

Paducah McCracken County Joint Sewer Agency
Rehabilitation Program
Summary Document



December 2024

The Paducah McCracken County Joint Sewer Agency performs routine inflow and infiltration (I/I) on its collection system and periodic rehabilitation on its collection system, as well as all mechanical systems.

On an annual basis, JSA allocates approximately:

- **~\$1,300,000 on collection line rehabilitation** via the Cured-In Place Pipe (CIPP) process. This also includes performing CIPP on approximately 100-150 service lines, from the wye.
- **~\$200,000 on manhole rehabilitation.** JSA performs manhole rehabilitation from the casting, all the way to the pipe seals, with various approved epoxy systems. This rehabs and leak-proofs the manholes.
- **~\$200,000 on cleaning and video inspection** of sewer lines. The collection system is subdivided by different zones. Contractors are required to clean and root cut the sewer lines, providing a final video review of the line and all of the connections for each line. This video is named and stored for easy searching. Lines are coded via the Pipeline Assessment Certification Program (PACP).
- **~\$50,000 on new pumps, control panels, and various mechanical equipment** throughout the JSA system.
- **In addition to the above, JSA staff also performs video inspection and cleaning of sewer lines, manhole rehabilitation, sewer main and service line rehabilitation and repair, and mechanical repair and replacement of various JSA components.**

JSA determines the work to be performed based on the following:

For the collection system:

- Sewer line PACP scores.
- Flow models and studies, as well as lift station flow data. JSA receives flow data from all lift stations via telemetry.
- Periodic reviews of JSA service calls and work orders.

For Mechanical systems:

- Asset Inventory (force main replacements, large mechanical replacements)
- Lift station telemetry trends to repair/replace proactively prior to failure.
- Work order trends reviews.
- Industry trends (improved telemetry systems, improved control systems, improved pumps)
- Energy efficiency improvements (variable frequency drives, turbo blowers)

Below is a representative listing of projects performed 2007-2024 related to rehabilitation and I/I improvements. The listing below does not include regular work performed by JSA personnel related to

service line improvements, pump replacements, control replacements, etc. At the end of this document are two pages of summary information related to collection system improvements over

2007 Completed Project Listing

Woodlawn Phase III - This project involved the construction of approximately 7,000 linear feet of 10" PVC force main to connect the Cook Street Lift Station to the recently constructed Woodlawn Interceptor, refurbishment of the Cook Street Lift Station from a 250 gpm flooded suction lift station to a 700 gpm submersible station, placement of a stand-by generator for alternate power for the Cook Street Lift Station and the rehabilitation of 7,184 linear feet of sewer main by the cured-in-place plastic process. Project was completed December 2007. Total cost \$897,000.

Chlorine Contact Chamber - Project involved the installation of a center wall and replacement of the chlorine contact chamber's rake assemblies. Completed March 2007. Total cost \$438,000.

Chlorine Room Renovations - Project involved the conversion of the disinfection system from chlorine gas to sodium hypochlorite drip feed. Completed June 2007. Total cost \$21,000.

Old Highway 45 Pump Station - Project involved the total refurbishment of the station, including the replacement of the pumps, level control, and control panel. Completed September 2007. Total cost \$15,000.

Husband Street Lift Station Refurbishment Project - The station, located within a Combined Sewer Area, underwent a complete electrical refurbishment including placement of a stand-by generator for alternate power, new seal water system for the pumps (pumps previously upgraded in 2005), installation of a comminator for reduced floatables and solids, new level control and pump control systems, and new motor control center, weatherhead and power service. Completed December of 2007. Total cost \$215,000.

Terrell Street Lift Station Force Main Replacement - This project involved the replacement of one of two 18" Cast Iron force mains with a new 18" C900 PVC force main. The Cast Iron force main had degraded due to wear. Completed September 2007. Total Cost \$23,000.

Contract No. 2 - Video Inspection and Cleaning Contract – This project involved the inspection, cleaning and root cutting of 42,000 linear feet of 8", 10", 12" and 15" gravity sewer main. Completed March 2007. Total cost \$75,000.

2008 Completed Project Listing

Perkins Creek Crossing Rehabilitation – Project involved the refurbishment of an above-grade creek crossing of the Perkins Creek Interceptor. The old structure had been undermined. Completed April 2008. Total cost \$100,000.

Rehabilitation Contract #2 - This project involved 13,452 linear feet of sewer rehabilitation of 8", 10", 12" and 15" gravity sewer main utilizing the cured-in-place plastic process, sewer cleaning and video inspection of 3,637 linear feet of gravity sewer main, approximately 7,000 linear feet of root removal,

leakproofing of approximately 60 manholes and 53 point repairs of the gravity sewer system. Completed February 2008. Total Cost \$647,000.

Lakeview Lift Station - Project involved the total refurbishment of the station, including the replacement of the pumps, level control, and control panel. Completed August 2008. Total cost \$33,000.

Homewood Lift Station Pump & Valve Replacement – Project involved the replacement of existing suction lift pumps with dry-pit submersible pumps, along with the replacement of two resilient wedge inlet valves. Completed November 2008. Total project cost \$25,000.

Contract No. 3 - Video Inspection and Cleaning Contract – This project involved the inspection, cleaning and root cutting of 67,251 linear feet of 8", 10", 12" and 15" gravity sewer main. Completed Spring 2008. Total cost \$100,000.

Terrell Street Small Bar Screen Refurbishment – Project involved the complete refurbishment of the original coarse bar screen for the Paducah Wastewater Treatment Plant. Completion of this project ensures an adequate back-up for the 1973 larger coarse bar screen which serves as the influent point for the Paducah WWTP. Completed August 2008. Total cost \$40,000.

2009 Completed Project Listing

Rehabilitation Contract #4 - This project involved 11,909 linear feet of sewer rehabilitation of 8", 10" and 12" gravity sewer main utilizing the cured-in-place plastic process, sewer cleaning and video inspection of 11,909 linear feet of gravity sewer main, approximately 408 linear feet of root removal, leakproofing of approximately 81 manholes and 37 point repairs of the gravity sewer system. Completed February 2009. Total cost \$575,000.

Contract No. 4 - Video Inspection and Cleaning Contract – This project involved the inspection, cleaning and root cutting of 65,130 linear feet of 6", 8" and 10" gravity sewer main. Completed Spring 2009. Total cost \$123,619.

Rehab Contract #5 – This project included the following:

- 13,369 linear feet of sewer rehabilitation of 6", 8", 12", and 21" gravity sewer main utilizing the cured-in-place plastic (CIPP) process
- Rehabilitation of approximately 46 manholes
- 21 point repairs of the gravity sewer system by dig and replace methods
- 13 lateral repairs utilizing CIPP process
- 9 main line sewer repairs utilizing CIPP patch process

Substantial completion date for the project was December 8, 2009 with a total cost of the project being \$540,000.

Pebblebrook Lift Station Remediation – The project converted the pump station from a suction lift pump station to a duplex pump submersible station. A complete refurbishment of the station was performed, with new controls and pumps, eliminating this station as a recurring overflow. The project was completed in August of 2009 with a total cost of \$31,500.

Cured-In Place Plastic Patch Contract – Project involved the placement of 10 CIPP patches within the JSA gravity system. Total cost of the project was \$29,200.

Cured-In Place Plastic Lateral Contract – Project involved the repair of 11 laterals utilizing the CIPP process. Total cost of the project was \$40,900.

Dewatering Building Improvements Project – Project involved structural repairs and improvements related to the Dewatering Building at the Paducah Wastewater Treatment Plant. Total cost of the project was \$31,300.

Paducah Wastewater Treatment Plant Boiler Replacement – Project involved replacement of the existing 1 Mbtu boiler with a 2 Mbtu boiler and associated piping at the Paducah Wastewater Treatment Plant. Total cost of the project was \$43,000.

Perkins Creek Lift Station Refurbishment and Force Main Extension –The project separated the flow from the Perkins Creek Lift Station from the Combined Sewer System via a new force main directly to the Paducah Wastewater Treatment Plant. The project removed 1.5 to 2 million gallons per day of dry-day wastewater flow from the Combined Sewer System, approximately one-third of the dry-day flow of the Paducah Wastewater Treatment Plant. Total cost of the project was \$2,500,000.

2010 Completed Project Listing

Rehabilitation Contract #6 – This project included the following:

- 32,478 linear feet of sewer rehabilitation of 6", 8", 12", and 21" gravity sewer main utilizing the cured-in-place plastic (CIPP) process
- 71 point repairs of the gravity sewer system by dig and replace methods
- 115 lateral repairs utilizing CIPP process
- 16 main line sewer repairs utilizing CIPP patch process

Substantial completion for the project was December 2010, with a total cost of the project being approximately \$1,200,000.

Terrell Street Pump Station Stand-by Electrical Power and Upgrades – This project involved the construction of a 355 KW diesel generator to provide backup power for the Terrell Street Pump Station, the influent pump station for the Paducah Wastewater Treatment Plant. In addition, new controls, motor control center, dual level indicators, and controls for the existing small coarse bar screen located within the pumping station were installed. This project was completed in the Spring of 2010 with a related cost of approximately \$280,000.

Paducah Wastewater Treatment Plant Large Coarse Bar Screen Replacement – This project involved the replacement of the largest coarse bar screen located at the Paducah Wastewater Treatment Plant. The screen was replaced with a Headworks brand continuous rake bar screen and new conveyor. This project was completed in the Fall of 2010 with a related cost of approximately \$590,000.

Gatewood Lift Station Refurbishment –The project converted the station from a flooded suction to a duplex submersible station with new plc controls and new valve vault with bypass connection. The refurbishment work was performed by JSA personnel and completed in the Spring of 2010 with a total materials cost of approximately \$35,000.

Contract No. 6 – Video Inspection and Cleaning Contract – This project involved the inspection, cleaning and root cutting of 63,333 linear feet of 8", 10", 12" and 15" gravity sewer line. This project was completed in the Spring of 2010 with a total cost of \$79,786.

2011 Completed Projects Listing

Rehabilitation Contract #7 – This project included the following:

- 50,399 linear feet of sewer rehabilitation of 6", 8", 10", 12", and 24" gravity sewer main utilizing the cured-in-place plastic (CIPP) process
- 66 point repairs of the gravity sewer system by dig and replace methods
- 156 lateral repairs utilizing CIPP process
- 4 main line sewer repairs utilizing CIPP patch process

The total cost of the project is approximately \$2,000,000.

Manhole Rehabilitation Contract - Work was performed on 71 manholes and included:

- 203 vertical feet of waterproofing manhole interior
- 106 instances of sealing internal precast manhole joints and interior leaks
- 44 vertical feet of epoxy coating
- 25 instances of sealing manhole bases and internal pipe connections
- 3 reconstructions of manhole bases
- 3 wet wells or valve vaults leakproofed

The total cost of the project is approximately \$75,000.

Stonegate Lift Station Refurbishment – The Stonegate Lift Station was constructed as a suction-lift type lift station in the early 1970's and has endured mechanical and piping failures over the last few years. The project converted the station to a duplex submersible station with new and enlarged wet well, plc controls and new valve vault with bypass connection. The refurbishment work was completed in Spring 2011 with a total cost of approximately \$125,000.

Bypass Valve Installations – Valves and connections that supply the capability for a pump station to be pumped by a diesel pump directly into a station's force main were installed at St. Andrews pump stations during calendar year 2011. The valves and connections were installed by JSA forces.

Contract No. 7 – Video Inspection and Cleaning Contract – This project involved the inspection, cleaning and root cutting of 63,333 linear feet of 8", 10", 12" and 15" gravity sewer line. Total cost of \$79,786.75.

2012 Completed Project Listing

Contract No. 8 - Video Inspection and Cleaning Contract – This project involved the inspection, cleaning and root cutting of 104,052 linear feet of 6", 8", 10" and 12" gravity sewer line. This project was completed in May of 2012 with a total cost of \$109,181.

Rehab Contract #8 – This project included the following:

- 30,600 linear feet of sewer rehabilitation of 8", 10", 12", and 24" gravity sewer main utilizing the cured-in-place plastic (CIPP) process
 - 95 point repairs and lateral repairs of the gravity sewer system by dig and replace methods
 - 129 lateral repairs utilizing CIPP process
 - 6 main line sewer repairs utilizing CIPP patch process
- The total cost of the project is approximately \$1,200,000.

2013 Completed Project Listing

Video Inspection and Cleaning Contract #9 – This project involved the inspection, cleaning and root cutting of 70,286 linear feet of 6", 8", 10" and 12" gravity sewer line. This project was completed in May of 2013 with a total cost of approximately \$131,500.

Rehab Contract #9 – This project included the following:

- 14,843 linear feet of sewer rehabilitation of 8", 10", 12", and 15" gravity sewer main utilizing the cured-in-place plastic (CIPP) process
- 19 point repairs of the gravity sewer system by dig and replace methods
- 156 lateral repairs utilizing CIPP process
- 1 main line sewer repair utilizing CIPP patch process

The total cost of the project is approximately \$720,000.

Manhole Contract #9 – This project involved the rehabilitation of 52 manholes at a total cost of approximately \$55,000.

Capital Improvements to the Paducah Wastewater Treatment Plant - Various improvements to the Paducah WWTP include:

- Replacement of handrails associated with all three primary clarifiers and two of four secondary clarifiers, including structural repairs to walkways, by JSA forces at approximate material costs of \$56,000.
- Replacement of controls associated with the Return Activated Sludge (RAS) pump station by JSA forces at a material cost of approximately \$8,500.

Woodlawn Pump Station Improvements – The project involved the complete replacement and upgrade of two pump stations with listed sanitary sewer overflows associated with them, Homewood Pump Station and Milliken Lift Station. Each station was replaced with new 10 foot diameter wet wells, valve vaults with bypass pumping ports readily available for bypass pumping, magnetic flow meters, new controls, and stand-by electrical generators. Each station was hydraulically upgraded to pump more flow, with 4,315 linear feet of hydraulic improvements to Milliken pump station force main. The project was completed in December of 2013 at a total cost of approximately \$990,000.

2014 Completed Project Listing

Video Inspection and Cleaning Contract #10 – This project involved the inspection, cleaning and root cutting of 60,676 linear feet of predominately 15"-36" gravity sewer line. This project was completed in December of 2014 with a total cost of approximately \$140,000.

Rehab Contract #10 (Year One) – This project included the following:

- 14,742 linear feet of sewer rehabilitation of 6", 8", 10", 12", and 15" gravity sewer main utilizing the cured-in-place plastic (CIPP) process
- 41 point repairs of the gravity sewer system by dig and replace methods
- 69 lateral repairs utilizing CIPP process

The total cost of the project is approximately \$720,000.

Manhole Contract #10 – This project involved the epoxy rehabilitation of 23 manholes at a total cost of approximately \$95,000.

Spann Lane Refurbishment – This project involved the epoxy lining of the Spann Lane pump station, the influent pump station for the Woodlawn Wastewater Treatment Plant. Total cost of this project was approximately \$135,000.

Blandville West Estates Extension/Private Package Plant Elimination – The Blandville West private package plant was eliminated via gravity sanitary sewer extension. The project entailed connecting the Blandville West Estates collection system to the newly constructed Massac Creek Interceptor. A collection line was built near the plant during the construction of the interceptor. This project completed the extension and demolished the plant. Total costs were approximately \$30,000.

James Marine Sanitary Sewer Extension/Private Package Plant Elimination – This project eliminated a failing private package plant located at an industrial barge maintenance area. A pump station, 4,650 linear feet of force main, and 960 linear feet of gravity sanitary sewers were constructed. The total cost of the project was approximately \$385,000. This project was funded by an EDA grant and James Marine.

2015 Completed Project Listing

Video Inspection and Cleaning Contract – Calendar Year 2015 – This project involved the inspection, cleaning and root cutting of 77,910 linear feet of 6", 8", 10", 12", and 15" gravity sewer line.

2015 Rehab Contract – The Consent Judgment for JSA listed two of these projects within the Early Action Plan for the JSA. This project is in addition to those two that have been completed (11 total projects have been completed) and included 3,862 linear feet of sewer rehabilitation of 8", 10", 12", 15" and 21" gravity sewer main utilizing the cured-in-place plastic (CIPP) process, along with related dig and replace point repairs and Cured-in Place Plastic repairs.

Gatewood Drive Pump Station Elimination – This project eliminated a failing private package plant, as well as the SSO related to Gatewood Drive pump station, which is listed in the Consent Judgment. The project entailed constructing a new sanitary sewer line to accept the flows from the failing W&W Services package plant, as well as eliminating the Gatewood Drive pump station by gravity extension. An additional 2,527 linear feet of gravity sewer main was replaced within the former W&W Services collection system. This project was only made possible by the construction of the Massac Creek Interceptor. Total cost of the project was approximately \$315,000.

Woodlawn Primary Pump Upgrade – The pump station at the primary lagoon was modified to include a pump with capabilities at around 1,400 gpm to provide better control during wet weather. Total costs were around \$25,000.

Kentucky Avenue Sanitary Sewer Rehabilitation - This project involved the replacement of approximately 50 manhole castings, manhole grouting, and sanitary sewer lateral rehabilitation and relocation during the rehabilitation of Kentucky Avenue. The Kentucky Transportation Cabinet provided funding for the project.

2016 Completed Project Listing

2016 Rehabilitation Contract - The project involved rehabilitation utilizing the cured-in-place plastic (CIPP) process, along with related dig and replace point repairs and included the following:

- 6, 145 lf – 8”
- 2,315 lf – 10”
- 726 lf – 12”
- 2,996 lf – 24”
- 211 lf – 27”
- 1,659 lf – 30”

The project was completed in late 2016. Total construction costs were approximately \$950,000.

Video Inspection and Cleaning Contract – Calendar Year 2016 – This project involved the inspection, cleaning and root cutting of 95,821 linear feet of 6”, 8”, 10”, 12”, 15” and 18” gravity sewer line.

2017 Completed Project Listing

Video Inspection and Cleaning Contract – Calendar Year 2017 – This project involved the inspection, cleaning and root cutting of 125,457 linear feet of 8”, 10”, 12”, 15” and 18” gravity sewer line.

Sewer main rehabilitation to reduce CSOs and SSOs by correcting I/I – (2017 Rehab Contract) – The Consent Judgment for JSA listed two of these projects within the Early Action Plan for the JSA. This project is in addition to those two that have been completed (13 total projects have been completed). The project involved rehabilitation utilizing the cured-in-place plastic (CIPP) process, along with related dig and replace point repairs and included the following:

- 7,461 lf – 8”
- 3,155 lf – 10”
- 3,447 lf – 12”
- 1,167 lf – 15”
- 145 lf – 18”
- 504 lf – 21”
- 404 lf – 24”
- 6 Main Line Point Repairs
- 16 Service Line Dig Repairs
- 52 CIPP Lateral Repairs

The project was completed in late 2017. Total construction costs were approximately \$900,000.

Calendar Year 2017 Manhole Repair Project – In addition to the above-referenced CIPP project, JSA also performed a manhole repair project which included the following:

- Epoxy coating 155.5 vf of 4' dia. manhole
- Epoxy coating 27.1 vf of 5' dia. manhole
- Epoxy coating of 90.7 vf of 6' dia. manhole
- Cement coating of 103.9 vf of 4' dia. manhole
- 98 manhole joint or base repairs.

The project was completed during the fall of 2017. Total construction costs were approximately \$130,000.

Spann Lane/Kenmar Road Pump Stations Controls Upgrade – Spann Lane and Kenmar Road pump station controls were upgraded to Allen Bradley PLC control units, with new panels and components. This project was a continuation of JSA's equipment standardization and upgrade program. Total project costs were approximately \$35,000.

JSA Telemetry Upgrade – The main telemetry system for JSA's largest pumping stations, including all of the treatment plant influent stations, which was 10 years old and beyond technical support, was replaced with a new unit. This unit is expandable for the wet weather tanks which have been constructed in JSA's system as well. Total cost for the upgrade was approximately \$54,000.

Reidland Wastewater Treatment Plant Grit Removal Replacement – The existing standard metal grit removal system at the Reidland Wastewater Treatment Plant had expended its service life was replaced with a new stainless steel system. Total project costs were approximately \$73,000.

Pump Truck Building Replacement – The replacement of a collections department building that was damaged beyond repair by a wind event was replaced. Total project costs were approximately \$250,000.

2018 Completed Project Listing

Video Inspection and Cleaning Contract – Calendar Year 2018 – This project involved the inspection, cleaning and root cutting of 100,456 linear feet of 8", 10", 12", 15" and 18" gravity sewer line. Total costs were approximately \$120,000.

Sewer main rehabilitation to reduce CSOs and SSOs by correcting I/I – (2018 Rehab Contract) – The Consent Judgment for JSA listed two of these projects within the Early Action Plan for the JSA. This project is in addition to those two that have been completed (13 total projects have been completed). The project involved rehabilitation utilizing the cured-in-place plastic (CIPP) process, along with related dig and replace point repairs and included the following:

- 10,301 lf – 8"
- 2,533 lf – 10"
- 3,798 lf – 12"
- 789 lf – 15"
- 3 Main Line Point Repairs
- 23 Service Line Dig Repairs
- 59 CIPP Lateral Repairs

The project was completed in late 2018. Total construction costs were approximately \$900,000.

Epperson Road/Reidland Road Force Main Replacement – Project replaced approximately 3,000 linear feet of cast iron or galvanized force main related to the Reidland Road and Epperson Road Lift Stations. Total construction costs were approximately \$126,000.

Paducah Wastewater Treatment Plant Sandbed Reconstruction – The project involved construction of new walls, runners, and a ramp for the combination vacuum/jetter trucks to offload debris. The total project construction costs totaled approximately \$121,000.

Reidland Wastewater Treatment Plant Oxidation Ditch Bearing Replacement – Project replaced all bearings related to the oxidation ditch drives. Material costs were approximately \$38,000.

Perkins Creek Pump Station Epoxy – Project involved the epoxy coating of a major lift station. Bypass pumping was required. Construction costs totaled \$245,000.

2019 Completed Project Listing

Video Inspection and Cleaning Contract – Calendar Year 2019 – This project involved the inspection, cleaning and root cutting of approximately 106,000 linear feet of 8” through 30” gravity sewer line. Project costs totaled approximately \$145,000.

Sewer main rehabilitation to reduce CSOs and SSOs by correcting I/I – (2019 Rehab Contract) – The Consent Judgment for JSA listed two of these projects within the Early Action Plan for the JSA. This project is in addition to those two that have been completed (13 total projects have been completed). The project involved rehabilitation utilizing the cured-in-place plastic (CIPP) process, along with related dig and replace point repairs and included the following:

- 3,361 lf – 8”
- 1,900 lf – 10”
- 1,857 lf – 12”
- 818 lf – 15”
- 411 lf – 18”
- 410 lf – 21”
- 1,240 lf – 24”
- 1,278 lf – 27”
- 1 Main Line Point Repair
- 22 Service Line Dig Repairs
- 52 CIPP Lateral Repairs
- 12 Cleanout Installations

The project was completed in late 2019. Total construction costs were approximately \$1,050,000.

2019 Manhole Project – Project applied epoxy to 544 vertical feet of manholes and a lift station. In addition, 5 manhole benches were repaired. Project costs totaled approximately \$150,000.

Waid Package Plant Removal Project - This project involved the partial abandonment of the existing package plants that serve JoAnn Estates and Wilmington Chiles subdivision and connection of the subdivisions to the JSA sanitary sewer network. Approximately 1,200 linear feet of gravity main was

required for JoAnn Estates, with Wilmington Chiles requiring a pump station and approximately 3,000 linear feet of force main. Total project costs were approximately \$510,000.

2020 Completed Project Listing

Video Inspection and Cleaning Contract – Calendar Year 2020 – This project involved the inspection, cleaning and root cutting of approximately 111,406 linear feet of 8” through 30” gravity sewer line. Project costs totaled approximately \$158,000.

Sewer main rehabilitation to reduce CSOs and SSOs by correcting I/I – (2020 Rehab Contract) – The Consent Judgment for JSA listed two of these projects within the Early Action Plan for the JSA. This project is in addition to those two that have been completed (13 total projects have been completed). The project involved rehabilitation utilizing the cured-in-place plastic (CIPP) process, along with related dig and replace point repairs and included the following:

- 198 lf – 6”
- 7,863 lf – 8”
- 5,583 lf – 10”
- 3,130 lf – 12”
- 4162 lf – 18”
- 503 lf – 30”
- 4 Service Line Dig Repairs
- 40 CIPP Lateral Repairs

The project was completed in late 2020. Total construction costs were approximately \$900,000.

2020 Manhole Project – Project applied epoxy to 23 manholes in addition to various other manhole repairs. Project costs totaled approximately \$75,000.

Paducah Wastewater Treatment Plant Electrical Upgrades – Project constructed a new electrical building and Motor Control Center for the main portion of the Paducah plant. A stand-by generator and automatic transfer switch were included. The plant’s main transformer and feed line were also replaced. The approximate project cost was \$433,000.

Paducah Wastewater Treatment Plant Turbo Blower – A new stacked turbo blower was purchased to replace two of the original centrifugal blowers for the plant. In addition, dissolved oxygen probes were purchased and installed to control the variable frequency drives of the blower based on the current dissolved oxygen levels in the aeration tank. The work was performed by in-house labor, with material costs approximately \$158,000.

Paducah Wastewater Treatment Plant Window Replacement – Windows for the treatment plant operations and lab building, pump shop, and digester room were replaced with energy efficient double pane windows. Total costs associated with this project were \$23,000.

2021 Completed Project Listing

Video Inspection and Cleaning Contract – Calendar Year 2021 – This project involved the inspection, cleaning and root cutting of approximately 97,327 linear feet of 8” through 18” gravity sewer line.

Sewer main rehabilitation to reduce CSOs and SSOs by correcting I/I – (2021 Rehab Contract) – The Consent Judgment for JSA listed two of these projects within the Early Action Plan for the JSA. This project is in addition to those two that have been completed. The project involved rehabilitation utilizing the cured-in-place plastic (CIPP) process, along with related dig and replace point repairs and included the following:

- 10,2114 lf – 8”
- 2,230 lf – 10”
- 600 lf – 15”
- 360 lf – 24”
- 3 Service Line Dig Repairs
- 62 CIPP Lateral Repairs

Total construction costs were approximately \$900,000.

2022 Completed Project Listing

Video Inspection and Cleaning Contract – Calendar Year 2022 – This project involved the inspection, cleaning and root cutting of approximately 96,000 linear feet of 8” through 18” gravity sewer line.

Sewer main rehabilitation to reduce CSOs and SSOs by correcting I/I – (2022 Rehab Contract) – The Consent Judgment for JSA listed two of these projects within the Early Action Plan for the JSA. This project is in addition to those two that have been completed. The project involved rehabilitation utilizing the cured-in-place plastic (CIPP) process, along with related dig and replace point repairs and included the following:

- 13,854 lf – 8”
- 417 lf – 12”
- 5 Service Line Dig Repairs
- 7 Main Line Dig Repair
- 129 CIPP Lateral Repairs

2022 Manhole Project – Project applied epoxy to 745 vertical feet of 69 manholes. Project costs totaled approximately \$180,000.

Perkins Creek Pump Station Force Main Replacement – The project replaced an approximate 2,000 linear feet section of 12 inch Ductile Iron Pipe (DIP) with 16 inch C900 PVC pipe. The replacement has increased the pumping capacity of the Perkins Creek Pump Station. Project was completed in late 2022, at an approximate cost of \$300,000.

2023 Completed Project Listing

Video Inspection and Cleaning Contract – Calendar Year 2023 – This project involved the inspection, cleaning and root cutting of approximately 123,000 linear feet of 8” through 24” gravity sewer line.

Sewer main rehabilitation to reduce CSOs and SSOs by correcting I/I – (2023 Rehab Contract) – The Consent Judgment for JSA listed two of these projects within the Early Action Plan for the JSA. This project is in addition to those two that have been completed. The project involved rehabilitation utilizing the cured-in-place plastic (CIPP) process, along with related dig and replace point repairs and included the following:

- 7,405 lf – 8”
- 1,517 lf – 10”
- 1,652 lf – 12”
- 2,192 lf – 15”
- 11 Service Line Dig Repairs
- 8 Main Line Dig Repairs
- 118 CIPP Lateral Repairs
- 2 CIPP Pipe Spot Repairs

Total construction costs were approximately \$1,340,000.

2023 Manhole Project – Project applied epoxy to 612 vertical feet of 77 manholes. Project costs totaled approximately \$190,000.

2024 Completed Project Listing

Video Inspection and Cleaning Contract – Calendar Year 2024 – This project involved the inspection, cleaning and root cutting of approximately 140,000 linear feet of 8” through 24” gravity sewer line.

Sewer main rehabilitation to reduce CSOs and SSOs by correcting I/I – (2023 Rehab Contract) – The Consent Judgment for JSA listed two of these projects within the Early Action Plan for the JSA. This project is in addition to those two that have been completed. The project involved rehabilitation utilizing the cured-in-place plastic (CIPP) process, along with related dig and replace point repairs and included the following:

- 7,405 lf – 8”
- 1,517 lf – 10”
- 1,652 lf – 12”
- 2,192 lf – 15”
- 11 Service Line Dig Repairs
- 8 Main Line Dig Repairs
- 118 CIPP Lateral Repairs
- 2 CIPP Pipe Spot Repairs

Total construction costs were approximately \$1,340,000.

2024 Manhole Project – Project applied epoxy to 735 vertical feet of 72 manholes. Project costs totaled approximately \$230,000.

Happy Hollow Pump Station Rehabilitation – The project converted the station from a flooded suction to a duplex submersible station with new plc controls and new valve vault with bypass connection. The refurbishment work was performed by JSA personnel and completed in 2024 with a total materials cost of approximately \$50,000.

**Paducah McCracken County Joint Sewer Agency
Collection System CIPP Lining Summary**

<u>Year</u>	Size (inches)										Total
	6	8	10	12	15	18	21	24	27	30	
2005	0	0	0	0	0	0	675	0	0	0	675
2006	0	6,744	1,012	1,635	0	0	0	0	0	0	9,391
2007	0	16,736	940	2,683	277	0	0	0	0	0	20,636
2008	0	10,917	741	274	0	0	0	0	0	0	11,932
2009	0	9,313	914	2,747	0	0	0	395	0	0	13,369
2010	981	28,657	2,500	0	0	0	340	0	0	0	32,478
2011	648	42,412	5,090	1,886	0	0	0	363	0	0	50,399
2012	585	26,441	2,594	122	0	0	0	283	0	0	30,025
2013	0	12,250	1,190	189	1,214	0	0	0	0	0	14,843
2014	346	11,655	1,808	744	0	0	0	0	0	0	14,553
2015	0	1,176	1,037	1,265	558	0	408	0	0	0	4,444
2016	0	6,145	2,315	726	0	0	0	2,996	211	1,659	14,052
2017	0	7,461	3,155	3,447	1,167	145	504	404	0	0	16,283
2018	0	10,301	2,533	3,798	789	0	0	0	0	0	17,421
2019	0	3,361	1,900	1,857	818	411	410	1,240	1,278	0	11,275
2020	198	7,863	5,583	3,130	0	462	0	0	0	0	17,236
2021	0	10,036	1,483	416	621	0	0	362	0	0	12,918
2022	125	13,919	0	418	0	0	0	0	0	0	14,462
2023	0	7,405	1,517	1,652	2,192	0	0	0	0	0	12,766
2024	242	8,988	2,778	510	809	0	0	0	0	0	13,327
Grand Total	3,125	241,780	39,090	27,499	8,445	1,018	2,337	6,043	1,489	1,659	332,485

