

SOUTH FLORIDA WATER MANAGEMENT DISTRICT  
3301 GUN CLUB ROAD  
WEST PALM BEACH, FLORIDA

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DISTRICT PLANNING OFFICE  
MAR 16 2011 9:48 AM

Order No. 2011-031-DAO-WS  
SOUTH FLORIDA  
WATER MANAGEMENT DISTRICT

IN THE MATTER OF:

Declaration of Water Shortage  
Warning for all Use Classes  
Withdrawing from Surface and  
Groundwater within the  
Boundaries of the South Florida  
Water Management District and  
Delegation of Authority to the  
Executive Director to Modify or  
Rescind the Provisions of this  
Order

**DECLARATION OF WATER SHORTAGE WARNING**

The Governing Board of the South Florida Water Management District ("District"), after considering recommendations of District staff and being otherwise fully apprised of the matter, issues this Order pursuant to Sections 373.083, 373.175, and 373.246, Florida Statutes, and Chapter 40E-21, Florida Administrative Code, based on the following Findings of Fact and Ultimate Facts and Conclusions of Law.

**FINDINGS OF FACT**

1. The sources of water affected by this Order are the surface and groundwater sources within the jurisdictional boundaries of the District as described in Rule 40E-21.631, Fla. Admin Code. A map depicting the area subject to this Order is attached hereto as Exhibit "A."

2. All water use classes identified in Rule 40E-21.651, Fla. Admin. Code, are subject to this Order.

3. The entire District, except as described further herein, shall be subject to this Order.

4. District staff has been monitoring the conditions of the water resources and the needs of the water users as required by Rule 40E-21.221, Fla. Admin. Code.

5. In 2010, the Upper Kissimmee River Region experienced its sixth driest wet season since 1915. The 2010-11 dry season also has been quite dry. Only 0.42 inches of rain fell in the upper portion of the Kissimmee River Region during February 2011. This is only 18% of the average rainfall for the month of February. From October 1, 2010 through March 6, 2011, 7.73 inches of rain or 59% of the historic average

6. The lower portion of the Kissimmee River Region saw 0.21 inches of rain during February 2011. This equates to 9% of the average rainfall for the month of February. From October 1, 2010 through March 6, 2011, 6.02 inches of rain, or 54% of the historic average, fell over the Lower Kissimmee River Region.

7. The U.S. Climate Prediction Center ("CPC") predicts the Kissimmee River Region to continue to experience a D1 to D2 (moderate to severe) drought, with below average rainfall throughout the remainder of the dry season.

8. The Lower East Coast ("LWC") Region, like regions described above, has experienced below average rainfall. The southwestern portion of the LWC Region experienced 0.39 inches of rainfall in February 2011. This is only 17% of the average rainfall for the month of February. The East Caloosahatchee portion of this region saw 0.36 inches of rain during February 2011. This is only 17% of the average rainfall for the month.

9. From October 1, 2010 to March 6, 2011, about 6 inches of rain, or 50% of the historic average, fell over the LWC Region. This region is currently experiencing a rainfall deficit of about 6 inches.

10. The well below average rainfall conditions seen in the LWC Region are expected to continue throughout the dry season. District meteorologists predict minimal rainfall as a result of La Niña weather patterns. The CPC predicts the LWC Region will experience a D1 to D2 (moderate to severe) drought conditions for the remainder of the dry season.

11. During the month of February, only 0.38 inches of rain fell in the Upper East Coast ("UEC") Region. This is only 15% of the average rainfall for the month of February. From October 1, 2010 to March 6, 2011, about 5.67 inches of rain, or 36% of the historic average, fell over the UEC Region. This region is currently experiencing a rainfall deficit of about 10 inches. The CPC predicts the UEC Region will experience a D2 to D3 (severe to extreme) drought conditions for the remainder of the dry season.

12. Finally, the Lower East Coast ("LEC") Region has also experienced well below average rainfall. During the month of February, 0.58 inches of rain fell in Palm Beach County, Broward County saw 0.17 inches of rain, and Miami-Dade County received 0.1 inch of rain. This is 20%, 6%, and 5%, respectively, below the average rainfall for February. From October 1, 2010 to March 6, 2011, about 7.5 inches of rain, or less than half the historic average, fell over the LEC Region.

13. The lack of rainfall has caused surface and groundwater levels to decrease in all areas of the District. In the Kissimmee River Region, about half of the monitoring stations maintained by the United States Geological Survey ("USGS") have

water levels between the lowest 10<sup>th</sup> and the lowest 30<sup>th</sup> percentile. The rest are at median levels for this time of year. The Boggy Creek and Sea World wells reflect water levels of 44.55 and 56.20 feet NGVD, respectively, as of March 7, 2011.

14. Monitoring data compiled by District staff shows a general decline in lake stages within the Upper Chain of Lakes. As of March 7, 2011, East Lake Tohopekaliga, Lake Tohopekaliga, and Lake Kissimmee measured 56.45, 54.40, and 49.98 feet NGVD, respectively. These water levels are 1.55, 0.60, and 1.02 feet, respectively, below the U.S. Army Corps of Engineers' ("Corps") regulation schedule for the lakes. These lakes are vital to the Kissimmee River Region, as well Lake Okeechobee Region, in that the lakes provide a base flow of water into Lake Okeechobee.

15. Groundwater levels in the LWC Region decreased this week in all aquifers. Two-thirds of the USGS Surficial and Lower Tamiami aquifer wells are in the lowest 10<sup>th</sup> to 30<sup>th</sup> percentiles for their period of record; the rest remain near median levels. Sandstone aquifer levels remain in the lowest 10<sup>th</sup> to lowest 30<sup>th</sup> percentile. As of March 7, 2011, well L-2186, located in the Sandstone aquifer, measured 2.98 feet NGVD, 7.98 feet above the maximum developable limit for said aquifer. Mid-Hawthorn aquifer wells vary from below the lowest 10<sup>th</sup> percentile to within 20 percent of median.

16. A number of minimum flows and levels ("MFLs") have been established across the District. Pursuant to Rule 40E-8.221, Fla. Admin. Code, minimum water levels have been established for the Caloosahatchee Estuary, Northwest Fork of the Loxahatchee River, Biscayne aquifer and peat-forming and marl-forming wetlands within the Everglades.

17. As of March 7, 2011, the District's Caloosahatchee Estuary monitoring gauge, identified as Ft Myers, maintained a 30-day average salinity of 16.14 practical salinity units ("psu"). Results from this gauge indicate that the MFL criterion for the Caloosahatchee River and Estuary has been exceeded.

18. Water level stages in the UEC Region are also low. On March 7, 2011, the water levels in the C-23, C-24, and C-25 Canals measured 19.31, 18.56, and 16.33 feet NGVD, respectively. Groundwater levels in USGS wells STL-125, M-1048, M-1004, and M-1261 remain in the lowest 10<sup>th</sup> percentile for their periods of record.

19. These water levels are a concern because the principal source of recharge for surface and groundwater supplies in the UEC Region is rainfall.

20. The LEC Region relies upon the Water Conservation Areas ("WCAs") and Lake Okeechobee as primary and secondary water supply sources. These sources are projected to decline during the dry season.

21. The WCAs west of the LEC Region are relied upon as the primary source of water to the LEC during the dry season in order to provide groundwater recharge, saltwater intrusion protection, and recharge of public drinking water wellfields. Historically, deliveries have averaged up to 500 million gallons per day ("MGD") during the dry season, with increased deliveries in April and May. If the freshwater levels decline, a significant potential exists for saltwater intrusion into the LEC Region's surficial, freshwater aquifers.

22. Lake Okeechobee is a secondary source of water for the LEC Region during the dry season. Water from Lake Okeechobee is relied upon to prevent saltwater intrusion and recharge wellfields when water levels in the Biscayne aquifer

and Water Conservation Areas can no longer meet user demands. However, when water levels in Lake Okeechobee fall below 10.5 feet NGVD, it becomes difficult to provide water to the LEC Region due to conveyance limitations in the regional system canals and evaporation of water during dry conditions.

23. As of March 7, 2011, the level of Lake Okeechobee was 12.02 feet NGVD. This is approximately 2.47 feet below the average water levels in Lake Okeechobee for this time of year.

24. This occurred because the normal wet season, June through October, failed to recharge the low lake levels in Lake Okeechobee. From June 1, 2010 to October 31, 2010, rainfall in the watershed basins recharging Lake Okeechobee was about 20% below average. Rainfall over Lake Okeechobee was 25% below average for the same time period.

25. The CPC Drought Monitor reflects that the LEC Region is experiencing a D2 to D3 (severe to extreme) drought. Based on the La Niña conditions, the dry season has an increased probability of below normal rainfall. Statistical analyses of Lake Okeechobee water levels during La Niña years indicate that Lake Okeechobee is likely to fall into the water shortage management zone as early as mid-March and that there is greater than a 50% chance that the Lake Okeechobee stage will fall below 11.0 feet NGVD before June 1st.

26. Due to the low lake level and lack of water in the recharge basins for Lake Istokpoga and Lake Okeechobee, climate forecasts, and projected water use demands over the remainder of the dry season, the Governing Board declared a water shortage warning for the Lake Okeechobee Region and connected surface waters as well as

Lake Istokpoga and the Indian Prairie Region on November 11, 2010. Users within these areas were asked to voluntarily conserve water in order to avoid future water shortage restrictions.

27. Water outflows from the WCAs to the LEC are also regulated by the Corps. The Corps' Water Control Manual for the WCAs and Everglades National Park sets regulatory floor elevations in the WCAs. The floor elevations identified in the regulation schedule are 14 feet NGVD for WCA-1, 10.5 feet NGVD for WCA-2, and 7.5 feet NGVD for WCA-3.

28. Pursuant to the WCA's regulation schedule, once a WCA regulatory floor elevation is exceeded water deliveries are restricted to the volume imported from secondary sources, such as Lake Okeechobee. If a secondary source is not available when a WCA level falls below the regulatory floor elevation, then water supply deliveries to the coastal areas cannot be made from that WCA, unless the Corps approves a temporary deviation from the regulation schedule.

29. As of March 7, 2011, the water levels within WCA-1, WCA-2, and WCA-3 measured 15.32, 11.15, and 8.44 feet NGVD, respectively. This is approximately 1.3, 0.6, and 0.9 feet, respectively above the regulatory floor of each WCA.

30. Most USGS monitor wells in the LEC Region continued an average drop of 0.1 to 0.2 feet over the past week. Wells located in or near Tequesta, Dania Beach, Hallandale Beach, North Miami, south Miami, and Homestead dropped below 2.0 ft NGVD, which is of concern to the District.

31. A number of minimum flows and levels ("MFLs") have been established in this region. Pursuant to Rule 40E-8.221, Fla. Admin. Code, minimum water levels have

been established for the Biscayne aquifer and peat-forming and marl-forming wetlands within the Everglades.

32. Pursuant to Rule 40E-8.221(3)(b), Fla. Admin. Code, water levels within marl-forming wetlands located east and west of Shark River Slough, the Rocky Glades, and Taylor Slough within the Everglades National Park shall not fall 1.5 feet below the ground surface, as measured at a key gauge, for one or more days during a period in which the water level has remained below ground for a minimum of ninety (90) days.

33. Pursuant to Rule 40E-8.221(3)(b), Fla. Admin. Code, water levels within peat-forming wetlands located within the Wildlife Management Areas, Water Conservation Areas, and Shark River Slough within Everglades National Park shall not fall 1.0 feet below the ground surface, as measured at a key gauge, for one or more days during a period in which the water level has remained below ground for a minimum of thirty (30) days.

34. As of March 7, 2011, the District's Everglades MFL monitoring gauges identified as G-1502 maintained a water level of 5.19 feet NGVD. Results from this gauge indicate that the MFL for marl-forming wetlands located within eastern Everglades National Park has been exceeded. Additional Everglades MFL monitoring gauges monitored by the District, identified as HoleyG, 3A-NE and 3A-NW maintained a water level of 10.59, 6.51, and 7.68 feet NGVD, respectively. Results from these gauge locations indicate that the MFL for peat-forming wetlands located within Holey Land Wildlife Management Area and WCA-3 will most likely be exceeded if current conditions persist.



35. As of March 7, 2011, the District's Loxahatchee River monitoring gauge, identified as Lainhart Dam, maintained an average daily flow rate of 26.15 cfs. Results from this gauge indicate that the MFL criterion for the Northwest Fork of the Loxahatchee River has been exceeded.

36. In light of the above factors, it is important that conservation of the District's surface and groundwater sources is implemented. There is significant potential that water supplies over the remainder of the dry season will decline to the extent that sufficient water will not be available to meet the present and anticipated requirements of the water users within the subject area, while protecting the water resources from serious harm and meeting dry season demands.

37. The declaration of a water shortage warning is prudent at this time in order to provide notice to users of the high potential for future water shortage cutbacks and to stimulate voluntary water conservation preparations and actions pursuant to Rule 40E-21.231(3), Fla. Admin. Code, and encourage increased use of alternative water sources where available.

38. The District will carefully monitor water usage to assess the effectiveness of the voluntary water conservation measures taken by the water use community. Should the voluntary water conservation efforts prove insufficient in conserving regional storage, the District will invoke mandatory water use cutbacks in order to equitably distribute the remaining water supplies and prevent serious harm to the water resources.

## **ULTIMATE FACTS AND CONCLUSIONS OF LAW**

39. The Governing Board has authority to adopt a water shortage plan to regulate the withdrawal and use of water and protect the water resources of the District. § 373.246, Fla. Stat. (2010).

40. The District's Water Shortage Plan is set forth in Chapter 40E-21, Fla. Admin. Code.

41. The Governing Board may issue a water shortage warning calling for voluntary reductions in demand within a source prior to declaring a water shortage. Fla. Admin. Code R. 40E-21.231(3).

42. Rule 40E-21.271, Fla. Admin. Code, recognize the restrictions contained in Part V of Chapter 40E-21, Fla. Admin. Code, are general water use restrictions and also authorize the Governing Board to order any combination of restrictions in lieu of or in addition to those in Part V, Chapter 40E-21, Fla. Admin. Code.

43. Rule 40E-21.401, Fla. Admin. Code, and permit conditions authorize the District to obtain data concerning monitoring of water usage.

44. The District has compared current data with historical data and has determined that the estimated present and anticipated available water supply within the same class may be insufficient to meet the estimated present and anticipated demands of the users and may be insufficient to protect the water resources from harm as required by Rule 40E-21.221(3), Fla. Admin. Code.

45. Considering the above, the best present option to protect the surface and groundwater resources of the affected water use basins is to issue a water shortage warning calling for voluntary reductions in use.

## ORDER

Based upon the above Findings of Fact, Ultimate Facts and Conclusions of Law, the Governing Board orders that:

46. A water shortage warning is issued for all users withdrawing water from surface and groundwater sources within the District's boundaries described in Rule 40E-21.691(2), Fla. Admin Code, except that users of surface waters in Lake Istokpoga, the Central and Southern Florida Flood Control Project Canals known as C-39A, C-40, C-41, and C-41A north of L-59, L-60, and L-61, Lake Okeechobee, and the surface waters hydraulically connected to Lake Okeechobee shall remain subject to Order No. 2010-206-DAO-WS, as modified by Order No. 2010-214-DAO-WS.

47. All water users are encouraged to practice efficient water use.

a. The most effective way to reduce unnecessary water demand is to limit landscape irrigation by watering only on assigned irrigation days, when plants show signs of stress (i.e., wilting). Self-cancelling nozzles should be used for all hand-watering of shrubs and landscaping.

b. Avoid washing or cleaning streets, sidewalks, driveways, or other impervious area with water.

c. Use a self-cancelling nozzle while washing vehicles. Vehicles should be washed over a pervious surface or in an area that immediately drains to a pervious surface.

d. Indoor water use should emphasize shorter showers and running reduced laundry and clothes washing of small loads, and running dishwashers only when full.

e. The proper conservation techniques and practices referenced in the District Conservation publications attached hereto as Exhibit B should be followed

- i. "50 Ways to be Water Smart"
- ii. "Sensible Sprinkling in South Florida"
- iii. "Florida-Friendly landscaping: How to Save Water through Water-Smart Landscaping"

f. All users can visit our website at [www.sfwmd.gov/conserve](http://www.sfwmd.gov/conserve) to request more water conservation tips and information.

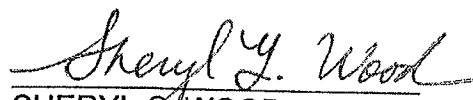
g. Agricultural users are encouraged to increase water conservation efforts and reduce demands where possible.

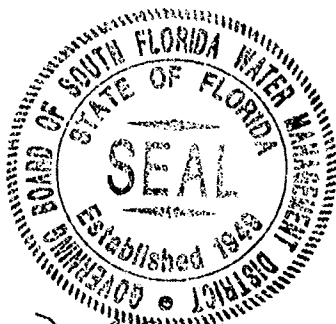
48. The Governing Board delegates the authority to the Executive Director to modify or rescind the water shortage warning order if the District's monitoring of water conditions and water shortage plan implementation reasonably demonstrates that a modification or rescission of the Board's order is warranted and necessary.

49. A Notice of Rights is attached hereto as Exhibit "C."

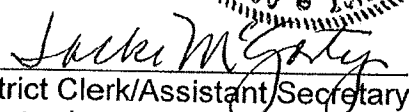
DONE AND SO ORDERED in Ft. Pierce, Florida, on this 10<sup>th</sup> day of March 2011.

SOUTH FLORIDA WATER  
MANAGEMENT DISTRICT  
By its Governing Board

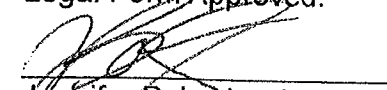
  
SHERYL G. WOOD  
General Counsel



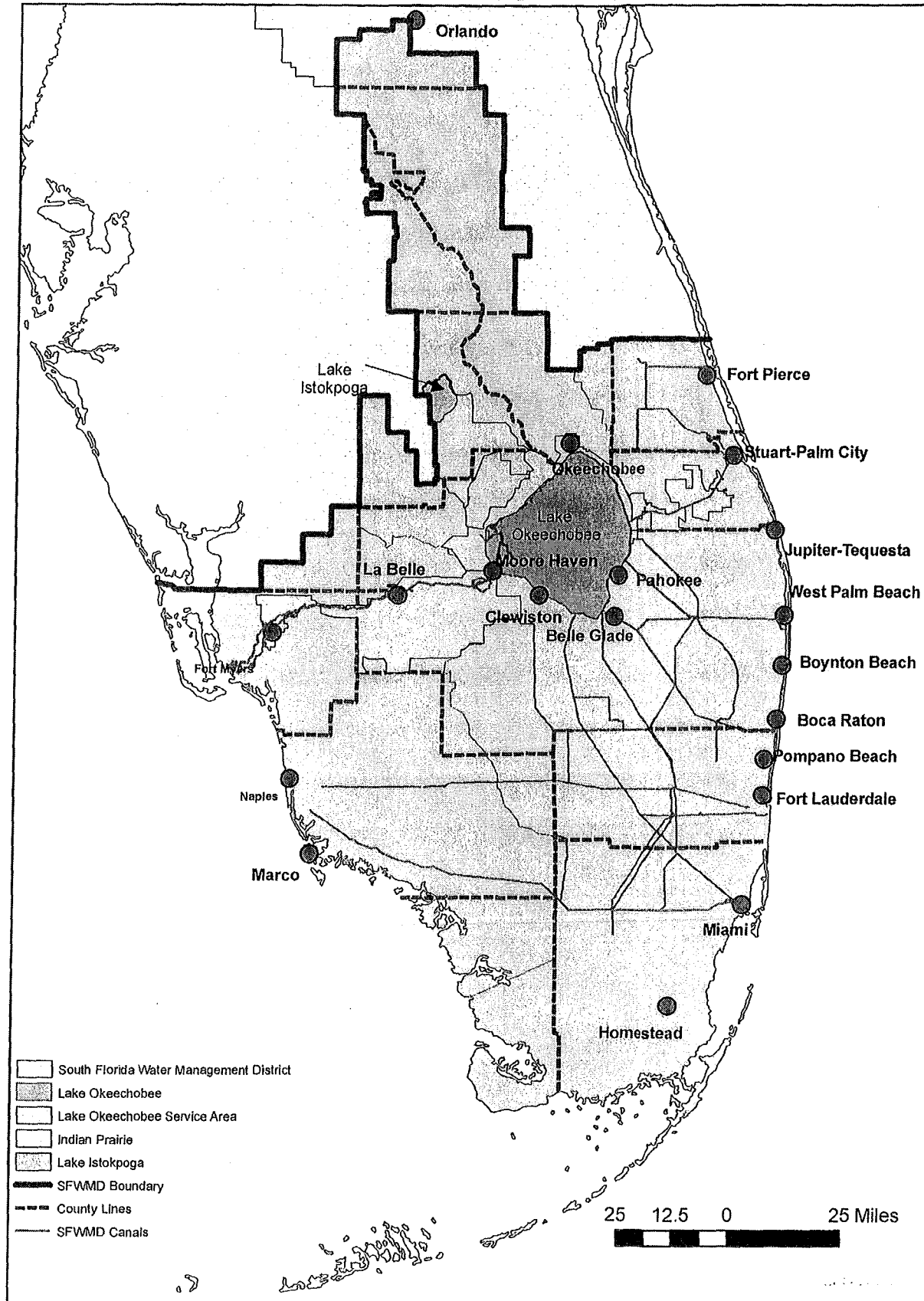
Attest:

  
District Clerk/Assistant Secretary  
March 16, 2011

Legal Form-Approved:

  
Jennifer Bokankowitz, Esq.

# WATER SHORTAGE WARNING



NOTE: LOSA, Indian Prairie and Lake Istokpoga Follow  
ORDER: 2010-206-DAO-WS as modified by 2010-214-DAO-WS

**Exhibit A**


 splash!

quick facts on...

## 50 Ways To Be Water Smart

HOW YOU CAN HELP SAVE FLORIDA'S LIMITED WATER SUPPLY

**The South Florida Water Management District** is a regional, governmental agency that oversees the water resources in the southern half of the state. It is the oldest and largest of the state's five water management districts.

Our Mission is to manage and protect water resources of the region by balancing and improving water quality, flood control, natural systems and water supply.

### NOTE:

*Florida's lifestyle depends on a clean, ample supply of water. You can help conserve this limited resource by using these commonsense tips at home. It's important that we all do our part.*



### Saving Water Outdoors

1. Use a rain gauge to measure how much water your lawn receives. South Florida lawns typically need only  $\frac{3}{4}$  to 1 inch of water each week.
2. Irrigate no more than once a week in the winter or twice a week in the summer.
3. Turn off sprinklers when it rains. All automatic sprinkler systems installed since 1991 must have a rainfall shut-off device, according to Florida law. The device overrides the sprinkling system when it rains.
4. Use Florida-friendly and drought-tolerant plants in your landscape. These plants do not need as much water as other varieties and are more likely to survive in a dry period.
5. Irrigate during the early morning hours when temperatures and wind speeds are the lowest. This reduces water loss through evaporation.
6. Position sprinklers to put water on your lawn and landscape, not onto paved areas nearby.
7. Install and use timers on all irrigation systems and portable sprinklers to prevent overwatering.
8. Check and maintain sprinkler systems and timing devices so that they operate properly.
9. Install low-flow irrigation systems that apply water directly to plant root zones. This includes drip, bubble and micro-jet systems and soaker hoses.
10. Collect rainwater from rooftop gutters in a rain barrel or cistern. Use the stored water during dry periods.
11. Adjust your mower blade to leave the grass 3 inches high when you cut the lawn. Taller grass encourages deeper root growth, shades the root system and holds soil moisture.
12. Keep the mowing blade sharp to reduce stress on your lawn.
13. Use mulch in plant beds to retain moisture, reduce evaporation and discourage weeds that compete with plants for water.
14. Avoid over-fertilizing your lawn. Applying fertilizer increases the need for water. If you use fertilizer, choose one containing 2 percent or less phosphorus.
15. Apply fertilizer using smaller applications rather than a large, single application. Follow instructions on the label. The label's the law.
16. To prevent fertilizer spills, use a tarp under the spreader when filling or emptying it. Sweep any spilled granular fertilizer onto the grass. Never hose it off.
17. Postpone fertilizing when more than 1 inch of rain is expected.
18. Use a broom or leaf blower instead of a hose to clean leaves and other debris off your driveway or sidewalk.
19. Attach to your hose an automatic or self-cancelling nozzle that can adjust water flow from the hose to a fine spray. Always turn water off at the faucet, instead of at the nozzle, to avoid leaks.
20. Check connectors on garden hoses and household appliances, such as dishwashers and clothes washers, to make sure that plastic or rubber washers are in place. Washers prevent water from leaking at the hose connection.

21. Do not leave hoses unattended. More than 600 gallons of water can flow from an open garden hose in one hour.

22. Avoid purchasing recreational toys that require a constant stream of water.

23. Consider using a commercial car wash that recycles water. If you wash your own car, park on the grass or other non-paved surface and use a hose with an automatic or self-cancelling nozzle.

24. Avoid installing fountains or other ornamental water features unless they use recycled water. Properly adjust them so that water doesn't fall outside of the catch basin.

### In Your Home

25. Repair dripping faucets by replacing the washers inside. One drop per second wastes 2,700 gallons of water per year.

26. Retrofit all household faucets with high-efficiency units that use 1 gallon of water per minute or less.

27. Replace older toilets with low-flow models that use 1.6 gallons of water per flush or less. Older models may use up to 5 gallons of water per flush.

28. Check for toilet leaks by adding food coloring to the tank. If it is leaking, colored water will appear in the bowl within 30 minutes. Flush the colored water immediately to avoid staining the bowl.

29. Replace or adjust the toilet handle if it frequently sticks in the flush position, letting water run constantly.

30. Install a toilet dam or displacement device, such as a filled 16-ounce plastic water bottle, to reduce the amount of water used for each flush. Be sure that it does not interfere with other parts in the tank or bowl. Other devices are available at hardware and home centers. Do not use a brick.

31. Replace your showerhead with a low-flow version using 2 gallons of water per minute or less. Older showerheads may use up to 5 gallons of water per minute.

32. Take shorter showers. When taking a shower or washing your hair, turn water on to get wet; turn it off before lathering; then turn water back on to rinse off.

33. Catch excess water in the shower with a bucket and use it to irrigate indoor plants.

34. Operate automatic dishwashers and clothes washers only for full loads. Scrape – don't rinse – dishes before loading.

35. Store drinking water in the refrigerator, and heat water on the stove or in a microwave. Don't let water run from the tap to get cold or hot water.

36. Defrost food overnight in the refrigerator, or use the defrost setting on your microwave. Don't thaw food under running water.

37. Compost kitchen food waste. Kitchen sink disposals require much more water and energy.

38. Install an instant hot water heater on the kitchen sink and insulate water pipes.

39. Cool your home with an air-to-air system. Newer models are more efficient and use less water than heat pumps and air-conditioning systems.

40. Turn off the faucet after wetting a toothbrush, razor or washcloth. Turn the faucet back on when you are ready to rinse.

41. Install water softening systems only when necessary. Turn softeners off when you leave for vacations.

42. Check and properly maintain any well pumps. A well pump has a leak if it turns on and off while water is not being used.

43. Avoid unnecessary toilet flushes. Dispose of tissues, insects, medicines and other waste in the trash.

### General Water Saving Tips

44. Follow community water restrictions and conservation guidelines. Private well users must also comply.

45. Report broken pipes, open hydrants, free-flowing wells and other water losses to the property owner, local authorities or water management district.

46. Use the services of businesses that conserve water, including restaurants that serve water only upon request.

47. Support projects that increase the availability of reclaimed waste water for irrigation and other uses.

48. Support programs that promote water conservation among tourists and the businesses that serve them, such as WaterCHAMP and Green Lodging.

49. Conserve water when you are staying at a hotel by requesting fewer replacement towels and sheet changes.

50. Do something every day to save water. Every drop counts.

**For MORE water conservation information and materials, visit us on the Web at [www.savewaterfl.com](http://www.savewaterfl.com)**



EN10/07/09

**South Florida Water Management District**  
3301 Gun Club Road  
West Palm Beach, Florida 33406  
561-686-8800 • 800-432-2045  
[www.sfwmd.gov](http://www.sfwmd.gov)

MAILING ADDRESS: P.O. Box 24680  
West Palm Beach, FL 33416-4680

### SERVICE CENTERS

Big Cypress Basin/Naples  
239-263-7615  
Broward  
954-713-3200  
Florida Keys  
305-453-1275  
Lower West Coast  
239-338-2929 or 800-248-1201

Martin/St. Lucie  
772-223-2600 or 800-250-4100  
Miami-Dade  
305-377-7274 or 800-250-4300  
Okeechobee  
863-462-5260 or 800-250-4200  
Orlando  
407-858-6100 or 800-250-4250  
Palm Beach County  
561-682-6000 or 800-432-2045

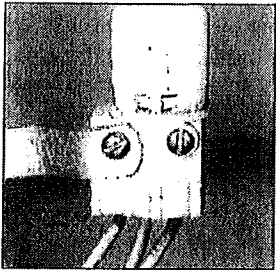

 splash!

quick facts on...

## Sensible Sprinkling in South Florida

**The South Florida Water Management District** is a regional, governmental agency that oversees the water resources in the southern half of the state. It is the oldest and largest of the state's five water management districts.

**Our Mission** is to manage and protect water resources of the region by balancing and improving water quality, flood control, natural systems, and water supply.



### Rain sensors make sense, plus it's the law!

Florida Statutes (Ch. 373.62) now require that "any person who purchase and installs an automatic sprinkler system shall... install a rain sensor device or switch which will override the irrigation cycle of the sprinkler system when adequate rainfall has occurred."

While this applies to all new automatic sprinkler installations, every system should have one!

### Saving a Little Saves a Lot

For home and business landscapes, many South Florida residents irrigate to keep grass green year-round and tropical plantings looking tropical. As much as 70 percent of home water use is for outdoor watering or irrigation. Whether sprinkling water comes from a municipal supply, a well, or another source, it's still ultimately drawn from one big South Florida "pool." To share the resource, South Floridians need to conserve water.

There are many ways to water your landscape – from hose "dragging" to automatic sprinkling. There are benefits to using the hose. Water can be directed to specific plants within a bed, sprinkled on seedlings, or applied deeply to planted trees or shrubs. To conserve water, always use a shut-off nozzle at the end of the hose. Using drip and soaker hoses also reduces evaporation and conserves water.

To save time and increase efficiency, many residents install automated sprinkler systems. Systems vary widely in complexity. Simple water computers costing only about \$30 can regulate home sprinklers. More complex systems may be professionally installed. Any automatic sprinkler can save water if set correctly. Saving water also saves money.

To use water most efficiently, set sprinkler timers to water in the early morning when winds are usually light and the ground is cool and receptive.



### Do All Lawns Need Irrigation?

All plants need water. Rainfall provides enough water for Florida's native plants growing in the wild. During Florida's normally dry winters, these native plants thrive in the residential landscape as well. However, limited areas of turf grass, flower beds, and accent plants usually need added water at some times during the year. When watering turf grass, water thoroughly so water will reach deeper portions of the soil. Deeper grass roots will develop and grass will stay greener and healthier during droughts. Watering infrequently with the right amount of water is better than watering frequently in small amounts.

Florida's Water  
It's Worth Saving



## **What Plants Make the Most Sense...and Scents?**

Many plants have low irrigation requirements and, once established, need very little water even during periods of drought. Choose your plantings wisely. Seek input from your county's agricultural extension agent and other resources including the South Florida Water Management District (<http://www.sfwmd.gov>) and the Florida Native Plant Society (<http://fnps.org>) websites.

Many native drought-tolerant plants can make your landscape wildlife friendly. Plants that attract and nurture butterflies add tremendous appeal to your yard. Ideas can be found at the North American Butterfly Association's website ([www.naba.org](http://www.naba.org)) which includes gardening suggestions for regions of the country including a plant list of South Florida plants that grow well and attract butterflies native to our area.



## **How Can Existing Irrigation Systems Be Improved?**

Enormous amounts of water are wasted in Florida. Incorrectly adjusted automatic sprinkler systems over-water lawns, paved areas and already rain-soaked soils and plants that may already be drought-tolerant by nature. Check your system and find out how (or who to call) to put the right amount of water where it is needed. Local hardware, plumbing stores, plant nurseries, and agricultural extension offices have experts on hand to answer questions about proper irrigation of Florida yards.

The first step to greatly improve an automatic sprinkler system is to install a rain sensor (described on the front). Why water your lawn when nature is doing it for you? Home supply stores stock rain sensors for \$20-30. The rain sensor tells the system when rains have already provided adequate water. It disables the systems until drier conditions return. An effective rain sensor should do the following:

- Override automatic sprinkler systems after significant rain has fallen.
- Disable the system during and after rainfall as the area dries out.
- Reset the system to the original schedule when water is needed again.

Although different types of rain sensors are available, they all achieve the same results. They save significant amounts of water.

## **Maintenance Can Save Water, Too**

Your irrigation system will need to be checked regularly. Are any pipes or fittings leaking? Are any spray heads clogged? Are any spray heads watering driveways, sidewalks, or other pavement? Does the rain sensor properly interrupt the irrigation cycle after rainfall? Stopping any leaks, cleaning out any clogs and directing water to spray only where it's needed can prevent hundreds of gallons from being wasted every week.

Using mulch helps save water, too. Mulches in the landscape:

- shade soils from direct sun so they stay moist longer.
- protect soils from erosion.
- limit weed growth.
- slowly decompose, adding nutrients in the process.
- provide habitat for beneficial soil organisms.
- are appealing, adding a clean and unifying appearance.

The best mulches for Florida come from non-native trees, recycled waste wood, including wooden pallets, and your own recycled yard clippings. These are regularly available from home supply stores, and should always be sought. Mulch made from native cypress trees doesn't make sense. Why remove a beneficial native tree from the environment only to grind it up and sprinkle it around your yard?

Mulch should be spread two to four inches thick with new mulch added as needed to maintain an adequate layer. New mulch should be stirred into the older matter to help maintain healthy soil conditions and prevent matting. Mulches shouldn't pile up directly against foundations of buildings since they may attract termites.

Once established, your water-conserving yard may require only moderate amounts of added fertilizer. Over-fertilizing aggravates pest problems and stimulates excessive growth, which may induce a need for more frequent watering. Also, fertilizers shouldn't be spread onto slopes and drainage areas where polluting runoff could flow into waterways. Slow-release fertilizers make sense since they don't need to be applied frequently and any resultant runoff will only contain small amounts of dissolved nutrients.

For more maintenance information, visit the University of Florida's web site: <http://hort.ifas.ufl.edu/turf/residential/residential.htm>

## **Be a Watchdog for Water Conservation**

Whether irrigating a home lot or a large commercial property, everyone needs to closely monitor outdoor water use. Watering less frequently but thoroughly will help lighten the load on both pocketbooks and the shared regional pool of water. When developing landscape designs, keep water conservation in mind. Only constant water awareness will help maintain a constant water supply!



JR08/12/09

**South Florida Water Management District**  
**3301 Gun Club Road**  
**West Palm Beach, Florida 33406**  
**561-686-8800 • 800-432-2045**  
**[www.sfwmd.gov](http://www.sfwmd.gov)**

MAILING ADDRESS: P.O. Box 24680  
 West Palm Beach, FL 33416-4680

### **SERVICE CENTERS**

**Big Cypress Basin/Naples**  
 239-263-7615  
**Broward**  
 954-713-3200  
**Florida Keys**  
 305-453-1275  
**Lower West Coast**  
 239-338-2929 or 800-248-1201

**Martin/St. Lucie**  
 772-223-2600 or 800-250-4100  
**Miami-Dade**  
 305-377-7274 or 800-250-4300  
**Okeechobee**  
 863-462-5260 or 800-250-4200  
**Orlando**  
 407-858-6100 or 800-250-4250  
**Palm Beach County**  
 561-682-0000 or 800-432-2045


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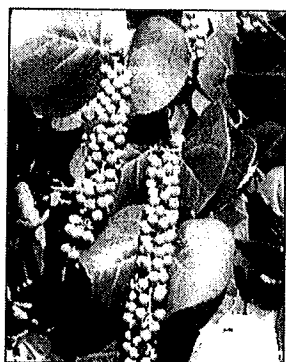
quick facts on...

## Florida-Friendly Landscaping:

## How to Save Water through Water-Smart Planting

**The South Florida Water Management District** is a regional, governmental agency that oversees the water resources in the southern half of the state. It is the oldest and largest of the state's five water management districts.

**Our Mission** is to manage and protect water resources of the region by balancing and improving water quality, flood control, natural systems and water supply.



Seagrape

Did you know that half of all potable (drinking) water in South Florida is used for outdoor irrigation? You can cut outdoor water use substantially by installing water-conserving plants and applying Florida-friendly landscaping principles in your outdoor spaces.

Florida-friendly landscaping conserves water and protects the environment through the use of native and drought-tolerant landscaping, with proper maintenance and water-wise irrigation. Follow the nine principles of Florida-friendly landscaping, and you'll be well on your way to saving water and enjoying your beautiful Florida yard!

**1. Right Plant, Right Place.** Almost any plant will survive in your landscape if you plant it in the right place. You can drastically reduce the need for water, fertilizer, pesticides and pruning if you choose and group plants according to their water and sunlight needs, as well as the type of soil, sunlight exposure and water conditions of your planting sites. Be sure to also remove invasive exotic plants that may steal water and nutrients from your Florida-friendly plants.

**2. Water Efficiently.** Efficient watering will not only help you save money and conserve water, it can also create a healthier landscape. Avoid overwatering, use micro-irrigation, and water your lawn and plants only when you know they need it or when they show signs of stress.

**3. Fertilize Appropriately.** Plants, animals and people depend on clean water for survival. When too much fertilizer is applied to landscapes, it seeps past the root zone of the grass, plants or trees and into the aquifer or runs off into water bodies. Avoid weed-and-seed products, use slow-release fertilizers, and fertilize lawns, trees and plants only to maintain health. Fertilizer will not help poor growth caused by poor plant placement, disease or pests.

**4. Mulch.** Keeping 2 to 3 inches of mulch on your plant beds helps control weeds, retain soil moisture and reduce erosion and stormwater runoff. Cut down on mowing by replacing grass with mulch in areas that are shaded or difficult to mow.

**5. Attract Wildlife.** Friendly visitors, like butterflies and beneficial insects, will enjoy your landscape if you provide food, water and cover. Plant vines, shrubs and trees to create cover, nesting areas and food. Protect your visitors by limiting pesticide use or by spot-treating only the areas that need attention.

**6. Manage Yard Pests Responsibly.** When it comes to pest management, nature takes care of itself! Misused pesticides in your yard can run off into waterways and harm beneficial insects. Learn to identify beneficial insects and let them do the work for you. If pesticides are needed, choose the least-toxic pesticides, such as horticultural oils, insecticidal soaps and *Bacillus thuringiensis* (BT). Remember, low levels of pests will do minimal damage, so be tolerant!

**7. Recycle.** Recycling your yard waste back onto your lawn and landscape can improve the fertility and water-holding ability of the soil and help aerate soil that has become compacted. There's no need to bag or rake lawn clippings; leave them on the lawn to recycle nitrogen. Use fallen leaves and pine needles as mulch under trees and shrubs.

**8. Reduce Stormwater Runoff.** Stormwater runoff can carry pollutants, pesticides and excess fertilizers into bays, rivers and lakes. Remember that what goes in your storm drain can find its way into our water sources. Pick up pet waste to help reduce bacterial and nutrient pollution. Remove trash from street gutters before it gets washed into storm drains. And use swales (low areas) to hold and filter water.

**9. Protect the Waterfront.** Bays and waterways contribute to the quality of life in Florida. Waterfront owners can help protect these fragile natural treasures by removing invasive aquatic plants and establishing a 10-30 foot "no fertilizer, no pesticide" zone along their shoreline. Never prune mangroves or remove any vegetation without first seeking proper permits and guidelines.

## Plants for Your Florida-Friendly Landscape

Florida-friendly landscaping is vibrant, alive and colorful. Many lush and tropical-looking plants are among the list of native or drought-tolerant plants appropriate for South Florida's unique climate, with some listed here. They will add to the beauty of your landscape while conserving water. Consult your nursery professional for information on which of these plants are appropriate for your region.

### Trees

Bald cypress (*Taxodium distichum*)  
Black ironwood (*Krugiodendron ferreum*)  
Buttonwood (*Conocarpus erectus*)  
Dahoon holly (*Ilex cassine*)  
Geiger tree (*Cordia sebestena*)  
Gumbo Limbo (*Bursera simaruba*)  
Live oak (*Quercus virginiana*)  
Paradise tree (*Simarouba glauca*)  
Pigeon plum (*Coccoloba diversifolia*)  
Pond apple (*Annona glabra*)  
Red bay (*Persea borbonia*)  
Red maple (*Acer rubrum*)  
Seagrape (*Coccoloba uvifera*)  
Simpson's stopper (*Myrcianthes fragrans*)  
Slash pine (*Pinus elliotii*)  
Southern magnolia (*Magnolia grandiflora*)  
Southern red cedar (*Juniperus silicicola*)  
Sweetbay magnolia (*Magnolia virginiana*)  
Sycamore (*Platanus occidentalis*)  
Tulip tree (*Liriodendron tulipifera*)



Sweetbay magnolia

### Shrubs

Bay Cedar (*Suriana maritima*)  
Beautyberry (*Callicarpa americana*)  
Coral bean (*Erythrina herbacea*)  
Firebush (*Hamelia patens*)  
Florida privet (*Forestiera segregata*)  
Florida gamagrass (*Tripsacum floridanum*)  
Inkberry (*Scaevola plumieri*)  
Jamaican caper (*Capparis cyanophallophora*)  
Marlberry (*Ardisia escallonioides*)  
Swamp mallow (*Hibiscus coccineus*)  
Walter's viburnum (*Viburnum obovatum*)  
Wax myrtle (*Myrica cerifera*)  
White indigo berry (*Randia aculeata*)  
Wild coffee (*Psychotria nervosa*)  
Wild olive (*Osmanthus americanus*)  
Yellow anise (*Illicium parviflorum*)

## Palms and Cycads

Buccaneer palm  
(*Pseudophoenix sargentii*)  
Cabbage palm (*Sabal palmetto*)  
Dwarf palmetto (*Sabal minor*)  
Florida thatch palm (*Thrinax radiata*)  
Florida royal palm (*Roystonea elata*)  
Needle palm (*Rhapidophyllum hystrix*)  
Paurolis/Everglades palm  
(*Acroelorrhaphie wrightii*)  
Queen sago (*Cycas circinalis*)  
Saw palmetto (*Serenoa repens*)



Buccaneer Palm

## Accent Grasses, Vines and Groundcovers

Blue Jacquemontia (*Jacquemontia pentanthos*)  
Bougainvillea (*Bougainvillea spectabilis*)  
Coral honeysuckle (*Lonicera sempervirens*)  
Corky-stemmed passion-flower (*Passiflora suberosa*)  
Crossvine (*Ignomia capreolata*)  
Passion-flower (*Passiflora incarnata*)  
Mondo grass (*Ophiopogon japonicus*)  
Purple love grass (*Eragrostis spectabilis*)  
Railroad vine (*Ipomoea pes-caprae*)  
Trailing Lantana (*Lantana montevidensis*)  
Trumpet vine (*Campsis radicans*)  
Yellow Jessamine (*Gelsemium sempervirens*)

## Annuals/Perennials/Wildflowers

Beach sunflower (*Helianthus debilis*)  
Black-eyed Susan (*Rudbeckia hirta*)  
Blanket flower (*Gaillardia pulchella*)  
Cardinal flower (*Lobelia cardinalis*)  
Green eyes (*Berlandiera subcaulis*)  
Purple coneflower  
(*Echinacea purpurea*)  
Rain lily (*Zephyranthes atamasco*)  
Shrub verbena (*Lantana depressa*)  
Sea oxeye daisy  
(*Borrchia frutescens*)  
Stokes Aster (*Stokesia laevis*)  
Tropical red sage (*Salvia coccinea*)  
Tickseed (*Coreopsis leavenworthii*)  
Virginia Iris (*Iris virginica*)



Blanket flower

**Florida-friendly landscaping saves time, money, water and our environment! For more information, go to [www.savewaterfl.com](http://www.savewaterfl.com).**

The University of Florida established these nine Florida-friendly landscaping principles to guide Florida Yards & Neighborhoods programs offered through county Extension Service offices.



JR8/06/09

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## NOTICE OF RIGHTS

As required by Sections 120.569(1), and 120.60(3), Fla. Stat., following is notice of the opportunities which may be available for administrative hearing or judicial review when the substantial interests of a party are determined by an agency. Please note that this Notice of Rights is not intended to provide legal advice. Not all the legal proceedings detailed below may be an applicable or appropriate remedy. You may wish to consult an attorney regarding your legal rights.

### **RIGHT TO REQUEST ADMINISTRATIVE HEARING**

A person whose substantial interests are or may be affected by the South Florida Water Management District's (SFWMD or District) action has the right to request an administrative hearing on that action pursuant to Sections 120.569 and 120.57, Fla. Stat. Persons seeking a hearing on a District decision which does or may determine their substantial interests shall file a petition for hearing with the District Clerk within 21 days of receipt of written notice of the decision, unless one of the following shorter time periods apply: 1) within 14 days of the notice of consolidated intent to grant or deny concurrently reviewed applications for environmental resource permits and use of sovereign submerged lands pursuant to Section 373.427, Fla. Stat.; or 2) within 14 days of service of an Administrative Order pursuant to Subsection 373.119(1), Fla. Stat. "Receipt of written notice of agency decision" means receipt of either written notice through mail, or electronic mail, or posting that the District has or intends to take final agency action, or publication of notice that the District has or intends to take final agency action. Any person who receives written notice of a SFWMD decision and fails to file a written request for hearing within the timeframe described above waives the right to request a hearing on that decision.

### **Filing Instructions**

The Petition must be filed with the Office of the District Clerk of the SFWMD. Filings with the District Clerk may be made by mail, hand-delivery or facsimile. **Filings by e-mail will not be accepted.** Any person wishing to receive a clerked copy with the date and time stamped must provide an additional copy. A petition for administrative hearing is deemed filed upon receipt during normal business hours by the District Clerk at SFWMD headquarters in West Palm Beach, Florida. Any document received by the office of the SFWMD Clerk after 5:00 p.m. shall be filed as of 8:00 a.m. on the next regular business day. Additional filing instructions are as follows:

- Filings by mail must be addressed to the Office of the SFWMD Clerk, P.O. Box 24680, West Palm Beach, Florida 33416.
- Filings by hand-delivery must be delivered to the Office of the SFWMD Clerk. **Delivery of a petition to the SFWMD's security desk does not constitute filing. To ensure proper filing, it will be necessary to request the SFWMD's security officer to contact the Clerk's office.** An employee of the SFWMD's Clerk's office will receive and file the petition.
- Filings by facsimile must be transmitted to the SFWMD Clerk's Office at (561) 682-6010. Pursuant to Subsections 28-106.104(7), (8) and (9), Fla. Admin. Code, a party who files a document by facsimile represents that the original physically signed document will be retained by that party for the duration of that proceeding and of any subsequent appeal or subsequent proceeding in that cause. Any party who elects to file any document by facsimile shall be responsible for any delay, disruption, or interruption of the electronic signals and accepts the full risk that the document may not be properly filed with the clerk as a result. The filing date for a document filed by facsimile shall be the date the SFWMD Clerk receives the complete document.

### **Initiation of an Administrative Hearing**

Pursuant to Rules 28-106.201 and 28-106.301, Fla. Admin. Code, initiation of an administrative hearing shall be made by written petition to the SFWMD in legible form and on 8 and 1/2 by 11 inch white paper. All petitions shall contain:

1. Identification of the action being contested, including the permit number, application number, District file number or any other SFWMD identification number, if known.
2. The name, address and telephone number of the petitioner and petitioner's representative, if any.
3. An explanation of how the petitioner's substantial interests will be affected by the agency determination.
4. A statement of when and how the petitioner received notice of the SFWMD's decision.
5. A statement of all disputed issues of material fact. If there are none, the petition must so indicate.
6. A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the SFWMD's proposed action.
7. A statement of the specific rules or statutes the petitioner contends require reversal or modification of the SFWMD's proposed action.
8. If disputed issues of material fact exist, the statement must also include an explanation of how the alleged facts relate to the specific rules or statutes.
9. A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the SFWMD to take with respect to the SFWMD's proposed action.

A person may file a request for an extension of time for filing a petition. The SFWMD may, for good cause, grant the request. Requests for extension of time must be filed with the SFWMD prior to the deadline for filing a petition for hearing. Such requests for extension shall contain a certificate that the moving party has consulted with all other parties concerning the extension and that the SFWMD and any other parties agree to or oppose the extension. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

If the District takes action with substantially different impacts on water resources from the notice of intended agency decision, the persons who may be substantially affected shall have an additional point of entry pursuant to Rule 28-106.111, Fla. Admin. Code, unless otherwise provided by law.

### **Mediation**

The procedures for pursuing mediation are set forth in Section 120.573, Fla. Stat., and Rules 28-106.111 and 28-106.401-405, Fla. Admin. Code. The SFWMD is not proposing mediation for this agency action under Section 120.573, Fla. Stat., at this time.

### **RIGHT TO SEEK JUDICIAL REVIEW**

Pursuant to Sections 120.60(3) and 120.68, Fla. Stat., a party who is adversely affected by final SFWMD action may seek judicial review of the SFWMD's final decision by filing a notice of appeal pursuant to Florida Rule of Appellate Procedure 9.110 in the Fourth District Court of Appeal or in the appellate district where a party resides and filing a second copy of the notice with the SFWMD Clerk within 30 days of rendering of the final SFWMD action.