City of Texas City
Sanitary Sewer System

Overview

- Serve Population of 45,971
- 12.5 MGD Wastewater Treatment Plant
- 1,008,587-ft of 6-inch to 48-inch gravity sanitary sewer
- 114,814-ft of 4-inch to 36-inch sanitary sewer force mains
- 14,000 service connection laterals
- 2,060 manholes
- 36 lift stations
Agreed Order

- TNRCC agreed order on April 15, 1994
  - Required a schedule of corrective actions
  - Required quarterly reports of progress

- From the agreed order a twenty (20) year plan was developed
## City of Texas City Sewer Rehabilitation Timeline

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### Legend
- **Red**: Budgeting
- **Yellow**: Design & Approval
- **Gold**: Bid
- **Blue**: Construction

**April 2010**
Agreed Order

• TNRCC letter dated June 3, 1996
  ▪ Acknowledged 10 manhole repairs, 77 point repairs and replacement of 1,190 linear feet of sewer line in April 1995.
  ▪ Acknowledged construction of Phase I Sewer Rehabilitation Project in September of 1995
  ▪ Acknowledged construction of new 12.5 WWTP in November 1995
  ▪ No longer required quarterly reports
  ▪ Requested corrective action notices within fourteen (14) days of completion
Summary of Work Performed to Date

- Phase A – Replace WWTP: $14,000,000
- Phase B – Replace Sewer Lines & Liftstation #30: $1,700,000
- Phase C – Replace Sewer Lines & Liftstation #10: $4,200,000
- Phase I – 22,600 ft of Sewer Lines: $1,661,225
- Phase II – 41,000 ft of Sewer Lines: $2,792,900
- Phase III – 21,750 ft of Sewer Lines: $8,069,100
- Phase IV – 14,825 ft of Sewer Lines: $1,983,300
- Phase V – 11,080 ft of Sewer Lines: $640,600
- Phase VI – 16,075 ft of Sewer Lines: $1,461,000
- Phase VII – 26,000 ft of Sewer Lines: $1,418,200
- Phase VIII – 39,450 ft of Sewer Lines: $2,027,700
- Phase IX – 28,275 ft of Sewer Lines: $1,499,900
- Lift Station #26 Rehabilitation: $507,870
- Phase XI – 19,825 ft of Sewer Lines: $1,192,065
- Lift Station Improvements: $747,000
- TOTALS – 321,460 ft of Sewer Lines: $48,800,430
Summary of Work Bond Projects

- 34<sup>th</sup> Street – 2002
- Monticello Street – 2002
- Logan Street – 2003
- 29<sup>th</sup> Street – 2004
WWTP Designs

- 1st Plant
- 2nd Plant – Pure Oxygen
- Current Plant – Vertical Loop Reactor (Activated Sludge / Extended Aeration)
WWTP DATA
Flow Increase From Rainfall (approx.)

- 2002 – 38%
- 2003 – 28%
- 2004 – 67%
- 2005 – 70%
- 2006 – 17%
- 2007 – 43%
- 2008 – 13%
- 2009 – 3%
- 2010 – 1%
WWTP DATA
BOD (mg/l) & Removal (approx.)

- 2002 – 81 @ 93.67%
- 2003 – 45 @ 85.88%
- 2004 – 10 @ 96.22%
- 2005 – 23 @ 98.67%
- 2006 – 139 @ 98.74%
- 2007 – 183 @ 97.33%
- 2008 – 202 @ 98.39%
- 2009 – 702 @ 99.20%
- 2010 – 640 @ 99.27%
Sanitary Sewer Rehab. & Replacement Program

- Replaced deteriorated sanitary sewer lines in the system
- Minimized maintenance calls
- Improved level of service to residents
- Minimized emergency repairs to the sanitary sewer system
- Met TCEQ compliance requirements
Sanitary Sewer Pipe Material

- Clay – 716,351 ft
- High Density Polyethylene – 144,579 ft
- Polyvinyl Chloride – 230,501 ft
- Concrete – 10,607 ft
- Corrugated Metal – 2,866 ft
- Cured In Place – 1,309 ft
- Asbestos Cement – 30,707 ft
Future Sanitary System Improvements

- Will be based on the following criteria:
  - Maintenance
  - Trunk Mains
  - Pipe Material
  - Age of System
  - Lift Stations
Sanitary Sewer System Improvement Costs

Sanitary Sewer System

$48,800,430
$65,558,300
$24,960,271

- Monitor for Future Replacement
- Completed Projects
- Scheduled Replacement Program
Moving Forward

- The City of Texas City will:
  - Continue with gravity sanitary sewer rehabilitation/replacement program
  - Continue monitoring lines
  - Continue to replace remaining asbestos concrete pipe
  - Continue rehabilitation of lift stations and monitor remaining lift stations
Questions or Comments?