

# water quality REPORT



## Hilton Head PSD Annual Drinking Water Quality Report

This Annual Drinking Water Quality Report contains tap water test results that have been confirmed through extensive scientific monitoring and analysis. In fact, more than 500 samples of PSD drinking water were analyzed during the past year to verify the safety of the drinking water we provide to you.

Additionally, the PSD completed an independent audit of our drinking water system. The audit included a review of regulatory compliance, treatment effectiveness, monitoring, operations and maintenance costs, system leaks, system flushing, construction inspections, customer satisfaction, and aesthetic water quality, among an array of other factors. The PSD's drinking-water treatment processes were found to be nearing optimization, and our tap water was found to be softer as a result of our blend of water sources.

This report reflects the results of analyses performed during the year to comply with drinking water quality regulations from the U.S. Environmental Protection Agency (EPA) and

the State of South Carolina's Department of Health and Environmental Control (DHEC).

Sampling data for nearly 100 regulated elements and substances that may be present in public drinking water supplies, from naturally occurring and manmade sources, was collected systematically throughout the year and scientifically analyzed. Independent laboratories and DHEC have confirmed the data.

Very few substances regulated by the Safe Drinking Water Act are present in the PSD's water supply, and the levels of substances or elements detected were well within the limits considered safe by state and federal standards.

If you have questions about the drinking water supplied by your PSD, please contact Pete Nardi, Hilton Head PSD Community Relations Manager, at (843) 681-0525, or email [info@hhpsd.com](mailto:info@hhpsd.com).



## Hurricane season and your water service

The public water and sewer system operated by Hilton Head PSD is a critical component of Hilton Head Island's quality of life. Our operations can be affected by a hurricane and we ask all customers to consider steps you can take to prepare your home and family for a storm.

To ensure your household has a safe and adequate water supply after natural disasters take these precautions:

- Store enough drinking water for each family member and pet
- Store in clean, non-corrosive, tightly covered containers
- Store containers in a cool, dark location
- Collect water in bathtubs for non-drinking uses

In the event of a hurricane, you can further protect the water supply going into your home and minimize property damage by following the guidelines below:

### How to protect your water heater

- Switch off the electrical circuit breakers
- Turn off your water at the main valve

### Finding your home's water shut-off valve

Your water can be shut off at the main valve. Everyone in your home should know where this is located. The main valve (usually with a wheel-type handle) normally is located either on the customer side of the meter box or just outside the point where the service line penetrates the foundation of the house. It will be in line with your water meter, which is usually located near the edge of your property line near the street.

Some homes may also have a water shut-off valve located in the garage. Bear in mind that closing such a valve will turn off water to the interior of the home, but not the exterior.

Also remember to turn off all electrical appliances that use water, such as water heaters, so that they do not create a safety hazard if they lose water. There also may be valves on appliances and fixtures, such as the water heater, washing machine and toilet. It is a good idea to turn these valves on and off from time to time in order to ensure they're working when you need them.

If you have questions about your water service in the event of a hurricane, please contact Pete Nardi, PSD Community Relations Manager, at (843) 681-0525 or [info@hhpsd.com](mailto:info@hhpsd.com).

**Hilton Head PSD  
Emergency  
Information Hotline  
(843) 681-0555**

**Beaufort County  
Hurricane Hotline  
1-800-963-5023**

## PSD, Town partnership continues sewer projects


The PSD and the Town of Hilton Head Island have partnered to install sewer service. A project to finish the installation of sewer along Squire Pope Road kicked off in April. Another project to provide sewer in the Chaplin area off William Hilton Parkway is on tap for the early summer.

The projects have been made possible through the Town's Tax Increment Finance (TIF) District in the project areas. TIF is a funding method of allocating tax revenues to create public owned projects that stimulate private investment and improve the quality of life on Hilton Head Island. The public sewer system, which has long been desired in the neighborhoods that comprise the TIF District, is critical in providing a high

quality of life on the island.

The PSD and Town in 2011 finished a project that provided sewer access to more than 130 properties in the Stony area, including Wildhorse and Squire Pope roads, part of Spanish Wells Road, Humane Way, and William Hilton Parkway between Squire Pope Road and Jenkins Island.

Connections to sewer in this area have been brisk. Many owners were relying upon septic systems that are ill-suited for the island's high groundwater table, resulting in failures. Septic system failures not only pose a soil and water pollution threat, but can result in costly property damage.



**Providing a SAFE  
option on Hilton Head**

Project SAFE is a charitable fund of the Community Foundation of the Lowcountry. The fund provides grants for low- and moderate-income homeowners to connect to the public sewer system. Click on the Project SAFE logo at [www.hhpsd.com](http://www.hhpsd.com) to donate today!

COMMUNITY FOUNDATION  
OF THE LOWCOUNTRY, INC.

**HiltonHeadPSD**

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**BOB MANNE**



**GARY KRATZ**



**JOHN GEISLER**



**DAVID MCCOY**

## PSD Commission election set for November

Four seats on the Hilton Head PSD Commission will be up for election during the November 6 general election. Two seats in PSD Voting District 4 and one seat each in PSD Voting Districts 2 and 3 will be up for election. Voting District 4 represents Hilton Head Plantation; Voting District 2 represents the Indigo Run and Spanish Wells areas; and Voting District 3 represents the Palmetto Hall and Port Royal Plantation areas.

The Commission normally meets on the fourth Tuesday of each month in the PSD Community Room at 21 Oak Park Drive, off Mathews Drive. The public is welcome and customer input is encouraged. Customers can contact the Commission via email at [commissioners@hhpsd.com](mailto:commissioners@hhpsd.com).

The following PSD Voting Districts and Hilton Head voting precincts will be involved in November's PSD Commission election:

### Incumbents file in Voting Districts 3 and 4

Incumbent Commissioner John Geisler has filed for reelection from PSD Voting District 3. Geisler has served as the Commission's secretary and chair of its Finance Committee since 2003. Incumbent Commissioners Bob Manne and Gary Kratz have filed for reelection from PSD Voting District 4. Manne and Kratz have served as the Commission's chairman and treasurer, respectively, since 2003.

### McCoy files for Voting District 2

David McCoy has filed for the seat from Voting District 2. McCoy moved to Hilton Head Island in 2006. He is the former Senior Vice President of Finance and Chief Financial Officer for the Community Foundation of Northwest Indiana, a health care system that included three hospitals among other facilities. McCoy began his career as a CPA with a firm in Chicago. On Hilton Head, he has served as the president of both the Hilton Head Island and Indigo Run computer clubs. He is a Rotary Club Paul Harris Fellow and resides in Indigo Run with his wife, Betsy.

PSD Voting District 2	PSD Voting District 3	PSD Voting District 4
2A	2B	1A
2C	3	1B
10	6A	2B
	6B	4A
		4B
		4C
		4D
		5A
		5B
		5C



**LowCountry Rain Barrel**

**Hilton Head PSD offers 80-gal. rain barrels for \$115 each. Please call (843) 681-5525 or email [info@hhpsd.com](mailto:info@hhpsd.com) to order.**

The PSD Commission is a seven-member board elected from four PSD Voting Districts. The Commission's duties include setting the policies and long-term goals of the PSD, and approving the annual operating budget and PSD property tax rate.





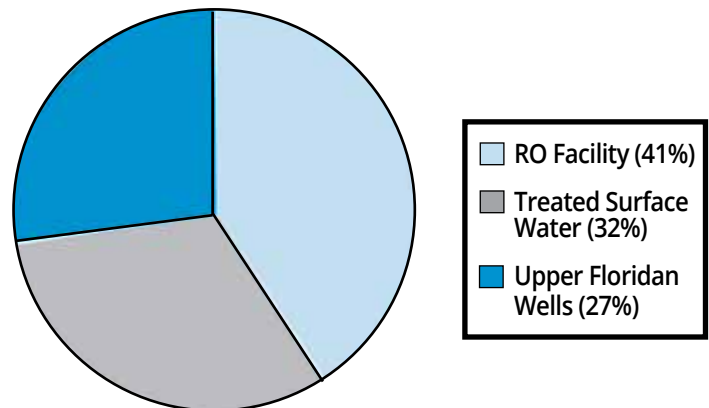
## Your sources of tap water

Hilton Head PSD uses three sources of drinking water. This diversity of supply is a necessary response to saltwater intrusion into our traditional groundwater source. But it also is an important recovery tool in the event of a hurricane or other disaster. The three sources are blended in the PSD's drinking water distribution system, at varying rates depending upon time of year, time of day, or other factors.

The PSD supplies its customers with an average of 6 million gallons of drinking water a day – 2.3 billion gallons a year – using our three sources:

- Groundwater from the Middle Floridan Aquifer treated at the PSD's Reverse Osmosis (RO) Drinking Water Treatment Facility
- Groundwater from the Upper Floridan Aquifer treated with chloramine injection at well sites
- Treated Savannah River surface water purchased wholesale by the PSD from the Beaufort-Jasper Water & Sewer Authority (BJWSA). The PSD buys wholesale water at an off-peak rate during the winter months and stores it in our new Aquifer Storage & Recovery (ASR) Well for re-treatment and distribution during the summer months when both demand and the wholesale water rate increase.

So, how much of the PSD's supply comes from these sources? It breaks down as follows:



## Now let's take a look at each of the sources

### The Reverse Osmosis Plant

The RO Plant, located across U.S. 278 from Windmill Harbour, began operations in April 2009. It provides customers with 3 million gallons of fresh drinking water a day, about half of the average daily demand for water. Its construction was necessary to replace water supply lost to saltwater intrusion. The plant uses state-of-the-art filtration to produce a very high-quality drinking water. In fact, it's the same process used to produce many brand-name bottled waters and other beverages. The RO plant is expandable to provide 6 million gallons of drinking water a day.

### Treated Savannah River Surface Water

The Beaufort-Jasper Water & Sewer Authority (BJWSA) treats Savannah River surface water at two state-of-the-art treatment plants located on the mainland. The treated water is pumped to Hilton Head PSD via a large pipeline underneath the Intracoastal Waterway. During the winter months, surface water is stored in the PSD's Aquifer Storage & Recovery (ASR) Well for re-treatment and distribution during the summer months.

### Upper Floridan Wells

The PSD uses five wells drilled into the freshwater Upper Floridan Aquifer, each at a depth of about 150 feet. The Upper Floridan Aquifer is a limestone aquifer and is one of the largest freshwater aquifers in the world, stretching from the Beaufort area into the Florida Everglades. It is Hilton Head Island's traditional source of drinking water. Unfortunately, the Upper Floridan has been affected by saltwater intrusion that has rendered six of the PSD's wells unacceptable for drinking water supply. The RO Plant and ASR Well were built to replace the water supply lost as a result of the saltwater intrusion.



## Testing the water

The PSD's tap water is subject to more than 100 primary and 15 secondary regulations by the U.S. Environmental Protection Agency (EPA) and the South Carolina Department of Health and Environmental Control (DHEC). To adhere to and surpass these regulations, the PSD annually tests more than 500 samples of the drinking water we provide to customers.

The utility performs both field and laboratory tests of our drinking water. We send the results of these tests to DHEC on a weekly basis. Our annual testing results are reported to you here, in our Water Quality Report. By law, this report must be mailed to all PSD customers.

The PSD employs water chemists to administer our Water Quality program and our EPA-certified laboratory. Our field technicians are licensed by the State of South Carolina.

### Water Quality Measures

Our field testing is done to monitor and ensure proper levels

of treatment are maintained throughout our drinking water distribution system.

The PSD routinely flushes water lines to circulate water in our system. This is particularly important in areas that are seasonally occupied or have low water consumption, such as streets with few homes or residents.

The utility uses computer-based monitoring of our water system, which allows our operators to check levels and flow rates 24/7.

As a safety measure for the general public and our employees, the PSD uses liquid chlorine treatment of drinking water. This effective method is safer than the use of chlorine gas treatment.

If you have questions about your drinking water, please email us at [info@hhpsd.com](mailto:info@hhpsd.com) or call Pete Nardi, PSD Community Relations Manager, at (843) 681-0525.

# Helping you better understand the technical terms

The following definitions will help you understand the data and information presented in the Water Quality Test Result tables.

- 90th %: Of all the samples analyzed, 90 percent were at or below this detection level.
- Action Level or AL: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
- Action Level Goal or ALG: The level of a contaminant in drinking water below which there is no known or expected risk to human health. ALGs allow for a margin of safety.
- 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 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.
- Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.
- 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.
- 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.
- MG/L: milligrams per liter. One mg/l is equal to one part per million.
- na: not applicable.
- NTU: nephelometric turbidity units. NTU is a measure of the clarity of treated surface water used to determine the effectiveness of filtration systems.
- pCi/L: picocuries per liter. The measure of radioactivity in water. It is equivalent to the quantity of radioactive material producing 2.22 nuclear transformations per minute.
- ppm: milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.
- ppb: micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.
- TT: treatment technique

## Mandatory Statements

The following mandatory statements are required by the U.S. Environmental Protection Agency and the S.C. Department of Health and Environmental Control to appear in this Annual Water Quality Report, regardless of the results of water quality monitoring. These statements must appear in all Annual Water Quality Reports for all publicly regulated drinking water providers in the United States.

\*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 storm water 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 storm water 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 storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

\*\*\*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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

\*\*\*\*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.

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 microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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 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>.

# PSD receives high marks from customers

The PSD's annual Customer Satisfaction Survey showed 92 percent of respondents rating the utility overall as either Excellent or Good. Additionally, 82 percent of respondents ranked the quality of the PSD's tap water as either Excellent or Good. More than 300 customers provided their valuable feedback through the survey, which is used to gauge our performance and help guide our programs and policies. The PSD sincerely thanks each customer who took time out of their busy schedules to complete the survey.

Below are the results of each question.

1. Do you drink unfiltered tap water?

Yes	56% (166)
No	44% (130)

2. Do you routinely buy bottled water?

Yes	32% (96)
No	68% (204)

3. How would you describe the quality of your tap water?

Excellent	24% (71)
Good	58% (171)
Fair	16% (48)
Poor	2% (7)

4. Do you use a water softener in your home?

Yes	28% (85)
No	72% (215)

5. Do you adjust your irrigation based on the weather?

Yes	83% (225)
No	17% (46)

6. Do you have a rain sensor on your irrigation system?

Yes	58% (156)
No	42% (113)

If you answered "Yes," do you know if your rain sensor is working?

Yes	65% (99)
No	35% (54)

7. Please read each statement below and tell us whether you Strongly Agree, Agree, Disagree or Strongly Disagree.

a. PSD tap water is safe to drink.

Strongly Agree	48% (144)
Agree	48% (142)
Disagree	3% (9)
Strongly Disagree	1% (3)

b. I prefer tap water to bottled water.

Strongly Agree	22% (63)
Agree	43% (122)
Disagree	26% (73)
Strongly Disagree	10% (28)

c. People on Hilton Head Island use water efficiently.

Strongly Agree	3% (8)
Agree	42% (117)
Disagree	48% (132)
Strongly Disagree	7% (20)

d. I use water efficiently.

Strongly Agree	39% (116)
Agree	58% (173)
Disagree	4% (11)
Strongly Disagree	None

8. Is your PSD bill statement easy to understand?

Yes	97% (288)
No	3% (10)

9. Do you believe the PSD's water and sewer rates are reasonable?

Yes	72% (201)
No	28% (77)

10. Overall, how would you rate Hilton Head PSD?

Excellent	45% (133)
Good	47% (139)
Fair	7% (22)
Poor	0% (1)

# Water Quality Test Results

for the period of January 1 to December 31, 2011

This report is intended to provide you with important information about your drinking water and the efforts made by the PSD to provide safe drinking water.

Este informe contiene información muy importante sobre el agua que usted bebe.  
Tradúzcalo ó hable con alguien que lo entienda bien.

## 2011 Regulated Contaminants Detected Hilton Head PSD (#0720006)

Lead and Copper								
Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over Action Level (AL)	Units	Violation	Likely Source of Contamination
Copper	June 1 - Sept. 30, 2009	1.3	1.3	0.642	0	ppm	No	Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing systems.
Lead	June 1 - Sept. 30, 2009	0	15	5	0	ppb	No	Corrosion of household plumbing systems; erosion of natural deposits.

Regulated Contaminants								
Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	2011	2	2-2	MRDLG = 4	MRDL = 4	ppm	No	Water additive used to control microbes
Haloacetic Acids (HAA5)*	Quarterly 2011	13	0 - 25.65	No goal for the total	60	ppb	No	By-product of drinking water chlorination.
Total Trihalomethanes (TThm)*	Quarterly 2011	22	10.21 - 35.89	No goal for the total	80	ppb	No	By-product of drinking water chlorination.

\* Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.



Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Fluoride	February 10, 2010	1.4	1.4 - 1.4	4	4.0	ppm	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (measured as Nitrogen)	2011	0.15	0 - 0.15	10	10	ppm	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.

\*Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.

### UCMR2 Sampling

Hilton Head PSD has been monitored for the Unregulated Contaminant Monitoring Regulation 2 (UCMR 2) in 2010. No detections were noted. If you would like to receive the list of contaminants monitored, please contact Pete Nardi, Hilton Head PSD Community Relations Manager, at (843) 681-0525 or [info@hhpsd.com](mailto:info@hhpsd.com).

## 2011 Regulated Contaminants Detected Beaufort-Jasper Water & Sewer Authority (#0720003)

### Regulated Contaminants

Contaminant	Detected Level	Range of Detection	Highest Level Allowed (MCL)	Goal (MCLG)	Unit of Measure	Violation	Year	Possible Source
Fluoride	0.72	0 - 0.72	4	4	ppm	No	2011	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (measured as Nitrogen)	0.20	ND - 0.20	10	10	ppm	No	2011	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Cadmium	0.77	0 - 0.77	5	5	ppb	No	2011	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paint.

### Turbidity

	Date	Highest Level Detected	MCLG	MCL	Violation	Likely Source of Contamination
Highest single measurement	2011	0.06 NTU	0	TT = 1 NTU TT = 95% < 0.30 NTU	No	Soil runoff.

### Total Organic Carbon

Date Tested	MCL	MCLG	Range of Removal	Level Found	Violation	Typical Source
2011	TT	n/a	32.4-57.7% removal	46.4% removal (35% -50% is required)	No	Naturally present in the environment



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## Ensure Healthier Plants This Growing Season

By Stuart Grant

General Manager for Residential Accounts, The Greenery

This is the time in the Lowcountry to enjoy your green, lush landscape. But it is important to take the time to properly manage your irrigation strategy.

### HOW TO SET UP YOUR IRRIGATION SYSTEM

During the upcoming months of June, July and August, landscapes should be on cruise control, meaning the fertilizing and planting should be completed. Now is the time to reap the benefits of your hard work and watch your lawn flourish. But it is still important to properly manage how you care for your landscape.

All irrigation clocks run off zones, with each zone dedicated to a specific area of the lawn. Set the zones for your property based on which areas will need the most nurturing. New plantings need the most attention to allow them to become established fixtures of your landscape.

New plantings such as flowers, shrubs or turf usually take a couple months to get established. During that time they require the most water and therefore should have their own irrigation zones and a watering program designed especially for their needs.

Typically, there is no need to water established plants during this time of year. You will only waste water. If the Lowcountry experiences normal weather, established plants should survive off the season's rainfall. When you water established landscape unnecessarily, the roots don't get the opportunity to grow and expand. The plants' roots stay short and therefore never truly flourish.

But it is important for property owners to keep a close eye on their landscape if our area experiences a time of drought. Look out for any flowers or shrubs that begin wilting. Those will need water, provided by the irrigation system, to continue to thrive during the warmer months.



the greenery, inc.

Employee Owned

### KNOW WHEN TO WATER

Property owners can keep their water usage and bill low by keeping a proper watering schedule. After first planting new shrubs, flowers or turf, you should water those zones for about 20 minutes a day, three times a week for three weeks. Then, remove a day from the schedule, watering only two days a week for two weeks. On week six, water for only one day a week until the plants are well established.

It is not only important to regulate how often and how long you water, but what time of day you water as well. It is best to run the irrigation system during the early morning hours such as 1 or 2 a.m. from now until June. By following this rule, the water

has a chance to filtrate down to the roots. The water would evaporate too quickly if you ran the irrigation system during the heat of the day and therefore your lawn would not be properly refreshed.

Keeping a tight watering schedule will ensure you optimize the water you're using.

### CONSIDER HOW YOU WATER

Another possibility in regards to water conservation is switching your spray zone to a drip zone for new plants. A spray irrigation device distributes water over a broad area. A drip irrigation device delivers water slowly and steadily to the roots of individual plants. There is far less tendency to over water using the drip method.

If a property owner decides to use a drip irrigation system for the lawn, set the clock to water for 45 to 50 minutes at a time. Although that length of time might seem excessive, keep in mind even though it is running longer, it is not using more water. The water is merely being distributed differently. Talk to your landscape professional regarding the best irrigation system and plan for your landscape.