

Business Item 2021-92:
**Adopt Facility Plan for the Blue Lake
Wastewater Treatment Plant
Improvements, MCES Project No. 809700**

Jason Peterson, Principal Engineer, Plant Engineering
Rene Heflin, Manager, Plant Engineering

Environment Committee: April 13, 2021



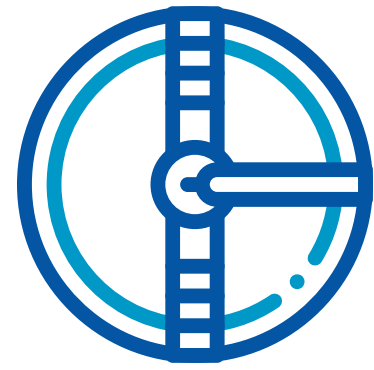
Project Location



Blue Lake Wastewater Treatment Plant (WWTP)

- Located in the City of Shakopee
- East of US-169 on Highway 101

Project Need



Additional wastewater treatment is needed to meet future environmental regulations.

The MPCA established River Eutrophication Standard TMDL for the Minnesota River which will require the Blue Lake Plant to meet a 0.3 mg/l total effluent (phosphorous).



The plant needs to expand to serve population growth in the service area.

The Blue Lake Service area is expected to increase by approximately 170,000 residents by 2050.



Existing facilities that are near end of service life need to be renewed.

Final Stabilization Facility (FSF) is over 20 years old and is one of the buildings that needs renewal.

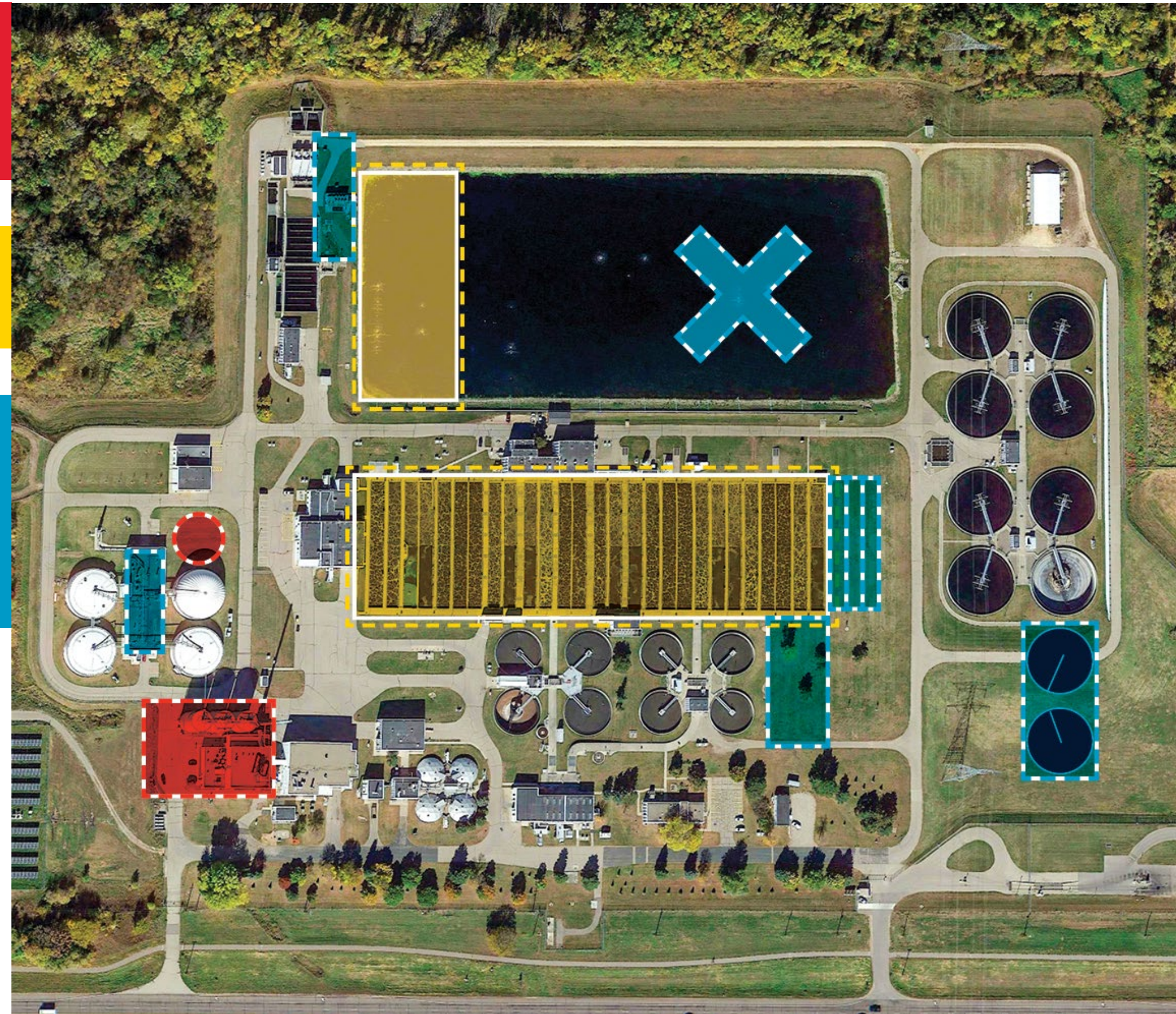
Key Scope and Implementation Plan

Phase I – Improvement required within the next 10 years to meet customer level of service objectives (\$159M)

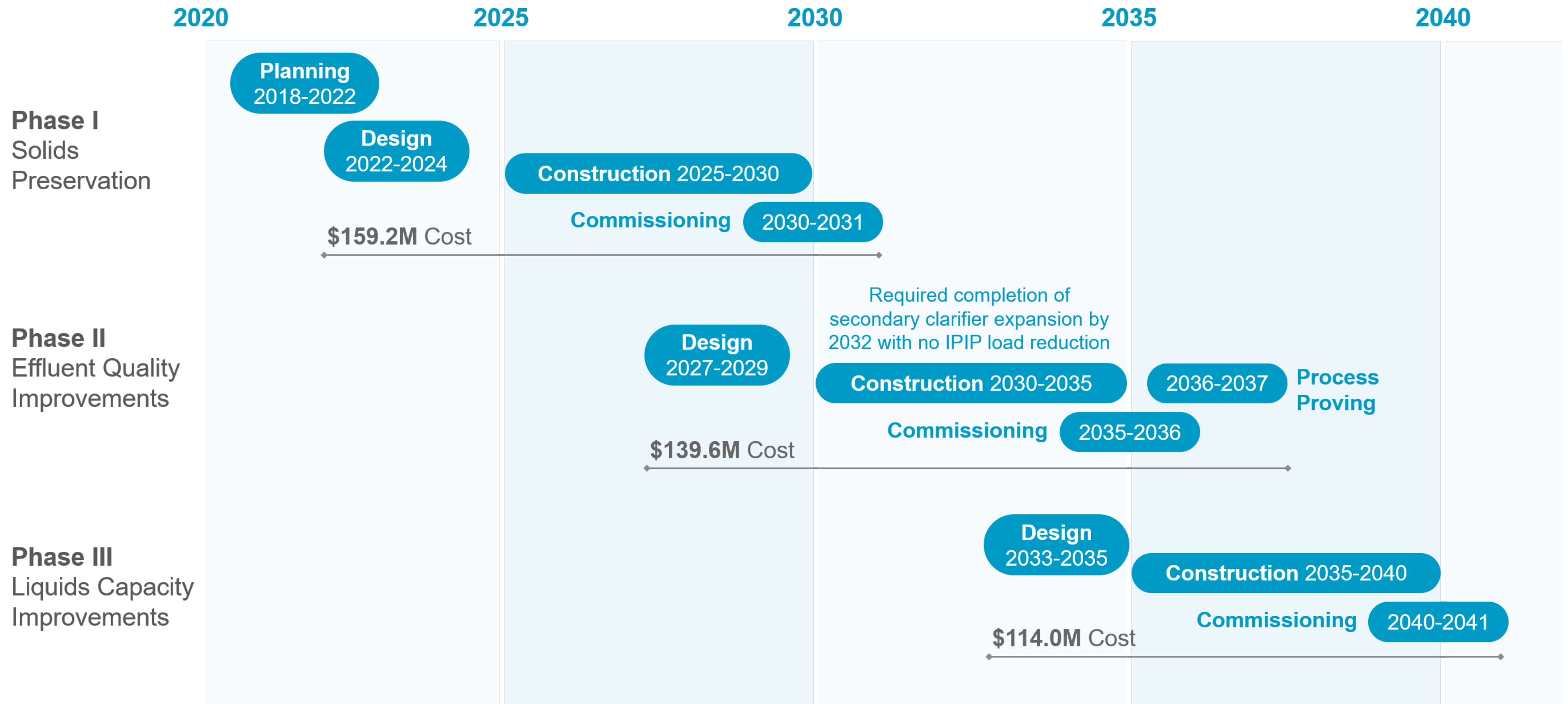
Phase II – Improvements that can be deferred for 10-15 years (\$140M)

Phase III – Remaining improvements identified within the 30-year planning period that can be deferred 15+ years (\$114M)

- Capacity Expansion
- Asset Preservation
- Quality Improvements



Implementation Schedule



Project Recap



**Environmental
Sustainability**



**Sustainable
Services**



Additional wastewater treatment is needed to meet future environmental regulations.



The plant needs to expand to serve population growth in the service area.



Existing facilities that are near end of service life need to be renewed.

Secondary treatment improvements & tertiary filtration will achieve effluent phosphorus of 0.3 mg/L

The plant will be expanded from 35 to 44 million gallons per day, on an average daily flow basis

Final stabilization facilities, the process control system, site buildings, liquid waste receiving, primary clarifiers, digester gas utilization equipment, the effluent structure, and others will be renewed.

Public Notices and Schedule



*Draft Facility Plan was available at Shakopee City Hall, the Shakopee Public Library and online at MetroCouncil.org/SewerConstruction/BlueLakeWWTP

Summary of Comments

From	Subject	Resolution
Steve Lillehaug, PWD, City of Shakopee	Will there be size increases of the WWTP?	All improvements will be contained in the current footprint of the plant. There will be no modifications to the flood levee or perimeter fence.
Steve Lillehaug, PWD, City of Shakopee	What traffic impacts are expected?	During Construction traffic will increase with construction personnel and after construction 2-4 additional trucks per day for deliveries and dumpster haul off.
Steve Lillehaug, PWD, City of Shakopee	What is being done about odor?	There are 3 projects currently in the plant advancing odor control as well as planning and piloting odor control measures in the interceptor system.
Steve Lillehaug, PWD, City of Shakopee	What is the capacity increase and is there still a WWTP planned farther west in Scott Co?	The liquids capacity will increase from 35 to 44 MGD and MCES is following the Water Resources Policy Plan and is continuing planning for the southwest Scott County WWTP.

Summary of Comments

From	Subject	Resolution
Lower Minnesota River Watershed District, Linda Loomis	Can the outfall work be moved to phase 1?	MCES has planned repairs to the riverbank near the outfall based on MCES annual erosion monitoring.
Lower Minnesota River Watershed District, Linda Loomis	Will you be applying for a permit from the LMRWD for this project?	MCES intends to apply for a permit from LMRWD for the work at the outfall and the Liquid Waste Receiving work as necessary and in accordance with the criteria above.
Lower Minnesota River Watershed District, Linda Loomis	Will MCES be applying for a new appropriations permit?	MCES does not anticipate needing to modify the existing groundwater appropriation permit for the Blue Lake WWTP.
Lower Minnesota River Watershed District, Linda Loomis	Is the groundwater used for plant processes?	The Blue Lake WWTP reuses effluent water for non-potable water uses throughout the plant. Groundwater is withdrawn for protection on infrastructure then discharged to the Minnesota river through the outfall pipe.

Proposed Action

That the Metropolitan Council adopt the Facility Plan for Blue Lake Wastewater Treatment Plant Improvements, MCES Project No. 809700, per Resolution No. 2021-15 attached to the business item.

Questions

Jason Peterson

Principal Engineer, Plant Engineering

Wastewater Planning & Capital Project Delivery

Jason.Peterson@metc.state.mn.us

651-602-4595

Rene Heflin

Manager, Plant Engineering

Wastewater Planning & Capital Project Delivery

Rene.Heflin@metc.state.mn.us

651-602-1077