

Welcome to the

SANITARY SEWER SYSTEM CAPACITY CERTIFICATION

PAST, PRESENT and FUTURE



Presented by

Carlos L. Hernandez, PE, CFM, LEED AP, Chief, hernac@miamidade.gov / (786) 315-2800

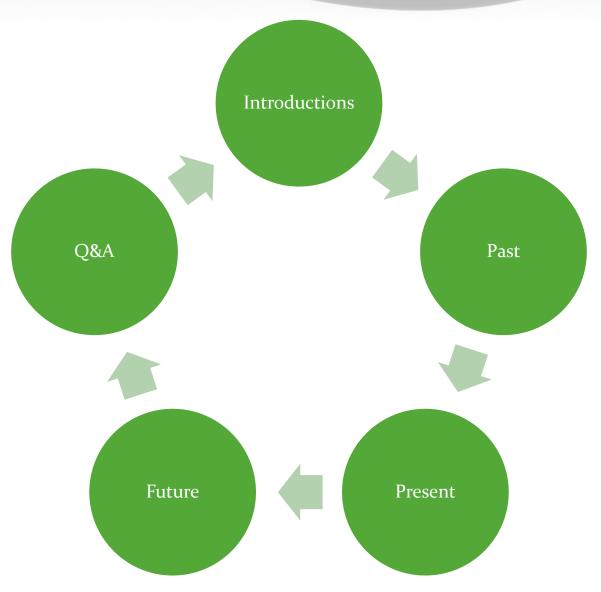






Department of Regulatory and Economic Resources

www.miamidade.gov/development

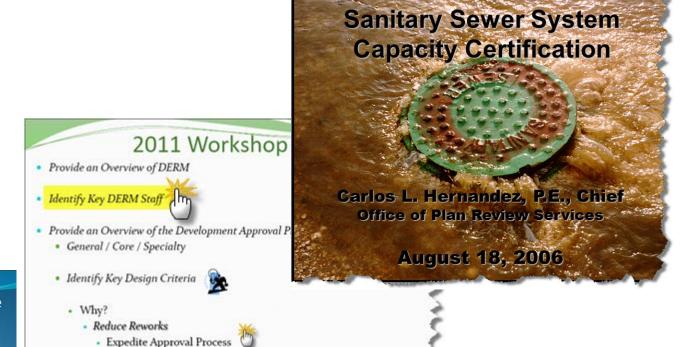


Environmental Plan Review: Prior Presentations

Outcome?

Increase Protection of Environment.

Deliver Projects to your clients faster.



Getting it Right the First Time Workshop for City Officials

DERM Overtown Transit Village North
October 29th, 2008
701 NW 1 Court, 2nd Floor Training Room
1 – 5 pm

Reservations (786) 315-2800

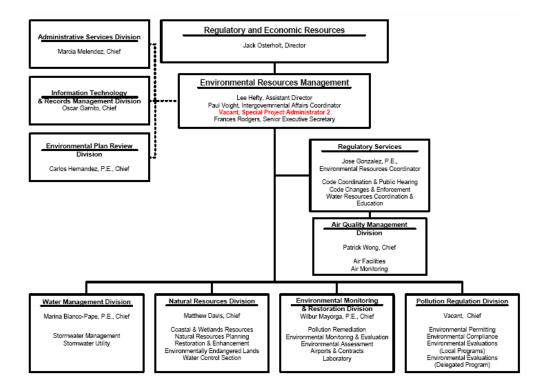
Environmental Plan Review: Who's Who

Carlos L. Hernandez, Division Director

hernac@miamidade.gov 786-315-2806

Frank Lezcano, Supervisor Downtown, OTV LezcaF@miamidade.gov

Christian Guerrero, Supervisor West Dade, PIC GuerrCh@miamidade.gov



WASD: Who's Who

Environmental Plan Review: Who's Who

Section	Section Supervisor	Area of Review	Email	Phone
Division Chief	Carlos L. Hernandez, PE, CFM, CEHP, LEED AP	All	hernac@miamidade.gov	786-315-2806
Division Secretary	Gloria Taborda	NA	taborgl@miamidade.gov	786-315-2800
Plan Review-OTV	Frank Lezcano	Flow Studies, Building Permit and Certificate of Use	lezcaf@miamidade.gov	305-372-6502
Plan Review-OTV	Christina Fernandez	Flow Studies, Building Permit and Certificate of Use	FernaC@miamidade.gov	305-372-6498 305-416-1488 (MWF)
Plan Review-PIC	Cristian Guerrero, PE	Flow Studies, Building Permit and Certificate of Use	guerrch@miamidade.gov	786-315-2805
Plan Review-PIC	Silvia Roehner	Building Permit and Certificate of Use	abrahr@miamidade.gov	786-315-2811
Plan Review-PIC	Betty Hernandez	Building Permit and Certificate of Use	HernaB@miamidade.gov	786-315-2807
Specialty Engineering	Roberto Abrahante	Paving & Drainage, Flood, Asbestos, Industrial Waste/Materials/Pretreatment, Water/Sewer Extensions, AST/UST, Air Pollution Sources, Trees, Wetland/Coastal.	abrahr@miamidade.gov	786-315-2810

In the Beginning: SSOs

Arterial or Collector Street



Protect Public Health,

Protect Property Values,

•Promote Development, ...

Local (Residential) Street

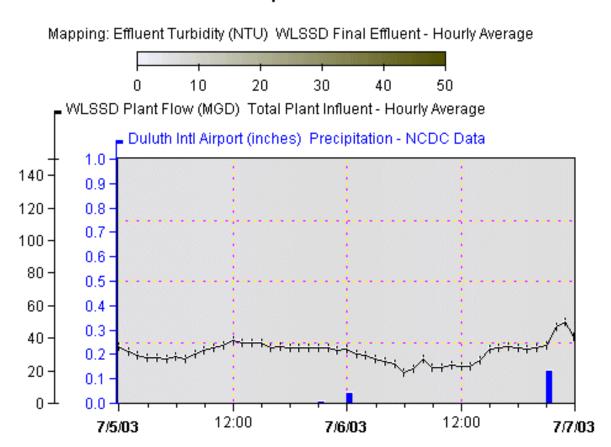


Sanitary Sewer Overflows: Causes

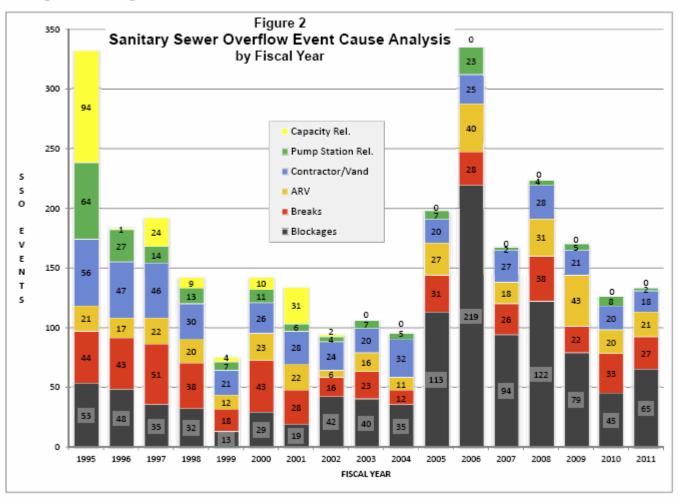


Sanitary Sewer Overflows: Causes

Duluth Precip. / WLSSD Flow



In the Beginning: SSOs



In the Beginning: SSOs

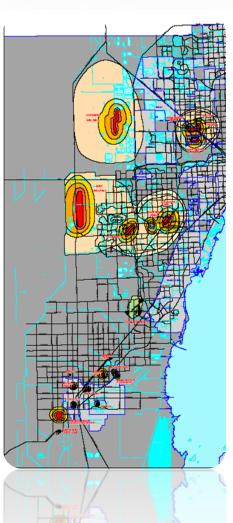


- Protect Public Health,
- Protect Property Values,
- •Promote Development, ...









The Federal Consent Decree: First & Second Partial

UNITED STATES DISTRICT COURT SOUTHERN DISTRICT OF FLORIDA

UNITED STATES OF AMERICA,

Plaintiff,

v.

METROPOLITAN DADE COUNTY, and MIAMI-DADE WATER AND SEWER AUTHORITY DEPARTMENT,

Defendants,

and

STATE OF FLORIDA,

Statutory Defendant.

CASE NO. 93-1109 CIV-MORENO

FIRST PARTIAL CONSENT DECREE

WHEREAS, Plaintiff, the United States of America, by
the authority of the Attorney General of the United States and
through its undersigned counsel, acting at the request and on
behalf of the Administrator of the United States Environmental
Protection Agency ("EPA"), has filed a complaint in this action
seeking injunctive relief pursuant to Section 504 of the Clean
Water Act (the "Clean Water Act"), 33 U.S.C. § 1364, alleging
that defendants, Metropolitan Dade County and the Miami-Dade
Water and Sewer Authority Department (hereinafter collectively
referred to as the "Defendants"), are presenting an imminent and
substantial endangerment to the health or welfare of persons by
i) the continued use of the 72-inch force main that conveys
untreated wastewater from the City of Miami under Biscayne Bay to

the Central District Wastewater Treatment Plant ("Central Plant"), and ii) the unpermitted discharge of untreated wastewater from the Defendants' wastewater treatment and collection system; and

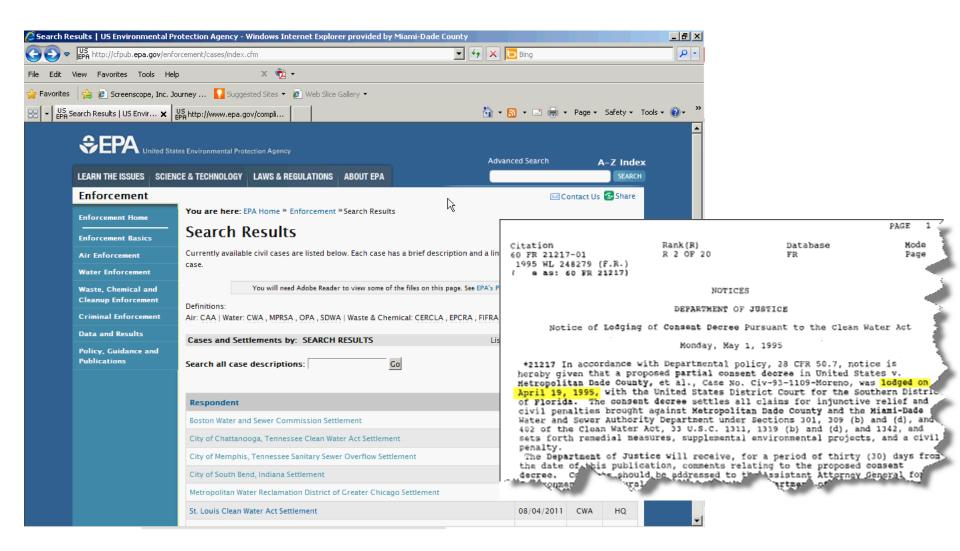
WHEREAS, Defendant Metropolitan Dade County,

...1st Partial CD...

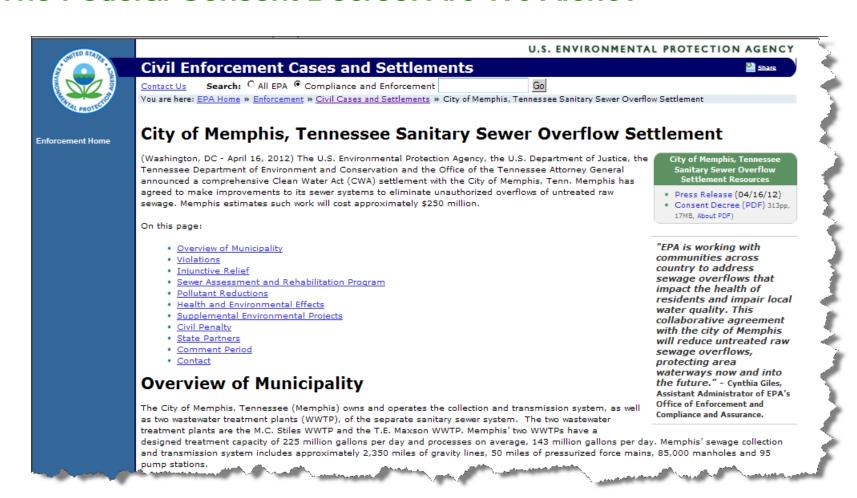
WHEREAS, the First Partial Consent Decree entered by this Court on January 13, 1994, resolves the First Claim for Relief by the United States in the complaint concerning the alleged threat presented by the continued use of the 72-inch force main that conveys untreated wastewater from the City of Miami under Biscayne Bay to the Central Plant; and

...2nd Partial CD...

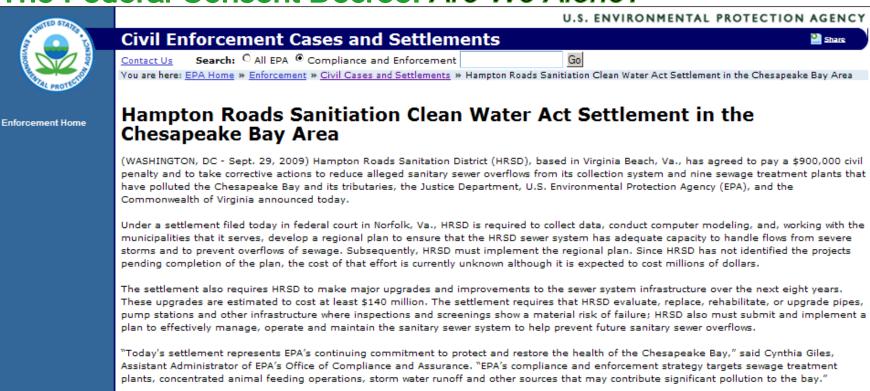
The Federal Consent Decree: Are We Alone?



The Federal Consent Decree: Are We Alone?



The Federal Consent Decree: Are We Alone?



- Press Release (09/29/09)
- Consent Decree (PDF) (99 pp, 295K, About PDF)
- e_C \laint () (33, 400 BPM, Albert DDF) A



The Federal Consent Decree: Where's Capacity Certification?

requirements or Paragraph 14.

16. c. Adequate Transmission and Treatment Capacity

i) As of the Date of Lodging of this Partial Consent Decree, Defendants shall authorize only those sever service connections as provided for in this Paragraph, and only under the conditions set forth in Appendix B. This Paragraph shall apply both to Defendants' collection system and to the collection systems of entities and municipalities serviced on a "bulk" basis by Defendants.

ii) Adequate treatment capacity shall be demonstrated by Defendants' certification that the wastewater treatment plant that will receive flow from newly authorized sewer service connection(s) will not be in "non-compliance" as defined in 40 C.F.R. Part 123.45, Appendix A, at the time the wastewater treatment plant receives the flow from the newly authorized sewer service connection.

iii) Adequate transmission capacity shall be demonstrated by Defendants' certification that each pump station

27

immediately upstream from the pump station receiving flow from the newly authorized sewer service connection, and all pump stations through which flow from the newly authorized sewer service connection passes to the vastewater treatment plant receiving such flow, exhibits a hominal verage pump perating lime of less than or equal to ten (1) hours per day. Nominal average pump operating time shall be defined as the daily average total pump operating hours for the previous twelve (12) months divided by one less than the total number of pumps installed in that station. Certification of adequate transmission capacity for each newly authorized sewer service connection shall require the consideration of all existing flow and loadings, including anticipated wastewater flow, resulting from all previously authorized sewer service connection(s). Defendants shall

What happens when NAPOT > 10 hrs?
Can't Certify Capacity!

Most commonly referred to as Moratorium



The Federal Consent Decree: Where's Capacity Certification?

requirements or Paragraph 14.

16. C. Adequate Transmission and Treatment Capacity

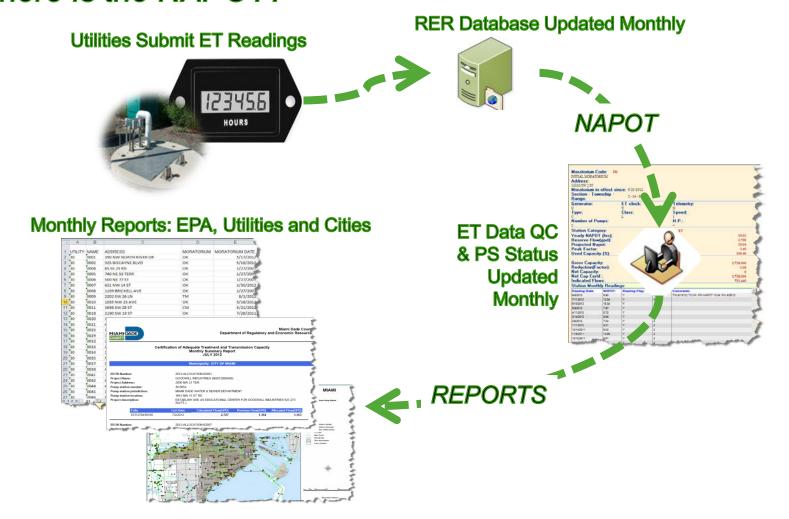
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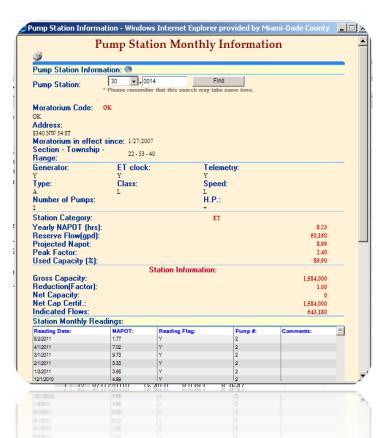
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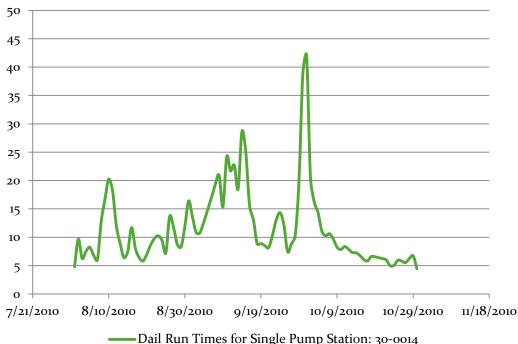
Sanitary Sewer Capacity Certification: Where does it begin & where is the NAPOT?



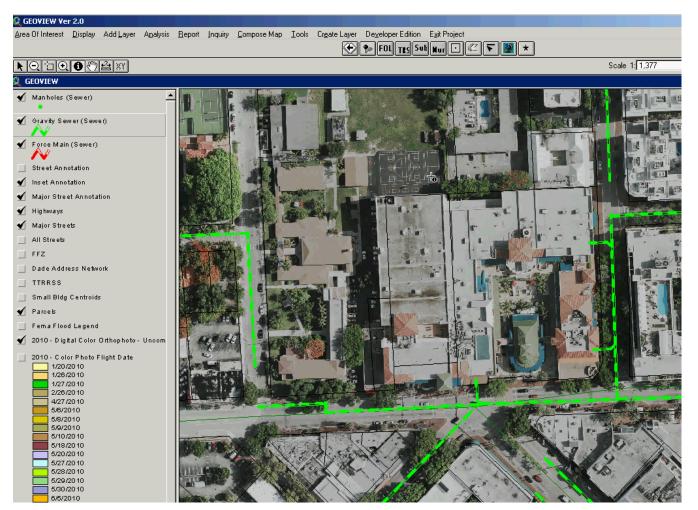
Sanitary Sewer Capacity Certification: Why 10 hrs?



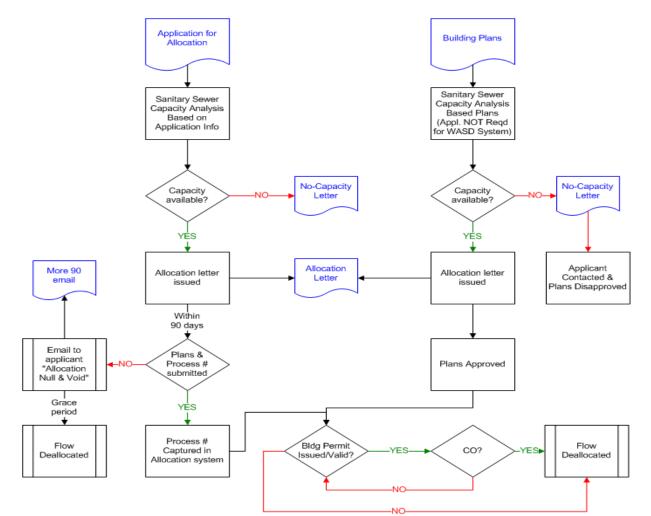
Dail Run Times for Single Pump Station: 30-0014



Sanitary Sewer Capacity Certification: How is Capacity Checked for a project?



Sanitary Sewer Capacity Certification: When is capacity Checked?



Sanitary Sewer Capacity Certification: When is capacity Checked?

Core Reviewer :
Water Supply
Wastewater

Wellfield Protection Area Identification of Specialty Flood (not municipal) Etc. Specialty Review Types:

- Air
- Asbestos
- Coastal
- Wetlands
- Trees (if city does not review)
- Paving & Drainage
- Pollution Remediation
- Water Control
- Industrial
- Storage Tanks
- Industrial Pre-Treatment

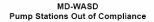
Sanitary Sewer Capacity Certification: What are IN, TM, IM..?

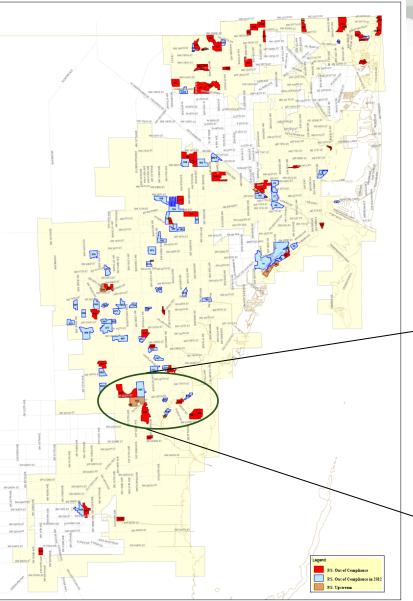
Status	Title	Description
OK		All is good.
IN	Insufficient Data	ET data has not been submitted.
TM	Temporary Moratorium	Database has identified NAPOT > 10 hrs
IM	Initial Moratorium	Staff has verified data and changed from TM to IM
CM	Condition Moratorium	Plan of Corrective Action submitted by Utility
СН	Condition & Hold	Station monitored for 12 months after repair/certification. If the station hours exceed 10 hrs, the station is put in CH status
AC	Approved & Corrected	Pump station hours are below 10 hrs
AM	Absolute Moratorium	After 12 months of monitoring, the PS remains above 10 hrs

Sanitary Sewer Capacity Certification: Past, Present & Future Utility Stations

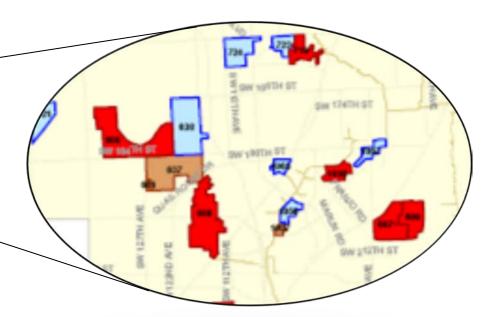
Sanitary Sewer Capacity Certification: What are IN, TM, IM..?

Status	Title	Can Allocation Be Issued?
OK		Yes, if projected flows for all downstream PS is \leq 10 hrs
IN	Insufficient Data	NO
TM	Temporary Moratorium	NO
IM	Initial Moratorium	NO
CM	Condition Moratorium	YES – but no CO/CU until repairs certified by Utility
СН	Condition & Hold	NO
AC	Approved & Corrected	Yes
AM	Absolute Moratorium	NO

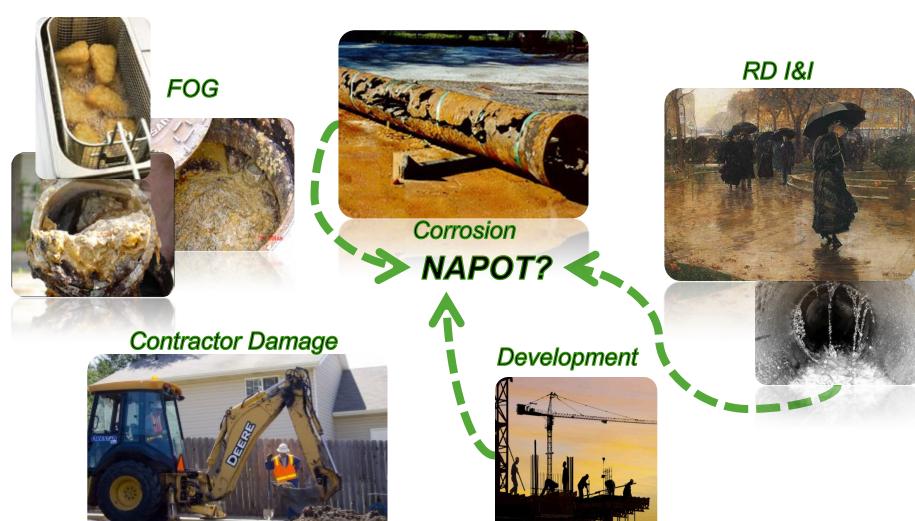




Sanitary Sewer Capacity
Certification: WASD Pump
Station Basins



Quick Quiz: Which one of these affects the NAPOT?



Planning Tools: The Earlier the Better!

- Pump Station Status Request Form Complete and submit (via email) a Pump Station Status Request Form and we will check status**.
 - To be upgraded to a Web-Based application.
- **Letter of Interpretation** determine if use can be approved *before* investing, purchasing, renting, leasing, etc.
- Reserve Flow good for 90 days can be recertified.
- **Development Pre-submittal meeting** get the facts before committing.
- Rework meeting helps design professional understand the pending disapproval comments before resubmitting plans.

Project in Basin under Moratorium: What are the options?



Project in Basin under Moratorium: Options?

- To be approved, the project must result in a No-Net-Increase (NNI).
- Which project are NNIs?
 - Use Temporary Septic Tank System (use must be compatible).
 - Use does not change or use changes to equal or lower flow use:
 - Shoe Store to Dress Shop Retail to Retail
 - Full Service Restaurant to Take Out or Fast Food.
 - Take Out to Full Service
 - Use changes to higher flow, but Flow Study shows no increase.
 - Actual Flow data from similar uses (e.g., Full Service Restaurant Chain shows that their restaurants uses 50 gpd/100 sqft instead of 100 gpd/100 sqft.)
 - Design incorporates higher efficiency fixtures or other design elements to reduce water consumption.





Project in Basin under Moratorium: Flow Study!

				-	-		
	Α	В	С	D	E	F	G
4	Process Number:		_				
5	Exiting Use:	Office	Gym	Proposed Use:	Office	Gym	
6	Existing Sqft:	3572	600	Proposed Sqft:	0	4172	
7	Existing q (gpd/sqft):			Existing q (gpd/sqft):			
8	Existing Q (gpd):	0	0	Existing Q (gpd):	0	0	
9	Totakl Q (gpd):	0		Totakl Q (gpd):	0		
10	Net Q (gpd):	0.0					
11	12. 2						
			RESID	DENTIAL BASE CASE			
2	Employees &						
13			Used?			Visitors 100	
			Yes = 1			Flow Rate	
14			No =0	Unit Flow Ra		GPD	Uses/Day
	Water Closet	Conventional	1		GPF	0.00	1
	Urinal_Male	Conventional	1		GPF	0.00	0.5
	Lavatory Faucet (15 sec)	Conventional	1		GPM	0.00	1
	Shower (20 min)	Conventional	1		GPM	0.00	1
19							
20							
21							
22					Domestic Volume =	•	GPD
23					Other flows =	-	GPD
24					Total =	•	GPD
25			RESIDE	ENTIAL DESIGN CASE			
26			Used?				100
			Yes=1		-		
27			No=0	Unit Flow Ra	Unit Flow Rates		UsestDay
28	Water Closet	Conventional	1		GPF	0.00	1
	Urinal_Male	Conventional	1		GPF	0.00	0.5
	Lavatory Faucet (15 sec)	Conventional	1		GPM	0.00	1
	Shower (20 min)	Conventional	1		GPM	0.00	1
32							
33							
34							
35					Domestic Volume =	•	GPD
36					Other flows =	-	GPD
37					Total =	•	GPD
38 39				Daily Value a Count to Date (2)			asl
39 40				Daily Volume Saved by Retrofit =		•	gal
41							







Sanitary Sewer Capacity Certification: What's Next?

While the definition for Adequate Transmission Capacity remains the same – NAPOT ≤ 10 hrs - there is a significant change proposed to how Additional Flows can be authorized.

Currently:

Additional flows can be authorized if: Projected NAPOT ≤ 10 Hrs

Authorizing Additional Flows: Infill Projects!

Proposed**:

Projects with existing connection to sewers or connecting to an existing sewer:

Additional flows can be authorized if:

- (a) Projected NAPOT ≤ 10 hrs, or
- (b) Projected NAPOT ≤ 12 hrs and,
 - (i) Projected NAPOT increase < 0.5 hrs and,
 - (ii) Additional Flow < 10,000 GPD

Authorizing Additional Flows: Projects In Existing PS Basin+SE!

Proposed**:

Projects within an Existing PS Basin but requiring a Sewer Extension:

Additional flows can be authorized if:

- (a) Projected NAPOT ≤ 10 hrs, and
 - (i) Projected AADF ≤ 1,000 GPD or,
 - (ii) HAMA \leq 15 hrs, or
 - (iii) HAMA > 15 but peak capacity study shows no upgrades required + no SSOs w/in prior 12 months.

Authorizing Additional Flows: Projects w/NEW Basin!

Proposed**:

Projects requiring new collection system, Pump Station and Force Main:

(a) Peak capacity study will determine under what conditions the new system is allowed to connect to transmission system.