OFFICIAL FILE COPY
CLERK OF THE BOARD
OF COUNTY COMMISSIONERS
MIAMI-DADE COUNTY, FLORIDA
(Second Reading 02-06-07)

Memorandum

MIAMI-DADE COUNTY

Date: December 19, 2006

To: Honorable Chairman Bruno A. Barreiro
and Members, Board of County Commissioners

From: George M. Burgess
County Manager

Agenda Item No. 7(C)

Subject: Ordinance Repealing Section 2-704 of the Code of Miami-Dade County, Florida, Relating to the Miami-Dade County Flood Management Task Force

O#07-17

RECOMMENDATION

It is recommended that the Board approve the attached ordinance repealing Section 2-704 of the Code of Miami-Dade County (Code), Florida, relating to the Miami-Dade County Flood Management Task Force (Task Force).

BACKGROUND

The Task Force was originally created by the Board in 1999 via Resolution No. R-1264-99 and later established by Ordinance No. 01-70. The mission of the Task Force has been to investigate, study and analyze the current and projected flood management system, with emphasis on the performance of the system during hurricanes and major storm events.

The Task Force has been successful in advocating the construction of large-scale flood protection projects, has monitored the federal, state and local drainage improvements funded and constructed as a result of Hurricane Irene and the No-Name storm, and has helped improve communication between flood management agencies in advance of major storms. Because the objectives of the Task Force have been reached, the members have agreed to sunset the Task Force. At their October 16, 2006, meeting, the Task Force unanimously voted to sunset the Task Force (Attachment A - Meeting Minutes). The Chair of the Task Force has provided a report (Attachment B) and an Executive Summary (Attachment C) that highlights their accomplishments since 1999, and urges the Board to continue the commitment to sound flood protection measures for Miami-Dade County.

FISCAL IMPACT

Repeal of this ordinance will have no fiscal impact.

Assistant County Manager

MEMORANDUM
(Revised)

TO: Honorable Chairman Bruno A. Barreiro and Members, Board of County Commissioners

DATE: February 6, 2007

FROM: Murray A. Greenberg County Attorney

SUBJECT: Agenda Item No. 7(C)

Please note any items checked.

_____ **"4-Day Rule" ("3-Day Rule" for committees) applicable if raised**

_____ **6 weeks required between first reading and public hearing**

_____ **4 weeks notification to municipal officials required prior to public hearing**

_____ **Decreases revenues or increases expenditures without balancing budget**

_____ **Budget required**

_____ **Statement of fiscal impact required**

_____ **Bid waiver requiring County Manager's written recommendation**

_____ **Ordinance creating a new board requires detailed County Manager's report for public hearing**

_____ **Housekeeping item (no policy decision required)**

_____ **No committee review**

Approved _____ Mayor

Veto _____

Override _____

Agenda Item No. 7(C)

02-06-07

OFFICIAL FILE COPY
CLERK OF THE BOARD
OF COUNTY COMMISSIONERS
MIAMI-DADE COUNTY, FLORIDA

ORDINANCE NO. 07-17

ORDINANCE REPEALING SECTION 2-704 OF THE CODE OF MIAMI-DADE COUNTY, FLORIDA, RELATING TO THE MIAMI-DADE COUNTY FLOOD MANAGEMENT TASK FORCE; PROVIDING SEVERABILITY, INCLUSION IN THE CODE, AND AN EFFECTIVE DATE

BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA:

Section 1. Section 2-704 of the Code of Miami-Dade County, Florida, is hereby repealed in its entirety:[1]

[[~~**Sec. 2-704. Miami-Dade County flood management task force.**~~

~~(1) *Creation.* There is hereby created a Miami-Dade County Flood Management Task Force which shall only have advisory powers.~~

~~(2) Membership. The composition of the Task Force shall be as follows:~~

~~One representative from the South Florida Water Management District;~~

~~One representative appointed by the Miami-Dade County State Attorney;~~

~~One representative appointed by the Miami-Dade County Department of Environmental Resources Management;~~

~~Thirteen members, each of whom shall be respectively appointed by each of the thirteen (13) members of the Board of County Commissioners, individually. The appointees shall be either engineers or technical experts.~~

~~(3) *Purpose.* The Task Force shall investigate, study, and analyze the current and projected flood management system with emphasis on the performance of the system during hurricanes and other storm events. The Task Force shall recommend methods in the public and private sector to improve flood~~

[1] Words stricken through and/or [[double bracketed]] shall be deleted. Underscored words and/or >>double arrowed<< constitute the amendment proposed. Remaining provisions are now in effect and shall remain unchanged.

~~management and to seek to minimize the kind of property damage and disruptions such as those caused by Hurricane Irene and Subtropical Storm No. 1 (October 3-4, 2000). Additionally, the Task Force shall assess the operation of the primary canal system before, during, and after hurricanes and other storm events by the South Florida Water Management District. The Task Force shall submit an annual written report to the Board of County Commissioners on March 1 of each calendar year commencing on March 1, 2002, containing its findings and recommendations.~~

~~(4) *Compensation.* The members of the Task Force shall serve without compensation but shall be entitled to reimbursement for necessary expenses incurred in the discharge of their duties.~~

~~(5) *Terms of Office.* All members shall serve for five years and may be reappointed thereafter for successive five year terms. Members may be removed in accordance with the provisions of Section 2-11.39 of the Code of Miami-Dade County. Initial appointments to the Task Force shall be for staggered terms. Five members shall serve for five years, five members shall serve for four years, and five members shall serve for three years. Vacancies on the Task Force shall be filled in the same manner by which Task Force members were appointed. A quorum shall be determined in accordance with Section 2-11.39.1 of the Code of Miami-Dade County.~~

~~(6) *Officers.* Members of the Task Force shall elect one (1) of its members as chairperson, one (1) of its members as vice chairperson and any such other officers as the Task Force deems necessary and appropriate.~~

~~(7) *Meetings.* The Task Force shall conduct at least four meetings per annum.~~

~~(8) [*Minutes; meetings public.* Minutes shall be kept of all meetings of the Task Force and all meetings shall be public.~~

~~(9) *Staff Support.* The County Manager shall provide staff support to the Task Force.~~

~~(10) *Applicability of State and County laws.* The Task Force shall operate at all times under the Florida Open Government Laws, including the "Sunshine Law," the public meetings law and public records law and shall be governed by State and County Conflict of Interest laws, as applicable, including the Miami-Dade County Conflict of Interest and Code of Ethics Ordinance, as amended. Methods of organization and the conduct of business shall be governed by Mason's Manual of Legislative Procedure (1953 Edition).]]~~

Section 2. If any section, subsection, sentence, clause or provision of this ordinance is held invalid, the remainder of this ordinance shall not be affected by such invalidity.

Section 3. It is the intention of the Board of County Commissioners, and it is hereby ordained that the provisions of this ordinance, including any sunset provision, shall become and be made a part of the Code of Miami-Dade County, Florida. The sections of this ordinance may be renumbered or re-lettered to accomplish such intention, and the word ordinance may be changed to "section", "article", or other appropriate word.

Section 4. This ordinance shall become effective ten (10) days after the date of enactment unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board.

PASSED AND ADOPTED: February 06, 2007
Approved by County Attorney as
To form and legal sufficiency.

Prepared by:
Peter S. Tell

ATTACHMENT A

Miami Dade County Flood Management Task Force
33 SW 2nd Avenue • PH 2
Miami, Florida 33130-154
T 305-372-6796 F 305-372-6759

MIAMI-DADE COUNTY FLOOD MANAGEMENT TASK FORCE
MINUTES OF OCTOBER 16, 2006 MEETING
MIAMI-DADE COUNTY DERM OFFICE
THOMAS CENTER, 2ND FLOOR TRAINING ROOM
10:35 AM – 10:55 AM

MEMBERS PRESENT:

Carlos Espinosa
Anthony Clemente
Mark Krauss
Kevin Kotun
Brad Waller
Michael Black
Tom MacVicar

MEMBERS NOT PRESENT:

Plinio Villanueva
Gary Winston
Fred Remen
Rafael Robayna
Rodrigo Rodriguez

Meeting started at 10:35 AM.

FEMA-Funded Projects

Dorian Valdes started by updating the Task Force on the FEMA projects. All construction has been complete since 2005. One half of the closures are done, they should finish closures by the end of the year. This will include reconciling monetary amounts with FEMA and the DCA. As an example, one canal had $86,000.00 disallowed, this was the only one. In total, the whole program expended $380 million dollars, out of the $740 million dollars allotted. This was well under budget.

New business is the damage that was done by Katrina and Wilma in 2005. We now have contracts to clean storm sewers as a result of these storms. We also have tree removal contracted, we have three months to complete this, and we should be done in three weeks.

Discussion then ensued regarding Mr Valdes' new position at DERM, and the various groups and programs he will be managing.

Sunsetting the Flood Management Task Force

Mike Gambino started by detailing what the Task force had asked for at the last meeting, when the subject of sunsetting the Task Force had been raised. An Executive Summary and cover Memorandum were provided to the Task Force for review. The process of sunsetting was explained: the group would have to vote to approve the termination of the Task Force, and then submit a cover

Memorandum to the Manager, along with an Executive Summary, a Resolution to repeal the Section that created the Task Force, and the final meeting minutes.

Discussion ensured regarding items to change and add to the cover Memorandum. It was agreed the Memorandum would remove "Active" from the Board, and include language that would urge the Board to continue to advocate for drainage maintenance, CSOP implementation with a provision for flood protection, and to construct the Modified Waters Delivery and the C-111 spreader Canal.

General Discussion

Discussion continued over whether the original CERP included flood protection, Terry Rice stated the rule was to maintain flood protection at the rate it was, no better no worse. Anthony Clemente stated that CERP would have flood protection benefits. Kevin Kotun added that doesn't seepage management have a flood protection benefit? Tom MacVicar stated no benefits were promised, nor found. Anthony Clemente asked about the ASR? Tom MacVicar replied that the ASR was not designed to provide flood protection. Mark Krauss asked if it would be good to mention improved flooding conditions during Katrina and Wilma in the Executive Summary, and the Task Force stated "No".

Sunsetting Task Force

Tom MacVicar then offered a motion to sunset the Task Force, Brad Waller seconded, and the vote was unanimous to sunset.

Mike Gambino will revise the cover Memorandum and send to the group for comments. Once the Memorandum is finalized, the cover Memorandum, Executive Summary, and repeal request will go before the Board of County Commissioners for review and approval.

Meeting adjourned at 10:55 AM.

ATTACHMENT B

Memorandum

MIAMI-DADE COUNTY

Date: November 16, 2006

To: George M. Burgess
County Manager

Thomas K. MacVicar

From: Thomas K. MacVicar, Chairman
Miami Dade County Flood Task Force

Subject: Completion of Duties of the Miami-Dade County Flood Management Task Force

On October 19, 1999, in response to the severe flooding experienced in Miami-Dade County as the result of Hurricane Irene, the Board of County Commissioners, via Resolution No. R-1264-99, and later established by Ordinance 01-70, created the Miami-Dade County Flood Management Task Force (Task Force). The Task Force was formed to investigate, study, and analyze the current and projected flood management system, with emphasis on the performance of the system during Hurricane Irene and subsequent major rain events.

The Task Force has been meeting regularly for the past seven years to continue the evaluation of the flood management system and has published two reports in response to major rain events. The "Hurricane Irene Report", created in 1999, and the "Report on Flood of October 3rd, 2000", offered a total of 22 recommendations to improve the flood management system. The Task Force is pleased to report that all of those recommendations have been addressed thanks to the continued commitment of the Board and the dedication of County staff.

The Task Force has advocated several major drainage improvement projects that have been implemented. For example, forward pumps and large detention areas have been constructed that will better protect residents from major storm events. The Task Force was pleased to follow the progress of unprecedented construction projects, funded by a joint partnership with FEMA and the County, as a result of Hurricane Irene and the October 2000 storm. These projects were constructed ahead of schedule and under budget.

The progress of the Task Force has assisted in raising public and political awareness of flood management problems in the County and achieved solutions to those problems. Communication between the various agencies responsible for the operation of the system has improved. The Task Force advocated increased involvement by County agencies in the implementation of the Comprehensive Everglades Restoration Plan (CERP) and other federal water projects. Additionally the County now participates in important CERP committees and other advisory groups.

The Task Force is proud to have participated and been involved in the improvements and developments mentioned above. However, it is worth noting that while these activities will reduce the severity and duration of impacts from major storms, extreme events may still cause flooding in some areas.

The Task Force would also like to respectfully urge the Board to continue to fund the drainage maintenance activities that are essential to continue to receive the benefits of the drainage facilities that are now in place. The Task Force also encourages the Board to continue to advocate for the construction of major flood mitigation projects, such as the Modified Water Deliveries Project, the C-111 Project, and the implementation of the Combined Structural and

Operating Plan with improved flood protection as a component. These major federal projects are critical in maintaining and improving flood protection for County residents.

Based on the successful completion of our assignment, as outlined above, the Miami-Dade County Flood Management Task Force has concluded our deliberations and voted on October 16, 2006, to sunset the Flood Management Task Force. We thereby respectfully request the Board to repeal Ordinance 01-70 that established the Task Force by Ordinance, and, if necessary, also repeal the original Resolution that established the Task Force (R-1264-99).

On behalf of all the members of the Task Force I would like to thank you for the opportunity to serve in this capacity, and for your continued commitment to sound flood protection measures for the County.

ATTACHMENT C

Miami-Dade County Flood Management Task Force

Executive Summary

Background

On October 19, 1999, in response to the severe flooding experienced in Miami-Dade County as the result of Hurricane Irene, through Resolution R-1164-99 the Board of County Commissioners (BCC) created the Miami-Dade County Flood Management Task Force (Task Force). The Task Force was formed to investigate, study, and analyze the current and projected flood management system, with emphasis on the performance of the system during Hurricane Irene and subsequent major rain events.

The Task Force consists of members appointed by each Commissioner, with one appointment each from the County Manager's Office, the South Florida Water Management District, and the State Attorney's Office. The Task Force started by scheduling a series of countywide public meetings to gather information from agency and municipal representatives, and public comments. The first meeting was held on November 3, 1999.

Since that first meeting, the Task Force has been meeting regularly for over six years, to continue the evaluation of the flood management system, and has published two reports in response to major rain events. The "Hurricane Irene Report", created in 1999 (Appendix A) and the "Report on Flood of October 3rd, 2000" (Appendix B) offered a total of 22 recommendations to improve the flood management system. These recommendations and their current status are described later in this Report. The Task Force is proud to claim that all of those recommendations have been implemented in Miami-Dade County.

The Task Force has advocated several major drainage improvement projects that have been implemented. Forward pumps and large detention areas have been constructed that will better protect residents from future major storm events. The Task Force was pleased to follow the progress of unprecedented construction projects funded by a joint partnership with FEMA and the County, as a result of Irene and the No-Name storm. These projects were constructed ahead of schedule and under budget.

The Task Force has also been able to raise public and political awareness of flood management problems in the County, and as mentioned above, recommend solutions to those problems. Communication between the various agencies responsible for the operation of the system has improved. The Task Force advocated increased involvement by County agencies in the implementation of the Comprehensive Everglades Restoration Plan (CERP), and the County now participates in important CERP committees and advisory groups.

Status of Task Force Recommendations

As mentioned in the background, the Task Force created a list of twenty-two recommendations that would improve the operation and effectiveness of the flood management system in Miami-Dade County. Listed below are the status and progress of those recommendations. This update was revised in February 2006.

1. **Proactive Approach to Flood Protection.** Preventing flood damage requires continuous vigilance, coordination among several levels of government and an accountable institutional framework. This is especially true in Miami-Dade County where municipal, County and regional facilities all must be operated in harmony for the system to work. The Task Force recommends:

   a. The County staff should establish a flood control liaison with the South Florida Water Management District (the District) to monitor conditions within the canal system and notify the District when action is needed to lower flood risk in the County. If appropriate action is not taken, the County Manager should be notified.

   b. At least once a month from June through October the flood control liaison for the County should participate in a conference call with the District and the US Army Corps of Engineers (the Corps) staff to assess the systems vulnerability to flooding and take discretionary actions to relieve any conditions that could make matters worse should a tropical storm or hurricane strike the area.

   c. The Board of County Commissioners should direct the County staff to provide them with a semi-annual status report regarding the progress of implementation of the District Implementation Plan and the report of the Miami-Dade County Flood Management Task Force.

Update: Proactive Approach to Flood Protection.

- The County's Department of Environmental Resources Management (DERM) continues to meet with staff from the South Florida Water Management District (District), the Army Corps of Engineers (Corps), the Office of Emergency Management, and other affected agencies on a regular basis. Weekly teleconferences are conducted during the rainy season.

2. **Wet Season Procedures.** In order to ensure that flooding is minimized during a hurricane, tropical storm or similar high rainfall event, the system must be operated in an appropriate manner well in advance of the weather service's ability to predict a problem.

   The coastal flood control structures are presently operated at the low wet season stages authorized by the Corps. Prolonged periods at wet season stages lower than those approved by the Corps could have a detrimental effect on the County's water supply. Therefore, it may not be possible to lower seasonal water levels any further to minimize flood potential in eastern Miami-Dade County. Other structural responses to increase coastal outlet capacity are addressed later in this report.

Operation of the canals in the western sections of the County has become very controversial due to the conflict between the canals' original purpose of flood protection and the present emphasis on environmental protection. The operation of the District canals west of U.S. 1 controls water levels for the western areas of the County. Because of the proximity of the canal system to Everglades National Park and Florida Bay, water control operations have the potential to create a significant negative effect on the Park and Barnes Sound. Minimizing flood damage solely through the implementation of single focus flood control operational policies could produce negative impacts to the water supply and to sensitive ecosystems in the region, and would not be allowed under today's state and federal environmental protection laws. Therefore, making a proposal to lower seasonal water levels to minimize flood potential in the south Miami-Dade area without assessing other impacts is unrealistic. Nevertheless, because of the essential role of the canal system in reducing flood damage, the Task Force recommends the following approach:

a. During the hurricane season, canal water levels should be held at the lowest feasible authorized level in areas that depend on groundwater storage control and the District canals for primary flood protection.

b. When conditions do not permit the lowest feasible level to be attained under the authorized operations schedule, then exceptions to authorized operations schedules should be actively sought to decrease the potential for flooding. The procedures outlined in the U.S. Army Corps of Engineer's Master Water Control Manual (7-11) provide the requirements for obtaining deviations and operation schedules.

Update: Wet Season Procedures.

- As stated above, meetings between DERM, the District and the Corps are ongoing to resolve the management of canal water levels.

- Pre-storm levels have been set at the low wet seasonal stages for any storm with the potential of affecting south Florida, including forecasting for 4" of rainfall or greater. The Corps has revised the operating schedule for the C-4 Canal, to add flexibility in advance of major rain events. A request to initiate drawdown procedures 72 hours in advance has been approved and implemented.

3. **Flood Control Pumping to the East.** The most populated areas in Miami-Dade County are dependent on gravity driven spillway structures for the primary flood control. Since land elevations are so low, the tidal cycles influence how much flow can be removed in the critical hours after a heavy rain. The County has little or no flood control capacity during high tides. This results in sanitary sewer overflows bypassing drainage systems in the urban areas, which result in additional pollution of Biscayne Bay. The County and Water Managers should develop a forward pumping design for the County's coastal canals that will ensure that some flow is maintained during high tide. This should not result in an increase in the water quantity flowing to the Bay but could significantly improve the water quality by reducing sanitary sewer overflows and maximizing the use of drainage system

treatment processes. Water quality should be an integral part of the planning process, as well as a determination of how forward pumping will affect Biscayne Bay. The Miami-Dade County Flood Management Task Force recommends:

a. The County should work with the District to conduct a feasibility study to determine the effects of forward pumping from all canals in the County and work to implement feasible recommendations.

Update: Flood Control Pumping to the East.

- Construction of the forward pump at the C-4 Canal is complete, and is in operation. Operation criteria will consider tide elevations and stages of the S26 on the Miami Canal (C-6).

- A forward pump for the C-6 Canal is also operational.

- The District has applied for FEMA funding for a forward pump on the C-7 Canal.

- Both the District's Implementation Plan and the 2001-2002 Congressional Authorization will allow the District and Corps to evaluate further the feasibility of forward pumping for all canals in the County. The District continues to actively seek federal funds to construct forward pumps.

4. **Back-pumping and New Structures for the Tamiami Canal.** It has long been recognized that additional flood control capacity was required in the western portions of the County from Kendall Drive to Okeechobee Road, in order to provide those areas with a level of flood protection comparable to that enjoyed in the eastern area of the County. At the inception of the Central & South Florida Project (C & S F Project), back-pumping excess stormwater from these areas to the Water Conservation Areas was a key feature proposed in association with the anticipated westward urbanization of the County. However, it has been recognized for some time that poor water quality, which might be associated with urban stormwater, now precludes the original back-pumping concept. The County has convinced the Corps that additional structures in the Tamiami Canal west of Sweetwater should be considered critical projects as defined by congress in the 1996 Water Resource Development Act. The western-most structure will be constructed soon, and if operated property, could provide some reduction in flooding during major storms.

   The second Tamiami Canal structure, to be located roughly at 117th Avenue, proposed as a Critical Project, was incorporated in the Comprehensive Everglades Restoration Plan (CERP). While this structure could provide significant water supply benefits, it is likely to have a mixed impact on flooding. While the diversion of western Tamiami Canal flow to the Snapper Creek Canal would reduce impacts to the communities of Sweetwater and West Miami, conveyance limitations in the C-2 and western C-4 canals would be expected to increase the potential of flooding in the Kendall area. Therefore, the Task Force recommends the following:

a. The County should request the immediate implementation of the Corps' critical project in the C-4 Canal (Tamiami) at theoretical N.W. 157th Avenue. Operational rules should be developed which maximize the flood control use of the structure.

b. Other back-pumping alternatives should be considered, including back-pumping into proposed detention area in the lakebelt and Bird Drive Basin.

c. It is not advisable to construct the proposed 117th Avenue structure until the back-pumping facilities for the Tamiami Canal are in place and an evaluation has been conducted by the Corps to verify that flood protection will be enhanced.

Update: Back-Pumping and New Structures for the Tamiami Canal.

- Construction of the S-380 Structure is complete, and the District took possession of the structure in July 2003. Operational criteria for the structure have been set.

- As part of ongoing CERP elements, all affected agencies are in the process of evaluation of back pumping to the Everglades.

- As part of FEMA-funded hazard mitigation projects, the District has completed an emergency impoundment area located in western Miami-Dade County. During major rain events the C-4 will be diverted into the impoundment area to create capacity, with seepage management included as a benefit. The impoundment was tested during Katrina and used during Hurricane Wilma.

5. **Miami-Dade County Stormwater Management Master Plan.** The County is presently engaged in the development of a Countywide Stormwater Management Master Plan (SMMP). The County was divided into four major planning areas for this effort as follows:

   1. Northern Basins (C-7, C-8, C-9 West and C-9 East)
   2. Southern Basins (C-1, C-102 with Goulds Canal, C-103, North Canal and Florida City Canal)
   3. Central Basins (C-2 and C-100)
   4. North Central Basins (C-3, C-4, C-5 and C-6)

   The Northern Basins' SMMP was completed in September 1997. The Southern Basins are presently being developed and are projected for completion in February 2002. The Central Basins and the North Central Basins are programmed to be completed by 2007.

   The SMMP efforts in the Northern Basins (C-9 East and C-9 West, C-8 and C-7) determined that the main issues with regard to improved flood protection could be addressed by the construction of the following projects:

   - Approximately eighteen (18) miles of berms would need to be constructed on both sides of the primary and secondary canal systems in the C-9 East Basin.

   - The improvement of the 199th Street Culvert to enhance water deliveries to the primary canal system (Snake Creek), C-9 East Basin, presently under bid.

- Retrofitting of undersized culverts for improved water flow. Basin C-7 showed the most impacts due to flooding of the other basins. Specifically the Red Road Canal areas were impacted, due to the inefficient capacities of all the culverts south of the Little River Canal that serves the C-7 Basin.

- The Twin Lakes, part of the C-7 Basin, are to be interconnected to improve the overall storage needs of the area during excessive storm events. Bidding is ongoing.

- It was found that of the four basins initially modeled that the C-8 Basin showed the least significant flooding problems.

- Canal capacity should be improved by dredging accumulated silt. The Miami-Dade Public Works Department (PWD) has provide a list of known areas where dredging is recommended and the Department of Environmental Resources Management is programming the surveying of these locations to determine the extent of the work needed.

As additional Basins' SMMP are completed, similar control measures will be identified and recommended for Commission action. The Task Force recommends that:

a. The County should complete its SMMP by 2002 with five-year review and updates.

b. The County should expedite its ongoing development and identification of control measures for implementation as determined by the SMMP in the remaining basins.

c. The SMMP's modeling efforts should be expedited in the central and north central areas of the County to identify appropriate control measures much like those mentioned above for the northern areas, to ensure that the flood protection needs for those areas of the County are addressed.

d. The County should produce an official map of the primary and secondary canal systems for the entire County, including private and publicly-owned canals.

Update: Miami-Dade County Stormwater Management Master Plan.

- DERM has completed mapping and modeling the primary drainage basins as part of the Master Plan. Earlier basin studies for the C-9 and C-7 basins have been updated in 2006.

- The improvement to the 199 Street (Snake Creek) Culvert has been constructed.

- The Twin Lakes (part of C-7 basin) have been interconnected to increase storage capacity.

- Maintenance dredging of the entire length of the County's secondary canal system has been completed
- DERM is committed to regular review and update of the Master Plan process every five years, as has been done for the C-9 and C-7 basins.

- Miami-Dade County's Water Control Plan serves as the official map defining primary, secondary and private canals in the County. Meetings with the District have occurred to ensure consensus with the Plan.

6. **Experimental Water Deliveries to Everglades National Park.** For 17 years, water management operations in the southwest Miami-Dade County region have been governed by criteria developed as part of the federally authorized program of "Experimental Water Deliveries to Everglades National Park (ENP)." Many believe that water levels and structure operations for the last five years under the program have exceeded the safe limit with respect to flood protection in the urban/agricultural areas of southwest Miami-Dade County. As a result of an emergency declared to protect the Cape Sable Seaside Sparrow, the Experimental Water Delivery Program has been discontinued and it is unlikely it will be reactivated in its previous form. The most recent four years under the experimental program have not been documented even though the program required that the agencies complete annual evaluations. These evaluations could produce valuable information to guide future operations in the area so unintended flooding could be avoided. The Miami-Dade County Flood Management Task Force recommends:

   a. The District and the Corps should prepare a final comprehensive report, covering the period from November 1, 1995 to December 31, 1999. This report would make definitive hydrologic conclusions about the impact of the canal operations and provide guidance for future actions.

   b. The evidence presented indicates that the water levels associated with the Experimental Water Deliveries to the ENP contributed to the flood during Hurricane Irene in southwest Miami-Dade County. Therefore, the County should recommend to the Corps that the water level conditions which existed during the wet season of 1999 be avoided and that in addition to environmental objectives, flood protection to areas east of ENP be accommodated during future operations.

Update: Experimental Water Deliveries to Everglades National Park.

- The Corps' General Reevaluation Report and Supplemental Environmental Impact Statement was completed December 22, 2000.

- The County has offered comments to the Corps concerning wet season water levels, and the need for flood protection for urban residents and agricultural areas.

- A revised Plan was presented to the District Governing Board on February 14, 2002. This Plan requested expedited construction of C-111, and recommended sustaining the existing level of flood protection.

- The Interim Operating Plan (IOP) criteria are now in place and in use, and the Combined Structure Operating Plan (CSOP) criteria is now being developed. The County is actively participating in this process, and is also represented in the CSOP Advisory Team.

- The Corps had agreed to conduct a General Re-Evaluation Study and Report of the entire primary canal system in Miami-Dade County. However, the Corps project has been placed on hold at this time. The District is evaluating performing a limited study of primary canals, and is seeking funding for the study. The County will assist in providing data for this study.

7. **Modified Water Deliveries and C-111 Projects.** The Modified Water Delivery (MWD) and C-111 Canal projects have been designed and approved for the express purpose of resolving the conflict between protecting Everglades National Park and Florida Bay and providing residents and business with the flood protection that is essential. The County should actively participate in ongoing National Environmental Protection Act (NEPA) processes to define structural and operational changes that will both alleviate some flooding issues, as well as protect water supply and the natural environment. These modifications will reduce the inherent conflicts between the natural system and the developed areas. The MWD and C-111 projects enhance the natural system, especially in Everglades National Park, the Water Conservation Areas, and Florida Bay by increasing flows through the system toward historical levels. The projects also help the urban and agricultural area in two ways; 1) they permit the lowering of water levels prior to a hurricane and provide significantly greater conveyance during a hurricane, thus decreasing the probability of flooding; and 2) they provide a structural interface between the natural and developed systems, thus permitting water levels to be managed separately for the benefit of both. The Task Force recommends:

   a. The County Commission should request that the Corps and District complete the Modified Water Deliveries and C-111 Projects as quickly as possible.

Update: Modified Water Deliveries and C-111 Projects.

- Projects under the Modified Water Deliveries are moving forward, and active acquisition of property in the 8.5 Square Mile Area is occurring.

- C-111 is 85% complete. The rest of construction is pending a land swap with Everglades National Park, and Park boundary changes.

8. **Sparrow Emergency Operations.** The U.S. Fish and Wildlife Service has declared an emergency for the Cape Sable Sparrow (the Sparrow), requiring the Corps to change the way the water management system is operated. These changes have the potential to raise water levels in western Miami-Dade County to levels that would put the area in much greater risk of damaging floods. The Corps has implemented an "Interim Structural and Operational Plan" for the year 2000 (ISOP). This significantly modified the operations in southern Miami-Dade County. To further comply with the emergency in the years 2001 and 2002, the Corps is preparing a

plan to implement the "Interim Operational Plan" (IOP) until the Modified Water Deliveries Project is constructed. Like the ISOP, the IOP will further modify water management operations in southwest Miami-Dade. The Task Force recommends:

a. The County Commission should recommend to the Corps that any operations related to protecting the Sparrow and its habitat that would result in L31-N canal water levels similar to those maintained during the wet season of 1999 should be avoided and that in addition to environmental objectives, flood protection to areas east of the ENP must be an integral part of any interim operating plan.

b. The County should play an active role in the formulation of the IOP to ensure that the plan being formulated to protect the Sparrow and its habitat prior to the completion of the Modified Water Deliveries Project, does not unnecessarily affect the residents of Miami-Dade County.

c. The County should work with the Corps and the District to ensure that more flexible flood control operational criteria are incorporated in the ISOP and IOP. The criteria should stipulate the involvement of the Corps Jacksonville District Engineer and the District Executive Director along with their respective operations managers, when a serious flooding threat to the region requires decisions which also have the potential to cause serious environmental impacts.

Update: Sparrow Emergency Operations.

- Comprehensive Environmental Impact Statement is complete; therefore current IOP supercedes sparrow emergency operations.

- County staff are participating in CSOP criteria development, as members of the CSOP Advisory Team and Project Development Team.

- Daily teleconferences are held between County, state and federal representatives when major rain events are anticipated. These teleconferences discuss flood control operating criteria, and how to improve its' flexibility.

9. **Increase Flood Protection in the CERP.** Within the context of its other project purposes the Corps' Comprehensive Everglades Restoration Plan (CERP) has the potential to maintain or enhance flood protection. The Chief of Engineers, in his June 22, 1999 Report to Congress, stated that flood protection would be maintained to "the extent practicable." Until the Chief of Engineers issued his report flood protection was to be improved throughout the system where possible, but in no case reduced below existing levels. The Chief's report said that, "Such assurance will not, to the extent practicable, impact other existing legal users and flood protection." Miami-Dade County will pay for significant portion of Everglades restoration and should expect along with ecological and water supply benefits, better flood protection where possible. The Task Force recommends:

a. The Miami-Dade County Commission should request that Congress include language in the bill that approves the CERP, a firm commitment to seek to improve local flood control within the context of the ecosystem restoration and water supply enhancements of the CERP.

Update: Increase Flood Protection in the Comprehensive Everglades Restoration Plan (CERP).

- The Federal bill that approved the CERP has stated that flood protection "should be maintained at its current level".

- Under County Resolution Number R-1153-00 the BCC advocated that CERP consider the flood protection needs of the agricultural area.

- Under County Resolution Number R-975-02, the BCC recommended that Congress and the USACE evaluate and analyze all data when carrying out the CERP to implement a plan that balances water quality and quantity, to meet the needs of urban and agricultural users, maintain or improve flood protection, and sustain the natural environment.

10. **8 ½ Square Mile Area.** The residents of the 8 ½ Square Mile Area (SMA) have endured flooding because of the eleven (11) year delay in implementing the Modified Water Deliveries project. There are several ongoing National Environmental Protection Act (NEPA) processes which determine the final disposition of the 8 ½ SMA. The Task Force recommends:

a. Once the final disposition of the 8 ½ SMA is determined, the County should, if necessary, begin the planning to ensure roads and drainage systems compatible with the chosen project.

b. Work with the residents of the area to establish a special taxing district within the 8 ½ SMA to defray costs of internal drainage and other services.

c. Immediately take steps to ensure access and egress for residents during hurricane conditions.

d. As an interim measure, the County should seek permission from the District to connect the roadside ditch along S.W. 168th Street, south of the 8 ½ SMA into the L31-N. The permitting process will include addressing environmental concerns with the runoff.

e. The Task Force heard conflicting testimony regarding allegations of discrimination during the post-storm emergency with respect to government assistance in obtaining flood relief for the 8 ½ SMA. The Task Force recommends that the County Commission should refer the issue of alleged discrimination against the 8 ½ SMA residents to an appropriate review body.

Update: 8 ½ Square Mile Area (SMA).

- Information about special taxing districts was forwarded to residents' representatives.

- The District's Board of Governors approved Alternative 6d as a final resolution. This provides limited flood protection for residents, combined with buy-outs of certain properties.

- The Miami-Dade County Office of Emergency Management (OEM) has updated the evacuation plan for Miami-Dade County. Depending on the type of event, a mandatory evacuation of the 8½ SMA will be issued, upon declaration of an emergency
  by the Mayor or his designee, for such events as hurricanes, major flood events, or other emergencies. Under the new plan 8½ SMA will also be included with coastal communities as a first stage mandatory evacuation area.

- The District has indicated that a positive drainage discharge for an existing drainage ditch along SW 168 Street, near the connection to the L-31N Canal, will not be constructed. The implementation of the 8½ SMA Mitigation Plan by the Corps is expected to eliminate the need for this drainage improvement.

- Staff from the County's Public Works Department have met with residents of the 8½ SMA to discuss options for road improvements in the area.

11. **Municipal Improvement Initiatives.** The Task Force recommends that the municipalities should continue to seek assistance from appropriate agencies for the construction of capital drainage improvements, which may include the installation of pumping systems. The municipalities should work within the framework of the regional system, and their solutions must be considered in the context of the regional system by the permitting agencies. The success of local solutions is often dependent on establishing improved conditions in the primary canal system. In order for this to work, all communities must coordinate their drainage activities with the County and the District to ensure that the regional system functions efficiently. Water quality must be an integral component of this planning.

Update: Municipal Improvement Initiatives.

- DERM serves as the drainage permit review agency for all regional development, and protocol exists where all municipal projects and permitting activities are forwarded to the County for review.

- When regional flood mitigation projects such as the C-4 projects are planned, a technical review committee is created. This group consists of several local, state and federal representatives. Managed by the District, the group meets regularly to ensure the regional scope of the projects is included.

12. **Cut and Fill Criteria.** The Task Force recommends that Miami-Dade County should evaluate the need for extending the fill restrictions (Miami-Dade County Fill Encroachment and Water Management Criteria, [Cut and Fill Criteria], refer to Appendix F), to other areas in southwest Miami-Dade County, beyond the present limits of the original boundaries of Area B.

    Study and implement, if necessary, new cut and fill criteria for new development. This may include higher house pad and road elevations and greater on-site stormwater retention. Miami-Dade County should review and upgrade the criteria for development in areas of the County that are known to be flood prone. This evaluation should be done in all flood prone areas of the County regardless of how they are currently mapped or zoned.

Update: Cut and Fill Criteria.

- As discussed in Item Number 5 above, the County has completed the process of generating a countywide Stormwater Management Master Plan. Using the model results of the Master Plan, the County is in the process of evaluating the extent of the Cut and Fill Criteria policies throughout Miami-Dade County.

13. **FEMA Insurance Maps.** The Task Force recommends that Miami-Dade County should request that the Federal Emergency Management Agency (FEMA) update their insurance rate maps Countywide. This is based on the fact that there has been extensive land development since the last update in 1994 by FEMA. The results of this process should be compared to the existing County Flood Criteria maps so that the more stringent elevation is used. Miami-Dade County should also work with FEMA to identify willing sellers in flood-prone areas and purchase those properties under existing federal buy-out programs.

Update: Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM).

- The County, District and FEMA have formed a technical partnership to refine and expedite the creation of new FIRM's as part of the above re-study. This has resulted in the creation of preliminary FIRM maps for the entire County.

- The Preliminary FIRM's were sent to the County and each of the municipalities on September 30, 2005.

- On February 10, 2006, a Community Coordination meeting was held with FEMA, the District, the County and the cities in attendance. This meeting starts the process of publication and codification of final FIRM's for Miami-Dade County.

14. **Operation of S-197.** S-197 is the structure at the southern end of the C-111 canal. It is the final outlet for the largest drainage area in the County and, coupled with the C-111 overbank flow down stream of the S-18C water control structure, is an important feature of the flood control system that currently serves the agricultural and residential areas east and west of Krome Avenue, from Tamiami Trail to Florida

City during severe storm events. Unfortunately, the structure itself is cumbersome to operate. Three culverts are opened and closed manually, and the other ten can only be operated by heavy equipment that must be transported to the site. Complicating the matter is that, to be effective, the culverts must be closed and opened in response to changing tides during a major event to not only permit the release of excess flood waters, but, in reverse, prevent tidal actions from compounding upstream flooding. As is typical for the current configuration, during Irene this inflexibility limited the effectiveness of S-197. None of the gates could be opened and closed in response to the tide. In this regard, it is important to note that tropical storm tidal surge in the low-lying areas of C-111 will at times negate any overflow and S-197 discharge capabilities. The Task Force therefore recommends:

a. The District and Corps should investigate options for improving the operational flexibility of the S-197 structure to improve its performance during flood events. This investigation should include potential impacts to Barnes Sound.

Update: Operation of S-197

- 8 of the 13 culverts have been modified with gearboxes and stem lift operators. The remaining 5 culverts have not been modified. This will allow a quicker and more flexible operational response, immediately before and after rainfall events. This will allow the District to both open and close gates to mitigate impacts to Barnes Sound, which is an estuary located in far south Dade, and alleviate high water conditions in the C-111 basin.

- A spreader canal in this area is being evaluated, which will result in removal of S-197 and backfilling of C-111.

15. **Florida City and North Canals.** These two canals provide important flood protection to a significant amount of agricultural and urban property near Homestead and Florida City. Although the County holds a flowage easement over the canal itself, no maintenance work is done because the County does not own the adjacent right-of-way. The lack of maintenance creates an unacceptable risk to people and property in the area. The Task Force recommends:

a. The County should evaluate the requirements for maintaining these canals. The evaluation should involve discussions with the adjacent property owners that now own the canal rights-of-way, to see under what conditions the ownership could be reconciled and canal maintenance provided.

Update: Florida City and North Canals.

- The County met with Homestead, Florida City, and the District to discuss maintenance issues and responsibilities. Discussions on cost sharing for maintenance are ongoing.

- Miami-Dade County has performed a maintenance dredge of both canals using state and FEMA appropriations. The local match was cost shared between the County and affected cities through coordination of staging areas during the dredging activity.

16. **Identify Flood Prone Areas in the Unincorporated County.** There are a number of low-lying areas of unincorporated Miami-Dade County which were flooded during Hurricane Irene. The Task Force recommends:

    a. These areas need to be evaluated and the County should implement programs to improve flood protection in these areas.

Update: Identify Flood-prone Areas in the Unincorporated County.

- Through DERM's Stormwater Utility, a tracking system is in place to identify flood-prone areas, and capital improvement projects are planned that will address these areas.

- The Quality Neighborhood Improvement Program (QNIP) addresses local flooding conditions as reported by County residents in flood-prone areas. The General Obligation Bond Program, approved by County residents in November 2004, will provide further funding to address these needs.

- The County's Stormwater Management Master Plan has also identified improvements needed as a result of the modeling conducted.

17. **Seepage Management.** Preliminary calculations indicate easterly seepage in flows to urban and agricultural areas across the L-33, L-30 and L-31 North levees. This seepage may contribute significantly to flooding during severe storms. The Task Force recommends:

    a. CERP plans for seepage management along the eastern edge of the Water Conservation Areas and Everglades National Park should consider flooding impacts to urban and agricultural areas.

Update: Seepage Management.

- The Corps has conducted a conceptual study under CERP, including modeling, and has included potential impacts to urban and agricultural areas. The study will be among the first pilot studies conducted. The CERP and Water Preserve Feasibility Study will also discuss this issue.

- Efforts are continuing to determine the authority for implementation of this project. This project was not an authorized project under CERP.

- County staff from DERM and the Water and Sewer Department actively participate on the Project Delivery Teams, and provide appropriate comments to the US Army Corps of Engineers.

18. **FEC-Borrow Canal.** Drainage for the Village of Virginia Gardens is dependent upon adequate maintenance of the canal on its western boundary. The Village has indicated that the canal has been blocked by aquatic vegetation, which adversely impacts the drainage of the canal. The Task Force recommends:

    a. Maintenance of this canal is increased to eliminate any blockage, and that the County evaluate the method to determine whether connection to the C-6 canal is adequate.

Update: FEC/Borrow Canal.

- DERM has placed a staff gauge in the Canal so that the Village of Virginia Gardens can monitor the Canal elevation.

- The County has replaced and upgraded the culvert connection between the FEC Borrow Canal and the Miami River Canal.

- Through established flow rights in the FEC Borrow Canal, the County has committed to performing a maintenance dredge of this canal. The General Obligation Bond will provide the funds necessary. Design for the dredge is complete, and bidding has started for this project.

Flood of October 3rd, 2000 Recommendations, and Progress to Date

WCA-3B Seepage Barrier. This project was originally considered by the Corps of Engineers as a Critical Project in the Everglades Restoration Program and is contained in the Report approved by Congress last fall. The project consists of constructing a below ground seepage barrier below the L-30 levee between the S-334 and S-335 water control structures. This is just west of the intersection of Krome Avenue and US 41. Previous studies have shown this section of levee to have the highest rate of seepage from the Everglades into the south Miami-Dade canal system. A barrier here would help keep Everglades water in the Everglades and eliminates a source of unwanted flow into the L-31 N Canal. The project would also provide the opportunity to test one of the key technologies recommended in the Comprehensive Everglades Restoration Plan. The Task Force recommends an expedited evaluation and implementation of this project by the US Army Corps of Engineers and the South Florida Water Management District. The County should explore the possibility of becoming a Co-Local sponsor of this project with the SFWMD.

Update: WCA-3B Seepage Barrier

- Project is currently under consideration by Corps and District.

- County has sent correspondence in support of project, and is actively involved in stakeholder meetings.

Temporary Lake Belt Reservoir The Task Force received a presentation from Paul Larsen, a member of the Task Force, on the possibility of constructing temporary flood storage impoundments on private property in the Lake Belt area. Several of the many

companies who own the land have expressed a willingness to allow use of their property to temporarily store floodwater during major storm events. This could allow the installation of temporary pumps and small-scale levees to permit floodwater to be pumped to the west and held for a few days until flooding to the east had receded sufficiently to accommodate the flow from the west. Because of the presence of the County's Northwest Wellfield, water quality review is essential. This concept has the potential to provide significant benefits to the communities affected by the slow recession rates of the western reaches of the Miami and Tamiami Canals. If the concept can be applied in a way that is compatible with wellfield protection and other water quality concerns, it could be the most effective near-term strategy for reducing flood damage in some of the most susceptible areas.

Update: Temporary Lake Belt Reservoir

As stated in Item Number 4 above, this project was funded and constructed through federal disaster money. The entire project is complete. The impoundment was tested and saw limited use during the 2005 hurricane season.

Ownership and Management of the Secondary Canal System. The Task Force discussed the need to integrate the operation and maintenance of the primary and secondary canal systems: the SFWMD and Miami-Dade County should evaluate the feasibility and advisability of combining oversight of the operation and maintenance of the primary and secondary under the auspices of the SFWMD. The evaluation should include an assessment of the entire canal system to specify the primary, secondary and tertiary systems; to identify conflicts due to diverse ownership; and make recommendations for resolving conflicts. This effort should culminate in a joint, comprehensive report, including appropriate recommendations, submitted to the governing bodies of each agency by January 1, 2002.

Update: Ownership and Management of the Secondary Canal System

- County and District staff formed a One Canal Authority Committee to review feasibility of creating one canal authority. After a series of meetings, a report on the Committee's findings was submitted to the Task Force in 2002.

FEC Borrow Canal Recommendation Number 18 from the May 16, 2000 report of the Task Force identified problems with the FEC Canal. The effort to ensure proper maintenance of the FEC Canal has not progressed sufficiently. The Task Force recommends that DERM take all necessary actions to ensure compliance by FEC, including enforcement if necessary. A report by DERM with regard to progress on this issue should be submitted to the County Manager each month until the problems are resolved.

Update: FEC/Borrow Canal

- Status described in Item Number 18 above.

Additional Flood Management Issues Evaluated by Task Force

Flood Mitigation Projects Funded by the Federal Emergency Management Agency (FEMA)

Hurricane Irene in 1999 and the No-Name storm of October 2000 were catastrophic flood events, and caused extensive damage to Miami-Dade County's roads and infrastructure. To repair the damage, and to mitigate future damages from floods, FEMA granted several hundred million dollars to the County.

Miami-Dade County then created a Division of Recovery and Mitigation (DORM), within the Department of Environmental Resources Management (DERM), to manage the implementation of the capital improvements being funded by FEMA and the County.

The Task Force has subsequently heard updates on the progress of the DORM projects on a regular basis, and has offered advocacy and encouragement to DORM staff during the entire construction process. The result has been that DORM has been able to finish implementation of these projects ahead of time and under budget.

Combined Structural Operations Plan (CSOP)

CSOP is a complex set of operating plans and procedures that are being developed to move water through the primary canal system in Miami-Dade County. The objectives are to provide water supply, protect natural resources, re-hydrate Everglades National Park (ENP), assist in projects implemented through the Comprehensive Everglades Restoration Plan (CERP), and to provide flood protection for agriculture and residents in south Florida.

At the beginning of the process to develop CSOP criteria, it appeared that the interests of the CERP and ENP were being considered before other competing interests, namely flood protection. The Task Force has subsequently asked that the Army Corps of Engineers report on progress of CSOP at each Task Force meeting. A dialogue with the Corps has now been established, and this has led to a more complete understanding and a more balanced approach to setting CSOP criteria, inclusive of the need to balance all interests in south Florida. Members of the Task Force and the County now sit on boards that advise and contribute to the CSOP Project Development Team, and the County has become more involved with the entire process.

In a recent meeting of the South Florida Ecosystem Regional Task Force, the group agreed to a selected plan (Alt. 5R), but included a condition that the S-356 be constructed to a capacity of 950 CFS. This would ensure that no negative flood impacts would occur to residential and agricultural areas. This condition can be directly attributed to efforts of members of the Miami-Dade County Flood Management Task Force.

Stormwater Utility Fees

In 1991, Miami-Dade County created a Stormwater Utility Program to collect and manage funds needed for the various stormwater management programs being implemented by the County. These programs are designed to properly manage stormwater runoff, both from a water quality and quantity perspective.

With the massive effort of the DORM to implement the improvements being funded by FEMA after Irene and the No-Name storm, the Task Force recognized that maintenance needs would also need to be increased.

Miami-Dade County had also realized the need for increased maintenance, and had prepared a proposal to increase stormwater utility fees to cover this need.

The Task Force in turn issued a Memorandum to the BCC advocating the increase in stormwater utility fees, explaining the need to the Board.

On September 17, 2003 the BCC approved the County's request for two $0.50 fee increases, which occurred on October 1, 2003 and October 1, 2004.

Grant funding options through the Local Mitigation Strategy

In 1997, Miami-Dade County created a comprehensive committee called the Local Mitigation Strategy (LMS). The goal of the LMS is to evaluate the vulnerabilities to disasters that exist within the community, and then create mitigation projects to reduce or eliminate those vulnerabilities. The LMS includes many different community stakeholders, such as the County Departments, all cities within the County, public and private colleges and universities, state and federal agencies, and private entities such as Florida Power and Light, and Home Depot.

Once each agency lists their various mitigation projects, the LMS then prioritizes the various projects, and is then ready to decide which projects to fund if disaster or other grants are issued. This has proven to be a very successful method to apply for and receive the various grants.

The Task Force receives regular updates on grant availability and flood mitigation projects being constructed from the Chair of the LMS. The Task Force meetings therefore serve as notice to cities that grants continue to be available to cities that wish to improve their flood protection efforts. In this manner the Task Force has helped to communicate the availability of these funds to entities that otherwise might not know of these opportunities.

Operation of the Northwest Wellfield Protection Canal

As part of the evaluation of the causes of flood damage from Irene and the No-Name Storm, the operation of the Northwest Wellfield Canal was examined. The Task Force heard presentations from their members and County staff as part of the evaluation. The result has been that operation of the canal has been refined to continue to protect the Northwest Wellfield from contamination from pollution sources to the east, while also minimizing seepage of groundwater to the east, thereby ensuring that flood protection for County residents is not compromised, and allowing the NWWF area to retain the water that is needed for water supply and recharge.

Appendices

A * Miami-Dade County Flood Management Task Force's "Hurricane Irene Report, Volume I, May 16, 2000"

B * "Report on Flood of October 3, 2000" buy the Miami-Dade County Flood Management Task Force

C List of Task Force Members

* Appendices A and B are enclosed under separate cover

MIAMI-DADE COUNTY
Miami Dade County Flood Management Task Force

33 SW 2nd Avenue • PH 2
Miami, Florida 33130-1540
T 305-372-6754 F 305-372-6759

Appointed Task Force Members

(Jordan Dist. 1)
VACANT

(Rolle Dist. 2)Term Exp 02/28/08
Rafael Robayna

(Shuler Dist. 3)
VACANT

(Heyman Dist. 4) Term Exp 12/31/07
Bradley G. Waller, Vice Chairman

(Barreiro Dist. 5) Term Exp 3/31/10
Terry L. Rice, Ph. D.

(Sosa Dist. 6) Term Exp 1/30/08
Rodrigo O. Rodriguez
C3TS

(Jimenez Dist. 7) Term Exp 8/30/10
Mark Kraus

(Sorenson Dist. 8) Term Exp 2/28/08
Kevin Kotun

(Moss Dist. 9) Term Exp 4/30/08
Thomas K. MacVicar, P.E., Chairman

(Souto Dist. 10) Term Exp 4/30/08
Plinio M. Villanueva, P.E

(Martinez Dist. 11) Term Exp 11/30/09
Michael Black

(Diaz Dist. 12)
VACANT

(Seijas Dist. 13) Term Exp 11/30/09
Anthony Clemente,

(State Attorney's Office)
Gary Winston

(DERM)
Carlos Espinosa, P.E.

(SFWMD)
Fred W. Remen