



Wastewater CIP Workshop

April 3, 2024

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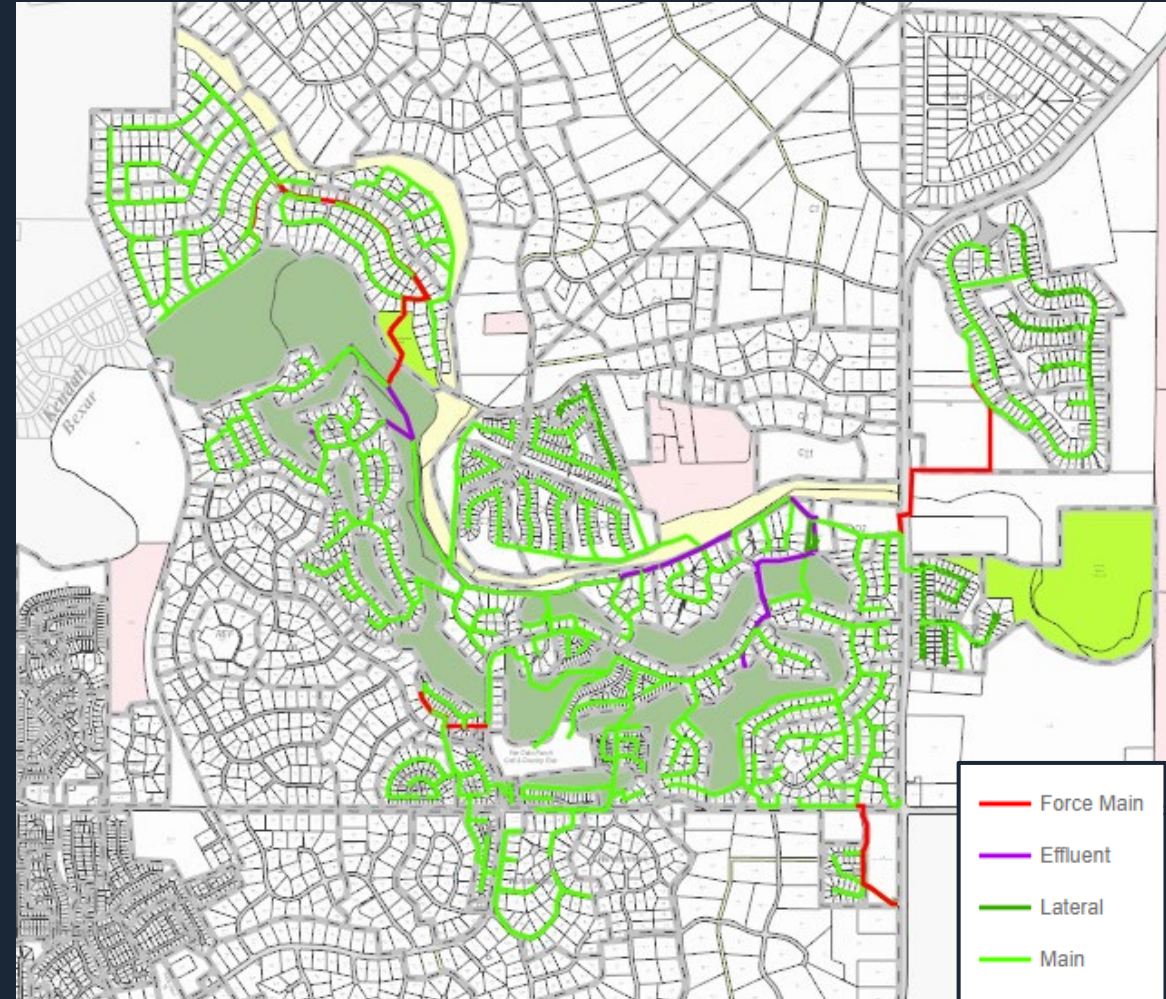
Agenda

- Overview
- Projects Completed
- Approved 5-year Wastewater CIP
 - WWTP Phase 1 Expansion
 - Install Sewer Line and Decommission The Falls Lift Station
 - Improvements at School Lift Station
 - Improvements at Deer Meadows Lift Station No. 1
 - Improvements at Deer Meadows Lift Station No. 2
- Other Projects for Consideration
 - Cojak Circle Manhole and Sewer Line Upgrade
- Discussion



Overview

- Much of the City's sewer infrastructure was originally built in the 1970s. It now includes:
 - Wastewater Treatment Plant (W/WTP)
 - 34.5 miles of gravity mains
 - 2.5 miles of force mains
 - 2.8 miles of effluent mains
 - 7 lift stations
- Currently serves 2024 wastewater customers



Project Completed – Dewatering Press



Approved 5-Year Wastewater CIP



	2023	2024	2025	2026	2027	2028	Total
Wastewater Treatment Plant Phase 1 Expansion (2S)	77,985	917,253	1,714,987	2,737,530	-	-	5,447,755
Install Sewer Line and Decommission Falls Lift Station (1S)	-	-	-	113,521	811,763	-	925,284
Improvements at School Lift Station (8R)	-	-	-	303,470	-	-	303,470
Improvements at Deer Meadow Lift Stations No.1 (10R)	-	-	-	-	179,487	-	179,487
Improvements at Deer Meadow Lift Stations No.2 (9R)	-	-	-	-	179,487	-	179,487
Total Wastewater	77,985	917,253	1,714,987	3,154,521	1,170,736	-	7,035,483



Cash Funded



Requires Debt Funding

Past Ranking/Scoring Schemes



“Must Do” Projects

- Regulatory driven
- System resiliency significantly improved based on current operations
- Improvements to infrastructure with known high O&M costs

“Should Do” Projects

- Added system resiliency
- Reduction in O&M costs
- Potential for regulatory deficiencies

“Nice to Do” Projects

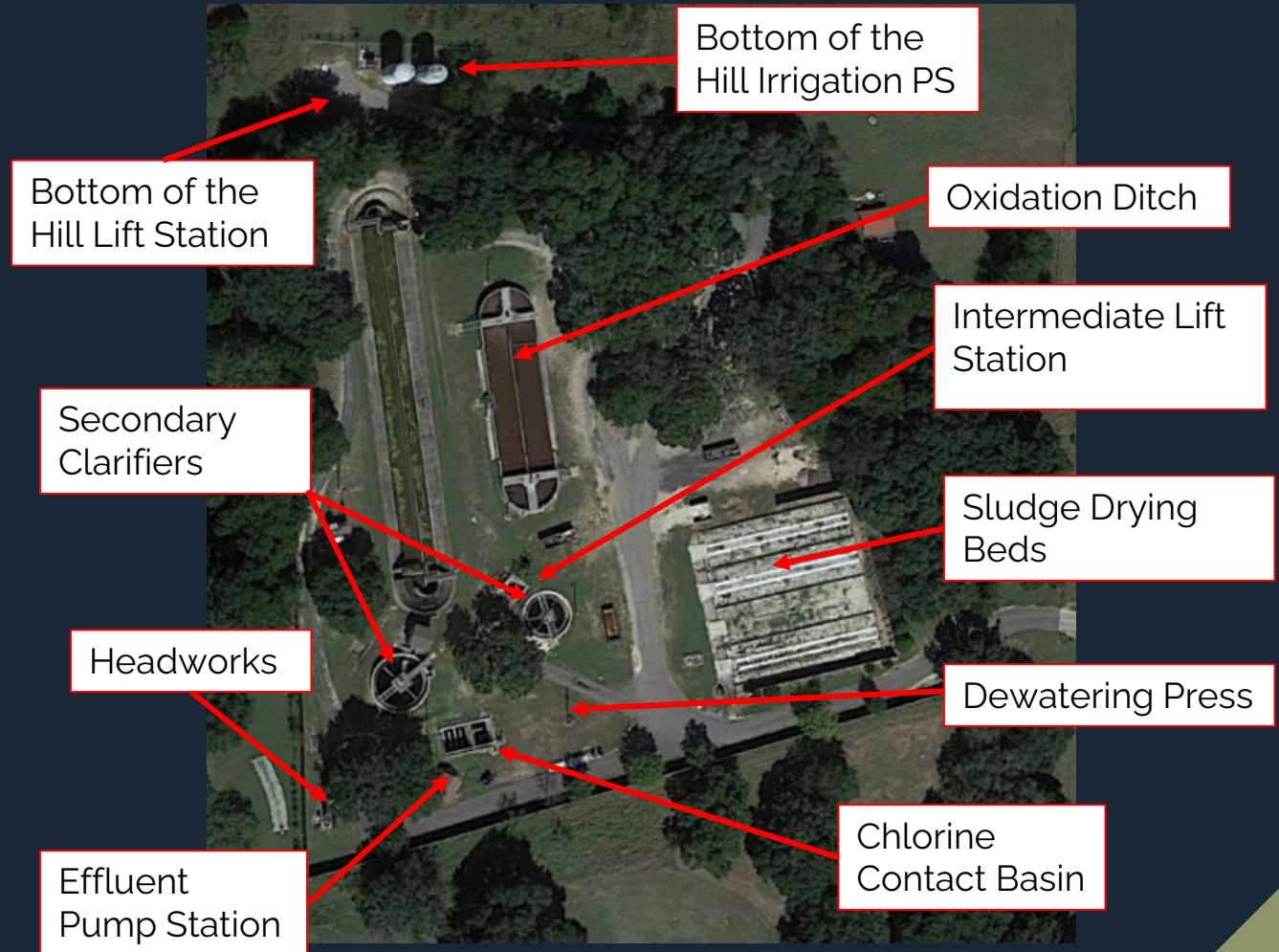
- Minor O&M corrections
- Minor system resiliency improvements
- Growth related projects

Criteria	Weight	Maximum Score	Weighted Score
Regulatory Driver	3	5	15
Contractual Agreement	2	5	10
Health and Safety Impact	3	5	15
Operating and Maintenance Cost	2	5	10
Resiliency	2	5	10
Growth and Development	1	5	5
City Priority	1	5	5
Total Score Possible			70

WWTP Phase 1 Expansion



- Wastewater Treatment Plant
 - Permitted Capacity: 0.5 MGD
 - Ave. Daily Flow: 0.27 MGD
 - Projected Build-out: 0.47 MGD
 - Treated effluent discharged to golf course storage ponds and used for irrigation purposes
 - Building setback of 150 ft. exists on surrounding properties to meet TCEQ buffer requirements.

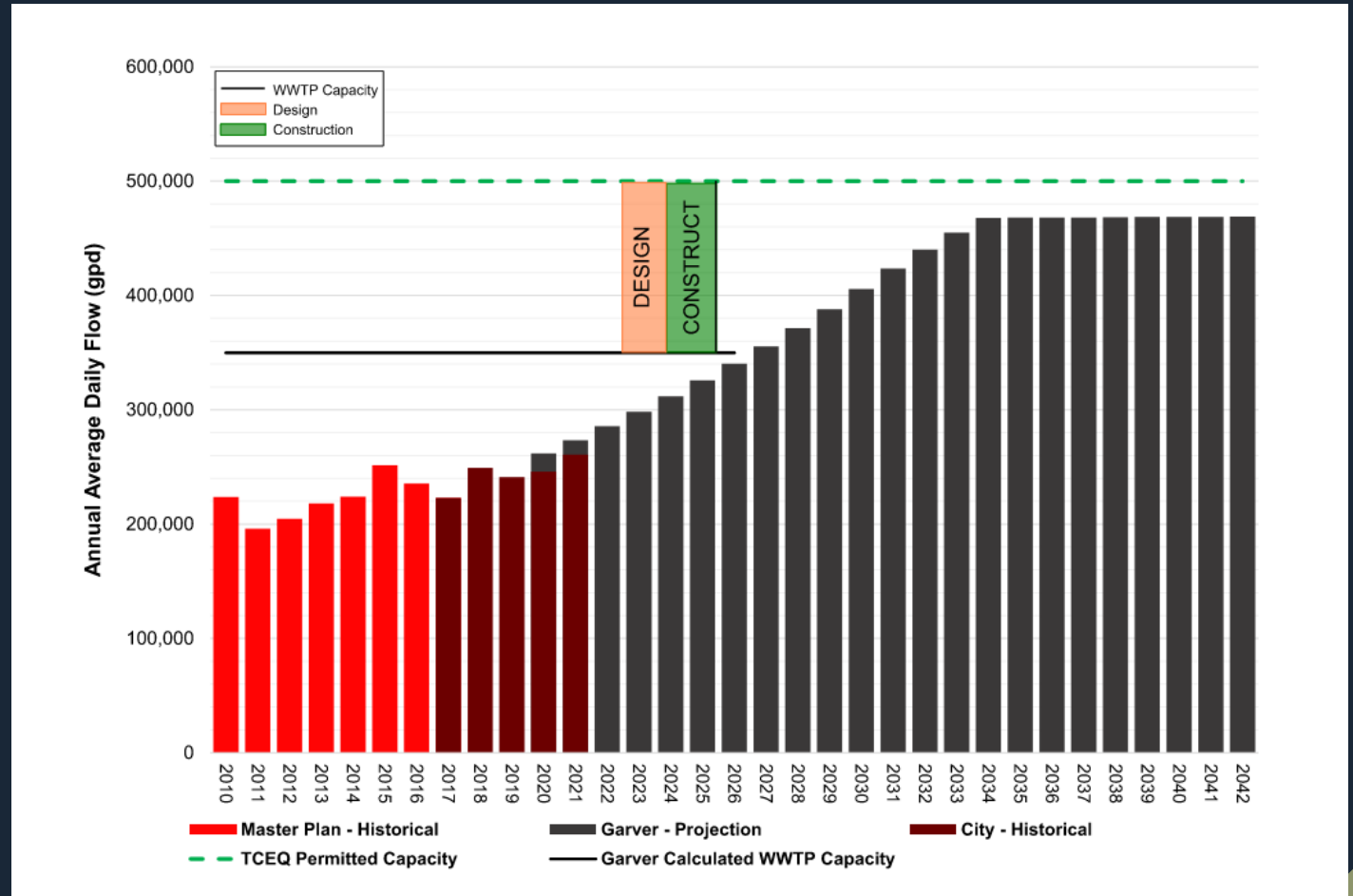


WWTP Phase 1 Expansion (cont.)



Expansion Study Projections

- Ultimate build-out projected to occur in 2042 vice 2033
- Ultimate capacity projection decreased from 0.56MGD to 0.47 MGD
- Current capacity limited to 0.35 MGD due to treatment process components
- Design for Phase 1 Expansion underway
- Construction for Phase 1 needs to start in the 2025-26 timeframe



WWTP Phase 1 Expansion (cont.)



Phase 1 (Immediate Needs): \$5.4 million

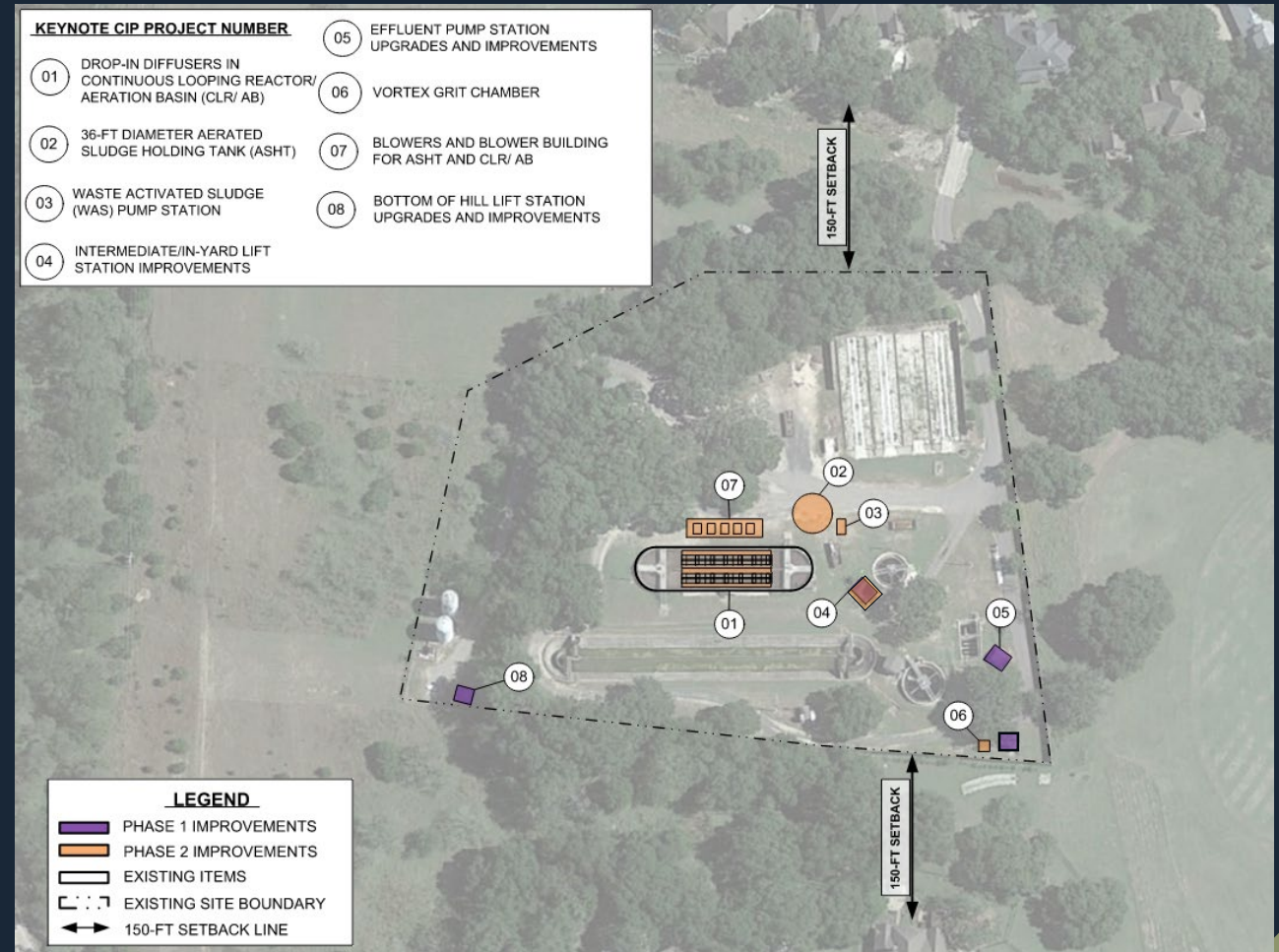
- Effluent Pump Station and Conveyance Upgrade
- Bottom of the Hill LS Improvements
- Headworks Odor Control Improvements

Phase 2 (Future Needs): \$11.2 million

- Oxidation Ditch to Aeration Basin Retrofit
- Aerated Sludge Holding Tank
- Headworks Grit Removal
- Intermediate/In-Yard LS Improvements

Prioritization Score: 33

“Must Do” Project (Regulatory)



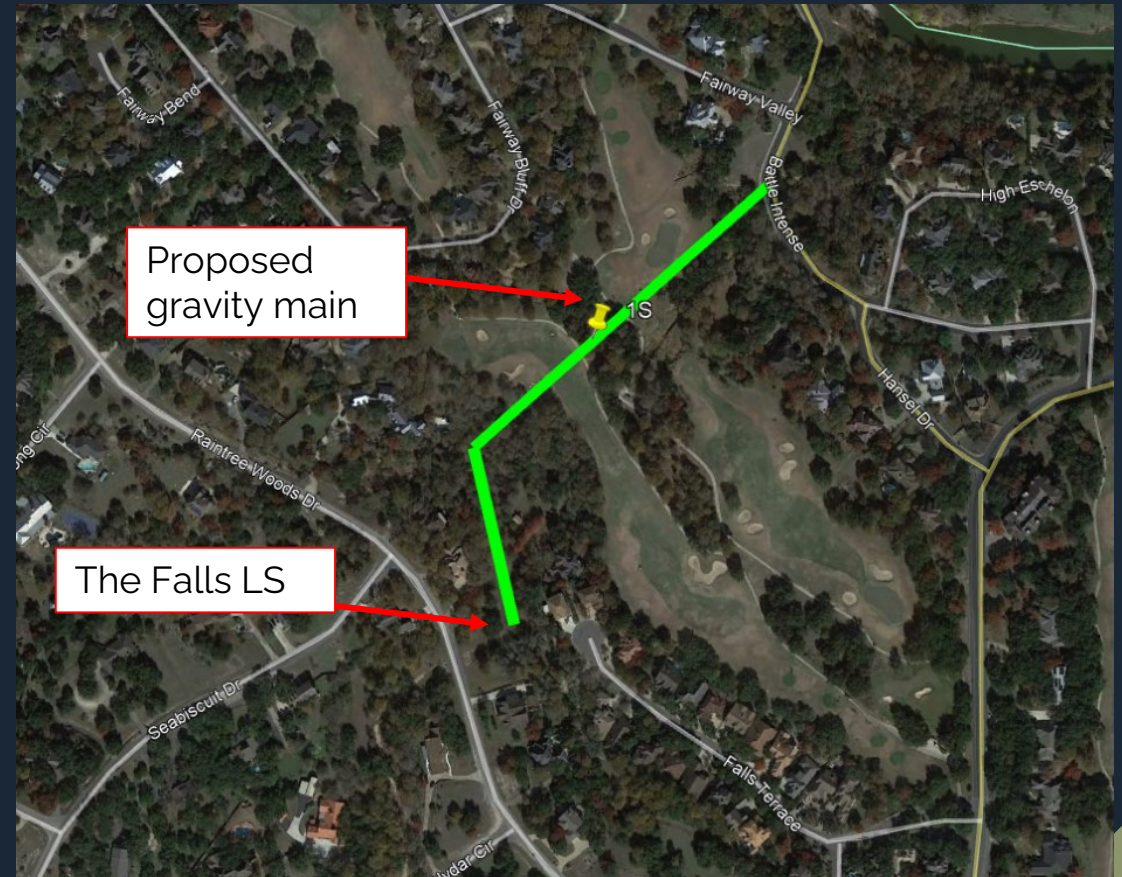
Install Sewer Line and Decommission Falls Lift Station



- The Falls Lift Station (LS) is in poor condition and frequently requires e-pump deployment when pumps/pipes fail.
- Electrical components have been damaged during storm events since LS located in a floodplain.
- Project installs 1,730 linear ft. of gravity main to replace the LS.
- **Total Estimated Cost = \$925,284**

Prioritization Score: 33

“Should Do” Project (Resiliency and O&M reduction)



Improvements at School Lift Station



- Original project adds SCADA to receive alarm notifications, control pumps remotely, and constructs e-pump access port
- Ongoing repairs and incremental improvements will largely accomplish this.
- **Total Estimated Cost = \$303,470**

Prioritization Score: 19
“Nice to Do” Project (Resiliency)



Improvements at Deer Meadows Lift Station No. 1 and 2



- Original project adds SCADA to receive alarm notifications, control pumps remotely, and constructs e-pump access port
- Ongoing repairs and incremental improvements will largely accomplish this.
- **Total Estimated Cost = \$179,487 each**

Prioritization Score: 19
“Nice to Do” Project (Resiliency)



Other Projects for Consideration



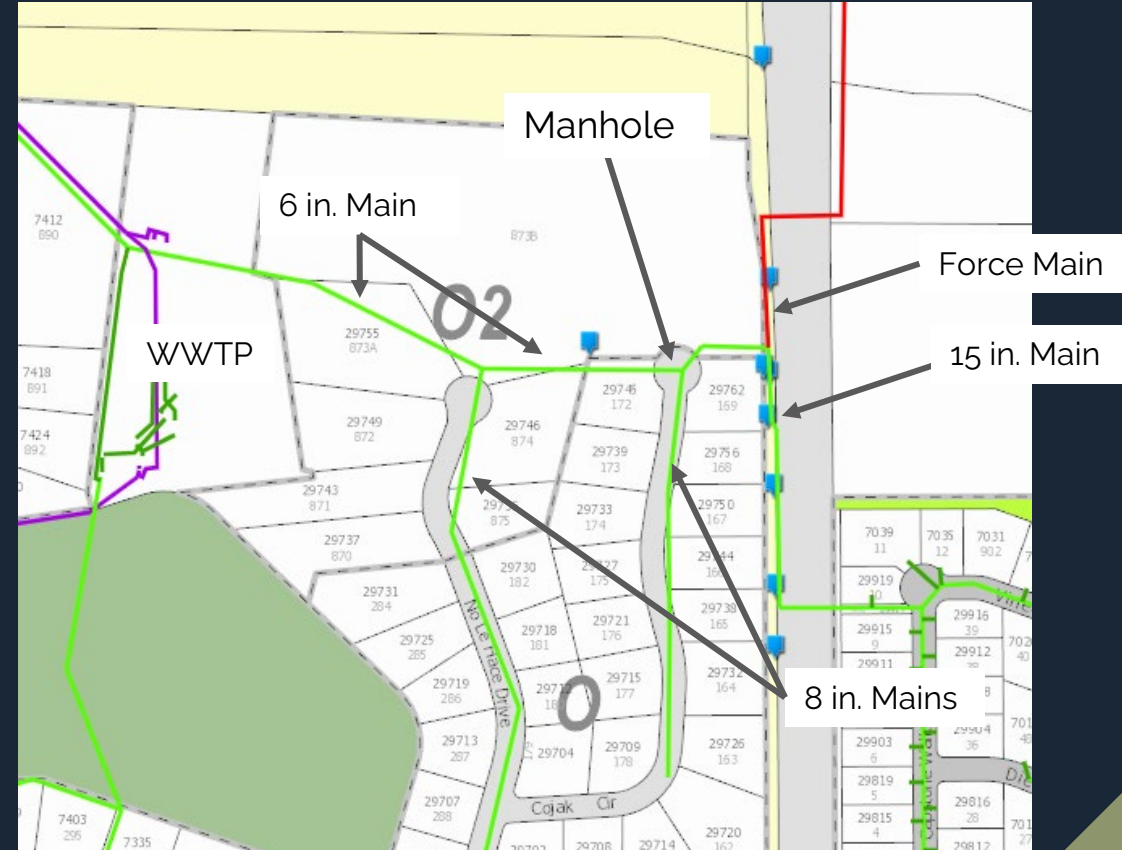
Other Wastewater Projects	2023	2024	2025	2026	2027	2028	Total
Cojak Circle Manhole and Sewer Upgrade	-	-	1,000,000	-	-	-	-
Total Other Wastewater	-	-	1,000,000	-	-	-	1,000,000

Cojak Circle Manhole and Sewer Upgrade



- Project upgrades Cojak Circle manhole and 1200 linear feet of 6 in. sewer line which is undersized.
- Flow from Arbors, Setterfeld, No Le Hace and Cojak Circle cause backups and high levels in manhole.
- Ongoing construction in the Arbors will exacerbate the issue, may result in spills during peak flow events.
- **Total Estimated Cost = \$1,000,000**

Prioritization Score: New project
“Must Do” Project (Resiliency, Health and Safety)





Discussion

- Do you agree with the proposed projects?
 - Are there any projects to add or remove?
 - Is the timing logical?
 - Are the cost estimates reasonable?
 - Do you need additional info or analysis?
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- Are you comfortable recommending these projects be included in the upcoming 2024 bond program?