



### **Mission Statement**

*To provide exemplary experiences, services & spaces that create opportunities for everyone to learn, engage and thrive.*

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## **YANKTON BOARD OF CITY COMMISSIONERS**

Work Session Meeting beginning at 6:00 P.M.

**Monday, May 23, 2022**

**City of Yankton Community Meeting Room**

Located at the Career Manufacturing Technical Education Academy formerly known as Technical Education Center • **1200 W. 21<sup>st</sup> Street • Room 114**

**If you would like to watch the City Commission meeting you can do so by accessing the City of Yankton's YouTube Live Channel.**

<https://www.youtube.com/channel/UCD1a1hf1dIkiLVSXnmdRQg/live>

Rebroadcast Schedule: Tuesday @ 7:30pm, on channels 3 & 45

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- 1. Roll Call**
- 2. Public Appearances**
- 3. Sewer Rates-Waste Water Treatment Plant and ARPA Projects**
- 4. Other Business**

*Other business is a time for City Commissioners to address the commission regarding matters not on the agenda. These items will be deliberated by the governing body and will not be acted upon at this time. Items mentioned may be added to a future City Commission meeting or work session for deliberation or action.*

- 5. Adjourn the Work Session of May 23, 2022**



# Wastewater and Water Improvements



# Introductions

Amy Leon - City Manager

Kyle Goodmanson - Environmental Services Director

Al Viereck - Finance Officer

Tanner Hanson - Wastewater Treatment Plant Superintendent

Donnie Robinson - Water Distribution/Wastewater Collection  
Superintendent

DelRon Peters - HDR

**Why Invest Now?**

# What We Do

**Collect and Treat 1.7 million gallons per day  
620 million gallons per year wastewater**

**Remove 97% Biological Oxygen Demand(BOD)**

**Remove 96% of Total Suspended Solids(TSS)**

**Disinfection and Pathogen Reduction**

# Why Collect and Treat Wastewater?

**Quality of Life**

**Convenience**

**Public Health**

**Protect Our Environment**

# Investing in our Wastewater Treatment Plant (WWTP)

## **AGING INFRASTRUCTURE**

Our treatment facility is 10+ years past its design life

WWTP has portions of the plant that are between 30 and 60 years old with equipment past useful service life.

## **AVAILABLE FUNDING**

Current water infrastructure provides opportunity for funding assistance

Outside funding minimizes impacts to rate payers.

## **FUTURE REGULATIONS**

Water quality regulations will be stronger in the future

This plan prepares the facility for future regulations.

## **GROWING CUSTOMER BASE**

2,700 added service area population are anticipated by 2046

New grit removal and clarifier needed for reliability and capacity. Digester boiler addition needed for code requirements.

## **Aging Conditions and Risk of Failure**

- The WWTP was originally constructed in 1964 with significant plant upgrades in the late 1970s, late 1980s, and early 2000s.
- Portions of the plant are 30-57 years old and are unreliable for maintaining treatment.
- The grit removal facilities lack sufficient capacity.
- There is currently no means for taking the single large clarifier off-line and continuing to meet permit requirements.
- Majority of process equipment has reached the end of useful service life and needs to be replaced.
- The boilers are in a space adjacent to digester gas storage and need to be relocated.
- Current lead times increase risk related to failures.



# PLANNING FOR THE NEXT 20 YEARS

- 17% increase in Service Population

Year	Population
2019	15,235
2026	16,068
2031	16,550
2041	17,543
2046	17,964
2046 w/Regionalization	19,964

# Capitalize on Federal Funding

WWTP - Low interest loan, 20 years at 2% \$23,318,450.00

America Rescue Plan Funds **Grant \$16,681,550.00**

Consolidated Water Facilities Construction **Grant \$2,000,000.00**

Wastewater Collection- Low interest loan, 20 years at 2% \$7,200,000.00

Water Distribution- Low interest loan, 30 years at 1.875% \$8,202,000.00

Totals- Grant-**\$18,681,500.00**      Loan-\$38,720,450.00

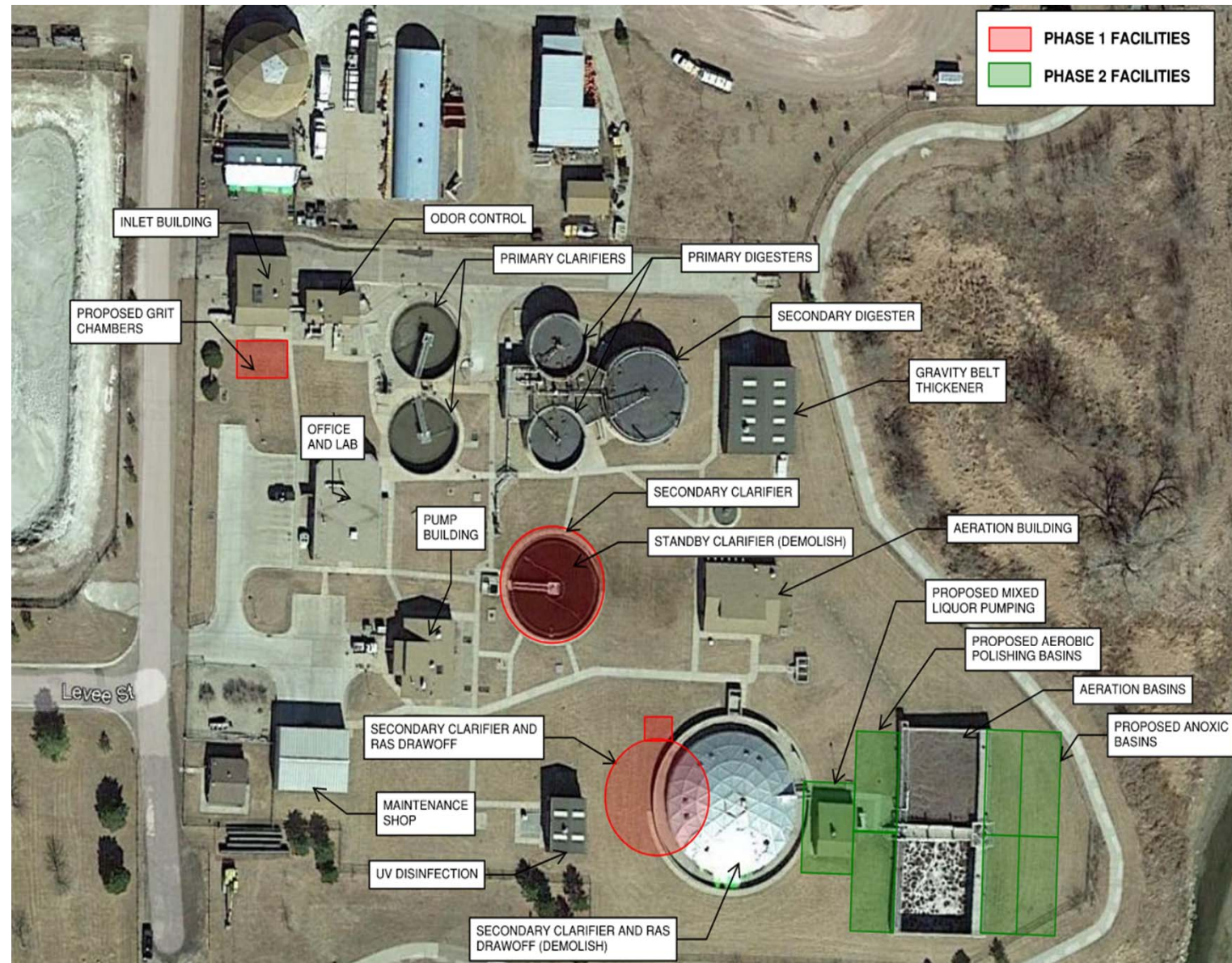
# Preparing our WWTP for the Future

## Phase 1

- New Grit Removal
- Two (2) New Secondary Clarifiers
- New UV Equipment
- Install Digester Mixing & new Covers
- Replace Outdated Equipment
- Replace piping and valves
- Improve Automation & Process Control
- HVAC and Electrical replacement
- Architectural and Sidewalk repairs
- Safety Improvements
- Redundancy & Resiliency

## Phase 2 (Nutrient Removal)

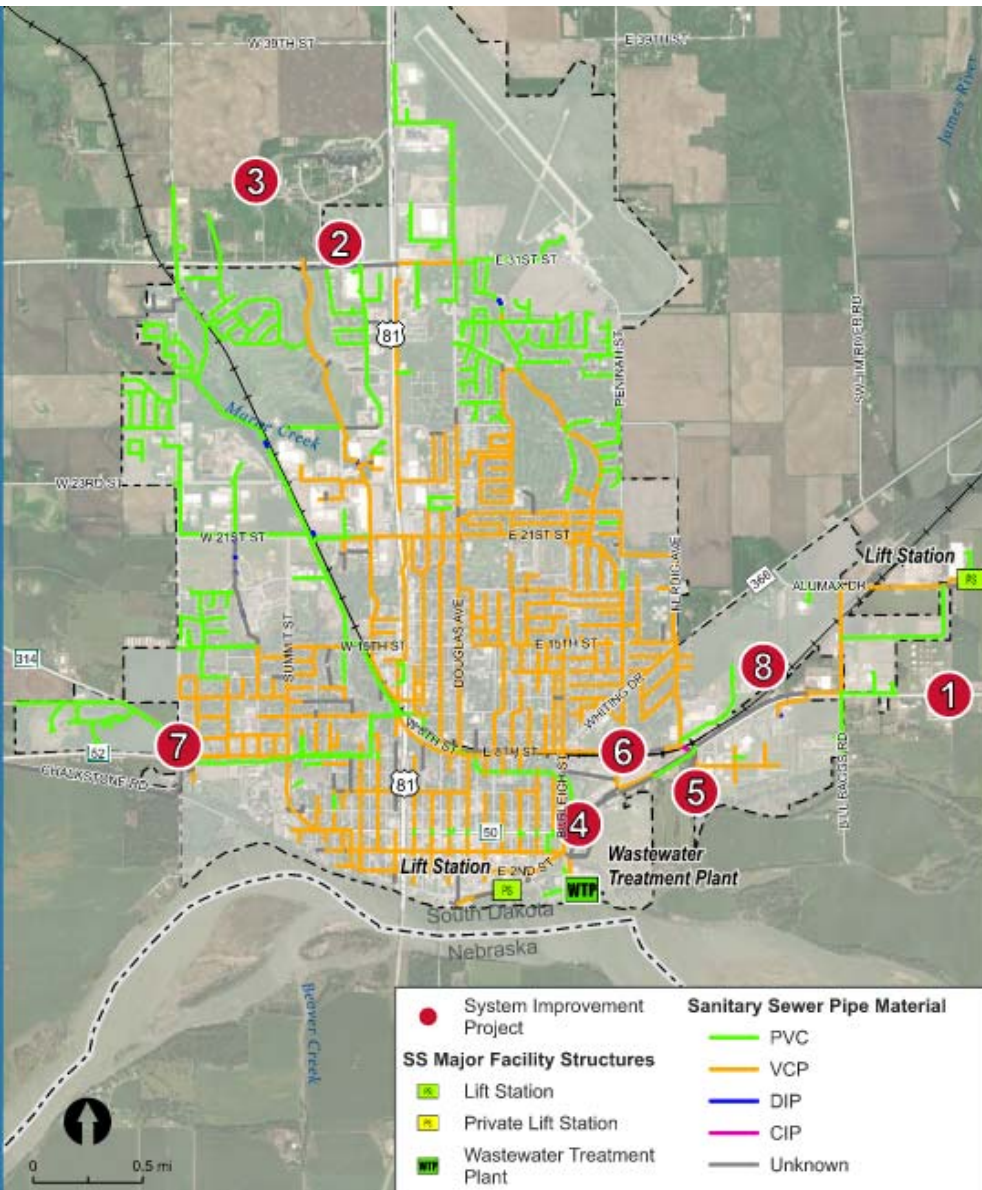
- Two (2) New Anoxic Basins
- Two (2) New Aerobic Polishing Basins
- Mixed Liquor Recycle Pump Station

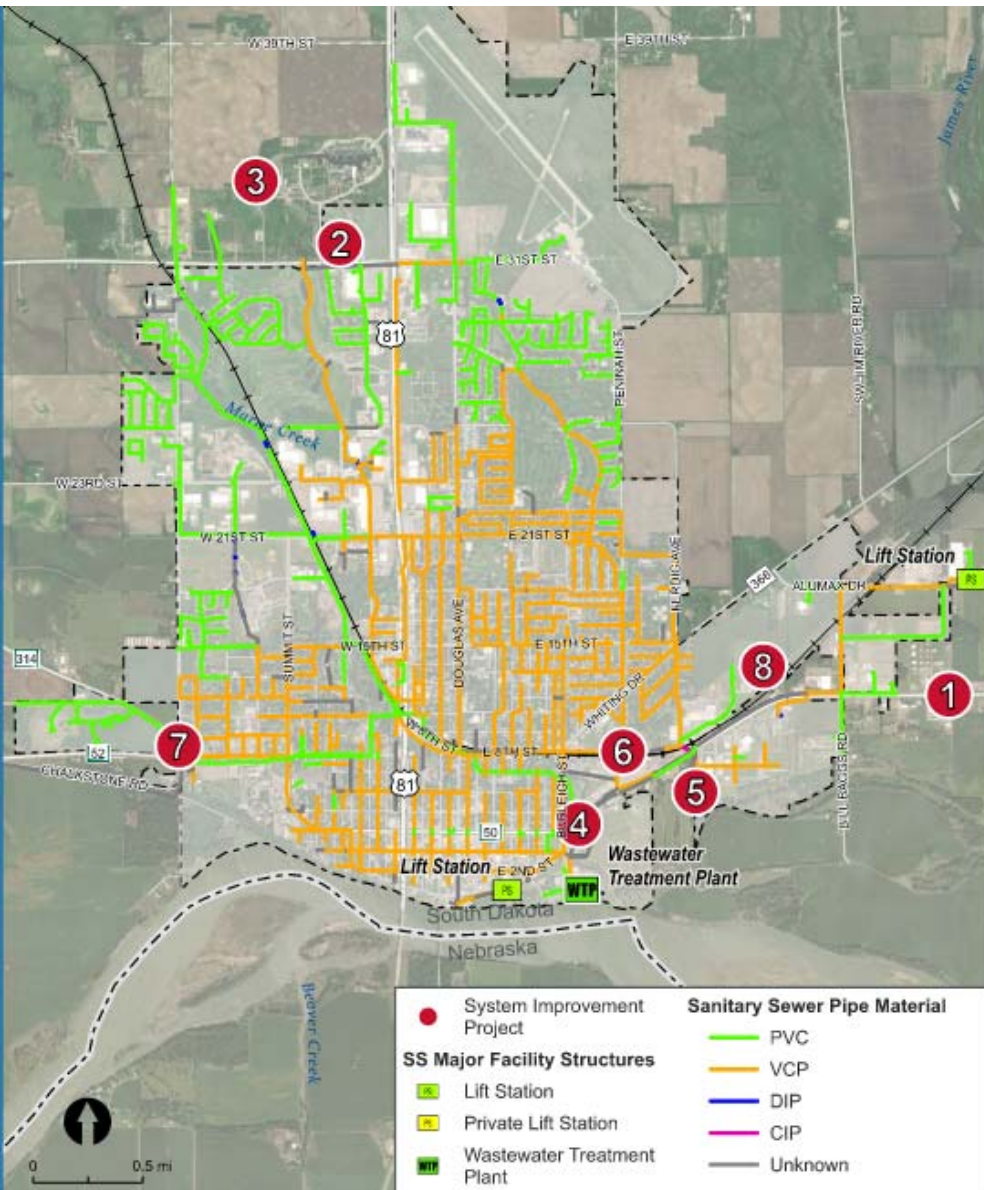




# Wastewater Collection System Improvements

1. East Highway 50 Extension - \$700,580
2. HSC/Soccer Complex - \$120,150
3. Sewer Line & HSC Lift Station Decommission - \$400,000
4. Highway 50 Replacement Marne Creek Crossing - \$670,000
5. Hastings Lift Station Replacement - \$1,000,000
6. 8<sup>th</sup> Street Burleigh to Ferdig - \$678,823





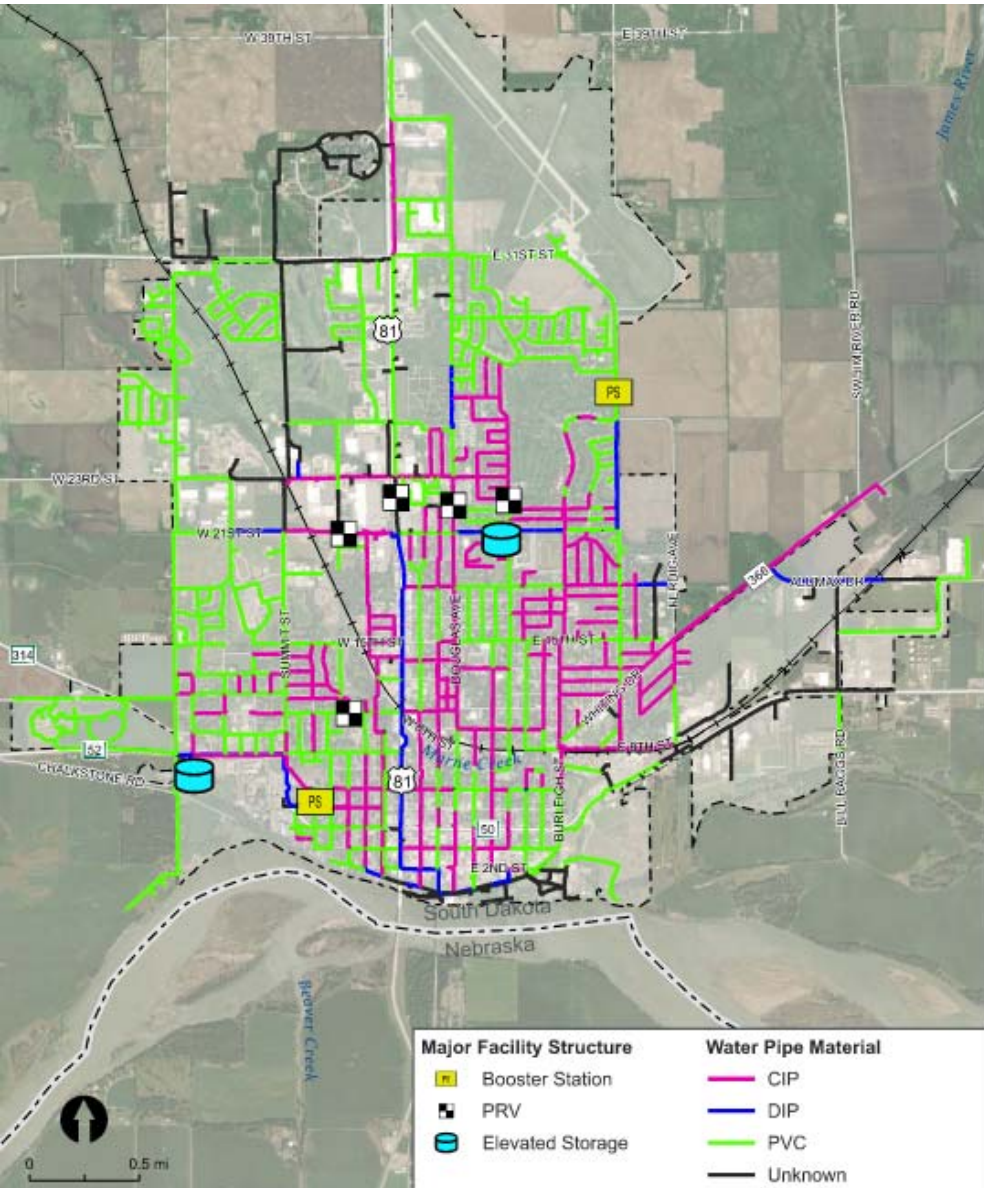
## Wastewater Collection System Improvements

7. West City Limits Road 8<sup>th</sup> to 9<sup>th</sup> Street - \$75,000

8. East Yankton Thrive Property - \$1,533,000

Total Project Cost - \$7.2 Million





# Water Distribution System Improvements

1. 22 Water Main Replacements - \$5,106,700
2. Water Meter Upgrade - \$2,195,000
3. Elevated Tower Rehabilitation – \$350,000-\$900,000

Total project Cost - \$8.2 Million

# **ARPA funding timeline**

**September 1, 2021- Notification of Funds**

**October 1, 2021- Deadline for State Water Plan**

**January 1, 2022 - Deadline for Funding Application**

**April 13, 2022 - Notification of Award**

# Funding

- American Rescue Plan Act (ARPA)
  - \$600,000,000 in ARPA funding for water and sewer infrastructure projects across the state.
  - 100% match local ARPA funds (City of Yankton \$2.5 Million = \$5.0 Million)
  - A minimum of 30% ARPA grant (percent of total amount requested). A grant cap will be determined by a per person project cost based on the population served by the system.
    - Service populations above 2,500: 30% grant with a \$3,000 per person maximum per applicant for all project(s) considered for ARPA grants.
- Total project cost eligible for ARPA funds - \$50,000,000.00 includes local match.
- All funds are contingent on rates being set to cover 110%.



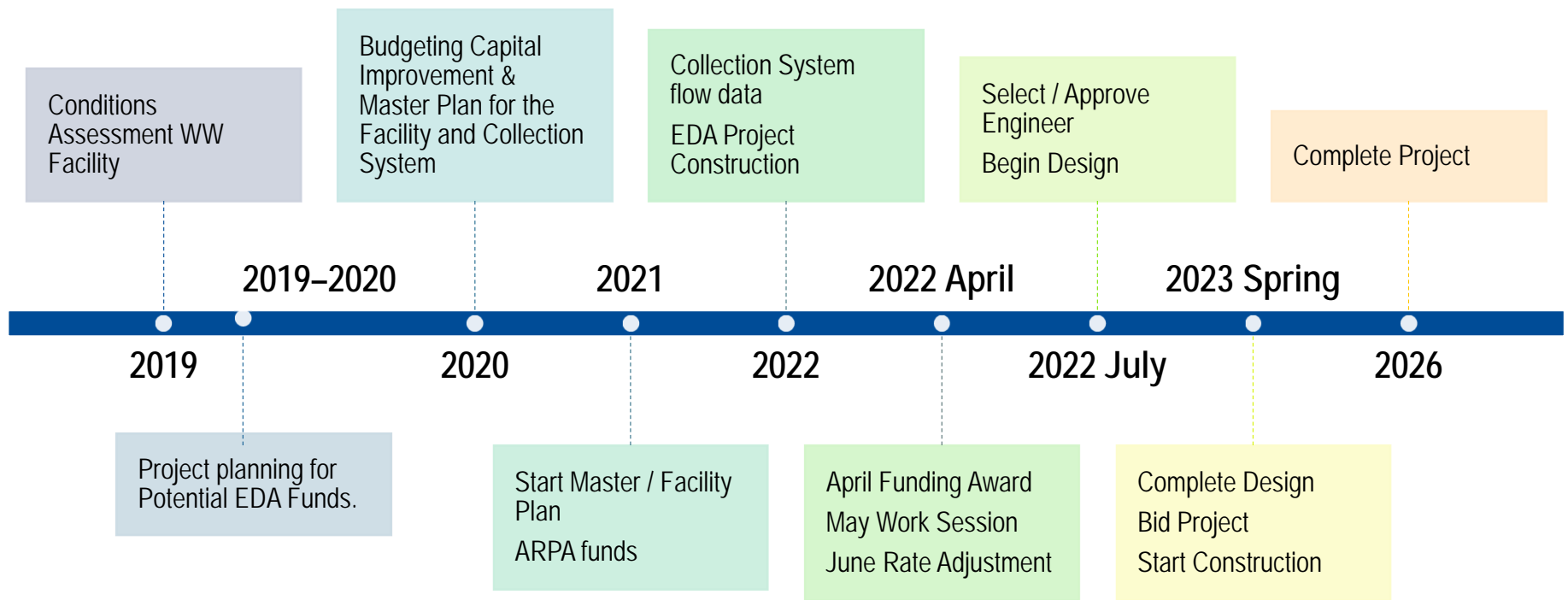
# SRF Funding vs ARPA Funding vs EDA Funding

State Revolving Fund (SRF) - federal and state funds- American Iron and Steel, procurement requirements. But more flexibility.

American Rescue Plan Act (ARPA) funds - Managed by the state. But has additional requirements including 2026 deadline. Short notice and deadline have compressed our timeline.

Economic Development Administration (EDA) funds - Federal funds managed at the federal level. Very little flexibility.

# Preliminary Timeline



## How Will This Project Affect Our Rates?

- Current Wastewater Rate for 5,000 gallons - \$45.22. Water rate - \$59.01
- The project will impact rates by \$6.31 per month for 4 years.
- New Rate 1<sup>st</sup> year \$51.53
- 2<sup>nd</sup> year \$57.84
- 3<sup>rd</sup> year \$64.15
- 4<sup>th</sup> year \$70.46
- Rate adjustment will be total of \$25.24 in additional surcharge
- \$18,000,000.00 in grants saves approximately \$18.88 in additional surcharge.
- New Wastewater Rates for 5,000 gallons - \$70.46. Water rate - \$59.01
- Possible increases to usage charge in the future- continue to monitor inflation

## What do you get \$70.46?

- Approximately 5,000 gallons of wastewater per month.
- Roughly the same as pouring 40,000 16oz bottles of water down the drain every month
- 290 showers 17.2 gallons per shower
- 3,125 toilet flushes 1.6 gallons per flush
- 200 loads of laundry 25 gallons per load
- 1,000 dishwasher cycles 5 gallons per cycle
- With the convenience of flushing a toilet or letting it go down a drain.
- Its all Collected, Treated, and returned to the Missouri River.

## Why is it important?

- Protect Public Health
- Prevent Fecal/Water born illness like Diarrhea, Cholera, Typhoid, and Hep A.
- Development of Wastewater treatment has greatly increased human life expectancy.
- Protect the Environment - Missouri River
- Missouri River is domestic water supply for millions of people.
- Missouri River as an immersion recreational water. Swimming and boating
- Fish and Wildlife Propagation.
- Irrigation, Commercial, and Industrial uses.
  
- This is why we have discharge monitoring requirements, regulations, and limits.
- We have treated wastewater for so long we have forgotten what happens if we don't.

What can you get for \$6.31

- Happy meal
- 6 pack of cheap beer
- 2 gallons of gas....(Almost)
- 12 pack of pop
- 1 bag of Amy's dog treats for Rufus



Meet Rufus- The newest WWTP employee!



**Questions?**

Proposed Loan Amortizations		Proposed						
	20 yr.- 2%	Surcharge	\$36.46					
CW Loan #5	\$ 4,500,000	Current Base	\$11.22					
Annual	\$ 262,954.00	Increase	\$25.24					
w/10%	\$ 289,249.40							
	20 yr.- 2%	Annual						
CW Loan #6	\$ 23,318,450	4 - Yr. Incr.	\$6.31					
Annual	\$ 1,417,485.28	1st Year	\$17.53					
w/10%	\$ 1,559,233.81	2nd Year	\$23.84					
		3rd Year	\$30.15					
	20 yr.- 2%	4th Year	\$36.46					
CW Loan #7	\$ 7,200,000.00							
Annual	\$ 437,674.64							
w/10%	\$ 481,442.10							
		Proposed						
		2021 Yr. End	Monthly					
		Customers	Surcharge	Total				
Total	\$ 2,329,925.31	5327	\$36.46	\$2,330,669.04				
Current Consumption Rate \$6.80 per 1000 Gal.		No Rate Increase, But Review Again in Fall						
2021		Revenue						
Total WW	508,794	\$3,459,799	w/o Base					
Consumption				\$1,043,450	Depreciation - Principal + Capital			
					Year	Principal #3	Principal #4	Capital
2021					2022	\$402,545	\$135,574	\$505,331
Operating	Expenses	\$3,207,105	Includes \$1,043,450 Depr.		2023	\$416,321	\$139,687	\$487,442
		\$252,694	7.88%	Excess	2024	\$0	\$143,925	\$899,525
2022								
April YTD	Expenses	\$852,705	-0.77%					
	Revenues	\$1,332,140	3.83%					
<b>Current Avg Bill (5,000 Gal.)</b>		Current	Yr. One	Yr. Two	Yr. Three	Yr. Four		
	Base / Surcharge	\$11.22	\$17.53	\$23.84	\$30.15	\$36.46		
	5,000 Gal.	\$34.00	\$34.00	\$34.00	\$34.00	\$34.00		
	Total	\$45.22	\$51.53	\$57.84	\$64.15	\$70.46		
	% Increase		13.95%	12.25%	10.91%	9.84%		
	<u>Consp. @5%</u>			\$35.70	\$37.49	\$39.36	Est. 5%	
				\$59.54	\$67.64	\$75.82		
				15.54%	13.60%	12.10%		