



City of Yankton 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 Future

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

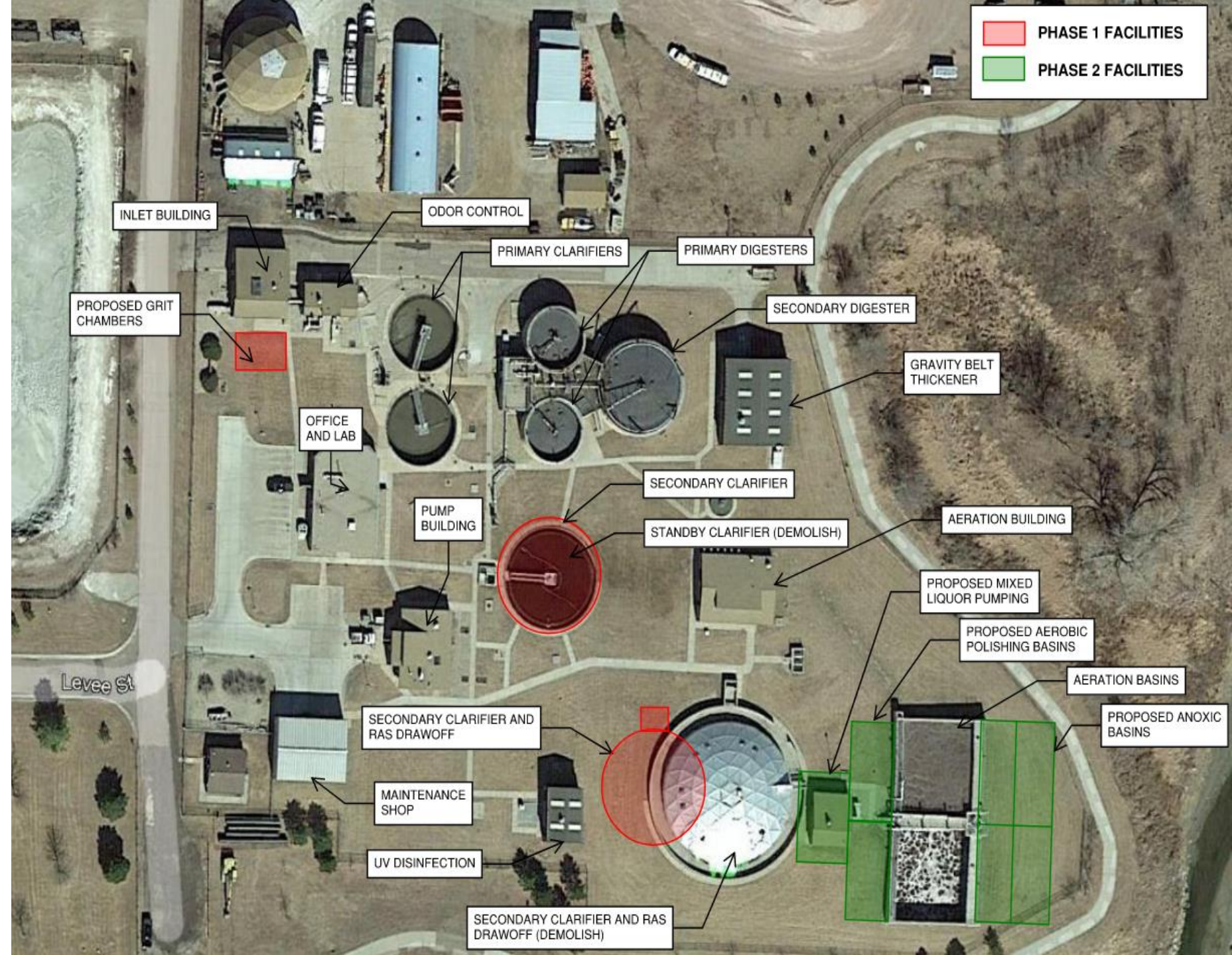
Preparing our WWTP for the Future

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

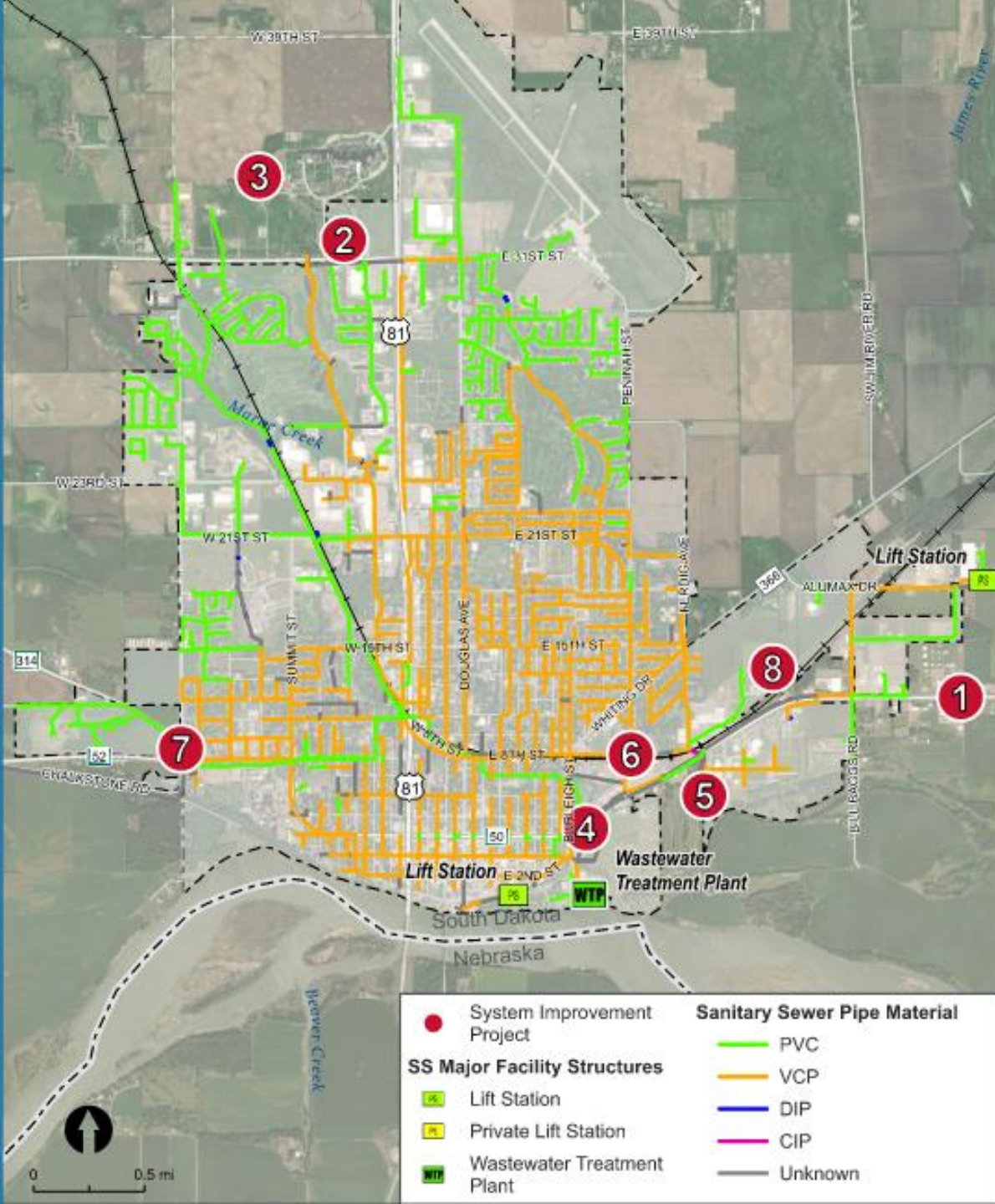
Phase 2 (Nutrient Removal)

- 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. 8th Street Burleigh to Ferdig - \$678,823

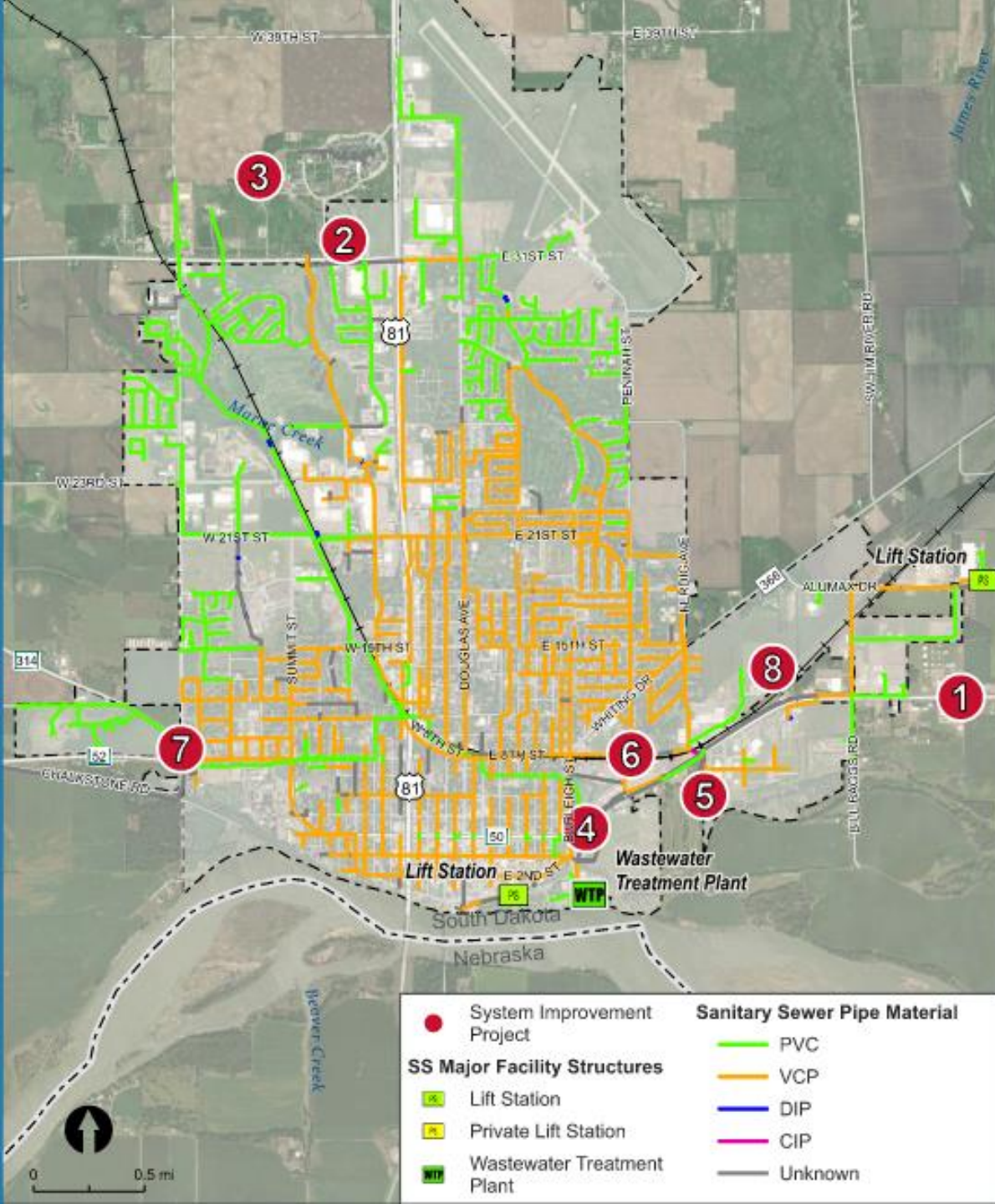


Wastewater Collection System Improvements

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

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

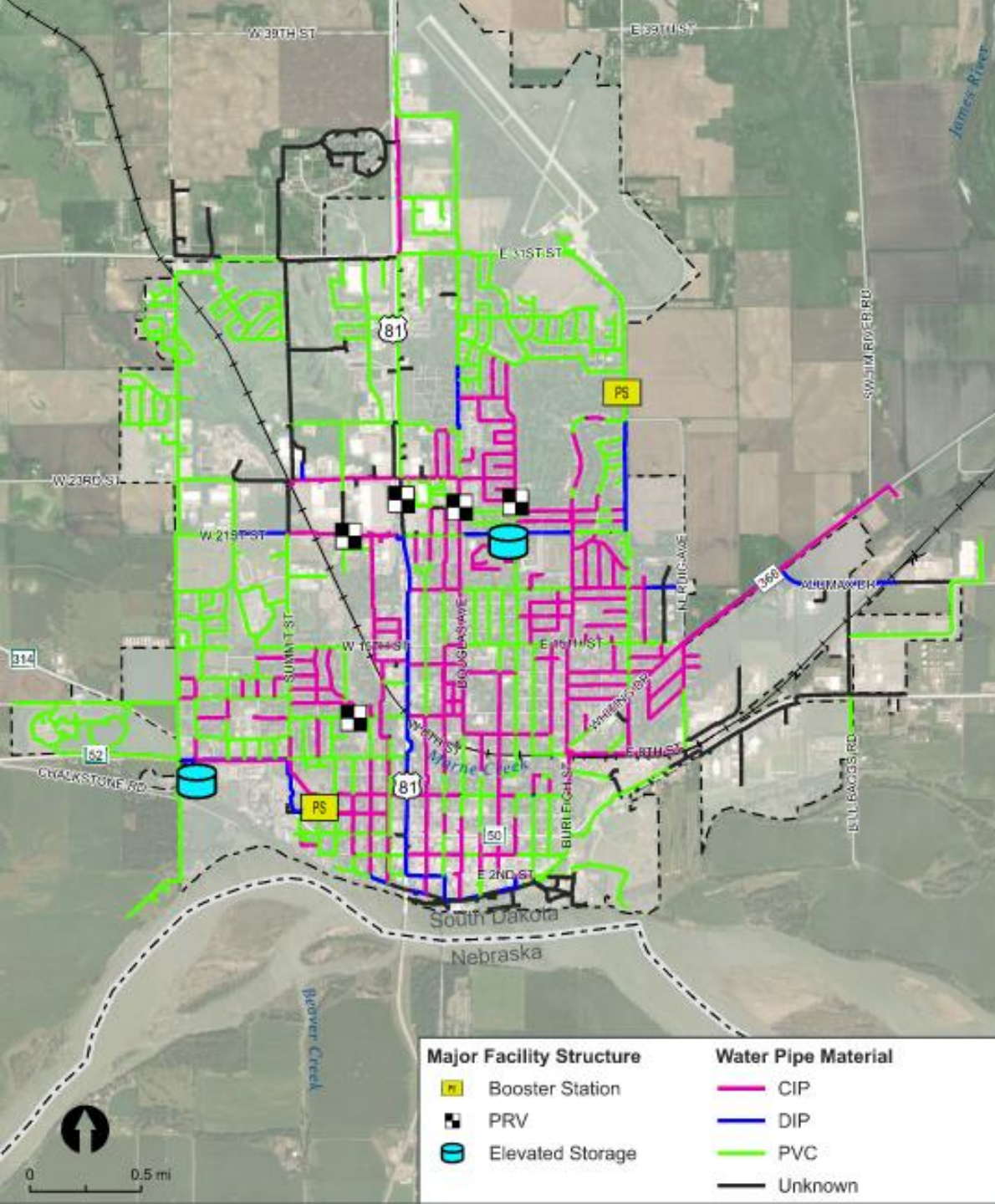
Total Project Cost - \$7.2 Million



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.

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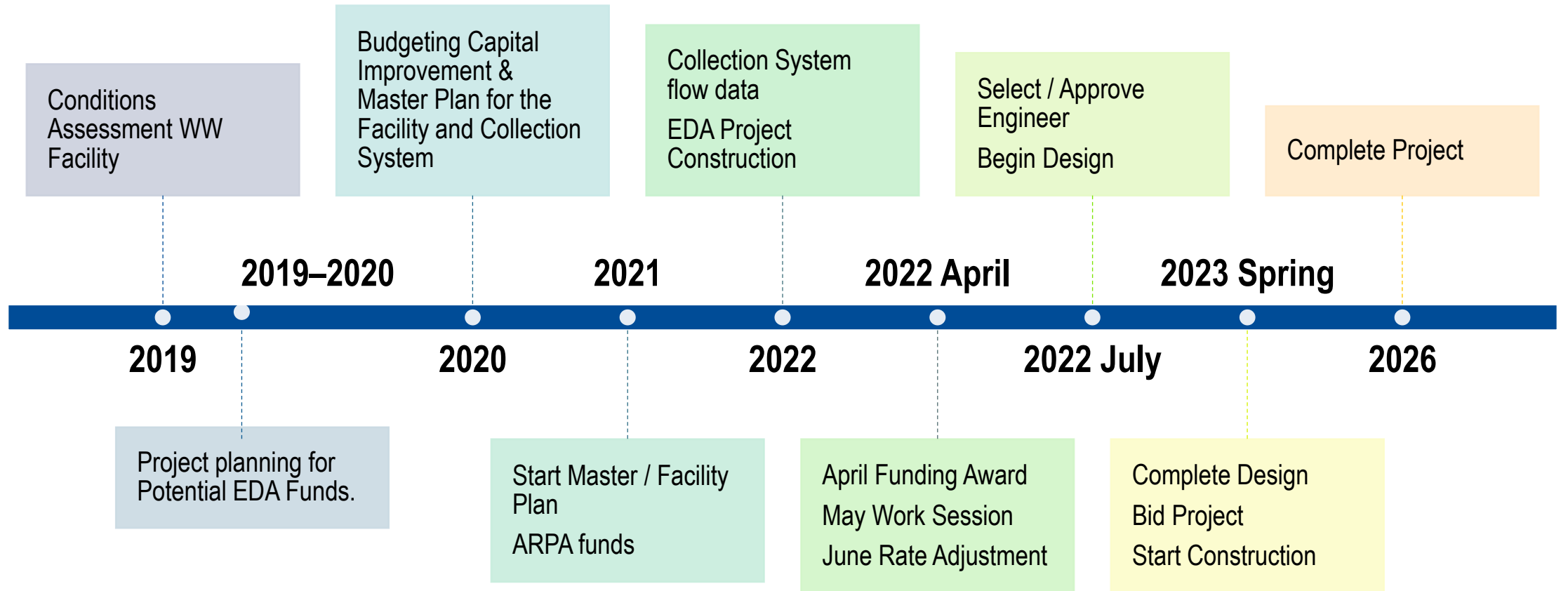
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Preliminary Timeline



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 1st year \$51.53
- 2nd year \$57.84
- 3rd year \$64.15
- 4th 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?