Presentation to Operations Committee

Stamford Water Pollution Control Authority

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Stamford Water Pollution Control Authority (SWPCA)

- Provides sanitary sewer service and wastewater treatment for City of Stamford
- Provides wastewater treatment for the Town of Darien
- Operates and maintains the City's Hurricane Barrier and four (4) Storm Water Pump Stations

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Stamford Water Pollution Control Authority (SWPCA)

- Enterprise Fund within the City of Stamford (SWPCA collects its own revenues to fund all of its operating budget)
- Led by SWPCA Board of Directors
  - ✓ Mike Handler, Chairman
  - ✓ Dan Capano, Vice Chairman
  - ✓ Finance Committee
  - ✓ Technical Committee
- Staff reports to the Director of Operations

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Stamford Water Pollution Control Authority (SWPCA)

- Total staff of 44 manages, operates and maintains:
  - ✓ Over 250 miles of sanitary sewers
  - ✓ 23 sewage pumping stations
  - ✓ Stamford Water Pollution Control Facility (WPCF)
  - ✓ Hurricane Barrier and 4 storm water pumping stations

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Stamford Water Pollution Control Authority (SWPCA)

FY 17-18 Operating Budget	$26.5 million

Revenue Sources

✓ Sewer User Charges	$19.8 million
✓ Town of Darien Treatment Charge	$2.4 million
✓ Connection Charges	$1.5 million
✓ Other	$2.8 million

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Stamford Water Pollution Control Authority (SWPCA)

- Operating Expenses $15.4 million
- Debt Service $10.0 million
- Payment to Capital Reserve $1.1 million

What drives WPCA's cost of service?

- ✓ Debt Service (38%)
- ✓ Payroll (12%)
- ✓ Utilities (9%)
- ✓ Sludge Drying and Disposal (7%)

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Stamford WPCA
Sanitary Sewer System Overview

- Serves most of Stamford south of the Merritt Parkway
- About 250 miles of sewer
  - ✓ Pipes from 8” to 60” diameter
  - ✓ 20 miles of sewer larger than 24” (called “Interceptor Sewers”)
- 23 Pump Stations pump sewage where it can’t flow by gravity

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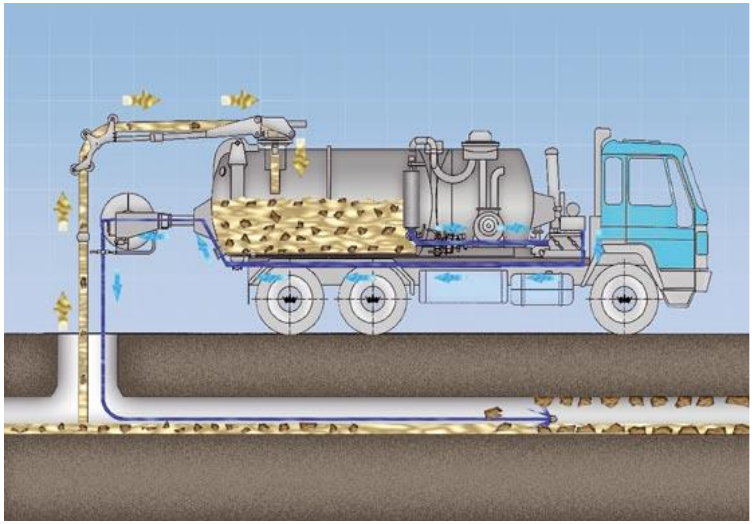
Sanitary Sewer System Cleaning

- Truck mounted water jets and vacuums are used to remove debris from the sewer pipes
- Clean over 30 miles of sanitary sewers each year



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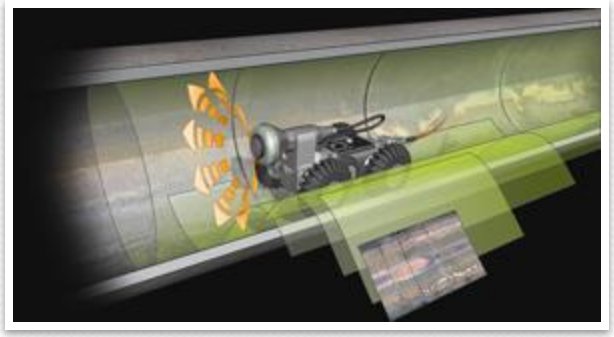
Sewer System Inspection Tools



Video Cameras travel through pipes

Closed-circuit television (CCTV) equipment used to inspect sewer lines

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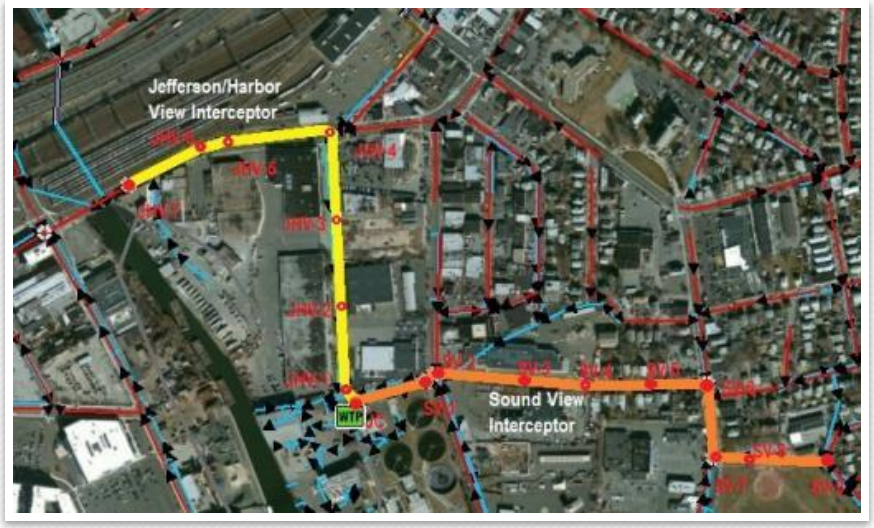
Sewer System GIS Mapping Examples



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Sewer System Pumping Station Example

Larger Pump Stations have pumps housed in a building with a below grade pump room, called a “dry well”.

(shown: Alvord Lane Pump Station)

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Sewer System Pumping Station Example

Smaller Pump Stations can be buried with pumps in a pre- fabricated metal manhole called a “tin can” pump station

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Sewer System Pumping Station Example

Other Pump Stations are buried with the pumps in a large manhole with the pumps submerged in the wastewater to be pumped. These are called "Submersible" Pump Stations

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Water Pollution Control Facility

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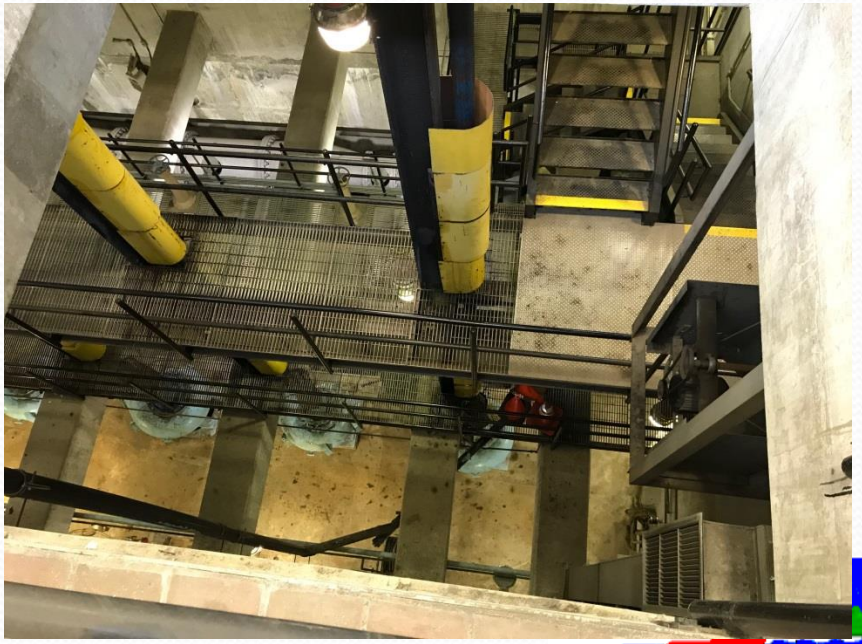
Raw Sewage Pump Station



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Primary Clarifiers

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Biological Reactors

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Final Clarifiers

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Ultra Violet (UV) Disinfection

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Treated Final Effluent

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Odor Control Facilities

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Sludge Dryer with Odor Control

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Sludge Beneficial Reuse

- Dewatered sludge (biosolids) is heated, dried and pelletized
- Sludge dryer processes 1.1 dry tons of biosolids per hour
- The dried biosolid pellets are used as fertilizer for growing feed crop (hay)
- The Sludge Dryer Facility and the beneficial use of the biosolids are managed by Synagro

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Other WPCA Projects and Initiatives

- Capital improvement projects to replace aged and inefficient equipment
- Sewer extension projects
- Sewer replacement and lining projects
- Inspect Fats, Oil and Grease (FOG) removal facilities at restaurants and other food preparation establishments
- Computerized maintenance management system (CMMS)

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5 Year Capital Improvement Plan

WPCF Improvements	$38.9 million
Pump Station Upgrades	$2.3 million
Sewer Rehab	$3.6 million
Sewer Extensions	$13.3 million
Vehicles	$0.3 million
Total	**$58.4 million**

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5 Year Capital Improvement Plan

Major Projects

- Upgrade Raw Sewage Pump Station $13.1 million
- Replace Aeration Blowers and Secondary Treatment Improvements $10.2 million
- Upgrade UV System $8.2 million
- Upgrade Sludge Degritting System $5.0 million
- Perna Lane Area Sewer Ext $9.6 million
- Wedgemere Road Area Sewer Ext $3.7 million

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Questions?

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