

# 2010 Water Quality Report

Gasparilla Island Water Association, Inc.

June 2011

## *A Message From GIWA*

Gasparilla Island Water Association, Inc. (GIWA) is very pleased to provide you with this year's Annual Water Quality Report. We want to keep you informed about the excellent water and services we delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water.

GIWA 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. We are pleased to report once again that your drinking water meets all federal and state requirements.

Your water source is from groundwater wells that draw from both surficial and lower intermediate aquifers. Approximately 75% of your water comes from brackish water withdrawn from the lower intermediate aquifers and treated by reverse osmosis (RO). The remaining 25% is shallow well water that is treated by a color removal plant. The treated water from both plants is blended and then disinfected with chloramines before pumping to the water distribution system. In 2010, GIWA produced 363 million gallons of quality drinking water.

GIWA also has an interconnect with Charlotte County utilities (CCU). In 2010 we purchased 486,000 gallons of water from CCU. For a copy of CCU's water quality data, please contact GIWA.

We encourage our members to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. If you have any questions about this report or concerning GIWA, please contact Bonnie Pringle, Utility Director at (941) 964-2423. GIWA's Board Meetings are held monthly at our office located at 1700 East Railroad Avenue, Boca Grande.

## *Capital Improvements Assessment and Bridge Relocation Project Update*

At GIWA's February 16, 2011 Annual Meeting, the membership approved the Board of Directors' recommendation to assess each unit a maximum of \$720 to be paid in monthly installments over a period of not less than five (5) years (60 payments of \$12.00 per month) to fund relocating GIWA's water and sewer mains on the Boca Grande Causeway when new bridges are constructed. GIWA's Board wants to thank the membership for their support for this fiscally sound financing option.

After receiving approval of the assessment from the Lee County Board of County Commissioners, GIWA began assessing the monthly charge on the April 2011 monthly water and sewer bills. The revenues generated monthly from the assessment total \$24,550. The funds will be kept separate from general operating funds in F.D.I.C. insured interest bearing accounts.

The designs for the two (2) new fixed bridges and GIWA water and sewer main relocations are currently underway with construction expected to begin in March 2012. GIWA will be required to relocate their water and sewer mains ahead of the construction of the south bridge, but fortunately, the water mains will be hung on the new middle bridge which not only reduces the cost, but also delays the expenditure several months. This schedule should allow the assessment to fund the construction with minimal or no interim financing.

## **Utility Services Report Fiscal Year**

	<b>October - May 10/11</b>	<b>October - May 09/10</b>
Connections, 5/31	1,680	1,679
Rainfall	13.02"	35.74"
Water Sold, Gals.	242,361,000	198,738,000
Wastewater Processed, Gals.	80,250,000	94,031,000

**(Continued Page 2)**

## ***Assessment and Bridge Relocation Project Update (Continued from Page 1)***

A time line for the construction of the swing bridge and relocation of our water main is not as clear, but the design phase should begin this summer. We are estimating GIWA will relocate at the swing bridge and make the final expenditure in 2014. GIWA may need short term financing for this portion of the project with a line of credit which will be repaid as the assessment funds are collected.

If you would like more details on the construction or financing plans, please visit [mygiwa.com](http://mygiwa.com).

### ***Weather and Hydrology***

Last year at this time, GIWA reported that the island had received twice the normal rainfall for the first five (5) months of the year, but that surplus was nearly erased with below normal rainfall for the second half of the year. We still ended 2010 with slightly more rainfall than normal, but that is the first time in four (4) years we even came close to our average 52 1/2" of rain. The rainfall so far for 2011 is once again below normal with a 4.16" deficit for the normal dry season. The following is a comparison of rainfall recorded on the island to the historic average for this area:

	<b>Actual</b>	<b>Historic Average</b>	<b>Excess/Deficit</b>
January - May 2011	9.78"	13.94"	(4.16")
2010 Total Rainfall	54.40"	52.50"	1.90"
2009 Total Rainfall	29.78"	52.50"	(22.72")
2008 Total Rainfall	33.75"	52.50"	(18.75")
2007 Total Rainfall	29.29"	52.50"	(23.21")
2006 Total Rainfall	41.85"	52.50"	(10.65")
Total Deficit			(77.59")

As you can see, we are now almost 6 1/2' below normal in rainfall for the past sixty-five (65) months. The lack of rainfall has a negative effect on our shallow well water aquifers which are replenished by rain. Reduced rainfall means less water is reaching the aquifers making them vulnerable to saltwater intrusion - movement of saltwater pushing inland from the Gulf.

Water sales on the island are greatly impacted by rainfall with not only lower sales during wet periods, but also lower sales as a result of mandatory watering restrictions. The following table demonstrates our gallons sold compared to annual rainfall for the past five (5) years:

	2006	2007	2008	2009	2010
Million Gallons Sold	364	375	317	343	316
Rainfall	41.85"	29.29"	33.75"	29.78"	54.40"

With severe drought conditions, GIWA sold a record 375 million gallons in 2007. Rainfall was still well below normal in 2008, but due to emergency mandatory watering restrictions, water consumption was down 15.5%.

Rainfall for 2009 was once again extremely low, but watering restrictions had eased some for the Lee County portion of the island and as a result water consumption increased 8.2% over 2008, but was still down 8.5% from the 2007 record.

With rainfall slightly better than normal in 2010, water consumption had not been this low since 2002; however, 2011 is looking more like 2009 and could reach 2007 levels if we don't have a normal rainy season. While this may be great for the "bottom line" financially, it is not great for our well fields. Unfortunately, when it is dry, water consumption is at its highest and we are pumping at full capacity when our wells are most vulnerable. You can help protect your water supply by adhering to the watering restrictions detailed on the following page, and conserving water whenever possible.

## ***Watering Restrictions***

With groundwater levels and stream flows in the area well below normal, Southwest Florida Water Management District declared a water emergency and Phase I Water Shortage Restrictions went into effect on December 1, 2010. A Phase I declaration means that conditions are below normal and warrant alerting the public and water utilities to prepare for additional actions, and all water users are asked to

- Reduce indoor water use on a voluntary basis;
- Test and repair or adjust irrigation systems to address broken pipes and leaks, damaged or tilted sprinkler heads and other sources of water waste;
- Continue to follow the twice per week watering schedule.

Watering restrictions for GIWA's service area are mandated by two (2) separate water management districts and watering restrictions vary by county as detailed below:

### **Charlotte County (Southwest Florida Water Management District)**

Lawn and landscape watering remains limited to twice-per-week as follows:

- Odd numbered addresses (1, 3, 5, 7, 9) may water on Wednesday and/or Saturday;
- Even numbered addresses (0, 2, 4, 6, 8) may water on Thursday and/or Sunday;
- Watering is allowed before 10:00 a.m. or after 4:00 p.m. on designated days;
- Hand watering and micro-irrigation of plants (other than lawns) can be done on any day at any time.

### **Lee County (South Florida Water Management District)**

Lawn and landscape watering is limited to two (2) days per week as follows:

- Odd numbered addresses (1, 3, 5, 7, 9) may water on Wednesday and/or Saturday;
- Even numbered addresses (0,2,4,6,8) may water on Thursday and/or Sunday;
- Landscape watering is allowed before 9:00 a.m. or after 5:00 p.m. on designated days;
- Irrigation using low volume methods such as micro-irrigation, and hand watering using a hose with an automatic shut-off nozzle may be conducted at any time.

### **New Planting**

New plant material is allowed additional watering days and times, but varies by county. Please visit [mygiwa.com](http://mygiwa.com) or contact Bonnie Pringle at 941-964-2423 for further information.

## ***Water Withdrawal Permit Renewal***

GIWA will be submitting a renewal application for its water withdrawal permit to the Southwest Florida Water Management District (SWFWMD) this summer. This permit limits the amount of well water GIWA is allowed to withdraw and treat for your potable water. Withdrawals are based on population and SWFWMD has set a water usage goal of 150 gallons per person per day (gpcd) for our region.

GIWA's reported average from 2007 to 2009 was 213 gpcd, and SWFWMD had informed us that they would most likely only issue a ten (10) year permit due to the high usage as opposed to a twenty (20) year permit. Since permitting is very expensive and we felt the population reported for the island may be low, GIWA decided to conduct a population survey. The membership participation was far greater than anticipated and as a result, our average population increased from 4,360 to 5,662. With the higher population figure, GIWA was in compliance for 2010 with 146 gpcd and the average has been reduced to 160 gpcd.

We will be asking SWFWMD to increase the per capita goal for the island due to the limited availability of well or surface water for irrigation such as is available on the mainland. Even if this increase is granted, GIWA will be working with the membership with water conservation education to keep us at or below our gallon per capita day goal.

GIWA thanks the membership for their participation in the population survey.

### **Pool Leaks**

What is the normal evaporation rate for pools? Unfortunately there is no magic number because evaporation rates depend upon environmental conditions such as wind, humidity, etc. We have had little rain this year to replace evaporation, but if you are adding more than 1.75" of water to your pool weekly, you may want to check for a leak.

## *Water Sustainability in Florida*

Water is one of our most precious resources and is a vital ingredient for life as we know it. On an individual level, we must drink water for basic survival and we depend on it for myriad of other uses - bathing, cooking, watering the lawn and so much more. Within the U.S. economy, water is an absolutely essential resource for almost every industry.

Because water is such a necessary part of our lives, ensuring an adequate supply must be a priority. With increased growth and varying amounts of rain in Florida, the Southwest Florida Water Management District (SWFWMD) is concerned about the sustainability of Florida's water supply. SWFWMD is charged with maintaining a balance between the water needs of current and future users while protecting the environment and water resources. As more people move to Florida, demand for fresh, potable water continues to increase.

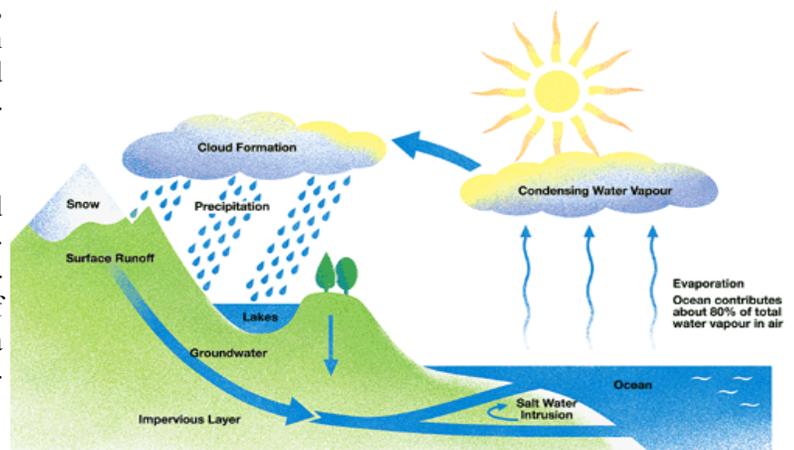
The hydrologic cycle cleans and replenishes the earth's surface water and underground aquifers that we depend upon for our water supply. Our area receives an average of approximately fifty-three inches (53") of rain in a year, making it one of the rainiest regions in North America; however, most of our rainfall occurs from June through September and much is lost to evaporation. The remainder runs off into surface water bodies such as lakes and rivers and a portion soaks through the soil into underground aquifers. The SWFWMD region obtains about 80 percent of its drinking water from underground aquifers with the remaining 20 percent from surface water bodies.

In some areas, aquifers are connected with lakes, rivers and wetlands, and if too much groundwater is withdrawn, the water level of the lake, river or wetland may decline. Excessive groundwater withdrawals can cause saltwater from the gulf to intrude into the freshwater supplies, decreasing the fresh water available and increasing costs to provide clean, drinkable water. To protect natural systems that sustain groundwater, there must be limitations on how much water can be withdrawn, and SWFWMD accomplishes this through planning, permitting and regulation.

Florida is taking several steps to help create and maintain sustainable water sources.

- **Conservation** - Conservation can be the most cost-effective "new" water source available. A drop of water saved is a drop of water gained.
- **Reclaimed Water** - Reclaimed water is defined as "water that has received at least secondary treatment and is re-used after flowing out of a wastewater treatment facility". Reuse saves fresh water for drinking and other daily needs and relieves the stress on the environment by reducing the demand on our ground water sources. Reclaimed water from GIWA's wastewater treatment plant is used for irrigation of the Gasparilla Inn Golf Course and surrounding properties.
- **Offstream Reservoirs** - During our rainy season, water can be skimmed from high flows of rivers and stored for later use in offstream reservoirs. Water purchased from GIWA's back-up water source utilizes this method.
- **Desalination** - Desalination is a process that removes salt from seawater or brackish (slightly salty) water to produce fresh, drinking-quality water. This process will allow us to benefit from the vast quantities of water available from the Gulf of Mexico, but it is costly. GIWA already uses desalination to treat brackish water with a reverse osmosis plant.
- **Land Acquisition** - Another key to a sustainable water supply is land acquisition and management. SWFWMD and other organizations all contribute to purchase, manage and protect natural lands, which in turn protects our water resources. Wetland and upland health play an important role in a sustainable water supply.

Water is crucial to the quality of life that has attracted so many people to Florida. Demand for water continues to grow. Safe, cost-effective, sustainable and environmentally friendly water sources are needed. If we are to preserve the environment that makes Florida unique, everyone must work together to sustain Florida's water resources.



## *What Can I Expect to Find in My Drinking 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 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.

## *Lead in Your 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. GIWA 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 thirty (30) seconds to two (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>.

## *People With Special 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, 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 1-800-426-4791.

### **Contact Information**

GIWA is regularly alerted to leaks or malfunctioning irrigation systems at member's residences especially during the summer months when many residents are gone. Sometimes it is a sprinkler system running non-stop, but sometimes it is water leaking out of your house! We try to contact not only the homeowner but also any local contact so the problem can be corrected as soon as possible.

So that we have up-to-date information to reach you in case of an emergency, please either contact GIWA at 1-941-964-2423 or provide us with that information when you pay your next bill.

## Source Water Assessment Plan

In 2009 the Florida Department of Environmental Protection (FDEP) 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 eight (8) potential sources of contamination identified for our system with susceptibility levels ranging from low to moderate for contamination. The potential sources identified include petroleum storage tanks (moderate risk) and industrial wastewater permits (low risk). The assessment results are available on the FDEP Source Water Assessment and Protection Program website at [www.dep.state.fl.us/swapp](http://www.dep.state.fl.us/swapp).

Florida relies on groundwater for approximately 92% of its drinking water needs; therefore, a very active petroleum contamination prevention program is in place with some of the most stringent rules in the country including annual compliance inspections. The industrial wastewater permits are needed for GIWA's reverse osmosis plant reject water disposal and for concrete plants operating in the area. Those permits include conditions that are designed to protect groundwater, and are monitored by FDEP to insure compliance.

Additionally, Charlotte County has a Wellhead Protection Ordinance in place that is designed to protect our water supply. This ordinance requires anyone wishing to conduct business within 1500' of our wells to enter into an agreement with GIWA which contains specific conditions to protect our water supply from contamination as a result of their operations.

### How Do I Read This Report?

In the table on the following page, you may find unfamiliar terms and abbreviations. To help you better understand these terms we've provided the following definitions:

- **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 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.
- **Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
- **Maximum Residual Disinfectant Level or MRDL:** 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.
- **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.
- **"ND"** means not detected and indicates that the substance was not found by laboratory analysis.
- **Parts per billion (ppb):** One part by weight of analyte to 1 billion parts by weight of the water sample.
- **Parts per million (ppm):** One part by weight of analyte to 1 million parts by weight of the water sample.
- **Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.



*MCL's 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 at the MCL level every day for a lifetime for a one-in-a million chance of having the described health effect.*

**Gasparilla Island Water Association, Inc.**  
**2010 Annual Drinking Water Quality Test Results**

<b>Microbiological Contaminants</b>							
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Highest Monthly Number	MCLG	MCL		Likely Source of Contamination
Total Coliform Bacteria (positive samples)	Monthly 2010	No	1	0	Presence of coliform bacteria in no greater than 1 sample collected during a month		Naturally present in the environment
<b>Inorganic Contaminants</b>							
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Barium (ppm)	04-14-08	No	.007		2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cyanide (ppb)	7-07-08	No	9.6		200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Nitrate (as Nitrogen) (ppm)	7-02-10	No	.02		10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	4-14-08	No	82.1		N/A	160	Salt water intrusion, leaching from soil
<b>Stage 1 and Stage 2 Disinfectants and Disinfection By-Products</b>							
Disinfectant or Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL or MRDL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL Or MRDL	Likely Source of Contamination
Chloramines (ppm)	01/10-12/10	No	3.0	2.5 - 3.0	MRDLG= 4	MRDL = 4.0	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (ppb)	02/15/10 & 9/29/10	No	15	11 - 19	N/A	MCL = 60	By-product of drinking water disinfection
TTHM (Total Trihalomethanes) (ppb)	02/15/10 & 9/29/10	No	52	48 - 56	NA	MCL = 80	By-product of drinking water disinfection
<b>Lead and Copper (Tap Water)</b>							
Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	AL Exceeded Y/N	90th Percentile Result	Number of Sampling Sites Exceeding AL	MCLG	AL	Likely Source of Contamination
Copper (tap water) (ppm)	09/10/08 - 09/23/08	No	.115	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	09/10/08 - 09/23/08	No	ND	0	0	15	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives



P.O. Box 310  
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# Be Water Smart Every Drop Counts!

<p align="center"><b>2010 Water Quality Report</b></p>	<p align="center"><i>Gasparilla Island Water Association, Inc. Board of Directors</i></p>
<p><b><i>President's Message</i></b></p> <p><i>We are pleased to report once again that our drinking water meets or exceeds all federal and state requirements. This annual Water Quality Report is our opportunity to provide you with details about your drinking water and the services we delivered to you over the last year.</i></p> <p><i>Last June was the first time in four (4) years we were not addressing the fact that our area was experiencing drought conditions. In fact we had received nearly twice the normal rainfall for the first five (5) months of 2010 and water sales were down twenty-two (22) million gallons. That trend changed for the last half of 2010, and has continued into 2011 with rainfall once again below normal. As a result, water sales are now thirty-five (35) million gallons over last year primarily due to increased landscape watering. The effects of reduced rainfall on your water supply is addressed in this report. You can help preserve your water supply by following the watering restrictions detailed on Page 3 of this report.</i></p> <p><i>GIWA wants to thank you for your continued support protecting our water sources by conserving water which is the heart of our community, our way of life and our children's future.</i></p>	<p>Leslie Diaz, President David McHugh, Vice-President Patricia Seidensticker, Secretary Renae Baker, Treasurer Joseph Anderson Terry Bisset Bill Caldwell Tom Shaffer Kathleen Turner</p>
<p align="center"><b>Landlords and businesses are encouraged to share this report with their tenants. Additional copies can be obtained by contacting GIWA at 941-964-2423</b></p>	<p align="center"><b>Gasparilla Island Water Association, Inc.</b> <b>Bonnie Pringle, Utility Director</b> <b>1700 E. Railroad Avenue</b> <b>PO Box 310</b> <b>Boca Grande, FL 33921</b> 941-964-2423      <a href="http://www.mygiwa.com">www.mygiwa.com</a></p>