



# **Chapter 7**

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# **Capital Improvement Plan**

## Chapter 7 – Capital Improvement Plan

### 7.1 CIP Overview

The Capital Improvement Plan (CIP) prioritizes the improvements that are necessary in the near term to relieve capacity issues, replace deteriorated segments of the collection system, and implement improvements that will be needed as infill occurs in the City and as the wastewater service area is expanded to the future boundary. The CIP is organized into the following categories:

- Capacity Projects – Required to address insufficient hydraulic capacity of existing pipes in the near future.
- System Expansion – Required to serve new areas within the UGA.
- Collection System Improvements – Required to address components of the collection system needing an upgrade.
- Rehabilitation/Replacement – Required to maintain the integrity of the existing system.
- WWTP Improvements – As identified by the Plant Staff.
- WWTP Rehabilitation/Replacement – As identified by Plant Staff.
- Developer Driven Growth Projects – To serve growth both inside and outside the UGA.

**Figure A14** shows the location and type of each project in the CIP. **Appendix I** contains detailed opinions of probable cost and a CIP summary/figure for each project. All capital costs are in 2015 dollars. The opinions of probable cost are for budgetary purposes only and further refinement of the cost opinions will be required during subsequent preliminary engineering and design phases for each CIP project.

The timeframe for implementing CIP projects not related to rehabilitation/replacement will ultimately depend on realized growth and non-residential development. The timeframes for the CIP projects shown on **Table 7-1** are based on review with City staff.



## 7.2 CIP Projects

Table 7-1 includes a summary of all identified projects in the CIP capital cost and recommended timeframe for completion.

Table 7-1 – CIP Projects

ID	Description/System Name	Recommend Action	Timeframe and Capital Cost										With Growth <sup>(1)</sup>
			2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
<b>Capacity Projects – Funded by Connection Fees</b>													
CP.1	Leslie Rd Trunk Replacement	Replace 18-inch bottleneck section											\$329,000
CP.2	Keene Rd Collector Replacement	Replace 10-inch bottleneck section							\$329,000				
CP.3	Upper North Interceptor Improvements	New lift station and piping to address neighborhood surcharging										\$2,238,000	
CP.4	Bellerive LS Pump Upgrade & Downstream Improvements	New lift station pumps and downstream pipe replacement to address surcharging										\$1,785,000	
<b>System Expansion – Funded by Connection Fees</b>													
SE.1	Leslie Interceptor Extension	Collection system expansion to extend utility service	\$800,000										
<b>Collection System Improvements – Funded by a split of Connection Fees and Rates</b>													
CS.1	Montana Lift Station Standby Generator	Generator installation to operate lift station during power outages	\$40,000										
CS.2	Columbia Lift Station Standby Generator	Generator installation to operate lift station during power outages	\$25,000										
CS.3	Waterfront Lift Station Replacement	Replace deficient lift station			\$608,000								
<b>Rehabilitation and Replacement Projects – Funded by Rates</b>													
RR.1	Renewals and Replacement	10-yr rehabilitation and replacement program based on Condition Assessment	\$250,000	\$258,000	\$1,599,000 <sup>(2)</sup>	\$1,652,000 <sup>(2)</sup>	\$1,705,000 <sup>(2)</sup>	\$1,761,000	\$1,818,000	\$1,878,000	\$1,939,000	\$2,002,000	



# CAPITAL IMPROVEMENT PLAN

ID	Description/System Name	Recommend Action	Timeframe and Capital Cost										With Growth <sup>(1)</sup>
			2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
RR.2	Annual Street Overlay Areas	Annual repair and replacement of sewer deficiencies in areas scheduled for re-paving	\$100,000	\$103,000	\$107,000	\$110,000	\$114,000	\$117,000	\$121,000	\$125,000	\$129,000	\$133,000	
RR.3	Infiltration and Inflow Study							\$200,000					
<b>WWTP Improvements – Funded by Rates/Connection Fees</b>													
WWTP. 1	Influent Upgrades	Influent Upgrades			\$2,133,000								
WWTP. 2	Engineering Report	Re-Rating Study for Design Criteria						\$411,000					
<b>WWTP Rehabilitation and Replacement – Funded by Rates</b>													
WWTP. RR.1	WWTP Renewals and Replacements	General rehabilitation and replacement				\$551,000	\$568,000	\$587,000	\$606,000	\$626,000	\$646,000	\$667,000	
WWTP. RR.2	Plant Wide HVAC Improvements	System improvements to current HVAC equipment	\$290,000										
WWTP. RR.3	Digester Building MCC	Replace obsolete and failing motor control center hardware	\$80,000										
WWTP. RR.4	Primary Clarifier #2 Coating	Recoat primary clarifier #2 to protect from corrosion		\$165,000									
WWTP. RR.5	Digester #1 Tank Coating	Recoat digester #1 tank		\$330,000									
WWTP. RR.6	Secondary Clarifier #2 Coating	Recoat secondary clarifier #2 to protect from corrosion		\$227,000									
WWTP. RR.7	Clarifier Gear Drive Replacements	Replace obsolete and failing gear drive on the clarifier			\$325,000								
WWTP. RR.8	Plant Pump and Piping Replacement	Annual pump and piping maintenance			\$80,000								
<b>Annual Capital Improvement Plan Total</b>													
<b>Yearly Totals</b>			\$1,585,000	\$1,083,000	\$4,852,000	\$2,313,000	\$2,387,000	\$2,876,000	\$3,074,000	\$2,629,000	\$2,714,000	\$6,825,000	

<sup>(1)</sup> All capital costs are in 2015 dollars.

<sup>(2)</sup> \$500,000 will be allocated to CCTV and Pipe Condition Rating



Table 7-2 – Developer Driven Growth Projects

ID	Description/System Name	Recommend Action	Timeframe and Capital Cost										With Growth <sup>(1)</sup>
			2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
<b>Developer Driven Growth Projects – Projects to serve growth both inside and outside the UGA</b>													
DD.1	Country Ridge Downstream Improvements	Upgrade downstream pipe to provide for future lift station upgrades and additional pumping capacity											\$4,070,000
DD.2	East Badger South Lift Station	Construction required for development within the East Badger South Basin – SRSR CIP #1 (AHBL est.)											\$5,500,000
DD.3	West Badger South Lift Station	Construction required for build-out of West Badger South and East Badger South											\$3,180,000
DD.4	Horn Rapids Interceptor Extension	From Kingsgate Sports Complex to Village Pkwy/Construction as required with growth											\$450,000
DD.5	SR 240 Interceptor	From Village Pkwy to Horn Rapids Rd/Construction as required with growth											\$3,214,000
DD.6	600 Area (South) Interceptor	From Battelle Blvd to Horn Rapids Rd & North/Construction as required with growth											\$3,467,000
<b>Developer Driven Growth Project Total</b>													
													\$19,881,000

<sup>(1)</sup> All capital costs are in 2015 dollars.



### 7.3 Budgeting CIP Projects

The costs associated with each CIP project were grouped by time and are summarized in **Table 7-3**. Refer to **Appendix I** for a detailed breakdown of each project. The timeframes listed are intended to begin in Calendar Year 2016. The additional CIP costs identified herein for lift station replacement/rehabilitation should be reviewed and integrated as budget permits. If this work is not completed in the designated year timeframe, the work should be carried forward into the following year timeframe and the budgets revised accordingly.

**Table 7-3 – CIP Cost Summary**

<b>CIP Project Timeframe</b>	<b>10-YR Capital Cost</b>
0 – 6 Years	\$15,096,000
6 – 10 Years	\$15,242,000
As Needed with Growth <sup>(1)</sup>	\$20,210,000
<b>Totals</b>	<b>\$50,548,000</b>