UNPERMITTED DISCHARGES CONTINGENCY PLAN
–
2014 ANNUAL UPDATE

MIAMI - DADE

WATER AND SEWER DEPARTMENT

DECEMBER 2014

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EXECUTIVE SUMMARY

This Unpermitted Discharges Contingency Plan details the course of action for the Miami-Dade Water and Sewer Department (MDWASD) in the event of an unpermitted discharge from the wastewater collection and treatment systems. Other MDWASD contingency plans address response actions specific to the Sludge Force Main and Miami Beach Force Main.

This is the 2014 annual update of the contingency plan. Annual updates are prepared to fulfill the requirements of Paragraph 15(C) of the First Partial Consent Decree (Case No. Civ-93-1109-MORENO) which Miami-Dade shall continue to implement as an enforceable obligation under the new Consent Decree (Case 1:12-cv-24400-FAM) until it implements a Sewer Overflow Response Plan (SORP) approved by the Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (FDEP). The original plan was submitted to the United States Environmental Protection Agency (EPA) on October 8, 1993 and it was approved, as submitted, on January 11, 1994.

The MDWASD wastewater service area is divided into the North, Central, and South Districts, each served by separate wastewater treatment facilities (Figure ES-1). The three regional plants have a total permitted capacity of 375.5 million gallons per day (MGD) annual average daily flow (AADF), with a peak installed capacity of 850 MGD AADF. The wastewater collection system covers approximately 443 square miles of area and includes 6,309 miles of pipes comprising wastewater gravity mains, force mains, interceptors, sludge mains, outfalls, and laterals along with 1,028 WASD owned pump and booster stations, and an additional 19 pump stations maintained under maintenance agreements with other agencies and departments.

Of primary importance is minimization of potential adverse effects on public health for users of area waters that might become contaminated with unpermitted wastewater discharges. Maintenance of surface water quality and preservation of environmentally sensitive areas are also essential concerns.

The plan updates and expands the existing plan that was implemented since its approval by the EPA. A schematic diagram illustrating emergency response actions is shown in Figure ES-2.

The sections of the contingency plan are arranged to address the essential requirements of the Consent Decree:

- Public Notification - Program for disseminating information to the local news media.
- Agency Notification - Procedure for notifying EPA and other agencies.
- Emergency Flow Control - Specifies methods for diversion and minimization of wastewater flow.
- Emergency Operations - Identifies potential failures and response and delineates mobilization and response actions.
- Preparedness Training - Delineates training for personnel involved in plan management, oversight, and response.
- Emergency Monitoring - Presents monitoring, sampling, analysis, and reporting procedures.
- Public Access Advisory - Strategy to warn the public to avoid affected areas.

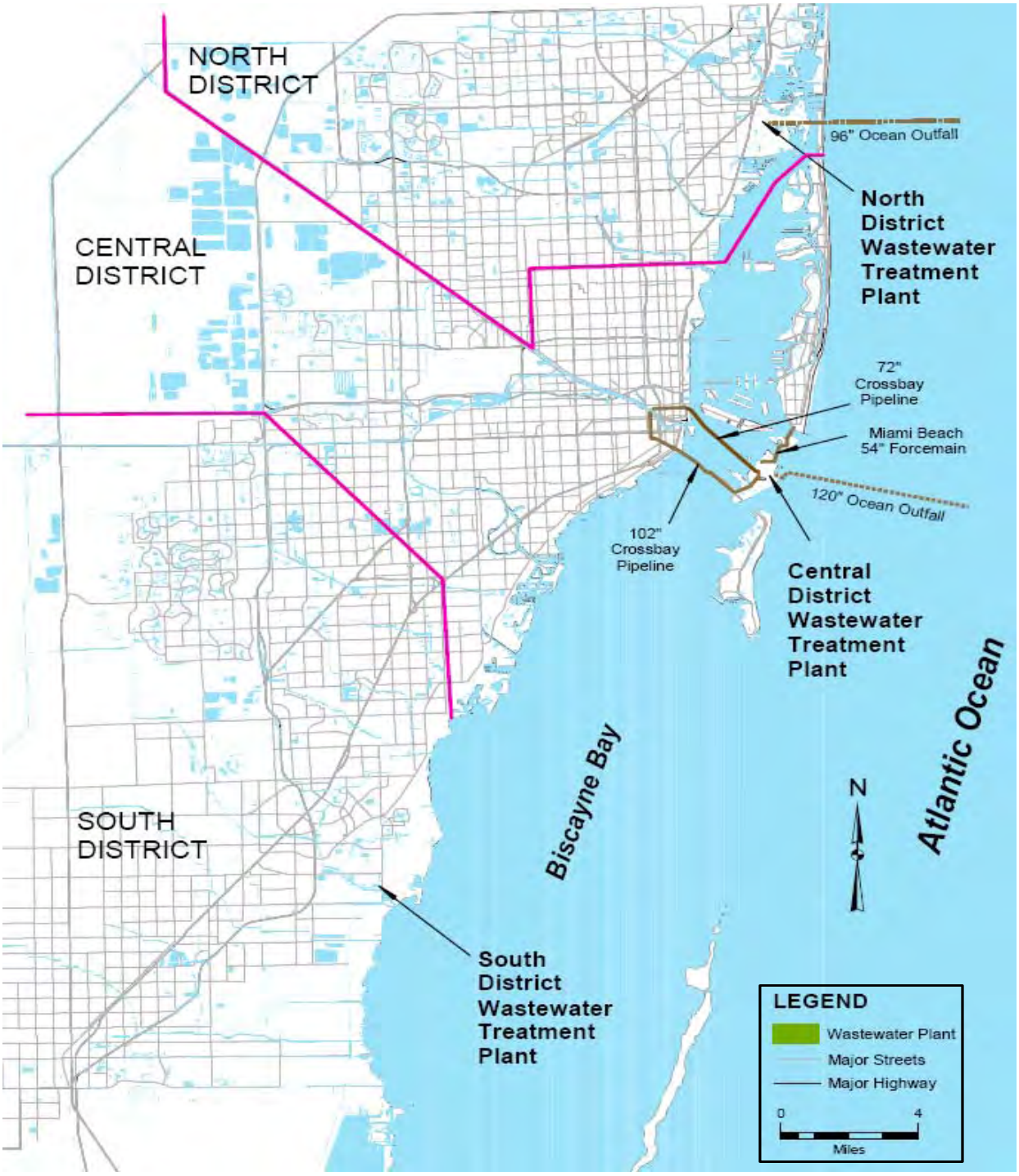


Figure ES-1. MDWASD Wastewater Service Areas

MDWASD has overall responsibility for plan execution. In addition, the Miami-Dade County Department of Regulatory and Economic Resources' Environmental Resources Management Division (RER-ERM), Miami-Dade County Department of Health (DOH), and the Office of Emergency Management's Emergency Operations Center (EOC) will have primary and secondary responsibilities for executing portions of the plan.

PUBLIC NOTIFICATION

An unpermitted discharge to surface waters exceeding a flow rate of 100 gallons per minute for 10 minutes will initiate a communication procedure from which the public notification process can be initiated. For unpermitted discharges requiring public notification during business hours, MDWASD's Public Information Office will provide news releases to the Mayor's Office of Communications for distribution to County representatives, and English, Spanish, and Haitian media outlets. For an unpermitted discharge requiring public notification outside of normal business hours, MDWASD's Emergency Communications Section will email the news releases to a pre-established distribution group provided by the Mayor's Office of Communications. If required, the Office of Emergency Management can provide for land-line telephone notification of residents in the affected areas through the use of a process referred to as "Reverse 311". Pre-scripted news releases are available for editing and prompt release to provide updates during the incident. The use of "Facebook" and "Twitter" notifications are being used as additional means of public notification.

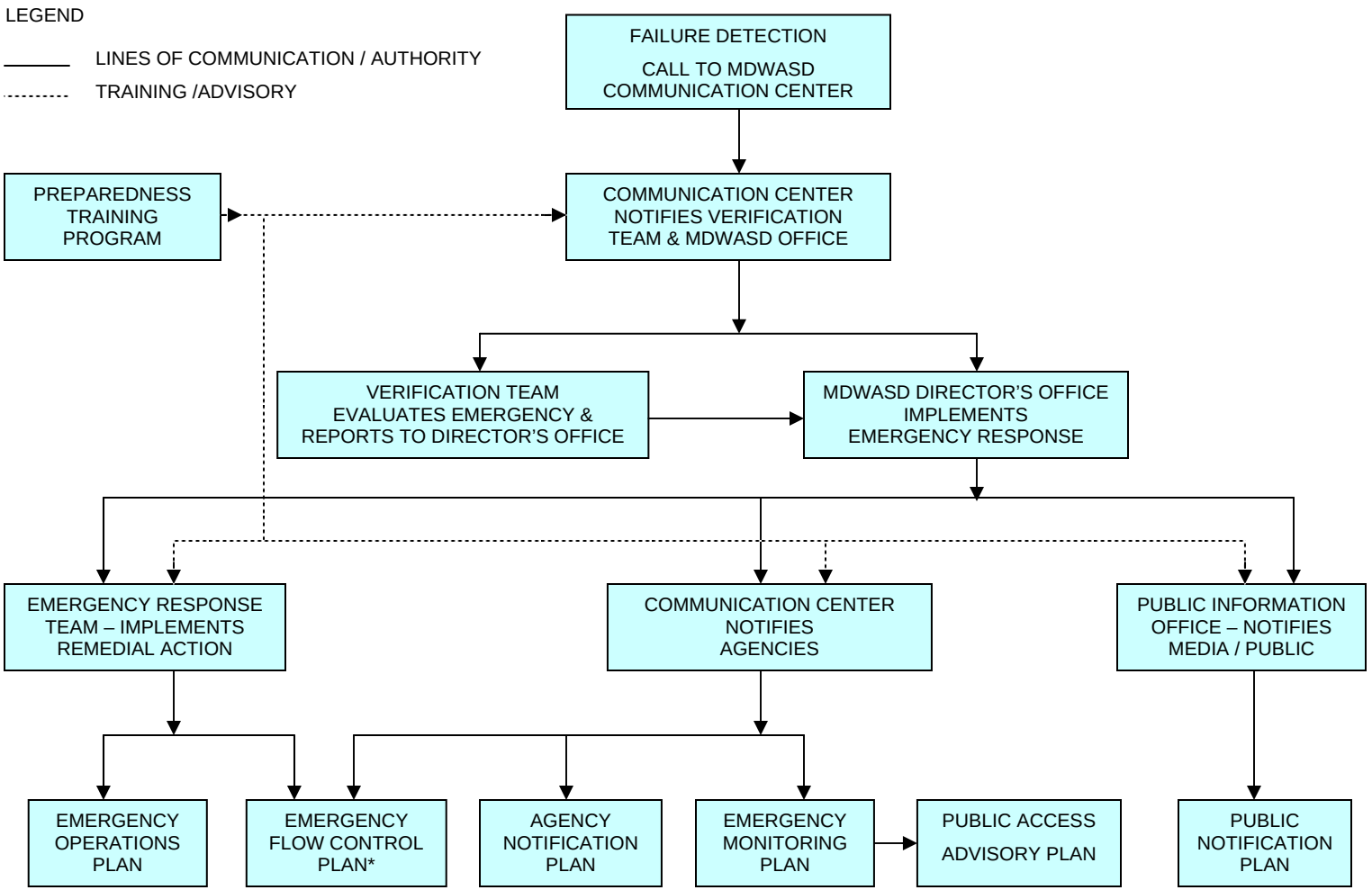
AGENCY NOTIFICATION

Agency notifications will be performed by the MDWASD Communications Section, in parallel with the public notification process. MDWASD Deputy and Assistant Directors will be contacted as well. Written procedures prepare operators for verbal and/or e-mail notice to the United States Environmental Protection Agency (EPA) and other federal, state, and local agencies of a confirmed release to surface waters. Further, the State Warning Point will be called for all unauthorized releases or spills of untreated or treated wastewater in excess of 1,000 gallons, as soon as practical, but no later than 24 hours from the time MDWASD becomes aware of the discharge. Agency contact individuals and telephone, beeper, and fax numbers are presented along with a notification checklist/log.

A Discharge/Abnormal Event Notification form will be sent to those requiring or desiring written notification. Consistent with the written notification requirements of the Partial Consent Decree, the incident report will provide the following:

- A description of the discharge and the cause.
- Duration of the discharge, including exact dates and times. If not repaired, the anticipated time it will continue.
- Steps taken or planned to reduce, eliminate, and prevent recurrence of the unpermitted discharge.

Figure ES-2. Incident Response Flow Diagram



EMERGENCY FLOW CONTROL

The Emergency Flow Control Plan outlines actions that MDWASD will take to reduce the quantity of wastewater tributary to the discharge while repairs are underway. Key provisions are flow diversion and reduced wastewater generation by system users. For the latter, special attention is given to Miami-Dade County facilities, major industrial/commercial wastewater generators, and residential customers. Reduction of water system pressure and lowering of groundwater elevations also are considered.

Wherever possible, MDWASD will divert tributary wastewater flows to unaffected portions of the collection system. Several pipe loops exist, but some locations are without a bypass option. MDWASD is continually improving the system to increase its capacity to reroute flows and to add redundancy.

In the event that a problem occurs in a major force main or interceptor that transmits flow to one of the three regional plants, MDWASD has capability to divert flows between wastewater service districts. Pump Station No. 187 (also referred to as No. 33-P1) was constructed in 1987 to provide a means of proportioning flow among the service districts in order to maximize treatment levels. This station has a capacity to divert about 25 million gallons per day.

Communications personnel will publicize the need for consumers to conserve water and limit wastewater generation during emergency periods. Direct contact will be made to specified Miami-Dade County Agencies and significant industrial and commercial wastewater generators. Also, the general public will be advised of effective measures to implement emergency conservation.

EMERGENCY OPERATIONS

The Emergency Operations Plan presents a strategy for the mobilization of labor, materials, and equipment to correct or repair conditions causing an unpermitted discharge. A response administration system and response actions are described along with opportunities to utilize existing standby contractor in the event of an emergency. An overview of the emergency operations action plan is presented in Table ES-1.

Unpermitted discharges, ranging from small pipe leaks or pump station overflows to very large overflows from the disruption of a major facility, such as a regional pump station, may occur in spite of concerted maintenance and replacement efforts by MDWASD. Discharges may result from surcharging due to excessive infiltration and/or inflow during prolonged rains; structural failures, such a pipe collapse due to internal corrosion; mechanical malfunctions; as well as natural or induced causes, such as power outages.

Suspected unpermitted discharges will be reported to the MDWASD Communications Section that manages a 24 - hour emergency operations center. Operators are responsible for receiving phone calls from the public and manning the radios that are in contact with the maintenance crews and other MDWASD personnel.

Upon determination of an unpermitted discharge from the system, MDWASD's first reaction in responding to the spill itself will be to determine a means to stop the discharge without resulting in a consequent overflow elsewhere in the system. Every effort will be made to keep raw wastewater away from locations of public access. Protection of public health and safety is of

paramount concern. In order of priority, MDWASD will endeavor to prevent discharges to residential areas, inland surface waters, and bay waters.

For most unpermitted discharge conditions, MDWASD maintenance crews will locate, investigate emergency measures, and correct or repair the problem. In the event of a significant incident, such as a regional force main or pump station failure, a response administration system is in place to ensure appropriate, overall management of the incident and to accomplish the repair promptly. Other functions include logistics support, site safety, agency liaison, and information services.

Regulatory agency requirements will be addressed in conjunction with emergency repairs. In addition to notifying agencies of a confirmed release to surface waters, MDWASD will take action to address regulatory agency issues before, during, and after response. Precautions are identified which will be implemented and enforced during the course of emergency repairs.

PREPAREDNESS TRAINING

Lesson plans and course outlines constitute the Preparedness Training Program. Training is provided and developed to ensure MDWASD, Florida Department of Health personnel, and others from affected Miami-Dade County agencies understand essential elements of the contingency plan.

MDWASD personnel continue to be briefed on contingency plan requirements and responsibilities. Workshops are conducted as needed with managers and key personnel to review established emergency response activities and new or expanded procedures.

EMERGENCY MONITORING

To assess the impacts on water quality, RER-ERM developed a plan for emergency monitoring, describing surface water monitoring, sampling, analysis, and reporting for a release incident. This plan also includes the review of stormwater systems that receive flow from releases for positive connections to surface water. The sampling protocol describes the frequency and the location of the samples that will be collected and the parameters that will be monitored.

Initial sampling will focus on the immediate vicinity of the discharge. The area will expand on subsequent days, taking into account tides and wind-driven circulation patterns, with emphasis on sites where public contact is likely. Sampling will continue until water quality returns to typical conditions or meets standards.

Surface water sampling will continue every second day after the discharge ceases at selected stations where public access is likely and any stations where violations of water quality standards are documented, until water quality meets standards or returns to typical conditions.

The County may utilize one or more private laboratories, already under contract, to provide laboratory services. Work orders with an appropriate primary vendor and back-up vendor for emergency laboratory services have been placed. All contract laboratories are required to have NELAC certification for those analyses conducted, and carry out analyses according to a Florida Department of Environmental Protection (FDEP) approved Quality Assurance Plan.

Table ES-1 EMERGENCY OPERATIONS ACTION PLAN		
ACTION	**BY**	**AUTHORIZATION**
Formulate Failure and Response Strategies		Response Manager
Develop failure detection strategies	Division Managers	
Develop response strategies	Unit Supervisors	
Failure Detection and Reporting		
Detect failures/report incident	MDWASD Personnel or General Public	
Notifies Verification Team and Director's Office	Communications Center	Reporter of Discharge
Failure verification	Verification Team	Response Manager or Operations Engineer
Incident Response		
Mobilization Emergency Response Team	Response Manager	MDWASD Director
Mobilize contractor (Optional)	Operations Engineer	Response Manager
Implement logistics plan	Logistics Officer	Response Manager
Initiate flow control measures	Unit Supervisors	Response Manager
Implement flow control measures	Unit Labor Crews	Operations Engineer
Obtain emergency permits	Liaison Office	Response Manager
Monitor safety	Safety Officer	Response Manager
Disseminate information	Information Officer	Response Manager

RER-ERM will verbally receive the bacteria analyses within 48 hours of delivering the samples to the laboratory. The results will be E-mailed to the EPA and other regulatory agencies within one hour of RER-ERM receipt. All data collected during the event will be forwarded to the EPA and the appropriate regulatory agencies within 15 days of the incident.

PUBLIC ACCESS ADVISORY

The Public Access Advisory Plan specifies warning signs for posting at site specific locations to advise the public to avoid areas of potential health impacts and to specifically avoid contact with contaminated waterways, ground surfaces, shoreline areas, and/or other affected resources.

Using water quality monitoring data and physical evidence, MDWASD, RER-ERM and DOH will jointly decide whether public access advisories are warranted and when any such advisories or notices will be removed, which normally occurs after the receipt of two water quality sampling results indicating a return to normal. MDWASD will be responsible for deploying and retrieving signs and providing advisories to the Mayor's Office of Communications for distribution to the local news media.

Section 1

INTRODUCTION

The Unpermitted Discharges Contingency Plan (UDCP) details actions that will be implemented by the Miami-Dade Water and Sewer Department (MDWASD) in the event of an unpermitted discharge of pollutants from the wastewater treatment and collection systems. Of primary importance is the minimization of adverse effects on human health and welfare of those that might come in contact with contaminated surface water. Preservation of surface water quality and protection of environmentally sensitive areas are also essential concerns.

A schematic diagram illustrating emergency response actions is shown in Figure 1-1. The following are key elements of the Contingency Plan and are addressed individually:

- Public Notification Plan
- Agency Notification Plan
- Emergency Flow Control Plan
- Emergency Operations Plan
- Preparedness Training Program
- Emergency Monitoring Plan
- Public Access Advisory Plan

This Contingency Plan is a revision of the twentieth update of the plan submitted on October 1993 to fulfill the requirements of Paragraph 15(A) of the First Partial Consent Decree between the United States of America, Plaintiff, versus Miami-Dade County and the Miami-Dade Water and Sewer Department, Defendants, lodged in U.S. District Court on September 8, 1993 which Miami-Dade shall continue to implement as an enforceable obligation under the new Consent Decree (Case 1:12-cv-24400-FAM) until it implements a Sewer Overflow Response Plan (SORP) approved by the Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (FDEP). The conditions set forth in Paragraph 15(A) are found in Appendix 1-A. Table 1-1 provides a summary of the requirements in Paragraph 15(A), and the Sections within this plan that meet those requirements. Appendix 1-A also includes the conditions set forth in Paragraph 15(C) for an annual update.

As of October 2001, as agreed to with the USEPA, MDWASD will no longer be required to submit Contingency Plan revisions. However, MDWASD must continue to revise the Plan as needed and keep a current Plan on-site and available for review and audit by the USEPA.

CONTINGENCY PLANNING

Parallel contingency plan efforts have been undertaken. MDWASD has a Wastewater Spill Cleanup Procedure that addresses reporting, posting, and cleaning and disinfection. Following extensive flooding problems from the prolonged storm event in October of 1991, the Miami-Dade County Flooding Impact Task Force was formed to respond to the public health risks created by the impacts of widespread flooding in Miami-Dade County on existing wastewater and stormwater systems. Task Force members include local representatives from the Miami-Dade County Department of Environmental Resources Management (DERM) – recently renamed as the Department of Regulatory and Economic Resources' Environmental Resources Management Division (RER-ERM), the Florida Department of Environmental Protection (FDEP), the Miami-Dade County Department of Health (DOH), and the South Florida Water Management District (SFWMD).

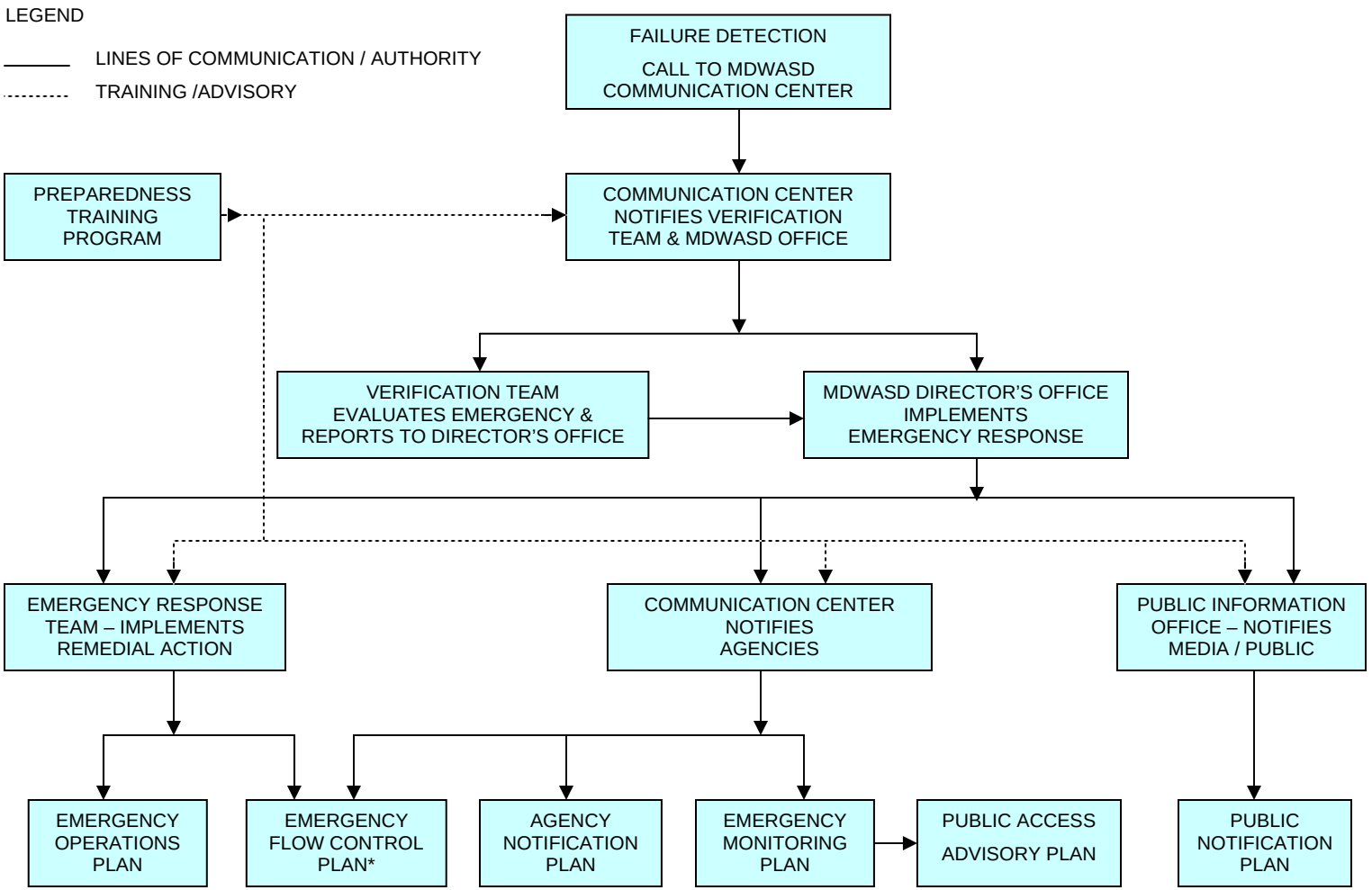


Figure 1-1 Incident Response Flow Diagram

Table 1-1
FIRST PARTIAL CONSENT DECREE CROSS REFERENCE

Paragraph 15 (A)	Contingency Plan Section
i) ... notice to the public ... local news media;	2 - Public Notification Plan
ii) ... notice to EPA ... agencies ...	3 - Agency Notification Plan
iii) ...plan to minimize volume ... diversion ...	4 - Emergency Flow Control Plan
iv) ... to retain ... immediately available ... materials and supplies; ...identifies ... failures modes ... to respond to each ...	5 - Emergency Operations Plan
v) ... preparedness ... training ...	6 - Preparedness Training Program
vi) ... monitoring ... plan ... reporting ...	7 - Emergency Monitoring Plan
vii) ... advise the public ...	8 - Public Access Advisory Plan

The Miami-Dade County Flooding Impact Task Force developed a contingency plan strategy for overflow and/or bypasses with and without discharge to surface waters. This plan presents inter-agency responsibilities and is to apply to all utilities operating in Miami-Dade County. The principal topics being addressed are notification, posting, disinfection/remediation plan, interim measures, sampling, and exceptional events.

The UDCP builds on previous works by MDWASD and is compatible with the Miami-Dade County Flooding Impact Task Force strategy.

SYSTEM OVERVIEW

The MDWASD service area is generally divided into the North, Central, and South Districts, each served by a separate wastewater treatment facility. The three service areas are interconnected; however, the approximate boundaries of these districts are shown in Figures I-2 through I-4.

North District. The location of the North District Plant and its approximate service area is shown in Figure 1-2. The collection system consists of two separate collection zones. One zone is from the north beach areas and the other is from the western part of the district. The permitted capacity for the North District Plant is 120 MGD AADF.

Central District. The collection system tributary to the Central District Plant consists of three main collection zones. The approximate area served by the Central District Plant is shown on Figure 1-3. The first zone collects wastewater from Miami Beach. MDWASD does not own or operate any of the wastewater collection or transmission facilities in the City of Miami Beach, but does operate a terminal pumping station and a 54-inch diameter force main routed through Fisher Island to the Central District Plant. This year the 54-inch diameter force main was replaced with a 60-inch microtunneled force main between Miami Beach and Fisher Island. The second and third zones are tributaries to the Cross Bay Line. One zone serves the area west of the Miami River and is routed through Pump Station No. 1 located at NW 4th Street and the Miami River. The other zone serves the north coastal area of the City of Miami and is routed through Pump Station No. 2 located at NE 9th Street and Biscayne Boulevard. The force main from Pump Station No. 2 feeds into Pump Station No. 1 which in turn feeds the 102" Cross Bay Line. The Central District Plant is permitted for a capacity of 143 MGD AADF.

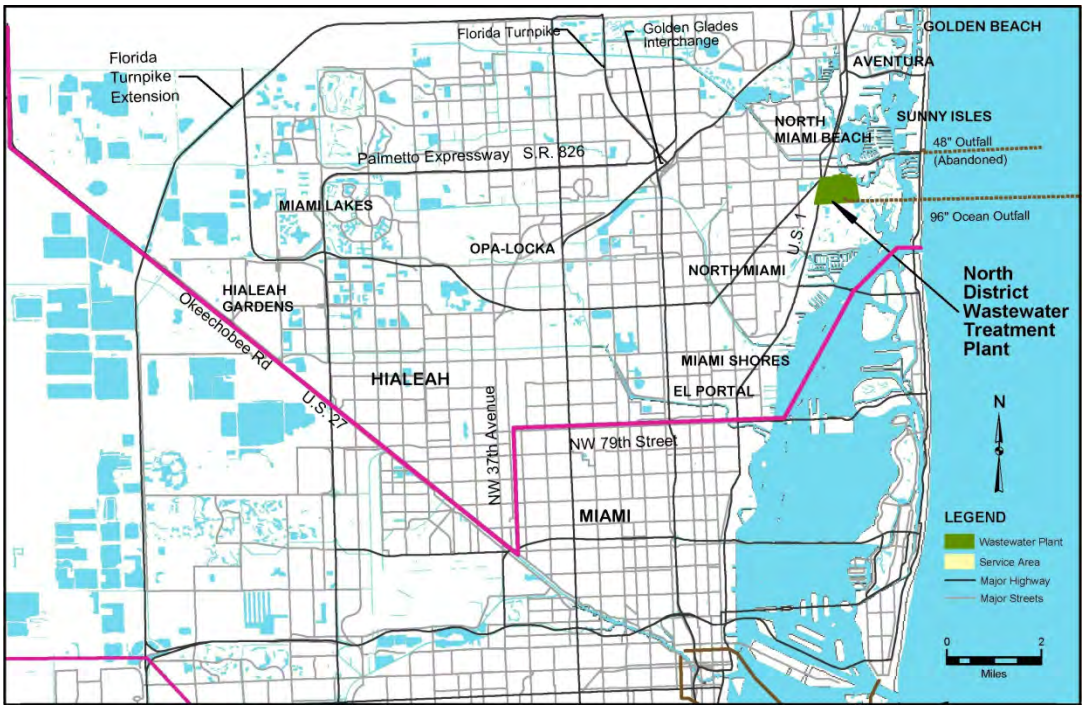


Figure 1-2 Location of North District Plant and Service Area

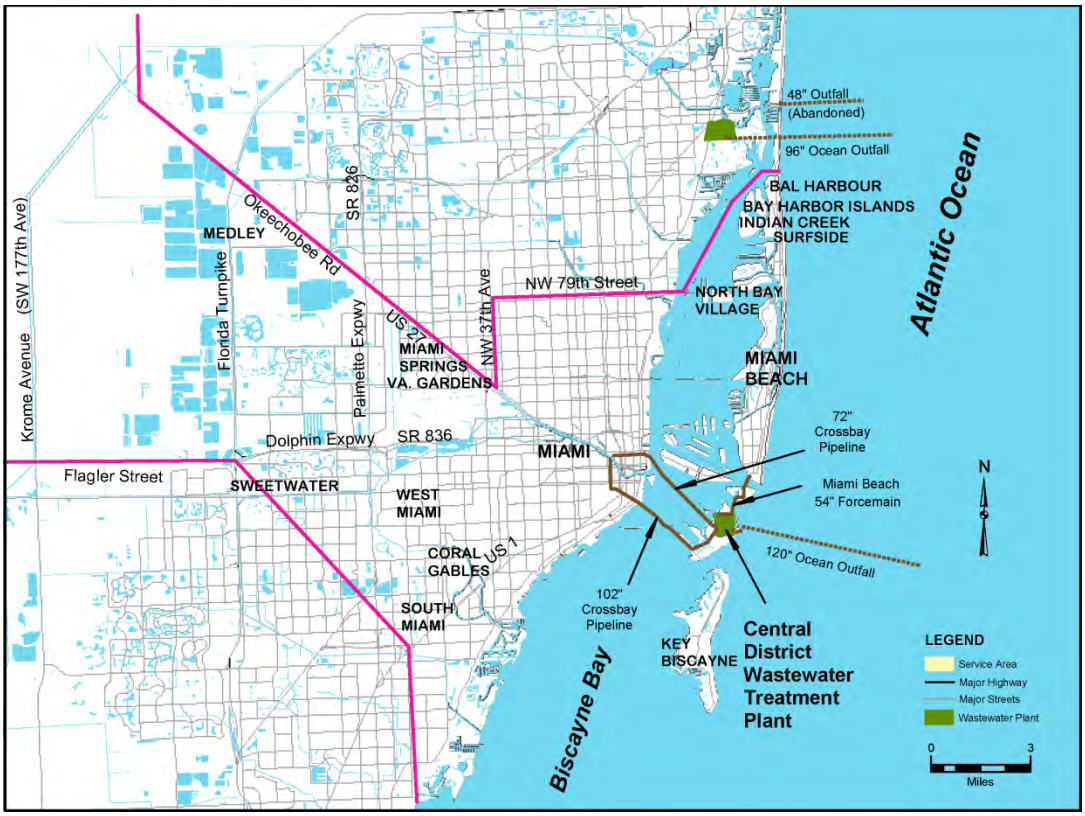


Figure 1-3 Location of Central District Plant and Service Area

South District. The collection system tributary to the South District Plant is divided into three collection zones. One zone is the northern portion of the District, the second is an expanded service area from the Central District, and the third is the southern portion of the District. Figure 1-4 shows the location of the South District Plant and service area. The South District Plant is permitted for a capacity of 112.5 MGD AADF.

PLAN IMPLEMENTATION

MDWASD is committed to minimizing the adverse effects on human health, welfare, and the environment should there be an unpermitted discharge from a wastewater treatment plant or collection system to surface waters. MDWASD has taken steps to ensure that this commitment is fulfilled. First, this contingency plan update was prepared to identify actions, which will be taken in the event of an unpermitted discharge and to identify specific personnel responsible for implementing those actions. Second, to ensure understanding of this contingency plan, preparedness exercises and workshops have been conducted for personnel involved in implementation of the plan.

MDWASD has overall responsibility for implementing this contingency plan. In addition to MDWASD, the Miami-Dade County Department of Regulatory and Economic Resources' Environmental Resources Management Division (RER-ERM), Florida Department of Environmental Protection (FDEP), Miami-Dade County's Department of Health (DOH), the Miami-Dade Office of Communications (MDOC), the South Florida Water Management District

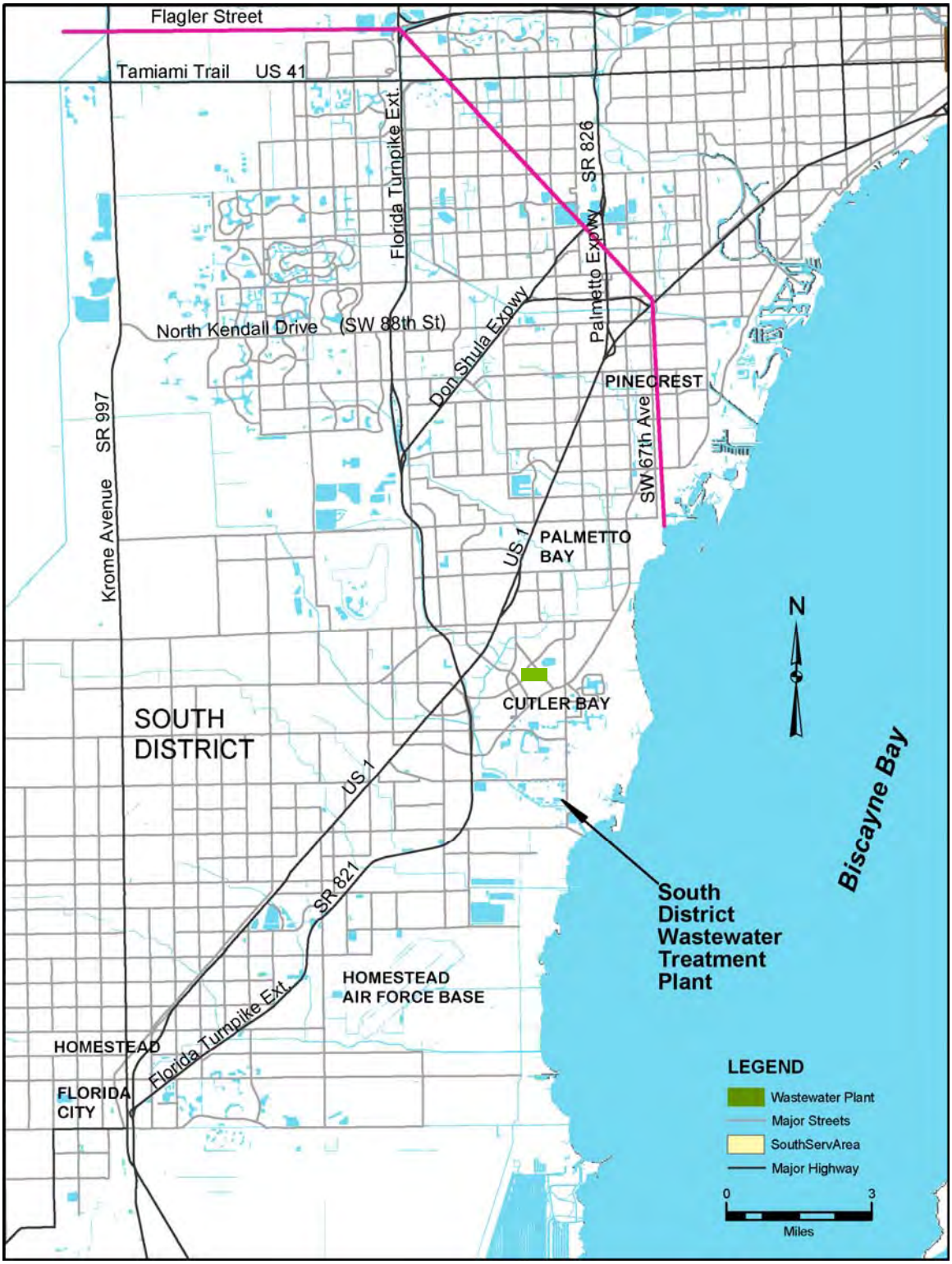


Figure 1-4 Location of South District Plant and Service Area.

and the Miami-Dade Office of Emergency Management's (OEM's) Emergency Operations Center (EOC) have primary and secondary responsibilities for executing certain portions of the plan. Table 1-2 lists the sections included in this plan and the agency responsible for implementation.

MDWASD will update this emergency contingency plan on an annual basis. The last annual update was completed in December 2013; an interim revision was issued in May 2014. MDWASD will:

- Oversee the readiness to implement the contingency plan.
- Interact with other agencies on refinements to the plan.
- Document physical changes to the system which affect the plan.
- Provide technical advice and direct the annual update.

Table 1-2
AGENCY IMPLEMENTATION RESPONSIBILITIES

Plan Element	Primary Responsibilities	Secondary Responsibilities
Public Notification	MDWASD	OEM/EOC MDOC
Agency Notification	MDWASD	--
Emergency Flow Controls	MDWASD	Water Users SFWMD
Emergency Operations	MDWASD	RER-ERM CONTRACTOR
Preparedness Training	MDWASD	RER-ERM
Testing and Monitoring	RER-ERM	DOH MDWASD
Public Access Advisory	MDWASD	RER-ERM DOH

APPENDIX 1-A
CONTINGENCY PLAN REQUIREMENTS
FIRST PARTIAL CONSENT DECREE - PARAGRAPHS 15(A) & 15(C)

FIRST PARTIAL CONSENT DECREE
Paragraph 15(A)

15. A. Within thirty (30) days of the Date of Lodging of this Partial Consent Decree, Defendants shall provide to EPA for approval a contingency plan that addresses the actions to be taken by Defendants in the event of the unpermitted discharge of pollutants from the wastewater treatment and collection system to surface waters. The contingency plan shall include but not be limited to:

i) a plan that describes in detail the actions Defendants shall undertake to immediately provide notice to the public of the unpermitted discharge of pollutants from the wastewater treatment and collection system to surface waters, including a plan to provide notice through the local news media;

ii) a plan that describes in detail the actions Defendants shall undertake to provide notice to EPA, the United States Coast Guard Service, FDEP, DHRS, local law enforcement authorities, as well as other state and local public health services and other appropriate federal, state and local agencies in the event of the unpermitted discharge of pollutants from the wastewater treatment and collection system to surface waters;

iii) a detailed plan to minimize the volume of untreated wastewater transmitted to the portion of wastewater treatment and collection system impacted by the events precipitating the unpermitted discharge to surface waters;

iv) a plan for the immediate availability of personnel necessary to correct or repair the condition causing or contributing to the unpermitted discharge to surface waters;

v) a plan to ensure the preparedness, including responsiveness training of Miami-Dade County employees, contractors, and personnel of other affected Miami-Dade County agencies (including DERM) necessary for the effective implementation of the contingency plan in the event of an unpermitted discharge of wastewater to surface waters;

vi) a detailed monitoring, sampling, analysis and reporting plan to determine if receiving water bodies meet state and local water quality standards for fecal coliform, total coliform, salinity (where applicable), turbidity, and dissolved oxygen ("DO"). The plan shall include, at a minimum, a program for the collection of untreated wastewater samples (5-day biochemical oxygen demand, total suspended solids) and surface water samples (which shall include a discussion of the frequency and duration of samples to be taken, the parameters to be sampled, and the location of such sampling events), a plan to perform laboratory analysis consistent with 40 C.F.R. Part 136, quality assurance/quality

control procedures and protocols, and a plan for the reporting of all such data and information to EPA, FDEP, DHRS and other appropriate federal, state and local agencies. EPA may request, and Defendants shall conduct, additional sampling and analysis as deemed necessary to evaluate the impact of a discharge event; and

vii) a plan for the implementation of institutional controls and actions to advise the public of, and limit access to and contact with, waterways, ground surfaces and resources affected by the discharge of pollutants from unpermitted discharges. The geographic extent and duration of public access limitations shall be determined in consultation and cooperation with DOH and DERM.

FIRST PARTIAL CONSENT DECREE
Paragraph 15(C)

15. C. Defendants shall update the contingency plan on an annual basis. Each annual update of the contingency plan shall be subject to EPA approval as specified in Paragraph 15(B), above, and upon EPA approval shall be incorporated into, and become enforceable under, this Partial Consent Decree.

Section 2

PUBLIC NOTIFICATION PLAN

The Public Notification Plan describes actions that Miami-Dade Water and Sewer Department (MDWASD) will follow to provide notice to the public, in the event of any significant Unpermitted Discharges from the wastewater collection or treatment system. The public notification section includes those procedures to be followed during normal business hours and after hours to ensure that the local news media is notified in a timely manner. MDWASD's Public Affairs Section provides news releases, some of which are pre-scripted and can be edited for prompt release, to the Miami-Dade Office of Communications (MDOC) for notification to the media. A schematic diagram illustrating the public notification process is shown on Figure 2-1.

PUBLIC NOTIFICATION

When a suspected unpermitted discharge to surface waters has been confirmed and the volume exceeds a flow rate of 100 gallons per minute for 10 minutes, the MDWASD Emergency Communications Section will immediately begin the MDWASD internal notification process. When initiation of the public notification plan is required, MDWASD's Public Affairs Section Chief will coordinate the efforts both internally and externally through the MDOC during normal business hours, and through the Emergency Communications Center after hours. The names and phone numbers of MDWASD personnel involved with the initiation of public notification are presented in Table 2-1.

MDWASD is currently using "Facebook" and "Twitter" for public notification. In addition, when needed MDWASD will use "Reverse 311" which immediately identifies residential land-line phone numbers in affected areas; if necessary, pre-recorded messages can be distributed in this manner.

MDWASD's Public Affairs Section will provide a statement or a pre-scripted news release for distribution to the news media. The news release will characterize the situation, advising of any health risks, describing any special conditions, such as traffic disruption to permit necessary repairs, and making appropriate requests of the public to limit water use. The news release will also include the affected bodies of water and public advisories regarding the impacts to swimming and recreational activities. The specific impacted areas will be identified by RER and DOH in communication with MDWASD.

Business Hours Notification

If the discharge is confirmed during normal business hours, defined as Monday through Friday, 8:00 am to 5:00 pm, excluding holidays, the Public Affairs Section Chief will contact the Miami-Dade Mayor's Office of Communication (MDOC). The MDOC will then notify the news media via their email distribution list.

Public Information Plan for Unpermitted Discharges

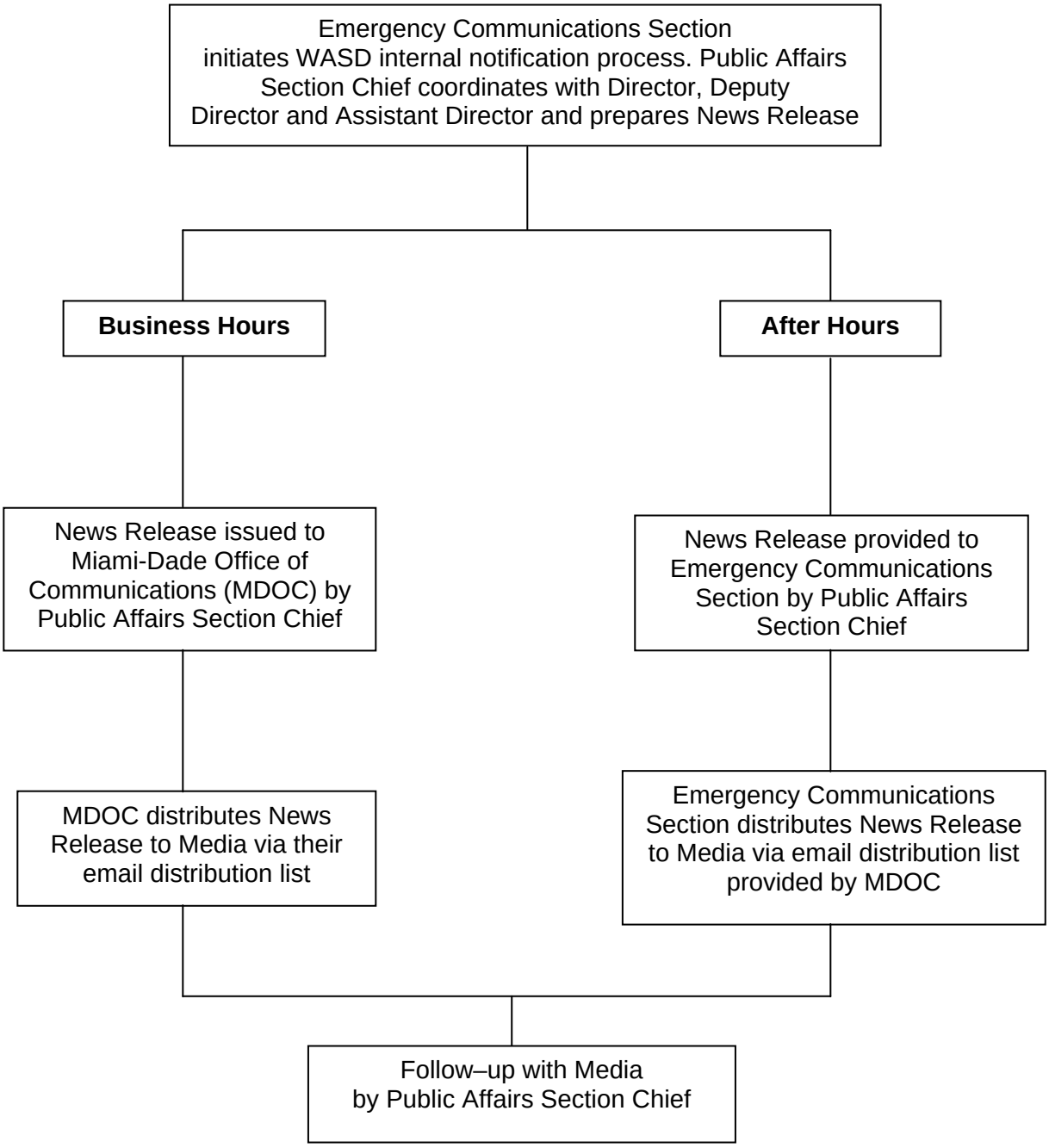


Figure 2-1 Public Notification Process

Table 2-1
MDWASD INITIATION OF PUBLIC NOTIFICATION
(Last verify/update: December 2014)

DEPARTMENT	NAME	PHONE NUMBERS
Authorized Representatives to Notify Public Information Office of a Confirmed Release		
Director's Office	Bill Johnson Director	Office: (786) 552-8156 Cell #: (786) 255-5765 E-mail: BJ4@miamidade.gov
	L. Douglas Yoder. Deputy Director, Operations	Office: (786) 552-8979 Home: (305) 666-5456 Cell #: (786) 282-8775 E-mail: yoderd@miamidade.gov
	Rafael A. Terrero Assistant Director, Wastewater System Operations	Office: (786) 552-8112 Home: (786) 374-6924 Cell #: (786) 229-0702 E-mail: Terrero@miamidade.gov
Authorized Representatives to Notify MDOC or News Media of a Confirmed Release		
Public Affairs Office	Adriana Lamar Chief, Public Affairs Section	Office: (786) 552-8087 Home: (305) 669-9081 Cell: (305) 607-3049 E-mail: ALAMAR@miamidade.gov

After Hours Notification

If the notification of the public is required after normal business hours, defined as Monday through Friday, 5:00 pm to 8:00 am, Saturdays, Sundays, and holidays, the Public Affairs Section Chief will coordinate with the Director, Deputy Director for Operations, and Assistant Director for Wastewater System Operations, and shall contact the media directly or through the Emergency Communications Section. The Emergency Communications Section will distribute authorized news releases through an email distribution list provided by the Miami-Dade Office of Communications (MDOC). This list , shown in Table 2-2, includes County Communication's personnel – including Miami-Dade's 311 information service, MDWASD's Customer Service, the Office of Emergency Management, Commission Offices, outside agencies, the Mayor's and Manager's Offices, and English, Spanish, and Haitian media outlets.

Table 2-2
Miami-Dade Office of Communications
Email Distribution List

(Last update: December 2014)

MEDIA OUTLETS/REPORTERS	
Acontecer Colombiano - Nelson Lenis	acontecercolombiano@yahoo.com
Actualidad 1020 AM - Maria Fernanda Silva	msilva@actualidad1020.net
Actualidad 1020 AM - Maria Fernanda Silva	msfernandanews@gmail.com
Actualidad 1020 AM - Nelson Rubio	nrubio@actualidad1020.net
Actualidad 1020 AM - Rene Pedrosa	renepedrosa1021@gmail.com
Actualidad 1020 AM - Sergio Gomez Jr.	sgomez@actualidad1020.net
Actualidad 1020 AM - Yamileth Salazar	ysalazar11@hotmail.com
Actualidad 1020 AM - Zairenna Barboza	zbarboza@actualidad1020.net
Aljazeera America - Lucho Durand	lucho.durand@aljazeera.net
American Towns	pr@americantowns.com
Años Dorados - Aurelio Nodarse	info@doradostoday.com
Animales 360 - Xiomara Gonzalez	xiomaragonzalez@animales360.com
Animales 360 - Emmanuel C. Munoz	emmanuelcmunoz@animales360.com
Argentina - Eduardo Carpio	ecarpio@fotoparty.com
Argentina Hoy	eyahni@yahoo.com
Art Deco Tropical	martdeco@bellsouth.net
Art Deco Tropical	artdecotropical@bellsouth.net
Asociacion de Javerianos	flaxa.uj@juno.com
Associated Press	miami@ap.org
Associated Press - C. Anderson	canderson@ap.org
Associated Press - Cristine M.	carmario@ap.org
Associated Press - Gisela Salomon	gsalomon@ap.org
Associated Press - Jennifer Kay	jnkay@ap.org
Associated Press - Suzette Laboy	slaboy@ap.org
Avance Semanal	avancesemanal@aol.com
Bloomberg News	miaminews@bloomberg.net
Bloomberg - Simone Baribeau	sbaribeau@bloomberg.net
Bloomberg News - Bill Faries	bfaries@bloomberg.net
Bloomberg News - Jerry Hart	jhart@bloomberg.net
Bloomberg News - M Drajem	mdrajem@bloomberg.net
Bloomberg News - Mason Levinson	mlevinson@bloomberg.net
Bloomberg BNA - Karen Young	kyoung@bna.com
Caracik 1269 AM- Madeline Prendes	mprendes@caracolusa.com
Caracol 1260 AM- Ernesto Rios	hplaneta@yahoo.com
Caracol 1260 AM- Eucario Bermudez	ebermudez@caracolusa.com
Caracol 1260AM - Sabina Covo	scovo@caracol1260.com
Caribbean News	caribnewsusa@aol.com
Caribbean Today	editor@caribbeantoday.com
Caribbean Today	ct_ads@bellsouth.net
Caribbean Today - Peter Webley	pawebley@bellsouth.net
Caribbean Today - Peter Webley	peter.webley@caribbeantoday.com
Caribevision CH 15 on Comcast - Arlena Amaro	aamaro@caribevision.com
Caribevision CH 15 on Comcast - Jose Perez	jperez@caribevision.com
CBS News - National - Miami Bureau - Pia Malbran - 305-571-4401	malbranp@cbsnews.com

Table 2-2
Miami-Dade Office of Communications
Email Distribution List

(Last update: December 2014)

Chavilah Corporation - Rafael Bigio	raphael@chavilah.com
Ciudad Doral Newspaper	cherradez@ciudaddoral.com
Ciudad Doral Newspaper	lalcala@ciudaddoral.com
CNN - Chuck Johnston	chuck.johnston@turner.com
CNN - Dave Alsup	dave.alsup@turner.com
CNN - Headline News Miami Bureau - Hansen Sinclair	hsinclair@allheadlinenews.com
CNN - Jason Reid	jason.reid@turner.com
CNN en Español - Adriana Hauser	adriana.hauser@turner.com
CNN en Español - Tonju François	tonju.francois@turner.com
CNN Rich Phillips 305-773-1356	rich.phillips@cnn.com
CNN - Adam Shivers	Adam.Shivers@CNN.com
CNN Latino - Frank Alvarado	falvarado10@gmail.com
Coffee News - Juan Casadevall - Publisher	atlantic12@prodigy.net
Community Newspapers - Dan Palmer	dan@communitynewspapers.com
Community Newspapers - David Berkowitz	david@communitynewspapers.com
Community Newspapers - Dick Yager	rbyager@communitynewspapers.com
Community Newspapers - Editor	cneditor@gate.net
Community Newspapers - Gary Alan Ruse	gary@communitynewspapers.com
Community Newspapers - Grant Miller	grant@communitynewspapers.com
Community Newspapers - Michael Miller	michael@communitynewspapers.com
Community Newspapers - Ron Beasley	ron@communitynewspapers.com
Consuelo Espinoza	consueloespinozashow@hotmail.com
Coral Gables Gazette	jprisendorf@cggazette.com
Coral Gables Gazette	news@cggazette.com
Coral Gables Gazette - Justin Sanchez, Editor	jjsanchez@aol.com
Daily Business Review - Eric Kalis	ekalis@alm.com
Daily Business Review - Paola Iuspa-Abbott	piuspa@alm.com
Daily Business Review - Terry Sheridan	tsheridan@alm.com
Daily Business Review- David Lyons	dlyons@alm.com
Daily Business Review - Julie Kay	JKay@alm.com
Diario Las Americas - Advertising	lpelaez@diariolasamericas.com
Diario Las Américas - Alejandro Aguirre	ajaguirrec@diariolasamericas.com
Diario Las Americas - Carmen Aguirre	cmaguirre@diariolasamericas.com
Diario Las Americas - Curbelo	ccurbelo@diariolasamericas.com
Diario Las Americas - Gustavo Pena	gustavopena@diariolasamericas.com
Diario Las Americas - Helen Ferre	Haferre@diariolasamericas.com
Diario Las Americas - Ileana Lavastida	ilavastida@diariolasamericas.com
Diario Las Americas - Olga Calcerrada	Ocalcerrada@diariolasamericas.com
Diario Las Americas - Vivian Crucet	vcrucet@diariolasamericas.com
Diario Las Americas - Laura Rivera	lrivera@diariolasamericas.com
Diario Las Americas - Jesus Hernandez	jhernandez@diariolasamericas.com
Diario Las Americas - Sergio Otalora	sotalora@diariolasamericas.com
Diario Sur Digital	surmiami@diariosurdigital.com
Dominique Larosiliere	dlarosiliere_metropolis@hotmail.com
Doral Family Journal - Ettore Sabatella	info@doralfamilyjournal.net
Doral Tribune - Zoila Hidalgo	zoilyhidalgo@hotmail.com
Downtown Miami News	lonny.paul@downtownmiaminews.com
Downtown Miami News	silvia@downtownmiami.com
EFE - Emilio Sanchez	ecsanchez@efeamerica.com

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Email Distribution List

(Last update: December 2014)

EFE - Sonia Osorio	sosorio@efeamerica.com
EFE	info@efeamerica.com
EFE - Ivonne Malaver	imalaver@efeamerica.com
El Anunciante Online - Eddie Diaz	info@elanuncianteonline.com
El Argentino Newspaper	showmagz@gate.net
El Avisador	avisadornews@aol.com
El Avisador	avisadornews@aol.com
El Centro Americano - Benjamin Navarro	cen.am@juno.com
El Centroamericano Prensa Libre	elcentroamericano@gmail.com
El Centroamericano Prensa Libre	cen.am@juno.com
El Centroamericano Prensa Libre	elcentroamericano@gmail.com
El Colombiano	director@elcolombiano.net
El Colombiano	editor@elcolombiano.net
El Colombiano	monicabotero@elcolombiano.net
El Colusa News	silvanam@elcolusa.com
El Correo de Doral - Sandra Ramon Vilarasau - 305-717-3206	elcorreodedoral@gmail.com
El Diario- Zoily Hidalgo	zoilyhidalgo@hotmail.com
El Nuevo Herald	calendario@herald.com
El Nuevo Herald - News Desk	locales@elnuevoherald.com
El Nuevo Herald - Enrique Flor	eflor@ElNuevoHerald.com
El Nuevo Herald - Juan Carlos Chavez	jcchavez@elnuevoherald.com
El Nuevo Herald - Manny Garcia	magarcia@elnuevoherald.com
El Nuevo Herald - Melissa Sanchez	msanchez@elnuevoherald.com
El Nuevo Patria - Demetrio J. Perez	djp@libreonline.com
El Nuevo Patria (E-mail)	patrianews@aol.com
El Nuevo Universal	elnuevouniversal@yahoo.com
El Paracaidista	editorial@elparacaidista.com
El Sol de la Florida- Marcos	admin@elsoldelaflorida.com
El Venezolano	nprieto@el-venezolano.net;
El Venezolano	semanarioelvenezolano@yahoo.com
Elaine de Valle - Political Cortadito	edevaLLE@gmail.com
Energy Now - Simon Lomax	simon@energynow.com
Enfoque Metropolitano - Silvio Mancha	m3news@bellsouth.net
Enrique Molano	cemolano@pmradio.net
Env Magazine - Howard Salus	howard@envmagazine.org
Ernst Jean Louis	haitivisionproductions@yahoo.com
ESPN Deportes	ccollova@espndeportesmiami.com
Excel Events and Productions LLC - Amaury Da Costa	miamidade@excel-ep.com
Eye on Miami	geniusofdespair@yahoo.com
Eye on Miami	nancyleemiami@gmail.com
Eye on Miami	gimleteyemiami@yahoo.com
Eye on Miami	alanfarago@me.com
Florida Association of Hispanic Journalists - Bill Lara - 786-439-9737	editor13x@gmail.com
Florida News Service - Keith Laing	k.laing@newsserviceflorida.com
Florida Review	art@floridareview.com
Florida Watchdog - Marianela Toledo	marianela.toledo@floridawatchdog.org
Foresight News USA - Caroline Morse	politics@foresightnews.com
FOX News - National	miami@foxnews.com

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Email Distribution List

(Last update: December 2014)

FOX News - National - Nancy Harmeyer	nancy.harmeyer@foxnews.com
FOX News - Miami- Heather Lacy	Heather.Lacy@FOXNEWS.com
German Duque	gestionmiamigda@gmail.com
Getty Images - Joe Raedle	joe.raedle@gettyimages.com
Getty Images - Carole Moore	carole.moore@gettyimages.com
Haiti en March	pasacalia@aol.com
Haitian American Business News	habnnews@yahoo.com
Haitian American Business News	habnnews@aol.com
Haitian Television Network - Newton Bellevue	fab5012003@yahoo.com
Hola Amigos	holamigo@bellsouth.net
Hola Amigos	Prensa@yahoo.com
Hola Amigos	begoflores@yahoo.com
Hola Ciudad (Ruth Vasquez)	rvasquez@zgsgroup.com
Hola Miami	holamiaminews@aol.com
Horizonte	horizontefl@aol.com
Huffington Post - Janie Campbell	miami@huffingtonpost.com
In Focus Magazine	tlesesne@infocus-mag.com
Informativo Dominicano	dng275@aol.com
International News - Ignacio Espinoza	internews@bellsouth.net
Island TV	imagtv@aol.com
Keys News	sgibbs@keysnews.com
Kiskeya Herald	newskiskeyaherald@yahoo.com
La Estrella de Nicaragua	nicolas@estrelladenicaragua.com
La Estrella de Nicaragua	noracaldera@estrelladenicaragua.com
La Ley	laleylive@gmail.com
La Noticia - Edddie Chaves	edcha@bellsouth.net
La Nueva 88.3 FM	marivi@lanuevafm.net
La Prensa Centroamericana	publimaster@bellsouth.net
La Prensa del Sur- Yvelice Gonzalez	prensadsur@aol.com
La Radio Global	mizturriaga@hotmail.com
La Razon - Juan Romero	kandyvision@yahoo.com
La Verdad	jerryspc@bellsouth.net
La Voz de la Calle	info@lavozdelacalle.net
La Voz de Miami Beach	lavozdemb@msn.com
Law 360	carolina.bolado@law360.com
Law 360	nathan.hale@law360.com
Libertad	gfonticoba@hotmail.com
Libertad News	libertadnews@aol.com
Libre	djp@libreonline.com
Libre - Herman Acero	hermanac@hotmail.com
Linha Aberta	contato@linhaaberta.com
Link My Web	lapi1939@att.net
LinkMyWeb en Español	lapi@linkmyweb.com
Mainstream Press	publisher@mainstream-press.com
Manriquel Pacheco	manriquelpacheco@recorriendoamericanews.com
Manriquel Pacheco	manriquelpacheco@gmail.com
Mass Media Enterprises - Editor	editor@massmediamiami.com
Mass Media Enterprises - Miami Monthly	Scordray@massmediamiami.com

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Email Distribution List

(Last update: December 2014)

Mass Media Enterprises - Miami Monthly Editor	editor@miamimonthlymagazine.com
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MEGA Ch. 22 TV - Laurinda Flores - Assignment Editor	lflores@mega.tv
MEGA Ch. 22 TV - News Desk	info@mega.tv
Miami Diario	Natycr12@gmail.com
Miami Diario	News2@miamidiario.com
Miami Diario - Jennifer Marcial	jmarcial@miamidiario.com
Miami Diario - Jennifer Marcial Ocasio	news@miamidiario.com
Miami Diario - Maibort Petit	mpetit@miamidiario.com
Miami Diario - Roberto Moreano	News3@miamidiario.com
Miami Diario	news@miamidiario.com
Miami Gardens Observer	lminto8881@aol.com
Miami Laker	miamilaker1@aol.com
Miami Laker- David Snelling	davidsneller2002@yahoo.com
Miami New Times - Chuck Strouse	chuckstrouse@miaminewtimes.com
Miami New Times - Tim Elfrink	tim.elfrink@miaminewtimes.com
Miami Today - Letters to Editor	editor@miamitodaynews.com
Miami Today - Marilyn Bowden	mbowden@miamitodaynews.com
Miami Today - Meisha Perrin	mperrin@miamitodaynews.com
Miami Today - Michael Lewis	mlewis@miamitodaynews.com
Miami Today - People Column	people@miamitodaynews.com
Miami Today - Scott Blake	sblake@miamitodaynews.com
Miami Today - Samantha Joseph	sjoseph@miamitodaynews.com
Miami Web News - John Dorschner	john@miamiwebnews.com
Miller Publishing	tait@communitynewspapers.com
Miller Publishing	artwork@communitynewspapers.com
Millie Acebal Rousseau - Professional Editor | Writer	Macebal01@aol.com
Modern Healthcare - Melanie Evans	mevans@crain.com
Mountain Area Reader - Gladys Parsins	chatcavanaugh@yahoo.com
MSNBC - AJ Goodwin	Aj.goodwin@nbcuni.com
MSNBC - Mark Potter	Mark.potter@nbcuni.com
National	news@brmedia.net
National Association of Counties (NACO)	cnews@naco.org
National Cities Weekly	weekly@nlc.org
National Public Radio (NPR Radio)	gallen@npr.org
NBC News- Atlanta -Deborah Lum	Deborah.lum@nbc.com
NBC- Vanessa Hauc	Vanessa.hauc@nbcuni.com
Nightly Business Report - Kira Rockell	kira_rockell@nbr.com
Nightly Business Report - Mike Malanga	mike_malanga@nbr.com
Noticias Miami Dade News	miamidadenews@comcast.net
Notimex - Ivan Cañas	ivancanas@aol.com
Notitarde Ven - Elizabeth Ostos	elizabethostos@yahoo.com.mx
NPR- Greg Allen	GAllen@npr.org
Omar Benel - Express News UK	omarb@expressnews.us.com
Orlando Sentinel - Miami Bureau	mbell@sun-sentinel.com
PM News Services	cemolano@pmnewsservices.net
Prensa Libre	tony@prensalibreusa.com
Que Pasa Miami (E-mail)	quepasamiami@usa.net
Radio Caracol - Sabina Covo	scovo@caracol1260.com

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Radio Cooperative - Chile - Rodrigo Vergara	rvergara@cooperativa.cl
Radio Disney - Deanna Droira	deanna.i.droira@disney.com
Radio Disney - James Morera	james.morera@disney.com
Radio Mambi 710 AM	lourdesdkendall@univision.com
Radio Mambi 710 AM	marthaflores710@univision.com
Radio Mambi 710 AM	ninoska710@univision.com
Radio Marti - C Dominguez	cdominguez@ocb.ibb.gov
Radio Marti- Karen Caballero	kcaballero@ocb.ibb.gov
Radio Miami - Agustin Rangugni	radiomiami@gmail.com
Radio RCH	rchinc@bellsouth.net
Radio Soy - Laura Lee Osorio	lauraosorio@elreyjesus.org
Radio Soy - Laura Lee Osorio	lauraleeosorio@gmail.com
Recorriendo America News	director@recorriendoamericanews.com
Redland Country News	redlandcountrynews@hotmail.com
Reuters - Frances Kerry	frances.kerry@reuters.com
Reuters - Kristin Roberts	Kristin.Roberts@reuters.com
Reuters - Michael Connor - (305) 810-2696	michael.connor@thomsonreuters.com
Reuters - Photo - J Skipp	jlskipp@attglobal.net
Reuters - Photo - Joe Skipper	joe.skipper@reuters.com
Reuters - Zacharay Fagenson	zfagenson@gmail.com
River Cities Gazette	newtcurtis@curtispub.net
Roberto Rodriguez Tejera	RODRIGUEZTEJERA@YAHOO.COM
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Sakapfet - Sales	marketing@sakapfet.com
Santiago Fittipaldi	safittipaldi01@aol.com
Sergio Boffelli Acosta	boffelli@hotmail.com
Social Magazine	strokespokes@aol.com
Social Miami - Melanie Cohen	melanie@socialmiami.com
Soledad Foucauld	admin@lakaymagazine.com
South Dade News Leader	tlovitt@calkins-media.com
South Dade News Leader - Dale Machesic	dmachesic@calkins-media.com
South Dade News Leader - Mike Dill	mdill@calkins-media.com
South Florida Business Journal	southflorida@bizjournals.com
South Florida Business Journal - Ashley Torres - Web Producer	atorres@bizjournals.com
South Florida Business Journal - Brian Bandell - Senior Reporter	bbandell@bizjournals.com
South Florida Business Journal - Kevin Gale - Editor	kgale@bizjournals.com
South Florida Business Journal - Leslie Kraft Burke - Managing Editor	lkraftburke@bizjournals.com
South Florida Business Journal - Oscar Pedro Musibay - Reporter	omusibay@bizjournals.com
South Florida Business Journal - Paul Brinkmann - Reporter	pbrinkmann@bizjournals.com
South Florida Caribbean News	info@southfloridacaribbeannews.com
South Florida Internet Index	jerryspc@bellsouth.net
South Florida Times	news@sfltimes.com
South Florida Times - Maria Wimberly	mawdove@yahoo.com
South Florida Times - Jose Perez	jose3perez@gmail.com
South Florida Times- Robert Beatty	rbeatty@sfltimes.com
SouthFlorida.com/LIVE - Mary Moloney	mmoloney@southflorida.com
SouthFlorida.com/LIVE - Talia Naquin	tnaquin@tribune.com

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Email Distribution List

(Last update: December 2014)

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Spotlight International - Waldo Perez-Perez	spotintl@comcast.net
Sun Sentinel - Geo Rodriguez	ijrodriguez@sun-sentinel.com
Sun Sentinel - Susannah Bryan	sbryan@tribune.com
SunPost	editorial@miamisunpost.com
SunPost	speditor@miamisunpost.com
Sunshine State News - Kenric Ward	kward@sunshinsestatenews.com
Sur Radio Mega 1700 AM - Volney Nerette	volneynerette@yahoo.com
Telefutura	rmacia@univision.net
Telemiami - Noticiero - Producer	aaybar@telemiami.com
Telemiami - Tomás García Fusté	buenosdiasmiami@telemiami.com
The Bond Buyer - Shelly Sigo	ssigo@yahoo.com
The Brickell Reporter - Cristina Restrepo	crestrepo@brickellreporter.com
The Brickell Reporter - Denisse Diaz	ddiaz@brickellreporter.com
The Brickell Reporter - Ralph Ventura	ralphventura@gmail.com
The Gospel News	swtruth@aol.com
The Gospel Truth	gospeltruthnews@aol.com
The Gospel Truth	swtruth@aol.com
Governing Magazine - Elizabeth Daigneau	edaigneau@governing.com
The Islander	editor@islandernews.com
The Miami Herald - Action Line	actionline@miamiherald.com
The Miami Herald - Al Chardy - Transit	achardy@miamiherald.com
The Miami Herald - Amy Reyes - Events Editor	areyes@miamiherald.com
The Miami Herald - Audra Burch	aburch@miamiherald.com
The Miami Herald - Business Desk	business@MiamiHerald.com
The Miami Herald - Business Movers	movers@miamiherald.com
The Miami Herald - Charles Rabin - County Government	crabin@miamiherald.com
The Miami Herald - Christina Veiga	cveiga@miamiherald.com
The Miami Herald - Curtis Morgan - Environment	CMorgan@miamiherald.com
The Miami Herald - David Ovalle	DOvalle@miamiherald.com
The Miami Herald - Dora Bain - Editorial Editor's Assistant	dbain@miamiherald.com
The Miami Herald - Douglas Hanks - Economy and Jobs	DHanks@miamiherald.com
The Miami Herald - Features Desk	features@MiamiHerald.com
The Miami Herald - Fred Gonzalez - Weekend Editor	fgonzalez@miamiherald.com
The Miami Herald - Hannah Sampson - Hotels, Airlines, Cruises and Tourism	hsampson@miamiherald.com
The Miami Herald - Ina Cordle - Banking and Small Business	icordle@miamiherald.com
The Miami Herald - Jane Wooldridge - Business Editor	jwooldridge@miamiherald.com
The Miami Herald - Jay Ducassi - Metro Editor	JDucassi@MiamiHerald.com
The Miami Herald - Joan Chrissos - Neighbors	JChrissos@MiamiHerald.com
The Miami Herald - Kathleen McGrory - City of Miami	kmcgrory@miamiherald.com
The Miami Herald - Larry Lebowitz - General Assignment	llebowitz@miamiherald.com
The Miami Herald - Marc Caputo - Politics	mcaputo@miamiherald.com
The Miami Herald - Martha Brannigan - Real Estate	mbrannigan@miamiherald.com
The Miami Herald - Miami-Dade News Desk	dadenews@MiamiHerald.com
The Miami Herald - Michael Hamersly - General Assignment	mhamersly@herald.com
The Miami Herald - Pat Andrews - Breaking News Editor	pandrews@miamiherald.com
The Miami Herald - Patricia Mazzei - County Government	pmazzei@miamiherald.com

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Miami-Dade Office of Communications
Email Distribution List

(Last update: December 2014)

The Miami Herald - Photo Desk	newsphoto@MiamiHerald.com
The Miami Herald - Rochelle Koff - Business Monday Editor	rkoff@miamiherald.com
The Miami Herald - Scott Andron - Neighbors	sandron@MiamiHerald.com
The Miami Herald - Scott Hiaasen - General Assignment	shiaasen@miamiherald.com
The Miami Herald - Sue Mullin - Listings (Calendar) Editor	smullin@miamiherald.com
The Miami Herald - Tere Figueras - Neighbors	tfigueras@miamiherald.com
The Miami Herald Neighbors - Assignment Desk	neighbors@MiamiHerald.com
The Miami Herald - Jenny Staletovich	jstaletovich@miamiherald.com
The Miami Herald Radio	radionews@miamiherald.com
The Miami Herald Radio - Arianna Prothero	aprothero@miamiherald.com
The Miami Herald Radio - Kelley Mitchell	kmitchell@miamiherald.com
The Miami Times	news@miamitimesonline.com
The Miami Times - Editor	agolan@miamitimesonline.com
The Miami Times - Kaila Heard	kheard@miamitimesonline.com
The Miami Times - Kevin McNeir	kmcneir@miamitimesonline.com
The Miami Times - Randy Grice	rgrice@miamitimesonline.com
The Miami Times - Vennda-Rei Gibson	vgibson@miamitimesonline.com
The New York Times - Damien Cave	damienc@nytimes.com
The New York Times - Lizette Alvarez	alvarez@nytimes.com
The New York Times - Miami Bureau	dcanedy@nytimes.com
The New York Times - Michael Barbaro	barbaro@nytimes.com
The Real Deal	southfloridanews@therealdeal.com
The Real Deal - Emily Schmall	es@therealdeal.com
The Saturday Edition	saturdayedition@bellsouth.net
The Total Leader	tlovitt@calkins-media.com
The Total Leader	adssdnl@calkins-media.com
The Weather Channel	newsdesk@weather.com
Tiempo Nuevo	tiemponuevo@bellsouth.net
Turner - Blanca Gomez	blanca.gomez@turner.com
U.S. Mayors	usmayor@usmayors.org
Univision - Angela Ramos - Public Affairs	aramos@univision.net
Univision - L. Del Rio	ldelrio@univision.net
Univision - L. Torres	ltorres@univision.net
Univision - Maria Garzardo	mgarzaro@univision.net
Univision - Patsy	ploris@univision.net
Univision - Xiomara Gonzalez	xgonzalez@univision.net
Univision Network - Sports	dvinas@univision.net
Univision Radio	agustintamargo@univision.com
Univision Radio	csantana@univisionradio.com
Univision Radio - Aglaes Ensenat - Programming Coordinator - 305-569-3262	aensenat@univisionradio.com
Univision Radio - Alberto Sardinas - General Producer WAMR FM (Amor 107.5) - 305-569-6605	asardinas@univisionradio.com
Univision Radio - Chuny Montaner	cmontaner@univisionradio.com
Univision Radio - Chuny Montaner	chunymontaner@comcast.net
Univision Radio - Humberto Cortina	hjcortina@aol.com
Univision Radio - Manny Lara - Producer WAMR/WRTO/WAQI/WQBA - 786-355-8927	mlara@univisionradio.com
Univision Radio - Monica Rabassa - VP Marketing - 305-569-3127	mrabassa@univisionradio.com
Univision Radio - Sarimar Hernandez - DJ on-air	shernandez@univisionradio.com

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Email Distribution List

(Last update: December 2014)

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Univision Radio - M Sanchez - Producer	masanchez@UnivisionRadio.com
USA Today	newstips@usatoday.com
USA Today - Alan Gomez	agomez@usatoday.com
WACC AM Radio Paz - Jose Francisco Nunez	nunez@paxcc.org
WACC AM Radio Paz (E-mail)	scn@paxcc.org
Wall Street Journal - Timothy Martin	Timothy.Martin@wsj.com
WAQI AM 710AM (E-mail)	Angel.mojica@prodigy.net
Watchdog Report - Daniel Ricker	watchdogreport1@earthlink.net
WBGG 105.9	ron@big1059.com
WFOR Ch. 4 (CBS 4) - Abby Lawing	alawing@wfor.cbs.com
WFOR Ch. 4 (CBS 4) - Assignment Desk	wfornews@wfor.cbs.com
WFOR Ch. 4 (CBS 4) - Assignment Desk	cbsmiami@cbs.com
WFOR Ch. 4 (CBS 4) - Brian Andrews	bandrews@cbs.com
WFOR Ch. 4 (CBS 4) - David Sutta	DSutta@cbs.com
WFOR Ch. 4 (CBS 4) - David Bernard	dbernard@cbs.com
WFOR Ch. 4 (CBS 4) - Gary Nelson	gnelson@cbs.com
WFOR Ch. 4 (CBS 4) - Jim Defede	jdefede@cbs.com
WFOR Ch. 4 (CBS 4) - Michele Gillen	mgillen@wfor.cbs.com
WFOR Ch. 4 (CBS 4) - Lauren Pastrana	lpastrana@cbs.com
WFTL 1400 ESPN/ FOX News Ken Pauli	news@jamescrystal.com
WFTL Radio - Robin Garrett	live85PalmBeach@aol.com
WGEN Ch. 8 (GEN TV) - Ronald Acha	racha@wgentv.com
WGEN Ch. 8 (GEN TV) - Assignment Desk	news@wgentv.com
WGEN Ch. 8 (GEN TV) - Claudia Do Campo	cdocampo@wgentv.com
WGEN Ch. 8 (GEN TV) - Elena Amaro	aamaro@wgentv.com
WGEN Ch. 8 (GEN TV) - Nelly Hurtado	rhurtado@wgentv.com
WGEN Ch. 8 (GEN TV) - S. Galan	sgalan@caribevision.com
WGEN Ch. 8 (GEN TV) - Veronica Paysse	vpaysse@wgentv.com
WHRC 1550 AM	ivannossa@bellsouth.net
WIOD 610 AM - Al Warnell	AL2470@yahoo.com
WIOD 610 AM - Jason Lopez	jlopez@ccmiami.com
WIOD 610 AM - Lori Shepard	lshepard@ccmiami.com
WIOD 610 AM - Manny Munoz	mmunoz@ccmiami.com
WIOD 610 AM - News Desk	news@wiod.com
WIOD 610 AM - Newsroom	newsradio610@ccmiami.com
WIRP FM 88.3 FM	claudiapinzond@hotmail.com
WJAN Ch. 41 (America TeVe) - Assignment Desk	noticias41@americateve.com
WJAN Ch. 41 (America TeVe) - Diego Bas - Producer - A Mano Limpia	diego.bas@americateve.com
WJAN Ch. 41 (America TeVe) - Erika Carrillo	vicca50@hotmail.com
WJAN Ch. 41 (America TeVe) - Flavia Azar	Flavia.Azar@americateve.com
WJAN Ch. 41 (America TeVe) - Laura Garcia - Producer - Contigo Miami	laura.garcia@americateve.com
WJAN Ch. 41 (America TeVe) - Luis Alfonso Fernandez	luis.fernandez@americateve.com
WJAN Ch. 41 (America TeVe) - Miguel Cossio - News Editorial Director	miguel.cossio@americateve.com
WJAN Ch. 41 (America TeVe) - Media Relations	press@americateve.com
WJAN Ch. 41 (America TeVe) - Andrea Gomez	andrea.gomez@americateve.com

Table 2-2
Miami-Dade Office of Communications
Email Distribution List

(Last update: December 2014)

WLQY 1320 AM	cwest@entravision.com
WLRN 91.3 FM - Richard Ives	rives@wlrn.org
WLRN 91.3 FM - Station Manager	peterj@wlrn.org
WLTV Ch. 23 - Assignment Desk	noticias23@univision.net
WLTV Ch. 23 - Carlos Espinosa	caespinosa@univision.net
WLTV Ch. 23 - Emilio Marrero	emarrero@univision.net
WLYF 101.5 FM	litefm@litemiami.com
WPBT Ch. 2 - Marilu Lozada - Issues	marilu_lozada@wpbt.org
WPBT Ch. 2 - Nicole Borrero - Issues	borreron@wpbt.org
WPLG Ch. 10 (Local 10) - Assignment Desk	newsdesk@local10.com
WPLG Ch. 10 (Local 10) - Assignment Desk	newsdesk@wplg.com
WPLG Ch. 10 (Local 10) - Glenna Milberg	gmilberg@local10.com
WPLG Ch. 10 (Local 10) - Kelly Butler	kbutler@local10.com
WPLG Ch. 10 (Local 10) - Michael Putney	mputney@wplg.com
WPLG Ch. 10 (Local 10) - Michael Putney	mputney@justnews.com
WPLG Ch. 10 (Local 10) - Robert Alpizar	ralpizar@wplg.com
WPLG Ch. 10 (Local 10) - Sandy Antonio	santonio@wplg.com
WPLG Ch. 10 (Local 10) - Sasha Andrade	sandrade@wplg.com
WPLG Ch. 10 (Local 10) - Hatzel Vela	Hvela@wplg.com
WQBA 1140 AM - Aglaes Ensenat	aensenat@univisionradio.com
WQBA 1140 AM - Mercy Alvarez	mercyalvarez@univisionradio.com
WQBA 1140 AM - Miguel A Sanchez	masanchez@UnivisionRadio.com
WQBA 1140 AM - N Rubio	Nrubio@univisionradio.com
WQBA 1140 AM - Soraya Galan - 786-488-1140	soraya.galan@hotmail.com
WRHB Radio Mega 1020 AM	info@radiomega.net
WSCV Ch. 51 (Telemundo 51) - Assignment Desk	noticias@telemundo51.com
WSCV Ch. 51 (Telemundo 51) - Assignment Desk	reporte@telemundo51.com
WSCV Ch. 51 (Telemundo 51) - Gina Montaner	gina.montaner@nbc.com
WSCV Ch. 51 (Telemundo 51) - Maria Lewis	mxlewis@telemundo.com
WSCV Ch. 51 (Telemundo 51) - Jorge Rodriguez	jorge.rodriguez@nbcuni.com
WSVN Ch. 7 (FOX) - Assignment Desk	newsdesk@news.wsvn.com
WSVN Ch. 7 (FOX) - Assignment Desk	newsdesk@wsvn.com
WSVN Ch. 7 (FOX) - Carmel Cafeiro	ccafiero@wsvn.com
WSVN Ch. 7 (FOX) - Daisy Rodriguez	drodriguez@wsvn.com
WSVN Ch. 7 (FOX) - Edwin Lester	elester@wsvn.com
WSVN Ch. 7 (FOX) - Q. McCray - 305-735-2628	qmccray@wsvn.com
WTVJ Ch. 6 (NBC 6) - Assignment Desk	nbc6.desk@nbcuni.com
WTVJ Ch. 6 (NBC 6) - Assignment Desk	newsroom@nbc6.net
WTVJ Ch. 6 (NBC 6) - Assignment Desk	wtvjdesk@nbc.com
WTVJ Ch. 6 (NBC 6) - Assignment Desk	nbc6desk@gmail.com
WTVJ Ch. 6 (NBC 6) - Berti Ruiz	berti.ruiz@nbcuni.com
WTVJ Ch. 6 (NBC 6) - Maria Carpio	maria.carpio@nbcuni.com
WTVJ Ch. 6 (NBC 6) - Diana Gonzalez	diana.gonzalez@nbc.com
WTVJ Ch. 6 (NBC 6) - Hank Tester	hank.tester@nbc.com
WTVJ Ch. 6 (NBC 6) - Steve Litz	steve.litz@nbcuni.com
WTVJ Ch. 6 (NBC 6) - Willard Shepard	willard.shepard@nbc.com
WTVJ Ch. 6 (NBC 6) - Ari Odzer	ari.odzer@nbcuni.com
WTVJ Ch. 6 (NBC 6) - Vanessa Morales	Vanessa.Morales@nbcuni.com
WVUM 90.5 FM - University of Miami	psa@wvum.org

Table 2-2
Miami-Dade Office of Communications
Email Distribution List

(Last update: December 2014)

COUNTY STAFF	
Abal, Maria Laura (CIAO)	abal@miamidade.gov
Abreu, Maria (OCA)	MARIAA@miamidade.gov
Anderson, Charles (OCA)	CANDERS@miamidade.gov
Baker, Ray (ISD)	BakerR@miamidade.gov
Barahona-Alea, Nusly (Seaport)	nba1@miamidade.gov
Bermudez, Doug (MDT)	dougb@miamidade.gov
Bodek, Fabie (CIAO)	BF017@miamidade.gov
Boone, Reetha (OCA)	RBOONE@MIAMIDADE.GOV
Brown, Melissa (CIAO)	brownml@miamidade.gov
Brumer, John (PA)	jmb@miamidade.gov
Castillo, Hilda (RER)	castilh@miamidade.gov
Charles, Kathy (BCCO)	KAT045@miamidade.gov
Connor, Keith (OCA)	kdc@miamidade.gov
Cortazar, Susan (PROS)	SUSANAC@miamidade.gov
Couch, William (OIA)	wcouch@miamidade.gov
Cyrille, Charles (OEM)	charles.cyrille@miamidade.gov
Delgado, Ileen (CIAO)	ILEEND@miamidade.gov
DeVito, Eleyn (ITD)	edevito@miamidade.gov
Drujak, Phillip (OIA)	drujak@miamidade.gov
Ferreira, Catherine (PROS)	FerreC@miamidade.gov
Foster, Louis (OCA)	Louis.Foster@miamidade.gov
Florin, Hector (CIAO)	florin@miamidade.gov
Galan, Jose (ISD)	galanj@miamidade.gov
Garcia, Marcelo (WASD)	marcg@miamidade.gov
Gonzalez, Jose	GonzaJ@miamidade.gov
Griner, Debbie (RER)	GrineD@miamidade.gov
Hall, Janelle G. (MDCR)	TAEA@miamidade.gov
Hamilton, Vinora (MDPLS)	hamiltonv@mdpls.org
Hefty, Lee (RER)	heftyl@miamidade.gov
Hefty, Nichole (RER)	HeftyN@miamidade.gov
Hernandez, Lili (CUA)	lilianh@miamidade.gov
Hinchey, Shawn (CIAO)	shawnh@miamidade.gov
Khalil, Leila (CIAO)	LKHALIL@miamidade.gov
Klopp, Lisa (RER)	LZK@miamidade.gov
Lopez, Carolina (Elections)	LOPEZC@miamidade.gov
Lord, Jonathan (OEM)	jonathan.lord@miamidade.gov
Griselle Marino (MDFR)	gmarino@miamidade.gov
Martin, Carolyn (OCA)	CLMART@miamidade.gov
Martinez, Raul V. (MDPD)	rvmartinez@mdpd.com
Mejia, Lorna (ASD)	LMEJIA@miamidade.gov
McLeod, Sherra (PHCD)	sbmc@miamidade.gov
Muñiz, Alvaro (District 11)	muniz@miamidade.gov
Nuñez, Estefania "Nia" (Office of the Chair)	estefan@miamidade.gov
Nuñez-Hervis, Gilda (ASD)	gxn@miamidade.gov
Olafson, Eric (Seaport)	OLAFSON@miamidade.gov
Olton, Debbie (CIAO)	olton@miamidade.gov
Olczyk, Teresa (RER)	twol@miamidade.gov
Owens, Debra (Seaport)	dowens@miamidade.gov

Table 2-2
Miami-Dade Office of Communications
Email Distribution List

(Last update: December 2014)

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Pascarella, Natalie (CIAO)	natalie@miamidade.gov
Perez, Jeannette (CIAO)	jeperez@miamidade.gov
Perez, Rosie (MDT)	rdp@miamidade.gov
Perez, Nancy K. (RER)	nkp@miamidade.gov
Portal News (CIAO)	PortalNews@miamidade.gov
Rasco, Joe (OIA)	jrasco@miamidade.gov
Rey, Angel (PA)	yer@miamidade.gov
Rinkins, Zachary (MDEAT)	zrinkin@miamidade.gov
Rodriguez, Orky (OCA)	oxr@miamidade.gov
Santos, Natasha (Office of the Chair)	nsantos@miamidade.gov
Serrano, Nixsa (OEM)	nixsa.serrano@miamidade.gov
Singer, Miriam (ISD)	singer@miamidade.gov
Smith, Tara C. (ISD)	tasmith@miamidade.gov
Smikle, Patrick U. (MDPD)	PUSmikle@mdpd.com
Sommerhoff, Curt (OEM)	curt.sommerhoff@miamidade.gov
Suarez, Dennise (FIN)	DS1@miamidade.gov
Vivian Suarez (Elections)	VIVIANS@miamidade.gov
Torres, Edith (PROS)	ETORRES@miamidade.gov
Troner, Susannah (RER)	TroneS@miamidade.gov
Trutie, Suzy (Vizcaya)	STRUTIE@miamidade.gov
Valdes, Doris (OEM)	valdesd@miamidade.gov
Victores, Yaniris (Office of the Chair)	yaniris@miamidade.gov
Villar, Robert (MDT)	rvillar@miamidade.gov
White, Meagan (Seaport)	mmwhite@miamidade.gov
OTHER ORGANIZATIONS	
Alejandro Alvarado	alejandroalvaradoalertas4me@gmail.com
Ayuda, Inc. - Pam Rubido	pamr@ayudamiami.org
The Beacon Council - Ana Acle Menendez	aacle@beaconcouncil.com
Beethoven Miami-Dade Society - Gus Noguera	gand007@yahoo.com
Brian Goldmeier	brian.goldmeier@gmail.com
Broward Net - Mark Young	News@BrowardNetOnline.com
Charesse Chester	charessechesterpr@msn.com
City of Coral Gables Public Affairs - Belkys Perez	bperez2@coralgables.com
City of Coral Gables Public Works - Sonia Succar	succarferre@gmail.com
City of Doral - Natalie French	Natalie.french@cityofdoral.com
City of Miami - Angel Zayon	azayon@miamigov.com
City of Miami - Communications	communications@miamigov.com
City of Miami - David Karsh	dkarsh@miamigov.com
City of Miami - Marco Giron	mgiron@miamigov.com
City of Miami - Mario Riquelme	mriquelme@miamigov.com
City of Miami Beach PIO - Nanette Rodriguez	nrodriguez@miamibeachfl.gov
City of Miami CRA - Julia Lopres	JLopes@miamigov.com
Congresswoman Ros-Lehtinen - Gabriella Boffelli	gabriella.boffelli@mail.house.gov
Congresswoman Ros-Lehtinen - Joshua Salpeter	joshua.salpeter@mail.house.gov
Dr. Denis Rod	drdenisrod@yahoo.com
Florida House of Representatives - Sharon Pritchett	Sharon.Pritchett@myfloridahouse.gov
Florida House of Representatives - Michelle Scabarozi	Michelle.Scabarozi@myfloridahouse.gov

Table 2-2
Miami-Dade Office of Communications
Email Distribution List

(Last update: December 2014)

GJB - Al Maloof	al.maloof@gjb-law.com
GJB - Barby Rodriguez-Gimenez	brodriguez@gjb-law.com
Greater Miami Convention & Visitors Bureau - Ginny Gutierrez	ginny@gmcvb.com
Greater Miami Convention & Visitors Bureau - Jennifer Diaz	JDiaz@GMCVB.com
Greater Miami Convention & Visitors Bureau - Shaneeva Yassi	syassin@Gmcvb.com
Ivonne Perez-Suarez	Ivonne.PerezSuarez@freshfromflorida.com
Jackson Memorial Hospital - Beba Luzarraga	Beba.Luzarraga@jhsmiami.org
Jackson Memorial Hospital - Edwin Odell	edwin.odell@jhsmiami.org
Jackson Memorial Hospital - Jennifer Piedra	jennifer.piedra@jhsmiami.org
Jackson Memorial Hospital - Maggie Perez	mperez27@jhsmiami.org
Jackson Memorial Hospital - Matthew Pinzur	matthew.pinzur@jhsmiami.org
Jackson Memorial Hospital - Esther Abolila	esther.abolila@jhsmiami.org
Julia Benavides	juliab719@bellsouth.net
Latin Builders Asscoiation - Barbara Rodriguez	brodriguez@lbaorg.com
Mass Transit Magazine	joe.petrie@masstransitmag.com
Miami-Dade Health Department - Olga Connor	Olga_connor@doh.state.fl.us
Miami-Dade Health Department - Rosa Oses	Rosa_Oses@doh.state.fl.us
MDCPS - Jackie Llama - Office of Carlos Curbelo	jllama@dadeschools.net
Reuters - David Adams	Miami.newsroom@thomsonreuters.com
SAVE - Safeguarding American Values for Everyone - CJ Ortuno	cj@savedade.org
Senator Dan Gelber, District 35 - Alexis Moseley	moseley.alexis.s35@flsenate.gov
Senator Dan Gelber, District 35 - Debby Schwartz	schwartz.debra.s35@flsenate.gov
South Florida Hispanic Chamber of Commerce - Liliam M. Lopez	llopez@sflhcc.com
State Attorney's Office - Ed Griffith	EdGriffith@MiamiSAO.com
State Attorney's Office - Lissette Valdes-Valle	LissetteValdes-Valle@MiamiSAO.com
Tom Martinelli	tomasmartinelli@gmail.com
Town of Medley - Councilman Gerardo Silva	gsilva@townofmedley.com
Village of Key Biscayne - Councilman Theodore Holloway	tholloway@keybiscayne.fl.gov
United Way - Ted Seijo	seijot@unitedwaymiami.org

Table 2-3

EMERGENCY COMMUNICATIONS CENTER FAX LIST – MEDIA OUTLETS

(Last verify/update: December 2014)

Receiver Name	Contact	Fax No.
WEDR	News Desk	(954) 847-3245
Miami-Dade Police Department	Communications Shift Commander	(305) 669-7733
WSVN - Channel 7	Assignment Editor	(305) 795-2746
WFOR - Channel 4	Assignment Editor	(305) 477-3040
WPLG - Channel 10	Assignment Editor	(954) 364-2755
WTVJ- NBC - Channel 6	Assignment Editor	(954) 622-6107
The Miami Herald	City Desk	(305) 376-5287
WQBA	News Desk	(305) 441-2454
WCMQ	News Desk	(305) 461-9994
El Nuevo Herald	City Desk	(305) 376-5287
Diario de Las Americas	News Desk	(305) 635-7668
City of Miami Police Department	P.I.O.	(305) 579-6191
U.S. Drug Enforcement Agency	Agency P.I.O.	(954) 660-4308
WIOD	News Desk	(954) 862-4012
Sun-Sentinel	Miami Bureau	(954) 356-4559
Miami Beach Police Department	P.I.O.	(305) 673-7065
City of Miami - Fire Rescue	Fire Central Info.	(305) 579-6277
Emergency Management	Duty Officer	(305) 468-5401
Miami-Dade Fire Department	Lead P.I.O.	(786) 331-5201
Hialeah Police Department	Shift Commander	(305) 769-7706
WSUA Radio Caracol	News Desk	(305) 858-5907
Coral Gables Police Department	Communication Sergeant	(305) 460-5506
WSCV - Channel 51	Assignment Editor	(954) 622-6107
WAQI - Mambisa Broadcasting	News Desk	(305) 443-3601
Miami-Dade Office of Communication	Director's Office	(305) 375-3304
WLTV - Channel 23	Assignment Editor	(305) 471-4236
North Miami Beach Police Dept.	Shift Commander	(305) 787-6009
WRHC - Radio Centro	News Desk	(305) 541-2013
WJAN Ch. 41 – Americateve	News	(305) 592-3808
WGEN Ch. 8	News	(305) 507-3722
MEGA-TV	News	(786) 470-1667
Miami Times	New Desk	(305) 694-6211

If after hours email distribution is required and the system is temporarily down, the Emergency Communications Center will immediately distribute news releases to the major media outlets through the pre-programmed fax distribution list shown in Table 2-3. A Public Notification Checklist is provided in Table 2-4.

Table 2-4
PUBLIC NOTIFICATION CHECKLIST

(Last verify/update: December 2014)

UNPERMITTED DISCHARGE AGENCY NOTIFICATION RECORD

Operator_____ **Incident Description**_____ **Notification Date**_____

Party	Contact	Phone/ Fax	Notified by PIO/ECS/MDOC/OEM	Time	Notes
Local Media	Tables 2-2 Table 2-3 (Backup)	Pre-Programmed Email List Table 2-3 Fax List			
Miami-Dade County Mayor	Carlos A. Gimenez	(305) 375-5071 / 375-2099			
Board of County Commissioners					
District 1	Barbara J. Jordan	(305) 375-5694 / 372-6028			
District 2	Jean Monestine	(305) 375-4833 / 694-2781			
District 3	Audrey M. Edmonson	(305) 375-5393 / 638-6906			
District 4	Sally A. Heyman	(305) 375-5128 / 372-6179			
District 5	Bruno A. Barreiro	(305) 643-8525 / 643-8528			
District 6	Rebecca Sosa	(305) 375-5696 / 267-6366			
District 7	Xavier L. Suarez	(305) 375-5680 / 372-6103			
District 8	Daniella Levine Cava	(305) 375-5218 / 372-6073			
District 9	Dennis C. Moss	(305) 375-4832 / 372-6011			
District 10	Senator Javier D. Souto	(305) 375-4835 / 375-3456			
District 11	Juan C. Zapata	(305) 375-5511 / 375-5883			
District 12	Jose “Pepe” Diaz	(305) 375-4343 / 372-6109			
District 13	Esteban Bovo, Jr.	(305) 375-4831 / 375-2011			
Deputy Mayor	Alina T. Hudak	(305) 375-1880 / 375-1262			
City of Miami, City Manager	Daniel J. Alfonso	(305) 416-1011 / 250-5410			
City of Miami Beach, City Manager	Jimmy Morales	(305)-673-7010 / 673-7782			
Emergency Communication Center	Marcelo Garcia	(786) 552-8342 / 552-8564			
Customer Service Division	Harold Concepcion Damarys Isler	(786) 552-8358 / 552-8765 (786) 552-8745 / 552-8765			

Note: PIO= Information Officer, ECS=Emergency Communications Section, MDOC= Miami-Dade Office of Communications, OEM= Office of Emergency Management

MEDIA COMMUNICATIONS

Communications regarding a confirmed discharge will be made to the public by television, radio, and newspaper reports. The local news media will be notified by MDWASD's Emergency Communication Section, as directed by the Public Affairs Section Chief.

Media Interviews

The following MDWASD personnel are authorized to be interviewed by the media:

Bill Johnson, Director
Adriana P. Lamar, Chief, Public Affairs Section
L. Douglas Yoder, Deputy Director, Operations
Juan C. Arteaga, Deputy Director, Regulatory Compliance and Capital Improvements
Rafael A. Terrero, P.E., Assistant Director, Wastewater System Operations
Jennifer L. Messemer, Information Officer

Unless authorized by Mr. Johnson, no other personnel are authorized to speak on behalf of MDWASD.

Pre-Scripted News Releases

To facilitate public notification, several pre-scripted news releases have been prepared for use by the Public Affairs Section. A list of pre-scripted news releases is shown below and followed by Figures 2-2, 2-3, 2-4 and 2-5 of location maps and sample warning signs. The news release text is maintained on disk, and hard copies of the figures are on file in the Public Affairs Section.

- Initial Public Notification/Flow Reductions
- Repair Update
- Biscayne Bay Advisory
- Beach Advisory
- Repair Complete

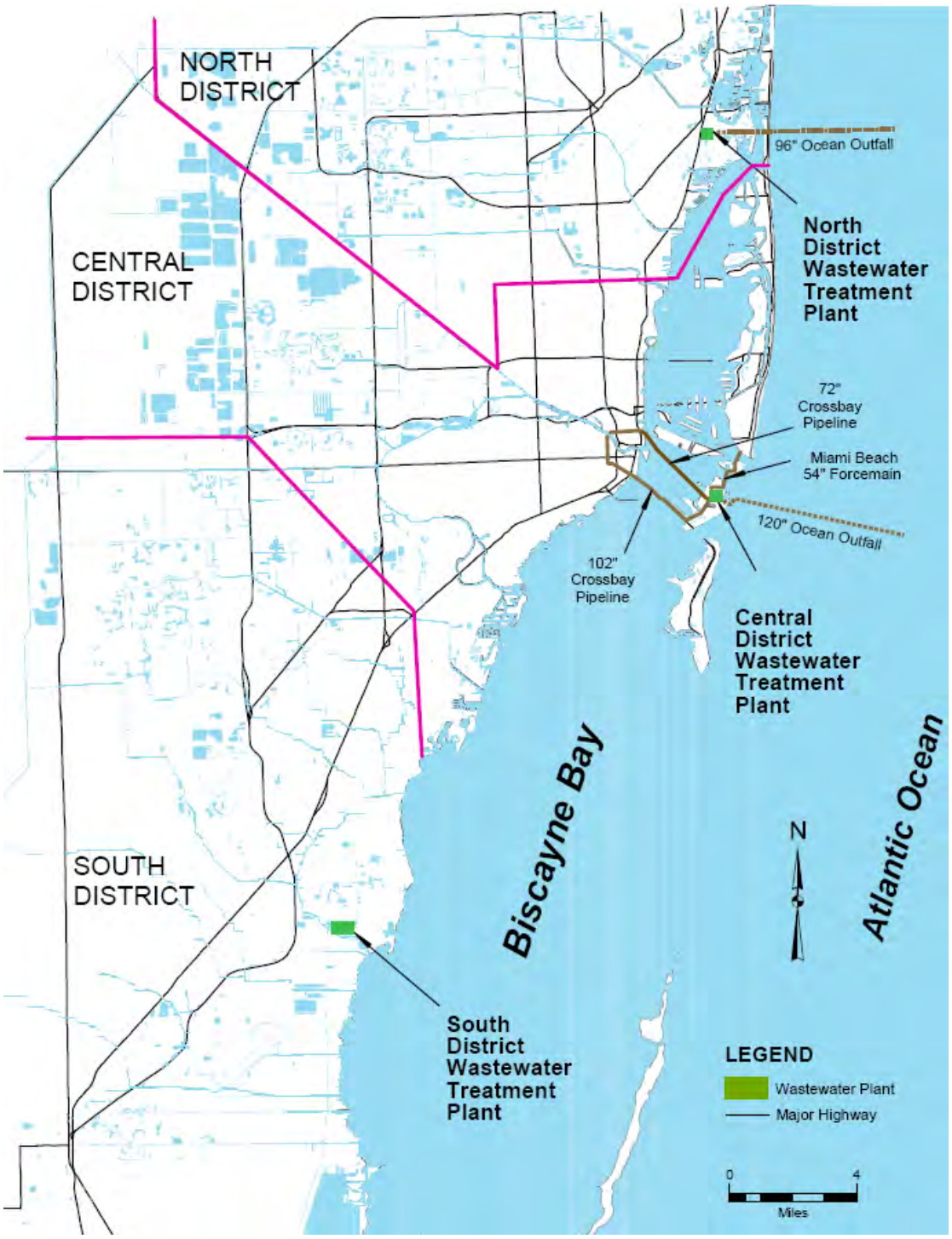


Figure 2-2 LOCATION MAP - BISCAYNE BAY

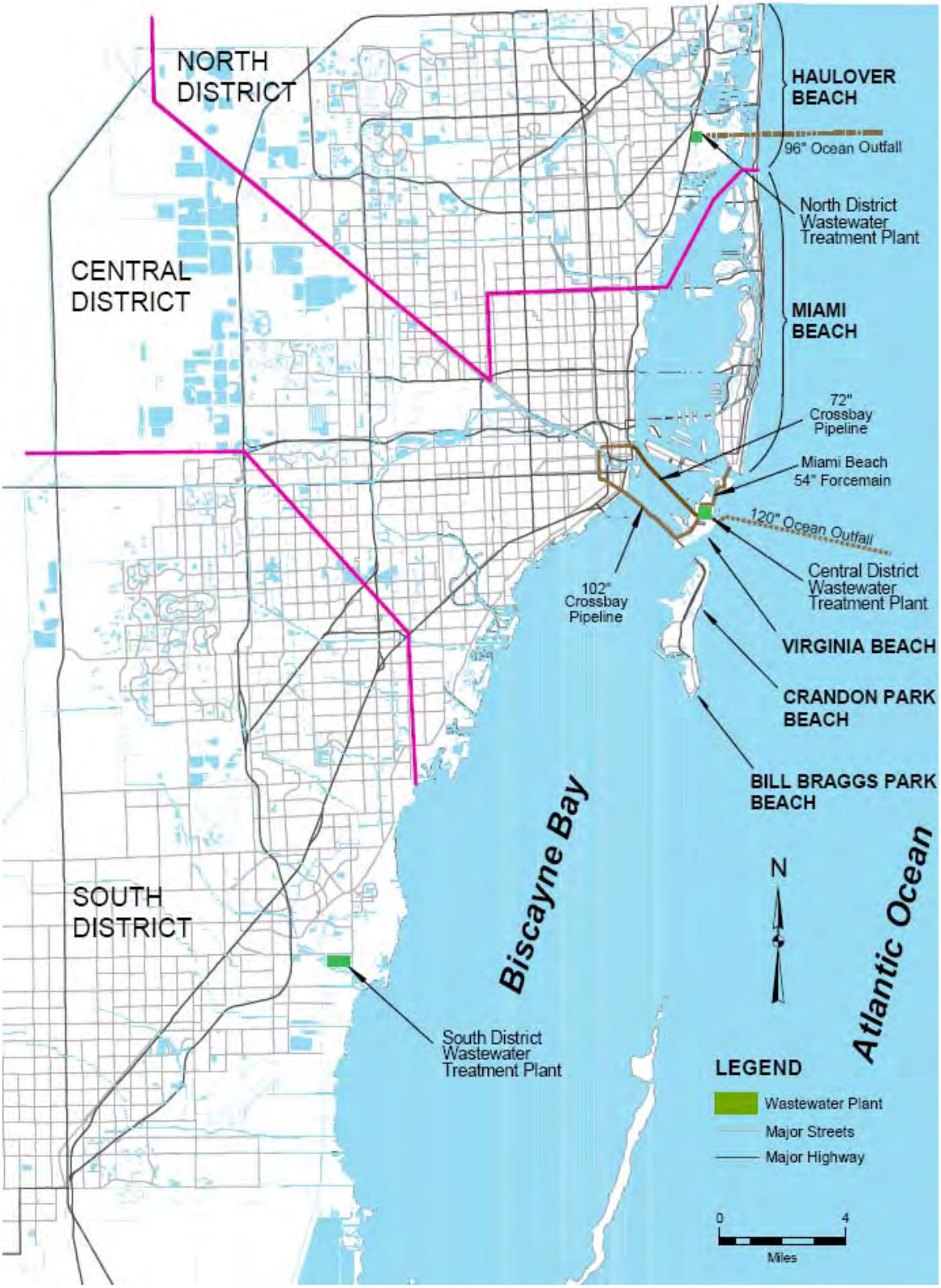


Figure 2-3 LOCATION MAP - BEACHES

Figure 2-4 SURFACE WATER WARNING SIGN

Figure 2-5 SURFACE WATER WARNING SIGN

APPENDIX 2-A
QUESTIONS AND ANSWERS

When will the warning signs be removed from the beaches?

DOH (and/or RER-ERM and/or MDWASD) is sampling up and down the beaches at least once a day. Twenty four hours are required for the bacteria (coliform) testing procedure. The alert will be rescinded and signs will be removed when bacteria levels return to normal (total coliform organisms below 1000 per 100 mL).

Is our drinking water safe?

Yes. Miami-Dade County is supplied by groundwater from the Biscayne Aquifer, which is not associated with the waters of Biscayne Bay or other surface waters.

What causes leaks in wastewater pipes?

There are many possible causes, but the most common one is corrosion of aging pipelines.

What causes corrosion of wastewater pipes?

The principal cause is hydrogen sulfide, which is present in septic sewers and industrial wastewater. In sewers, sulfides are converted into sulfuric acid, which attacks (corrodes) concrete and steel. After years of this condition, the concrete will be eaten away permitting wastewater leaks. In severe cases, the pipe may collapse. On lines constructed since 1970, MDWASD has required corrosion-resistant internal liners to protect concrete pipes.

Does the County have a plan to fix the leaks?

Yes. MDWASD prepared a special contingency plan to respond to emergencies of this type. A communications hotline has been established to dispatch a specially trained emergency response team to the problem area. Procedures are in place so that speedy repairs can be made. The public and regulatory agencies will be kept apprised of the problem and status of the repair efforts.

Is there any testing of the water that is being done to determine if it is safe?

Water quality monitoring is being implemented by RER-ERM. The monitoring parameters are: fecal coliform, Enterococcus, turbidity, salinity, temperature and dissolved oxygen. Initial sampling will focus on the immediate vicinity of the discharge (s). The sampling area will increase on subsequent days, taking into account tides and wind-driven circulation patterns with emphasis on sites where public contact is likely.

How long will the beaches be closed?

The beaches are not "closed". However, warning signs of contaminated water and the need to avoid contact will remain posted until water monitoring indicates water quality is similar to typical conditions or meets water standards.

In a case where the bay is closed, how long will the bay be off-limits?

> The bay will be closed until water monitoring indicates water quality is similar to typical conditions or meets water standards.

How long will it take to make the repair?

> The length of repair is dependent upon the extent of damage. The repair may be completed within 24 hours or longer.

What precautions are being taken to protect the environment? Particularly, will this have an impact on the reef systems?

> Every effort is being made to limit the discharge of wastewater. Where possible wastewater will be diverted to alternative wastewater treatment facilities and the public has been requested to minimize discharge to the wastewater system. The discharge may impact the reef system depending upon the severity of the discharge and the current flow.

Section 3

AGENCY NOTIFICATION PLAN

The Agency Notification Plan establishes procedures which Miami-Dade Water and Sewer Department (MDWASD) will follow to provide formal notice to the U.S. Environmental Protection Agency and other federal, state, and local agencies in the event of Unpermitted Discharges of pollutants from the wastewater treatment plants and collection systems to surface waters. The reporting criteria section explains to whom various forms of notification will be made, and the agency notification section lists agencies/individuals to be contacted.

Agency notifications will be performed in parallel with other notification plans. The procedures for providing notification to the public of a release from Unpermitted Discharges are presented in Section 2 - Public Notification. Internal notification and mobilization of MDWASD personnel are detailed in Section 5 - Emergency Operations Plan.

Notification will be made promptly. The MDWASD Emergency Communications Section at the Douglas Office Building will be the primary originating point for notifications. In the event of telephone or power outage or other restraints at the Douglas Office Building, the first alternate location is the MDWASD's LeJeune Office Building. The Miami-Dade County Emergency Operations Center, which is readily available during normal business hours, and the Central District Plant are secondary alternate sites.

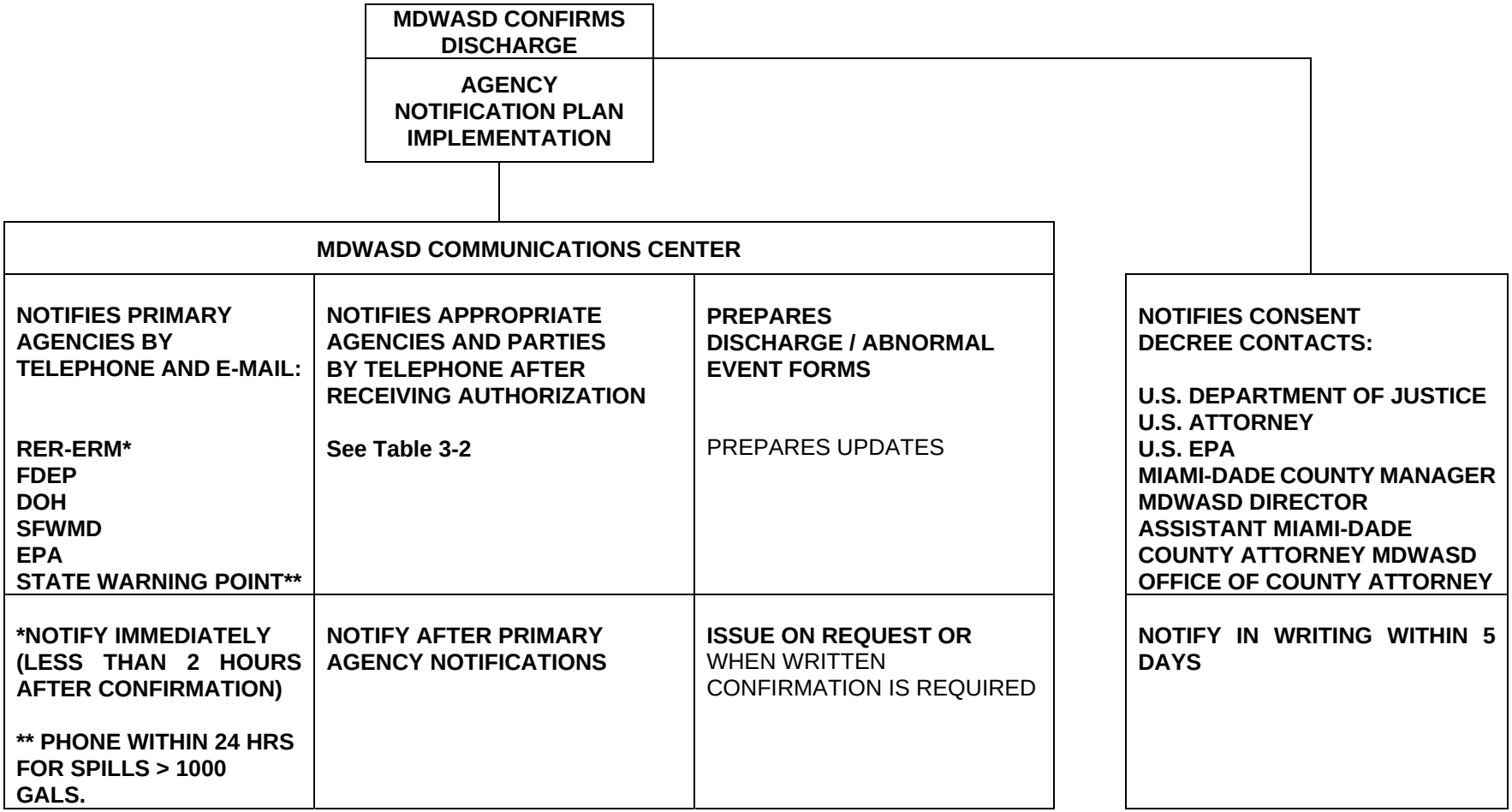
NOTIFICATION CRITERIA

Prior to any agency notification, MDWASD will investigate all reports of suspected releases from Unpermitted Discharges. The procedures for failure verification are presented in Section 5 - Emergency Operations Plan.

MDWASD Emergency Communications Section will provide notification to the regulatory agencies and others of any confirmed discharges to surface waters. The agency reporting protocol is illustrated in Figure 3-1. Marcelo Garcia, Emergency Communications Section Manager, will be the primary contact at the Emergency Communications Section. Robert Cooper, Communications Center Supervisor will serve as the alternate contact.

The Emergency Communications Section, which is staffed 24 hours a day, will serve as MDWASD's Emergency Operations Center. Using data supplied during the unpermitted discharge verification process, and updates from response personnel, the Emergency Communication Center will prepare initial and updated Discharge/Abnormal Event Notification forms (Figure 3-2). This form will be made available to those desiring additional information or written confirmation.

Figure 3-1
AGENCY NOTIFICATION PROTOCOL



Immediate Notification

The MDWASD Emergency Communications Section must notify certain agency representatives immediately and keep them abreast of response actions and final corrective actions. Table 3-1 lists the agencies primarily involved in the response and regulatory aspects of the release to surface waters. The U.S. Environmental Protection Agency (EPA) and the South Florida Water Management District (SFWMD) will not be notified if the release is contained without discharge to surface waters. However, the State Warning Point will be called for all unauthorized releases or spills of untreated or treated wastewater in excess of 1,000 gallons, as soon as practical, but no later than 24 hours from the time MDWASD becomes aware of the discharge.

Initially, these primary agencies will be notified by e-mail and verbally no later than 24 hours (preferably within 2 hours) after a confirmed release of 100 gallons per minute for 10 minutes. RER-ERM will be notified verbally within two (2) hours of a spill confirmation, since they are responsible for monitoring surface water quality and assessing other potential environmental impacts. MDWASD will make best effort to notify all agencies verbally, in addition to the e-mail. However, failure to notify verbally, on regular working hours, shall not constitute a violation of this Plan. The initial, and updated, Discharge/Abnormal Event Notification form will be faxed to each of these agency representatives.

Secondary Notification

After those on the primary notification list have been contacted, the Emergency Communications Section will contact other agencies, as applicable, as well as interested and possibly impacted parties if there has been a verified discharge. Table 3-2 lists those agencies and parties on the secondary notification list that would be notified of a discharge to surface waters. Also, Miami-Dade Police and Public Works & Waste Management Departments, and Miami Police and Public Works Departments will be called, if applicable.

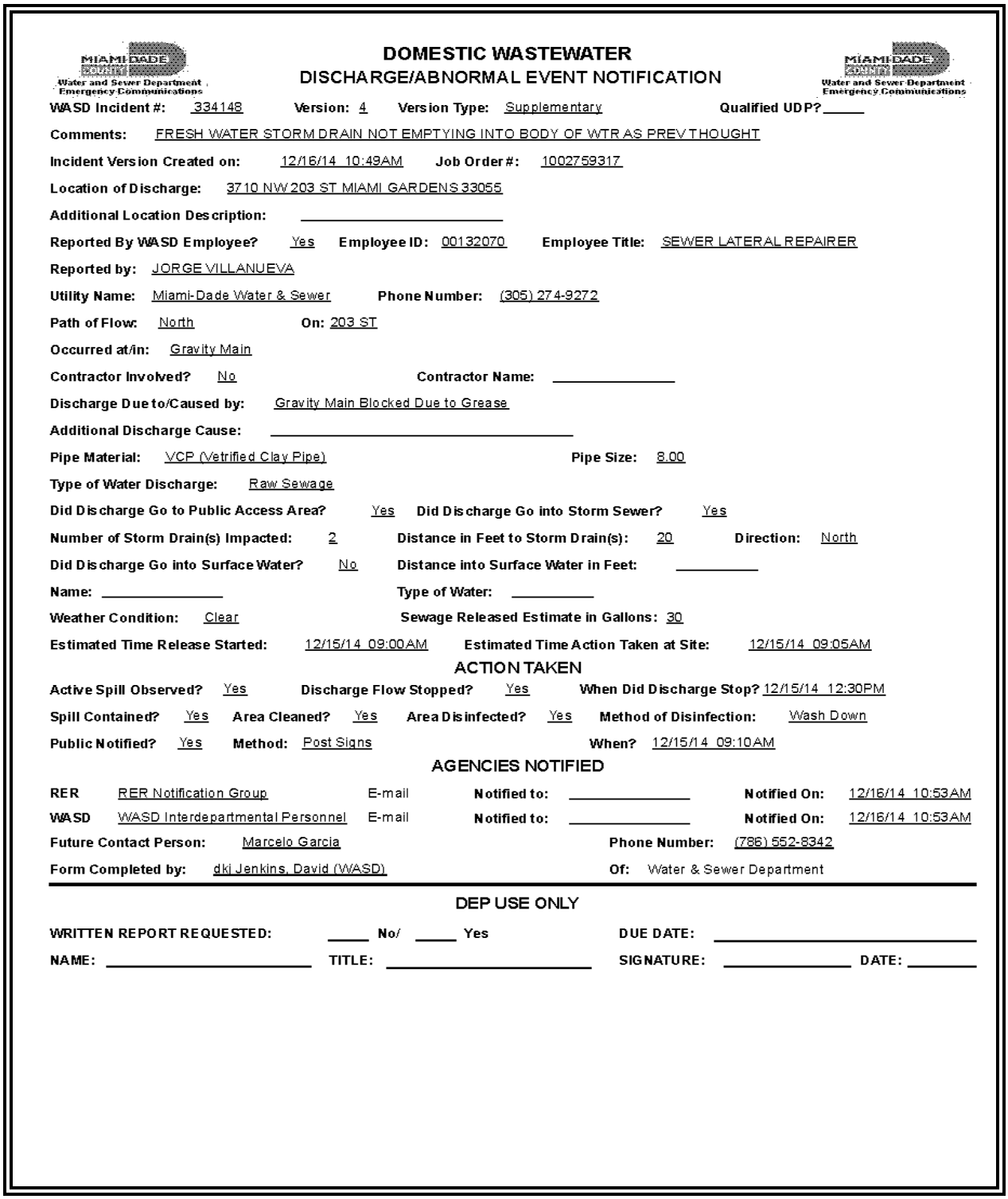
Consent Decree Notification

The First Partial Consent Decree requires notification of Unpermitted Discharges to those listed in Table 3-3. Notification to these parties will be provided by the Assistant Director for Wastewater System Operations.

Written notice will be submitted within 5 days (deemed to be the date postmarked) by certified mail, return receipt requested and e-mails.

The written notification requirements are:

- Description of the unpermitted discharge.
- Location of the unpermitted discharge.
- Duration of the unpermitted discharge, including exact dates and times. If not corrected, the anticipated time the discharge will continue.
- Steps taken or planned to reduce, eliminate, and prevent recurrence of the unpermitted discharge.



MIAMI-DADE COUNTY
Water and Sewer Department
Emergency Communications

DOMESTIC WASTEWATER
DISCHARGE/ABNORMAL EVENT NOTIFICATION

MIAMI-DADE COUNTY
Water and Sewer Department
Emergency Communications

WASD Incident #: 334148 **Version:** 4 **Version Type:** Supplementary **Qualified UDP?** _____

Comments: FRESH WATER STORM DRAIN NOT EMPTYING INTO BODY OF WTR AS PREV THOUGHT

Incident Version Created on: 12/16/14 10:49AM **Job Order #:** 1002759317

Location of Discharge: 3710 NW 203 ST MIAMI GARDENS 33055

Additional Location Description: _____

Reported By WASD Employee? Yes **Employee ID:** 00132070 **Employee Title:** SEWER LATERAL REPAIRER

Reported by: JORGE VILLANUEVA

Utility Name: Miami-Dade Water & Sewer **Phone Number:** (305) 274-9272

Path of Flow: North **On:** 203 ST

Occurred at/in: Gravity Main

Contractor Involved? No **Contractor Name:** _____

Discharge Due to/Caused by: Gravity Main Blocked Due to Grease

Additional Discharge Cause: _____

Pipe Material: VCP (Vetrified Clay Pipe) **Pipe Size:** 8.00

Type of Water Discharge: Raw Sewage

Did Discharge Go to Public Access Area? Yes **Did Discharge Go into Storm Sewer?** Yes

Number of Storm Drain(s) Impacted: 2 **Distance in Feet to Storm Drain(s):** 20 **Direction:** North

Did Discharge Go into Surface Water? No **Distance into Surface Water in Feet:** _____

Name: _____ **Type of Water:** _____

Weather Condition: Clear **Sewage Released Estimate in Gallons:** 30

Estimated Time Release Started: 12/15/14 09:00AM **Estimated Time Action Taken at Site:** 12/15/14 09:05AM

ACTION TAKEN

Active Spill Observed? Yes **Discharge Flow Stopped?** Yes **When Did Discharge Stop?** 12/15/14 12:30PM

Spill Contained? Yes **Area Cleaned?** Yes **Area Disinfected?** Yes **Method of Disinfection:** Wash Down

Public Notified? Yes **Method:** Post Signs **When?** 12/15/14 09:10AM

AGENCIES NOTIFIED

RER	RER Notification Group	E-mail	**Notified to:** _____	**Notified On:**	12/16/14 10:53AM
WASD	WASD Interdepartmental Personnel	E-mail	**Notified to:** _____	**Notified On:**	12/16/14 10:53AM

Future Contact Person: Marcelo Garcia **Phone Number:** (786) 552-8342

Form Completed by: dkj Jenkins, David (WASD) **Of:** Water & Sewer Department

DEP USE ONLY

WRITTEN REPORT REQUESTED: ____ No/ ____ Yes **DUE DATE:** _____

NAME: _____ **TITLE:** _____ **SIGNATURE:** _____ **DATE:** _____

Figure 3-2 DISCHARGE/ABNORMAL EVENT NOTIFICATION FORM

Table 3-1
PRIMARY AGENCY NOTIFICATION LIST

(Last verify/update: December 2014)

Agency	Office/Location/Phone
Miami-Dade County Department of Regulatory and Economic Resources' Environmental Resources Management Division (RER-ERM) Primary RER-ERM Complaints E-mail Stephen Blair Richard Neumann	Miami-Dade County Fax No. (305) 372-6630 (305) 372-6893 Phone No. (305) 372-6955 (24-hrs) EnvtlComplaints@miamidade.gov Phone No. (305) 372-6853 Cell (305) 775-9404 Email: blairs@miamidade.gov Phone No. (305) 372-6487 Email: neumar@miamidade.gov
Miami-Dade County Department of Health (DOH) Samir Elmir	Miami-Dade County Fax No. (305) 623-3502 Phone No. (305) 623-3500 or (305) 324-2400 (24-hrs) Email: Samir_Elmir@doh.state.fl.us
Florida Department of Environmental Protection – DEP-SED Michael Hambor is primary contact. Lisa Self (back-up contact)	West Palm Beach Fax No. (561) 681-6760 Phone No. (561) 681-6600 (Desk) Michael Hambor (561) 681-6698 Email: michael.hambor@dep.state.fl.us Lisa Self (561) 681-6699 Email: lisa.m.self@dep.state.fl.us
U.S. Environmental Protection Agency, Region IV – EPA Brad Ammons Denisse Diaz	Atlanta Fax No. (404) 562-9729 Phone No. (404) 562-9769 or (404) 562-8700 (24 hrs) 1(800) 424-8802 Email: ammons.brad@epa.gov Email: diaz.denisse@epa.gov
South Florida Water Management District - SFWMD	Miami-Dade County – via Operations Control Center (OCC) 24/7 WPB, Florida Fax No. (561) 681-2570 Phone No. (561) 682-6116 Email: 5710@sfwmd.gov 5720@sfwmd.gov 5731@sfwmd.gov
State Warning Point (For any spill in excess of 1000 gallons)	Must be notified within 24 hours Phone No. 1(800) 320-0519 Fax No. (850) 488-7841

Table 3-2 SECONDARY AGENCY NOTIFICATION LIST	
Agency or Party	**Concerns**
Bill Baggs Park, Cape Florida	Potential for water quality deterioration at beach
Oleta River State Recreation Area	Potential for water quality deterioration at beach
Crandon Park Beach	Potential for water quality deterioration at beach
Biscayne National Park	Concern for water quality and environmental impacts
Florida Fish and Wildlife Conservation Commission (FWC)	Concerns for Critical Wildlife Area
FWC, Imperiled Species Management Section	Concerns for Critical Wildlife Area
FWC Florida Marine Patrol	Notification of emergency actions in bay
FDEP Biscayne Bay Aquatic Preserve	Concern for water quality deterioration
Greater Miami Convention & Visitors Bureau	Potential for water quality deterioration at beach
Miami-Dade Parks, Recreation and Open Spaces Dept. (Crandon, Rickenbacker, Haulover Beach, Matheson, Homestead)	Potential for water quality deterioration at beach
Miami-Dade Police Marine Patrol	Notification of emergency actions in bay
Miami Beach	Potential for water quality deterioration at beach
Miami Seaquarium	Possible impact to water quality at Seaquarium
National Marine Fisheries	Concerns for water quality in bay
National Oceanographic and Atmospheric Administration (NOAA)	Concerns for water quality in bay
U.S. Army Corps of Engineers	Concern for dredge and fill activities
U.S. Coast Guard	Notification of emergency actions in bay
U.S. Fish & Wildlife Service	Concerns for potential impacts to manatees
University of Miami, Marine Dept.	Concerns for water quality in bay
University of Miami, Hatchery and RASMAS	Concerns for water quality in bay
Virginia Beach, Virginia Key	Potential for water quality deterioration at beach
City of Sunny Isles Beach Park & Recreation, and LIfeguards	Potential for water quality deterioration at beach
City of Golden Beach Park & Recreation, and Lifeguards	Potential for water quality deterioration at beach
Miami-Dade Fire Rescue Ocean Rescue	Potential for water quality deterioration at beach (Lifeguards at County guarded beaches)

Table 3-3
CONSENT DECREE NOTIFICATION LIST

(Last verify/update: December 2014)

As to the United States

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
Post Office Box 7611, Ben Franklin Station
Washington, DC 20044-7611
Reference DOJ Case No. 90-5-1-1-4022
Phone: (202) 514-5260 Fax: (202) 616-2427
Rachael Amy Kamons Email: Rachael.Kamons@epa.gov

United States Attorney
South District of Florida
99 N.E. 4th Street, Suite 300
Miami, Florida 33132-2111
Phone: (305) 961-9000 Fax: (305) 530-7087

As to U.S. Environmental Protection Agency

Chief
Water Programs Enforcement Branch
Water Management Division
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street, SW 16th Floor
Atlanta, Georgia 30303 - 3104
ATTN: FL/KY/SC Unit
Phone: (404) 562-8700 Fax: (404) 562-8701
1(800) 424-8802

As to Defendants

Deputy Mayor
Miami-Dade County
111 N.W. 1 Street, Suite 2910
Miami, Florida 33128
Phone: (305) 375-3075 Fax: (305) 372-6082

Director
Miami-Dade Water and Sewer Department
3071 S.W. 38th Avenue
Miami, Florida 33146
Phone: (786) 552-8156 Fax: (786) 552-8647

Table 3-4
AGENCY NOTIFICATION CONTACT INFORMATION (Last verify/update: December 2014)

Agency	Representative	Office	Beeper	Fax Number	Cell or Home
Bill Baggs Park, Cape Florida	David Foste Shaun Allen	(305) 361-8779	N/A	(305) 365-0003	(305) 361-8779 (Shaun Allen)
Crandon Park Beach	Mark Richard	(305) 361-5421	N/A	(305) 223-0148	(305) 458-4711
Crandon Ocean Rescue	Luiz Morizot	(786) 336-6982	N/A	(305) 365-3077	(954) 232-4468
Florida DEP-SED	Jack Long	(561) 681-6661	N/A	(561) 681-6755	N/A
Florida DEP-SED	Lisa Self	(561) 681-6699	N/A	(561) 681-6755	N/A
FWC, Imperiled Species Management Section	Kipp Frohlich	(850) 922-4330	N/A	(850) 922-4338	N/A
Miami-Dade County Dept. of Health	Samir Elmir	(305) 623-3500	N/A	(305) 623-3502	(786) 388-7207
Miami-Dade County RER-ERM	Oscar Aguirre or Compliance Section	(786) 315-2889 or (305) 372-6789 or (305) 372-6955 (24 hrs)	(305) 483-8015	(305) 372-6631 (305) 372-6760	N/A
Miami-Dade Police Dept. Non-emergency	Alternate number	305-4-Police (24 hrs) (305) 595-6263 (24 hrs)	N/A	N/A	N/A
Miami-Dade Police Dept. Communications Bureau	Shift Commander	(305) 596-8176	N/A	(305) 596-8244	N/A
Miami-Dade Police Dept. Marine Patrol	Lt. John Ramos	(305) 468-1164	N/A	(305) 468-1211	(305) 986-1109
Haulover Beach	Alex Cann	(305) 947-3525	N/A	(305) 948-2802	N/A
Haulover Ocean Rescue	Luis Andrade	(786) 336-6990	N/A	(786) 336-6990	(772) 240-0310
Miami-Dade County Public Works & Waste Mgmt. Dept.	Antonio Cotarelo	(305) 375-1918	N/A	(305) 375-2547	(305) 240-0310
Miami Police Department	Communications Supervisor	(305) 579-3449	N/A	(305) 579-3375	N/A
Miami Public Works	Francis Mitchell	(305) 416-1218	N/A	(305) 416-2152	N/A

Table 3-4 AGENCY NOTIFICATION CONTACT INFORMATION (Last verify/update: December 2014)					
Agency	**Representative**	**Office**	**Beeper**	**Fax Number**	**Cell or Home**
Miami-Dade Parks Beach Maintenance	John Ripple	(305) 868-7075	N/A	(305) 865-4649	N/A
Greater Miami Convention & Visitors Bureau	Bill Talbert	(305) 539-3040	(305) 250-3040	(305) 539-3125	N/A
Miami Beach Ocean Rescue	Scott Randol	(305) 673-7714	N/A	(786) 394-4468	(305) 345-9116
Miami Seaquarium	Andrew Hertz Einar Gustafson Mark McCarty	(305) 365-2533 (305) 365-2513 (305) 361-5705 x273	(305) 650-5415 (305) 650-6178	(305) 361-6077	N/A
National Marine Fisheries	Jeff Willoughby David Scenn	(305) 361-4597 (305) 361-4280	N/A	(305) 361-4499	(786) 797-4609 N/A
National Oceanographic & Atmospheric Admin.	Dr. Jack Stamates	(305) 361-4312	N/A	(305) 361-4402	N/A
South Florida Water Management District	Ed Hernandez	(305) 377-7274	N/A	(305) 377-7293	(305) 775-0651
U.S. Army Corps of Engineers	Todd Trulock	(904) 232-3626	N/A	(904) 232-3430	(904) 424-2726
U.S. Coast Guard	Duty Officer	(305) 535-4472 (24 hrs)	N/A	(305) 535-8761	N/A
U.S. Environmental Protection Agency	Brad Ammons	(404) 562-9769 (404) 562-8700 (24 hrs)	N/A	(404) 562-9729	N/A
U.S. Fish & Wildlife Service	Eddie McKissick	(305) 526-2789 x13	N/A	(305) 526-2695	(786) 236-2864
University of Miami, RSMAS	Dr. Ronny Avissar	(305) 421-4000	N/A	(305) 421-4711	N/A
University of Miami, RSMAS Marine Dept.	Ray Alfonso Richard Niffen	(305) 421-4132 (305) 421-4832	N/A	(305) 421-4757	(305) 205-7268 (954) 646-7633
University of Miami, RSMAS Hatchery	Tom Capo Phillip Gillette	(305) 421-4946 (305) 421-4941	N/A	(305) 421-4934	(305) 905-1122 (321) 591-1482
Virginia Key Beach	Jose Hernandez	(305) 575-5256 (305) 416-1307	N/A	(305) 575-5266 (305) 960-3019	N/A

AGENCY CONTACT INFORMATION

Facsimile contact information for applicable agencies, and their representatives, is presented in Table 3-4. Using this information, the MDWASD Emergency Communications Section will make the notification of a confirmed release. The Communications Center will verbally contact those on the Agency Notification Checklist (Table 3-5). The notes section will be used to record contact feedback and to identify those e-mailed or faxed a Discharge/Abnormal Event Notification form.

Table 3-5
AGENCY NOTIFICATION CHECKLIST

UNPERMITTED DISCHARGE NOTIFICATION CHECKLIST
Operator _____
Incident Description_____ **Notification Date**_____

Agency	Contact	Time	Notes
Primary Notifications			
RER-ERM			
DEP			
DOH			
SFWMD			
U.S. EPA			
Secondary Notifications			
Bill Baggs Park, Cape Florida			
Crandon Park Beach			
Florida Fish and Wildlife Commission			
FWC, Imperiled Species Management Section			
Florida Marine Patrol			
Haulover Beach			
Miami-Dade Police Bay Operations Section			
Greater Miami Convention & Visitors Bureau			
Miami Beach			
Miami Seaquarium			
National Marine Fisheries			
National Atmospheric and Atmospheric Administration			
U.S. Army Corps of Engineers			
U.S. Coast Guard			

Table 3-5 AGENCY NOTIFICATION CHECKLIST			
U.S. Fish & Wildlife Service			
University of Miami, Marine Sciences (Hatchery)			
University of Miami, Marine Sciences			
University of Miami, RASMAS			
Virginia Beach, Virginia Key			
Release Affecting Unincorporated Miami-Dade County			
Miami-Dade Police Department			
Miami-Dade Public Works and Waste Management			
Release Affecting City of Miami			
Miami Police Department			
Miami Public Works			

Section 4

EMERGENCY FLOW CONTROL PLAN

The Emergency Flow Control Plan describes actions that the Miami-Dade Water and Sewer Department (MDWASD) will take to minimize the volume of untreated wastewater transmitted to any portion of the wastewater treatment and collection system impacted by the events, which generate an unpermitted discharge to surface waters.

The actions required under the plan will involve a multi-disciplined team of MDWASD employees working interdependently. Maintenance and operations personnel will manipulate flow control devices to bypass or divert flow while the fault is being corrected. Water system personnel may be called upon to reduce water distribution system pressures. Communications personnel will publicize the need for consumers to conserve water and limit waste generation during emergency periods. Table 4-1 presents a summary of the actions and responsibilities developed for the Emergency Flow Control Plan.

WASTEWATER COLLECTION AND TREATMENT SYSTEM

The system covers approximately 443 square miles of land and includes a 6,292 mile network of wastewater pipes. The wastewater system is subdivided into three interconnected districts: North, Central, and South. The approximate boundaries of these districts are shown in Figure 4-1. Each district is served by a regional wastewater treatment plant. Including those maintained under maintenance agreements with other agencies and departments, the collection of wastewater is aided by approximately 1,044 pump and booster stations throughout the service area.

Wastewater Treatment Districts and Plants

The three regional wastewater treatment plants have a total permitted capacity of 375.5 million gallons per day (MGD). The combined annual average daily flow for fiscal Year 2012/2013 was 289.5 MGD.

Central District.

The Central District approximate service area, shown on Figure 4-2, handles the largest average daily flow among the MDWASD service areas. The Central District serves unincorporated areas and the municipalities of Bal Harbour Village, Bay Harbor Islands, Coral Gables, Indian Creek, Key Biscayne, Medley, Miami, Miami Beach, Miami Springs, North Bay Village, Sweetwater, South Miami, Surfside, Virginia Gardens, and West Miami.

The treatment plant is located on Virginia Key (a flow diagram of the plant is presented in Figure 4-3). The permitted capacity at this plant is 143 MGD. Flow is received at the Central District Plant from three routes. The greatest quantity, approximately 100 MGD, is derived from mainland locations and is received through the new 102-inch Cross Bay Line and the old 72-inch, which was placed back in service in August 1999.

Table 4-1
EMERGENCY FLOW CONTROL ACTION PLAN

ACTION	BY	AUTHORIZATION
Flow Diversion to North or South District Plants		
Increase flow diversion to North District Plant by increasing pumping rate at Pump Station No. 187	P.S. No. 187 Maintenance Crew	Asst. Director Wastewater System Operations Pump Station Division Chief
Increase flow diversion to South District Plant by increasing pumping rate at Pump Station No. 187	P.S. No. 187 Maintenance Crew	Asst. Director Wastewater System Operations Pump Station Division Chief
Reduction in Wastewater Generation		
Prepare advisories to residential customers to reduce household water use	Public Affairs Officer	Director
Prepare advisories to commercial and industrial customers to reduce wastewater discharges	Public Affairs Officer	Director
Prepare press releases	Public Affairs Officer	Director
Prepare water bill inserts	Public Affairs Officer	Director
Reduce system water pressure	Water Production Division	Director

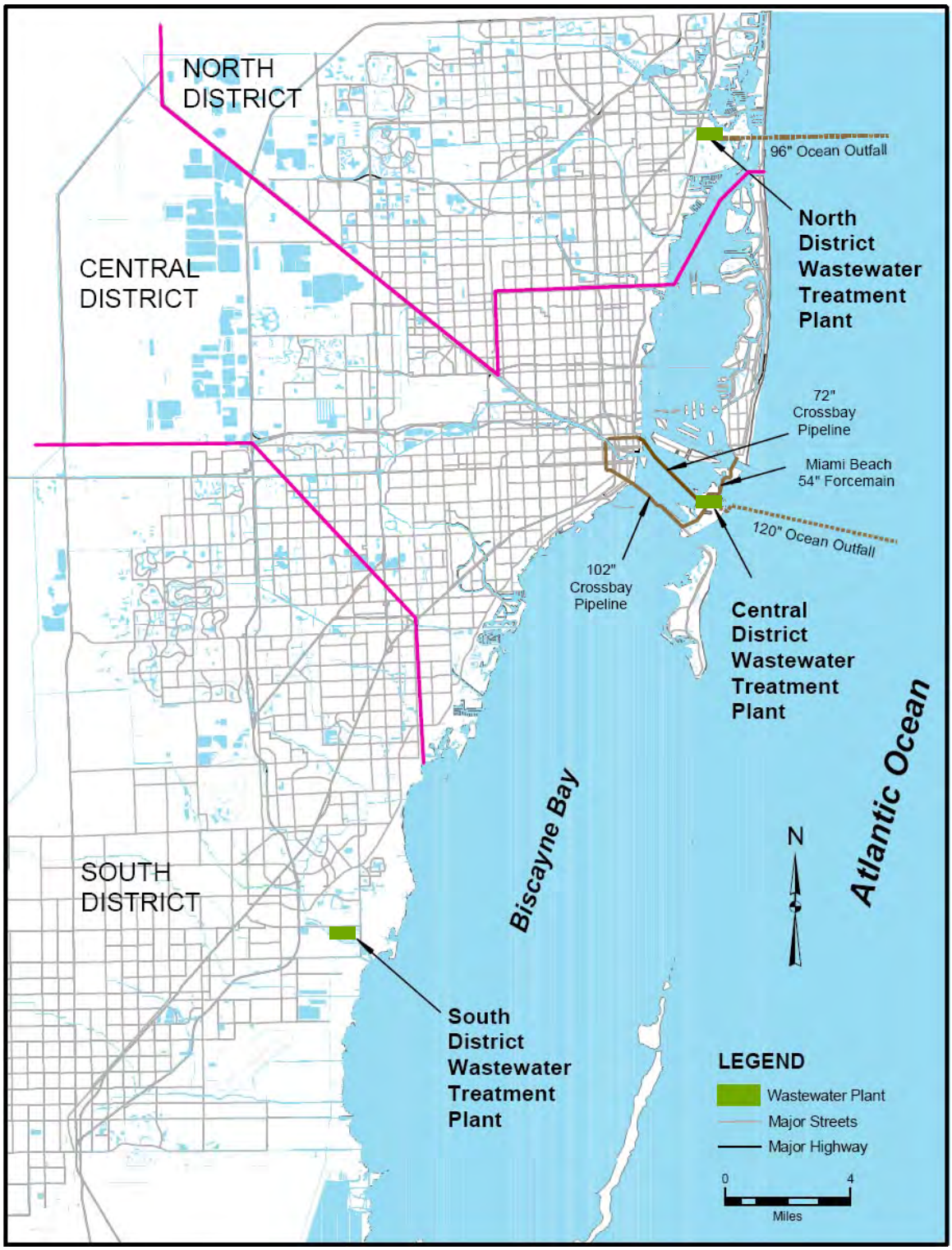


Figure 4-1 MDWASD Collection System.

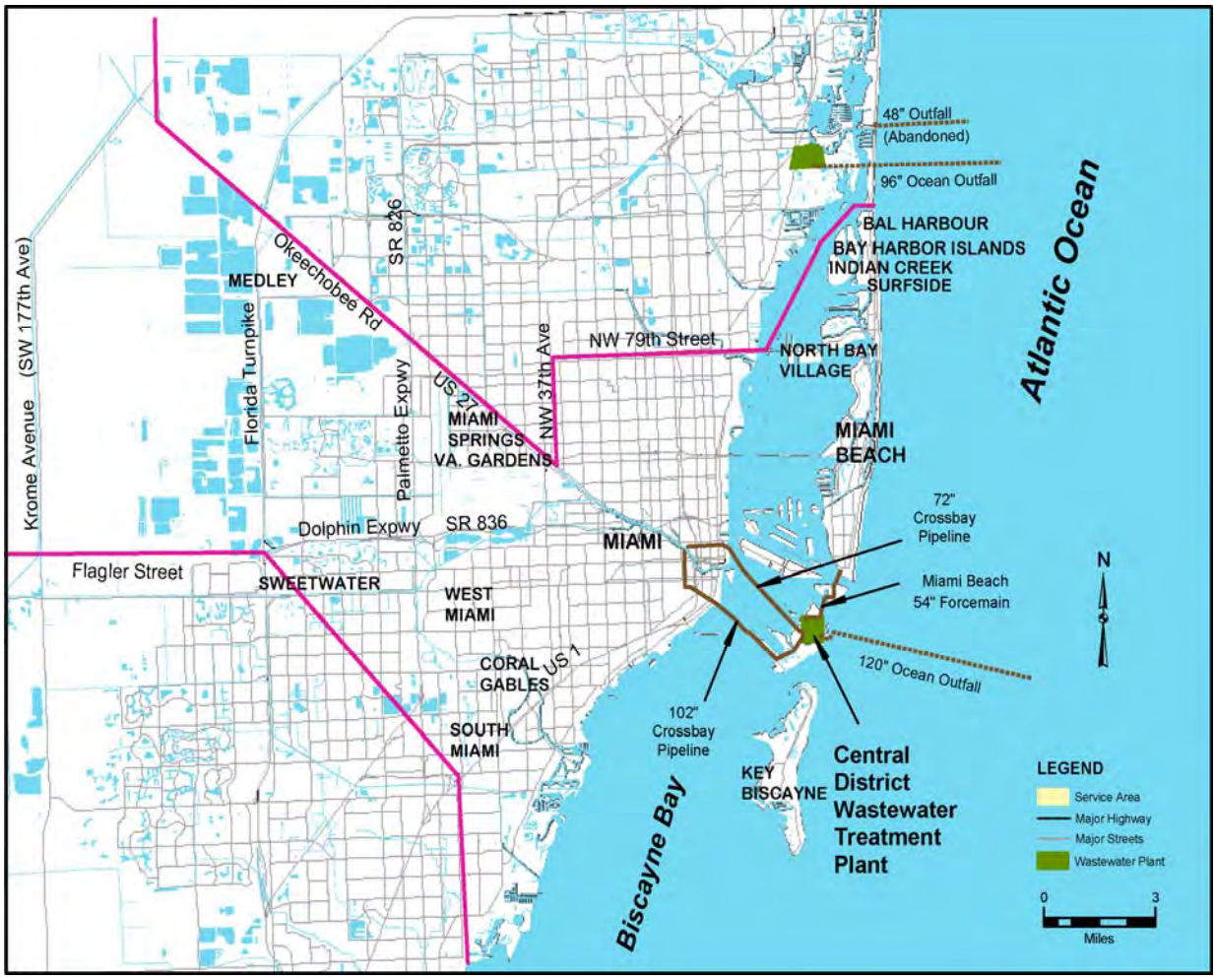


Figure 4-2 MDWASD Central Wastewater District.

Wastewater from Miami Beach is transmitted through a 54-inch force main which passes below Government Cut south of Miami Beach to Fisher Island and Virginia Key. The 54-inch force main between Miami Beach and Fisher Island was replaced with a 60-inch tunneled force main this year. This line contributes up to 30 MGD. A small quantity of wastewater is also received from parallel 24-inch and 12-inch force mains coming from Key Biscayne.

The wastewater transmission system contains a number of large force mains and interceptors which collect wastewater from smaller service areas for delivery to Pump Station Nos. 1 and 2. As shown on Figure 4-2, the areas that contribute flow toward Pump Station No. 1 contain several loops that allow alternate routing. There are fewer alternates as the system extends to the west. However, Pump Station No. 187 (also referred to as No. 33-P1) is located near the intersection of West Flagler Street and Northwest Boulevard and provides the flexibility to divert some flow to any of the three service districts. Flow to Pump Station No. 2 arrives through a 72-inch interceptor that flows southward along Biscayne Boulevard. There are no alternative routes to the pump station.

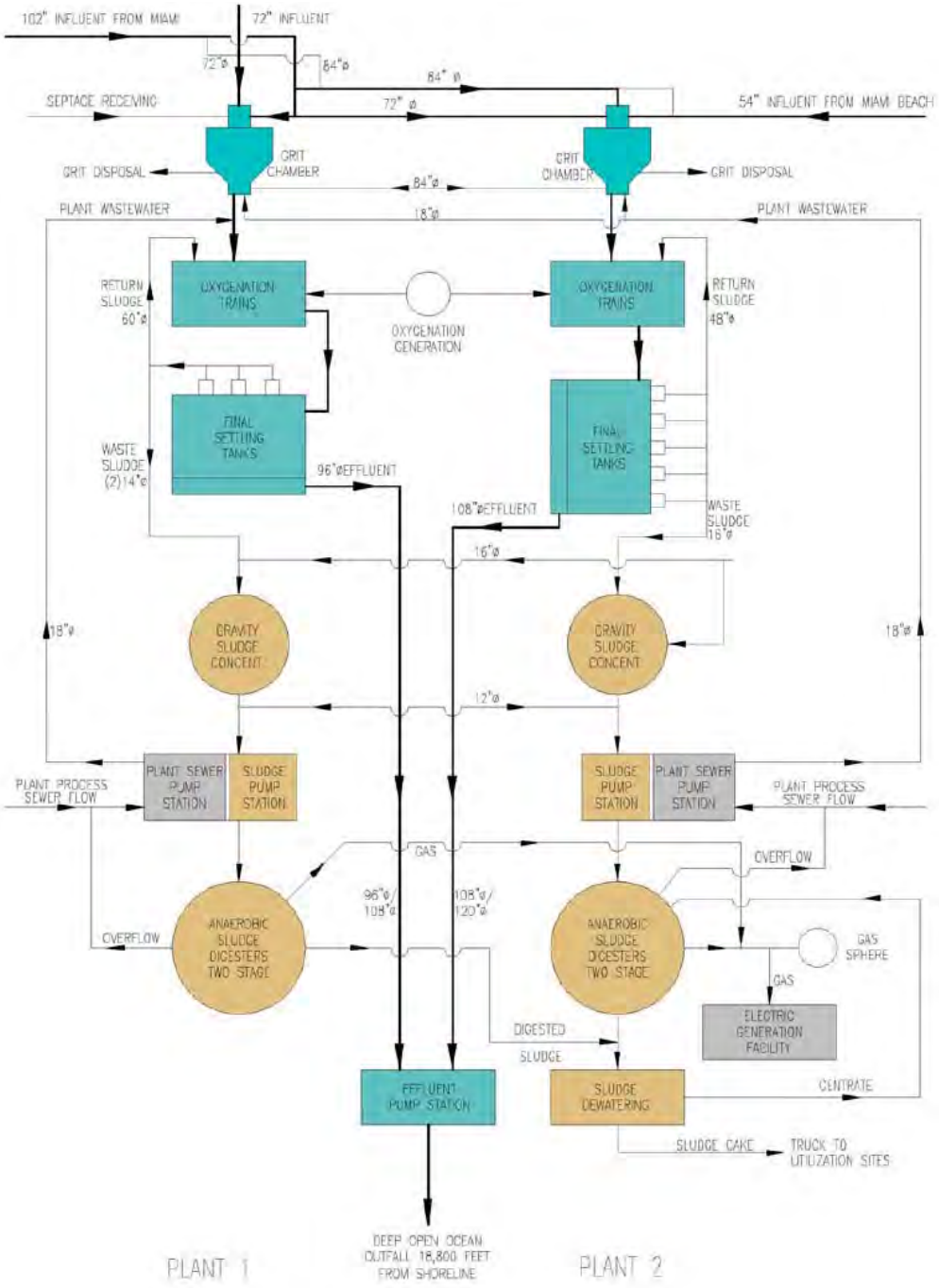


Figure 4-3 Process Flow Diagram Central District Wastewater Treatment Plant.

North District.

The North District plant approximate service area is shown in Figure 4-4, it extends from the Broward County line southward to approximately Okeechobee Road and 79th Street. The district includes the municipalities of Aventura, El Portal, Golden Beach, Hialeah, Hialeah Gardens, North Miami, Miami Lakes, Miami Shores, Opa-Locka, North Miami Beach, Sunny

Isles and unincorporated areas. Flows from the North District service area are pumped to the North District Wastewater Treatment Plant, located in North Miami along NE 151st Street, via three influent force mains 54-inch, 60-inch, and 72-inch lines.

A flow diagram of the plant is presented as Figure 4-5. The plant permitted capacity is 120 MGD.

A 54-inch force main carries flow from coastal areas within the district, while a 72-inch pipe transmits wastewater from western locations. Several loops provide alternative ties to the 72-inch force main. There is only one loop in the coastal areas connected to the 54-inch force main.

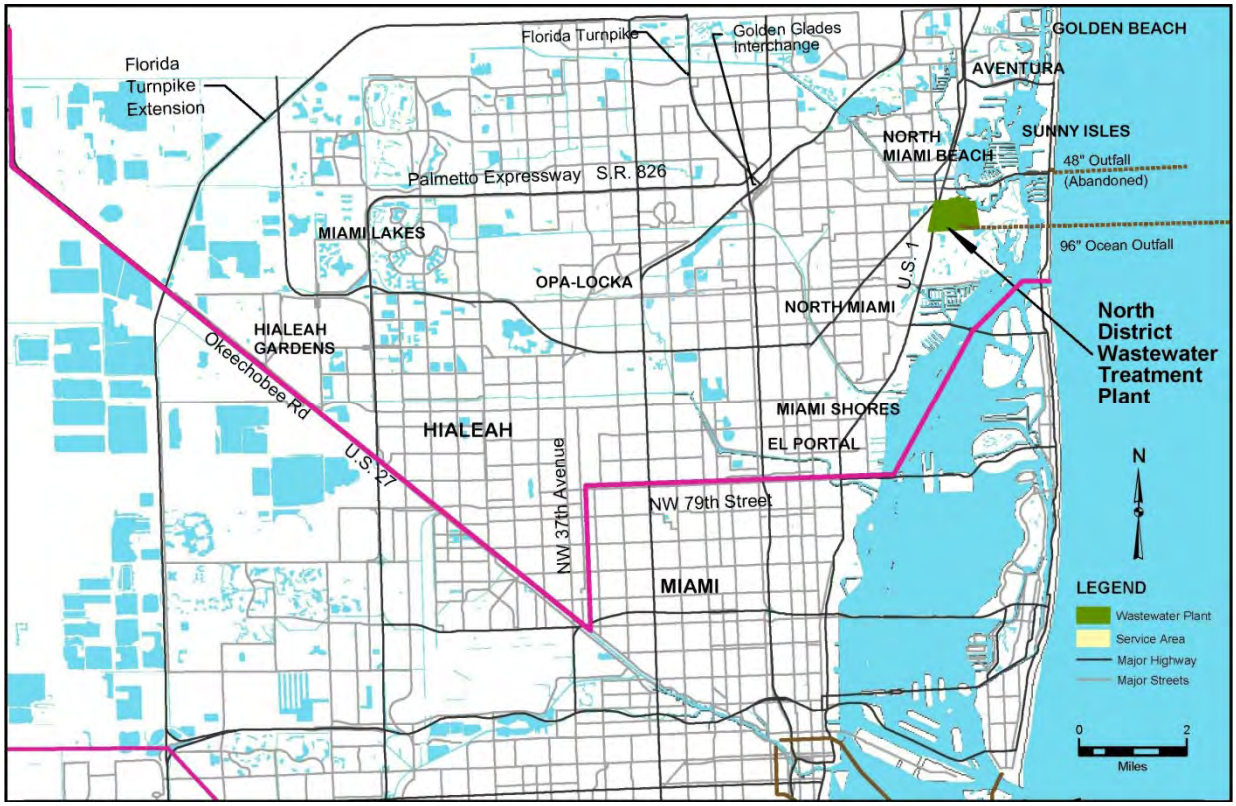


Figure 4-4 MDWASD North Wastewater District.

South District.

The South District Plant is located at Black Point in unincorporated Miami-Dade County. The approximate service area is shown on Figure 4-6. It includes large unincorporated areas and the Homestead Air Force Base, also the municipalities of City of Florida City, Village of Palmetto Bay, and the Village of Pinecrest.

A plant flow diagram is illustrated on Figure 4-7. The plant is fed by two 72-inch influent force mains and has a permitted capacity of 112.5 MGD. An expansion to 112.5 MGD that included construction of four additional injection wells has been completed and is currently undergoing operational testing.

The older developments in the north area of the South District are characterized by several collector pipe loops, though the number decreases toward the south. These collectors carry flow to either a 36-inch force main or a 60-inch force main that directs the flow southerly to the plant. Booster Pump Station Nos. 536 and 559 aid the delivery of wastewater southward. The service area south of the treatment plant is virtually without redundancy.

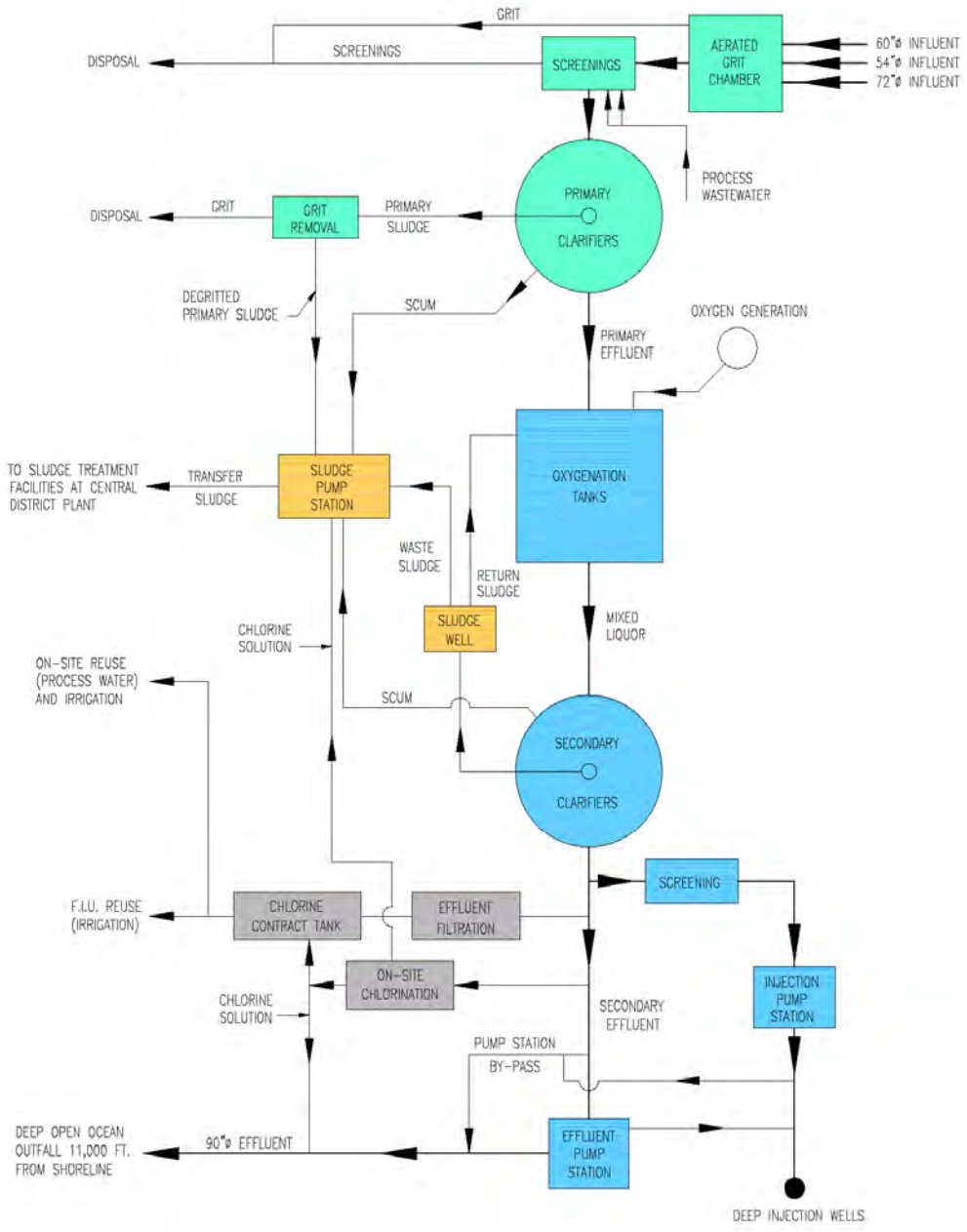


Figure 4-5 Process Flow Diagram for North District Wastewater Treatment.

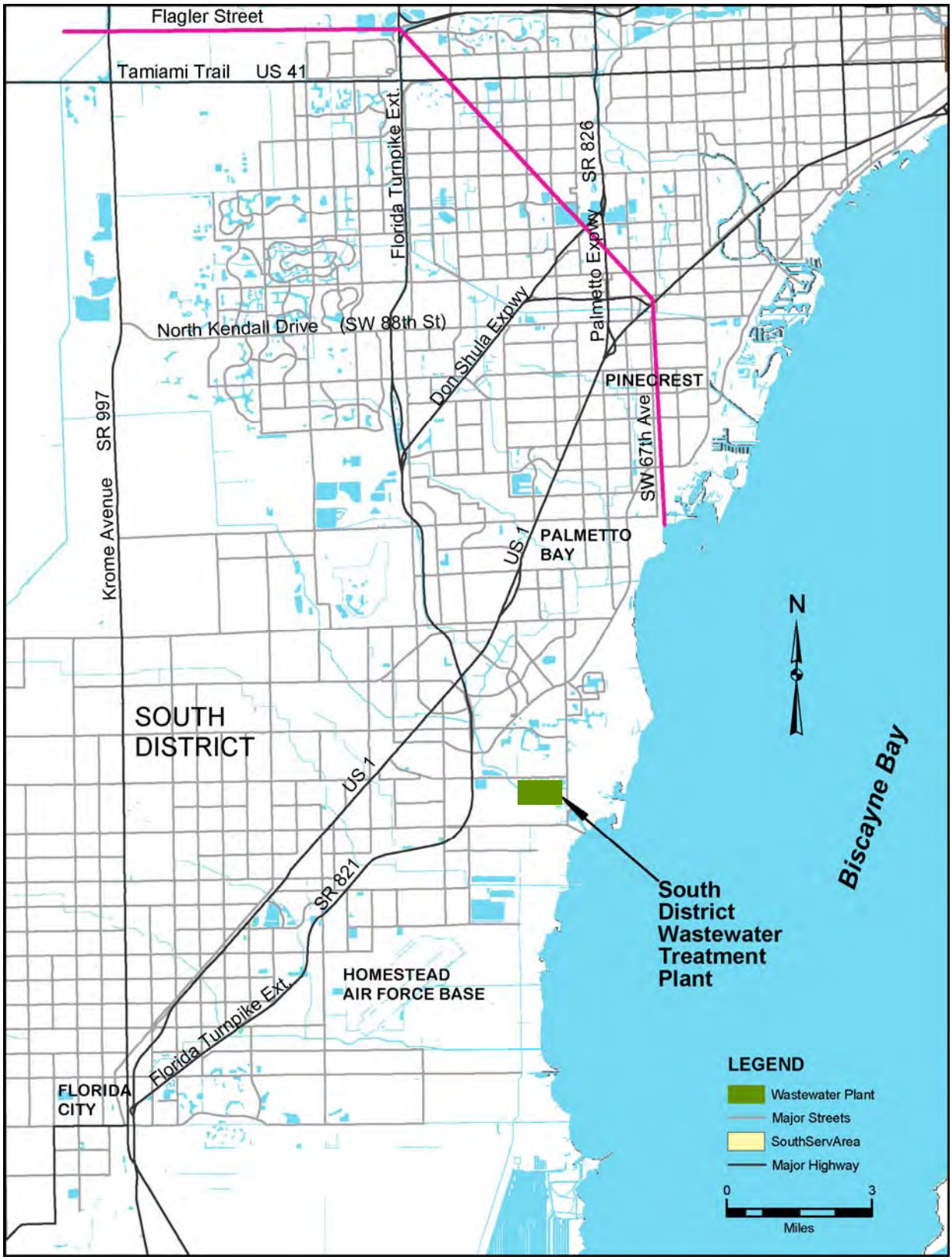


Figure 4-6 MDWASD South Wastewater District

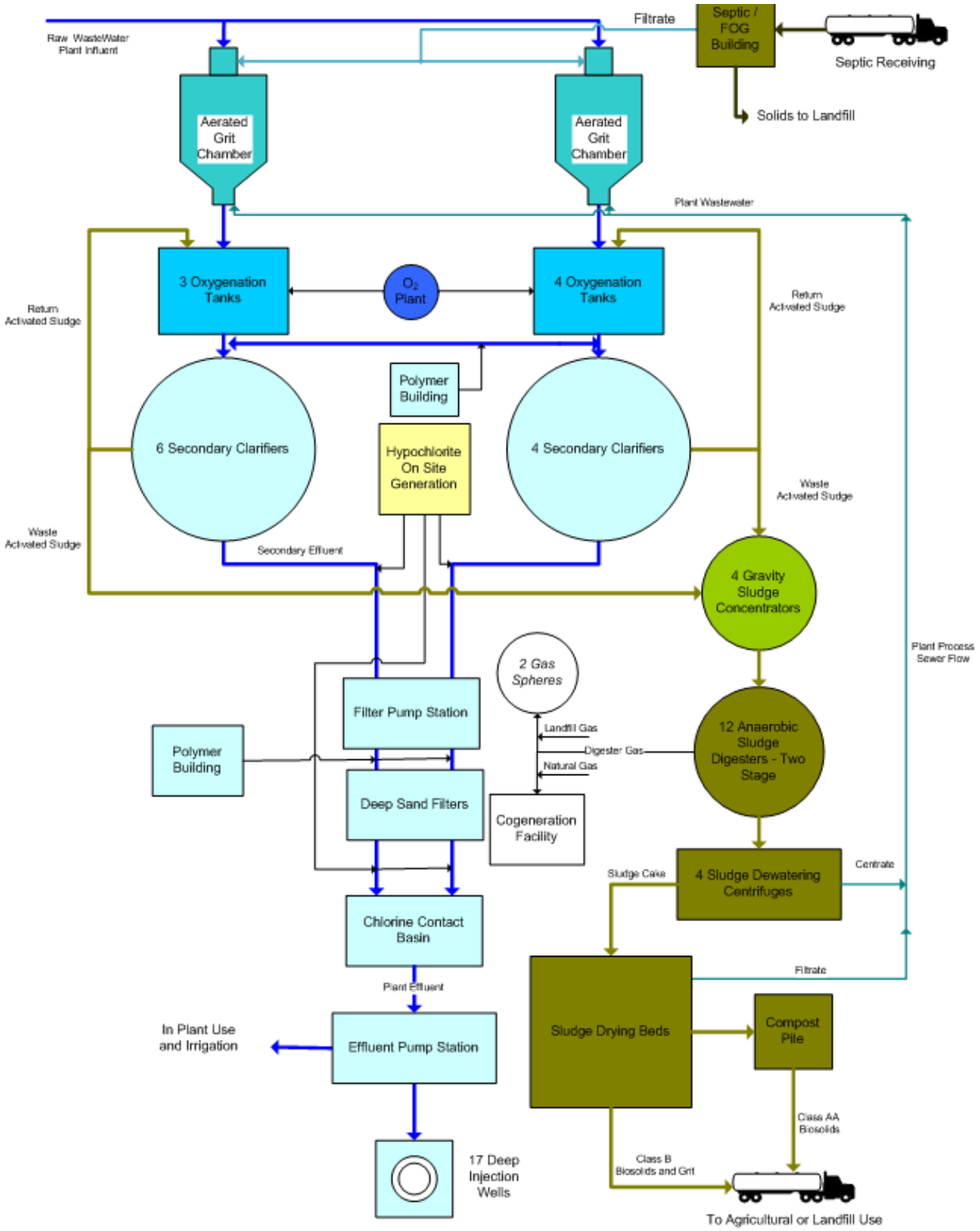


Figure 4-7 Process Flow Diagram for South District Wastewater Treatment.

RESPONSE ACTIONS

Upon verification and internal notification of an unpermitted discharge from the system, MDWASD's first reaction will be to determine a means to stop the discharge without resulting in a consequent overflow elsewhere in the system. At times this may not be possible as, for example, in the case where repair of a damaged pipe requires the closure of an upstream pump station. To the extent that a consequential discharge is unavoidable, every effort will be made to keep raw wastewater away from locations of public access. Protection of public health and safety is of paramount concern. In order of priority, MDWASD will endeavor to prevent discharges to residential areas, inland surface waters, and bay waters. Wherever possible, MDWASD will take advantage of system loops to divert flow to unaffected portions of the collection system. Thereafter, the failure will be corrected. Failure of a pump station may be mitigated through use of portable pumps and temporary piping.

Flow Diversions

Several pipe loops exist, but the collection network is not completely redundant. MDWASD cannot ensure that wastewater can be diverted away from all potential discharge locations. However, MDWASD is continually designing and adding bypasses to the system to increase its capacity to reroute flows as necessity dictates.

When possible, the quantity of wastewater discharged will be minimized by manipulating flow control devices to reroute flow through other pipelines. In instances where the notification plan is activated and flow reductions are necessary, MDWASD will encourage temporary reductions among its customers.

Diversions between Regional Treatment Systems

In the event that the leak or break occurs in a major force main or interceptor which transmits flow to one of the three regional plants, MDWASD may choose to divert portions of the wastewater flow to another region. The focal point for diversion among the regions is Pump Station No. 187 which MDWASD constructed in 1987 to provide a means of proportioning flow among the districts in order to maximize treatment levels. This station has a capacity of approximately 25 million gallons per day. Valves can be manipulated to direct flow between districts. The Pump Station has been upgraded to include header piping to allow for more versatility in diverting flows.

A schematic of the vital force mains through which flow is directed to each of the three districts is presented in Figure 4-8. The potential operating positions of the flow control valves at Pump Station No. 187 are illustrated in Figure 4-9.

Wastewater diverted to the North District Plant exits the diversion station through a 48- inch force main along NW 77th Avenue. The diversion flow is boosted at Pump Station No. 300 located at NW 30th Avenue and NW 135th Street and / or Pump Station No. 1310, located at NW 151st Street and 37th Avenue. Pump Station No. 300 was the subject of a design upgrade which is serving to increase the inter-district diversion capacity when other transmission system improvements are made. Both Pump Stations have an emergency generator to operate their electric pumps during a power outage. There are no diesel or dual drive pumps.

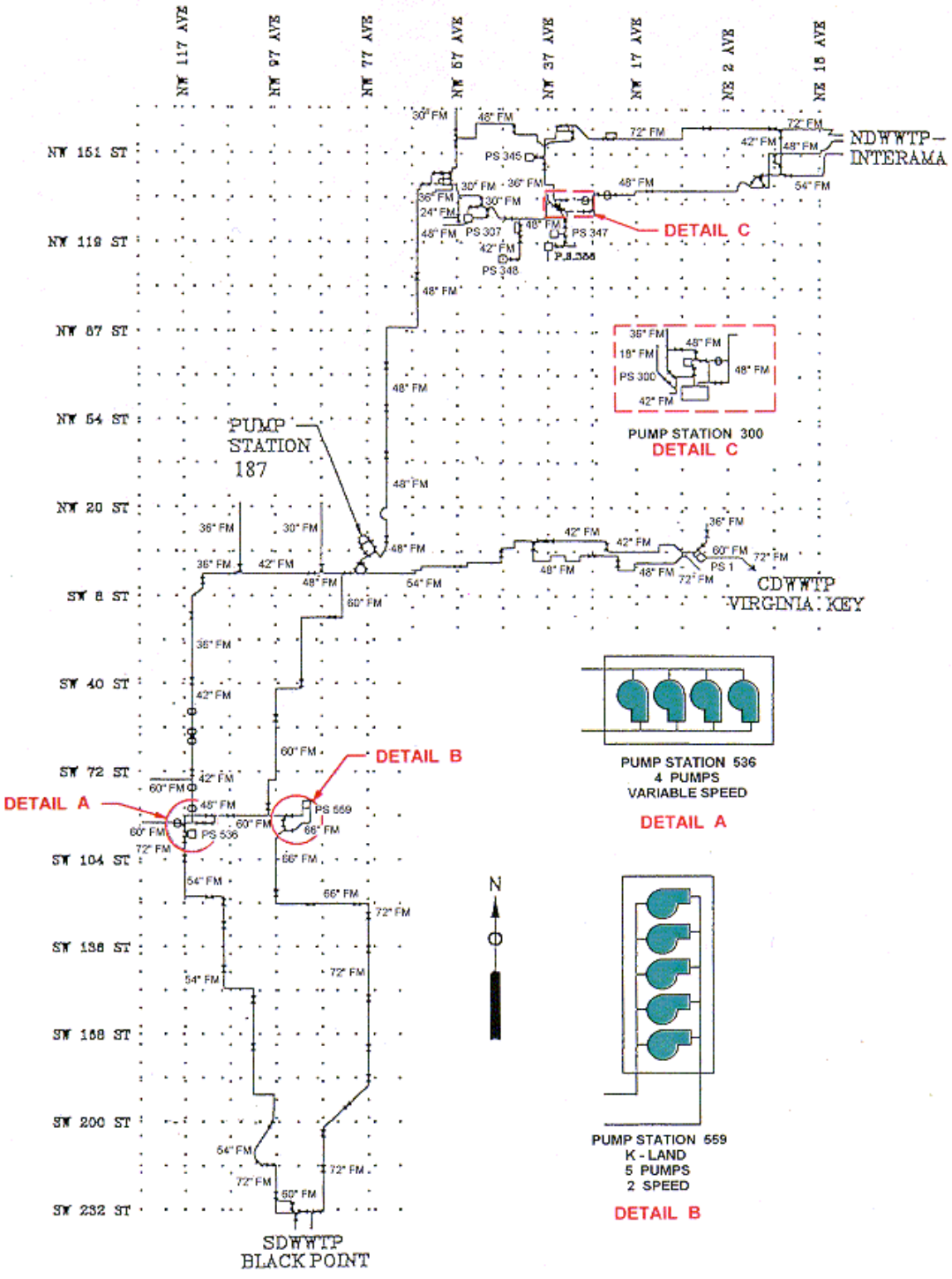


Figure 4-8 Inter-District Flow Diversion Network

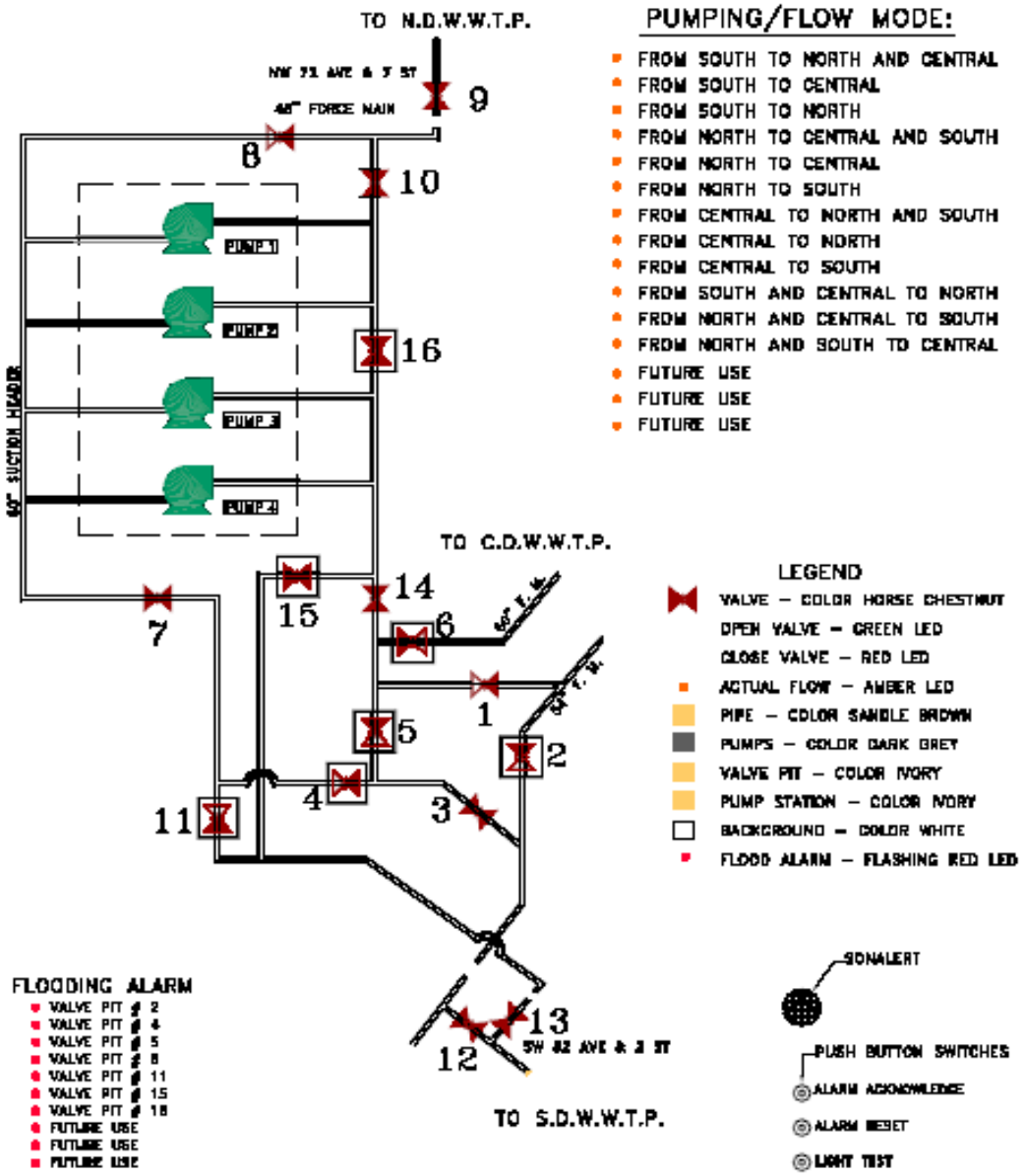


Figure 4-9 Flow Control at Pump Station No. 33-P1

Southerly diversions from Pump Station No. 187 would follow a 54-inch pipe to Flagler Street; from there the flow may be directed toward a 60-inch main below NW 82nd Avenue or a 36- inch main below NW 117th Avenue. A booster station with emergency generator capacity is located along each of these force mains. Pump Station No. 559 is located near the intersection of SW 97th Avenue and SW 88th Street. Station No. 536 is located near the intersection of SW 117th Avenue and SW 88th Street.

The choice of which plant(s) to divert flow will be made by the Assistant Director for Wastewater System Operations and the Pump Station Division Chief. The decision will be made in consideration of the current inflow rate at each plant and the capacities to accept greater flows without adverse treatment consequences. In the instance in which the alternative plants are being operated at or near capacity, flow usually will be sent to the North or Central Plant, since these have the greatest treatment and disposal capacity. The South District Plant is limited by its permitted capacity to discharge flow through its deep well injection system.

Flow diversion will be made regardless of whether the alternate plants are being operated at or above their rated capacities. While the increased quantity of flow may detract from the overall treatment efficiency, substandard treatment and disinfection would be superior to a direct discharge of raw wastewater.

In certain instances, MDWASD may take advantage of lagoons at the South District Plant for disposal. The lagoons have an average total capacity of 75 million gallons, three days holding at 25 MGD. In theory, the ponds could accept three days worth of diverted flow. Percolation should extend this capacity. There is no ability, however, to return wastewater from the ponds back into the plant for treatment.

REDUCTION OF WASTEWATER GENERATION

The collection system has limited capacity to divert wastewater flows from one district to another so a substantial quantity of wastewater may be released to surface waters in the event of a major system failure. In recognition of the potential health and environmental concerns that this action would bring, MDWASD has evaluated methods by which the quantity of wastewater generated within the system can be reduced. These methods may be categorized as either voluntary or mandated.

Voluntary methods of wastewater reduction require the purposeful cooperation of water system users to reduce consumption during an emergency. It is MDWASD's responsibility to advise its customers of an emergency and the steps that can be taken to reduce consumption.

The public will be notified through releases and official statements to local media (see Section 2 - Public Information Plan), while certain consumers and county agencies will be called by MDWASD personnel asking that cutbacks be made.

Reductions by County Agencies

MDWASD has the ability to communicate via the County Portal to advise county employees of measures which they can take to reduce discharges when an emergency is declared. When an emergency arises, the agencies within the service area of the spill will receive an e-mailed/or faxed notification from MDWASD with a request to implement water use reduction strategies. County agencies and responsible contact persons are identified in Table 4-2. The agencies will be requested to cease non-essential water uses, which generate waste discharges, and to post notices in common areas.

Table 4-2
MIAMI-DADE COUNTY DEPARTMENTS/AGENCIES/OFFICES DIRECTORY
(Revised: December 2014)

Department/Agency/Office	Telephone No.	Fax No.
ADA Coordination, Office of (Division of Internal Services Dept.)	(305) 375-3566	N/A
Administrative Office of the Courts	(305) 349-7000	(305)349-7003
Adrienne Arsht Center for the Performing Arts (Division of Cultural Affairs)	(786) 468-2000	(786) 468-2001
Animal Services	(305) 884-1101	(305) 805-1619
Audit and Management Services	(786) 469-5900	(786) 469-5933
Aviation Department	(305) 876 7000	(305) 879-0948
Board of County Commissioners	(305) 375-4696	(305) 372-6090
Citizen's Independent Transportation Trust	(305) 375-1357	(305) 375-4605
Clerk, Circuit and County Courts	(305) 349-7333	(305) 349-7403
Commission Auditor	(305) 375-4354	(305) 375-3096
Commission on Ethics and Public Trust	(305) 579-2594	(305) 579-0273
Communications, Office of the Mayor	(305) 375-1545	(305) 375-3304
Community Action and Human Services	(786)469-4600	N/A
Community Advocacy	(305) 375-5730	(305) 375-5715
Community Information and Outreach	(305) 468-5900	(305) 375-2004
Corrections & Rehabilitation	(786) 263-7000	(786) 263-6127
County Attorney, Office of	(305) 375-5151	(305) 375-5634
Cultural Affairs	(305) 375-4634	(305) 375-3068
Economic Advocacy Trust	(305) 375-5661	(305) 375-5651
Elections Department	(305) 499-8683	(305) 499-8547
Finance Department	(305) 375-5080	(305) 375-4966
Fire Rescue	(786) 331-5000	(786) 331-5101
Homeless Trust	(305) 375-1490	(305) 375-2722
Housing Finance Authority	(305) 499-8743	(305) 392-2722
Independent Review Panel	(305) 375-4880	(305) 375-4879
Information Technology Services	(305)596-8200/8700	(305) 596-8072
Intergovernmental Affairs (Division of Board of County Commissioners)	(305) 375-5600	(305) 375-5639
Internal Services	(305) 375-2363	(305) 372-6084
Jackson Memorial Hospital (Public Health Trust)	(305) 585-7137/6750	(305) 585-5355
Juvenile Services Department	(305) 755-6200	(305) 755-6146
Libraries	(305) 375-2665	(305) 375-5545
Management and Budget	(305) 375-5143	(305) 372-5168
Mayor of Miami-Dade County, Office of the	(305) 375-5071	N/A
Medical Examiner	(305) 545-2400	(305) 545-2412
Metropolitan Planning Organization	(305) 375-4507	(305) 375-4950
Miami Art Museum	(305) 375-3000	(305) 375-1725
Parks, Recreation, and Open Spaces	(305) 755-7903/7800	(305) 755-7946
Police Department, Miami-Dade	(305) 471-2100	(305) 471-2163

Table 4-2 MIAMI-DADE COUNTY DEPARTMENTS/AGENCIES/OFFICES DIRECTORY (Revised: December 2014)		
Department/Agency/Office	**Telephone No.**	**Fax No.**
Property Appraisal Department	(786)375-4712	(305) 679-7940
Public Housing and Community Development	(786) 469-4156	(786) 469-4222
Public Works & Waste Management Department	(305) 375-2960	(305) 375-3070
Regulatory and Economic Resources (RER)	(305) 375-3076	(305) 372-6893
Regulatory and Economic Resources (Building)	(786) 315-2332	(786) 315-2929
Seaport (Port of Miami)	(305) 347-4844	(305) 347-4852
Senior Advocate	(305) 375-3098	N/A
South Florida Workforce	(305) 594-7615	(305) 470-5519
Tax Collector (A Division of Finance)	(305) 375-5448	(305) 375-4214/1142
Transit	(786) 469-5675	(786) 469-5580
Vizcaya Museum and Gardens	(305) 250-9133	(305) 285-2004
Water and Sewer Department	(786) 552-8156	(786) 552-8639

Reductions by Commercial and Industrial Customers

Due to the large number of commercial and industrial customers, it is not feasible to contact each individually. However, those customers within the areas affected by the spill and who discharge an average of 100,000 gallons per day will receive direct contact from MDWASD. MDWASD will rely upon press releases to inform smaller customers as well as the general public.

MDWASD will distribute educational bulletins for posting in advance of an emergency situation. Table 4-3 presents a list of commercial and industrial customers who will be contacted under emergency circumstances. Cooperation among these users will vary. Customers whose business is dependent on water use may be reluctant to cooperate, while customers who are less dependent on water use may participate in the emergency conservation efforts.

Table 4-3 INDUSTRIAL/PRETREATMENT PERMIT HOLDERS Discharging 100,000 GPD or Greater (Last verify/update: December 2014)			
Corporation Name/ Address	**Contact Person Telephone & Fax**	**Permit No.**	**Flow Rate (gpd)**
Atlas Paper Mills 3725 E 10 Ct Hialeah, FL 33013	Carlos Sone T: (305) 835-8046 F: (305) 691-6018	IWP-100	230,000
Cliff Berry, Inc. Miami Terminal 3033 N.W. N. River Dr. Miami, FL 33142	Cliff Berry II T: (305) 638-2030 F: (954) 763-8375	IWP-108	210,040
Aramark Uniform Services 160 Ali Baba Ave. Opa-Locka, Fl 33054	Dan Jurczak T: (305) 681-3521 F: (305) 688-1328	IWP-129	100,000
Dean Dairy Holdings, LLC 6851 NE 2 Ave.	Robert Megee T: (305) 795-7700/7714	IWP-131	183,000

Table 4-3
INDUSTRIAL/PRETREATMENT PERMIT HOLDERS
Discharging 100,000 GPD or Greater
(Last verify/update: December 2014)

Corporation Name/ Address	Contact Person Telephone & Fax	Permit No.	Flow Rate (gpd)
Miami, Florida 33138	F: (305) 795-7736		
Perko, Inc. 16490 NW 13 Ave. Miami, FL 33169	Frederick Perkins T: (305) 621-7525 F: (305) 620-9978	IWP-75 IWP-154	17,000 173,000
Consolidated Dye, LLC 9002 NW 106 Street Medley, Florida 33178	Lino Alvarez T: (305) 883-2242 F: (305) 885-1704	IWP-158	110,000
Medley Landfill & Recycling Center 9350 NW 89 Ave. Medley, Florida 33178	Mr. Armand Joe Gagne III T: (305) 883-7670 F: (305) 883-7758	IWP-257	110,000
South Dade Landfill 23707 SW 97 Ave. Miami, Florida 33032	German Hernandez, P.G. T: (305) 514-6673 F: (305) 514-6874	IWP-273	320,000
Resources Recovery Facility 6990 NW 97 Avenue Miami, Florida 33178	German Hernandez, P.G. T: (305) 514-6673 F: (305) 514-6874	IWP-309	106, 000
Combined Services, Inc. 2358 NW 151 Street Opa-Locka, Florida 33054	Michael Labate T: (305) 685-7219 F: (305) 685-6388	IWP-311	120,000
Borden Dairy Company of Florida 501 NE 181 Street Miami, Florida 33162	Scott Schultz T: (305) 652-3720 F: (305) 655-0354	IWP-317	130,000
Beverage Corporation International 3550 NW 110 Street Miami, Florida 33167	Janell Bellinger T: (305) 714-7000 F: (305) 769-1572	IWP-322	150,000
The American Bottling Company 5900 NW 72 Ave Miami, Florida 33166	Steve Landsgaard T: (305) 887-6535 / (904) 739-1000 F: (305) 885-8410 / (904) 737-2880	IWP-331	105,087
North Dade Landfill 21500 NW 47 Ave. Miami, Florida 33126	German Hernandez, P.G. T: (305) 514-6673 F: (305) 514-6874	IWP-333	300,000
Meca Knitting, LLC 6768 NW 37 Court Miami, Florida 33147	Amancio Suarez T: (305) 836-1300 x13 F: (305) 836-3595	IWP-351	230,000
McArthur Dairy West 3000 NW 123 St. Miami, FL 33167	Robert Megee T: (305) 795-7700/7714 F: (305) 795-7736	IWP-355	115,000
MDWASD Northwest Well Field Sludge 13680 NW 58 Street Miami, Florida 33178	Bill Johnson T: (786) 552-8156 F: (786) 552-8639	IWP-417	1,900,000
Norwood Oeffler Water Treatment 19150 NW 8 Ave North Miami Beach, Florida 33169	Dr. Jeff Huran An T: (305) 787-6049 F: (305) 957-3502	IWP-438	6,500,000

Reductions by the General Public

As stated above, notice of an emergency condition caused by a failure will occur through press releases. Upon declaration of an emergency, an advisory will be sent immediately to the media as prescribed in Section 2 - Public Notification Plan. These will be followed by periodic updates which will remind the public of measures which should be taken to reduce wastewater generation

REDUCED WATER SUPPLY SYSTEM PRESSURE

MDWASD controls most of the water service in the wastewater treatment districts, so it has the opportunity to achieve a modest level of flow control through water supply operations. Appendix 4A offers a concept analysis which relates water system pressure to typical domestic water usage. The analysis indicates that residential wastewater generation would be reduced by only 3 percent if water pressure reduction was the sole action taken to reduce wastewater flows. The impact of system pressure reduction on wastewater produced by industrial and commercial sectors is not known.

During an emergency condition, MDWASD will reduce water system pressure to 55 pounds per square inch (psi) if a major overflow develops in the collection system. The impacts on the water system will be monitored to ensure water supply reliability is not impeded. In particular, pressure increases for firefighting will take precedent.

Because of wastewater travel time variables, liabilities for fire fighting, impacts to customer's water use expectations, and the relatively low volume reductions anticipated, water system pressure controls are not considered a significant volume control procedure for most cases of unpermitted discharges.

INFILTRATION CONTROL

If there was a major failure within the collection system such that the duration of the repair period may exceed 48 hours, wastewater flow reduction efforts may be enhanced by lowering groundwater elevations to reduce infiltration. Data and analyses developed by MDWASD are presented in Appendix 4B. There exists a striking correlation between histograms of groundwater elevations and wastewater treatment plant flows. Additional study is needed to quantify this approach to emergency flow control.

APPENDIX 4A

WATER SYSTEM PRESSURE REDUCTION STUDY

A concept study and MDWASD testing are considered below to analyze the impacts of reducing wastewater flows by a reduction in water system pressures.

CONCEPT STUDY

A reduction of water system pressure is believed to reduce water consumption. However, customers are likely to change their water use habits to accommodate decreases in pressure resulting in relatively little water conservation. Moreover, since less than half of residential consumption (flow) is affected by pressure, a small percent reduction of return flow (wastewater) is expected.

Flow within a water system is the product of the velocity and cross sectional area of distribution piping. Velocity is proportional to the square root of the system pressure. Thus, for a given service area, the influence of water pressure reductions can be correlated to flow.

A typical range of municipal water system pressures is 50 to 70 psi. Low-end pressures are satisfactory for residential areas, while business districts and industrial areas tend to be on the upper end. For fire fighting, pressures of 50 to 60 psi generally are required. Pressure and velocity relationships resulting from pressure decreases of 5, 10, and 15 psi are shown in Table 4A-1 and Figure 4A-1.

The velocity (flow) reductions under typical system pressures vary from 3.6 to 12.3 percent for 5 to 15 psi, respectively. For a generalized situation, a 10 psi water system pressure reduction is realistic. Using the pressure and velocity relationships, a consumptive flow reduction of about eight percent is expected.

Table 4A-1 PRESSURE AND VELOCITY RELATIONSHIPS			
Pressure	**Percent Velocity Decreases with Pressure Reductions**		
psi	**5 psi**	**10 psi**	**15 psi**
65	3.64		
60	3.92	7.42	
55	4.26	8.01	11.36
50	4.65	8.71	12.29

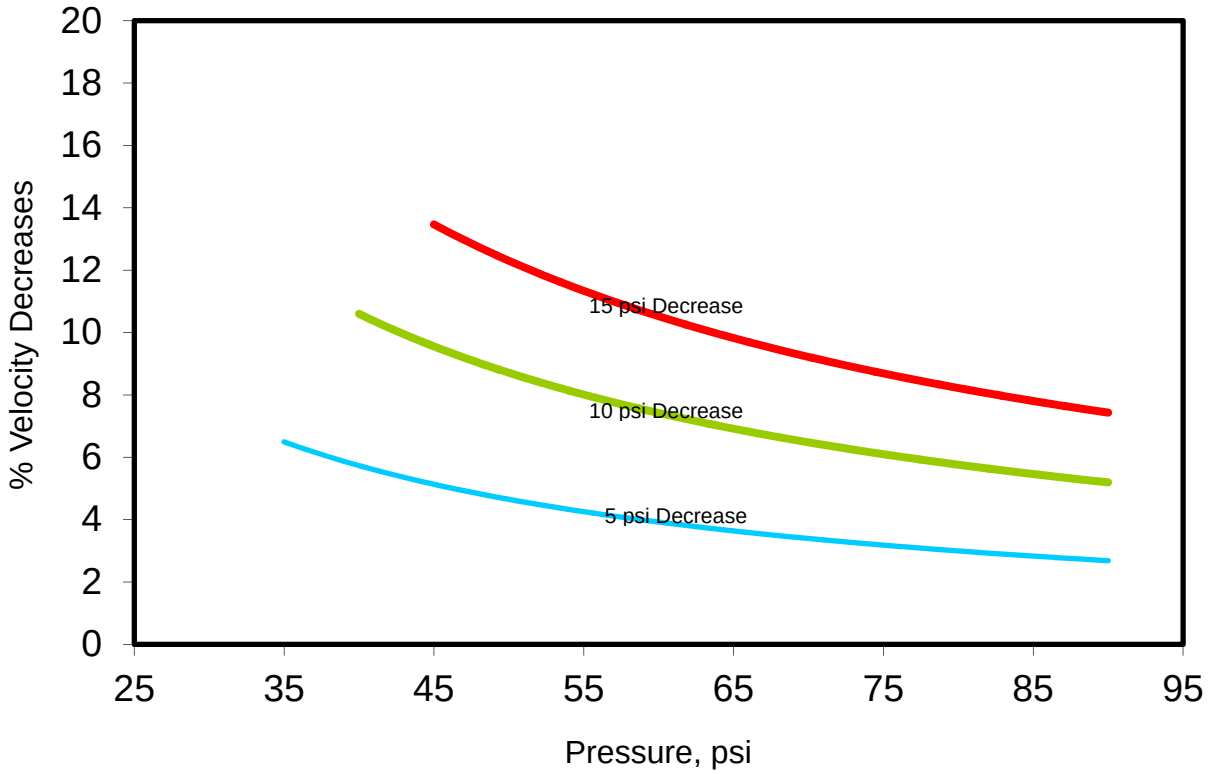


Figure 4A-1. Velocity and Pressure Change Relationship.

Information on return flows is service area specific, but residential flows are somewhat predictable. Table 4A-2 shows common distributions of residential water uses. Since volume controls toilet flushing, clothes washing, baths, and dishwashers, pressure will not affect some 67 percent of residential water use. In the short term, the remaining 33 percent from showers and faucets will be reduced by a nominal eight percent. Thus, for a 10 psi water system pressure reduction, residential wastewater flows are estimated to decrease by about 2.6 percent.

In addition, this evaluation suggests more significant levels of flow control can be obtained by users. For example, residential wastewater controls (approaching 50 percent reductions) may be achieved by reduced toilet flushing and dishwasher use and suspended use of clothes washers for a short, repair period.

Table 4A-2 TYPICAL DISTRIBUTION OF RESIDENTIAL INTERIOR WATER USE	
Use	**Percent of Total**
Toilet Flushing	34
Showers	21
Clothes Washing	21
Faucets	12
Baths	9
Dishwashers	3

SYSTEM TESTING

During the summer of 1993, MDWASD conducted a limited study of impacts of pressure changes on the Miami-Dade County water system. A comparison of water system pressure changes, water supply flows, wastewater treatment plant flows, and ratios of wastewater to water supply flows is shown in Table 4A-3. Results from this limited testing are not conclusive. Rainfall, water table, weekday and holiday use patterns, and other factors seemed to have over shadowed impacts from pressure changes during the period.

Table 4A-3 WATER SYSTEM PRESSURE STUDY				
Date	**Pressure (psi)**	**Water Supply - (MGD)**	**Wastewater Flow - (MGD)**	**Return Ratio**
6/17/93	70	351	301	0.86
6/18/93	65	353	309	0.88
6/19/93	70	352	301	0.86
6/20/93	65	348	302	0.87
6/21/93	70	354	299	0.84
6/22/93	65	357	307	0.86
6/23/94	70	355	301	0.85
6/24/93	65	338	315	0.93
6/25/93	64	331	309	0.93
6/26/93	66	324	318	0.98
6/27/93	66	323	314	0.97
6/28/93	62	334	323	0.97
6/29/93	70	341	310	0.91
6/30/93	60	344	304	0.88
7/1/93	70	335	305	0.91
7/2/93	76	341	313	0.92
7/3/93	74	340	301	0.89
7/4/93	75	338	289	0.86
7/5/93	66	346	292	0.84

Appendix 4B

GROUNDWATER LEVEL CONTROL

Data collected from January 1989 through June 1993, at seven groundwater wells throughout Miami-Dade County (Figure 4B-1), was used to assess the impacts of fluctuating groundwater levels on treatment plant flows. Groundwater elevations from the U.S. Geologic Survey and average daily treatment plant wastewater flow rates are presented in Table 4B-1. A correlation between wastewater flows and groundwater elevations is demonstrated on Figure 4B-2. At the end of this section, plant wastewater flows are compared with groundwater elevations at individual wells are presented in Figures 4B-4 - 4B-10.

The mechanism for this relationship may be explained by the presence of, and pressure exerted by, the groundwater on the wastewater pipes. As groundwater elevations rise and fall, wastewater pipes become subject to differing external water pressures. Leaking pipes subject to rising groundwater receive increased inflow. As groundwater falls to its average depth, which is often higher than wastewater pipe depths, pressure and infiltration decrease.

The purposeful lowering of groundwater elevations can produce an unwanted side effect. The same leaking pipes that would allow groundwater to infiltrate would also exfiltrate wastewater when the water table is lowered. However, exfiltration quantities should be relatively low due to the small difference in water levels and the low pressure which exists in most wastewater pipes.

Groundwater levels are influenced by many factors, including surface water hydrology. In Dade County, shallow water tables not only occur naturally, but are influenced by manmade and controlled locks and canals. These control systems are administered through the South Florida Water Management District (SFWMD) and the Stormwater Division of Miami-Dade Department of Regulatory and Economic Resources (RER). Given the apparent relationship between groundwater levels and wastewater flows, it is conceivable that canal management systems could be implemented to lower groundwater tables when the need reduce wastewater flows arises.

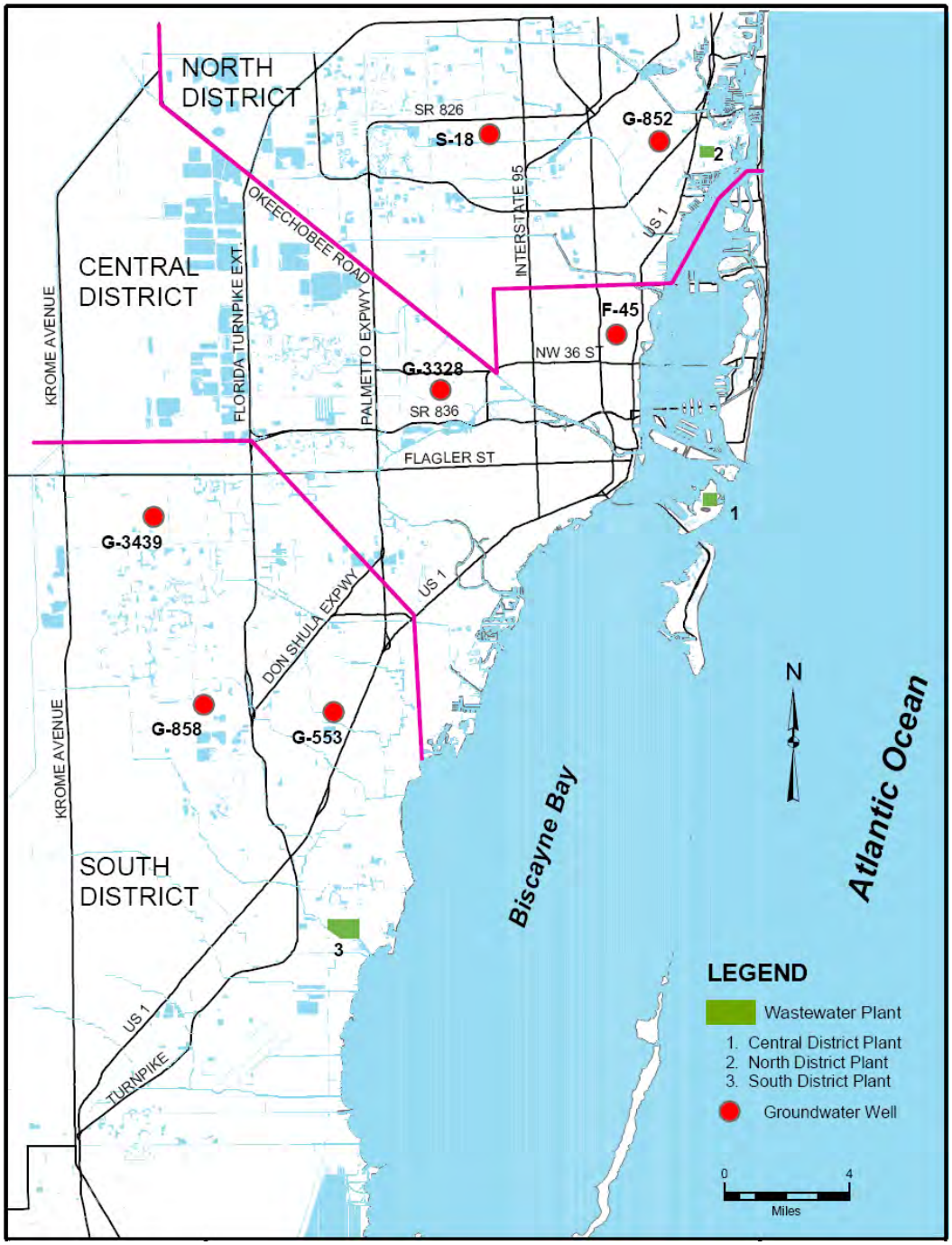


Figure 4B-1 Location of Groundwater Wells and Wastewater Treatment Plants.

Table 4B-1
WASTEWATER FLOWS AND GROUNDWATER ELEVATION

Date	Regional Wastewater Flows (MGD)	MEAN GROUNDWATER ELEVATION, FT NVGD (Data provided by the USGS)							
		F45	G852	G3328	S-18	G553	G858	G3439	AVG
1/89	244.3		1.48	1.67	1.87	2.61	3.68	3.35	2.44
2/89	243.7	1.49	1.58	1.55	1.78	2.35	3.07	3.40	2.17
3/89	250.3	1.81	1.72	1.80	1.86	2.14	2.77	2.99	2.16
4/89	245.5	1.85	2.98	1.88	1.65	2.13	2.80	3.10	2.34
5/89	249.1	1.68	3.74	1.40	1.95	2.80	3.12	3.16	2.55
6/89	265.3	1.87	1.90	1.44	1.80	2.54	2.50	2.74	2.11
7/89	289.9	2.05	1.83	2.15	2.22	3.28	4.45	3.45	2.78
8/89	289.2	3.12	2.53	2.76	2.39	3.69	4.66	4.51	3.38
9/89	287.3	2.15	1.80	2.26	2.05	3.01	4.19	3.80	2.75
10/89	277.8	2.01	1.83	2.22	2.01	3.11	4.14	3.35	2.67
11/89	266.3	1.87	1.76	1.98	2.15	2.80	4.08	3.99	2.66
12/89	251.9				1.93				1.93
1/90	242.3	1.42	1.36	1.51	1.78	2.22	2.61	2.91	1.97
2/90	231.7	1.40	1.31	1.46	1.69	1.99	2.45	2.85	1.88
3/90	242.7	1.49	1.25	1.62	1.53	2.40	2.73	3.12	2.02
4/90	276.2	2.70	2.29	2.32	2.43	3.25	2.99	2.99	2.71
5/90	270.7	2.01	1.74	1.71	2.05	2.25	2.19	2.64	2.08
6/90	289.6	2.04	2.66	2.09	2.12	3.16	3.28	3.65	2.71
7/90	283.7	1.95	1.71	2.21	2.05	3.76	3.79	3.50	2.71
8/90	320.6	2.24	2.06	2.44	2.32	4.20	4.88	4.44	3.23
9/90	312.2	2.34	1.89	2.40	2.12	3.83	4.05	3.99	2.95
10/90	321.8	2.64	2.24	2.49	2.40	4.22	4.48		3.08
11/90	293.9	2.10	1.83	2.33	2.07	3.44	3.84	3.72	2.76
12/90	263.8	1.80	1.66	1.95	1.93	2.81	2.99	2.96	2.30
1/91	272.7	1.83	1.63	1.79	1.99	2.26	2.36	2.39	2.04
2/91	273.3	1.98	1.79	1.80	2.39	2.06	2.44	2.40	2.12
3/91	269.6	2.01	1.81	1.91	2.22	2.19	3.42	2.76	2.33
4/91	271.4	2.04	1.71	2.01	2.36	2.02	3.36	2.49	2.28
5/91	272.2	2.01	1.84	1.94	2.40	2.19	2.72	2.81	2.27
6/91	319.0	2.57	2.18	2.39	2.48	4.08	4.74	4.26	3.24
7/91	312.7	2.66	2.12	2.44	2.28	4.20	4.76	4.93	3.34
8/91	298.1	2.43	1.90	2.23	2.17	3.98	4.82	4.78	3.19
9/91	339.3	2.81	2.41	2.71	2.51	4.20	4.54	5.25	3.49
10/91	407.3	4.87	3.56	3.24	3.15	4.72	4.39	5.68	4.23
11/91	329.7	2.66	2.13	2.44	2.25	3.99	4.44	5.31	3.32
12/91	288.4	1.75	1.55	2.10	1.84	3.13	3.73	3.16	2.47
1/92	289.0	2.01	1.95	2.10	2.01	2.91	3.42	3.13	2.50
2/92	291.8	1.99	1.78	2.17	1.96	2.92	3.84		2.44
3/92	279.2	2.16	1.83	2.27	2.16	3.57	4.03	3.83	2.84
4/92	289.1	2.19	2.03	2.25	2.62	3.62	4.03	3.77	2.93
5/92	264.8	1.78	1.69	1.94	1.88	2.84	3.37	3.34	2.41
6/92	325.5	3.65	3.96	2.68	2.00	5.80	8.44	6.07	4.66
7/92	320.5	3.60	3.60	2.50	3.17	4.86	4.12	6.07	3.99
8/92	299.2	2.66	2.81	2.73	2.54	3.68	4.77		3.20
9/92	313.2	2.61	2.35	2.39	2.30	3.98	6.19	6.16	3.71
10/92	335.8	2.69	2.73	2.27	3.00	4.04	4.83	5.20	3.54
11/92	366.9	5.55	5.55	3.64	4.10		5.29	5.91	5.01
12/92	312.6	3.22	2.44	2.30	2.29		4.73	5.32	3.38
1/93	341.3	3.28	3.19	2.42	2.89	1.41	6.05	5.64	3.55
2/93	304.6	2.30	2.17	2.13	2.03	3.98	4.62	4.79	3.15
3/93	292.2	2.31	2.09	1.92	1.71	3.47	4.72	5.14	3.05
4/93	299.8	3.01	2.49	2.27	2.13	4.20	8.06	5.17	3.90
5/93	288.5	1.61	2.28	1.99	2.23	3.72	4.36	5.47	3.09
6/93	317.4	2.52	2.32	2.27	2.26	4.95	8.12	5.81	4.04

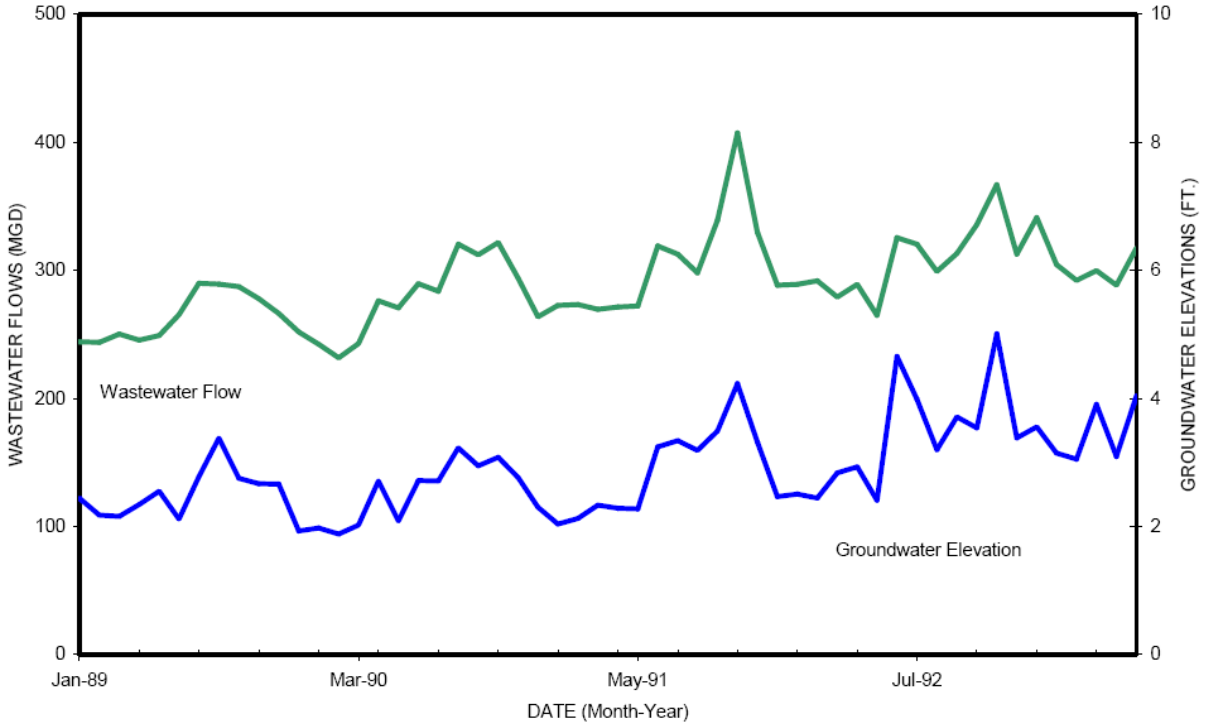


Figure 4B-2 Groundwater Elevations and Wastewater Treatment Plant Flow Rates

However it also must be realized that groundwater moves quite slowly and that the canals (Figure 4B-3) are relatively far apart. The small increase in the hydraulic gradient which might be achieved through the lowering of the canals by one of several feet will not produce an immediate effect on groundwater elevations in most areas.

Given the groundwater/wastewater correlation and some ability to manage the groundwater table, it appears worthwhile for MDWASD and the SFWMD to conduct a study to verify and quantify the magnitude of control and the time needed to produce an appreciable change in wastewater flows. Follow-up work may be warranted to address implementation.

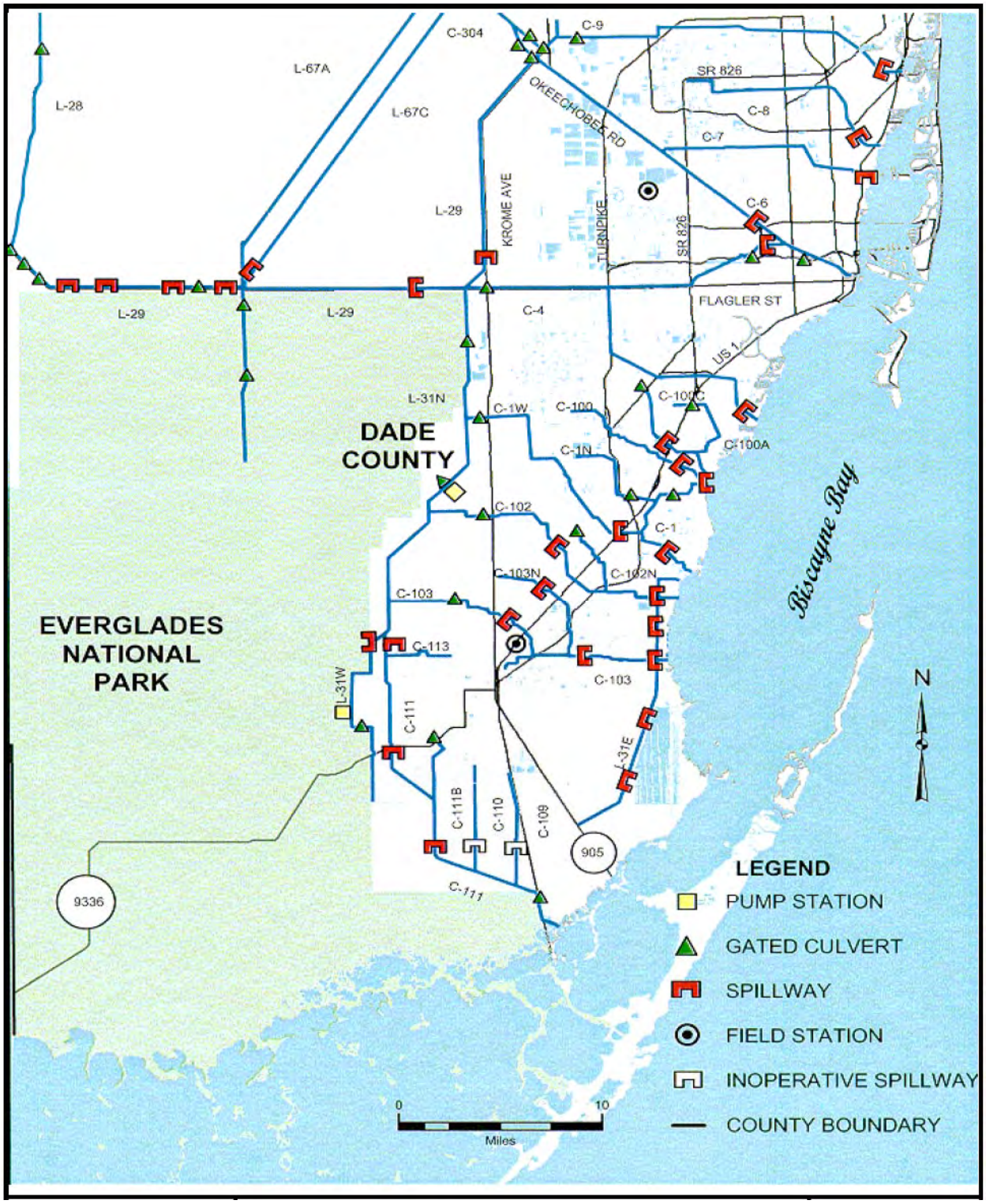
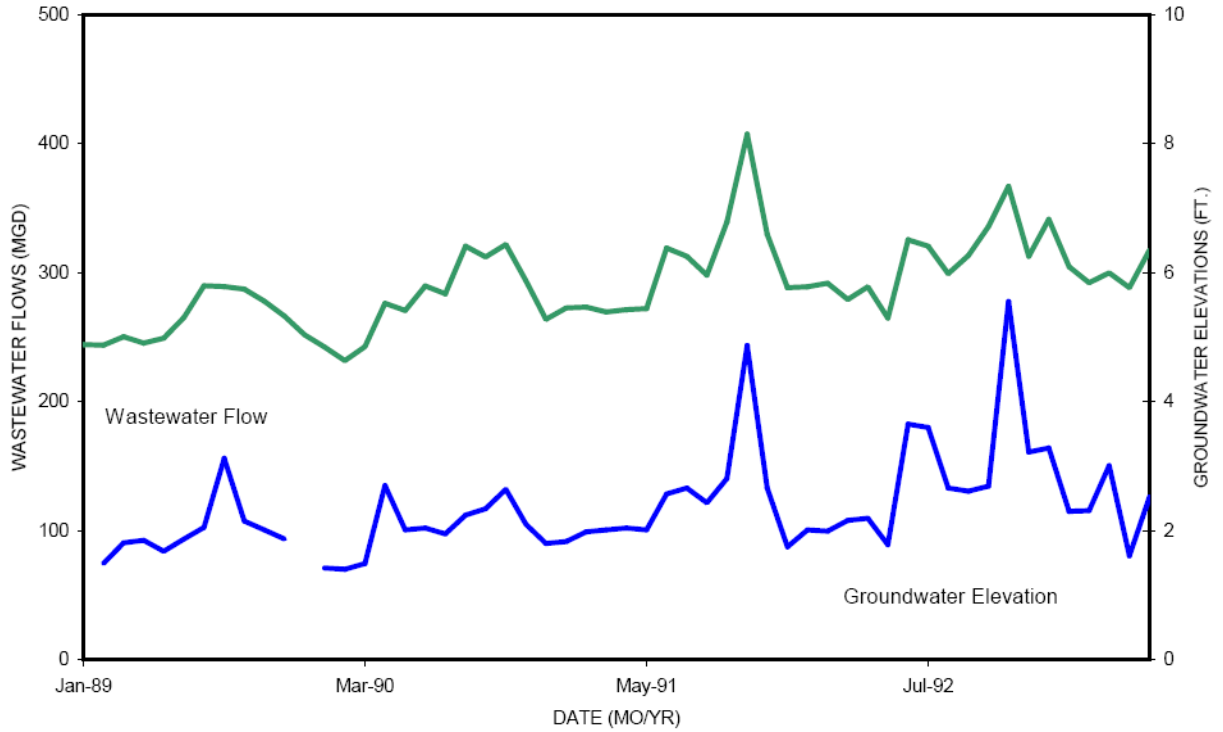
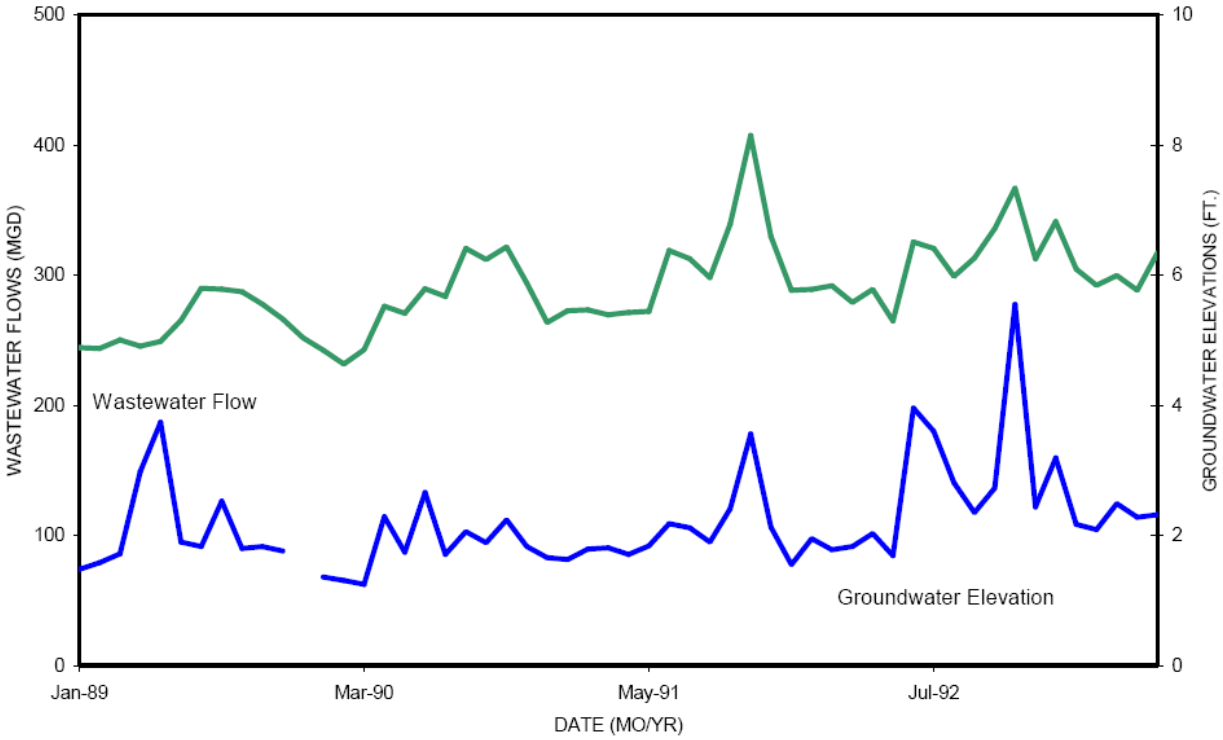


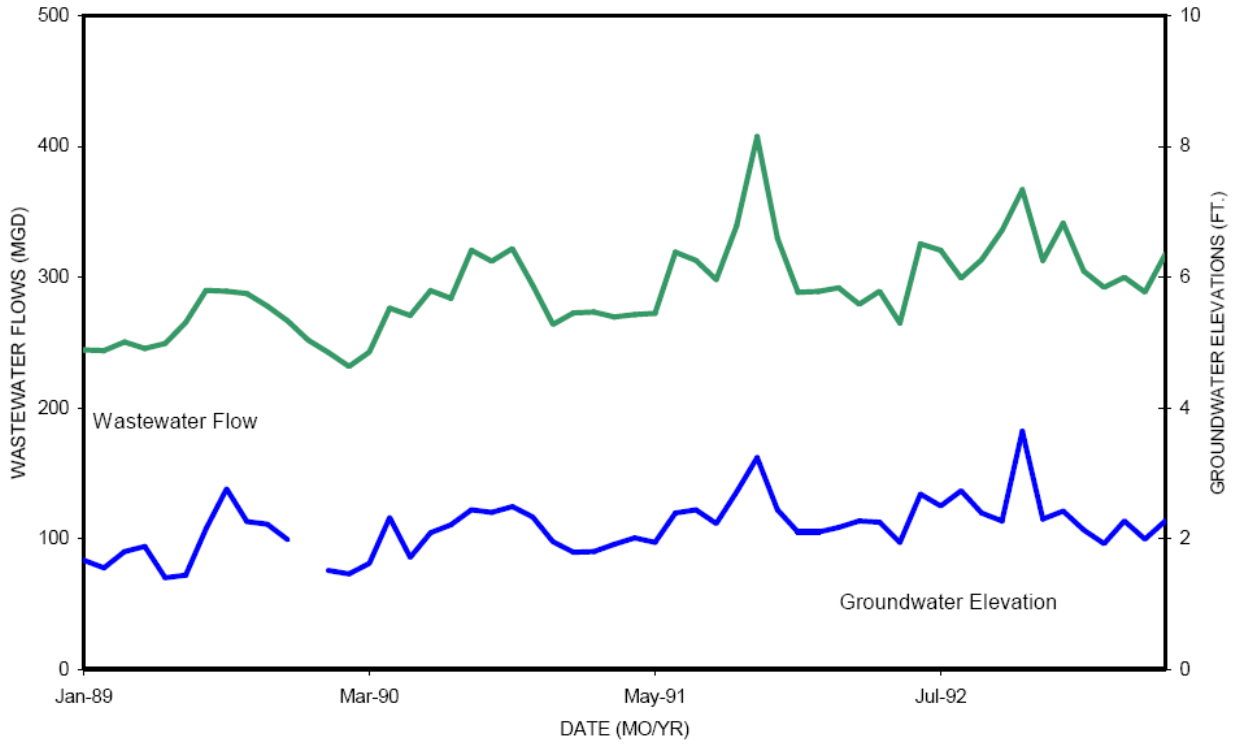
Figure 4B-3 SFWMD Surface Water Control System.



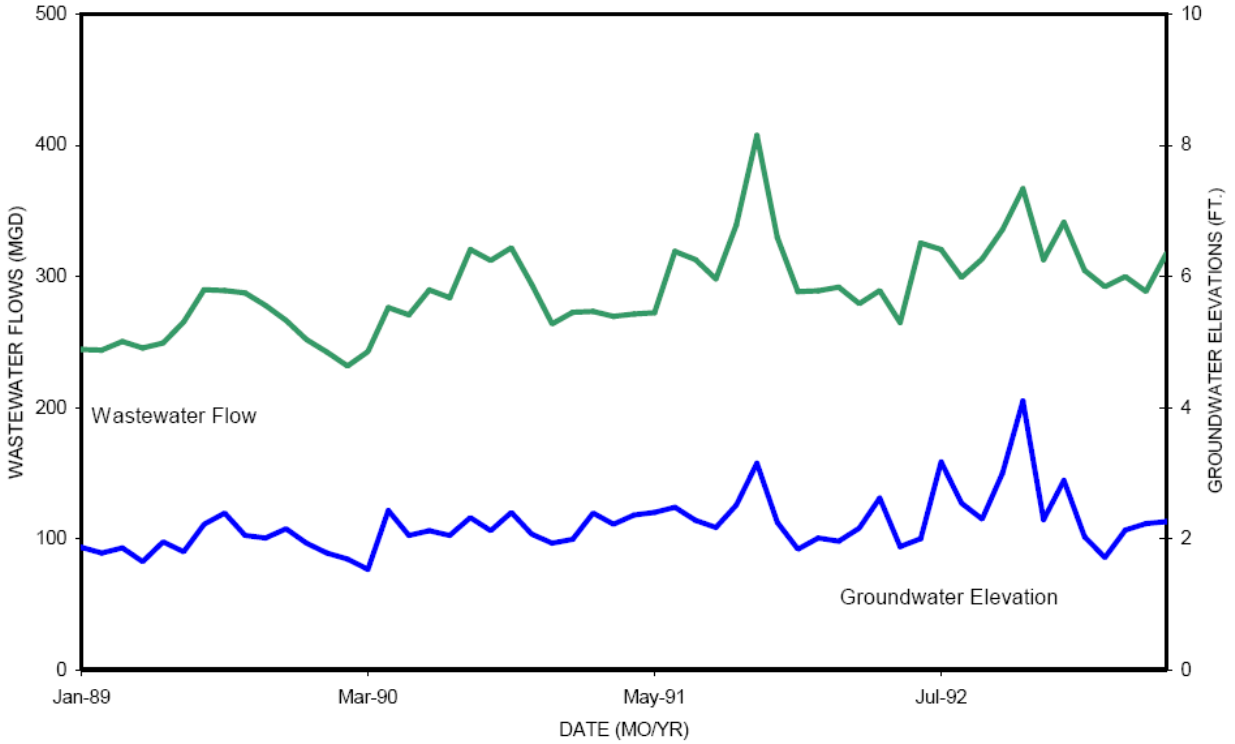
Figures 4B-4 Wastewater Flows VS Groundwater Elevations at Well F-45.



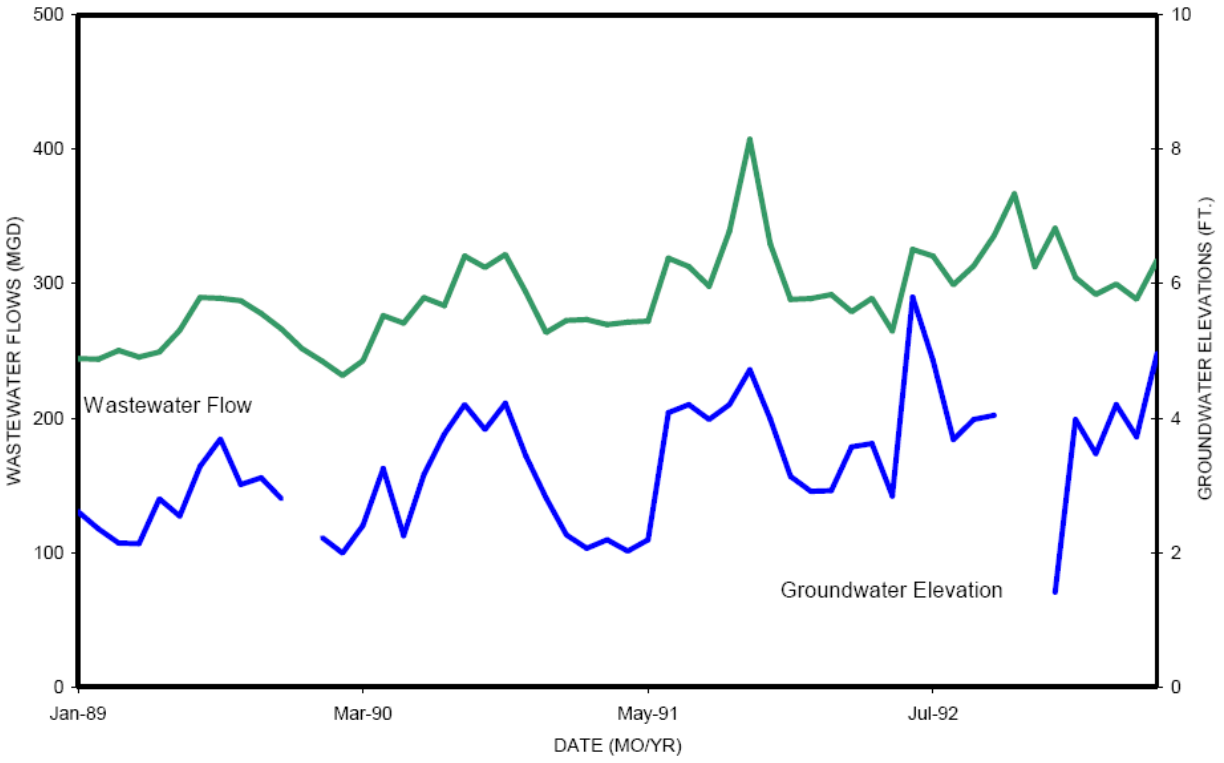
Figures 4B-5 Wastewater Flows VS Groundwater Elevations at Well G-852.



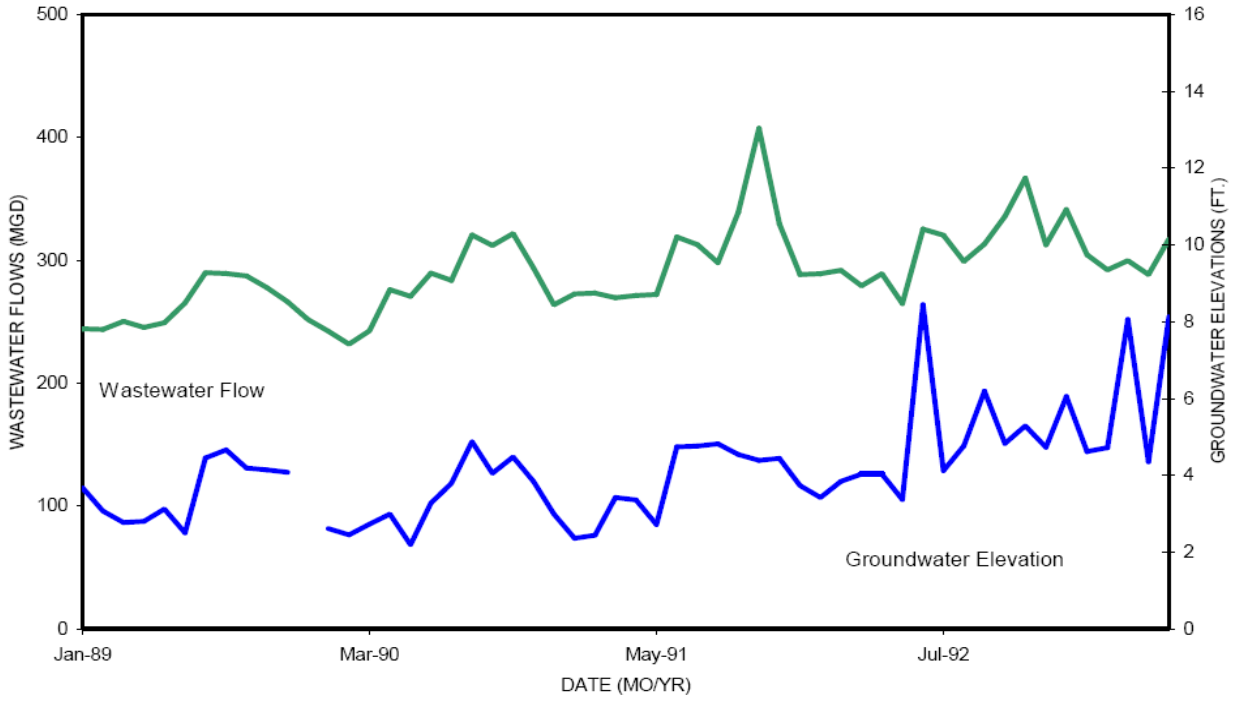
Figures 4B-6 Wastewater Flows VS Groundwater Elevations at Well G-3328.



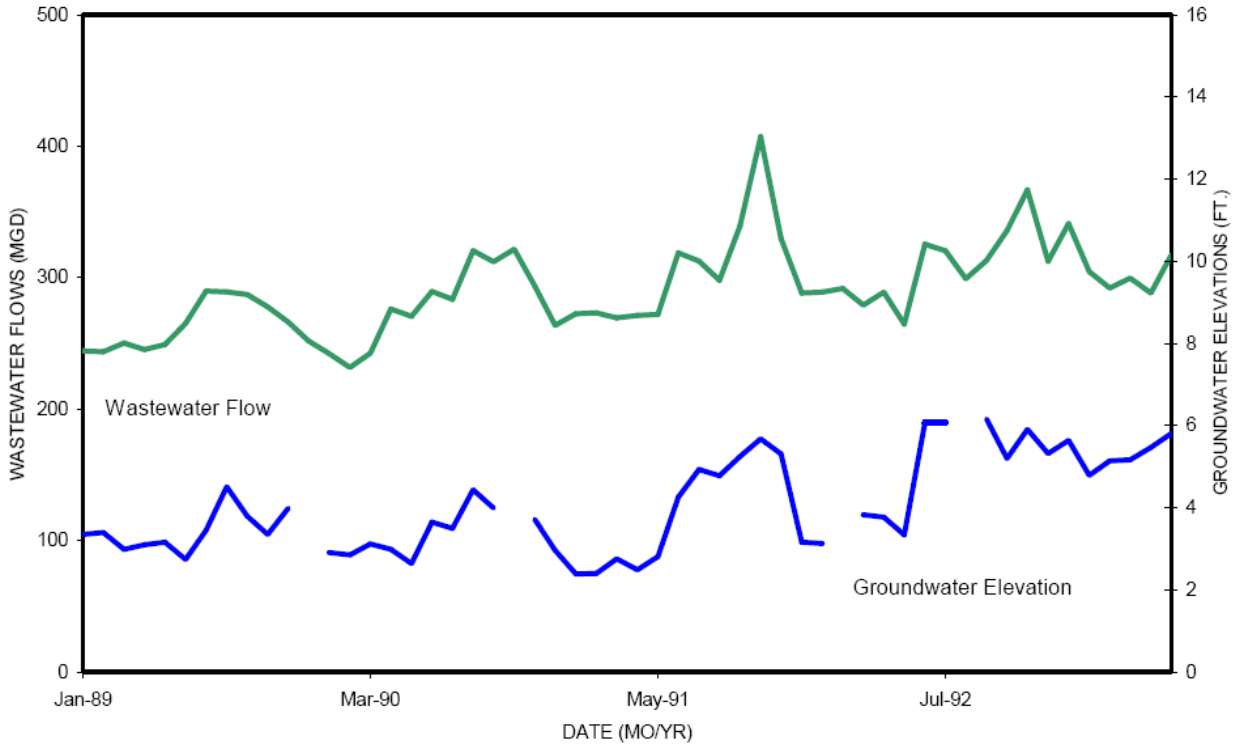
Figures 4B-7 Wastewater Flows VS Groundwater Elevations at Well S-18.



Figures 4B-8 Wastewater Flows VS Groundwater Elevations at Well G-553.



Figures 4B-9 Wastewater Flows VS Groundwater Elevations at Well G-858.



Figures 4B-10 Wastewater Flows VS Groundwater Elevations at Well G-3439.

Section 5

EMERGENCY OPERATIONS PLAN

The Emergency Operations Plan for Unpermitted Discharges presents a strategy for the Miami-Dade Water and Sewer Department (MDWASD) to mobilize labor, materials, tools, and equipment to correct or repair any condition which may cause or contribute to an unpermitted discharge. The plan considers a wide range of potential system failures that could create a spill to surface waters. MDWASD classifies a spill of greater than 100 gallons per minute for ten minutes as a major spill. Furthermore, the plan describes special procedures for extreme incidents, such as a subaqueous pipe break, a large diameter force main rupture, or a booster pump station failure.

Potential failure situations are identified in order to assess the resources and methods that would be required to produce emergency relief and permanent repairs. Permitting actions are also reported. A summary of the Emergency Operations Plan is presented on Table 5-1 and a summary response strategy appears in Figure 5-1.

IDENTIFICATION OF POTENTIAL FAILURE MODES

Unpermitted discharges, ranging from small spills to larger overflows, occur from time to time in spite of concerted prevention efforts by MDWASD. Spills may result from surcharging, pipe failures, or mechanical malfunctions among other natural or induced causes. MDWASD is constantly on alert and is poised ready to respond upon notification of an Unpermitted Discharge.

Surcharging

Topographic and geographic characteristics of Miami-Dade County create a difficult environment in which to operate a wastewater collection system. The county is extremely flat, and soil and rock strata are porous.

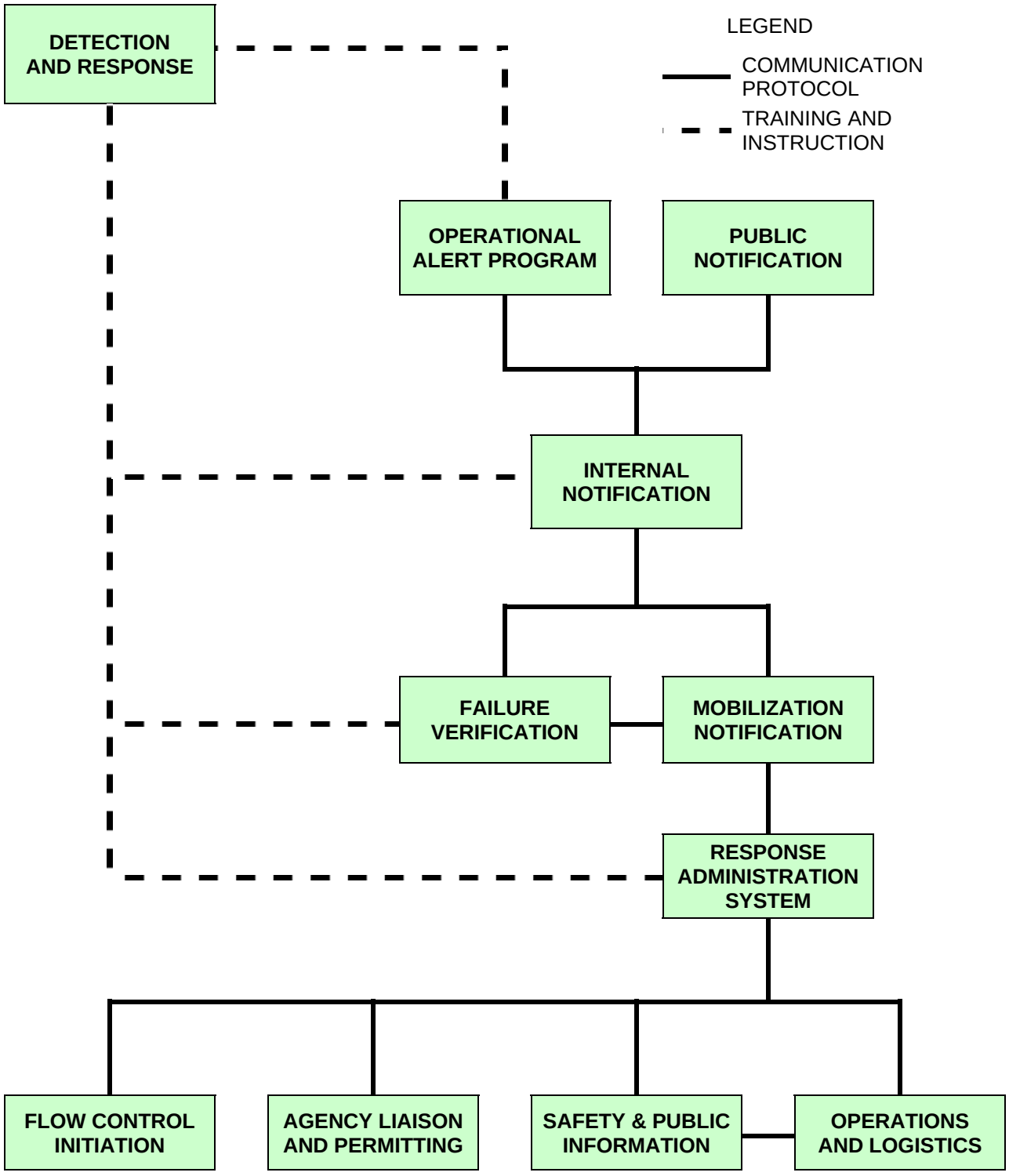
Surface elevations generally rise no more than 25 feet above sea level and groundwater lies at shallow depth. Ponds, lakes, and canals dot the landscape, while western and southern developments encroach upon the Florida Everglades. Consequently, the wastewater collection pipes typically lie below the groundwater table and in close proximity to surface water bodies.

Infiltration/inflow is one of the critical problems faced by MDWASD. The wastewater collection system has evolved as a blend of several small systems that were constructed by individual municipalities and private concerns. MDWASD gradually took these systems and continues to cope with the poor construction and the integration of these systems into the MDWASD infrastructure. Any leaking wastewater pipes within the system can allow groundwater infiltration. Evidence indicates that fluctuations in wastewater flow rates correlate roughly with fluctuations of groundwater table elevations (See Section 4 - Emergency Flow Control Plan).

Heavy precipitation extending over long periods causes groundwater levels to rise. Flooding also may ensue. Leaking or broken wastewater pipes and service laterals collect and transport groundwater and surface inflow. Over time, lift station wet wells may become full or overflow,

Table 5-1 EMERGENCY OPERATIONS ACTION PLAN		
ACTION	**BY**	**AUTHORIZATION**
Formulate Failure and Response Strategies		
Develop failure detection strategies	Division Managers	Response Manager
Develop response strategies	Unit Supervisors	
Failure Detection and Reporting		
Detect failures/report incident	MDWASD Personnel or General Public	
Notifies Verification Team and Director's Office	Communications Section	Reporter of Suspected Leak
Failure verification	Verification Team	Response Manager or Operations Engineer
Incident Response		
Mobilization Emergency Response Team	Response Manager	Assistant Director
Mobilize contractor (Optional)	Operations Engineer	Response Manager
Implement logistics plan	Logistics Officer	Response Manager
Initiate flow control measures	Unit Supervisors	Response Manager
Implement flow control measures	Unit Labor Crews	Operations Engineer
Obtain emergency permits	Liaison Office	Response Manager
Monitor safety	Safety Officer	Response Manager
Disseminate information	Communications Officer	Response Manager

Figure 5-1
EMERGENCY OPERATIONS CONTROL PLAN



and collection pipes may backup within residential or other areas. In low lying areas, continued precipitation and wastewater overflows could bring about a discharge to surface waters.

Pipe Failures

Many of the MDWASD wastewater pipes are old and, on occasion, fail. Commonly when older pipes have failed, internal corrosion has been a factor. Warm temperatures, flat topography, large pipes, and long travel times within wastewater service areas promote the production of hydrogen sulfide gas which, under some conditions, will be converted to sulfuric acid. In concrete pipes, acid reacts with the alkaline cement leading to progressive deterioration (corrosion) and failure. Metallic pipes and manholes may be attacked directly.

The corrosion failure mode typically appears in the crown of gravity wastewater pipes. The failure develops as cement disintegrates around the rock aggregate in the concrete mixture. Slowly, corrosion penetrates the pipe core and strength is lost. Eventually, the weight of the overburden may exceed the pipe strength resulting in a cave-in. Under this scenario, wastewater may either back-up within the upstream sections or percolate into the soil.

Pressurized pipes which do not contain an air space and carry anaerobic wastewater are generally spared from corrosion because the reactions require the presence of oxygen to develop. Yet under severely corrosive septic conditions and in the presence of small quantities of dissolved oxygen, pressurized pipes could fail. If a pressure pipe or manhole fails, raw wastewater may spew onto surface areas and flow to surface drainage systems or to surface waters.

In recognition of potential corrosion problems, MDWASD has included a crown liner in all reinforced concrete force mains and interceptors constructed since 1972.

Scouring is a potential failure mode in older pressurized pipes. All wastewater systems collect quantities of sand and other small particles. If velocities are sufficient, wastewater containing hard particles can abrade the pipe walls. Over long periods of time, particularly if aggressive wastewater has influenced the integrity of the pipe, scouring may lead to a cave-in or rupture. In the MDWASD system, the problem may be heightened by inflow which can allow sand and small rocks to enter the waste stream.

Poor construction and deterioration are not the only potential causes of wastewater pipe failures. Expansive development within Miami-Dade County has resulted in occasional construction related breaks. Other natural and induced circumstances including water hammer, sinkholes, and vandalism can lead to unpermitted discharges from wastewater pipes and manholes.

Electrical and Mechanical Failures

Unpermitted discharges are sometimes caused by power outages and equipment breakdowns. The regional wastewater treatment plants as well as the larger pump stations and booster stations have adequate fail-safe features so that they will continue to operate in the event of an electrical or mechanical failure. However, MDWASD also operates a number of local lift stations that collect wastewater from subdivisions and other areas. The vast majority of these lift stations are without assured emergency capacity.

The smaller stations are most susceptible to power failures. These stations are operated with electric motor driven pumps powered exclusively through the local energy grid. A power outage would cause the shutdown of the stations until the system is restored or until spare generators are brought to the site. Meanwhile, wet wells may overflow. If the power outage affects a large area, many pump stations may be shutdown and a large spill could develop.

The larger pump stations and the booster stations, which are critical to the inter-district flow diversion system, possess emergency generators that activate automatically in the event of a power failure. Further, Pump Station Nos. 1 and 2 have several dual drive pumps that can be operated by diesel engines as well as by electric motors. This dual drive system is vital to the continued operation of these stations. A momentary power loss can cause sudden pressure changes upstream, resulting in water hammer related pipe and manhole failures.

Mechanical failures are generally less consequential than power failures. Even the smallest pump stations possess at least one spare pump which will be activated when a sister pump suffers a mechanical failure. However, where the pump station is not compatible with the system, the spare pump may be called upon to meet needs. In this event, a pump failure may result in a spill.

Treatment Plants

In theory, the three regional treatment plants could be impacted by several events or circumstances, which could develop into an unpermitted discharge to surface waters. Potential causes of an unpermitted discharge at the plants include excessive influent flow, failure of a process or delivery element, electrical or mechanical failure, or a natural disaster.

Each of the treatment plants possesses sufficient redundancy and hydraulic capacity to make a significant spill unlikely. There are sufficient spare pumps and emergency generators on line to ensure that the plants would continue to operate under most circumstances. In a wide spread natural disaster, as in the case of hurricane Andrew, influent rates may be considerably below normal because of power outages and because of failures in the water distribution system. However, even when an event causes extreme influent conditions, the plants appear to have the ability to contain, treat, and dispose the flows.

The peak hydraulic capacity of each plant is compared with its permitted capacity and its installed capacity in Table 5-2. As shown, the plants have sufficient capacity to pass flows in excess of 2.1 times the Average Annual Daily Flow (AADF). Based on the available capacity, overflows to surface waters are not anticipated at the plants.

Table 5-2
PLANT CAPACITY DATA AADF
(FY 2013/2014)

Wastewater Plant	Permitted Treatment Capacity (MGD)	Installed Treatment Capacity (MGD)	Peak Installed Capacity (MGD)	Annual Average Daily Flow (MGD)
North District	120	120	260	93.96
Central District	143	143	305	113.99
South District	112.5	112.5	285	103.12

DETECTION, VERIFICATION AND REPORTING

A leak may be detected by MDWASD employees or by other individuals. The MDWASD Communication Center will be responsible for receiving phone calls from the public of suspected Unpermitted Discharges from the wastewater treatment and collection system, and for dispatching reports to MDWASD verification teams. Signs (Figure 5-2) are posted at MDWASD pump stations to provide the public with the phone number to call.

The Emergency Communications Section is a 24-hour manned emergency operations center that is within the Emergency Communications Section. Operators are responsible for receiving phone calls from the public and manning the radios, which are in contact with the maintenance crews or other MDWASD personnel.

Figure 5-2 Typical Pump Station Advisory Sign Posted at Pump Station Sites

Discharge Tracking System Report

When the Emergency Communications Section receives a call from the public to report a suspected unpermitted discharge or release of wastewater, the information will be forwarded to the appropriate MDWASD verification team. These personnel will document the event using the wastewater Unscheduled Maintenance form (Figure 5-3) or the Pump Station Division Work Order (Figure 5-5). The Communication Center will also notify the MDWASD Director's Office of the report of a suspected discharge.

MDWASD personnel assessing the problem will report back to the Emergency Communications Section, immediately upon confirmation of a wastewater release or discharge within two hours and provide information necessary to complete the back portion of the unscheduled maintenance form (Figure 5-4) and the lift station unscheduled maintenance form (Figure 5-6). In some cases, all required information may not be available within two hours. However, it will be provided as soon as it can be determined. The Emergency Communication Center will provide an update to the MDWASD Director's Office.

Miami-Dade Water and Sewer Department
Unscheduled Maintenance Report

Work Ticket # _____ Address _____
Date Received _____ _____
Time Received _____ Customer Name _____
Time Arrived _____ Phone _____

Customer Complaint

☐ Bad Odor Complaint
☐ Broken Sewer Line
☐ Broken or Missing Manhole Cover
☐ Sewer Back-up
☐ Manhole Overflowing
☐ Other Sewer Problem (Please explain)

Maintenance Facility _____

Description/Details: _____

Field Investigation

Findings

☐ Main Stoppage
☐ Lateral Stoppage
☐ Broken Forcemain
☐ Broken ARV
☐ Broken Gravity Main
☐ Broken/Missing Manhole cover
☐ Pump Station Problem
☐ System Surcharged
☐ Storm Drain
☐ Inside Problem
☐ Other/ Not a Sewer Problem (Please explain)
☐ Broken Sewer Lateral

Responsibility

☐ Department
☐ Customer
☐ Contractor
☐ Other, Explain

Spill _____
Gallons _____

Surface Water
Yes ☐
No ☐

Line Segment: Pump Station # _____ Upstream MH # _____ Downstream MH # _____

Comments: _____

Action Taken

☐ Request Job Order
☐ Cleared Main
☐ Cleared Lateral
☐ Cleared Main and Lateral
☐ Investigate. Sewer Problem
☐ Referred to Repair Crew
☐ Referred to Pump Station Maintenance
☐ Televised Sewer Lateral
☐ Other/ Not a Sewer Problem (Please explain)

Blockage Due to: Broken/Collapsed Pipe _____ Grease _____ Other Debris _____

Comments: _____

Completed by: _____ Assisted by: _____ Date: _____

Equipment Used: _____ Time to Complete (hrs): _____

☐ Bill Customer Customer Charge $ _____ JO #: _____

Comments: _____

SPILL FORM MUST BE COMPLETED IF A SPILL OR ABNORMAL EVENT OCCURRED

Figure 5-3 Wastewater Unscheduled Maintenance Form (Front)

WORK TICKET NUMBER _____

A SPILL OR AN ABNORMAL EVENT OCCURS, THE FOLLOWING INFORMATION MUST BE PROVIDED

1) Location of spill: _____

2) Path of flow: _____

_____

3) Type of water spilled: Raw-Sewage-Other: _____

4) Did Sewage go to Public Access Area? YES _____ NO _____

5) Did Sewage go into Storm Sewer? YES _____ NO _____

6) Did Sewage go into Surface Water? YES _____ NO _____

Type of water (Canal, River, Lake, etc.): _____

Distance: _____ Name: _____

7) Weather conditions: _____

8) Estimated quantity of sewage released: _____

9) Estimated time when release started: _____ : _____ AM / PM

10) Estimated time when action taken at site: _____ : _____ AM / PM

ACTION TAKEN:

Flow Stopped: YES _____ NO _____

If NO, estimated time to stop discharge _____ : _____ AM / PM Date: _____

If YES, time when discharge stopped _____ : _____ AM / PM Date: _____

Spill Contained: YES _____ NO _____ Area Cleaned: YES _____ NO _____

Area Disinfected: YES _____ NO _____ Method of Disinfection: _____

Public Notified: YES _____ NO _____ Method & When: _____

Cause of the spill: _____

COMMENTS: _____

Figure 5-4 Wastewater Unscheduled Maintenance Form (Back)

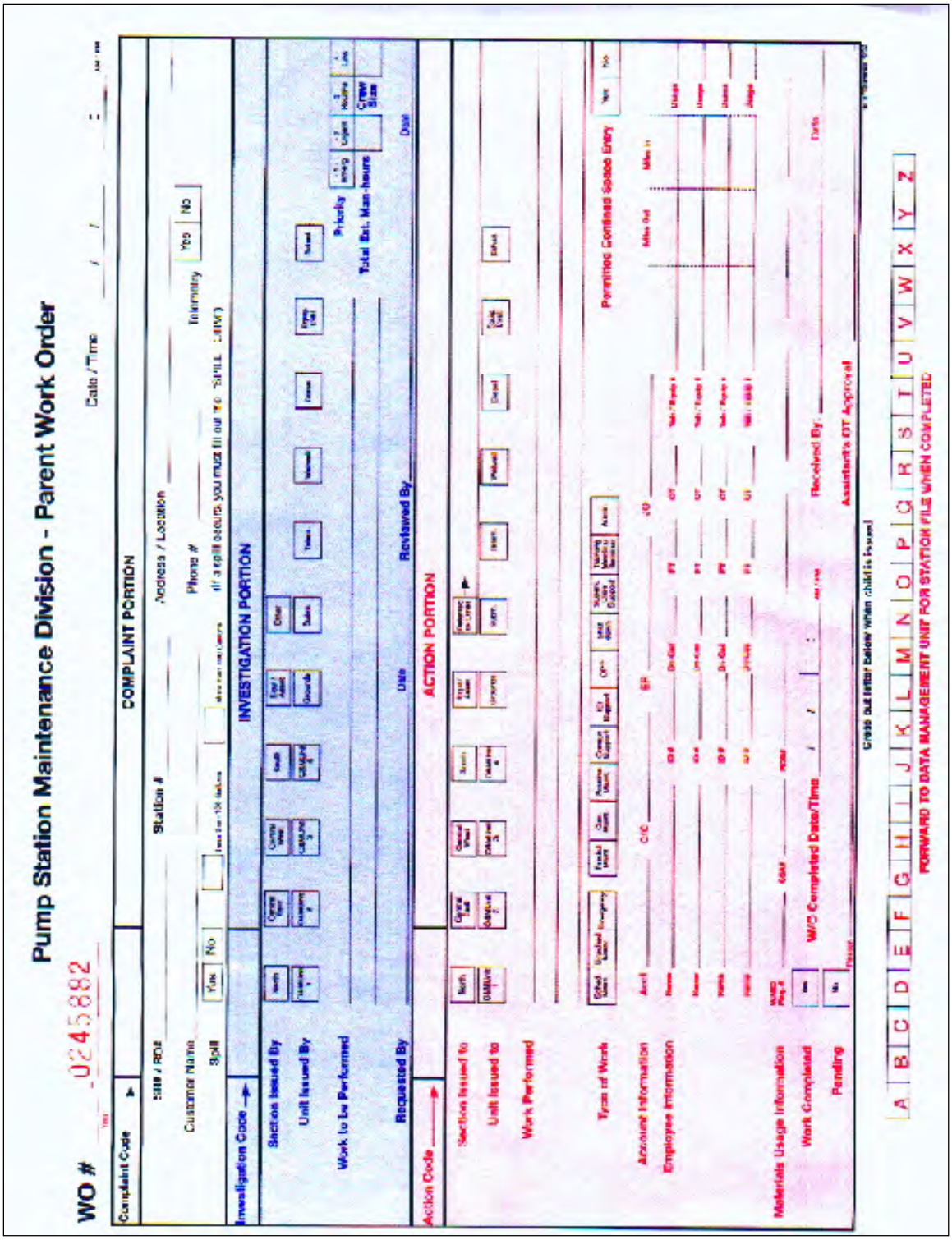


Figure 5-5 PUMP STATION DIVISION WORK ORDER

WORK TICKET NUMBER _____

A SPILL OR AN ABNORMAL EVENT OCCURS, THE FOLLOWING INFORMATION MUST BE PROVIDED

1) Location of spill: _____

2) Path of flow: _____

_____

3) Type of water spilled: Raw-Sewage-Other: _____

4) Did Sewage go to Public Access Area? YES _____ NO _____

5) Did Sewage go into Storm Sewer? YES _____ NO _____

6) Did Sewage go into Surface Water? YES _____ NO _____

Type of water (Canal, River, Lake, etc.): _____

Distance: _____ Name: _____

7) Weather conditions: _____

8) Estimated quantity of sewage released: _____

9) Estimated time when release started: _____ : _____ AM / PM

10) Estimated time when action taken at site: _____ : _____ AM / PM

ACTION TAKEN:

Flow Stopped: YES _____ NO _____

If NO, estimated time to stop discharge _____ : _____ AM / PM Date: _____

If YES, time when discharge stopped _____ : _____ AM / PM Date: _____

Spill Contained: YES _____ NO _____ Area Cleaned: YES _____ NO _____

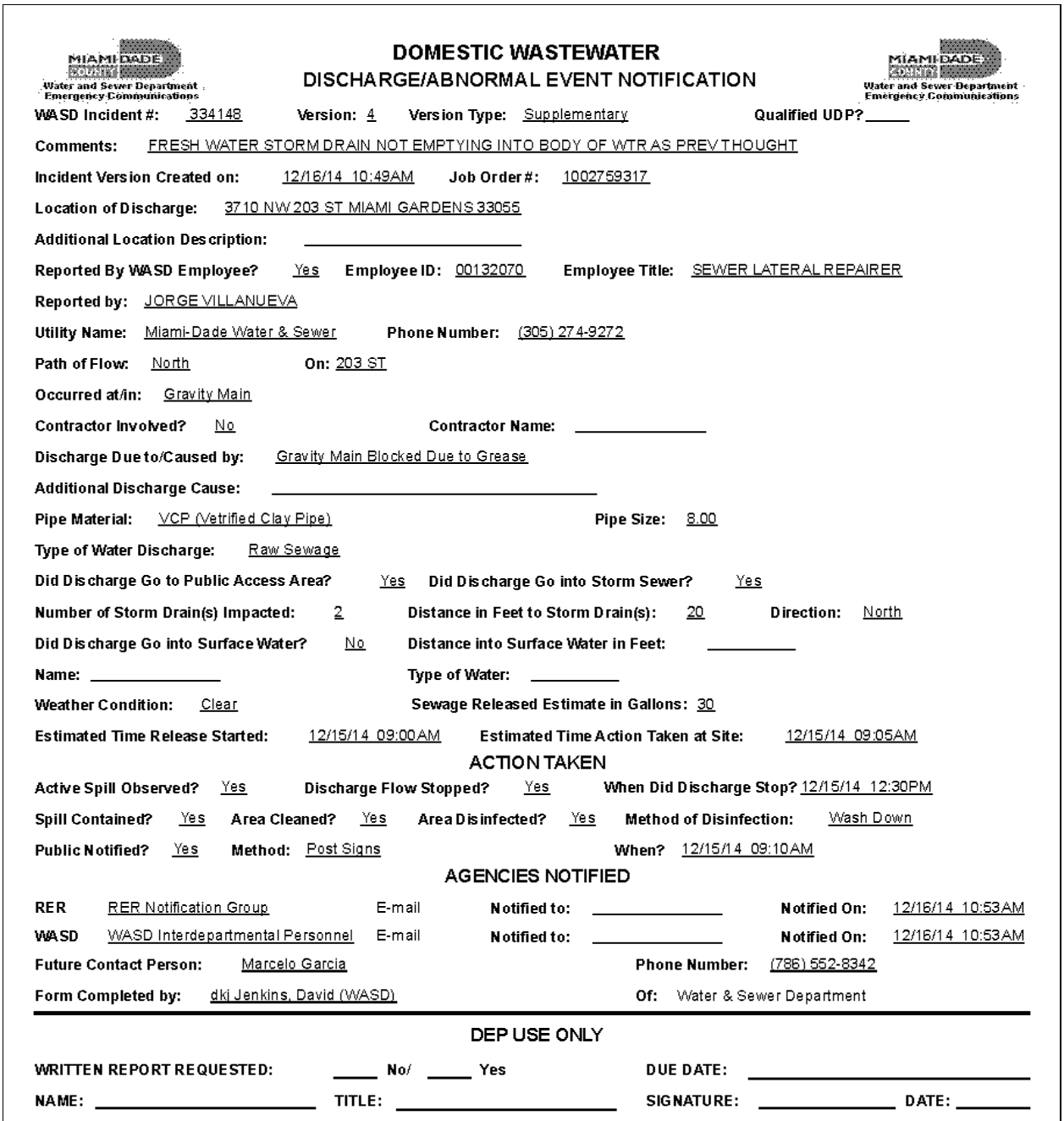
Area Disinfected: YES _____ NO _____ Method of Disinfection: _____

Public Notified: YES _____ NO _____ Method & When: _____

Cause of the spill: _____

COMMENTS: _____

Figure 5-6 WASTEWATER LIFT STATION UNSCHEDULED MAINTENANCE FORM



DOMESTIC WASTEWATER
DISCHARGE/ABNORMAL EVENT NOTIFICATION

MIAMI-DADE COUNTY Water and Sewer Department Emergency Communications

MIAMI-DADE COUNTY Water and Sewer Department Emergency Communications

WASD Incident #: 334148 **Version:** 4 **Version Type:** Supplementary **Qualified UDP?** _____

Comments: FRESH WATER STORM DRAIN NOT EMPTYING INTO BODY OF WTR AS PREV THOUGHT

Incident Version Created on: 12/16/14 10:49AM **Job Order #:** 1002759317

Location of Discharge: 3710 NW 203 ST MIAMI GARDENS 33055

Additional Location Description: _____

Reported By WASD Employee? Yes **Employee ID:** 00132070 **Employee Title:** SEWER LATERAL REPAIRER

Reported by: JORGE VILLANUEVA

Utility Name: Miami-Dade Water & Sewer **Phone Number:** (305) 274-9272

Path of Flow: North **On:** 203 ST

Occurred at/in: Gravity Main

Contractor Involved? No **Contractor Name:** _____

Discharge Due to/Caused by: Gravity Main Blocked Due to Grease

Additional Discharge Cause: _____

Pipe Material: VCP (Vetrified Clay Pipe) **Pipe Size:** 8.00

Type of Water Discharge: Raw Sewage

Did Discharge Go to Public Access Area? Yes **Did Discharge Go into Storm Sewer?** Yes

Number of Storm Drain(s) Impacted: 2 **Distance in Feet to Storm Drain(s):** 20 **Direction:** North

Did Discharge Go into Surface Water? No **Distance into Surface Water in Feet:** _____

Name: _____ **Type of Water:** _____

Weather Condition: Clear **Sewage Released Estimate in Gallons:** 30

Estimated Time Release Started: 12/15/14 09:00AM **Estimated Time Action Taken at Site:** 12/15/14 09:05AM

ACTION TAKEN

Active Spill Observed? Yes **Discharge Flow Stopped?** Yes **When Did Discharge Stop?** 12/15/14 12:30PM

Spill Contained? Yes **Area Cleaned?** Yes **Area Disinfected?** Yes **Method of Disinfection:** Wash Down

Public Notified? Yes **Method:** Post Signs **When?** 12/15/14 09:10AM

AGENCIES NOTIFIED

RER RER Notification Group E-mail **Notified to:** _____ **Notified On:** 12/16/14 10:53AM

WASD WASD Interdepartmental Personnel E-mail **Notified to:** _____ **Notified On:** 12/16/14 10:53AM

Future Contact Person: Marcelo Garcia **Phone Number:** (786) 552-8342

Form Completed by: dkj Jenkins, David (WASD) **Of:** Water & Sewer Department

DEP USE ONLY

WRITTEN REPORT REQUESTED: _____ No/ _____ Yes **DUE DATE:** _____

NAME: _____ **TITLE:** _____ **SIGNATURE:** _____ **DATE:** _____

Figure 5-7 DISCHARGE/ABNORMAL EVENT NOTIFICATION FORM

Table 5-3 COMMUNICATIONS CENTER TRACKING PROTOCOL	
Step	**Event**
1	Suspected Unpermitted Discharge report received by Communication Support Specialist.
2	Operator contacts Field Crew/ Verification Team to investigate the reported incident
3	Field Crew/ Verification Team reports back to verify release or discharge and will complete the front portion of the Unscheduled Maintenance form or the Pump Station Division work order.
4	Operator notifies RER-ERM's 24-hour number (305) 372-6955 and completes Discharge/Abnormal Event Notification form.
5	Operator notifies supervisor on duty if a major spill is confirmed.
6	Operator commences (Section 2) Agency Notification Plan.
7	Operator faxes completed Wastewater Complaint Log to the maintenance group of the applicable Division. (Pump Station or Wastewater Collection)
8	Field unit completes applicable Unscheduled Maintenance/Work Order forms for division files.
9	Collection Division: Daily, Operator inputs Unscheduled Maintenance information to Summary of Potential Wastewater Spills Report. Pump Stations: Daily, Data entry personnel inputs Work Order information to Summary of Potential Wastewater Spills Report and forwards to Communication Center. Communication Center distributes Report via fax to applicable agencies.
10	Operator will update Discharge/Abnormal Event Notification form, as appropriate.

If the suspected release is confirmed, the Emergency Communications Section will notify RER-ERM at the 24-hours number (305) 372-6955 (within two hours of the confirmed spill) and complete the Discharge/Abnormal Event Notification form (Figure 5-7), and forward the completed form to appropriate agencies. This notification process is summarized in Table 5-3. The procedures for notifying the agencies are discussed in Section 3 – Agency Notification Plan.

The Wastewater Complaint Log forms will be faxed at the end of the day to the corresponding Division. Maintenance personnel will be responsible for reviewing these forms and issuing any updated Discharge/Abnormal Event Notification forms to the Emergency Communications Section. The Emergency Communications Section will then forward these updated forms to the appropriate agencies.

The Emergency Communications Section is also responsible for completing the Summary of Potential Wastewater Spills Reported to the Communication Section form (Table 5-3). This report will contain all complaints pertaining to an Unpermitted Discharge regardless of their outcome. This report will be faxed to:

- Florida Department of Environmental Protection (DEP) Domestic Waste Section — Phone: (561) 681-6600, Fax: (561) 681-6760
- Miami-Dade County Department of Regulatory and Economic Resources' Environmental Resources Management Division (RER-ERM) — Phone (24hr): (305) 372-6955, Fax: (305)372-6631

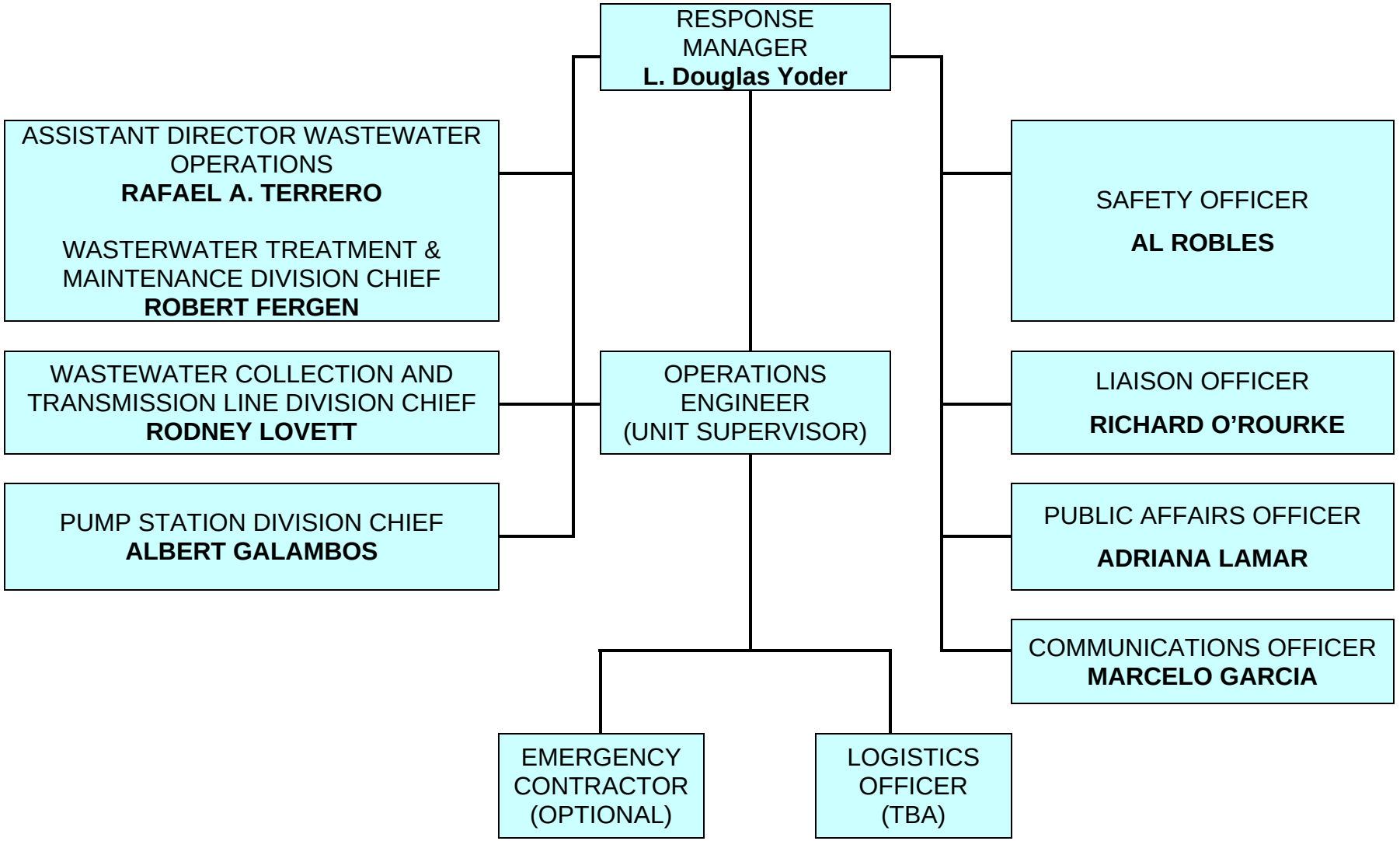
MIAMI-DADE COUNTY
WATER AND SEWER DEPARTMENT
SEWAGE COLLECTION DIVISION
Summary of Potential Sewer Overflows as Reported to the Emergency Communications Section
24 Hours End:
NOV 14, 2011

The above summary is information received at the Communications Center from the three Sewage Collection areas, and does not confirm that a sewage spill has occurred. In the event of a discharge of sewage to surface water exceeding 100 gallons, or to land, a separate report will be filed.

WORK ORDER #	TIME	AREA PROBLEM	PROBLEM ADDRESS	REQUESTED BY	DISPATCHED TO	REFERRED TO	PHONE NUMBER	OVERFLOW CODE	SPILL CREATED BY CONTRACTOR
			SEWAGE COLLECTIONS						
		N O R T H							
		C E N T R A L							
		SOUTH							
		REPORTED SEWAGE OVERFLOWS:							

Figure 5-8 Summary of Potential Wastewater Spills Reported to the Communication Center Form

Figure 5-9
RESPONSE ADMINISTRATION SYSTEM ORGANIZATION



RESPONSE ADMINISTRATION

The Response Administration System is patterned after the Incident Command System developed by the National Fire Academy. The latter is the standard command system for fire departments in the United States, and was selected by OSHA as the organizational structure for responding to chemical spill emergencies. In addition, the Superfund Amendments and Reauthorization Act of 1986 (SARA) requires organizations which handle hazardous material incidents to operate with an incident command system.

The Response Administration System is intended to ensure responsible, overall management of a serious incident and to accomplish the repair promptly. Other functions include logistics support, site safety, agency liaison, and information services. The organizational responsibilities and chain of command are shown in Figure 5-9.

For the purpose of this Contingency Plan, a serious incident is one which may cause a profound impact on public health and surface water quality. Examples of such incidents would include a subaqueous pipe break, a force main rupture, or a booster pump station failure.

Response Manager

The Response Manager, appointed by the MDWASD Director, is responsible for managing all incident operations. All other task managers will report to the Response Manager. Specific Response Manager responsibilities are:

- Assess priorities
  - Life safety
  - Incident stabilization
  - Environmental protection
- Determine goals and objectives
- Develop and implement action plan
- Develop incident command structure
- Assess and obtain needed resources
- Coordinate overall activities
- Coordinate information release Operations Engineer

Operations Engineer / Unit Supervisor

The Operations Engineer is responsible for initiating and coordinating internal notification, verification, flow control and repair actions. He will be assisted by task leaders assigned to supportive tasks indirectly related to the spill or its control.

Logistics Officer

The Logistics Officer is responsible for providing facilities, services, and materials for the incident. The Logistics Officer is also responsible for inspection and readiness of Emergency Standby and Repair contractor response, including staging areas.

Safety Officer

The Safety Officer monitors and assesses potential safety hazards and unsafe situations to develop measures for ensuring personnel safety. The Safety Officer reports to the Response Manager but has authority to bypass the chain of command to correct unsafe acts or remove personnel from areas of imminent danger.

Liaison Officer

The Liaison Officer is the point of contact for assisting or coordinating agencies. The Liaison Officer will also coordinate particular agency functions in response to an incident. Furthermore, the Liaison Officer will monitor the project with respect to after the fact permitting and compliance with environmental protection procedures.

Public Affairs Officer

The Public Affairs Officer will be the Public Affairs Section Chief or an appointee of the Director. The Public Affairs Officer disseminates information and is responsible for interfacing with the local news media. All news releases must be cleared by the Response Manager. This may include establishing a press area, which may be near the repair site. If necessary, the Public Affairs Officer may arrange for the Director or Response Manager to talk to the media.

RESPONSE ACTION

Emergency response to a report of a leak will be coordinated by the Response Manager – L. Douglas Yoder (Deputy Director, Operations). Mr. Yoder will rely on the assistance provided by Rafael A. Terrero (Assistant Director, Wastewater Operations), Robert Fergen (Wastewater Treatment & Maintenance Division Chief), Rod Lovett (Wastewater Collection and Transmission Line Division Chief), and Al Galambos (Pump Station Division Chief). Table 5-4 contains the phone numbers of key personnel.

Immediate actions will consist of internal notifications, mobilization and verification, repair, and clean-up. Emergency permitting, if necessary, will follow subsequent to the repair action.

Depending on the system element which is suspected to be the cause of the unpermitted discharge, the operations engineer responsible for implementation of the response plan will be the supervisor responsible for the element. The other two unit supervisors will assume associated leadership roles to ensure that temporary bypasses, inter-district diversions, and emergency flow controls are implemented.

Upon receiving notice of an unpermitted discharge, the Operations Engineer will contact each of the other unit supervisors who will in turn mobilize their respective operations staff to implement appropriate controls.

Next, the Operations Engineer will contact the verification team and his labor crews for mobilization to the site. The verification team will be first to arrive. They will assess the problem and, by mobile communication, report back to the Operations Engineer after having established the problem. Based on the type and extent of the problem, the Operations Engineer will establish and implement a plan to control and correct the spill.

Table 5-4
MDWASD KEY CONTACTS

(Last verify/update: December 2014)

Bill Johnson
Director

Office (786) 552-8156
Office (786) 552-8156 (secretary)
Mobile 786-255-5765
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L. Douglas Yoder
Deputy Director, Operations

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Mobile (786) 282-8775
E-mail YODERD@miamidade.gov

Robert Fergen, Division Chief
Wastewater Treatment and Maintenance Division

Office (786) 268-5104
Home (919) 602-7664
Mobile (876) 218-0758
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Mark McNamara, Plant Mechanic
Wastewater Treatment and Maintenance Division

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Adriana Lamar
Public Affairs Section Chief

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Rafael A. Terrero, Assistant Director
Wastewater System Operations

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Rod Lovett, Chief
Wastewater Collection and Transmission Line Division

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James Saren
Assistant Superintendent, Wastewater Maintenance and Repair Section

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Beeper (305) 277-0325
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Bertha Goldenberg, Assistant Director
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Richard O'Rourke
Regulatory Compliance Section Head

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Mobile (305) 987-7068
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Al Galambos, Chief,
Pump Station Division

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Home (305) 223-0984
Mobile (786) 586-3597
Beeper (305) 277-1072
E-mail AGALA@miamidade.gov

Al Robles
Safety Specialist II

Office call Mobile
Home call Mobile
Mobile (305) 607-2780
E-mail ROBS@miamidade.gov

Logistics Officer
(TBA)

Plan Implementation

Failure of any element within the wastewater collection and treatment system will trigger an immediate response action to isolate and correct the problem. Generalized response action is illustrated on Figure 5-10. Response to an emergency will develop rapidly. MDWASD work crews and equipment are stationed at each of the three regional wastewater treatment plants as well as at the Westwood Lakes maintenance station. From these stations crews can be dispatched to and arrive at any site within one hour of a call. Also, additional maintenance personnel are on call if extra crews are needed.

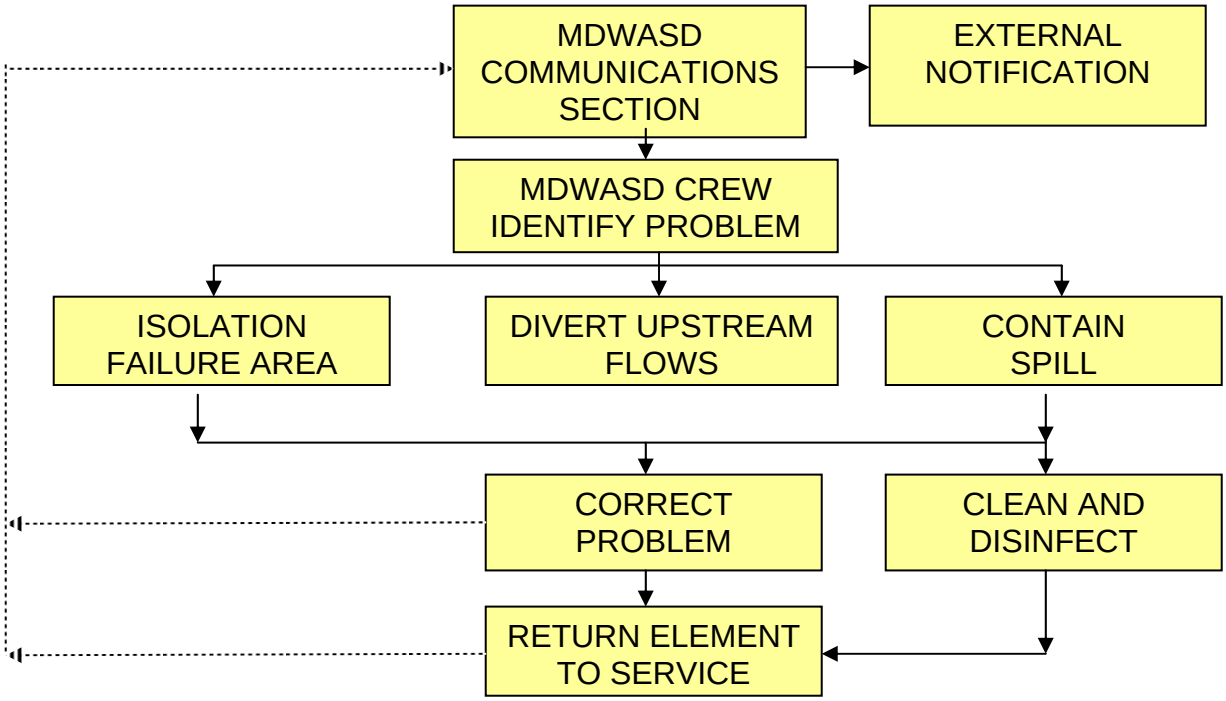

Figure 5-10 Field Response Action Flowchart.

Upon receipt of a report of a spill or element failure, MDWASD forces will immediately visit the location to determine the cause of the emergency and the appropriate actions to be taken. After identification, a three-fold plan will evolve. Crews from the maintenance and treatment plant units will establish and implement a temporary diversion plan. Meanwhile, the Logistics Officer will work to establish a work area, with assistance from the Liaison Officer and Miami-Dade or local police, to ensure that people are kept away from emergency work sites. Third, laborers crews will begin to contain the spill area and minimize the release to populated areas and surface waters. A common purpose to these actions is to protect the public from harm and long-term effects resulting from a spill.

Subsequent to these immediate actions, MDWASD and/or contractor forces will correct the failure and begin cleaning and disinfection actions. Generally, cleaning will involve removal of spill using MDWASD Vactor trucks or larger tank trucks. A large fleet of 2000-gallon Vactor trucks and 6000-gallon tank trucks are available to collect spilled wastewater and deliver it to one of the treatment plants for disposal. Slaked lime will be spread to disinfect surface areas

where a spill has been removed.

Under most circumstances, MDWASD will handle all response actions with its own maintenance forces. These personnel have the skill and experience to respond rapidly and in the most appropriate manner. An important issue with respect to an emergency response is to ensure that the temporary actions necessary to divert flows and fix the problem do not produce a problem elsewhere in the system. For example, repair of a force main would require the closure of the pipe and diversion of the flow at an upstream location. If the closure is not handled properly, wastewater system back-ups could create other spills. MDWASD crews, with their knowledge of the system, can address these problems best.

Circumstances may arise when MDWASD would benefit from the support of private-sector construction assistance. This is particularly true in the case of large pipes buried to such depths as may require sheet piling and dewatering. These non-standard operations would best be handled by skilled, heavy construction contractors.

EMERGENCY MEASURES

An emergency situation would necessitate temporary measures to ensure that the work area is isolated during a repair. Major system diversions and other large scale flow control measures as presented in Section 4 - Emergency Flow Control Plan. Small scale or localized actions are identified below.

Wastewater Pipes

Wastewater pipes which suffer failures and produce an unpermitted discharge will be replaced in kind. Actions required will include measures to prevent flow to the affected section while the repairs are being made. Flow through larger force mains and interceptors will be diverted within the system to the maximum possible extent. Smaller pipe failures will generally be handled by placement of a temporary bypass line along the ground surface.

Temporary bypass lines will carry flow from the nearest manhole upstream of the failure to the next downstream manhole. If necessary, influent wastewater at the upstream manhole will be lifted to the surface using portable pumps and generators. Work crews will block the ends of the section under repair to prevent inflow. Pipe repair will then proceed using standard construction methods.

Pump Stations

Larger pump stations are expected to remain operable under all conditions because they possess emergency generators and spare pumps which should be sufficient to deliver influent flow downstream. When a small lift station suffers a failure, it will be necessary to construct a temporary bypass using portable pumps, piping and generators. A bypass scheme for a standard lift station is presented on Figure 5-11.

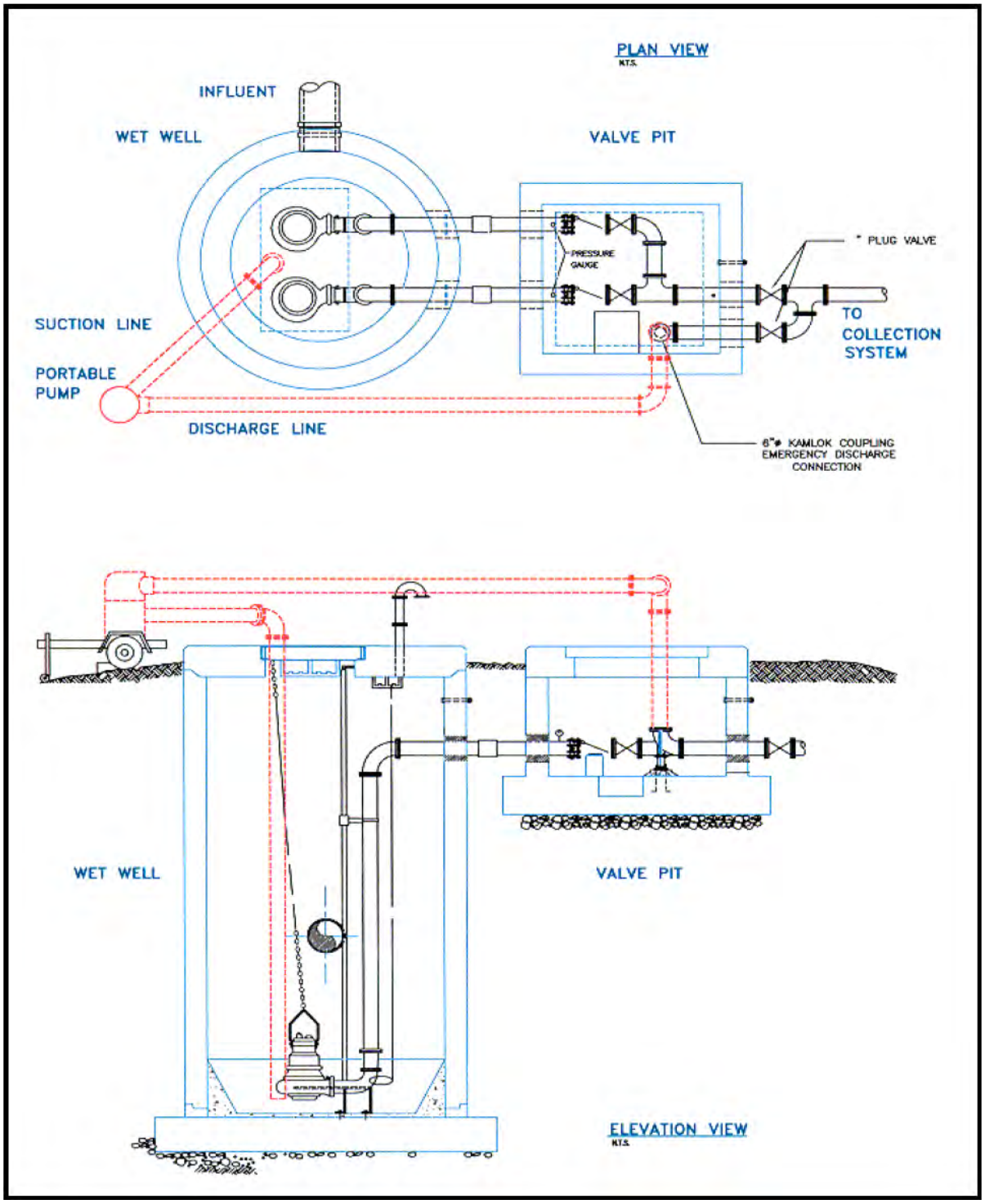

Figure 5-11 Wastewater Lift Station Bypass

As shown, the influent to the wet well would be pumped to the surface and delivered into a valve connection in the lift station discharge line. Valves within the station control vault would be closed to prevent backflow into the station. Given this configuration, the lift station should operate to its design capacity while necessary repairs are being made or until power is restored.

Disinfection

Direct discharge of raw wastewater poses public health and water quality consequences. However, there is no satisfactory method to disinfect surface waters that are contaminated. Any chemicals which might be used to provide disinfection would have to be well-mixed with the wastewater in order to kill coliform bacteria. This is not feasible on a large scale. Further, the most effective chemicals, such as chlorine compounds and metal salts, are dangerous to handle and raise aquatic toxicity concerns. For these reasons, MDWASD does not plan to institute disinfection of spills of surface waters that receive a spill. Additionally, “Storm drain catch-basins impacted by discharge events and known at the time of remediation to have a direct connection to surface waters will be vactored only, without the subsequent use of chemical disinfectants.”

A spill to surface waters will be contained and removed to the greatest possible extent. As the problem is being corrected or immediately thereafter, MDWASD will begin to clean and disinfect ground surfaces and other accessible contaminated areas so that no wastewater is left standing. A large fleet of 2000-gallon capacity Vactor trucks and 6000-gallon capacity tank trucks owned by MDWASD are available to ensure that contained spills are collected and removed quickly to the nearest treatment. Slaked lime will be spread to disinfect areas impacted by spillage. The operation will continue until the contamination no longer poses a threat.

Treatment Plants

Although there has been no history of excess influent at the North District, in the event of an emergency, all or a portion of the influent can be diverted around the process units through an 84-inch bypass pipe (Figure 5-12). The pipe would carry flow to the effluent outfall chamber where it would be mixed and disposed with treated effluent or it would be directly disposed.

Like the North District Plant, there is no historical record of the need to bypass the Central District Plant as a consequence of a capacity problem. However, if it became necessary, a plant bypass could be achieved. One of the two parallel treatment plants at the Central District Plant contains an emergency bypass pipe (Figure 5-13). This bypass line would carry influent from the discharge ends of the grit chambers to the effluent outfall pumping station by gravity flow.

Excess flows received at the South District Plant can be diverted to several interconnected percolation ponds having a total exfiltration capacity of 75 million gallons per day (Figure 5-14). The ponds were used to dispose of influent for a period of seven days after the plant suffered damage during hurricane Andrew in August 1992. No overflows were observed.

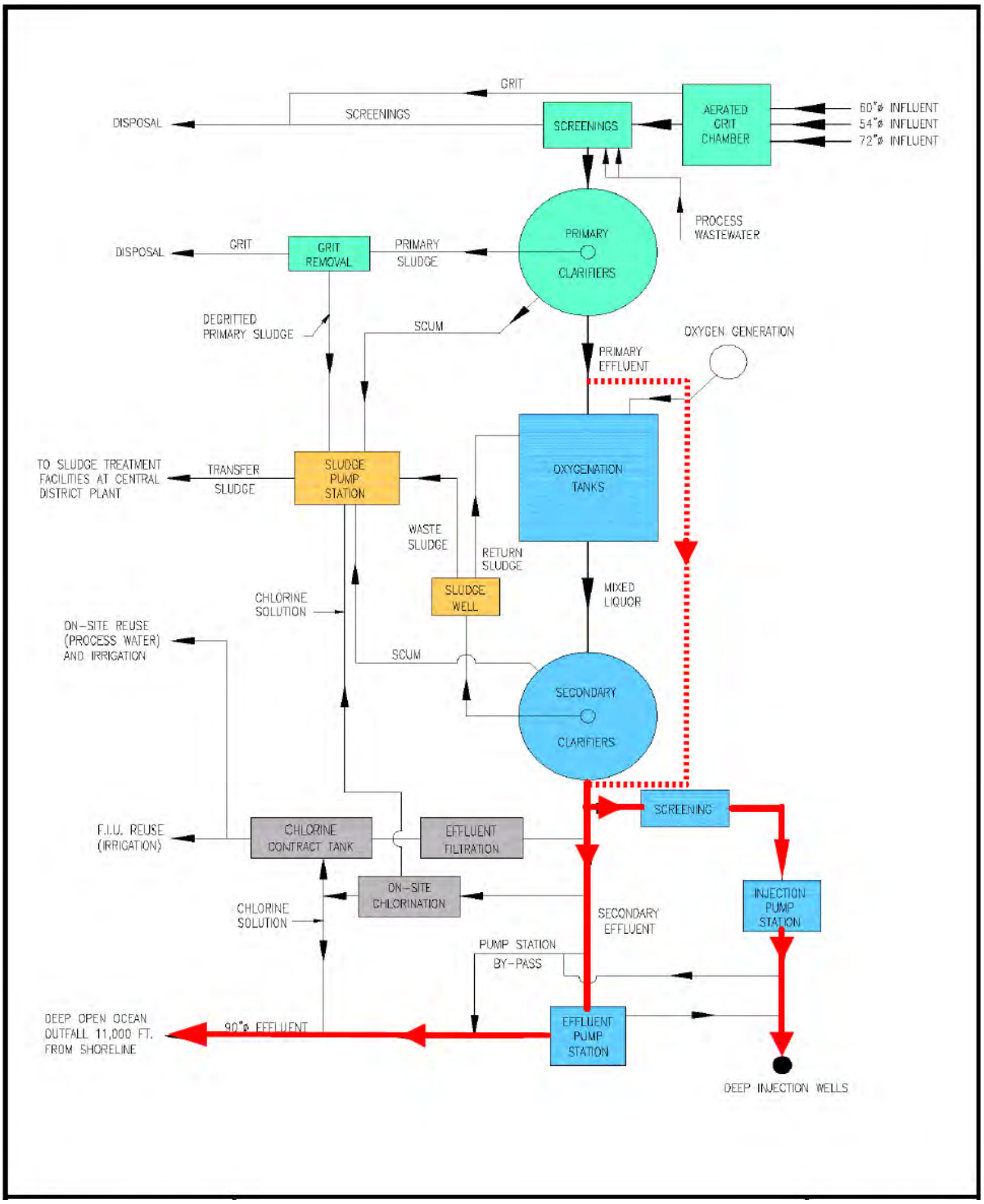

Figure 5-12 North District Plant Bypass Scheme.

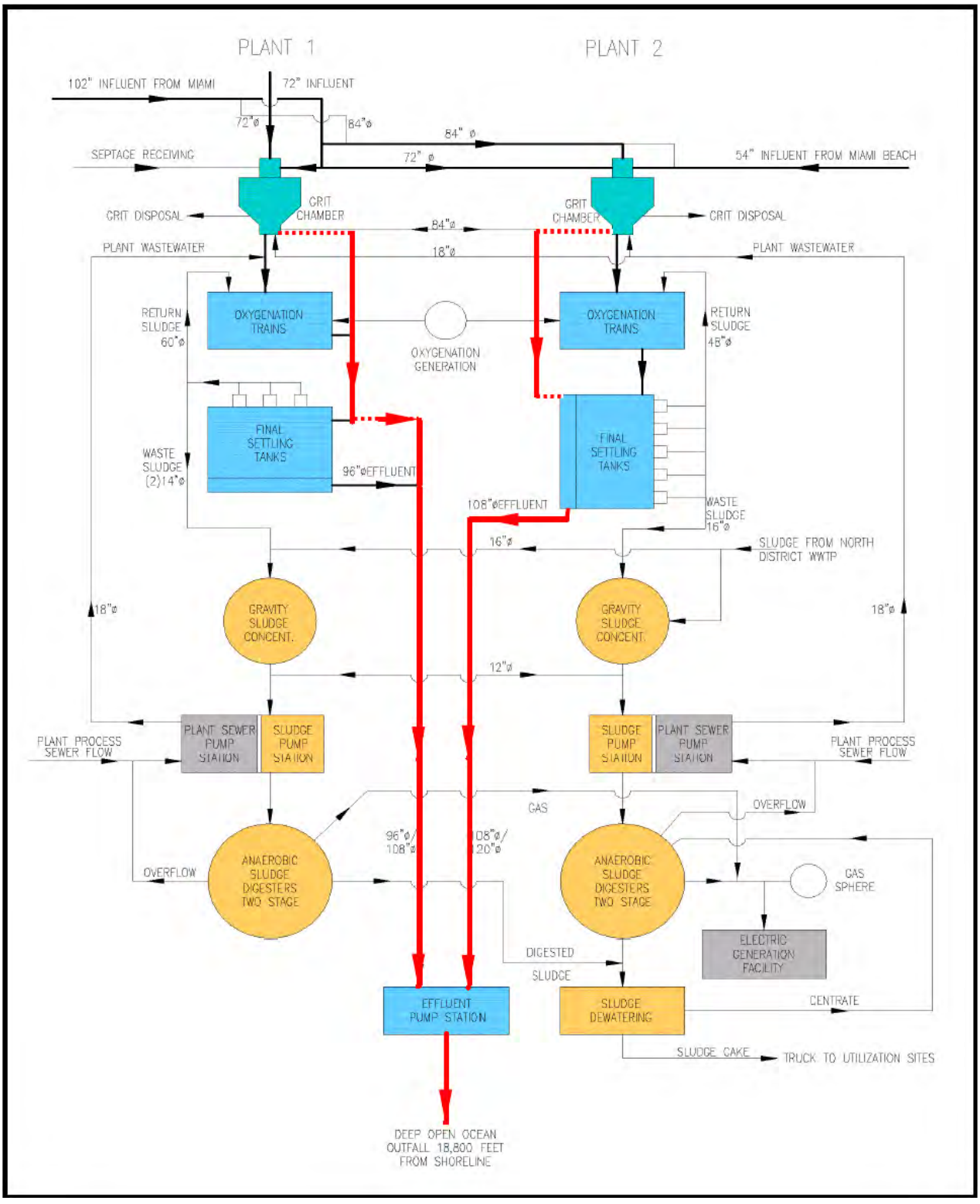

Figure 5-13 Central District Plant Bypass Scheme (note that Plant 1 bypass is no longer in service)

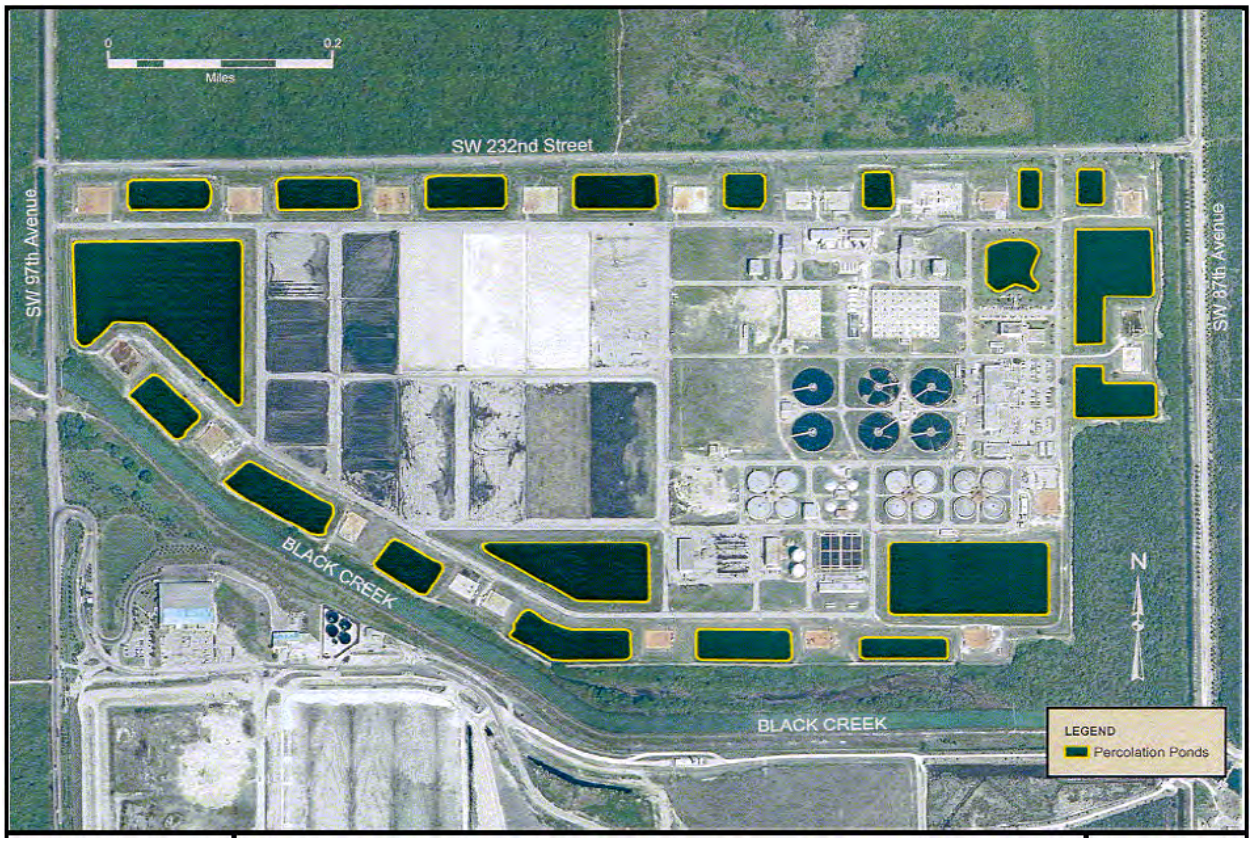

Figure 5-14 South District Plant Percolation Pond Locations

EMERGENCY PERMITTING

Regulatory agency issues will be addressed in conjunction with emergency repairs. In addition to agency notifications, several courses of action must be implemented by MDWASD to address regulatory agency concerns before, during and after response to an unpermitted discharge. Precautions are identified which should be implemented to minimize environmental impacts.

Regulatory Requirements

The requirements for obtaining emergency (environmental protection) regulatory authorization are summarized in Table 5-5. Many of the federal, state, and local agency requirements may be fulfilled by contacting the agencies and describing the location and extent of the incident. After-the-fact permits are required, on a case-by-case basis, by RER-ERM and FDEP for permanent repair work. If work affects streets and roads, the local department of public works and the Florida Department of Transportation should be contacted.

Environmental Protection Precautions

Prior to emergency repair work, response personnel should be advised of precautions to minimize adverse environmental impacts. An overview of general precautions is presented in Figure 5-15

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Table 5-5
AGENCY ISSUES DURING EMERGENCY REPAIRS
(Last /update: December 2014)

Agency	Requirements	Concerns	Staff Contact
U.S. Environmental Protection Agency	Contact	Compliance with First Partial Consent Decree	Brad Ammons (404) 562-9769
U.S. Coast Guard, Captain of the Port	Contact	Compliance with marine vessel safety regulations	(305) 415-6670
U.S. Army Corps of Engineers Miami Permitting Section	Contact	Permit by Rule applicable in emergency situations	Paul Kruger (305) 526-7181
Florida Department of Environmental Protection	Permit after the fact	Permit required for permanent repairs on a case-by-case basis	Linda Brien (561) 681-6696
Miami-Dade County Dept. of Regulatory and Economic Resources' Environmental Resources Management Division	Permit after the fact	Permit required for permanent repairs on a case-by-case basis	Carlos Hernandez (305) 372-6714
Florida Department of Health and Rehabilitative Services	Permit after the fact	Permit required for permanent repairs on a case-by-case basis	Samir Elmir (305) 623-3500
South Florida Water Management District	Contact	Impacts to management of surface waters	24/7 Operation's Control Center (561) 682-6116

GENERAL PRECAUTIONS DURING REPAIRS TO UNPERMITTED DISCHARGES

1. All personnel working in Biscayne Bay and on Virginia Key should know of the boundaries of the Critical Wildlife Area (CWA), its significance to manatee preservation, and its no entry designation. Access to the CWA shall be limited to the greatest extent possible.

2. Repair crews should take all necessary precautions to prevent construction debris from falling into the surface waters. Any debris that falls into the water shall be removed immediately.

3. Effective turbidity control, such as, but not limited to, turbidity curtains, shall be employed during all operations that may create turbidity. If necessary, turbidity curtains may be extended to enclose the entire work area. Where water depths and currents allow, turbidity curtains shall be weighted sufficiently to extend entire depth, but only in cases where sea grasses will not be damaged. All curtains shall remain in place until turbidity levels have subsided.

4. All excess spoil generated from excavation shall be removed from the work area and disposed of in accordance with applicable federal, state and local regulations.

5. If historical or archaeological artifacts, such as Indian canoes, are discovered at any time within the project site the MDWASD should immediately notify the Florida Department of Environmental Protection and the Bureau of Historic Preservation, Division of Archives, History and Records Management, R.A. Gray Building, Tallahassee, Florida 32301.

Figure 5-15 GENERAL PRECAUTIONS

Section 6

PREPAREDNESS TRAINING PROGRAM

A program was developed to ensure the preparedness, including responsiveness training, of Miami-Dade County employees and other affected Miami-Dade County agencies, including The Department of Regulatory and Economic Resources' Environmental Resources Management Division (RER-ERM), necessary for the effective implementation of the contingency plan in the event of an unpermitted discharge of wastewater to surface waters. Upon the initial development of the Unpermitted Discharge Contingency Plan (UDCP), the Program included:

- Workshops conducted with managers and key personnel to review the established emergency response activities.
- Field trials of emergency response procedures
- Preparedness training sessions to provide personnel, who may be involved in a discharge event, an overall understanding of the response actions.
- Coordination and training meetings to ensure the members of the response team are aware of their responsibilities.

The UDCP has been in place for approximately twenty years. Different levels of UDCP response have been and will continue to be executed on a regular basis, as every wastewater spill event whether more than a thousand gallons or not, and whether they discharge to surface waters or not, share many common response elements. In comparison to the less significant events, the more significant ones, though infrequent, do occur and basically only entail additional communication procedures, including the implementation of public access advisories. With the above in mind, it is important to note that the responses to unpermitted discharges have historically provided preparedness training on a fairly regular basis. These responses also expose the need for any revisions or clarifications of responsibilities as they pertain to the UDCP or its implementation. Any needed revisions are usually implemented on a continuous basis. In the absence of any significant revisions to the UDCP or to the personnel involved in its implementation, field trials of emergency response procedures, and workshops with managers and key personnel will be conducted on an as needed basis.

A sample of the agenda for preparedness training is included below. In addition to this training, Water Quality Impact Committee (WQIC) members meet as needed to review response procedures – a meeting was held on July 10, 2012.

On June 6, 2013, the Department of Justice lodged a proposed Consent Decree with the United States District Court for the Southern District of Florida in the lawsuit entitled United States, State of Florida and State of Florida Department of Environmental Protection v. Miami-Dade County. The Date of Entry for the new Consent Decree was April 9, 2014. The requirements for this Unpermitted Discharge Contingency Plan will continue until the Sewer Overflow Response Plan (SORP) is implemented as required by Paragraph 19(b) of the new Consent Decree.

AGENDA
PREPAREDNESS TRAINING FOR UNPERMITTED DISCHARGE CONTINGENCY PLAN
WASD Douglas Bldg., Training Room

I. INTRODUCTION – (Bertha Goldenberg)

II. OVERVIEW OF CONTINGENCY PLAN – (Bertha Goldenberg)

III. POTENTIAL FAILURE MODES – (Vicente Arrebola)
- Pipe, Joint, and Manhole Failures
- Electrical and Mechanical Failures
- Construction Disruptions

IV. DETECTION AND VERIFICATION – (Vicente Arrebola)

V. AGENCY NOTIFICATION – (Marc Garcia)
- Regulatory Agency Notifications
- Local Agency Notifications

VI. PUBLIC NOTIFICATION PLAN – (Bertha Goldenberg, Adriana Lamar & Marc Garcia)
- Water Quality Impact Committee
- News Media Notification Process
- Public Official Notifications

VII. INTERNAL NOTIFICATION PLAN –
- Communications Center (Marc Garcia)
- Response Administration System (Vicente Arrebola)

VIII. EMERGENCY FLOW CONTROL – (Vicente Arrebola)
- Diversion and Flow Reduction Strategies
- Flow Diversion at P.S. 33-P1
- Controlled Releases
- Treatment Plant Operation Modifications

IX. EMERGENCY OPERATIONS PLAN – (Vicente Arrebola)
- Response Priorities
- Pump Station Shutdowns
- Flow Control at Treatment Plants
- Flow Diversions

X. REPAIR PROCEDURES OVERVIEW – (Vicente Arrebola)

- Emergency Contracting
- Trenching and Excavations
- Pipe Sleeve and Spot Repairs
- Tapping Procedures
- Replacement

XI. ENVIRONMENTAL PROTECTION PRECAUTIONS – (Steve Blair and Bertha Goldenberg)

XII. EMERGENCY MONITORING PLAN – (Steve Blair and Bertha Goldenberg)

XIII. PUBLIC ACCESS ADVISORY PLAN – (Vicente Arrebola and Bertha Goldenberg)

XIV. SUMMARY COMMENTS AND CLOSING (Bertha Goldenberg)

Section 7

WATER QUALITY MONITORING

The Miami-Dade County Department of Regulatory and Economic Resources' Environmental Resources Management Division (RER-ERM) developed the Emergency Monitoring Plan to describe the monitoring, sampling, analysis and reporting which will be implemented to assess the impacts on water quality from an Unpermitted Discharge. The sampling program will also determine the geographic and temporal extent of contamination.

Sampling locations, sampling methods and analysis are specified to ensure protection of the environment and human health and welfare. Quality assurance and quality control procedures consistent with 40 CFR Part 136 will be implemented. The results of all data collected through the duration of the event will be reported to Environmental Protection Agency (EPA), the Florida Department of Environmental Protection (FDEP) and the Miami-Dade County Department of Health (DOH).

WATER QUALITY MONITORING

Water quality monitoring will be implemented by RER-ERM when the release volume exceeds 100 gpm for 10 minutes, and the flow from the release impacts surface waters directly (directly flow to surface water), or indirectly (stormwater drains receive flow from the release, and those drains have connection to surface waters).

Personnel

Upon notification from the Miami-Dade Water and Sewer Department (MDWASD) pursuant to Paragraph 15(A)(vi) of the First Partial Consent Decree, RER-ERM will evaluate stormwater systems, if impacted by releases, for any positive discharges or connections to surface water, and initiate surface and wastewater quality sampling. RER-ERM sampling activities will be coordinated by the RER-ERM Natural Resources Division according to procedures outlined below. Backup support will be provided by the RER-ERM Pollution Regulation Division, which coordinates after-hours and weekend emergency response inspector services. A RER-ERM Division or Section chief will provide project coordination, and designate a field supervisor who will oversee collection of samples.

Equipment

Vehicles, vessels, field meters, and expendable equipment and supplies are routinely available to the staff of the Natural Resources and Pollution Regulation Divisions of RER-ERM. This equipment will be utilized, as needed, for the required sampling. Multiple backup vehicles, vessels, and other permanent equipment are available.

SAMPLING PROTOCOL

The sampling protocol describes the parameters which will be monitored and the frequency and the location of the samples which will be collected. Additional sample locations will be included as necessary to define the extent of the contamination with emphasis on areas where the public may come in contact with wastewater and waters contaminated by wastewater.

Sample Parameters

Surface and untreated wastewater parameters will be monitored, as indicated below.

- Surface Water — Fecal coliform, Enterococcus, turbidity, salinity, temperature, dissolved oxygen.
- Untreated Wastewater — Fecal coliform, 5-day Biological oxygen demand, total suspended solids.

Location and Schedule of Sampling

Initial sampling will focus on the immediate vicinity of the discharge(s). The sampling area may be modified on subsequent days, taking into account site factors, such as currents, water flow, tides and wind-driven circulation patterns, with emphasis on sites where public contact is likely. Sampling will continue at the frequencies noted below until water quality is similar to typical conditions or meets water standards.

Initial "DAY ONE" Sampling

If the discharge begins and is reported to RER-ERM prior to 2:00 pm, a DAY ONE sampling protocol will be implemented. Surface water samples will be collected at suspected point(s) of discharge to surface waters. If the receiving water body is a tidal water body or a canal or tributary ultimately discharging to tidal waters, samples will be collected upstream and downstream of the suspected sources of discharge.

Exact numbers and locations of sample sites will be determined after review of pertinent information including: the location and volume of the source, currents, water flow, tides and wind-driven circulation patterns, and sites where public contact is likely. Exact locations of sampling may be modified in the field due to access or other pertinent site conditions found by the sampling staff. Sampling will conducted using the following guidelines. One sample will be collected approximately 200 yards upstream of the discharge. Downstream samples will be collected at any parks, beaches, street-ends or locations providing public access within 1 mile of the discharge point, or 2 miles if the total volume of release impacting surface waters is greater than 50,000 gallons. If there are no clear points of public access, samples will be collected at approximately one-half mile intervals for a distance of 1 mile downstream of the discharge point (up to 2 miles downstream if strong current or winds exist that would cause rapid movement of the discharge plume). To expedite the sampling, a field kit containing an adequate number of sampling containers and related expendable materials will be prepared and maintained by the Natural Resources Division.

Second Day Sampling

On the day after the discharge is discovered (or if the discharge is first reported after 2:00 pm), a DAY TWO sampling protocol will be implemented. Surface water samples will be collected at all DAY ONE stations. If the volume of discharge is estimated in excess of 1 million gallons, samples will be collected in adjoining basins or at ocean beaches within a 5-mile radius that could be affected by the discharge.

Locations of these stations will be determined in the field, but may include sites routinely monitored or for which background information is available or other public areas. In addition, up to 10 elective samples will be collected at the discretion of the field supervisor if a visible plume can be detected and taking into account tides, canal discharges, wind-driven circulation, or other factors that could influence movement of contaminated water.

Continuing Sampling

DAY TWO sampling protocol, including elective stations, will continue every second day thereafter until the discharge ceases.

Follow-up Sampling

Surface water sampling will continue every second day after the discharge ceases at selected stations where the public access is likely and at any stations where violations of water quality standards were documented, until water quality meets standards or returns to typical conditions.

ANALYSIS

Sampling methods will follow RER-ERM's established quality assurance and quality control procedures. Temperature, salinity and dissolved oxygen will be determined utilizing field instrumentation. Bacteria, turbidity, biochemical oxygen demand, and total suspended solids samples will be collected according to procedures in RER-ERM's approved Field Comprehensive Quality Assurance Plan (CQAP) and delivered to a laboratory holding NELAC certification for analyses to be conducted.

Quality Assurance/Quality Control

All sampling methods will be in accordance with RER-ERM's Field CQAP for Biscayne Bay monitoring. This plan has been reviewed and approved by the Florida Department of Environmental Protection (formerly Department of Environmental Regulation) in connection with the Biscayne Bay Surface Water Improvement and Management Program. All laboratories analyzing samples collected during contingency monitoring will be required to have NELAC certification to perform analysis of the specific parameter(s), a current DEP-approved quality assurance plan and follow approved procedures for all analyses. DEP requirements are consistent with 40 CFR Part 136 procedures and protocols.

Field Parameters

Temperature, salinity and dissolved oxygen will be determined in the field using a YSI (Yellow Springs Instrument) multi-parameter water quality instrument (or equivalent instrumentation) according to procedures in the approved Field CQAP. The Natural Resources Division will maintain a minimum of five multi-parameter water quality instruments in the event that multiple meters or a back-up is required.

Laboratory Analyses

Samples collected for bacteriological analysis will be collected according to procedures in the

approved Field CQAP. All such samples will be delivered to a laboratory holding NELAC certification for analyses to be conducted and will be analyzed using the membrane filter (MF) method, or other EPA approved method. Turbidity, biochemical oxygen demand, and total suspended solids samples will be collected according to procedures in the approved Field CQAP and delivered to a contract laboratory for analysis. All analyses will be carried out according to procedures in DEP-approved QAP's.

Laboratory Services

The County may utilize one or more private laboratories already under contract to provide laboratory services to the County. Work orders with an appropriate primary vendor and backup vendor for emergency laboratory services will be drafted immediately. All contract laboratories are required to have NELAC certification to conduct analysis of the specific parameter(s) analyzed, and carry out analyses according to a DEP-approved QAP.

REPORTING

RER-ERM will verbally receive the bacteria analyses within 48 hours of delivering the samples to the laboratory. This result will be emailed to the EPA and other regulatory agencies within one hour of RER-ERM receipt. All data collected during the event will be forwarded to the EPA and the appropriate regulatory agencies within 15 days of the event.

Laboratory Results

The contract laboratory will be required to report results of bacteria analyses by telephone to the RER-ERM project manager within 48 hours of receiving samples. This communication will be followed by a preliminary written fax report from the lab of the data. RER-ERM will in turn report by telephone and/or fax, or E-mail, results to EPA, DEP, and DOH within 1 hour of receiving the lab report to facilitate determination of public access restrictions and notifications described under other sections of this plan.

A final written report of bacteria analyses will be provided by the contract lab to RER-ERM within 5 working days of the sampling event. Results of other laboratory analyses will be provided to RER-ERM by the contract laboratory within 10 working days of the sampling event. RER-ERM will compile all reports and provide a written report, summarizing all data collected through the duration of the event, to EPA, DEP, and DOH within 15 working days after receiving the laboratory reports with results from the last day of sampling.

Field Sampling Results

Results of field sampling will be tabulated with the results of bacterial analyses in preliminary reports and be forwarded by E-mail, to the EPA, DEP, and DOH. Field data will be included in the final written summary report of the event.

Section 8

PUBLIC ACCESS ADVISORY PLAN

The Public Access Advisory Plan describes the actions that Miami-Dade Water and Sewer Department (MDWASD) will take, in cooperation with the Miami-Dade County Department of Health (DOH) and the Miami-Dade County Department of Regulatory and Economic Resources' Environmental Resources Management Division (RER-ERM), and the Miami-Dade County Office of Emergency Management (OEM), to limit public access to areas potentially impacted by Unpermitted Discharges of pollutants to surface water bodies from the MDWASD wastewater treatment plants and collection systems. The purpose of this plan is to ensure that warning signs are posted at site specific locations to inform the public of potential health impacts from contact with contaminated waterways, shoreline areas, or other affected resources.

ADVISORY PROCEDURES

When it is decided that public access advisories are required, communications will be made to the public through television, radio, and newspaper as discussed in Section 2 – "Public Notification Plan". News releases will include a description of the problem, the areas affected by the advisory, and the measures being taken to minimize public health impacts.

POSTING PROCEDURES

The MDWASD has primary responsibility for posting notices of polluted surface water bodies or ground surfaces, which result from uncontrolled wastewater discharges from its facilities. The postings do not prohibit use of recreational areas, but provide a warning of potential public health risks due to wastewater contamination. Responsibility for monitoring the quality of water resources rests with RER-ERM, while DOH is responsible for protecting public health. In the event of an Unpermitted Discharge to surface water, these agencies will participate in the decision to alert the public to potential health risks. When necessary, the OEM may assist in the implementation of the Public and Agency Notification Plans.

The flow diagram in Figure 8-1 illustrates the responsibilities and interactions of the agencies involved in posting public access advisories for Unpermitted Discharges to surface water bodies or ground surfaces.

Deployment of Signs

Upon confirmation of a discharge to surface waters, the MDWASD response team on site will post signs along the immediate areas affected by the wastewater spill. A discharge to surface waters will immediately initiate sampling, testing, and monitoring by RER-ERM or DOH to determine if additional posting of signs is warranted. RER-ERM efforts will focus on tracking the movement of wastewater plume, while DOH will concentrate on the beaches and shoreline areas.

The police and public works departments in the political jurisdiction in which the discharge occurred will be notified by the MDWASD Communications Section. The local police department will be notified to assist in rerouting vehicles and pedestrians around the discharge/repair staging area, if necessary. The local public works department will be notified of any potential secondary impacts to roads and drainage.

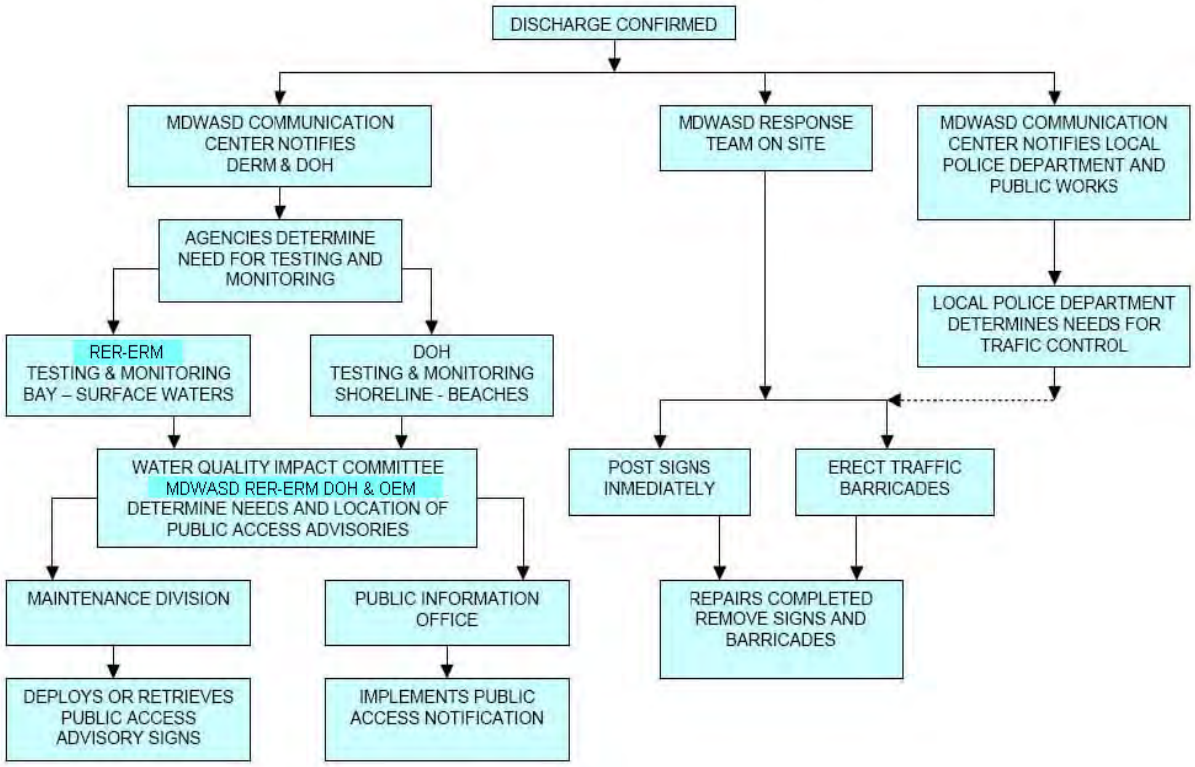

Figure 8-1 Public Access Advisory Process.

The Water Quality Impacts Committee (WQIC), which includes representatives from MDWASD, RER-ERM, DOH, and OEM will review the results of the water quality testing performed in response to a discharge to surface waters and will jointly decide whether public access advisories beyond the initial postings are warranted and where the additional postings should be located. The WQIC will consist of the individuals or their alternate listed in Table 8-1.

When the need for additional public access advisory is defined by the WQIC, the MDWASD representative will notify the Emergency Communications Section who will notify the appropriate Maintenance Division. MDWASD's Public Affairs Office Section Chief will provide news releases and access advisories to the local news media through the Emergency Communications Section, outside of business hours, or through the Miami Dade Office of Communications (MDOC), during business hours, as described in Section 2 – "Public Notification Plan". The Pump Station Division will assume responsibility for posting the public advisory signs. They will post signs in the areas other than the immediate vicinity of the discharge, as indicated in a map and/or list provided by RER-ERM and/or DOH.

Depending on the location of the Unpermitted Discharge, public access advisory signs will be posted at the site and along affected shorelines. In the case of an Unpermitted Discharge entering Biscayne Bay, or a tributary to the bay, signs will be posted in the area of the discharge on pilings, boat ramps, channel markers, sea walls, shorelines, or beaches within the boundaries determined by the WQIC. A map of the bathing beaches is shown in Figure 8-2.

Table 8-1 WATER QUALITY IMPACTS COMMITTEE (WQIC)		
Agency	**Representative**	**Alternate**
MDWASD	**Bertha Goldenberg** Office: (786) 552-8120 Mobile: (305) 903-9807	**Richard O' Rourke** Office: (786) 552-8123 Mobile: (786) 586-3597 Beeper: (305) 277-0999
RER-ERM	**Steve Blair** Office: (305) 372-6853 Mobile: (305) 775-9404	**Chris Avila** Office: (305) 372-6861 Mobile: (954) 232-3313
DOH	**Samir Elmir** Office: (305) 623-3500, x3595 Mobile: (305) 219-3280	**Paul Andre** Office: (305) 623-3551 Mobile: (305) 986-4046
OEM	**Curtis Sommerhoff** Office: (305) 468-5403 Mobile: (786) 863-9350	**Jonathan Lord** Office: (305) 468-5403 Mobile: (305) 215-1971

The public access advisory signs in Figures 8-3 and 8-4 will be posted as needed at area beaches and will provide warnings in English, Spanish, and Creole. Additional postings will be initiated immediately after notification of the joint WQIC's recommendations. As water quality monitoring efforts continue throughout the duration of the Unpermitted Discharge incident, the committee will continue to review the testing results and may recommend different or additional locations for public access advisory postings.

Retrieval of Signs

Following repair to correct the Unpermitted Discharge and an evaluation of the results of water quality monitoring in the affected water bodies and shoreline areas, the water quality impacts committee will determine when the situation has been remedied to an extent that the public access postings can be removed. The determination will be based upon results of coliform bacteria testing performed on samples taken in affected areas. Bacteria counts must be less than published guidelines for the waterbody's use for DOH to determine that swimming and other recreational water contact activities can be resumed.

The MDWASD representative will notify the Emergency Communications Section when the public access advisory is rescinded and will instruct the Chief of the Pump Station Division to remove the public access advisory signs.

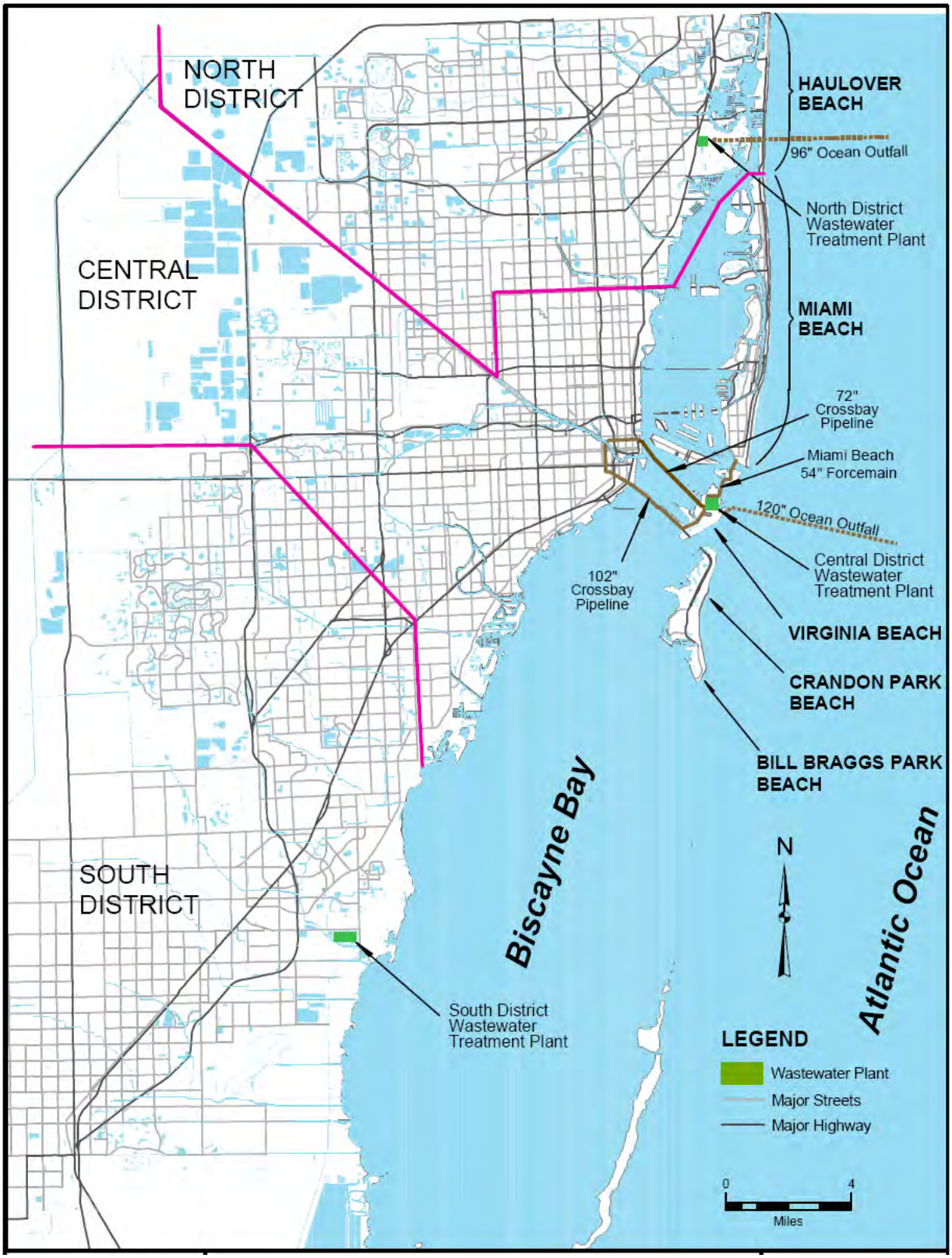

Figure 8-2 Miami Area Coastal Beaches

Figure 8-3
SURFACE WATER WARNING SIGN

Figure 8-4
SURFACE WATER WARNING SIGN