



Florida Department of Environmental Protection

Domestic Waste Water Issues and Challenges

9/20/2016

Pinellas County Legislative Delegation

Mary E. Yeargan, PG

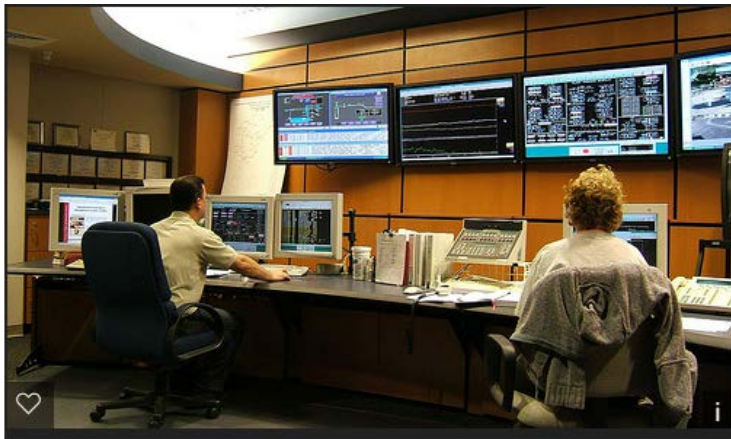
Director, Southwest District Office





Domestic Wastewater Facts

- DEP regulates about 2,000 wastewater facilities
- Treated Water Discharge Methods
 - Surface Waters (Advanced WW Treatment) – 39%
 - Deep aquifer injection wells – 26%
 - Reclaimed Water Systems – 35%
- DOH regulates smaller on-site systems
 - About 1/3 of Florida's population



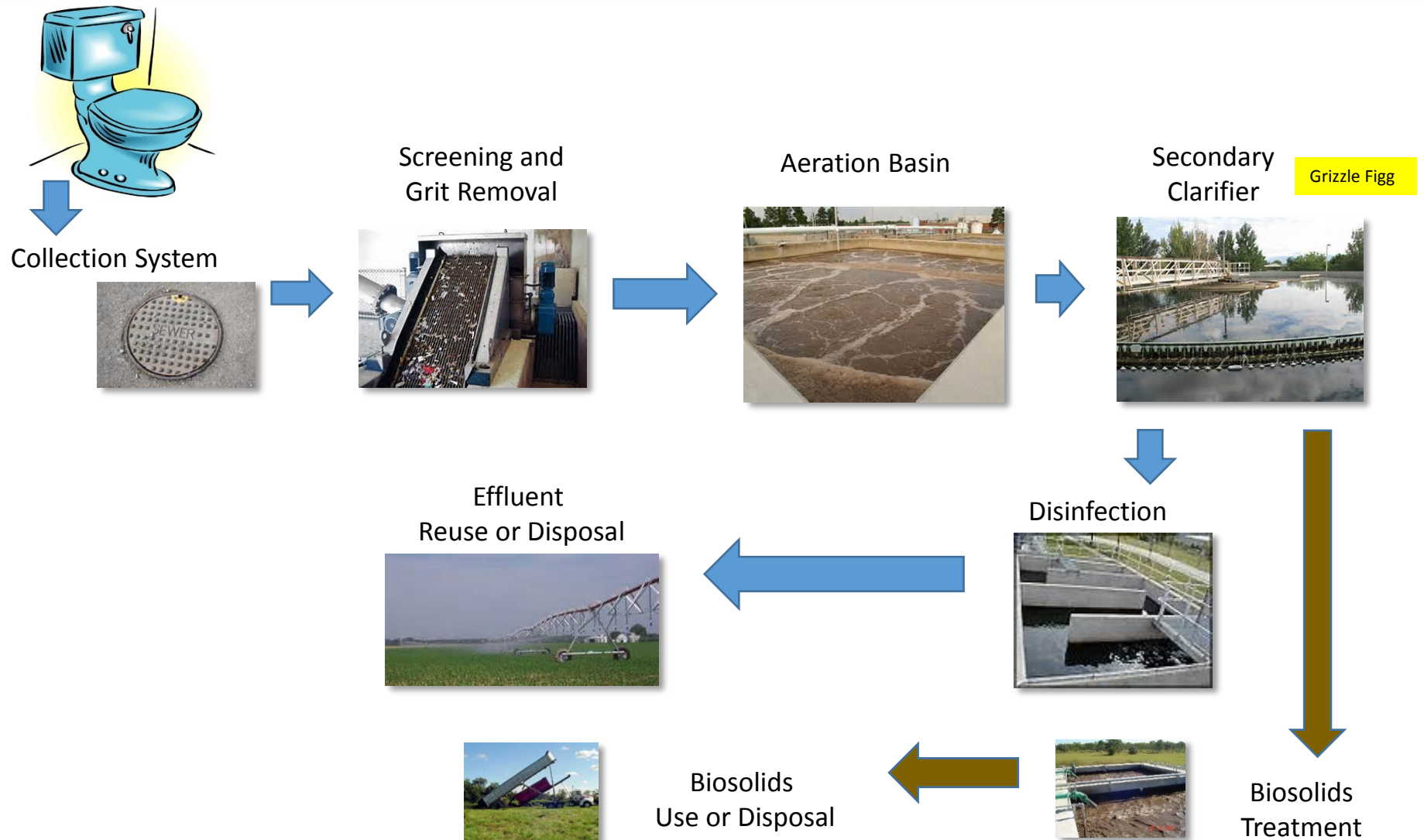


Wastewater Treatment Permits

- Issued for Domestic Waste and Pretreated Industrial Wastes
- Issued for 5 or 10 years—dependent on compliance history
- Includes effluent limitations, monitoring, reporting, and operations/maintenance requirements
- Certain statutes require advanced levels of treatment for discharges to surface waters (nutrients)
 - Grizzle-Figg (Tampa Bay area)
 - Indian River Lagoon
 - Florida Keys



Basic Wastewater Treatment





Why do Sanitary Sewer Overflows Occur?

- 💧 Lack of Capacity
- 💧 System Breakdowns
 - 💧 Equipment failure
 - 💧 FOG (fats, oils, grease)
 - 💧 Non-flushable items
 - 💧 **Wipes Clog Pipes!**
- 💧 Flooding
- 💧 Infiltration and Inflow
 - 💧 Aging Systems
 - 💧 Illicit Connections



FOG- Arlington, VA



Crown Corrosion – City of Largo



Collection Systems/Infiltration and Inflow

How does Stormwater Enter Domestic Waste Water Lines?

Public Right of Way

Cross Connections

Leaky Manholes covers or frames

Old Manhole beneath groundwater

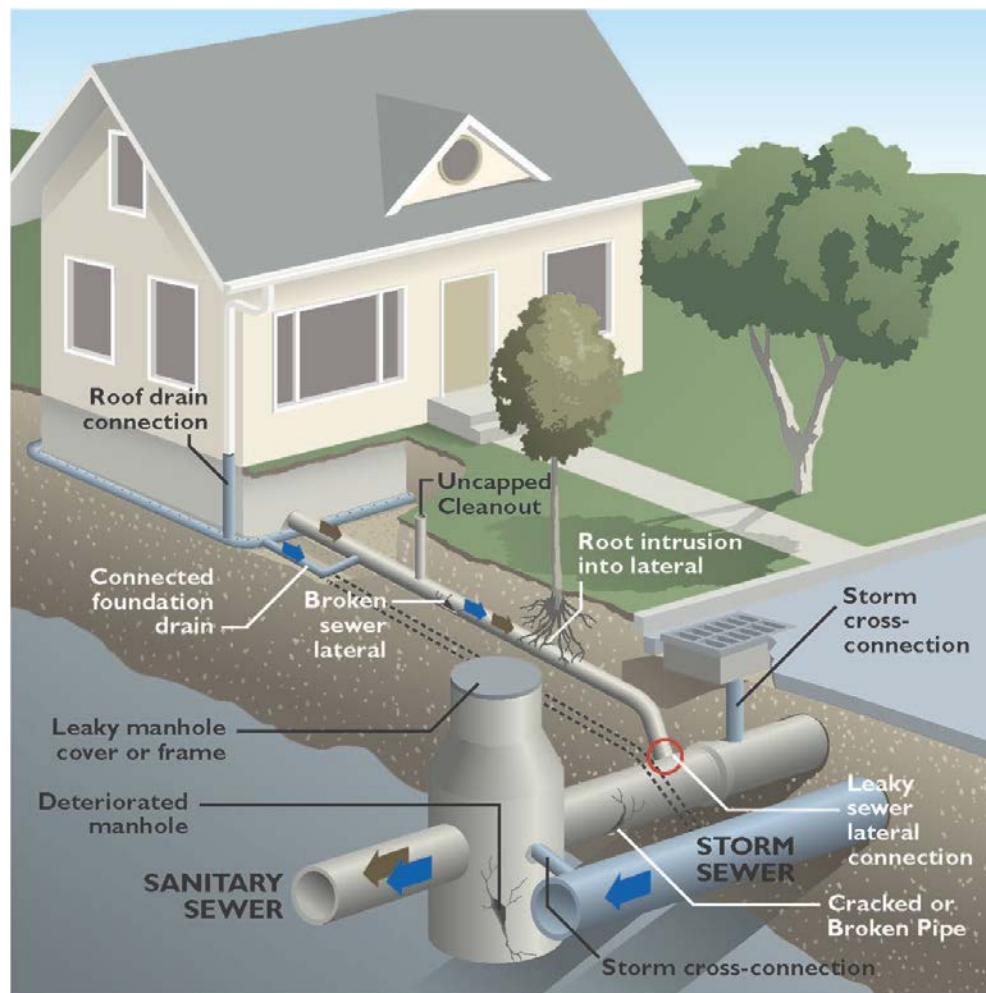
Cracked/Broken Sewer Pipes

Private Property (Laterals)

Sewer Laterals—broken, roots

Open Cleanouts

Roof Drain/Stormwater Pond Connections





Treatment Plants in Pinellas

Municipality	Permitted Capacity (gal/day)
Tarpon Springs	4 million
Dunedin	6 million
Oldsmar	2.25 million
Largo	15 million
Clearwater <ul style="list-style-type: none">• Northeast• Marshall St.• East	27.7 million <ul style="list-style-type: none">• 13.5• 10.0• 4.3
Pinellas County <ul style="list-style-type: none">• William Dunn• South Cross Bayou	42 million <ul style="list-style-type: none">• 9• 33
St. Petersburg <ul style="list-style-type: none">• Northeast• Northwest• Southwest• Albert Whitted	56 million <ul style="list-style-type: none">• 16• 20• 20• (12)



Collection Systems to WWTP

- St. Petersburg
 - Gulfport
 - St. Pete Beach
 - Treasure Island
 - S. Pasadena
 - Ft. Desoto and Bear Creek
 - Tierra Verde
- Pinellas
 - Pinellas Park
 - Purchased and operate beach communities from Madeira Beach north to Clearwater
- Largo
 - Privately Operated Collection Systems (235)
- Clearwater
 - Safety Harbor



Total Volume Spilled Hermine

Utility	Gallons Released
St. Petersburg	136,791,840 – 151,791,840
Largo	>26,069,467
Pasco County	36,800,000
Clearwater	>31,697,510
Gulfport	892,500
Pinellas County	526,000
S. Pete Beach	732,440
Dunedin	155,000
Tarpon Springs	5,786
Treasure Island	2,600
Total*	>248,673,143



Total SSOs Over 5.7 Years

Year	State Total	SWD Total	St. Pete total SSO	St. Pete % of State
2011	79,151,541	20,607,128	784,305	0.99%
2012	40,046,858	18,664,891	285,295	0.59%
2013	150,692,932	49,011,591	1,320,190	0.88%
2014	137,846,976	17,194,307	146,945	0.11%
2015*	151,422,549	108,377,388	17,692,244	11.68%
2016 (as of 6/9/16)	44,393,113	18,637,127	9,242,761	20.82%
2016 (as of 9/19/16)	262,288,387	>248,673,143	152,675,587	58.21%

*less Pasco County reuse water discharge (437 Million)

*** Spill Totals do not include unknown spill amounts



Notice Requirements

- 24 hours – Call State Warning Point and District office
- 5 days updated report due in writing
- Emergency order—Allows for 30 day updated report due in writing
- Rule does not address monitoring after a spill
- EPA has a the “Capacity, Maintenance, Operation, and Management Program” (CMOM) for Waste water collection and treatment facilities
- Each utility is to use the CMOM guide to develop their own management protocols, including overflow response. This allows a city/county to tailor their protocols to their government structure



Albert Whitted Timeline

- **02/1995** Underground Injection Well----Four separate Consent Orders executed for all four Waste Water Treatment Plants due to fluid migration.
- **12/2005** 40 CFR 146 became effective (allowing exemptions for existing wells with fluid migration) – codified in Rule 62-528.300, Florida Administrative Code. *Final Compliance Date = December 2010.*
- **06/2008** City proposed plan to comply with Rule 62-528.300, FAC. DEP deemed it insufficient for Albert Whitted.
- **02/2012** City Completed a Capacity Study and proposal to shift flow from Albert Whitted to SW WWTP.
- **11/2014** 11 Consent Order Amendments between 1995 and 2014 to allow extra time to find alternative effluent disposal for Albert Whitted. *Final Compliance Date for Albert Whitted November 2016.*
- **04/07/2015** Flow to Albert Whitted ceased. All flow diverted to SW WWTP.



DEP Compliance/Enforcement

Enforcement for WWTP/Collection System Improvements in Pinellas County

- Past Consent Orders
 - St. Petersburg (UIC wells, Reuse and SSOs)
 - Pinellas County (UIC wells, SSOs)
 - Clearwater
- Ongoing Consent Orders
 - Largo--Corrective action includes construction improvements and rehabilitation of collection system and facility. Final date to comply with these requirements is January 21, 2018.
 - St. Pete Beach--Corrective action includes developing Fats, Oils, and Grease ordinance, conducting city-wide I/I study, rehabilitating two lift stations, developing Operation and Maintenance Policy. Final date of comply with these requirements is November 21, 2017.
- Upcoming Consent Orders
 - St. Petersburg—Updated Capacity Study (to include population projections), Increase maximum daily treatment at plant, construct additional injection wells, I and I study, lining and replacing public lateral piping. Final proposed completion dates for these various projects ranges from 2016-2020, however still under discussion.

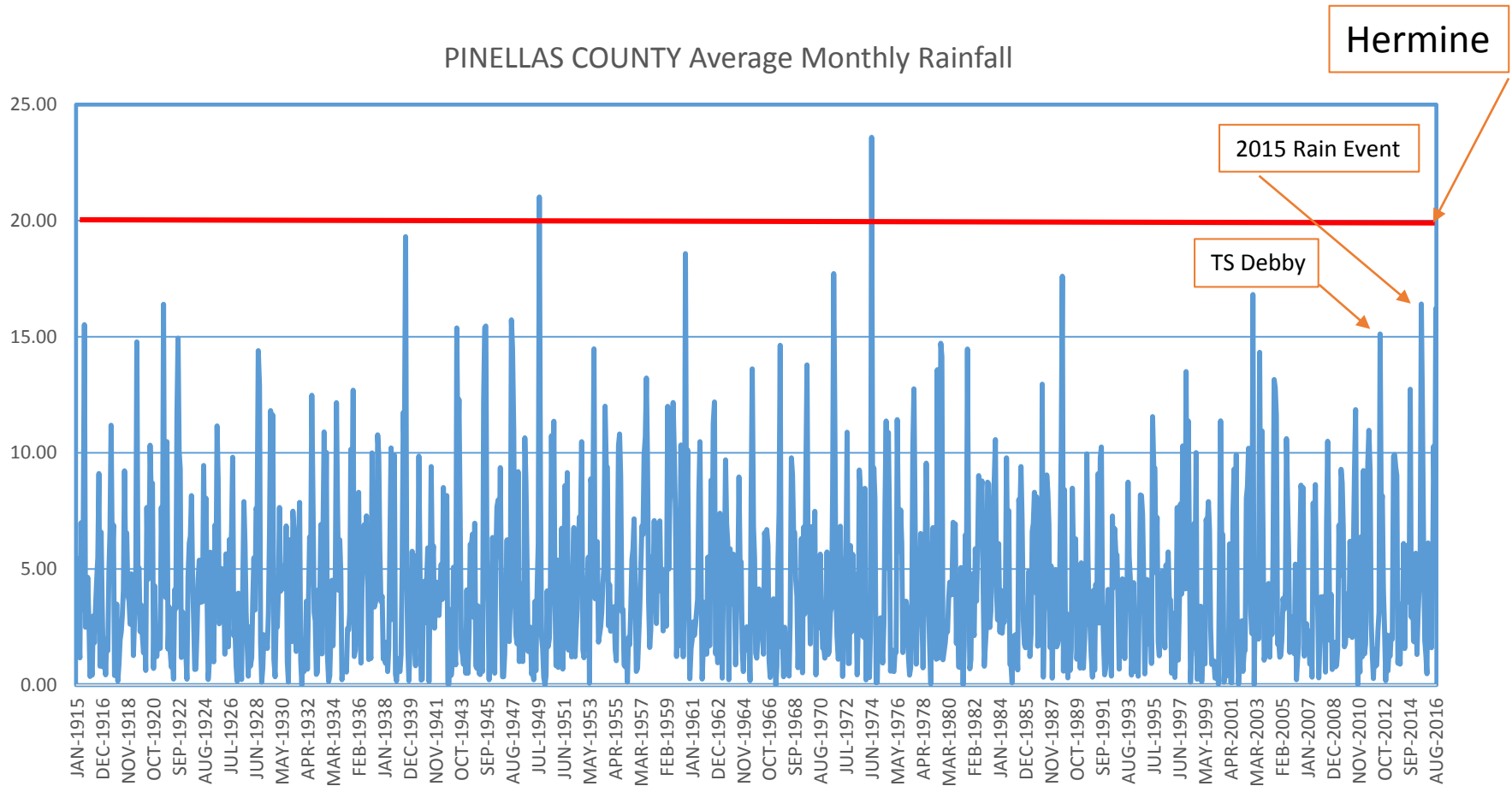


State Revolving Fund-Tampa Bay Region

Project No.	Recipient	Amount	Project scope
54101	City of Palmetto	\$141,917.00	I/I correction, major sewer rehab
68118	City of Bradenton	\$327,113.00	transmission facilities (mains and lift stations)
41030	City of Bradenton	\$6,736,968.00	Collection and transmission facilities
41031	City of Bradenton	\$279,999.00	Major sewer rehabilitation
47382	City of Tampa	\$39,389,000.00	Treatment, influent transmission and major rehabilitation
47390	City of Tampa	\$2,882,867.00	Major sewer rehabilitation
52020	City of Gulfport	\$1,500,500.00	Major sewer rehabilitation
69612	City of St. Pete Beach	\$275,471.00	Sewer and reclaimed water utility relocation
52021	City of Largo	\$73,216,406.00	Collection, transmission, treatment
52081	City of Treasure Island	\$1,250,000.00	Lift station rehabilitation
53601	City of Treasure Island	\$1,023,512.00	Major sewer rehabilitation & I/I correction
TOTAL		\$127,023,753	
Applications in-house			
58061	City of Longboat Key	\$1,000,000.00	Subaqueous force main replacement
52080	City of Treasure Island	\$2,150,000.00	I/I rehabilitation
41020	City of Palmetto	\$175,000.00	Sewer rehab, treatment and reuse



Rainfall and Sanitary Sewers





Communications

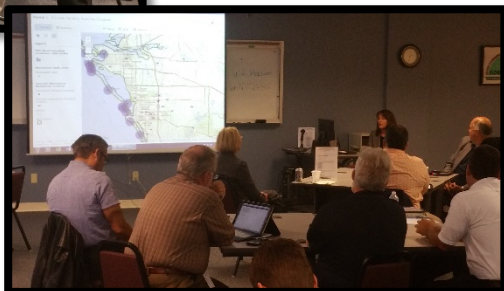
- DEP is evaluating moving to an electronic reporting system accessible through our website. Our goal is to be more timely, accurate, more user friendly and transparent to the community. Currently evaluating our resources to make this happen.
- Notices to the Public. Best handled by the local government—more familiar with local community and how best to communicate with their citizens.



Moving Forward

DEP is committed to do our part in strengthening all of our partnerships and resolving these problems.

- All Utilities Meetings:
 - October 2015
 - February 2016
 - August 2016
- 15 Outreach Events
- Takeaways:
 - Significant investments in infrastructure
 - Clarify the language of SSOs
 - Make reporting more accurate/less confusing
 - Sharing Resources & Capacity--MOU





Discussion



City of Largo public education campaign