency's  
Safe Drinking Water Hotline:  
800/426-4791 • www.epa.gov  
Palm Beach County  
Public Health Unit:  
561/837-5900  
Florida Department of Health:  
904/791-1599

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## How Do We Ensure the Highest Quality of Water?

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. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health. MCLs are set at very stringent levels. 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.

In our continuing effort to maintain a safe and dependable water supply and to comply with applicable regulations it may, from time-to-time be necessary to make improvements to the water system. The costs of such improvements may be reflected in the rate structure or through ad valorem taxes. In March 2015, voters passed a referendum that approved the replacement of water lines on the side streets of the Town and to construct a system to re-mineralize the water as part of the treatment process. Currently both projects are in the design phase. Look for project updates on our website or on Channel 99.

The Department of Environmental Protection performed a Source Water Assessment in 2009 which indicated there are no potential sources of contamination near our groundwater wells. The assessment results are avail-

### WATER CONSERVATION TIPS

*Courtesy of the Environmental Protection Agency*

- Repair all leaks immediately. A leaky toilet can waste 200 gallons of water per day. To detect leaks in the toilet, add food coloring to the tank; if the colored water appears in the bowl, the toilet is leaking
- When using a hose, control the flow with an automatic shut-off nozzle
- Water only when necessary. The most effective time is early in the morning; not on windy, rainy or very hot days. Use water efficiently; direct water to plants, not to driveways or sidewalks
- Replace old fixtures with high efficiency devices

able on the FDEP Source Water Assessment and Protection Program website at [www.dep.state.fl.us/swapp](http://www.dep.state.fl.us/swapp).

Note: Some individuals may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as people with cancer undergoing chemotherapy, have undergone organ transplants, or those who may have 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 Hot Line 800-426-4791.