

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

IN RE:

DECLARATION OF WATER SHORTAGE

ORDER SWF 07-02

ORDER DECLARING WATER SHORTAGE

The Executive Director of the Southwest Florida Water Management District (District), during a public hearing held on January 9, 2007, at District Headquarters in Brooksville, Florida, received testimony, including data and recommendations from District staff, and comment from the public regarding hydrologic conditions and the declaration of a water shortage within the District. Based upon the testimony, data, staff recommendations and public comment, the Executive Director makes the following Findings of Fact and Conclusions of Law.

FINDINGS OF FACT

1. At its November 30, 2006 meeting, the District's Governing Board authorized the Executive Director to declare a water shortage pursuant to the non-emergency provisions of 40D-21, Florida Administrative Code (F.A.C.), the District's Water Shortage Plan ("Plan"), if, in his judgement, it is appropriate to do so prior to the Governing Board meeting on January 30, 2007.
2. The Plan specifies that the District will monitor certain sources of national predictions, indices and conditions and current hydrologic data, including rainfall, stream flow, lakes and ground water levels and certain sources of national predictions and conditions.
3. The Plan establishes Drought Condition Levels that relate the extent to which current rainfall, stream flows and ground water levels are below normal levels. Drought Condition Levels include Moderately, Severely, Extremely and Critically Abnormal. Drought Condition Levels consider regional conditions, and national predictions, indices and conditions (individually "Drought Indicator", collectively "Drought Indicators"). The Drought Condition Levels are described in the Fact Sheet attached to this Order.
4. Drought Indicators are summarized as follows:
 - a. **Rainfall**
 - i. As of December 31, 2006, for the sixteen counties within the District, there is an average rainfall deficit of approximately 11.6 inches, measured as a twelve-month moving sum.



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- ii. Citrus, DeSoto, Hardee, Hernando, Highlands, Lake, Levy, Marion, Pasco, Polk, and Sumter, are experiencing rainfall deficits categorized as Critically Abnormal.
- b. **Ground water conditions**
- i. As of January 3, 2007, all or part of fifteen of sixteen counties within the District were experiencing varying levels of below-normal ground water conditions.
 - ii. Sarasota County was the most affected, with part of it experiencing ground water levels categorized as Critically Abnormal.
- c. **Surface water conditions**
- i. As of January 3, 2007, flow data were generally below normal for most rivers. This includes rivers associated with the District's largest surface water-dependent public supply systems.
 - ii. As of January 3, 2007, the stream flow for the Withlacoochee River near Holder was 190 cubic feet per second (cfs). The USGS categorizes this flow as Severe Hydrologic Drought. Under the Plan this flow is Critically Abnormal.
 - iii. The Peace River is the primary water source for the Peace River Manasota Regional Water Supply Authority. The Authority is a wholesale water supplier serving portions of Charlotte, DeSoto, Manatee and Sarasota counties.
 - iv. As of January 3, 2007, the stream flow for the Peace River at Arcadia was 125 cfs, categorized as Extremely Abnormal.
 - v. The Hillsborough River is both a source of water for Tampa Bay Water and a primary water source for the City of Tampa.
 - vi. As of January 3, 2007, the stream flow for the Hillsborough River at Zephyrhills was 76 cfs, categorized as Severely Abnormal.
 - vii. The Alafia River is one of the sources of water for Tampa Bay Water. Tampa Bay Water is a wholesale water supplier serving portions of Hillsborough, Pasco and Pinellas counties.
 - viii. As of January 3, 2007, the stream flow for the Alafia River at Lithia was 109 cfs, which is just within normal limits for that river.
- d. **The U.S. Drought Monitor**
- i. The U.S. Drought Monitor is one of the national Drought Indicators specified in the Plan.

ii. As of January 2, 2007, the Monitor indicates that all sixteen counties within the District were experiencing drought or drought-like conditions.

iii. Citrus, Marion, Polk and Sumter counties were the most affected, generally experiencing Severely Abnormal conditions.

e. The Standard Precipitation Index

i. The Standard Precipitation Index is another national Drought Indicator specified in the Plan.

ii. As of November 2006, the Standard Precipitation Index indicates that all sixteen counties have experienced some improvement compared to October 2006, but conditions remained below normal.

iii. Citrus, Hernando, Lake, Levy, Marion, Pasco and Sumter counties were the most affected, generally experiencing Critically Abnormal conditions, the most pronounced level of abnormality defined in the Plan.

f. The Long-Term Palmer Index

i. The Long Term Palmer Index is another national Drought Indicator specified in the Plan.

ii. As of December 20, 2006, this Index indicated that all sixteen counties within the District were experiencing drought conditions of a nature that affect water demand for agriculture and other irrigation purposes. Based on this Index, all sixteen counties are Severely Abnormal.

iii. Citrus, Hernando, Lake, Levy, Marion, Pasco, and Sumter counties, as of December 9, 2006, were classified as Extremely Abnormal. Those counties have experienced some improvement in recent weeks, but as of December 20, 2007, they are classified as Severely Abnormal.

g. The National Oceanic and Atmospheric Administration's Climate Prediction Center ("CPC") Predictions

i. The CPC Predictions comprise another national Drought Indicator specified in the Plan.

ii. The District has considered all applicable CPC prediction outlooks.

5. The Plan specifies that the Drought Indicators described in paragraph 4. above and Drought Condition Levels are factors to be considered in determining whether a water shortage declaration is warranted. As described above, the Drought Indicators demonstrate that all sixteen counties within the District are experiencing a composite Drought Conditions Level consistent with a declaration of at least a Phase II, Severe Water Shortage, Order.

6. While lake levels are not included in the Plan as a Drought Indicator, the Plan specifies that lake levels, as part of the water resource data collected by the District, shall be considered in determining whether a water shortage should be declared. Current lake level conditions include that:

- a. Lakes in the northern region are 2.64 feet below the bottom of the normal range.
- b. Lakes in the Tampa Bay region are 0.02 foot below the bottom of the normal range.
- c. Lakes in the Polk Uplands region are at the bottom of the normal range.
- d. Lakes in the Lake Wales Ridge region are 1.49 feet below the bottom of the normal range.

7. In addition to evaluating and analyzing quantifiable Drought Indicators to determine the degree to which geographic area(s) and water source(s) are affected by a water shortage, the Plan specifies that District shall take into account several qualitative factors when considering what Phase of restrictions and other response mechanisms should be declared. Pertinent factors include:

- a. Surface water-dependent public supply systems serving the City of Tampa, Tampa Bay Water and the Peace River Manasota Regional Water Supply Authority were significantly affected by this water shortage prior to its impact reaching regional proportions. The District has assisted each of these public supply systems as necessary, including coordination of water conservation messaging efforts.
- b. Local governments associated with these public supply systems have already responded with appropriate local actions, including restrictions substantially consistent with Phase II, Severe Water Shortage restrictions.
- c. The CPC predictions assume that the El Nino weather pattern will produce above-normal rainfall in winter and spring. However, the CPC recently indicated that this pattern may have already started to subside and, even if above average rainfall in the winter and spring does occur, District staff have concluded that areas of the District could remain in a deficit situation for several months.
- d. All ground water and surface water sources throughout the District are currently affected by this water shortage event to varying degrees. All categories of water users are impacting the available sources and contribute to the potential for harm to the natural systems.

e. It is necessary to place all categories of water users under the same level of restrictions until conditions have improved to where water shortage restrictions are determined to be no longer necessary.

CONCLUSIONS OF LAW

8. The Governing Board of the District is duly authorized by Section 373.246(2), Florida Statutes (F.S.), and Chapter 40D-21, F.A.C., to issue Orders declaring the existence of a water shortage within all or part of the District and to impose such restrictions and require such measures as may be necessary to reduce demand on available water supplies.

9. The Governing Board is duly authorized by Section 373.083(5), F.S., to delegate, and has so delegated, its power, duties and functions to the Executive Director to issue a non-emergency water shortage order pursuant to the Plan prior to the Governing Board meeting scheduled for January 30, 2007.

10. County and city officials and all law enforcement authorities are required to enforce orders lawfully issued by the Executive Director pursuant to the Plan and Section 373.609, F.S.

11. The Executive Director held a public hearing on January 9, 2007, at the District's Brooksville headquarters for the purpose of considering data, including quantitative and qualitative indicators, staff recommendations and public input.

12. Upon careful consideration of the Drought Indicators, Drought Condition Levels, District data, qualitative factors, staff recommendations and public input, the Executive Director has determined that a District-wide modified Phase II "Severe Water Shortage" declaration is necessary and should be ordered prior to the next regularly scheduled Governing Board meeting.

ORDERED

THEREFORE, based upon the foregoing Findings of Fact and Conclusions of Law, it is hereby ORDERED:

13. A Phase II "Severe Water Shortage" as defined in the Plan, is declared for all ground and surface waters within the District's sixteen county area.

14. Except as modified in paragraph 15. below, Phase II "Severe Water Shortage" restrictions and other response mechanisms are hereby ordered for all categories of water users within the District's sixteen county area. These restrictions and other response mechanisms are specified in Chapter 40D-21.601(4), F.A.C., and Chapter 40D-21.631, F.A.C.

15. The Plan's Phase II provision codified in 40D-21.631(6)(c)2.b., F.A.C., limiting lawn watering to one day per week is hereby modified to extend the limitation through July 31, 2007.

16. A Fact Sheet containing a summary of the restrictions and response mechanisms is attached to this Order.

17. County and city officials and all law enforcement authorities shall enforce the Order when requested pursuant to the Plan and Section 373.609, F.S.

18. Water shortage declarations and restrictions enacted prior to this Order by county and city officials affecting their local jurisdictions ("Local Action") that are at least as restrictive as a Phase II Severe Water Shortage under the Plan are hereby ratified and are authorized to continue in effect according to their terms. In the event that a Local Action is less restrictive than this Order, this Order shall supersede the Local Action, unless the county or city officials obtain a variance or waiver from this Order from the District.

19. This order shall expire on July 31, 2007, unless extended or rescinded by Governing Board or Executive Director action on or before that date.

DONE AND ORDERED in Hernando County, Florida, on this 9th day of January, 2007.

SOUTHWEST FLORIDA WATER
MANAGEMENT DISTRICT

By: David L. Moore

David L. Moore

Executive Director

1-9-2007

Filed this 9th day
of January, 2007

William M. Lee
Agency Clerk

Fact Sheet: Drought Indicators & Drought Condition Levels

Characterization of Drought Indicators

Analysis of Drought Indicator data includes characterizing each value as either normal or one of four degrees of abnormality. The names of the four degrees are: Moderately Abnormal, Severely Abnormal, Extremely Abnormal and Critically Abnormal.

The range of values associated with each degree of abnormality is based on a comparison to historical data. For example, streamflow is characterized as follows:

- "Moderately Abnormal" means streamflow is at or below the 25th percentile*
- "Severely Abnormal" means streamflow is at or below the 20th percentile*
- "Extremely Abnormal" means that streamflow is at or below the 10th percentile*
- "Critically Abnormal" means that streamflow is at or below the 5th percentile*

* Percentile is a statistical term that is used in scientific settings. One way to describe this term is that, if 100 pieces of historical data are available for a specific Drought Indicator, a current value in the 19th percentile means that conditions have been better 81 times (and only as bad or worse 19 times).

Determination of Drought Condition Level

Analysis also includes reviewing the characterizations of individual Drought Indicators for any given geographical area or water source of interest. This review results in a composite Drought Level Condition Level being determined, as follows:

Drought Condition	Applicable Drought Indicators
Level 1	At least one Drought Indicator is Moderately Abnormal
Level 2	Multiple Drought Indicators are Moderately Abnormal (or one is Severely Abnormal)
Level 3	Multiple Drought Indicators are Severely Abnormal (or one is Extremely Abnormal)
Level 4	Multiple Drought Indicators are Extremely Abnormal (or one is Critically Abnormal)

The individual Drought Indicators, composite Drought Condition Level(s) and other pertinent facts (including qualitative factors) are considered in order to decide what Water Shortage Phase should be declared.

NOTE: this fact sheet is a summary of Table 21-1, Table 21-2 and associated text; please refer to Chapter 40D-21.221, F.A.C. for complete details

Summary Fact Sheet Modified "Phase II" (Severe Water Shortage) Restrictions

All Water Uses

- These restrictions go into effect on January 16 and are scheduled to expire on July 31, unless rescinded or otherwise modified prior to that date.
- These restrictions apply to the use of water from public and private water utilities as well as the use of all wells and surface water sources (ponds, rivers, etc.).
- This fact sheet is only a summary. All water users should review Water Shortage Order SWF 07-02 and the District's Water Shortage Plan for complete details; both items are available online (at www.WaterMatters.org).

Lawn & Landscape Watering

- If your city or county already has a once-per-week schedule in effect, your watering day will remain the same.
- If you were previously allowed to follow a twice-per-week schedule, you now need to follow the schedule shown below.
- Unless your city or county already has stricter hours in effect, properties under two acres in size may only water before 8 a.m. or after 6 p.m.
- Unless your city or county already has stricter hours in effect, properties two acres or larger may only water before 10 a.m. or after 4 p.m.
- Variances are available if a property proposes an alternative irrigation plan (such as splitting a large property into two pieces and assigning a different day to each piece).
- Handwatering or microirrigation of non-lawn landscape is allowed.
- Certain limited exemptions are available, such as allowances for new plant material.

Addresses with "house numbers" ending in ...	May only irrigate on...
0 or 1	Monday
2 or 3	Tuesday
4 or 5	Wednesday
6 or 7	Thursday
8 or 9	Friday

Local Governments & Water Utilities

- Assist the District with water shortage restriction enforcement, including coverage for cases referred by the District (when a Water Use Permit is not involved).
- Review the availability of backup water supplies for potable and fire-fighting purposes.
- Institute/accelerate local water conservation efforts, including a water system audit.
- Implement appropriate changes to water system flushing, including on-site signage.

Golf Courses, Agricultural Operations & Other Water Users

- Fountains and other aesthetic-only water features may only operate 8 hours per day.
- Car washing is limited to once per week; however, fundraiser events are still allowed.
- Comply with all Water Use Permit conditions, including allowable drought quantities.
- Reduce off-site discharge and mobile equipment washing.
- Follow applicable best management practices, including watering times and applications.

For complete details or to ask questions about these restrictions, visit the District's website (www.WaterMatters.org) or call 1-800-848-0499 or 1-800-423-1476, extension 4498, during normal business hours.