Welcome!

## Fridley Lift Station Virtual Public Hearing

December 17, 2020

You are muted and your video is disabled upon entry. Please utilize the "chat" function (bottom menu bar) if you want to submit comments or questions at this time.

The public hearing will start at 4:00 p.m. Music is playing. If you do not hear music, please check your audio settings.









### Fridley Lift Station (L32A)

Tim Wedin, Assistant Manager, Interceptor Engineering Wastewater Planning & Capital Project Delivery Metropolitan Council Environmental Services







### Introductions

- **Peter Lindstrom** Metropolitan Council Member District 10 Chair, Environment Committee
- Tim O'Donnell

Metropolitan Council Environmental Services (MCES) Senior Information Coordinator and Project Citizen Liaison

- Tim Wedin MCES Assistant Manager **Interceptor Engineering**
- Jeny Baroda **MCES** Principal Engineer **Interceptor Engineering**
- **Ashley Osteraas & Angela Klein** Zan Associates (MCES Project Communications)



# Public Hearing Purpose

- Summarize the proposed Fridley Area Lift Station project and explain alternative approaches that we evaluated
- Answer your questions
- Receive your comments for the public record



## **Comment Period**

- Draft Facility Plan report available for review at:
  - Fridley City Hall, 7071 University Avenue NE, Fridley Ο
  - Brooklyn Park City Hall, 5200 85th Avenue N, Brooklyn Park Ο
  - Anoka County Library Mississippi Library, 410 Mississippi Ο Street NE, Fridley
  - Hennepin County Library Brooklyn Park Library, 8500 W  $\bigcirc$

Broadway Avenue, Brooklyn Park

Metropolitan Council Website:

*metrocouncil.org/sewerconstruction/fridley* 





# Comment Period (Cont.)

- Submit comments no later than 5 p.m. on Monday, December 28, 2020
- Submit comments to Tim O'Donnell at Metropolitan Council Environmental Services, 390 Robert Street North, Saint Paul, MN 55101-1805
  - Email comments to: <u>public.info@metc.state.mn.us</u>
  - Record comments on: Metropolitan Council Public Comment Line at 651-602-1500
  - Send TTY comments to 651-291-0904





#### Public Notices & Schedule Nov 15, 2020 Star Tribune notice Dec 4, 2020 Postcard notice mailed Email invitations & social media posts **Dec 2020** Public hearing Dec 17, 2020 **Jan/Feb 2021** Metropolitan Council adoption of Facility Plan Mar 2021



Submit Plan to Minnesota Pollution Control Agency (MPCA) with application for Clean Water Revolving Fund Project Priority List



#### **Welcome and Introductions**

Presentation

About MCES

**Facility Plan and Definitions** 

Project Background and Drivers for the Project

**Different Alternatives Evaluated** 

Proposed Cost Estimates, Limitations and Recommendations for each alternative

Next Steps

#### **Public Comments and Questions**

## Metropolitan Council **Environmental Services**





#### WHO WE SERVE

**7**-county Twin Cities Metro Area **110** communities 2,700,000+ people

#### **OUR FACILITIES**

**9** wastewater treatment plants 640 miles of interceptors **\$7** billion in valued assets

#### **OUR ORGANIZATION**

600+ employees **250** million gallons per day (avg) **\$150** million / year capital program



# What is a Facility Plan?





December 2020

#### **MCES Facility Plan**

fees. The MCES Facility Plan:

- Summarizes the current state of the existing MCES wastewater sewer system
- Identifies the need for rehabilitating existing facilities or constructing new facilities
- Determines the potential environmental impacts of new facilities
- Evaluates alternatives and recommends a course of action





This document is a prerequisite to qualify for financing through the Minnesota Public Facilities Authority. The project is funded by using utility







## Definitions

#### Wastewater Sewer System

A system of underground pipes that carries wastewater (or sewage) away from buildings. Cities operate their own local wastewater sewer systems within a community. MCES operates the regional wastewater sewer system that carries wastewater from city systems to our treatment plants, similar to how a freeway system carries regional traffic.

#### **MCES Interceptor**

The large underground pipes that make up the regional sewer system. These pipes can be either gravity pipes or forcemains.

#### **Gravity Pipe**

A sloped pipe that carries wastewater downhill (by gravity) without mechanical assistance.

#### Forcemain

A pipe that carries wastewater being pumped (or forced) uphill, as opposed to wastewater flowing by gravity.

#### **Flow Meter**

A device MCES uses to measure the quantity of wastewater a customer (city) sends to the regional sewer system, similar to how a city water meter measures water usage in a home.

#### **Lift Station**

A lift station or pumping station pumps wastewater from low points in the sanitary sewer system to higher points allowing the flow to be carried by regional gravity pipes to the wastewater treatment plant.

#### Siphon

Pipes that convey flow beneath low lying areas such as rivers, utilities, or other obstructions.







## **Project Location**

- Existing Lift Station L32
  - Located in Brooklyn Park at 7700 Ο Mississippi Lane North
- Proposed Lift Station L32A
  - 6900 E River Road in Fridley, on MCES Ο property which previously was the site of **Camp Lockeslea**
  - Located across the Mississippi River from Ο the existing lift station

Rd Mississippi Ln West Rive 71st Way Community Park Brookdale Dr Hartman River | Cir (252) Locke Lake Mississippi St Missi Manomin Park Existing Lift Station L32 Future Lift Station L32A MCES Property



## **Existing Conditions**

- L32 (Brooklyn Park) is 50 years old
- Components such as the structure, piping, and controls show signs of deterioration, requiring replacement
- Failures at the lift station have resulted in back-ups of wastewater into neighboring homes
- There are odor complaints due to inability to address air flow at the current facility

Lift station is almost at full capacity with the existing flow conditions







# **Existing and Future Flow**

Year	Average Day Flow MGD	Peak Day Flow MGD
2016*	16.55	38.4
2019*	17.28	26.93
2040	25	48
Ultimate	34	67

#### Note: \*from metered data

Current L32 Peak Capacity – 43 MGD



### Drivers for the Project

The existing lift station is 50 years old and has reached the end of its useful life. Condition assessments have documented structural mechanical, and electrical deficiencies which has led to system failures – Backups and odor issues.

The lift station is almost to its full pumping capacity. L32 does not have sufficient capacity to serve the current and future needs of the area.



# **Overall System Analyses**

#### Upstream System Capacity Analysis

Enough capacity in the pipe for future flow

#### **Downstream System Capacity Analysis**

No capacity concerns









# **Spill Prevention Analysis**

- MCES Design Guidelines recommends 60 mil response time under peak flows
  - Additional 30 min response time recomme Ο for ultimate flow
- Spill prevention items analyzed
  - In-line storage  $\bigcirc$ 
    - Two new small submersible pump station
  - Independent pumping system for additional  $\bigcirc$ response time
  - Additional resiliency addition split wet well  $\bigcirc$ system, redundant pumps, automatic bar screen and grinders, etc.

in ended	Peak Flows	Available Storage with Existing System	Response Ti with Existin System
	Existing Flows (38 MGD)	1.4 MG	53 minute
	2040 Flows (48 MGD)	~1.3 MG	41 minute
	Ultimate Flows (67 MGD)	1.1 MG	24 minute
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### Alternatives Evaluated

#### No Change

#### • Do nothing

### Replace

 Replace the lift station with a new larger lift station on the existing site in Brooklyn Park



 Construct a new larger lift station on the east side of the river in Fridley

### Alternative 1 - Do Nothing

- Keep existing lift station the same size without any upgrades
- Limitations
  - Lift station will continue to deteriorate
  - Require excessive maintenance in the future Ο Eventually lead to failure, back-up in residential basements and overflow/spill into the
  - $\bigcirc$ environment and Mississippi River
- Not a recommended option
  - Does not address environmental health and safety hazards, such as spills  $\bigcirc$
  - Does not meet MCES customer level of service goals  $\bigcirc$
  - Not recommended per MCES policy of providing continued and best customer services to the 0 communities they serve



# Alternative 2 – New Lift Station on the West Side

This alternative includes:

- Construct a new larger pump station to meet future flow and resiliency needs
- Independent pump system inside the new lift station
- Two new submersible lift stations
- Other resiliency additions
- Upgrades to the existing odor control system
- Maintain operation of existing lift station while constructing a new facility.
  - The existing lift station will be demolished once the new lift station is in operation





### Alternative 2 – West Side Property Layout Constraints



### Alternative 2 – Estimated Projected Construction Cost

Sr. No.	Description	<b>Estimated Cost</b>
1	New pump station	\$19,200,000
2	Addition of 2 new smaller submersible pump station	\$1,560,000
3	Dedicated pumps at lift station	\$1,800,000
4	Odor control upgrades	\$240,000
5	Property Acquisition + Temporary easements	\$960,000
	Subtotal	\$23,760,000
	22% Engineering and Administration	\$5,227,200
	30% Construction Contingency	\$7,128,000
	Total Project Cost (in 2020-dollar amount)	\$36,115,200

## Alternative 2 – Limitations and Recommendations

#### Limitations

- Need to keep existing lift station in operation during construction limiting the available space on site  $\bigcirc$
- Additional property acquisition is required for new lift station + temporary easements for staging  $\bigcirc$
- Construction difficulties due to depth sheeting may be required to protect neighboring properties and  $\bigcirc$ street
- Adequate screening may not be possible due to space limitations  $\bigcirc$
- Not a recommended option
  - Space constraints due to set back requirements from the river, bluffs, streets and neighboring properties Challenging to build a new lift station while keeping the exiting lift station in operation  $\bigcirc$

  - Require purchasing additional property near the site







# Alternative 3 – New Lift Station on the East Side

#### This alternative includes:

- East Side Facilities
  - O New pump station to meet future flow and resiliency needs
  - Independent pump system + other resiliency additions
  - O Odor control system
  - Flow meter station
- West Side Facilities
  - O Control building
  - O Siphon structure/headhouse
  - Odor control structure
  - O Two new small submersible lift stations
- River crossing
  - Rehabilitate the two existing forcemains

esiliency needs



## East Side Facilities – Conceptual Plan







### River Crossing – Upgrade Two Existing Forcemains



### Alternative 3 – Estimated Projected Construction Cost

Sr. No.	Description	<b>Estimated Cost</b>
1	New pump station (8-pump circular foundation)	\$20,400,00
2	Addition of 2 new smaller submersible pump station	\$1,560,00
3	Dedicated pumps at lift station	\$1,800,00
4	New odor control system on East Side	\$360,00
5	Flow metering	\$36,00
6	Siphon system	\$6,900,00
7	Odor control system modification on West side	\$120,00
8	River Crossing forcemain pipe rehab	\$2,400,00
	Subtotal	\$33,576,00
	22% Engineering and Administration	\$7,386,72
	30% Construction Contingency	\$10,072,80
	Total Project Cost (in 2020-dollar amount)	\$51,035,52





## Alternative 3 – Limitations and Recommendations

#### Limitations

- Construction challenges due to vicinity of river and depth required for construction 0
- Highest construction cost
- **Recommended** option
  - Large open space: 22-acre property, big enough for new lift station and all other requirements Ο
  - No additional easements required for construction Ο
  - Large space will allow for adequate screening of the facility from its neighbor  $\bigcirc$
  - Provide sustainable long-term solution for conveying wastewater in the region  $\bigcirc$
  - Lift station structures will be designed for 67 MGD and other mechanical and electrical equipment be  $\bigcirc$ designed for interim capacity of 48 MGD





### **Existing MCES Lift Station Examples in Residential Area**

MCES will work to develop a facility that architecturally integrates into the neighborhood.



L 27 - Hopkins



L 73 - Woodbury



L 60 – Long Lake

L 76 - Champlin





# Information Included in the Report

- Background information and past studies done to date
- Detailed analyses and comparison of alternatives
- **Environmental Review of Fridley Site** 
  - Wetland delineation  $\bigcirc$
  - Archeological and historic sites Ο
  - **Environmental Assessment Worksheet (EAW)** Ο
- Geotechnical report for Fridley Site
  - Project delivery schedule

# Financing

- MCES Project Financing
  - O Loan from the Minnesota Public Facilities Authority
  - Below market-rate loans used to finance eligible projects which helps keep wastewater rates low
  - Paid for through existing municipal and industrial wastewater rates.

## Total Cost and Rate Impacts

- MCES project funding: Public Facilities Authority (PFA) loans (20-year term)
- Loans for these projects are paid from two funding sources:
  - Municipal Wastewater Charges (MWC): This is the MCES portion of your sewer bill.
  - Sewer Availability Charge (SAC): This is a one-time charge for new connections.
- Impact to rates from \$51.04 million in loans\*:
  - \$1.38 = amount included in the annual sewer billing per household (\$188 annual average MCES wholesale rate charged to communities).
  - \$64.08 = amount paid per year (for 20 years) from the SAC fund per new household connection (or equivalent).

\* This project is included in MCES capital improvement plan, so loan payments are already built into future increases to MWC and SAC rates. These figures show the relative impact on rates and how the project will be paid for over time.

# **Design-Phase Considerations**

Engineering studies will investigate:

- Construction method
- Odor control mitigation
- Design of lift station
- Physical and conceptual model of the new lift station and odor control system
  Permits requirements by different regulatory agencies
- Architectural design



- Coordination with local entities and stakeholders
- Set back requirements from bluffs, river, streets and neighboring properties

• Site restoration on new lift station site



## Next Steps

- Dec 28, 2020
- Jan/Feb 2021
- Mar 2021

- Due date for written comments on draft Facility Plan
- Metropolitan Council Adoption of Facility Plan
- Submit Plan final Facility Plan to Minnesota Pollution Control Agency (MPCA) with application for Clean Water Revolving Fund Project Priority List

# **Project Schedule**



# Public comments and questions

- Participants will be muted during the presentation
- To ask questions or provide comments:
  - Computer, Smartphone and Tablet Users:
  - Use the Chat box to type in questions and comments



**A** 

#### Type into the chat box



# Public comments and questions

Use the raise hand function to be unmuted and speak aloud. Select the 'Raise Hand' option inside the "Participants" panel from the right-hand side of the screen.



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### Project Contacts



#### Website

metrocouncil.org/sewerconstruction/fridley



#### Phone (763) 520-8650



#### **Email**

info@fridleyarealiftstation.com

Visit our project website for more information and to sign up to receive our project email updates.





## Thank you for participating in our public hearing





