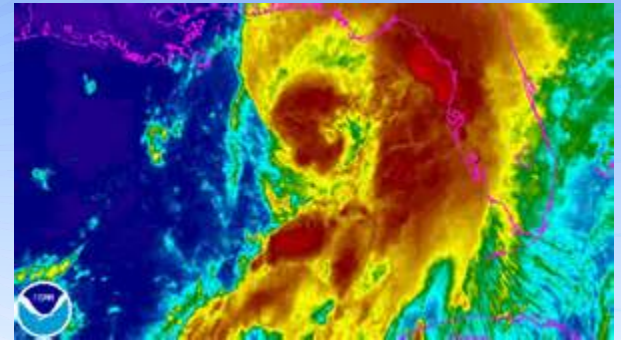


Doing Things!

Tropical Storm Hermine
Pinellas County Legislative Delegation Workshop
September 20, 2016

Randi M. Kim, P.E., Pinellas County Utilities Director



Agenda

- Pinellas County Wastewater Systems
- TS Hermine Protective Actions
- Challenges
- Opportunities
- Countywide Task Force

Pinellas County Wastewater Systems



South Cross Bayou

Advanced Water Reclamation Facility

- Permitted capacity: 33 MGD
- Peak design capacity: 66 MGD
- Average flow: 23 MGD
- TS Hermine inflow: 80 MGD
- 7.3 MG of treated wastewater that did not meet chlorine residual but met fecal coliform bacteria limit was released into Joe's Creek

Pinellas County Wastewater Systems



William E. Dunn

Advanced Water Reclamation Facility

- Permitted capacity: 9 MGD
- Peak design capacity: 18 MGD
- Average flow: 6.5 MGD
- TS Hermine flows: 17 MGD
- No unpermitted discharges occurred

Pinellas County Wastewater Statistics



Collection System

- 1,150 miles of gravity lines and force mains
- Overflows
 - 64 incidents reported
 - 10 million gallons estimated total
 - 7.3 million gallons reached water ways
- Avoided spills with emergency pumper/tanker truck operation
 - 15.6 million gallons
 - 2,899 truck loads
 - \$648,100 cost

Pinellas County's Strategic Plan: *Doing Things to Serve the Public*

Mission: Pinellas County Government is committed to progressive public policy, superior public service, courteous public contact, judicious exercise of authority, and responsible management of public resources to meet the needs and concerns of our citizens today and tomorrow.



Deliver First Class Services to the Public and Our Customers

- 5.1 Maximize partner relationships and public outreach
- 5.2 Be responsible stewards of the public's resources
- 5.3 Ensure effective and efficient delivery of county services and support
- 5.4 Strive to exceed customer expectations



Ensure Public Health, Safety, and Welfare

- 2.1 Provide planning, coordination, prevention, and protective services to ensure a safe and secure community
- 2.2 Be a facilitator, convener, and purchaser of services for those in need
- 2.3 Provide comprehensive services to connect our veterans and dependents to the benefits they have earned
- 2.4 Support programs that seek to prevent and remedy the causes of homelessness and move individuals and families from homelessness to permanent housing
- 2.5 Enhance pedestrian and bicycle safety



Practice Superior Environmental Stewardship

- 3.1 Implement green technologies and practices where practical
- 3.2 Preserve and manage environmental lands, beaches, parks, and historical assets
- 3.3 Protect and improve the quality of our water, air, and other natural resources
- 3.4 Reduce/reuse/recycle resources including energy, water, and solid waste



Foster Continual Economic Growth and Vitality

- 4.1 Proactively attract and retain businesses with targeted jobs to the county and the region
- 4.2 Invest in communities that need the most
- 4.3 Catalyze redevelopment through planning and regulatory programs
- 4.4 Invest in infrastructure to meet current and future needs
- 4.5 Provide safe and effective transportation systems to support the efficient flow of motorists, commerce, and regional connectivity
- 4.6 Support a vibrant community with recreation, arts, and culture to attract residents and visitors



Create a Quality Workforce in a Positive, Supportive Organization

- 1.1 Recruit, select, and retain the most diverse and talented workforce
- 1.2 Leverage, promote, and expand opportunities for workforce growth and development
- 1.3 Make workforce safety and wellness a priority
- 1.4 Maintain a fair and competitive compensation package

TS Hermine Protective Actions

- Proactive pre-storm actions to minimize infrastructure failures
 - 200+ hot spots inspected/cleared
 - Monitoring and response to high level conditions
 - Accelerated wastewater treatment to make capacity available
 - Pumper trucks staged at hot spots
 - Emergency purchase orders issued
 - Leveraged technologies to respond to workload and communicate

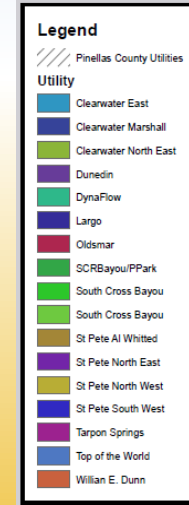
Challenges

- Rainfall Impacts on Plant Capacity
 - ~ 2.6 inches in 1 day can result in 10.5 MGD of additional wastewater
 - 5-10 inches or more in 1 day can result in overflows in South sewer system
 - TS Hermine: 22 inches of rain over 3 days in Pinellas
 - Localized flooding and standing water contributes to inflows when stormwater drainage cannot drain an area
 - Areas of high inflow and infiltration include Belleair, Belleair Beach, Seminole, Kenneth City, and Pinellas Park

Opportunities

- Increase Capacity at Plants
 - Equalization storage tanks to handle peak flows
- Reduce Inflow/Infiltration
 - Comprehensive inflow and infiltration study
 - Better delineate the magnitude of inflow and infiltration
 - Prioritize solutions that will provide the most benefit
 - Coordinate with stormwater management efforts
 - Eliminating illicit stormwater cross-connections
 - Private lateral repairs
 - Stormwater/flood control
 - Lining or replacement of sewer pipelines
- Environmental Action Task Force: Stormwater/Wastewater Utilities

- Complex network of city, county, and private sewer systems
- More beneficial outcomes through collaboration, communication, mutual support
- Benefits our environment, public health/safety, economic vitality



Environmental Action Task Force: Stormwater/Wastewater Utilities

Municipality	Customers	Sewer Pipelines	Wastewater Treatment Plant	Wastewater Treatment Plant	Permitted Treatment Capacity (MGD)
St. Petersburg	87,000	X	X	Northeast	16
				Northwest	20
				Southwest	20
				Albert Whitted	12.4
				Master Urban Reuse	67.9
				Total	136.3
Clearwater	37,277	X	X	Northeast	13.5
				Marshall	10
				East Plant	4.3
				Master Urban Reuse	40
				Total	68
Pinellas	83,326	X	X	William E. Dunn	9
				South Cross Bayou	33
				Total	42
Largo	22,207	X	X	Largo	15
Dunedin	12,471	X	X	Dunedin	6
Tarpon Springs	7,200	X	X	Tarpon Springs	4
Oldsmar	5,211	X	X	Oldsmar	2.25
Treasure Island	2,405	X		St. Petersburg Northwest	
St. Pete Beach	3,710	X		St. Petersburg Northwest	
South Pasadena	345	X		St. Petersburg Northwest	
Gulfport	5,480	X		St. Petersburg Northwest	
Pinellas Park	20,911	X		Pinellas South Cross Bayou	
North Redington	407	X		Pinellas South Cross Bayou	
Redington Shores	874	X		Pinellas South Cross Bayou	
Safety Harbor	8,950	X		Clearwater Northeast	
Private Systems					
Mid-County (Utilities Inc.)	2,732	X	X	Mid-County (Utilities Inc.)	0.9
On Top of the World	4,959	X	X	On Top of the World	0.6
Tierra Verde	1,030	X		St. Petersburg Southwest	