Sanitary Sewer Overflows

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Regulatory Programs
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Wastewater Treatment Facilities

- DEP, through its district offices, works with wastewater utilities and Florida residents to protect and conserve our water resources while meeting the basic public health need for effective wastewater treatment.

- These activities are part of DEP's coordinated efforts to promote safe, efficient, and environmentally sound management of Florida's domestic wastewater.

- The Domestic Wastewater Program is responsible for the development and administration of rules and policy for proper treatment of wastewater from domestic facilities.
Wastewater Treatment Facilities

- DEP regulates approximately 2,000 domestic wastewater facilities
- Providing a total treatment capacity of over 2.5 billion gallons per day
Sanitary Sewer Overflows

- Sanitary Sewer Overflows (SSOs) occur when there is an obstruction, system failure, or capacity exceedance at a wastewater facility.
- SSOs can contain partially treated or untreated domestic wastewater and can have adverse effects to public health and the environment.
- DEP has made significant progress in improving the data collected regarding SSOs by implementing the GeoForm software.
SSOs by Volume
Common Causes

January 2017 through December 2018

<table>
<thead>
<tr>
<th>Cause</th>
<th>Number of Spills</th>
<th>Volumes (Gallons)</th>
<th>Percentage (Volume)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rain</td>
<td>730</td>
<td>160,596,866</td>
<td>50%</td>
</tr>
<tr>
<td>Break-In-Line</td>
<td>1142</td>
<td>50,458,879</td>
<td>16%</td>
</tr>
<tr>
<td>Unknown</td>
<td>558</td>
<td>37,630,825</td>
<td>12%</td>
</tr>
<tr>
<td>Power</td>
<td>937</td>
<td>27,962,326</td>
<td>9%</td>
</tr>
<tr>
<td>Equipment</td>
<td>947</td>
<td>21,580,285</td>
<td>7%</td>
</tr>
<tr>
<td>Contractor</td>
<td>446</td>
<td>11,546,223</td>
<td>4%</td>
</tr>
<tr>
<td>Blockage</td>
<td>855</td>
<td>7,812,475</td>
<td>2%</td>
</tr>
<tr>
<td>Accident</td>
<td>152</td>
<td>3,836,920</td>
<td>1%</td>
</tr>
<tr>
<td>Other*</td>
<td>117</td>
<td>484,610</td>
<td>&lt;1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5884</strong></td>
<td><strong>321,909,409</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Common Causes by Volume (Gallons)

- Rain: 160,596,866 (50%)
- Unknown: 37,630,825 (12%)
- Accident: 3,836,920 (1%)
- Power: 27,962,326 (9%)
- Contractor: 11,546,223 (3%)
- Equipment: 21,580,285 (7%)
- Other*: 484,610 (<1%)
- Break-in-Line: 50,458,879 (16%)
- Blockage: 7,812,475 (2%)

*Includes maintenance, alternatives, user error, etc.
SSO Evaluation for Storm Events

- DEP conducted an investigation of SSOs following storm events of 2016.
- The third-party study provided an evaluation of SSO events, causes of events, and recommendations to minimize overflows.
- Infiltration and inflow (rain) and loss of power were identified as primary causes of SSOs in storm events.
- Recommendations include:
  - Address power loss issues
  - Sewer system cleaning and maintenance
  - Reducing infiltration and inflow through system rehabilitation and repairing broken or leaking lines
  - Enlarging or upgrading capacity and/or reliability
  - Construction of wet weather storage and treatment facilities to treat excess flows
Outreach Initiative

• Quarterly meetings with facilities
• Conduct statewide resiliency training for facilities
• Outreach brochures to distribute to facilities and the public

• Post-Storm Outreach
  • Hurricane Response Call Center
  • Investigate reports of spill
  • Site visits to facilities to determine operational status
Common Corrective Actions

- Replace/install backup generators and pumps
- Survey and fix I&I issues
- Create Smoke Test Pilot Project
- Sample all surface water bodies impacted by SSOs
- Lift station improvements
- Complete Resiliency Assessment
- Quarterly/annual status reports
- Conduct Capacity Management Operation and Maintenance (CMOM)
- Update and Submit O & M
- Create/Update/Submit Emergency Action Plan
- Provide a compliance schedule
- Training program for electrical and mechanical staff
- Evaluate and provide results of facility deficiencies in need of repair/upgrade (Rehabilitation Process Plan)
In-Kind Penalty Project

- Provides violator with opportunity to reduce total cash amount owed.
- Not designed to provide credit for the cost of corrective actions.
- In-kind penalties are limited to the following specific options:
  - Material and/or Labor Support for Environmental Enhancement or Restoration Projects
  - Environmental Information/Education Projects
  - Capital or Facility Improvements
  - Property
Pollution Prevention Project (P2)

- P2 project defined as a process improvement that can be classified in one of the following categories:
  - Source Reduction
  - Waste Minimization
  - On-Site Recycling
- P2 project does NOT include:
  - Off-site recycling
  - Treatment
  - Disposal