

Town of Abita Springs, LA

SANITARY SEWERAGE REHABILITATION PROGRAM



June 14, 2017

Prepared by:





OVERVIEW

Background

Problem Impact

Proposed Rehabilitation

Program Approach

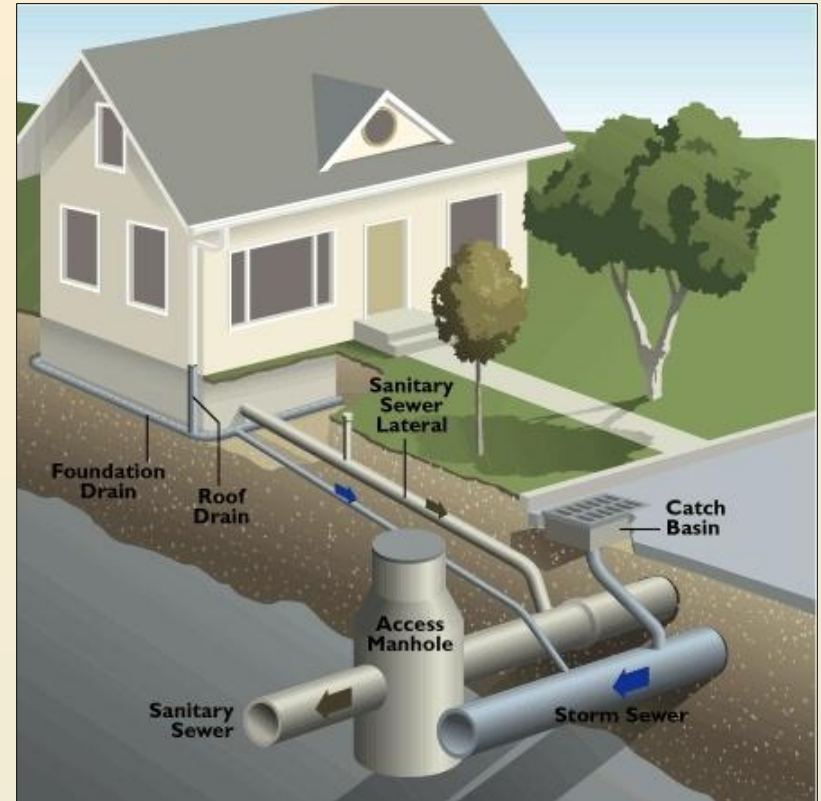
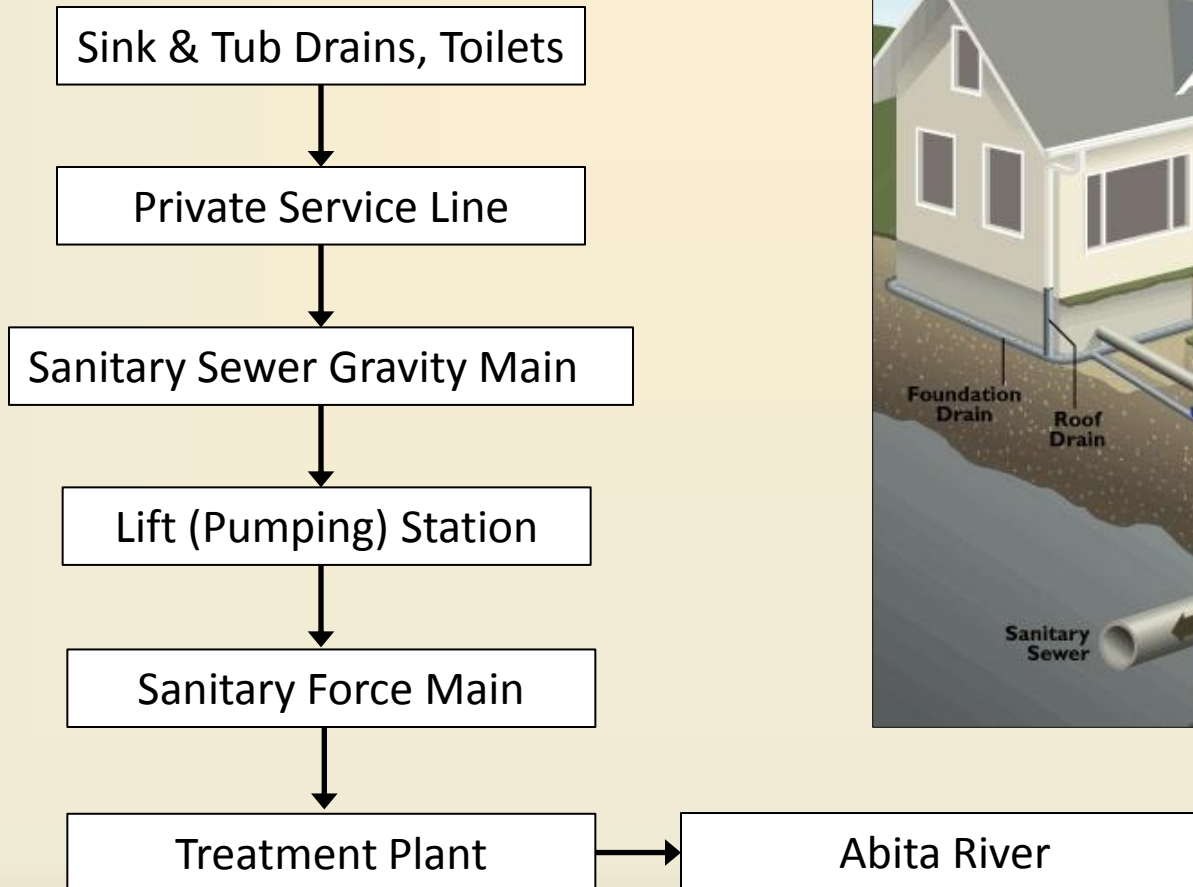


Above: Typical appearance of SSO at manhole



Sanitary Sewerage Basics

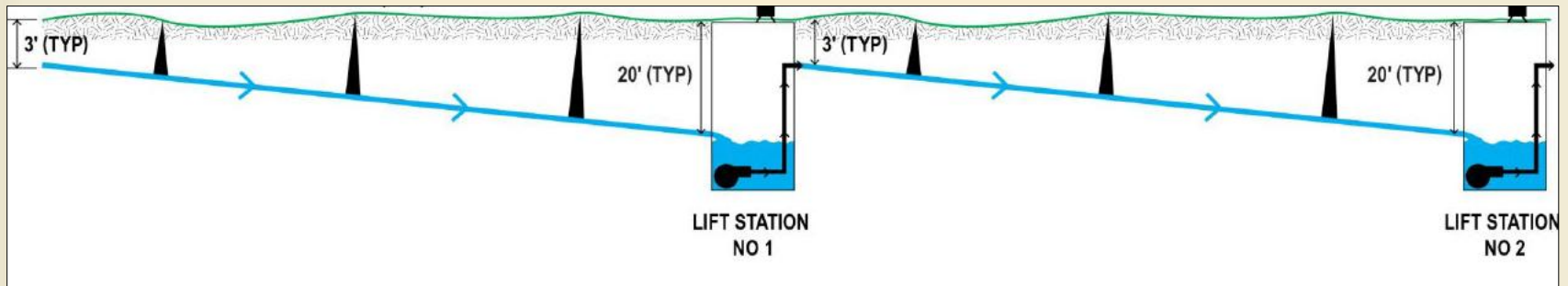
Wastewater Path:





Sanitary Sewerage Basics

Typical Sanitary Sewer Profile:



Typical Sanitary Manhole



Pearl St. Lift Station



Town WWTP



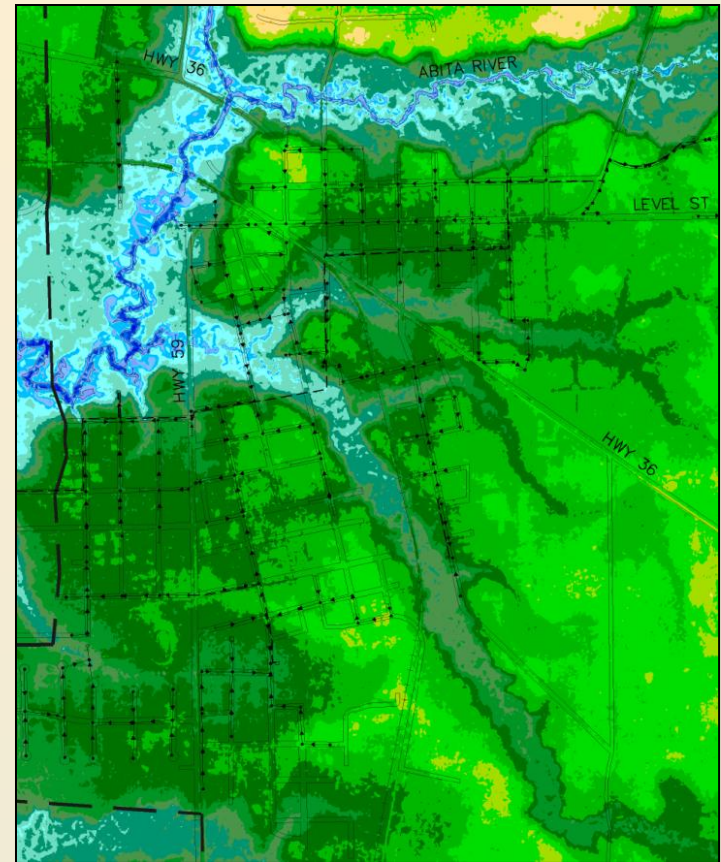
Program Background

Long Observed:

- *Sanitary Overflow at MHs*
- *High Wet Weather Flows at WWTP*
- *1930's WPA-Constructed Gravity Main Deterioration*

Recent Efforts:

- *2014 LPBF-Funded Sewer Study*
- *2016 LPBF-Funded LS Evaluation*



Above: Gravity network on LIDAR topography

Left: Overflow Evidence



Sanitary Overflow Causes

1. *Inflow/Infiltration*



Tree root penetration allows infiltration, contributing to Overflow



Sanitary Overflow Causes

2. Pumping Deterioration

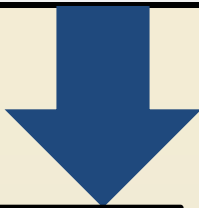


Above: Minkler St. Station. Pumping capacity deterioration contributes to Overflow.



Problem Impact

Sanitary Overflows
Inflow and Infiltration
Lift Station Deterioration
SCADA Telemetry
Standby Power Generation
WWTP Capital Improvement
Service Extensions
Individual Septic Permits
Utility Mapping



Water Quality

Cost



Water Quality: Federal & State Law, Citizen Quality of Life
Cost: Rehabilitation Only Increases in Difficulty with Time



Proposed Rehabilitation

Rehabilitate Gravity Pipes and MHs— Eliminate SSO, Provide Pipe Integrity

Rehabilitate and Upgrade Lift Stations— Ensure Operability & Resilience

Electronic Utility Mapping— Centralize & Preserve System Knowledge



Left: CIPP & CCTV images
Above: Standby generator at lift station

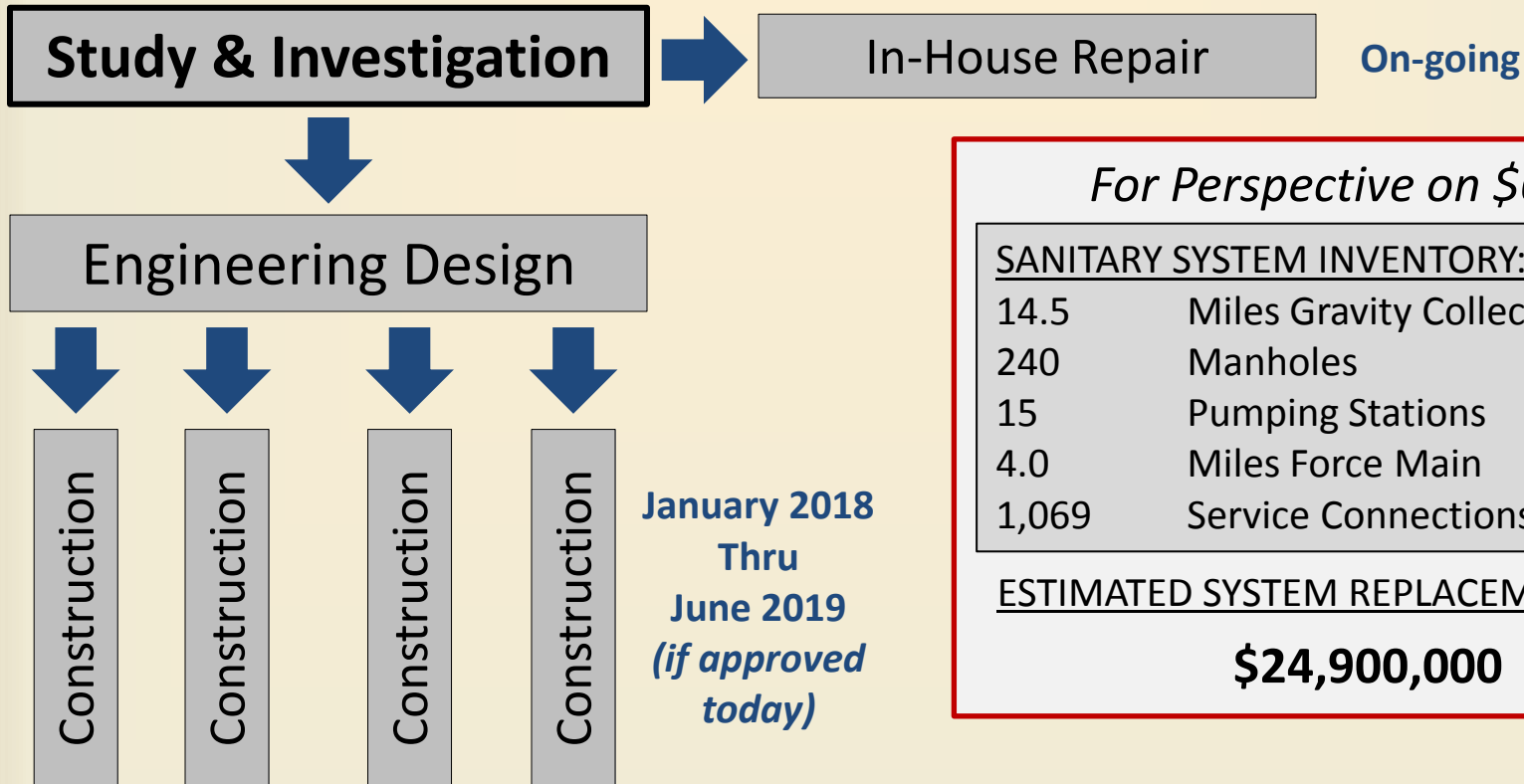


Right: Smoke emerging from culvert during smoke test



Program Approach

Working Program Estimate: \$6.3M



For Perspective on \$6.3M:

SANITARY SYSTEM INVENTORY:

14.5	Miles Gravity Collection Main
240	Manholes
15	Pumping Stations
4.0	Miles Force Main
1,069	Service Connections

ESTIMATED SYSTEM REPLACEMENT COST:

\$24,900,000

Execution Approach: Program Split into Modular Construction Efforts



Program Budget

<i>Rehabilitate Gravity Pipes and MHs</i>	<i>\$3.6M</i>
Mains	\$2.4M
Services	\$0.7M
CCTV	\$0.5M
<i>Rehabilitate and Upgrade Lift Stations</i>	<i>\$1.8M</i>
Station Work	\$1.6M
SCADA	\$0.2M
<i>Engineering, Legal, & Const. Oversight</i>	<i>\$0.6M</i>
<i>Equipment</i>	<i>\$0.2M</i>
<i>Electronic Utility Mapping</i>	<i>\$0.1M</i>
TOTAL	\$6.3M

Questions?



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