

APPENDIX H - FIGURE 1

CITY OF PATASKALA UTILITY STUDY

PROJECT RECOMMENDATIONS

SANITARY SEWER SYSTEM



Type	Location	Project Description	Length	Estimated Cost
R	WWTP	Current plans for WWTP rehabilitation	-	\$3,200,000
R	Existing West Side Trunk	Replace existing 15" Sanitary Sewer with 24" Sanitary Sewer from MH 297 to MH 187 along Main St., Poplar St., and Jefferson St. to meet capacity requirements.	4,100'	\$848,700
R	Linda and 3rd St.	Replace existing 8" Sanitary Sewer with 10" Sanitary Sewer from MH 285 to MH 297 along Linda Ave. from North End Dr. to Vine St. and along 3rd Ave. from Vine St. to Main St. to meet minimum slope requirements.	1,650'	\$199,300
R	Cedar Street	Replace existing 8" Sanitary Sewer with 10" Sanitary Sewer from MH 254 to MH 272 along Cedar and Front St. to Jefferson St. to meet minimum slope and capacity requirements.	1,800'	\$217,400
R	Wood Street / Mill Street	Replace existing 10" Sanitary Sewer with 15" Sanitary Sewer from MH 220 to MH 187 along Wood St. and Mill St. to meet minimum slope and capacity requirements.	1,200'	\$193,200
R	Muddy Fork at Creek Road Bridge	Repair pipe leak on south abutment and ensure considerations have been made for frost heaving. Ensure bottom of pipe is above the 50-year flood line	-	\$20,000
M	All Lift Stations	Ensure all lift stations are properly gated and/or secured.	-	\$50,000
R	Pat Haven Drive	Replace existing 8" Sanitary Sewer with 12" Sanitary Sewer from MH 416 @ Oakhaven Apartments to MH 399 to meet capacity requirements.	600'	\$89,700
R	Broad Street	Replace existing 10" Sanitary Sewer with 18" Sanitary Sewer from MH 399 to MH 729 along Broad St. from Pat Haven Drive to Main St. to meet capacity requirements.	650'	\$115,900
M	River Forest Lift Station	Remove old electrical items & raze structure housing control panel, Install new control panel and lockable wet well cover.	-	\$35,000
R	Manholes	Annual manhole rehabilitation, and finalize inspections. See report for details.	-	\$50,000
M	All Lift Stations	Ensure pumps cycle through lead-lag start-up order	-	\$10,000
R	Central Trunk	Provide new 24" Sanitary Sewer trunk line from MH 317 to MH 189 along Township Road to supplement flow.	4,300'	\$875,000
R	Creek Rd. Lift Station	Replace pump #3 with similar pump model as current pumps.	-	\$10,000
R	Mill Street	Replace existing 15" Sanitary Sewer with 30" Sanitary Sewer from MH 187 to MH 189 along Mill St. to meet future capacity requirements.	325'	\$95,000
R	Creek Road	Replace existing 24" Sanitary Sewer with 30" Sanitary Sewer from MH 189 to Creek Road L.S. to meet future capacity requirements.	1,500'	\$650,000
M	All lines	Annual contract/continue for sewer cleaning and televising, I/I mitigation	-	\$15,000



**APPENDIX H - FIGURE 1
CITY OF PATASKALA UTILITY STUDY
PROJECT RECOMMENDATIONS
SANITARY SEWER SYSTEM**



Type	Location	Project Description	Length	Estimated Cost
M	All Manholes	Annual contract/continue for manhole cleaning / vacuuming	-	\$15,000
M	All lines	Develop an annual schedule for relining and/or replacing aging sewers, and flow monitoring	-	\$200,000
M	All Manholes	Develop a schedule for relining and/or replacing aging manholes	-	\$150,000
A	JRS Site	Extend 12" Sanitary Sewer along Mill St. to JRS Site. Connect to MH 191.	12,000'	\$2,250,000
A	310 South	Extend 10" Sanitary Sewer along SR 310 to Sugar Mill Lift Station, including Lift Station modifications.	3,100'	\$474,400
A	310 North	Extend 10" Sanitary Sewer along SR 310 North to future commercial development. Connect to MH 729 near Broad St. / SR 310 intersection.	3,500'	\$499,000
A	WWTP	Increase in treatment capacity to 2.5 - 3.0 MGD as development warrants	-	\$6,250,000

Abbreviations

R	Restorative	High Risk
M	Maintenance	Moderate Risk
A	Anticipatory	Low Risk

**APPENDIX H - FIGURE 2
 CITY OF PATASKALA UTILITY STUDY
 PROJECT RECOMMENDATIONS
 WATER SYSTEM**



Type	Location	Project Description	Length	Estimated Cost
R	Cedar Street	Increase size of water line in Cedar Street to 8" to support fire flow	650'	\$59,800
R	Creek Road	Increase size of distribution line to 8" line along Creek Rd. from transmission main to River Forest Rd to remove size bottleneck	2,600'	\$239,200
R	WWTP Entrance Drive	Increase size of distribution line to 8" along the WWTP entrance drive to remove size bottleneck	300'	\$27,600
R	WTP #1 & #2 Operation	Further investigation, SCADA revisions operation of the plants as controlled by the levels of the Headleys Mill and Southeast Water Towers.	-	\$7,500
R	Booster Station	New 15" transmission main from SE Water Tower to booster station for secondary connection point to improve SE Tower water circulation and use	6,700'	\$817,400
R	Well #6	Repair well so that it is operational	-	\$17,000
R	Beechwood Trails	New 310 North Extension for secondary connection to Beechwood Trails tanks. This is a 50% split project with SWLCWSD	6,100'	\$600,000
R	Beechwood Trails, SR310/RR tracks	Water line replacement and new service saddles in heavy maintenance areas (annual effort)	-	\$75,000
R	310 South	New 310 South Extension for emergency connection to SWL. This is a 50% split project with SWLCWSD	500'	\$70,000
M	Beechwood Trails Water Tower	Full inspection and rehabilitation of interior and exterior	-	\$150,000
M	Headleys Mill Water Tower	Full inspection and rehabilitation of interior and exterior	-	\$150,000
A	Monitoring Wells	Establish at least 3 monitoring wells to monitor ground water levels.	-	\$50,000
M	Entire Water System	Develop/continue an annual program for replacement of aging pipes, valves and hydrants.	-	\$150,000
M	Entire Water System	Develop/continue and implement an annual flushing schedule with the Western Licking Joint Fire District.	-	\$10,000
M	Water Towers	Establish contract for annual cathodic protection inspection and full inspection of towers every five years.	-	\$10,000
M	Production Wells	Establish/continue contract for full well cleaning, inspection and testing every five years.	-	\$30,000

**APPENDIX H - FIGURE 2
 CITY OF PATASKALA UTILITY STUDY
 PROJECT RECOMMENDATIONS
 WATER SYSTEM**



Type	Location	Project Description	Length	Estimated Cost
M	Booster Station	Establish/continue contract for full pump inspection and rehabilitation every five years.	-	\$5,000
R	All 4" lines	Increase minimum size of all lines to 6" to be in compliance with 10 state standards. (To be done by separate projects)	7,000'	\$499,100
R	Vine Street	New 8" water main to replace existing lines from Broad St. to Cedar St.	1,665'	\$114,885
R	Jefferson Street	New 8" water main to replace existing line from Depot St. to Mill St.	1,500'	\$103,500
R	Ravines at Hazelwood	New 10" line extension along Hazelwood to connect to proposed 310 North extension. An additional PRV will also need to be installed.	500'	\$65,000
A	West Side	New 12" transmission main from WTP #1 to Broad Street for increased capacity.	4,800'	\$546,500
A	WTP #2	Double capacity output of plant and drill two new wells. (Plant already has floor space for addition and two new wells have been placed).	-	\$2,900,000
A	West Side (JRS)	New 12" transmission main along Mill Street to JRS Site.	9,600'	\$1,093,000
A	West Side (JRS)	Connect to and/or purchase SWL line along Broad street to existing west side terminus in front of Conine Village. Minimum of 12" in size. New PRV and/or master meter at connection.	2,000'	\$228,000
A	West Side (JRS)	New 0.50 MG Storage Tank located just west of Downtown Pataskala on Mill Street. New PRV to proposed west side transmission main.	-	\$1,200,000
R	310 North	Increase size of line from 8" to 10" line from 670' south of Hillview Blvd. north to Hollow Rd. to improve future scenarios after 310 North extension	4,600'	\$502,500
M	Southeast Water Tower	Full inspection and rehabilitation of interior and exterior	-	\$150,000
M	WTP #2	Repair service drive into the treatment plant.	-	\$10,000
M	WTP #1	Miscellaneous repair and painting of equipment. See report for full details.	-	\$50,000
A	New Well Field	Conduct further study and testing for additional well field site per Hydrogeological report.	-	\$75,000

Abbreviations

R	Restorative	High Risk
M	Maintenance	Moderate Risk
A	Anticipatory	Low Risk

APPENDIX H - FIGURE 3

CITY OF PATASKALA UTILITY STUDY PROJECT RECOMMENDATIONS STORM SEWER SYSTEM



Type	Location	Project Description	Length	Estimated Cost
R	Dixon Road	Drainage Improvements per 2008 study	-	\$40,000
R	Halloon Lane	Drainage Improvements per 2008 study	-	\$383,000
R	Connors Ave	Drainage Improvements per 2008 study	-	\$100,000
R	AEP Site vicinity	Drainage Improvements per 2008 study	-	\$50,000
R	All Outfalls	Further investigation of known polluted outfalls and removal of these outfalls.	-	\$15,000
M	Entire System	Develop an annual / ongoing schedule for monitoring all storm sewer structures for deposits.	-	\$10,000
M	Bridges, Culverts, Ditches	Develop an annual schedule for inspecting all bridges, culverts and roadside ditches for blockages.	-	\$5,000
M	Retention / Detention Basins	Develop an annual schedule for inspecting all basins for inlet/outlet blockages and heavy depositing.	-	\$5,000
M	All lines	Develop an annual schedule for relining and/or replacing aging storm sewers, or ditch improvements from results of annual monitoring.	-	\$150,000
M	All Structures	Develop an annual schedule for relining and/or replacing aging storm structures from results of annual monitoring.	-	\$150,000
M	SWMP	NPDES Phase II Compliance/Continue achieving goals as laid out in the 2009 Stormwater Management Plan.	-	\$10,000
M	All lines	Annual contract for storm sewer and structure cleaning and televising	-	\$20,000
M	All roadside ditches	Annual contract for ditch cleaning	-	\$20,000
A	Township Road Bridge	Monitor and evaluate bridge condition. Once replacement is necessary, ensure 100-year storm event hydraulics are met by new bridge design.	-	\$500,000
A	McIntosh Road Culvert	Monitor and evaluate culvert condition. Once replacement is necessary, ensure 100-year storm event hydraulics are met by new bridge design.	-	\$250,000

Abbreviations

R	Restorative	High Risk
M	Maintenance	Moderate Risk
A	Anticipatory	Low Risk

APPENDIX H - FIGURE 4
Threat Matrix

