

Chapter 3: 2008 Minimum Flows and Levels Priority List and Schedule

John R. Maxted

INTRODUCTION

Minimum Flows and Levels (MFLs) provide technical criteria that are important management tools used by the South Florida Water Management District (SFWMD or District) to protect major water bodies from significant harm due to reduction in water levels or flows. These criteria provide a basis for defining the point at which additional consumptive use permit withdrawals will result in significant harm to water resources. MFLs are established based on the best available information. Protection of non-consumptive uses may be considered and provided for in the establishment of MFLs [Section 373.042, Florida Statutes (F.S.)]. A baseline condition for the protected resource functions must be identified through consideration of changes and structural alterations in the hydrologic system [Section 373.042(1), F.S.]. If it is determined that water flows or levels are presently below the relevant MFL or will fall below an established MFL within the next 20 years, then the District must develop and implement a recovery or prevention strategy [Section 373.0421(2), F.S.].

The District is required to establish MFLs for waters of the state that are listed on the MFLs Priority List and Schedule for Establishment. The list is developed by the District with consideration of additional information and comments from the Florida Department of Environmental Protection (FDEP). The schedules for developing MFLs and projects that may be part of recovery or prevention strategies are also provided in the District's regional water supply plans (see Chapter 5A of this volume). The MFLs Priority List and Schedule for Establishment also includes the name of the water body and the date (calendar year) in which the MFLs will be established. An opportunity to modify this list is provided each year by law.

The District has additional authority, under Section 373.223(4), F.S., to “. . . reserve from use by permit applicants water, in such locations and quantities and for such seasons of the year, as may be required for protection of fish and wildlife or the public health and safety.” Whereas the MFL criteria are appropriately used to *prevent significant harm* from occurring to water resources, water reservations (WRs) provide a different standard, i.e. *to protect* fish and wildlife resources. The SFWMD is developing water reservations based on evaluation of existing water availability (Initial Reservations) and consideration of future water needed to achieve system restoration (Project Reservations). Water provided by restoration projects and funded with federal funds under the Water Resources Development Act (2000, as reauthorized 2007) also requires a determination that such restoration water will be “reserved” for fish and wildlife and will not be permitted for consumptive use. This chapter includes the list and schedule for development of water reservations in relation to restoration projects.

To date, MFL criteria have been adopted for 12 water bodies within the SFWMD, including eight water bodies in 2001, two in 2002, and two in 2006. These water bodies include Lake Okeechobee, five areas of the Everglades, the northern portion of the Biscayne aquifer, Lower

West Coast deeper aquifers, Caloosahatchee River and Estuary, St. Lucie River and Estuary, the Northwest Fork of the Loxahatchee River, Lake Istokpoga, and Florida Bay (Figure 3-1). Further details on MFLs can be found on the District’s web site at www.sfwmd.gov under the *What We Do, Water Supply, Minimum Flows and Levels* section.

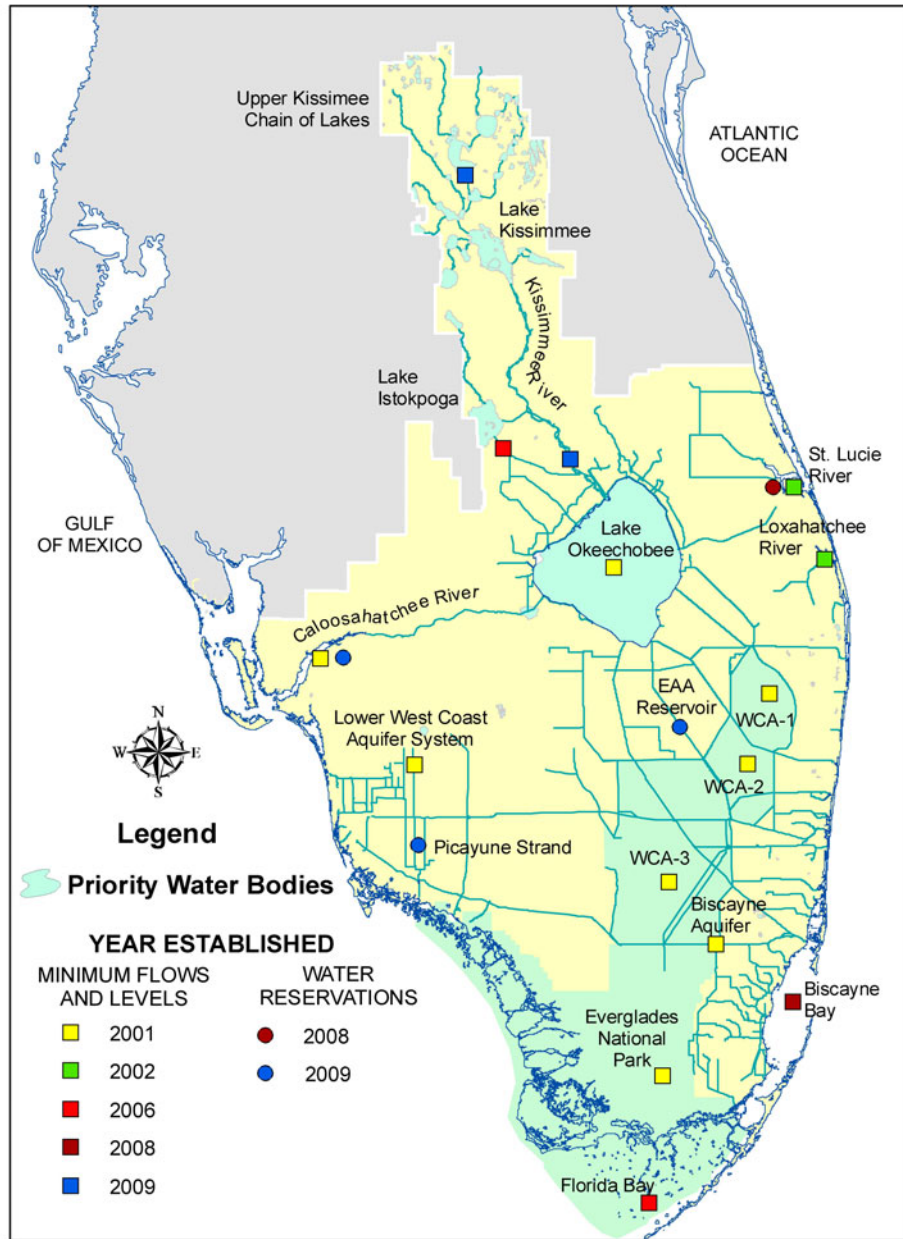


Figure 3-1. Water bodies on the 2008 Minimum Flows and Levels Priority List and Schedule for Establishment, water bodies for which Water Reservations are being developed, and the date (calendar years) for when the rules for these water bodies are scheduled to be adopted.

DEVELOPMENT OF CRITERIA

MFL criteria are developed pursuant to the requirements contained within Sections 373.042 and 373.0421, Florida Statutes (F.S.), of the Florida Water Resources Act. These statutes require Florida's water management districts to establish MFLs for surface waters and aquifers within their jurisdiction [Section 373.042(1), F.S.]. The minimum flow is defined as the "limit at which further withdrawals would be significantly harmful to the water resources or ecology of the area."

Based on the MFL Priority List and Schedule for Establishment, the District undertakes research, analysis, and interpretation of data necessary to develop "technical criteria" for each water body to determine low water conditions (water levels and/or flows) that may cause significant harm to water resources of the region. The criteria typically consist of a minimum water level or flow rate, a duration of time that this level can occur before damage occurs, and a return frequency (that is, how often such conditions can occur over a specified time period).

There are three major steps in the development of an MFL. The priority water body list includes a schedule which estimates the time required to complete the three steps. It has been the District's experience that the schedule for rule development is driven by the combined results of scientific peer review and public discussion of the rule proposal.

Step 1. Compile into a report the relevant science linking water resource functions that are to be protected by regulation and the water needs associated with those functions.

Step 2. Conduct scientific peer review of the information available to determine if the linkage between natural resource functions and water necessary to protect those functions is scientifically sound.

Step 3. Complete rule development where data are sufficient. If peer review concludes that data are insufficient, conduct additional research and repeat peer-review process.

Once the proposed technical criteria are approved by the District's Governing Board, rule development and rulemaking processes, including public workshops and opportunities for administrative challenge, are initiated to implement these criteria. This developed rule defines the resources that are at risk and the water levels or flows necessary to protect these resources from significant harm. The MFL is not considered to be "established" until the final rule is approved, adopted, and published in the *Florida Administrative Weekly*.

2008 PRIORITY LIST

The District has scheduled the following efforts for 2008:

- Complete Step 1 and Step 2 actions for the following two water bodies:
 - Indian River Lagoon – South. (MFL established in 2002; current efforts focused on water reservations necessary for CERP/Acceler8 projects.)
 - Biscayne Bay
- Completion of Step 3 actions for these water bodies depends upon the findings of the scientific peer review panel. If the peer review concludes that there is sufficient information to support rule development, rule language will be drafted and the formal rule development process will be initiated. If the review identifies significant knowledge gaps, needed research proposals will be submitted as part of the Fiscal Year 2009 budget process.

PLANS FOR 2009

More water bodies will be added to the priority list in future years, as areas with the most critical needs are prioritized, associated planning and restoration efforts proceed. The policy issues surrounding development of MFLs have become more complex in areas where there is potential for competition for available water resources. More emphasis is currently being placed on protection of resources in these critical areas; water bodies where competition for available water is not an immediate issue were removed from the list.

The workload for developing MFLs (i.e., the amount of study, analysis, documentation, and interaction with the public and other agencies) is considerable. However, due to competing, high-priority restoration initiatives, no additional District staff resources are presently available for this effort. The effort to establish water reservations for CERP/ACCELER8 water bodies requires many of the same staff that is presently developing MFLs. Therefore, the schedule for developing water reservations takes into consideration the staff resources available.

In 2009, the District plans to complete Step 1 actions for the following priority water bodies:

1. Kissimmee River and upper Kissimmee chain of lakes (potential MFLs)
2. Everglades Agricultural Area (EAA) Reservoir (water reservation to support CERP/Acceler8 project)
3. Caloosahatchee River Reservoir (water reservation in support of CERP/Acceler8 project)
4. Picayune Strand (water reservation in support of CERP/Acceler8 project)

GOVERNING BOARD ADOPTION AND FDEP APPROVAL

The 2008 MFL Priority List was adopted by the Governing Board on November 15, 2007. A letter describing the 2008 MFLs Priority List will be sent to the FDEP, and comments are expected to be received by January 2008.