

Water /Sewer Systems Concession Lease



610-437-7587

Presented by: City of Allentown
Office of Compliance, Department of Public Works

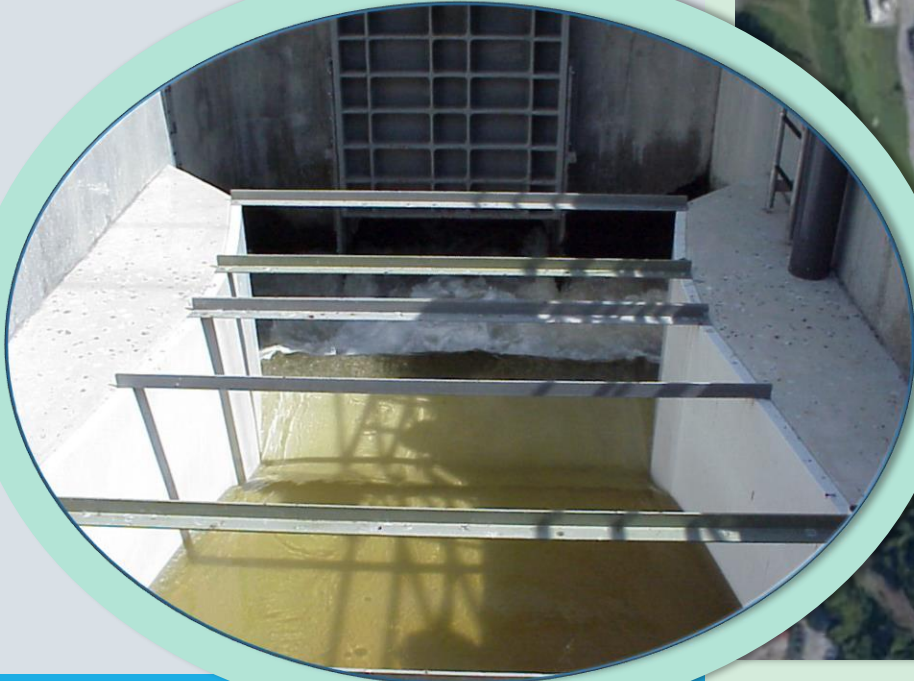
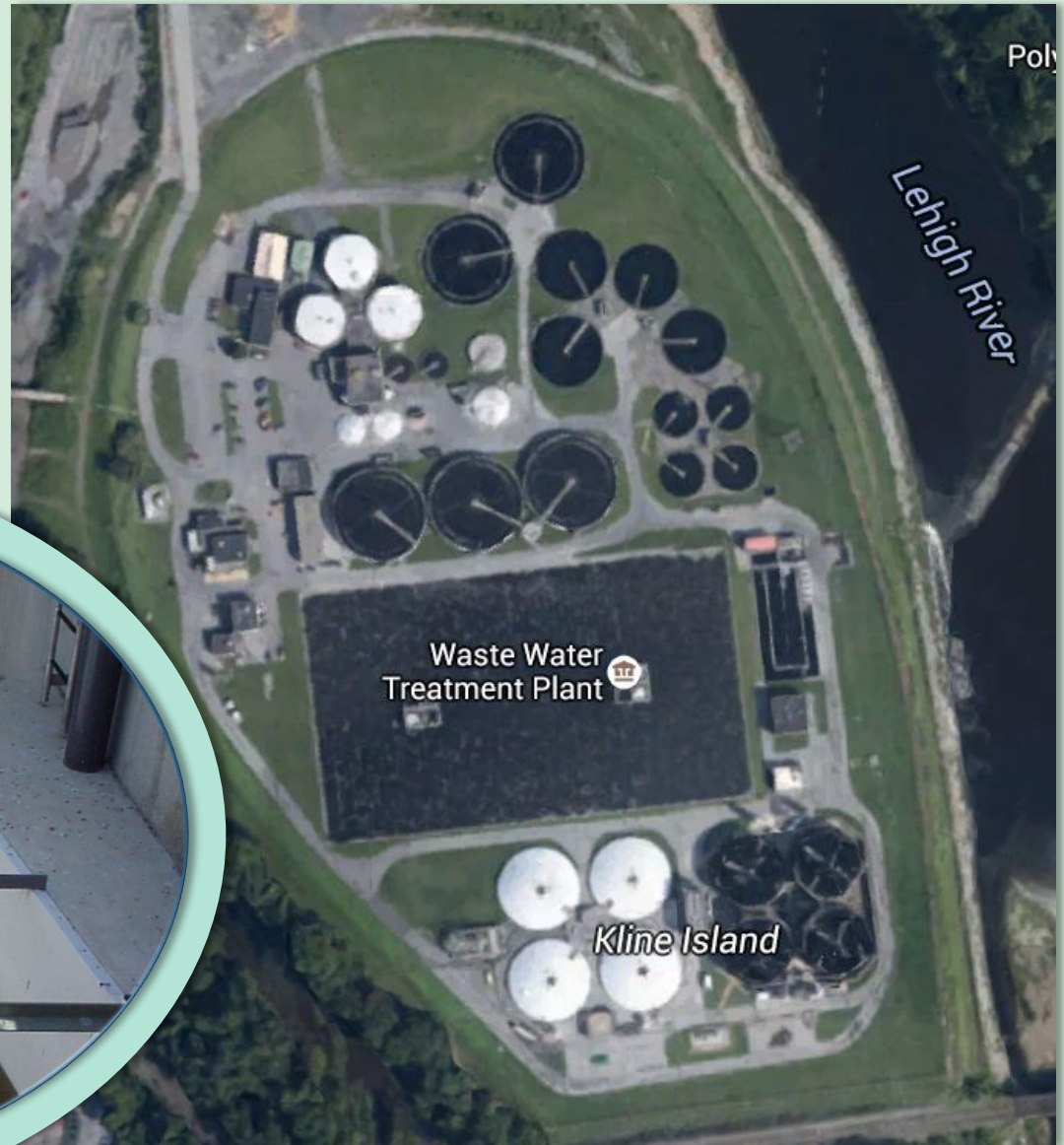
June 27, 2018

Introduction



Wastewater Treatment

11.2
Billion
gallons of
wastewater
treated in
2017



Wastewater Treatment Plant

		Performance Standards	NPDES Discharge Permit Effluent Limitations		
Parameter	LCA	Monthly Average Effluent Concentration	Monthly Average Effluent Limit	Weekly Average Effluent Limit	Instantaneous (Daily) Maximum Effluent Limit
Carbonaceous Biochemical Oxygen Demand (CBOD ₅)	Met Requirement	≤ 12 mg/L	20 mg/L	30 mg/L	40 mg/L
CBOD5 Percent Removal	Met Requirement	≥ 90 %	≥90 %	---	---
Total Suspended Solids (TSS)	Met Requirement	≤12 mg/L	30 mg/L	45 mg/L	60 mg/L
TSS Percent Removal	Met Requirement	≥90 %	≥90 %	---	---
Ammonia Nitrogen (NH ₃ -N) May 1 to October 31	Met Requirement	≤4.0 mg/L	5 mg/L	---	10 mg/L
Ammonia Nitrogen November 1 to April 30	Met Requirement	≤12.4 mg/L	15 mg/L	---	30 mg/L
Fecal Coliform May 1 to September 31	Met Requirement	200/100 ml geometric mean			
Fecal Coliform October 1 to April 30	Met Requirement	2,000/100 ml geometric mean			
Residual Chlorine	Met Requirement	≤0.5 mg/L			
pH	Met Requirement	6.0 to 9.0 SU			
Dissolved Oxygen	Met Requirement	5.0 mg/L minimum			



Wastewater Treatment Plant

Headworks Overflow



Outfall 003

No Odor Complaints



Wastewater Treatment Plant



pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

In
November
2016,
comments to
the 3rd draft
NPDES Permit
were submitted
to PaDEP.
No response
has been given.



Regulatory Update

Biosolids



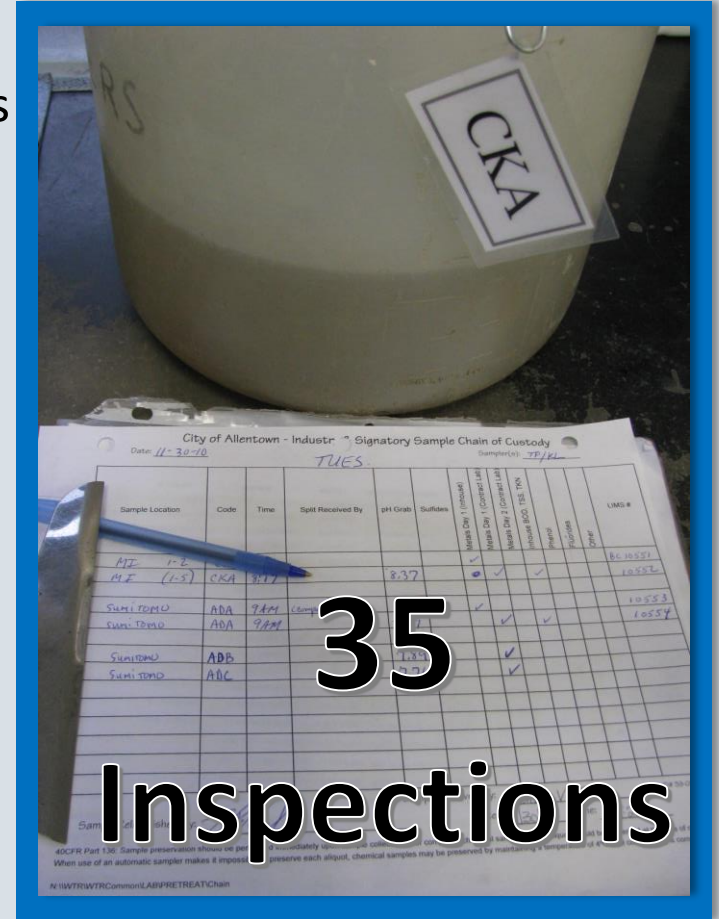
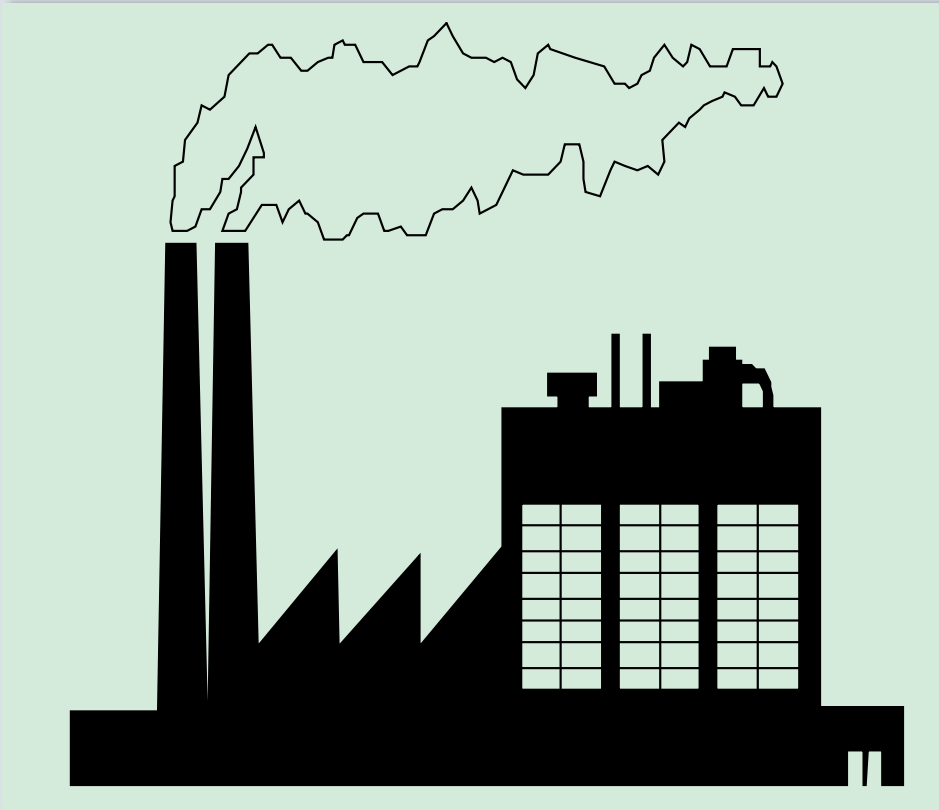
• Deliver to
Farm

• Land apply

• Improved
Soil
Conditions

Industrial Pretreatment

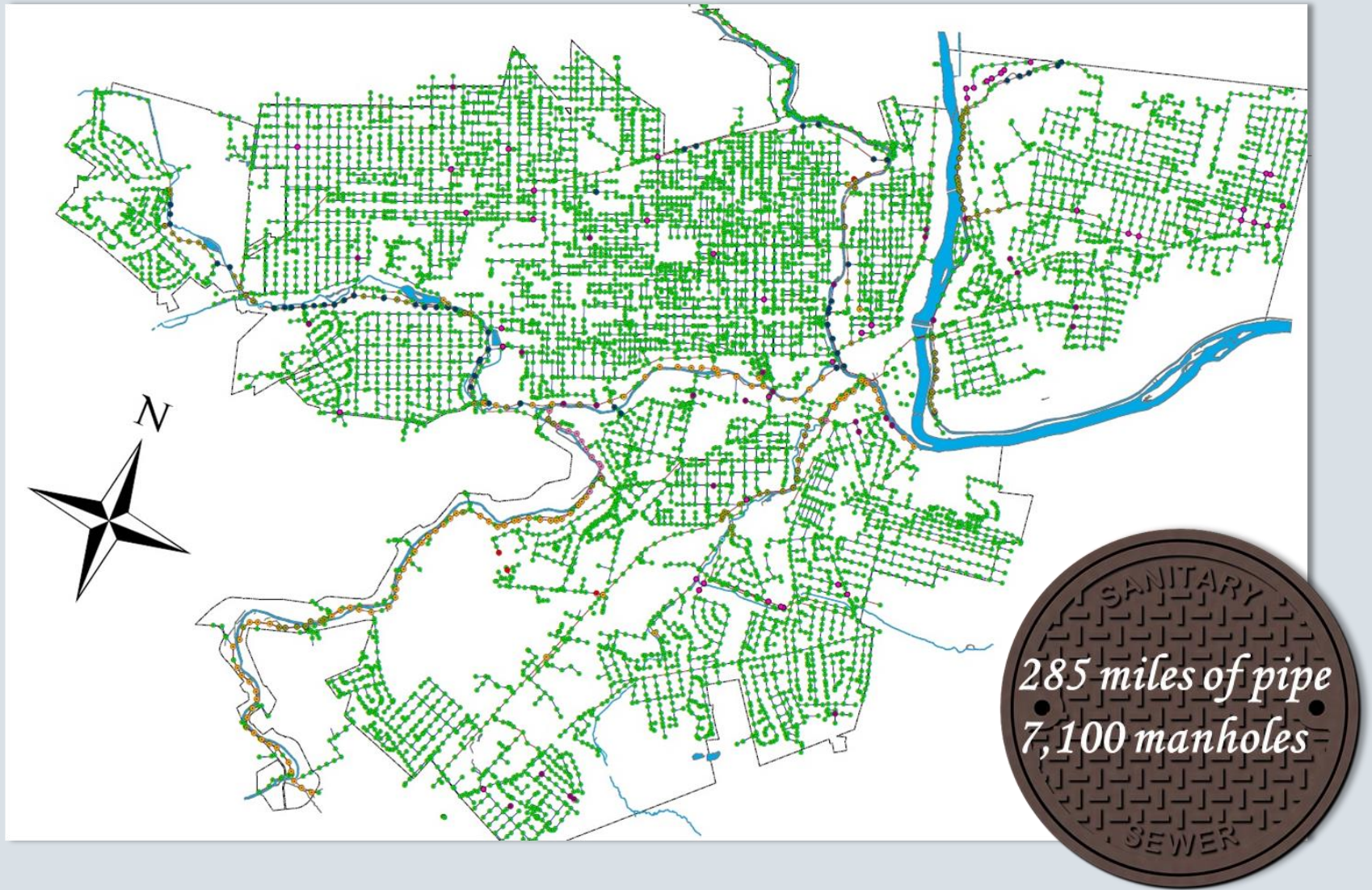
- Control interference with WWTP operations
- Control pass through of pollutants
- Control sludge quality
- Control exposure of workers to chemical hazards



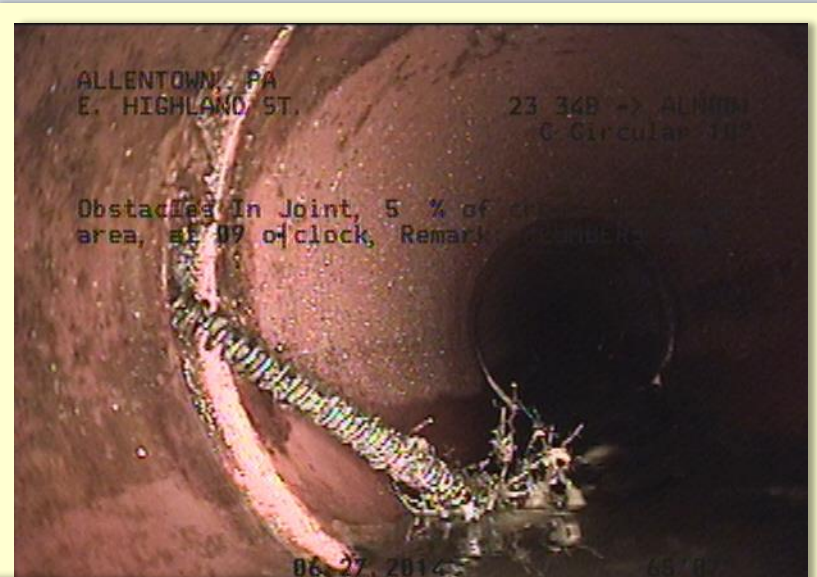
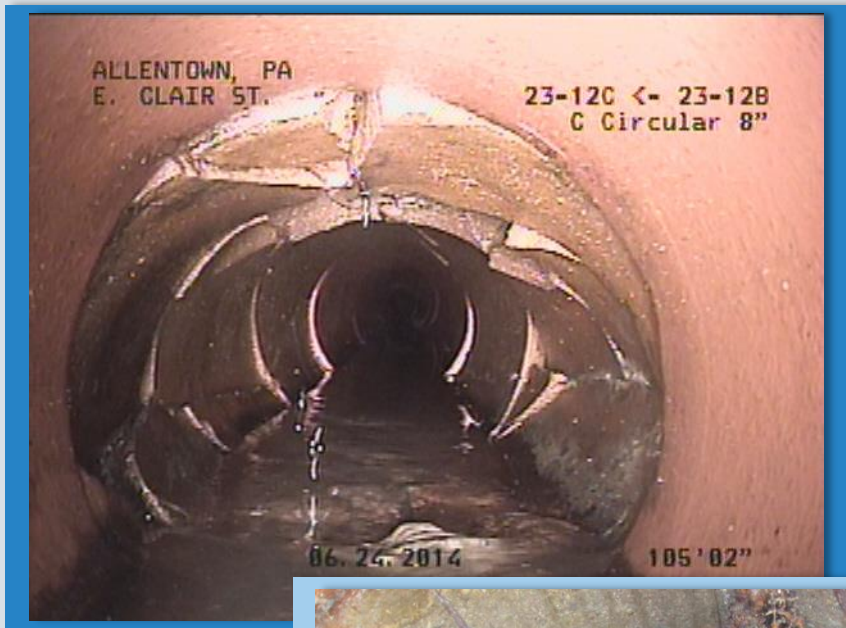
35

Inspections

Sewage Collection System



Sewage Collection System



**CCTV Minimum
linear footage
requirement:
55,000 feet**



**Linear feet televised
158,735 feet
(Including credits)**



Sewage Collection System

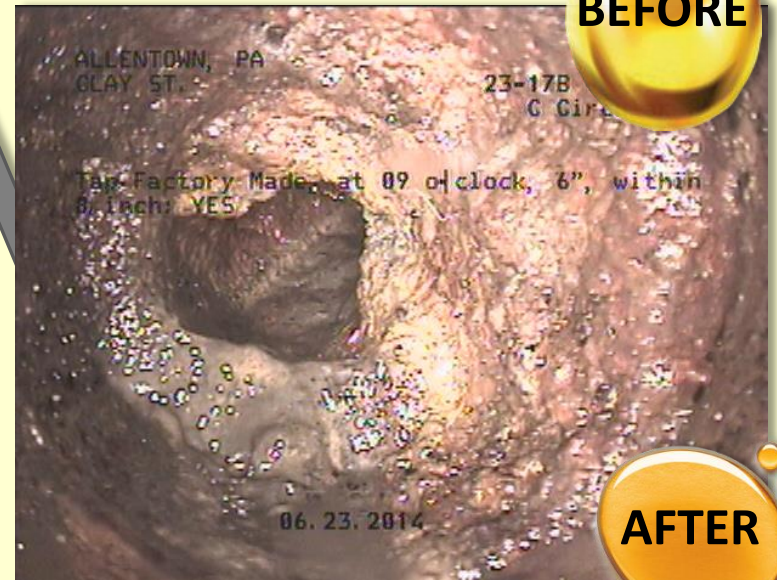
Tree roots
block sewer pipe.

Maintain the lateral
from your home.

Residents
can help
STOP
SSO's



BEFORE

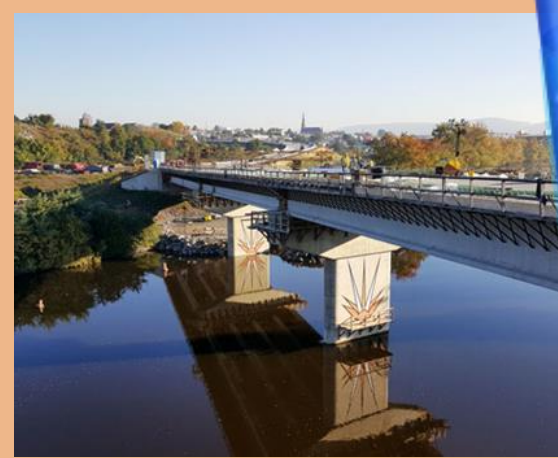


AFTER

Drinking Water Treatment and Production



*Finished Water is produced
from 4 sources:
Little Lehigh Creek, Schantz Spring,
Crystal Spring & Lehigh River*



The Allentown
Water Filtration
Plant averaged
21.16 mgd



49% of finished water is from the Springs

Drinking Water Treatment and Production



**7.72
Billion
Gallons
Treated
in 2017**



Drinking Water Treatment and Production

Turbidity:

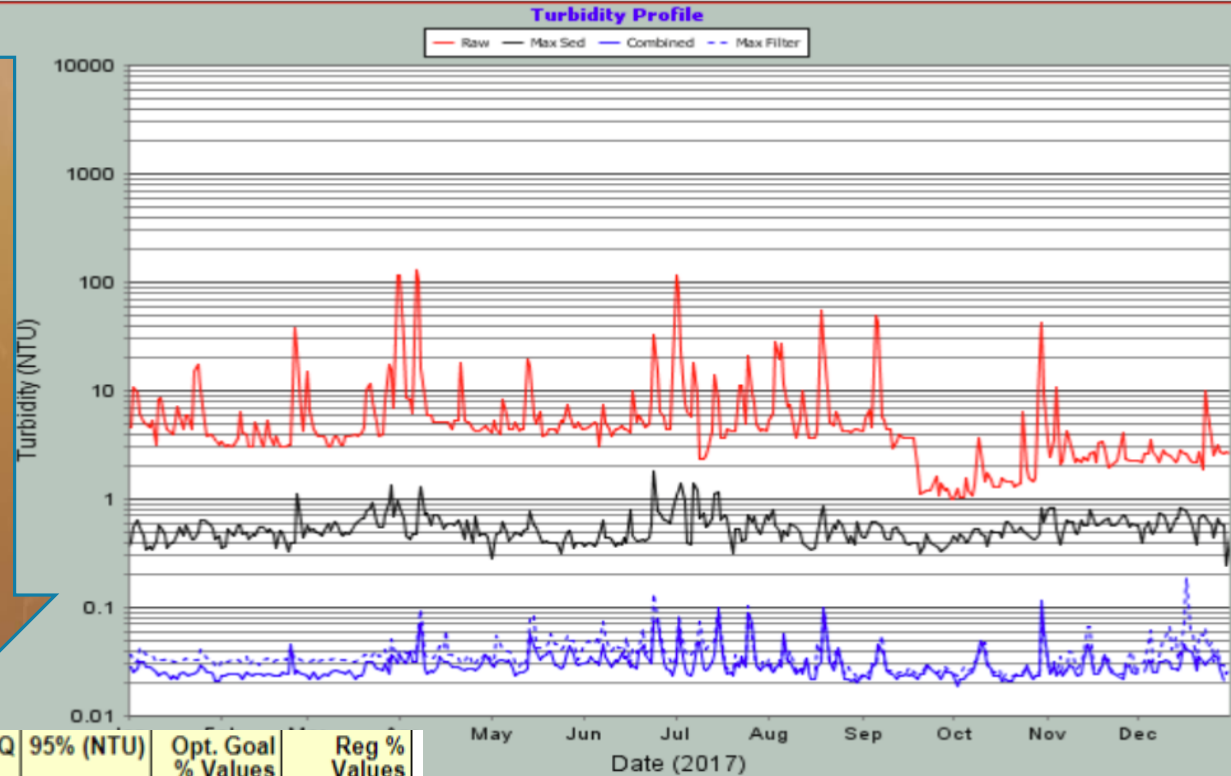
Law: Less than

Or equal to **0.3 NTU**

Partnership: Less than
or equal to **0.1 NTU**

Allentown:

Equal to **0.03 NTU**



ANNUAL DATA	Avg (NTU)	Min (NTU)	Max (NTU)	RSQ	95% (NTU)	Opt. Goal % Values	Reg % Values
Raw Turbidity	7.6	0.98	131.59	n/a	21.01	n/a	n/a
Max. Settled Turbidity	0.55	0.24	1.83	0.14	0.84	97	n/a
Max. Filtered Turbidity	0.038	0.022	0.188	0.2	0.064	98.9	n/a
Combined Filtered Turbidity	0.03	0.019	0.114	0.54	0.047	99.7	100

RSQ = Correlation Coefficient for two selected data sets.
 95% = 95th Percentile value for data set.
 Opt. Goal = % of values in data set that are less than or equal to the selected optimization turbidity goal.
 Reg. = % of values in data set that are less than or equal to the regulated turbidity requirement.

Partnership for Safe Water



Drinking Water Treatment and Production



**NO
Maximum
Contaminant
Levels
were exceeded.**



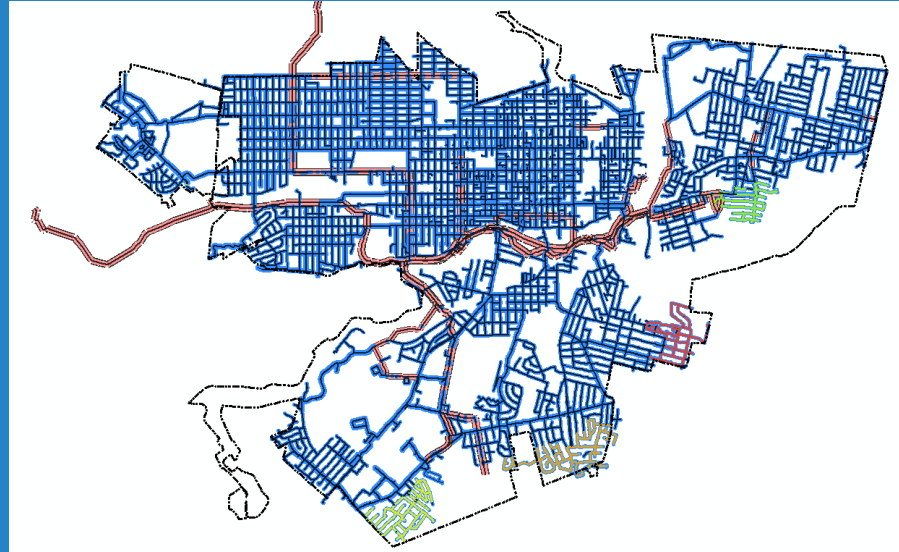
Contaminant Testing



Drinking Water Distribution System



325 Miles of Pipe



33,400 Service connections



8,060 Valves

Drinking Water Distribution System



Drinking Water Distribution System

Hydrants

Inspected

1,533

and

Tested

178.55

Miles of Pipe

Checked

for

leaks

1931

**Valves
Exercised**

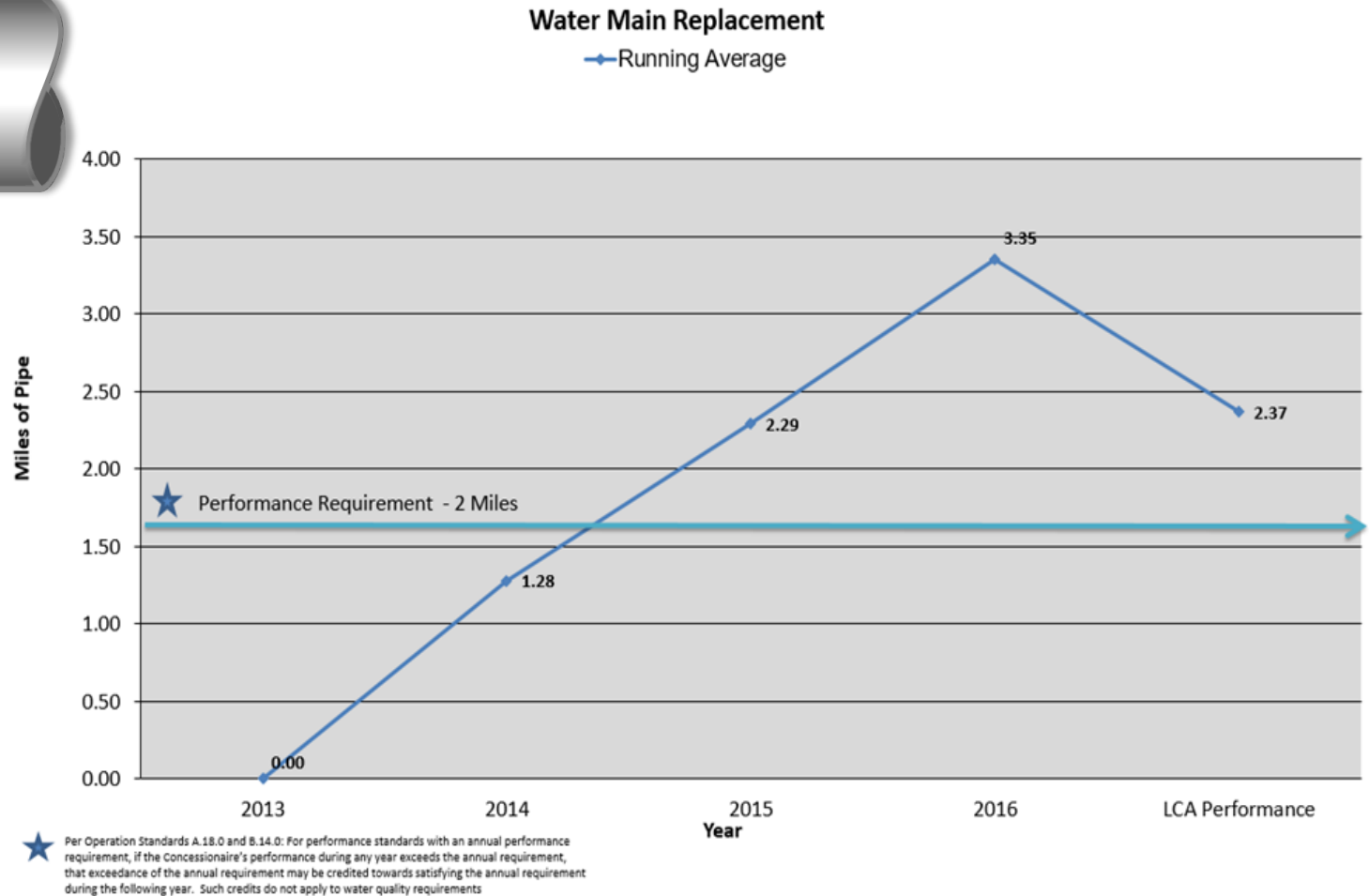
Metrics Update

Drinking Water Distribution System

Metrics Update

.9
Miles

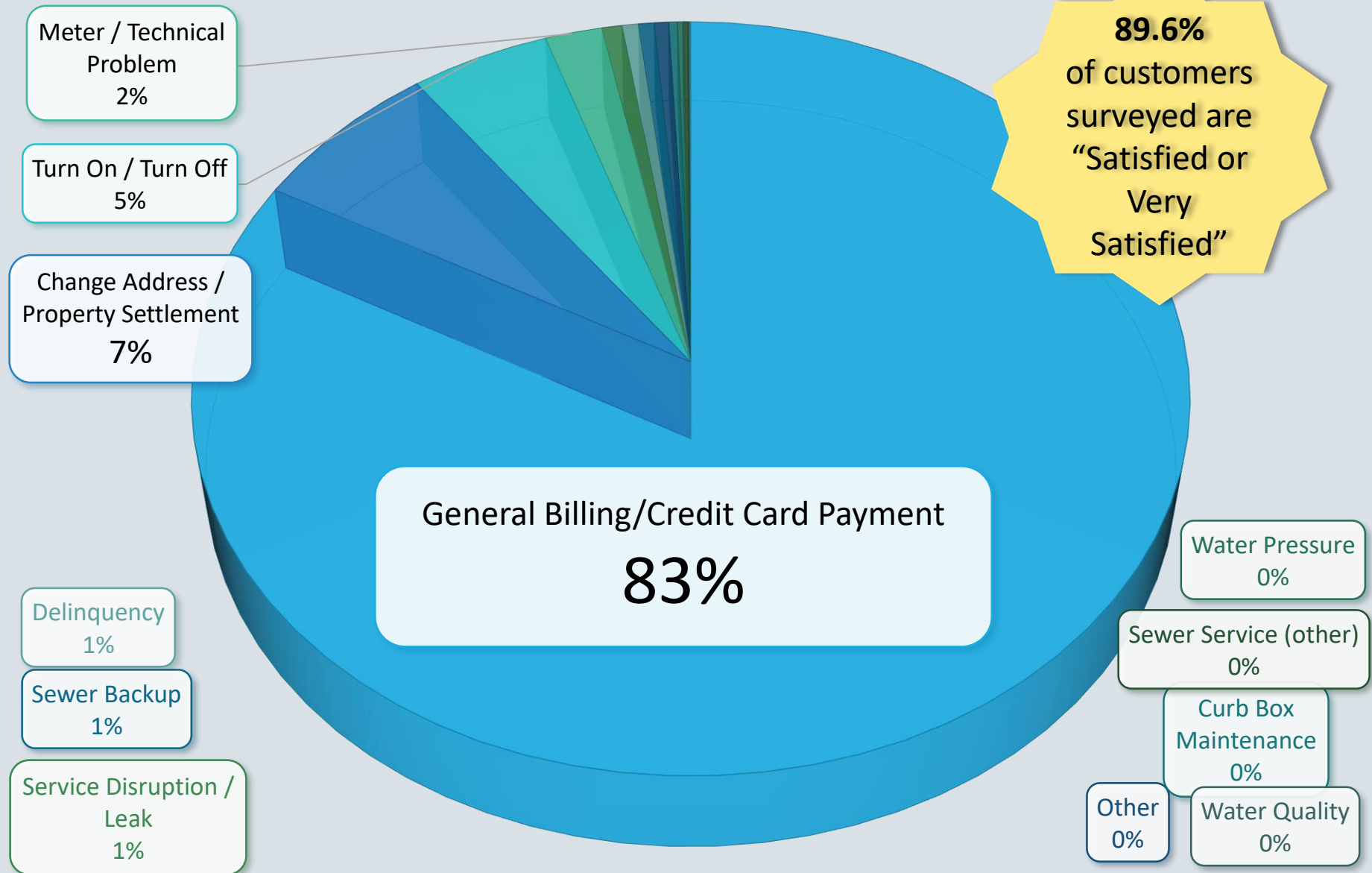
of Water Main
replaced



Notices of Violation



JANUARY – JUNE 2017 CUSTOMER SERVICE CALLS



2017 CUSTOMER SERVICE CALLS

Change Address /
Property
Settlement
10%

Turn On / Turn Off
5%

Meter / Technical
Problem
2%

General
Billing/Credit
Card Payment
79%

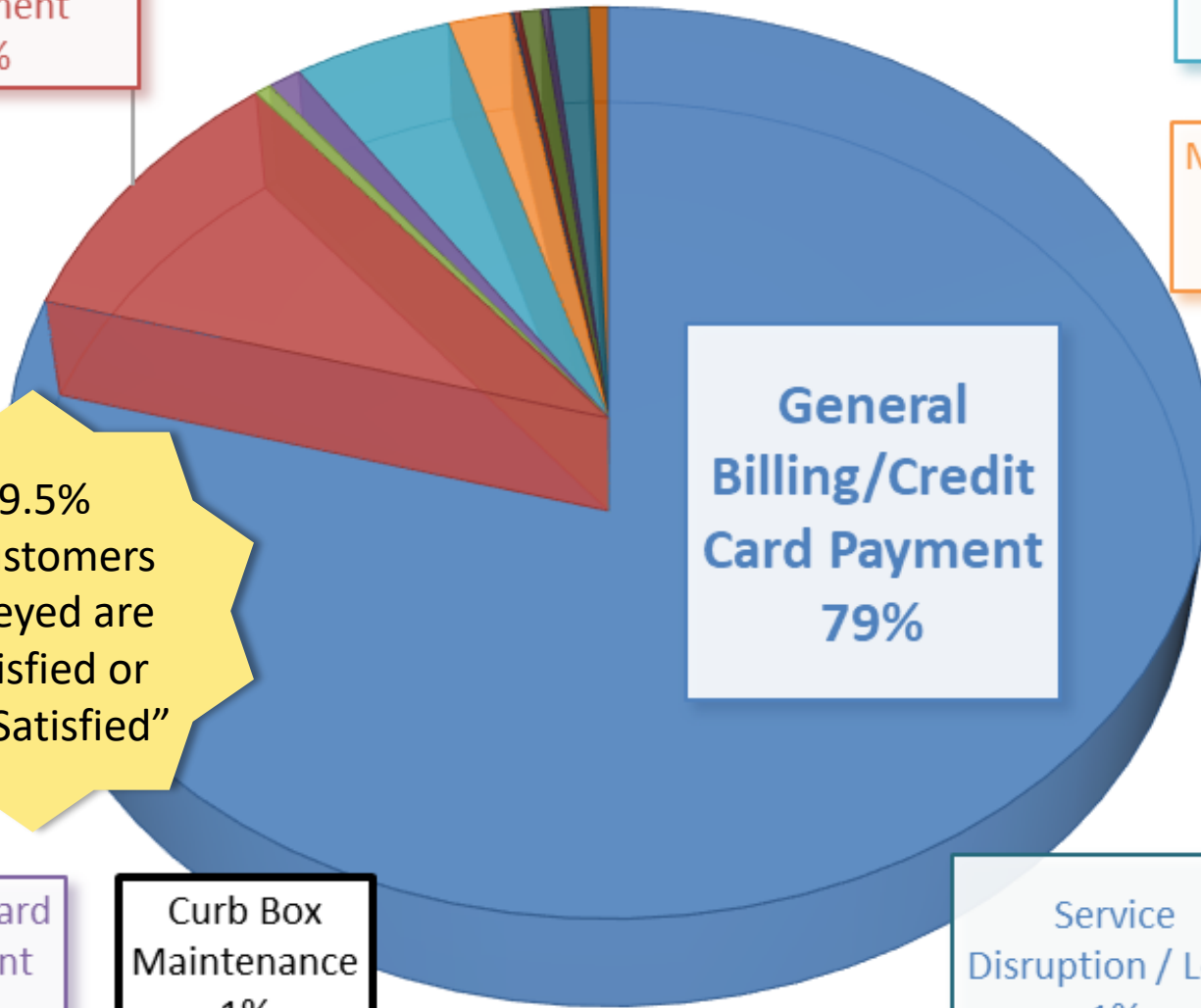
89.5%
of customers
surveyed are
“Satisfied or
Very Satisfied”

Credit Card
Payment
1%

Curb Box
Maintenance
1%

Service
Disruption / Leak
1%

Sewer
Backup
1%



Security

A security breach
occurred

2/23/2017



“Restoration Work” and “Uncompleted Work” is planned work not completed by the transfer date.

“Required Capital Improvements” “Schedule 7” are Major Capital Improvements required by the Concession Lease Agreement to be completed by Winter 2017.



“Administrative Order Projects”
Projects planned to comply with
the Administrative Orders.

Major Capital Improvements are those projects, approved by the Office of Compliance which cost more than one million + CPIU (Consumer Price Index for Urban).

Water Filtration Capital Projects - 2017

Schantz Spring Water Main Replacement Project



Wastewater Treatment Plant Capital Project - 2017

Security Upgrades



Estimated Cost: \$283,000
Completed: Fall of 2017
No Rate-Payer Capital Expense
Category: Uncompleted Work



**Homeland
Security**

**INFRASTRUCTURE SURVEY
SECURITY & RESILIENCE REPORT**



Water Distribution Capital Projects - 2017

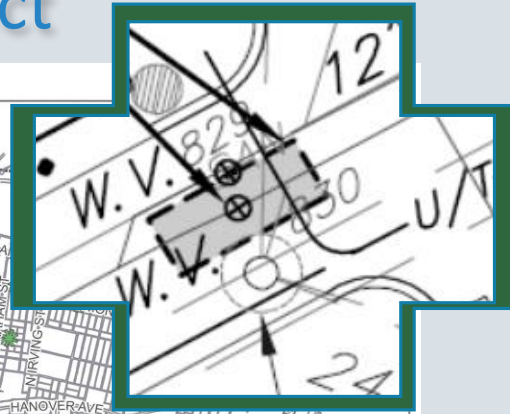
Inoperable Valves Replacement Project

Cost: \$1,110,000

Complete: Summer 2018

No Rate-Payer Capital Expense

Category: Uncompleted Work



Replacing 55 inoperable valves in multiple locations throughout the City.

Wastewater Treatment Plant Capital Project - 2017

Primary and Secondary Digesters Replaced anaerobic floating covers



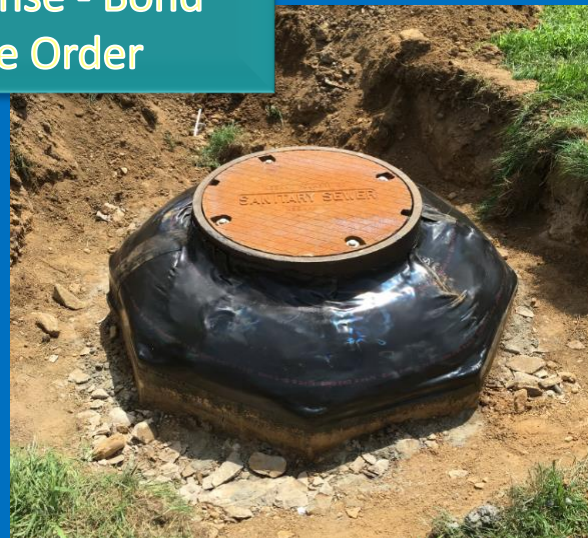
Estimated Cost: \$2,296,228
Completed: Fall of 2017
Rate-Payer Capital Expense: 2019
Category: Schedule 7

Administrative Order Projects - 2017

Sanitary Sewer Manhole Rehabilitation



Cost: \$60,090
Complete: Summer 2017
Rate-Payer Capital Expense - Bond
Category: Administrative Order



10 manhole structures were rehabilitated

QUESTIONS

