



# **TOWN OF CUTLER BAY**

## **PROJECT:**

### **SAGA BAY 1.2 SUB-BASIN**





**Office of the Town Manager**

Rafael G. Casals, CFM  
Town Manager

**Saga Bay 1.2 Sub-Basin Water Quality Improvement Project**

**Project Abstract:**

The Town of Cutler Bay is requesting \$165,250 for Capital Improvements that will improve stormwater management system and treat runoff pollutants in the Saga Bay 1.2 Sub-Basin. This sub-basin is part of the DA-4-4 Basin. The current drainage system in this sub-basin consists of isolated French Drains and Catch Basins. Roadside swales also provide some water quality pre-treatment and storage of roadway run-off. The existing drainage infrastructure in the Saga Bay 1.2 Sub-Basin does not discharge adequate runoff to meet the desired performance criteria adopted in the Town's Stormwater Master Plan. The capacity of the existing roadside swales and French Drains is not sufficient to discharge the volume of runoff and treat pollutants. As a result, this project has been identified in the Town's Stormwater Master Plan adopted via Resolution No. 08-50 on August 20, 2008.

Based on the Capital Improvement recommendations listed in the Town's Adopted Stormwater Master Plan, the Town will use the requested funding to: Install six (6) manholes; Install six (6) additional catch basins; replace three (3) existing catch basins; Install an additional 725 LF of 18" Pipe; and install an additional 250 LF of French Drain. These improvements will be conducted in Area #34 of the attached Sub-Basin Map. Area #34 failed to meet performance standards in four (4) out of five (5) goals (Water Quality, 5-Year Storm, 10-Year Storm, and Observed Flooding or Complaints). Existing catch basins will be modified to provide sediment traps (sumps) and pollution retardant baffles to protect the French Drains. Weir structures will be installed prior to each outfall to restrict the discharge of pollutants to the Saga Bay Lake. Additional French Drain, Catch Basins, and/or manholes will provide water quality and water quantity treatment. Finally, concrete aprons will be installed around each Catch Basin to ensure that roadway runoff flow is not impeded by landscaping around the Catch Basins. The Town is currently working with a contracted engineering consultant to develop the plans and permitting documents in order to have this project "shovel-ready". If awarded funding,

the Town will be able to complete construction of this project within twelve (12) months from the date of contract execution. Furthermore, this project was recommended again by the residents of Cutler Bay and has been included in the Town's newly developed Floodplain Mitigation Master Plan adopted via Resolution #14-73 in October 2014.

**Project Location:**

The project is located north of SW 198 Terrace, south of SW 196 Street, east of SW 81 Court and west of SW 78 Avenue.

**Watershed Name:** Everglades

**Latitude:** 25.581907

**Longitude:** -80.321184

**Hydrologic Unit Code (HUC):** 03090202

**Project Benefits:**

Cutler Bay is bordered on the West by Biscayne Bay National Park and the Biscayne Bay Wetlands. In our efforts to protect the Bay, the Town has implemented a series of best management practices as it relates to stormwater treatment. The Town consistently educates the community about water pollution due to stormwater runoff and regularly maintains the Town's streets and drainage systems. All Capital Improvement projects include improved treatment trains that will ultimately reduce pollutant loads to Biscayne Bay by 80% or greater. This particular project discharges into the Biscayne Bay C-1 Canal and ends in Biscayne Bay.

This chart displays the estimated pollutant load reduction provided by the proposed inlet traps, baffle boxes and exfiltration trenches. Impact was estimated using methodology similar to Harvey Harper's Model and was accepted by the South Florida Water Management District.

<b>Pollutant</b>	<b>Existing Load (kg/yr)</b>	<b>Reduction (kg/yr)</b>	<b>Proposed Load (kg/yr)</b>	<b>Percentage Reduction</b>
Total Phosphorous (TP)	7.77	7.20	0.57	92.7%
Total Nitrogen (TN)	61.21	54.79	6.43	89.5%
Total Suspended Solids (TSS)	733.79	664.45	69.34	90.6%

**Match Funding Available:**

The Town currently has a 5 year Interlocal Agreement with Miami-Dade County for Stormwater Utility. This was formally adopted and implemented by the Town of Cutler Bay via Resolution No. 12-39 on August 15, 2012. This has allowed the Town to budget \$165,250 (50%) of the total estimated cost of \$330,500. This funding is obtained through "Stormwater Utility Fees" in accordance with the Town's adopted Stormwater Master Plan. This fee is assessed on the utility bill of each residential or commercial property. This fee has not been increased for the purpose of funding this project.



# **Attachment I**

Letter of Endorsement

Miami-Dade County LMS

Cathie Perkins, LMS Planner  
Miami-Dade Emergency Management  
9300 N.W. 41<sup>st</sup> Street  
Miami, FL 33178-2414  
Phone: (305)-468-5429



March 14, 2014

Mr. Miles Anderson, State Hazard Mitigation Officer  
Florida Division of Emergency Management  
2555 Shumard Oaks Boulevard  
Tallahassee, Florida 32399-2100

**Re: Hazard Mitigation Grant Program (HMGP) applications for FEMA 4138-DR-FL "Florida Severe Storms and Flooding"**

Dear Mr. Anderson,

The Miami-Dade County Local Mitigation Strategy (LMS) working group has approved the following project for HMGP funding from this disaster:

The Town of Cutler Bay is applying for potential funding for a drainage improvement project. The Project as it is listed in our LMS Project list (Project #346) is entitled Drainage Improvements – Saga Bay Section 1.2 Sub-Basin.

The projects align with our LMS goals and objectives as noted, and with the State's mitigation goals and objectives (in accordance with the Code of Federal Regulations 44§ 201.6). Furthermore, the Town of Cutler Bay is an active, continuing participant in the Miami-Dade County Local Mitigation Strategy (LMS) Working Group.

For further information or inquiry, please contact me at 305.468.5429 and [cathie.perkins@miamidade.gov](mailto:cathie.perkins@miamidade.gov).

Sincerely,

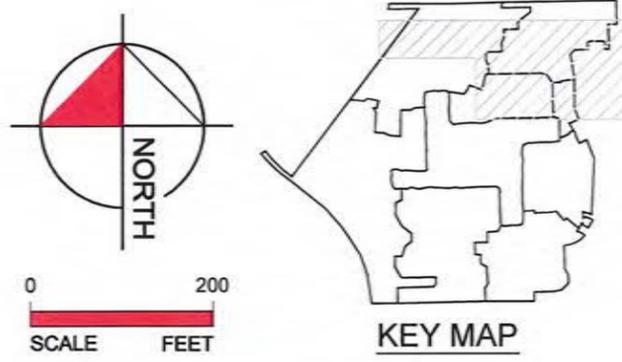
A handwritten signature in blue ink, appearing to read "Cathie Perkins", with a long horizontal flourish extending to the right.

Cathie Perkins,  
Miami-Dade County LMS Planner



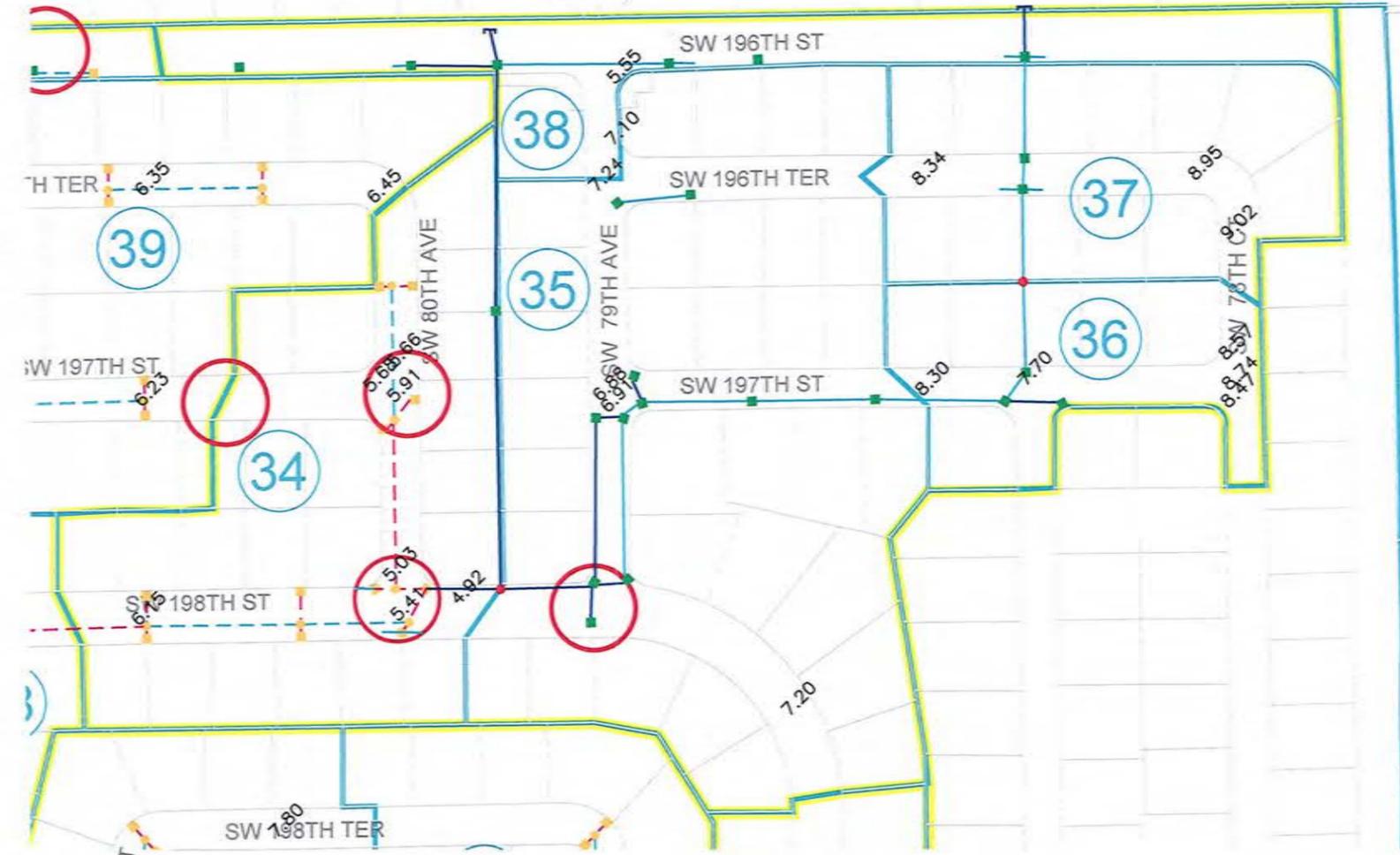
# **Attachment II**

## **Project Maps from the Town's Stormwater Master Plan**



**LEGEND**

- EXIST./PROP. OUTFALL PIPE
- EXIST./PROP. DRAINAGE PIPE
- EXIST./PROP. FRENCH DRAIN
- AREA DELINEATION
- SUB-BASIN GROUP
- EXIST./PROP. CATCH BASIN
- EXIST./PROP. MANHOLE
- PROP. REGRADING
- AREA NUMBER
- KHA OBSERVED PONDING
- KHA OBSERVED FLOODING
- TOWN COMPLAINT LOCATIONS



**AREA 34 PROPOSED MODIFICATIONS**  
 -REPLACE 3 EXIST. C.B.  
 -ADD 6 MANHOLES  
 -ADD 6 CATCH BASIN  
 -ADD 725 LF OF 18" PIPE  
 -ADD 250 LF OF FRENCH DRAIN

**AREA 35 PROPOSED MODIFICATIONS**  
 -NO IMPROVEMENTS PROPOSED

**AREA 36 PROPOSED MODIFICATIONS**  
 -NO IMPROVEMENTS PROPOSED

**AREA 37 PROPOSED MODIFICATIONS**  
 -NO IMPROVEMENTS PROPOSED

**AREA 38 PROPOSED MODIFICATIONS**  
 -NO IMPROVEMENTS PROPOSED

**SUMMARY OF PROPOSED MODIFICATIONS**

- REPLACE 3 EXIST. C.B.
- ADD 6 MANHOLES
- ADD 6 CATCH BASIN
- ADD 725 LF OF 18" PIPE
- ADD 250 LF OF FRENCH DRAIN



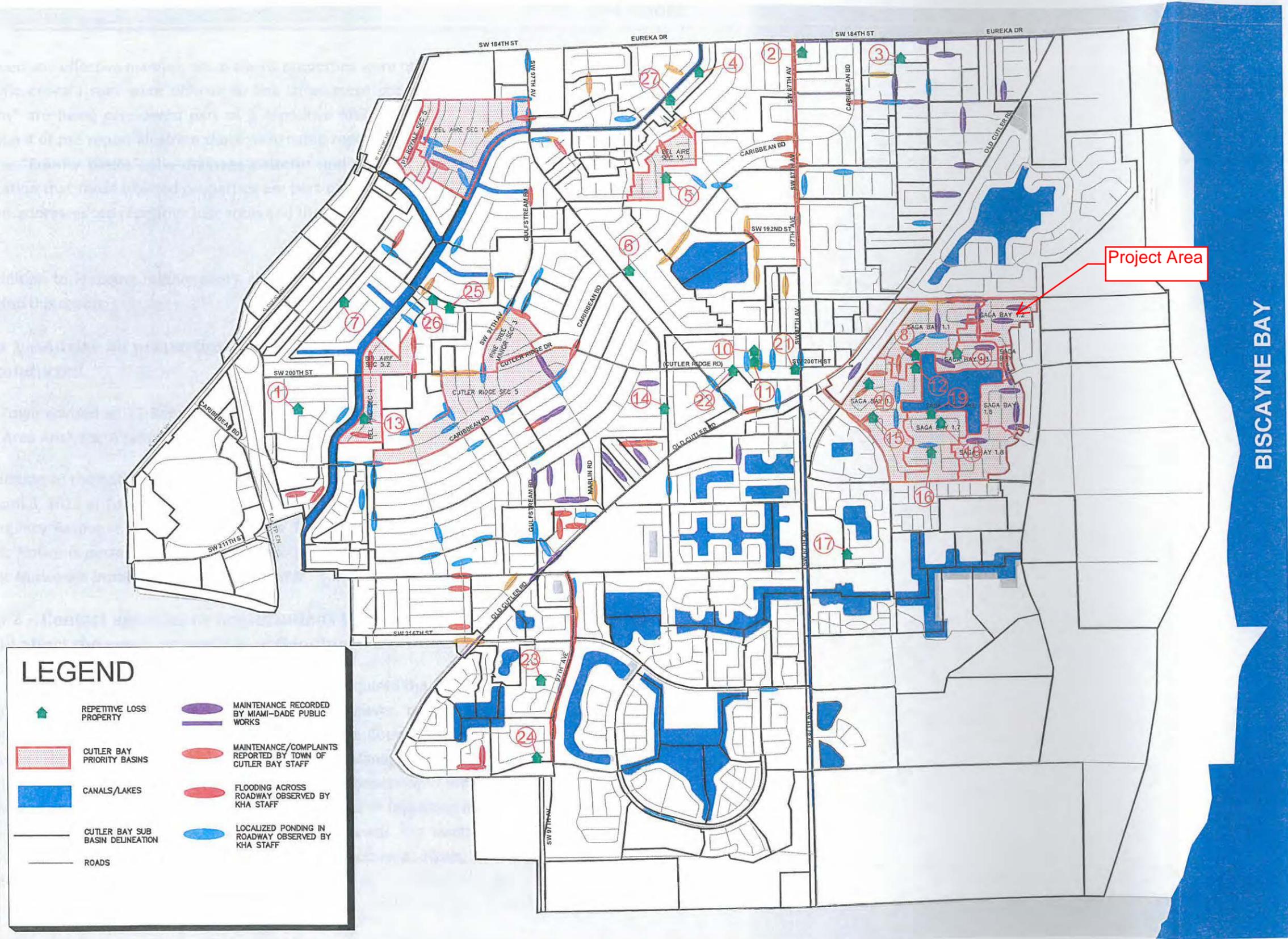
**TOWN OF CUTLER BAY  
 STORMWATER MASTER PLAN**

**SAGA BAY 1.2  
 SUB-BASIN**

**FIGURE 16**

Drawing name: H:\043 jobs\043145000-Cutler Bay Stormwater MP\CADD\CIVIL\CONCEPT\FIG 15A-22.dwg FIG 16 SAGA BAY 1.2 Mar 25, 2008 11:22am by heather.spencer

Drawing name: K:\FTL\_Civil\043\_joba\043145020-CRS Class Improvement Services\CADD\Fig 4 - Repetitive Loss Properties.dwg FIG 14 Nov 20, 2012 4:40pm by: stefano.viola



**LEGEND**

	REPETITIVE LOSS PROPERTY		MAINTENANCE RECORDED BY MIAMI-DADE PUBLIC WORKS
	CUTLER BAY PRIORITY BASINS		MAINTENANCE/COMPLAINTS REPORTED BY TOWN OF CUTLER BAY STAFF
	CANALS/LAKES		FLOODING ACROSS ROADWAY OBSERVED BY KHA STAFF
	CUTLER BAY SUB BASIN DELINEATION		LOCALIZED PONDING IN ROADWAY OBSERVED BY KHA STAFF
	ROADS		

- ① 10481 SW 202ND TERRACE CUTLER BAY, FL 33189
- ② 18420 SW 86TH COURT CUTLER BAY, FL 33157
- ③ 18435 SW 83RD AVENUE CUTLER BAY, FL 33157
- ④ 18482 SW 89TH PLACE CUTLER BAY, FL 33157
- ⑤ 18800 SW 91ST AVENUE CUTLER BAY, FL 33157
- ⑥ 19401 FRANJO ROAD CUTLER BAY, FL 33157
- ⑦ 19610 BELVIEW DRIVE CUTLER BAY, FL 33157
- ⑧ 19901 SW 82ND PLACE CUTLER BAY, FL 33189
- ⑨ 19904 SW 80TH COURT CUTLER BAY, FL 33189
- ⑩ 19920 SW 88TH COURT CUTLER BAY, FL 33157
- ⑪ 19940 SW 88TH COURT CUTLER BAY, FL 33157
- ⑫ 19941 SW 82ND PLACE CUTLER BAY, FL 33189
- ⑬ 20220 BEL-AIRE DRIVE CUTLER BAY, FL 33189
- ⑭ 20225 RANCH ROAD CUTLER BAY, FL 33189
- ⑮ 20310 SW 84TH AVENUE CUTLER BAY, FL 33189
- ⑯ 20525 SW 82ND COURT CUTLER BAY, FL 33189
- ⑰ 21128 SW 85TH PASSAGE CUTLER BAY, FL 33189
- ⑱ 8130 SW 203RD STREET CUTLER BAY, FL 33189
- ⑲ 8141 SW 203RD STREET CUTLER BAY, FL 33189
- ⑳ 8431 SW 201ST STREET CUTLER BAY, FL 33189
- ㉑ 8700 SW 200TH STREET CUTLER BAY, FL 33157
- ㉒ 8900 SW 200TH STREET CUTLER BAY, FL 33157
- ㉓ 9751 SW 218TH STREET CUTLER BAY, FL 33190
- ㉔ 9762 SW 222ND TERRACE CUTLER BAY, FL 33190
- ㉕ 9945 MARLIN ROAD CUTLER BAY, FL 33157
- ㉖ 9985 MARLIN ROAD CUTLER BAY, FL 33157
- ㉗ 18572 SW 89TH PLACE CUTLER BAY, FL 33157

NOTE: THIS MAP CONTAINS INFORMATION FROM FLOOD INSURANCE CLAIMS THAT IS PROTECTED BY THE PRIVACY ACT.



**Kimley-Horn and Associates, Inc.**  
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**TOWN OF CUTLER BAY  
 REPETITIVE LOSS PROPERTIES  
 AND PRIORITY BASINS**

**FIGURE 4**



# Attachment III

Section II-A: Latitude/Longitude Map

Section II-B: FIRM Map

Section II-C: Site Maps & Photographs









