

Chapter 3: 2006 Minimum Flows and Levels Priority List and Schedule

Joel VanArman

INTRODUCTION

Minimum Flows and Levels (MFLs) provide technical criteria that are an important management tool 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 also provide a basis for defining the point at which additional consumptive use permit withdrawals will result in significant harm to water resources.

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. This statute requires 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." The minimum level is defined as the "limit at which further withdrawals would be significantly harmful to the water resources of the area." [Section 373.042(1), F.S.].

MFLs are to be 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, 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 will fall below an established MFL within the next 20 years or that water flows or levels are presently below the MFL, then the water management district must develop and implement a recovery or prevention strategy [Section 373.0421(2), F.S.].

The District is required to establish such MFLs for waters of the state that are listed on the MFL Priority Water Body List. The list is developed by the District with feedback from the Florida Department of Environmental Protection (FDEP) and other agencies. 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. The MFL Priority List includes the name of the water body and the date (calendar year) in which the MFL will be established. An opportunity to change or add to this list is provided each year by the FDEP.

Based on this schedule, 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 (how often such conditions can occur over a specified time period). These technical criteria may be voluntarily subjected to scientific peer review or peer review may be required, if the basis for MFL establishment is questioned by the public, engineers, or other scientists.

Once the proposed technical criteria are approved by the District's Governing Board, rule development and rule making processes, including public workshops and opportunities for administrative challenge, are initiated to implement these criteria. The 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 and adopted.

To date, MFL criteria have been adopted for 10 water bodies within the SFWMD including criteria for eight water bodies in 2001, one in 2002, and one in 2003. 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, St. Lucie River and Estuary, and the Northwest Fork of the Loxahatchee River. The MFL rule for Lake Istokpoga is in the final stages of development and is expected to be adopted by December 2005 (**Figure 3-1**). Further details on MFLs can be found on the District's web site at <http://www.sfwmd.gov/org/wsd/mfl/>.

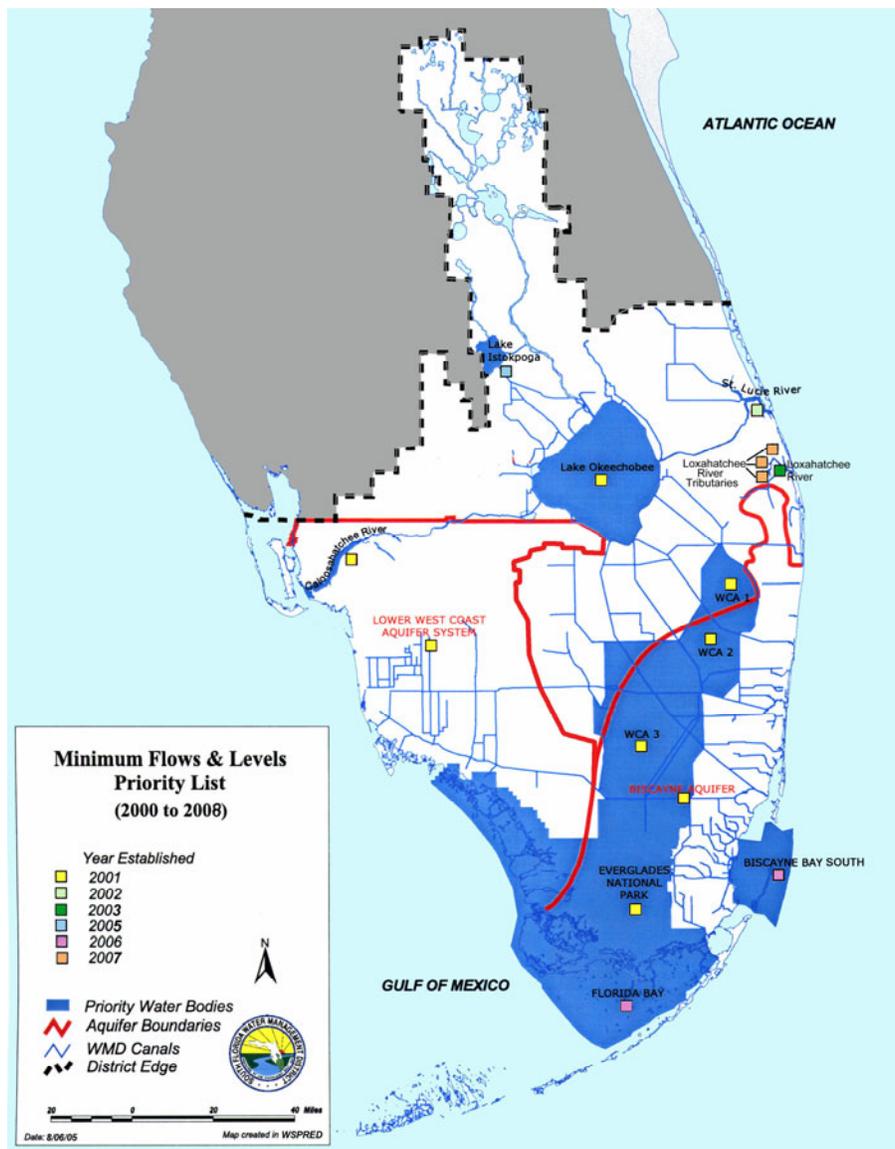


Figure 3-1. Water bodies on the 2006 Minimum Flows and Levels Priority List and dates when rules for these water bodies are scheduled to be adopted.

2006 PRIORITY LIST

The 2006 Minimum Flows and Levels Priority List and Schedule for Establishment (**Table 3-1**) was approved by the District's Governing Board on November 8, 2005. A letter was subsequently sent to the Florida Department of Environmental Protection, in accordance with Section 373.042(2), F.S. This list reflects one revision to reflect additional time needed to resolve restoration and long-term management issues in Florida Bay. The SFWMD is currently waiting to receive comments from the FDEP and approval of the updated list. Upon FDEP's approval, it is anticipated that this list will be published in the Florida Administrative Weekly.

Table 3-1. 2006 Minimum Flows and Levels Priority List and Schedule for Establishment.

Region	Water Body	Year to be Established
Kissimmee Basin	Lake Istokpoga	2005
Lower East Coast	Florida Bay	2006
	Biscayne Bay – So. Central	2006
	Loxahatchee River, N.W. Fork Tributaries	2007

BASIS FOR CHANGES IN THE 2006 PRIORITY LIST

CONSIDERATIONS FOR DEVELOPING THE 2006 LIST

The previous SFWMD Minimum Flows and Levels Priority List and Schedule, dated April 1, 2005 represented a considerable reduction in the number of priority water bodies on the list, due to limited available resources and the extensive modeling, peer review and public involvement processes needed to support these efforts. The 2006 Minimum Flows and Levels Priority List and Schedule, which was adopted by the SFWMD Governing Board in November 2006 reflects one additional change – postponement of the Florida Bay MFL to 2006.

The SFWMD recently began efforts to develop initial water reservations for natural areas within its jurisdiction. The most critical resources are those that are linked to regional water management facilities, are subject to restoration efforts such as the Comprehensive Everglades Restoration Plan but, prior to completion of these projects are threatened by pending requests for increased consumptive use withdrawals. The water bodies deemed most at risk from these perspectives include the Everglades, Northwest Fork of the Loxahatchee River, Caloosahatchee River, Biscayne Bay, St. Lucie Estuary, and the Kissimmee River.

Whereas the MFL criteria are appropriately used to protect water resources that are presently experiencing or likely to experience significant harm, the District perceives that the initial water reservations will provide additional protection for fish and wildlife resources within some of

these areas. Reservations may also provide a more appropriate basis for restricting consumptive use water allocations than is provided by the MFL, but it will take some time and experience with the use of this tool to determine its effectiveness. Some areas may require development of both MFL criteria and a water reservation to ensure adequate resource protection.

The workload for development of 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 available for this effort. The effort to establish initial water reservations for critical water bodies will require many of the same staff that is presently developing MFLs.

The 2005 list proposed a more realistic approach to MFL prioritization that focused efforts in areas with the most critical needs and in areas where MFL criteria development efforts were actively under way. The scope of the list was also reduced to three years. More water bodies will be added, as areas with the most critical needs are prioritized, associated planning and restoration efforts proceed, and MFL or water reservation studies are initiated. Each area will be carefully evaluated to determine which of these tools (MFLs or reservations) can provide the most effective protection of South Florida's water resources.

The policy issues surrounding development of MFLs have become more complex in areas where there is significant competition for available water resources. More emphasis is 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.

EXPLANATION OF CHANGES FROM THE 2005 LIST

The 2006 Minimum Flows and Levels Priority List and Schedule shown in **Table 3-1** reflects additional time needed to resolve restoration and long-term management issues in Florida Bay. During 2005, the SFWMD initiated an effort in cooperation with the U.S. Department of the Interior (USDOI) and three of its key organizations (United States Fish and Wildlife Service, Everglades National Park and Biscayne National Park) to develop an integrated set of restoration goals and targets for Biscayne Bay, Florida Bay and the Everglades. The intent is to identify long-range management goals and objectives that balance water needs and water distribution requirements of these three areas that are of critical importance to the future of South Florida. This effort is still under way.

The USDOI groups and the District have made great strides in recent months to resolve technical, resource, policy and modeling issues, but the development of the MFL document for Florida Bay has been delayed. Determining the long-term goal for management of Florida Bay is a critical step toward estimating whether the system is presently experiencing significant harm, and hence the nature of a recovery plan that may be needed. These issues should be resolved in the coming months so that the MFL process can proceed to completion during 2006.

FDEP COMMENTS ON THE 2005 PRIORITY LIST

A letter describing the 2006 Minimum Flows and Levels Priority List and Schedule was sent to FDEP in November 2005. FDEP comments are expected by January 2006.

CHANGES CONTEMPLATED FOR 2007

No further changes to the Minimum Flows and Levels Priority List and Schedule for Establishment are expected for 2007.