

ANNUAL  
**WATER REPORT**

*Water testing  
performed in 2010*



*Presented By*  
**Florida Keys Aqueduct Authority**

PWS ID#: 4134357, 5444047

## Utility Introduction

Once again we are proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2010. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of source water protection, distribution and transmission system protection, and water conservation.

Through proactive efforts, the Florida Keys Aqueduct Authority (FKAA) is continually monitoring, assessing, and working to eliminate potential hazards to our water source including inappropriate aquifer utilization, unsuitable land uses, and the potential for saltwater intrusion. Progressive planning, such as construction of the recently completed reverse osmosis plant, the strategic installation of additional monitoring wells, and the implementation of alternative water supplies and advanced conservation strategies, will continually be used to protect our resource. Additionally, we continue our efforts to manage the impacts to our transmission and distribution lines from ongoing outside utility construction and harsh environmental conditions.

Throughout these challenges, we continue to maintain our high standards in an effort to continue delivering the best-quality drinking water possible. There may be other hurdles in the future, but please know that we will always stand by you and the drinking water we work diligently to provide.

We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions or concerns, we are always available to assist you.

## 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 or <http://water.epa.gov/drink/hotline>.

## Breaking News:

### FKAA Gets In Front of Radionuclide Testing

Radionuclides are radioactive isotopes that can occur naturally or result from manmade sources. The March 2011 earthquake in Japan led to a release of radioactivity from the Fukushima nuclear power plant. In response to this event and in an effort to remain vigilant in monitoring and protecting our wellfield, the FKAA, recently completed enhanced radionuclide testing, in addition to standard compliance testing. The FKAA is pleased to announce that all samples were well below EPA regulatory levels. The FKAA will continue to periodically test for radionuclides as part of the comprehensive wellfield protection program.

## Community Participation

You are invited to participate in regularly scheduled board meetings and voice your concerns about your drinking water. Call Colleen Tagle at (305) 295-2176, or visit our Web site at [www.fkaa.com](http://www.fkaa.com) for more information on these meetings.

## Where Does My Water Come From?

### The J. Robert Dean Water Treatment Facility (PWS ID#: FL4134357)

The freshwater Biscayne Aquifer is the primary water supply for the Florida Keys Aqueduct Authority. Our wellfield is located within an environmentally protected pine rockland forest west of Florida City on the mainland. The location of the wellfield near Everglades National Park, along with restrictions enforced by State and local regulatory agencies, contributes to the unusually high quality of the raw water. The FKAA wells contain some of the highest quality groundwater in the state, meeting all regulatory standards prior to treatment.

Included in the regulations mentioned above are restrictions that limit the amount of water that can be extracted from the Biscayne Aquifer. In order to abide by the regulations, the FKAA utilizes the Floridan Aquifer, a brackish groundwater source located approximately 800 to 1,000 feet below the surface, to supplement the Biscayne supply. The Floridan Aquifer is the source employed by the FKAA's new reverse osmosis (RO) water treatment plant located at our Florida City Wellfield. The new RO facility was completed in the Fall of 2009 and can contribute up to an additional six million gallons a day to our water supply. During emergency situations, the FKAA may also directly blend the Floridan Aquifer with the Biscayne Aquifer water to supplement approximately 4 percent of the water supply.

### The Kermit H. Lewin Reverse Osmosis & Marathon Reverse Osmosis Facilities (PWS ID#: FL5444047)

During an emergency situation, the FKAA may utilize the emergency Reverse Osmosis Water Treatment Plants (WTPs) located in Stock Island (Kermit H. Lewin Reverse Osmosis Facility) and Marathon to supplement the water supply and increase emergency storage capacity. The RO WTPs withdraw from seawater wells to produce potable water from saltwater.

## Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has convinced many people that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent, according to government estimates).

The Food and Drug Administration (FDA) is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Furthermore, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you obtain your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 50 cents.

For a detailed discussion on the NRDC study results, check out their Web site at [www.nrdc.org/water/drinking/bw/exesum.asp](http://www.nrdc.org/water/drinking/bw/exesum.asp).

## Source Water Assessment Plan

The Florida Department of Environmental Protection (FDEP) is conducting a statewide source water assessment project. This project will result in Source Water Assessment reports that will identify and assess any potential sources of contamination in the vicinity of each water supply in the State. The FDEP has performed a source water assessment on our water supply system in Florida City, and a search of the data sources indicated two potential sources of contamination near our wells. The Source Water Assessment report for our system is available at the FDEP Source Water Assessment and Protection Program Web site at [www.dep.state.fl.us/swapp](http://www.dep.state.fl.us/swapp). The Source Water Assessment for the RO facility water supply system has not yet been evaluated.



## What Is FKAAs Priority Call?

The Florida Keys Aqueduct Authority initiated a program to call residents and businesses in the Florida Keys when there is important information to be shared. This information may be a Precautionary Boil Water Notice, information regarding an emergency conservation order following a severe disruption to our transmission line, or the latest updates on post-storm system status.

We have a database of telephone numbers linked to specific areas of the keys. In order to better serve our customers, we invite you to provide us with your preferred and most up-to-date contact information. In this way, you can take advantage of this important communication tool.

Some examples of customer updates include text and email notification, alternate information for part-time residents, business manager contacts, and caregiver telephone numbers for special residents.

You may also use this resource to be placed on a Do Not Call list if you prefer. If you have any questions, or have suggestions that will improve our communication program, please contact Colleen Tagle, FKAAs Public Information Director, at [ctagle@fkaa.com](mailto:ctagle@fkaa.com) or (305) 295-2176.

## Year-Round Landscape Irrigation Watering Measures

The South Florida Water Management District has implemented year-round watering restrictions. Watering with reclaimed water, other alternative supplies, or low-volume methods may be conducted at any time according to local utility regulations. These measures can become more restrictive during times of drought. For additional information, please visit [www.fkaa.com](http://www.fkaa.com) or contact Colleen Tagle, Director of Public Information, at [ctagle@fkaa.com](mailto:ctagle@fkaa.com) or (305) 295-2176.



## I moved into a new home and I am not sure about the building's plumbing. Is there a way I can tell if the water quality at my faucet is as high-quality as the water provided by the FKAAs to the meter?

Any customer concerned about the water quality at their home can request a Water Quality Analysis. This Customer Water Quality Testing Program is provided by the Aqueduct free of charge. A water quality technician will come to your home and obtain a sample from your faucet. This sample will be tested for Total Chlorine, Hardness, Turbidity, Alkalinity, Total Dissolved Solids (TDS) and Iron. The analysis will determine if the sample is outside of the acceptable range and will also allow a comparison between the water provided to the meter by the FKAAs and the water at your faucet.

If you have any questions about this program, or would like to schedule an appointment please contact Julie Cheon, Water Quality and Environmental Manager at (305) 295-2150 or [jcheon@fkaa.com](mailto:jcheon@fkaa.com).

## How much water is used during a typical shower?

The Federal Energy Policy Act set a nationwide regulation that limits shower heads to a maximum flow of 2.5 gallons per minute (GPM). Shower heads made before 1980 are rated at 5 GPM. Since the average shower is estimated to last 8.2 minutes, the old shower heads use 41 gallons of water while the newer, low-flow shower heads use only about 21 gallons.

A typical bath will hold between 25-45 gallons of water depending on the fill level. Filling the tub half way will consume approximately 25 gallons, while filling the tub to the top will use approximately 45 gallons.

## 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 that 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.

## How Is Our Water Source Protected?

The FKAAs wellfield is located within an undeveloped forested area providing natural protection between supply wells and surrounding land uses. The FKAAs also implements a comprehensive wellfield protection program utilizing the full resources of the FKAAs in conjunction with the resources of local, State, and Federal agencies. The FKAAs monitors, on a monthly basis, a network of wells and structures for saltwater intrusion. This network includes 10 FKAAs wells, and 9 United States Geological Survey wells. These nineteen sites provide valuable information on the location, movement, and velocity of the saline/fresh water interface. During drought conditions the FKAAs performs daily monitoring of real-time data from these wells.

Additionally, the Aqueduct maintains a cooperative agreement with the Miami-Dade County Department of Environmental Resource Management (DERM) to regulate and manage issues relating to the protection of the Aqueduct's wellfield. DERM has a regular ground and surface water monitoring program to detect water quality trends, a surveillance and enforcement program to eliminate illegal discharges, a wetlands program to protect important aquifer recharge areas, a hazardous materials management program that includes regulation of underground storage tanks and liquid waste haulers, and a planning program to analyze data and refine the regulatory program as needed.

This multifaceted approach provides for enhanced protection that extends beyond the purview of the FKAAs normal jurisdiction.

## Is Home Water Treatment Necessary?

Home treatment equipment is not needed to make your water meet Federal and State drinking water standards. As previously mentioned, the FKAA is fortunate to have an outstanding source water, the Biscayne Aquifer, which meets or surpasses all drinking water standards, even before we treat it. People who have medical conditions, such as severely compromised immune systems, that might put them at special risk should discuss the need for a water filter with their doctors.

Should you decide to purchase a water treatment unit, it is prudent to carefully research and ensure that the unit you purchase will remove the constituent of concern. Remember, if you have a water treatment unit, you must maintain it properly according to the manufacturer's instructions. Also be aware that if the unit removes the disinfectant in your tap water, the treated water should be stored as you would store a food. If you have questions about the composition of the water, a complete list of regulated constituents can be found on our website, [www.fkaa.com](http://www.fkaa.com), under Reports, Drinking Water Standards, or by calling the contact information provided.

### What Is Hardness?

Water hardness is the measure of the mineral content of the water, typically Calcium (Ca) and Magnesium (Mg). The FKAA's water source is a groundwater source located beneath a protected pine rockland. The FKAA's primary aquifer (Biscayne Aquifer) flows through a limestone substrate composed primarily of calcium carbonate. The FKAA's water hardness can be attributed primarily to this natural mineral. Due to the hardness of the water in the aquifer, the FKAA softens the water so that the water that reaches the customer is considered moderately hard. This softening process reduces the mineral build up on cooking utensils, fixtures, appliances, and water heaters and also decreases soap and detergent consumption. The degree of hardness in the FKAA system is appropriate for the vast majority of appliances. Generally, normal care and maintenance of appliances negates the need for additional water softening. Some extremely sensitive appliances may require further softening for their optimal use. The manufacturer can provide the requirements for their products. Otherwise, additional water softening is not necessary. Water hardness is not associated with adverse health effects. The hardness of water supplied by the FKAA is typically between 80–100 mg/l, which is considered moderately hard. Water that is too soft can cause corrosion of pipe materials.

Hardness of Water	
Water Classification	Hardness in mg/l
Soft	0-17
Slightly Hard	17-60
Moderately Hard	60-120
Hard	120-180
Very Hard	180 and Over
To convert hardness to grains per gallon, divide hardness by 17.1.	

### Water Conservation Tips

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 water whenever you can. It is not hard to conserve water. Here are a few tips.

**Trick the Tank:** Toilet flushing uses a lot of water. Putting something in the toilet tank that takes up space means that less water will be utilized with each flush. This can be accomplished with a plastic bag, a glass jar or jug filled with water. Items such as bricks are not recommended because they tend to crumble and might damage the toilet's flushing mechanism. Because some toilets require a certain amount of water to work right, be sure to check that your toilet flushes properly after you make any changes.

**Test the Tank:** Leaks in toilet tanks are the number one cause of unexplained high water consumption. Because these leaks can be intermittent, they may not always be noticeable while you are home. To check your tank, place a few drops of food coloring in the tank, and then wait for several hours, or preferably overnight. Check the bowl before the next use. If the food coloring is in the bowl, that indicates that the tank is leaking and should be repaired.

**Go from Fee to Free:** Use free water (rainwater) at every opportunity. Rain barrels are a simple way to capture free water for use in irrigation. Based on about a half gallon of water per square foot of roof area, a 2,000-square-foot roof can collect about 600 gallons of water during a half-inch rainfall. You can find handy instructions for building a rain barrel at [www.fkaa.com/buildingrainbarrel.pdf](http://www.fkaa.com/buildingrainbarrel.pdf), or by attending one of the many workshops held by the University of Florida's Monroe County Extension Service. Call them at (305) 292-4415.

**Be a Convert:** Convert your septic tank to a cistern. If you are in an area to be served by central wastewater, your septic tank can conveniently be converted into a cistern. Instead of putting a hole in the tank and filling it, consider converting it into a cistern. By disinfecting the tank, directing gutters to the tank, and installing a pump, you now have a system that can collect and hold several hundred gallons or more of irrigation-quality water. Using free water not only reduces your water bill, but it will also reduce the wastewater charges assessed by the wastewater utility. Please check with the Monroe County Department of Health for septic tank abandonment and conversion requirements; Telephone (305) 289-2721..

**Air It Out:** Faucet aerators are a cheap and easy ways to save money. Aerators work by mixing air and water. The water passes through the aerator screen, creating many small streams with air in between. Although the water flow is reduced, the pressure feels the same and, in some instances, will actually be amplified, providing increased rinsing power. In most instances, aerators simply screw onto the faucet head, usually after you remove the existing screen.

## 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 we 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](http://www.epa.gov/safewater/lead).

## How Often Is My Water Tested?

In accordance with State and Federal regulations and as part of the FCAA's Water Quality Program, the FCAA conducts over 95,000 water quality tests every year. Your water is sampled and analyzed by skilled and certified technicians, operators, and laboratories. Your water is analyzed 24 hours a day, 7 days a week, at various locations, including at the underground source, at the water treatment plants, and at hundreds of points throughout the distribution system.

## Questions?

For more information about this report, or for any questions relating to your drinking water, please call Julie Cheon, Water Quality and Environmental Manager, at (305) 295-2150.

## How Is My Water Treated and Purified?

### Florida City Water Treatment Facility (PWS ID#: FL4134357)

FCAA's primary treatment plant is a state-of-the-art facility staffed by State-licensed personnel. Groundwater from the Biscayne Aquifer is the primary source water for this facility. This groundwater is classified as very hard due to the high concentration of calcium in the water. A process called lime softening is used to reduce calcium hardness. Lime softening is achieved by the addition of excess calcium under high pH conditions. This allows the water to become supersaturated with calcium so that the calcium sinks to the bottom of the lime-softening treatment unit, leaving less hard (softened) water for use by the FCAA. The FCAA product water is considered moderately hard.


The softened water is then piped to dual media filters, which are made up of layers of anthracite and fine sand for additional removal of particles (calcium) and further purification. Chlorine and ammonia are injected into the water to form chloramines, which provide long-lasting disinfectant protection without the objectionable taste and odor of regular chlorine. Fluoride, which is recommended for drinking water by the American Dental Association to prevent cavities and strengthen bones, is also added.

In order to comply with Biscayne Aquifer withdrawal limitations, a new Floridan wellfield and reverse osmosis (RO) water treatment process were recently constructed. Operational since the Fall of 2009, the RO water treatment plant treats the brackish water of the Floridan Aquifer. The Floridan raw water contains approximately 4,000 to 5,000 parts per million of salts. This concentration is significantly lower than the 35,000 ppm typically found in seawater. This RO system utilizes very fine membrane elements mounted on RO system skids. The water is pressurized to approximately 250 pounds per square inch (psi), rejecting the salt while allowing the passage of the pure finished water. The RO water is disinfected in the same manner as the Biscayne lime-softened water. Finished water from the RO process is then blended with water treated from the Biscayne Aquifer.

The FCAA treated water is pumped 130 miles from Florida City to Key West, supplying water to the entire Florida Keys. The FCAA maintains 187 miles of transmission main, which varies in diameter from 12 to 36 inches. Transmission pressures are boosted up to 250 psi at strategic locations throughout the Keys. An additional 690 miles of distribution pipeline are maintained to complete delivery to the customer connections. The water provided to customers in the Florida Keys is continuously monitored and tested to ensure that the water quality is consistent, safe, and meets all Federal and State drinking water standards. The FCAA operates two State-certified laboratories, located in Florida City and Stock Island, to perform many daily water quality analyses.

### Kermit H. Lewin Reverse Osmosis & Marathon Reverse Osmosis Water Treatment Facilities (PWS ID#: FL5444047)

The Kermit H. Lewin and Marathon RO water treatment facilities desalinate seawater into potable water. The saltwater from seawater wells first enters cartridge filters to remove particulate matter. From the filters, the water is pressurized up to 900 psi. These pressures are significantly higher than those required at the Florida City RO due to the significantly higher salt content of the seawater. The high pressure forces some of the water in through the RO membranes to create drinking water; the remainder of water is rejected as brine and disposed of in an underground injection well. The permeate flows into a degasifier and clear well, where hydrogen sulfide and carbon dioxide are removed. Next, sodium hydroxide is added to raise the pH, and a corrosion inhibitor may be added to provide corrosion control. In the final treatment stage, the permeate is disinfected with chloramines, and the finished product is transferred to the storage tank for distribution.



**Drink to your health: Drinking water contains NO calories, fat, sugar, caffeine, or cholesterol.**

## Sampling Results

The following tables detail the concentrations of water quality parameters detected in the FKAA finished (treated) water, unless otherwise noted. The data presented in this table are from the most recent testing done in accordance with regulations. The U.S. EPA requires monitoring of more than 80 drinking water contaminants. Every primary regulated contaminant that was detected in the FKAA finished water, even in the minutest traces, is listed here. The tables contain the name of each substance, the highest level allowed by regulation (the MCL), the ideal goals for public health, the amount detected, the usual sources of contamination, definitions, and a key for units of measurement. This report is based on the results of our monitoring for the period of January 1 to December 31, 2010. A complete listing of all contaminants that are monitored is available upon request.

The state requires the FKAA to monitor for certain substances less often 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

#### Radioactive Contaminants<sup>1</sup>

CONTAMINANT AND UNIT OF MEASUREMENT	MCL VIOLATION (YES/NO)	DATE OF SAMPLING (MO./YR.)	LEVEL DETECTED	RANGE OF RESULTS	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Alpha Emitters (pCi/L)	No	11/2010	1.73	NA	0	15	Erosion of natural deposits
Radium 226 + 228 [Combined Radium] (pCi/L)	No	11/2010	0.291	NA	0	5	Erosion of natural deposits

#### Inorganic Contaminants

Barium (ppm)	No	11/2010	0.0108	NA	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	No	1-12/2010	0.836	ND-1.18	4	4.0	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
Nitrate [as Nitrogen] (ppm)	No	11/2010	2.5	2.3-2.7	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	No	11/2010	18.3	NA	NA	160	Salt water intrusion, leaching from soil

#### Synthetic Organic Contaminants Including Pesticides and Herbicides

Picloram (ppb)	No	11/2010	0.1	NA	500	500	Herbicide runoff
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#### Stage 1 Disinfectants and Disinfection By-Products<sup>2</sup>

CONTAMINANT AND UNIT OF MEASUREMENT	MCL VIOLATION (YES/NO)	DATE OF SAMPLING (MO./YR.)	LEVEL DETECTED	RANGE OF RESULTS	MCLG OR [MRDLG]	MCL OR [MRDL]	LIKELY SOURCE OF CONTAMINATION
Chloramines (ppm)	No	1-12/2010	3.79	0.9-4.8	MRDLG=4	MRDL=4.0	Water additive used to control microbes
Haloacetic Acids (five) [HAA5] (ppb)	No	8/2010	28.7	NA	NA	MCL=60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] (ppb)	No	8/2010	17.1	NA	NA	MCL=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	AL EXCEEDANCE (YES/NO)	DATE OF SAMPLING (MO./YR.)	90TH PERCENTILE RESULT	NO. OF SAMPLING SITES EXCEEDING THE AL	MCLG	AL (ACTION LEVEL)	LIKELY SOURCE OF CONTAMINATION
Copper [tap water] (ppm)	No	4/2010	0.0355	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead [tap water] (ppb)	No	4/2010	1.45	0	0	15	Corrosion of household plumbing systems; erosion of natural deposits

<sup>1</sup> Results in the Level Detected column for radioactive contaminants, inorganic contaminants and synthetic organic contaminants including pesticides and herbicides are the highest average at any of the sampling points or the highest detected level at any sampling point, depending on the sampling frequency.

<sup>2</sup> For chloramines, 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 that a water system must follow.

**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 the 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.

**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).