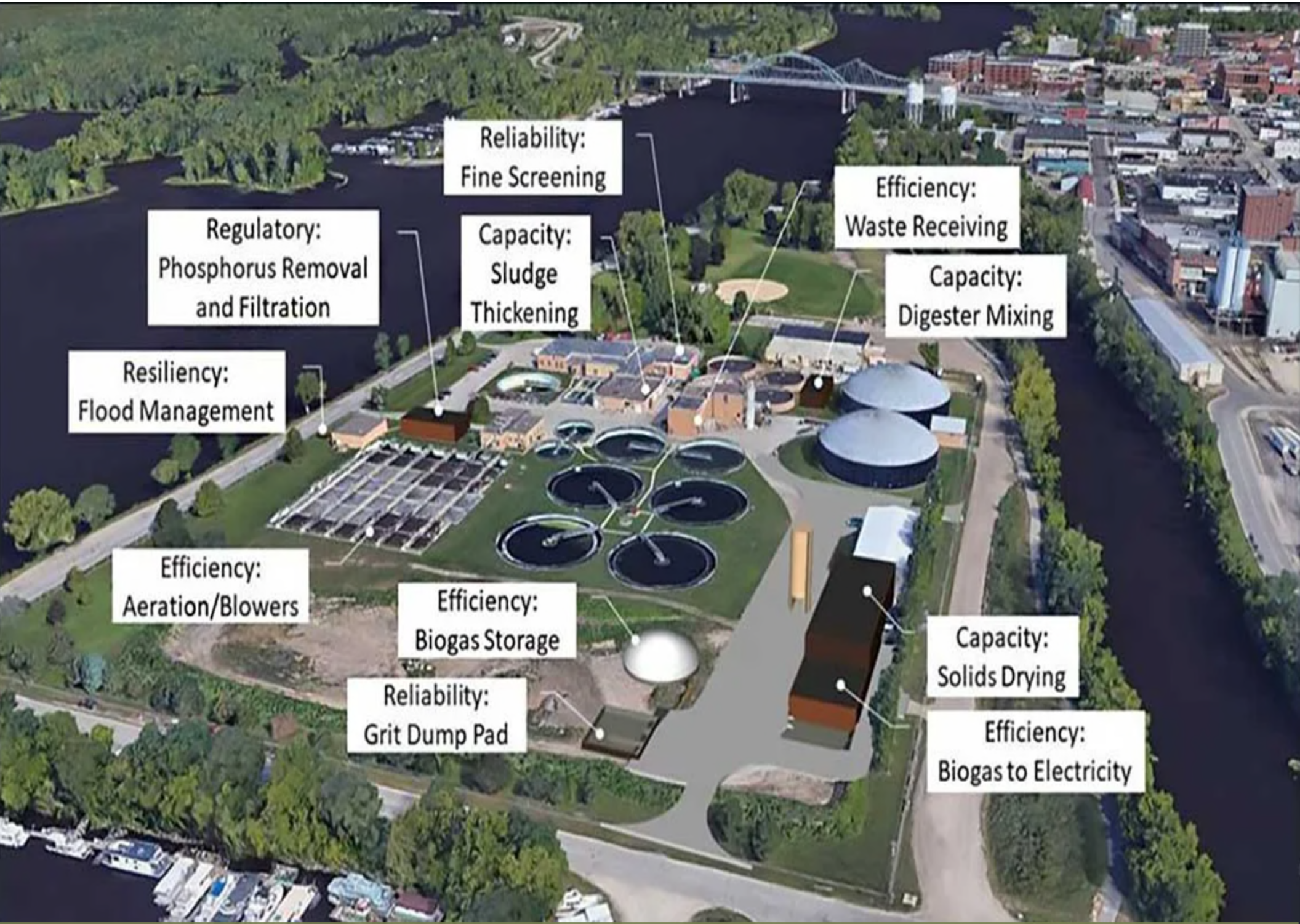
Wastewater Utility Updates
January 2026 1st Quarter

The La Crosse Regional Wastewater Treatment Plant (WWTP) receives and treats 10 million gallons per day of sewage from the City of La Crosse, contracted communities, trucked waste haulers, and 12 large industries.

The design capacity for sewage is 20 million gallons per day. The design capacity for biochemical oxygen demand (BOD) loading is 30,000 of BOD/day.

Upgraded WWTP 2021-2025

The Wastewater Treatment Plant is located on the bank of the Mississippi River. At one point, moving the facility to higher ground was considered, but the cost to move was estimated at 440 million dollars. Instead, stop logs with bypass pumping capacity were installed to prevent flooding at the 100 year flood stage.



4.5-year Project to Upgrade the La Crosse Wastewater Treatment Plant

Upgrades to the Wastewater Treatment Plant Include:

- A unique numbering sequence for each building to help identify the building's location
- Identify treatment process location
  - This helps with tracking the cost to operate each process for budgeting purposes.
  - The building ID will help with enhanced asset management as it relates to types of treatments.
- A QR Code System was installed on all new equipment
  - QR Codes will be linked to a handheld scanning device which will lead staff to operation and maintenance manuals and records and standard operating procedures.
  - The QR Code System is also tied to our asset management for future use.

Backup emergency power, creating redundancy when we lose Utility power.


New power distribution throughout the WWTP
DANGER
DANGER
DANGER
This creates a more reliable power supply to each building ensuring that all processes do not go out when transformers are lost.

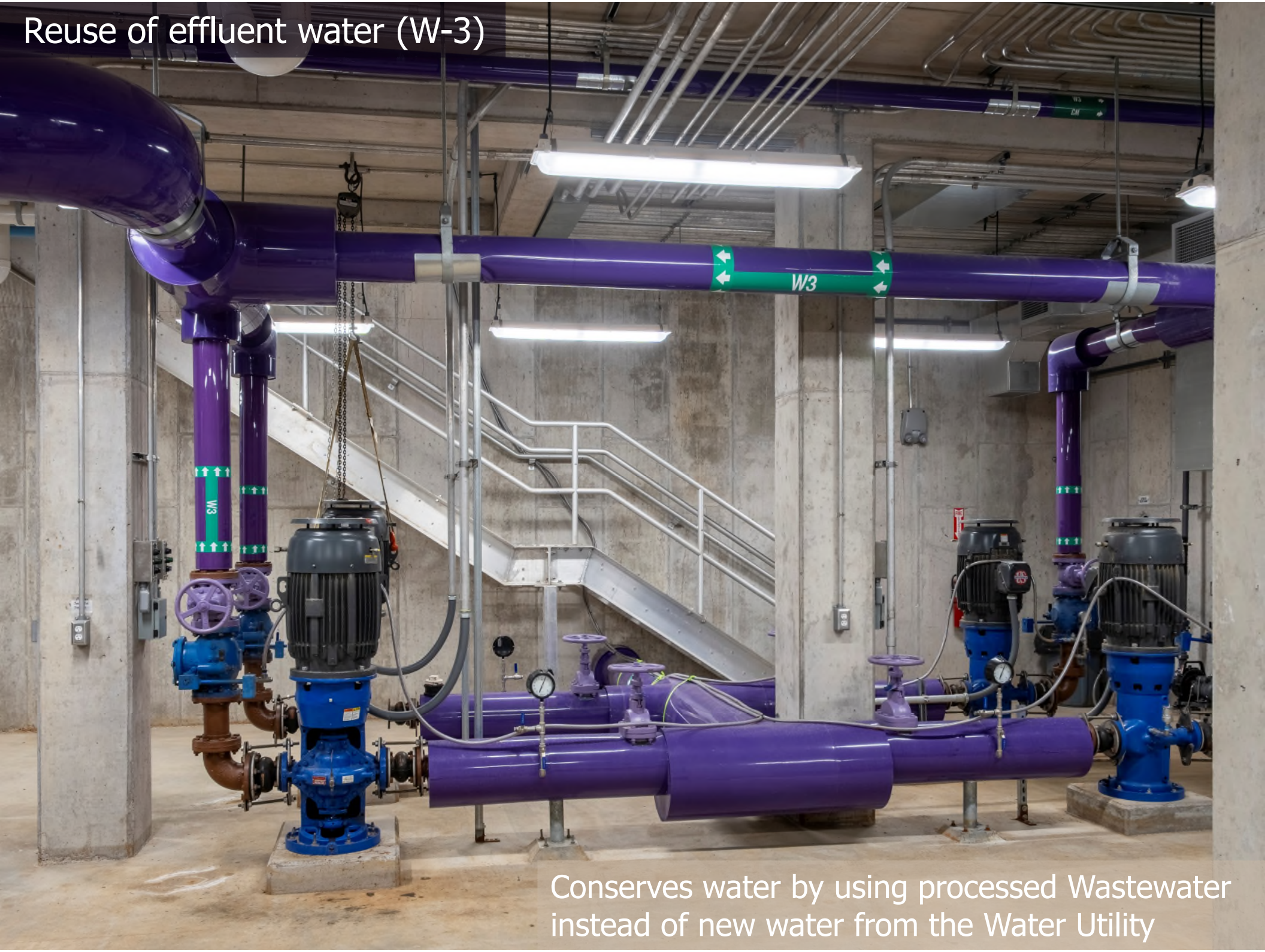
Redundancy built into Head Works. Second influent fine screen added for backup.

Second influent fine screen and additional compactor.

Extended aeration to enhance the biological nutrient removal of Phosphorus and Nitrogen

Installation of effluent disc filters to remove solids/TSS to meet low level phosphorus limits of 0.01mg/L

Reuse of effluent water (W-3)



Conserves water by using processed Wastewater instead of new water from the Water Utility

Solids Processing Enhanced

Solids thicken to reduce the volume of sludge by removing water. This increases the capacity of the digesters to increase solids loading and methane gas production. This French Technology is one of the first installed in the USA.

Additional sludge screening before digesters and Biosolids Heat Dryer

High Strength Waste Receiving Station
Repurposed Centrifuge Garage

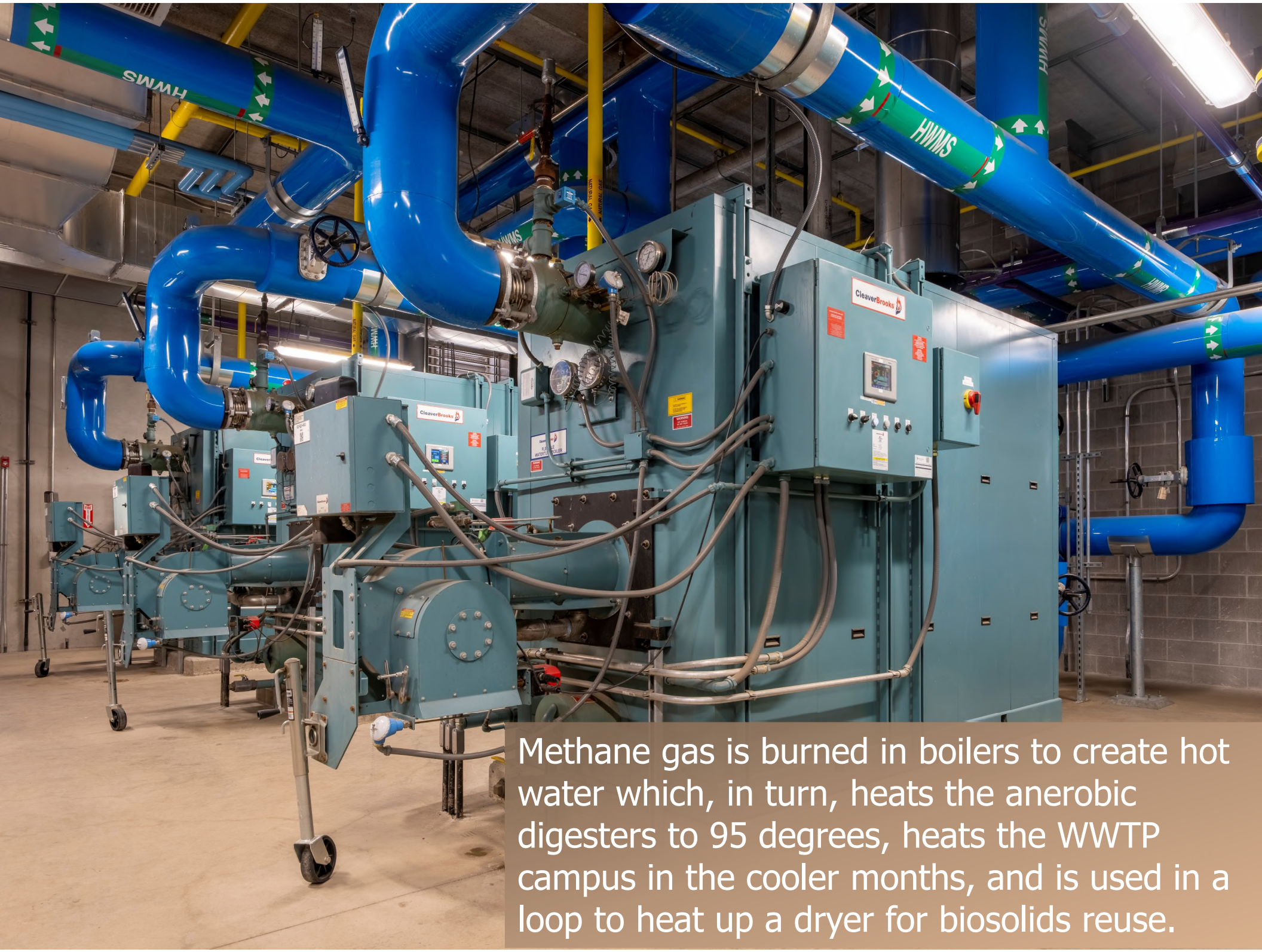
High Strength Waste is made up restaurant grease trap waste and dairy waste of the service area. A specific amount of high strength waste is needed to produce a volume of methane gas production.

Anerobic digestion is where sludge is heated to 95 degrees and the reduction of solids occurs.

This process has been enhanced by better mixing, adding heating loops, and having thicker sludge by removing water.
This increases solids capacity and methane gas production.

Mix pumps and heat pumps dedicated to each of the four anerobic digesters

Dedicated heat exchangers for each anerobic digester



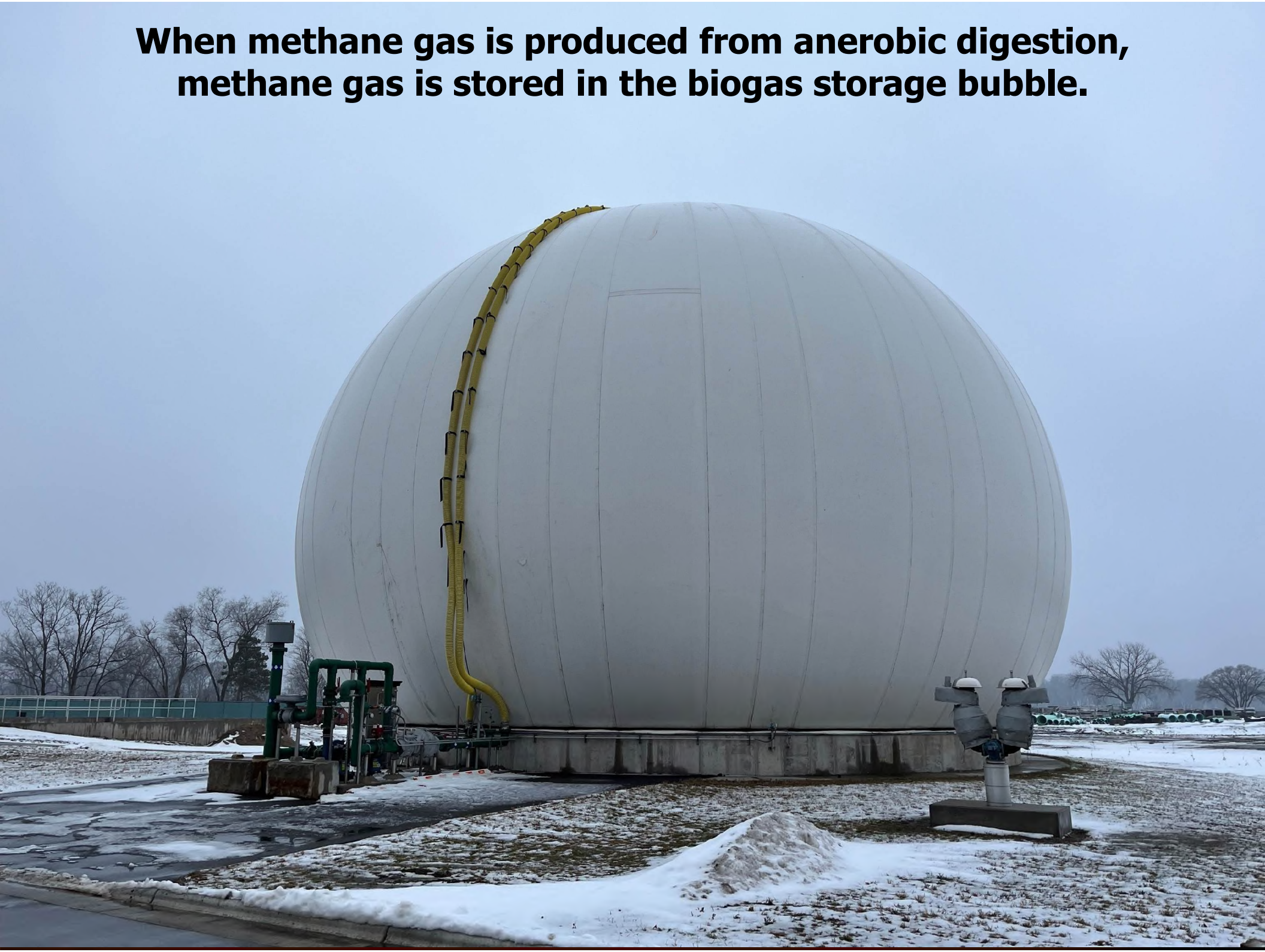
Methane gas is burned in boilers to create hot water which, in turn, heats the anerobic digesters to 95 degrees, heats the WWTP campus in the cooler months, and is used in a loop to heat up a dryer for biosolids reuse.

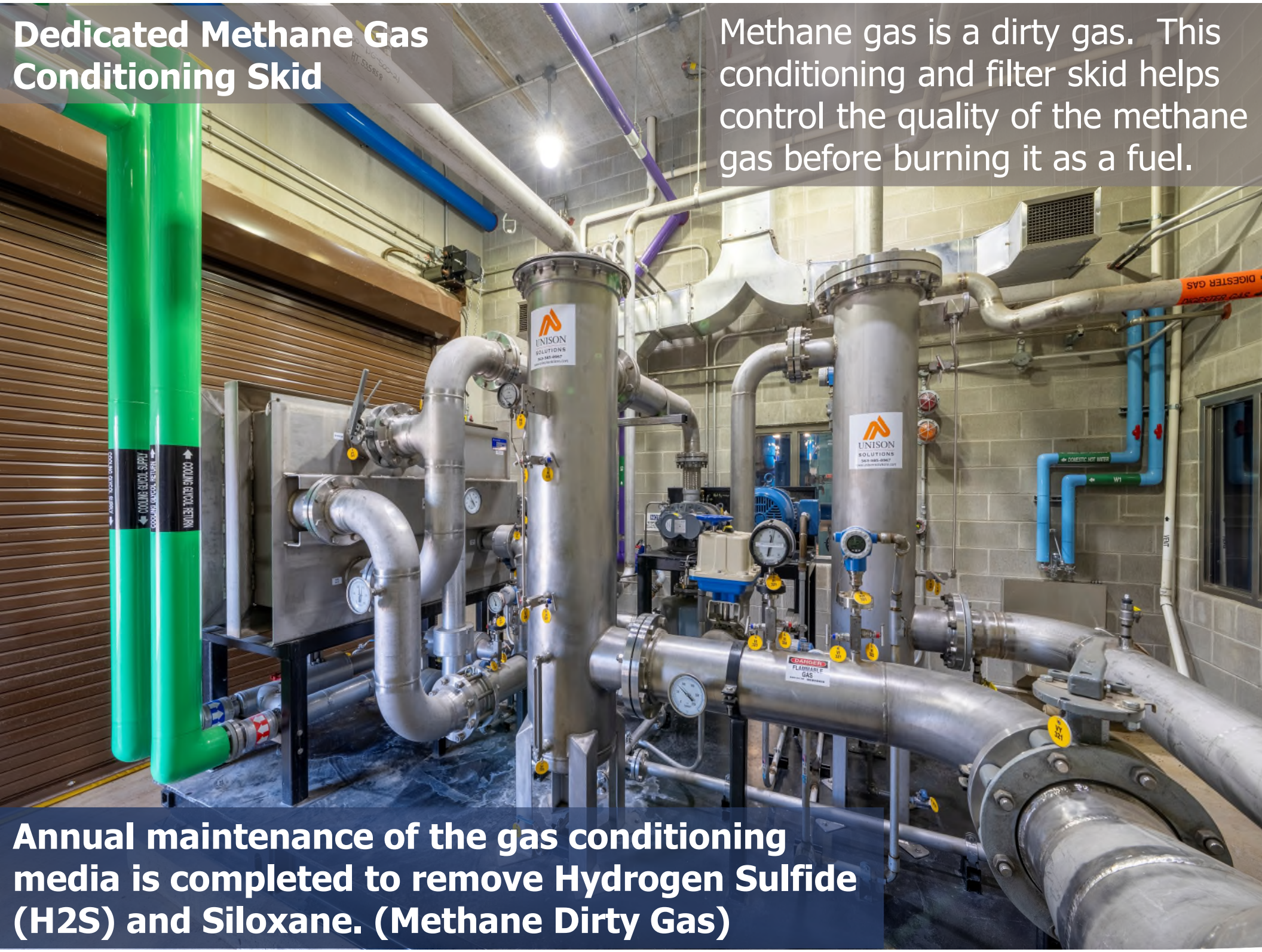
Hot Water Loops

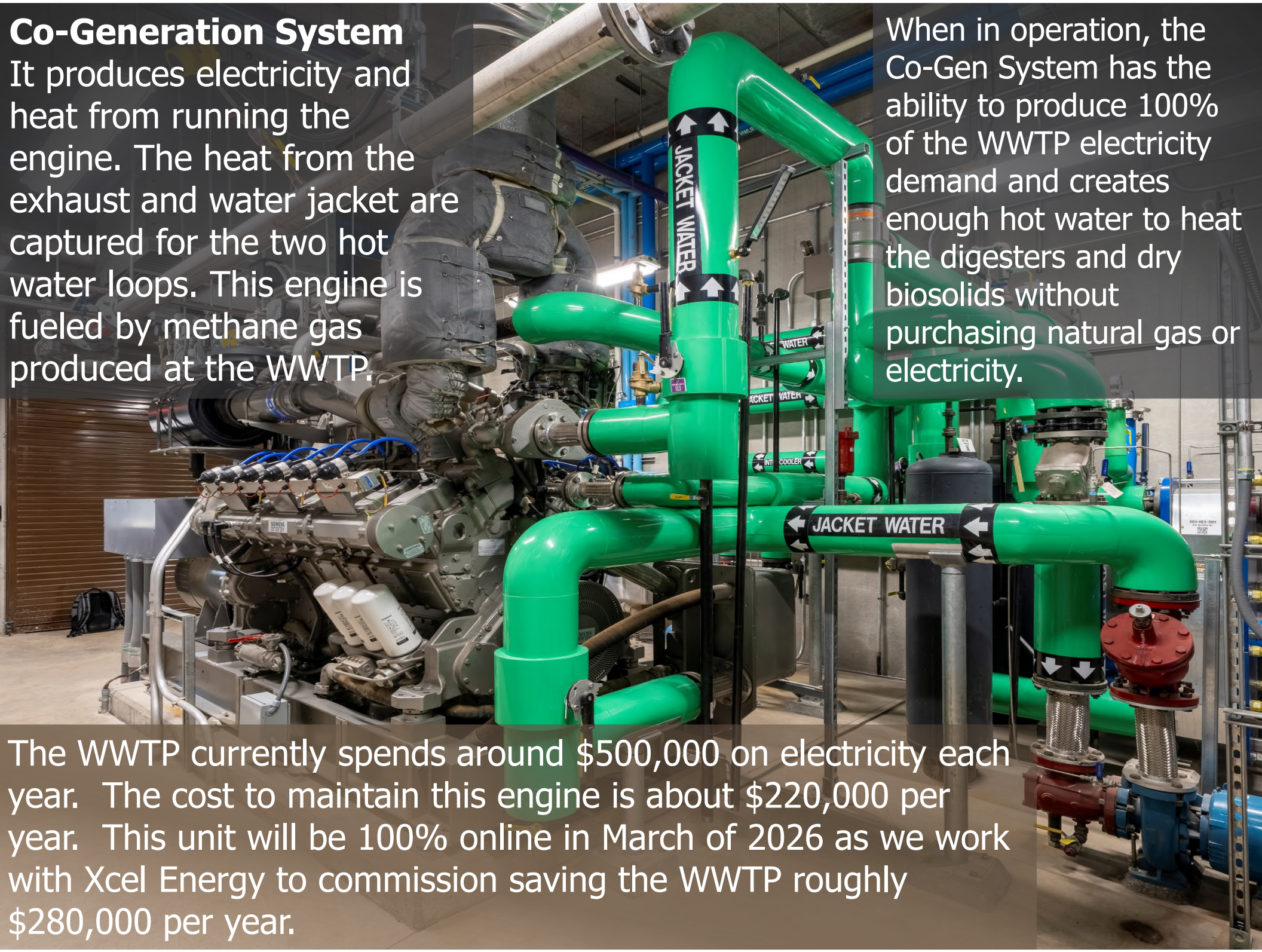
One low temp. loop for heating the digesters and WWTP campus.
One medium temp. loop dedicated to dry biosolids.

Pumps for the two hot water loops

When methane gas is produced from anerobic digestion, methane gas is stored in the biogas storage bubble.




Dedicated Methane Gas Conditioning Skid
Methane gas is a dirty gas. This conditioning and filter skid helps control the quality of the methane gas before burning it as a fuel.
UNISON SOLUTIONS
COOLING GLYCOL SUPPLY
COOLING GLYCOL RETURN
DANGER
FLAMMABLE GAS
DIGESTER GAS
DOMESTIC HOT WATER
Annual maintenance of the gas conditioning media is completed to remove Hydrogen Sulfide (H2S) and Siloxane. (Methane Dirty Gas)



Co-Generation System
It produces electricity and heat from running the engine. The heat from the exhaust and water jacket are captured for the two hot water loops. This engine is fueled by methane gas produced at the WWTP.

When in operation, the Co-Gen System has the ability to produce 100% of the WWTP electricity demand and creates enough hot water to heat the digesters and dry biosolids without purchasing natural gas or electricity.

The WWTP currently spends around $500,000 on electricity each year. The cost to maintain this engine is about $220,000 per year. This unit will be 100% online in March of 2026 as we work with Xcel Energy to commission saving the WWTP roughly $280,000 per year.

Huber Biosolids Heat Dryer

Dries biosolids for reuse.

If we produced liquid biosolids for reuse, typically used on agricultural land in La Crosse County, we would produce 13 million gallons per year or 2,400 semi tanker loads per year.

When we produce dry biosolids for reuse as Class A Biosolids, which can be used in various applications, we produce 365 semi tanker loads per year.

By producing dry biosolids vs. liquid biosolids, we drastically reduce the volume produced, reduce our environmental footprint, and expand the market for reuse.

Silo for storage of heat dried biosolids. As a truck pulls in, it fills and then exits the facility.

Heat dried biosolids can be reused Class A biosolid fertilizer. In the future, there is a possibility it could be burned as biomass energy to produce electricity.

Goals

- Continue to track the actual cost to operate the upgraded WWTP
  - Meeting Low level Phosphorus limits, Operation and 24/7 operation of Co Gen to produce electricity and heat.
- Continue to maintain and operate this large WWTP ensuring its success
- Continue to understand and navigate new and stricter limits coming from the State DNR
  - PFOS
- Continue to work on best practice to fund CIP Projects as construction costs increase at alarming rates
- Continue condition assessment of sanitary sewer collection for future rehabilitation projects

Projects

- Current: GIS reimplementation and Building out the mapping attributes.
- 2026: WWTP Office Space and Admin. Remodel
- 2026: Hagar and Pammel Creek sanitary lift station upgrades
  - Pumps and controls
  - The Hagar Lift Station pumps all the sewage from the North Side of La Crosse, City of Onalaska, Industrial Park/Kwik Trip production, and the Town of Campbell.
- 2027: UV Disinfection upgrade at the WWTP
  - To start after disinfection season 2027 and be completed before May 1, 2028 disinfection season.
- 2028: Finish Sewer Interceptor rehabilitation from Division Street to Isle La Plume/WWTP