Welcome to the
Hastings Wastewater Treatment Plant Facility Plan Public Hearing

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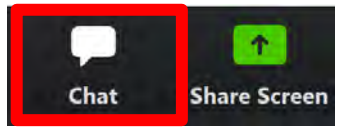

Please use the chat (between the 'participants' and 'share screen' buttons) to send in comments and questions throughout the public hearing. Comments and questions will be addressed after the presentation during the public comment session.

If you experience any technical difficulties, please call or text 651.302.2908 or email comment@hastingswwtp.com

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MCES Hastings Wastewater Treatment Plant Facility Plan Public Hearing

Wendy Wulff, Metropolitan Council Member, Vice Chair of the Environment Committee
Tim O'Donnell, Project Citizen Liaison, Facilitator
Rene Heflin, Manager, Wastewater Plant Engineering
Heidi Hutter, Principal Engineer, Project Manager, Wastewater Treatment Plant
Chad Davison, Principal Engineer, Project Manager, Collection System and Roadway Improvements

Public Hearing
January 5, 2022

METROPOLITAN COUNCIL

Meet the presenters of the

Hastings Wastewater Treatment Plant Public Hearing

Tim O’Donnell

Wendy Wulff

Rene Heflin

Heidi Hutter

Chad Davison

Public Hearing Purpose

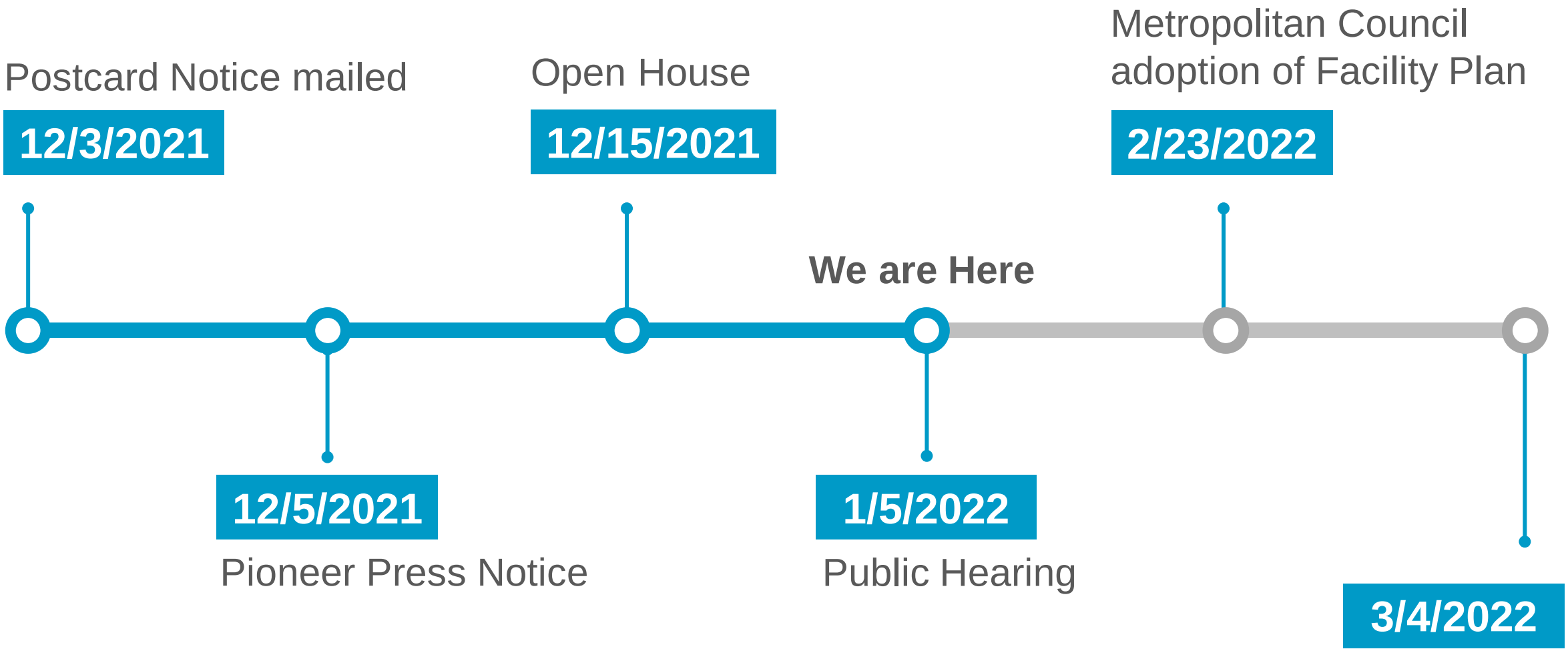
- Summarize the proposed project and explain alternative approaches that we evaluated
- Answer your questions
- Receive your comments for the public record

Comment Period

The comment period is open through January 18 at 5 p.m.
In addition to offering comments at the public information meeting and public hearing, you can submit comments in the following ways:

- Mail written comments to Heidi Hutter at Metropolitan Council Environmental Services, 390 Robert St. N., Saint Paul, MN 55101-1805
- Email comments to: comment@hastingswwtp.com
- Record comments: 651.302.2908 (Project Comment Line)
- Send Teletype (TTY) comments to 651.291.0904

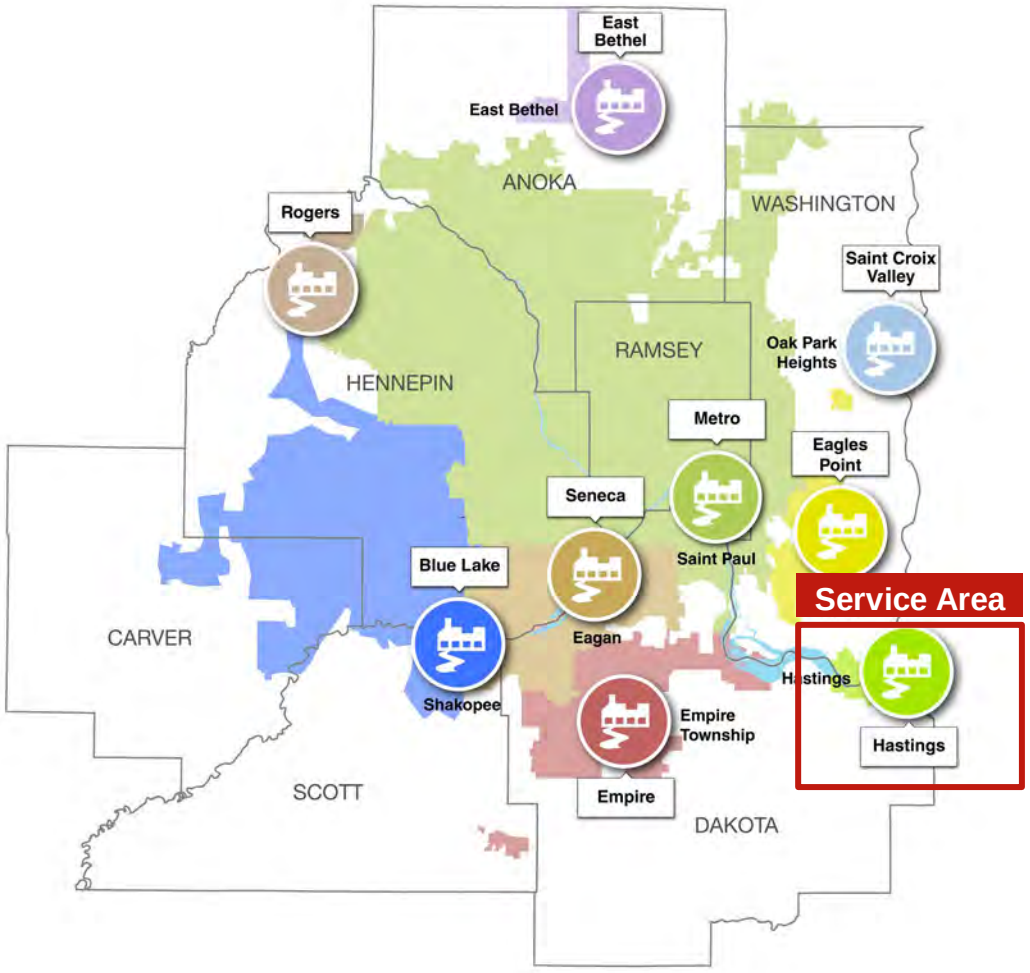
Public Notices & Schedule



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

Service Area and Facilities

Wastewater Treatment Plant Locations



WHO WE SERVE

7-county Twin Cities Metro Area
111 communities
3,000 square miles
2,700,000+ people

OUR FACILITIES

9 wastewater treatment plants
640 miles of interceptors
61 lift stations (pumping stations)
250 million gallons per day (average)

- 1952 Constructed
- 1970 MCES Acquired
- 1985 Last Expansion
- 2020 Condition Assessment

30 Consecutive Years of Perfect Permit Compliance

Hastings WWTP Service Area

Long Term Service Area

10M gallons/day long-term planned capacity*

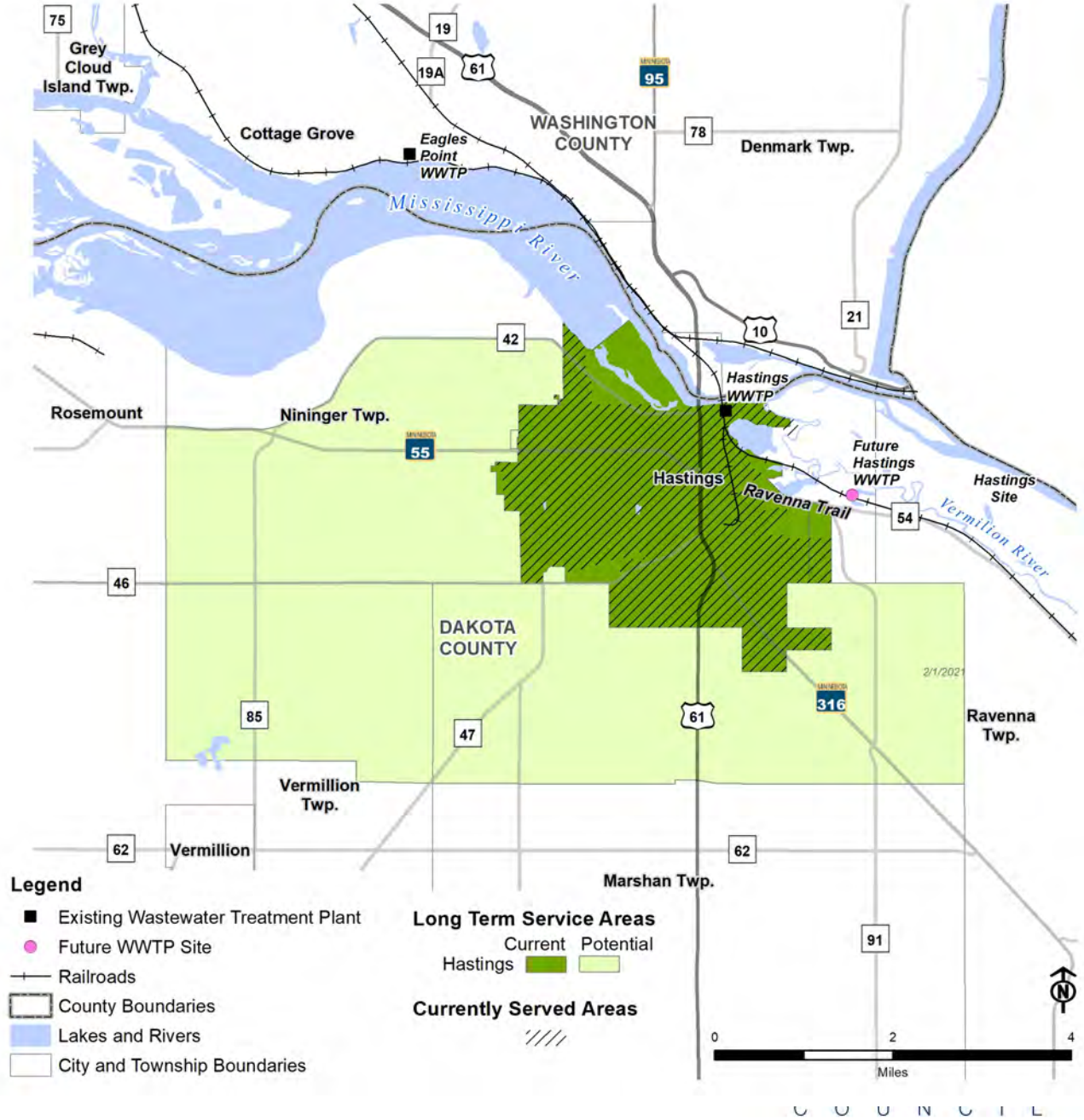
29,000 residents served (in 2040)

*MCES 2040 Water Resources Policy Plan – Post 2040

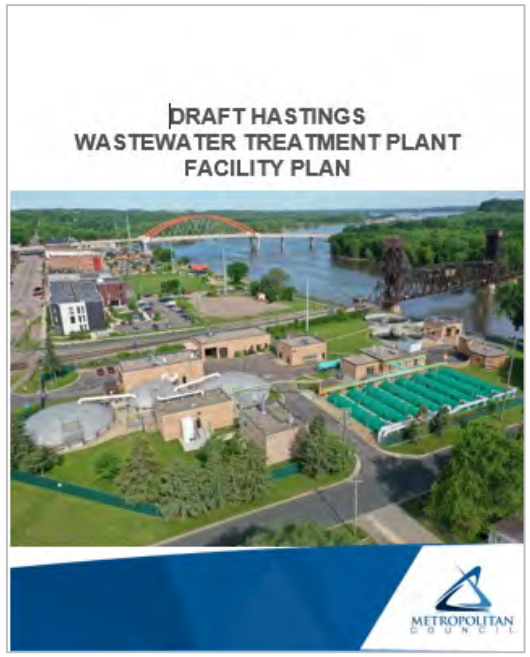
Existing Service Area

2.3M gallons/day plant capacity

23,000 residents served



What is a Facility Plan?



MCES Facility Plan

This document is a prerequisite for a portion of the financing on MCES projects. The MCES Facility Plan:

- Summarizes the current state of the existing MCES wastewater treatment plant
- Identifies the need for rehabilitating existing facilities or constructing new facilities
- Determines the potential environmental impacts of new facilities
- Recommends a course of action

Facility Plan Schedule

Hastings Wastewater Treatment Plant Facility Plan

Project Need

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

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

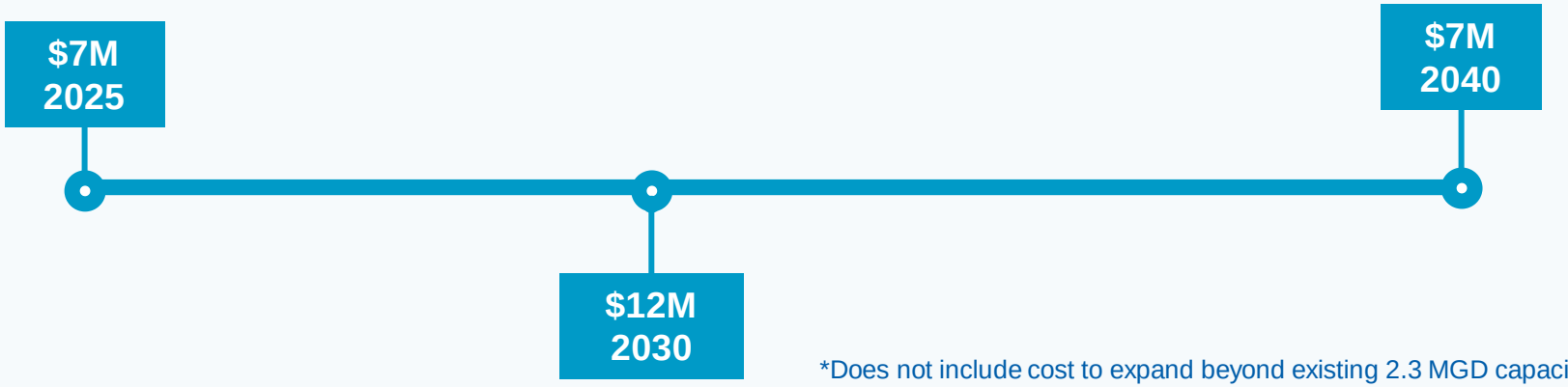
Additional wastewater treatment is needed to meet future environmental regulations.

Implementation Schedule

$165 Million

Hastings WWTP
Condition Assessment & Renewal Project

Condition Assessment - $26M to Renew through 2040*



*Does not include cost to expand beyond existing 2.3 MGD capacity.
*Does not include administration, engineering, contingency, or inflation.
*Status quo renewal.

Renewal Project Scope

- Plant Outfall
- Aeration Tanks
- Mechanical HVAC
- Security for new plant site

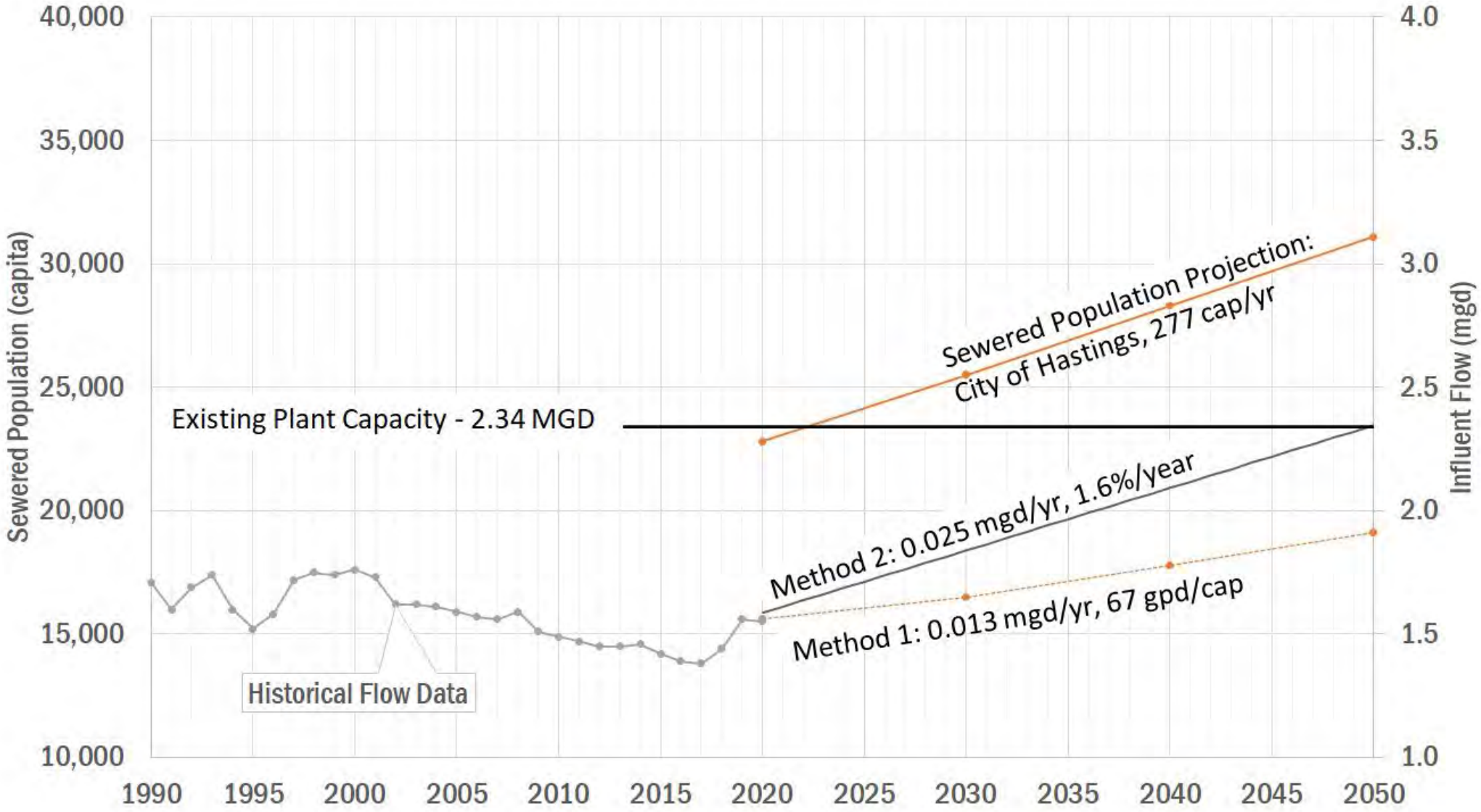
Schedule

2020 — 2022 — 2024

Design | Construction

$2.5 Million

Projected Growth in the Service Area



Minnesota Nutrient Reduction Strategy

- 45% Reduction in Nitrogen Loads to the Mississippi by 2040
- Load Reductions at Wastewater Treatment Plants will be necessary
- Hastings area is prioritized by the MPCA for future nutrient reduction
- Plant expansion at the current Hastings WWTP would be required
  - Expansion is challenging and limited.
  - Derating capacity is not an option for MCES.

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Key Scope & Implementation Plan $165M Program

Lift Station and Conveyance Systems ($23M)*

Construction 2024 to 2026

- Lift Station on Existing Site ($1M)
- Conveyance System to New Site ($22M)

Wastewater Treatment Plant and Outfall ($139M)*

Design/Build 2024 to 2027

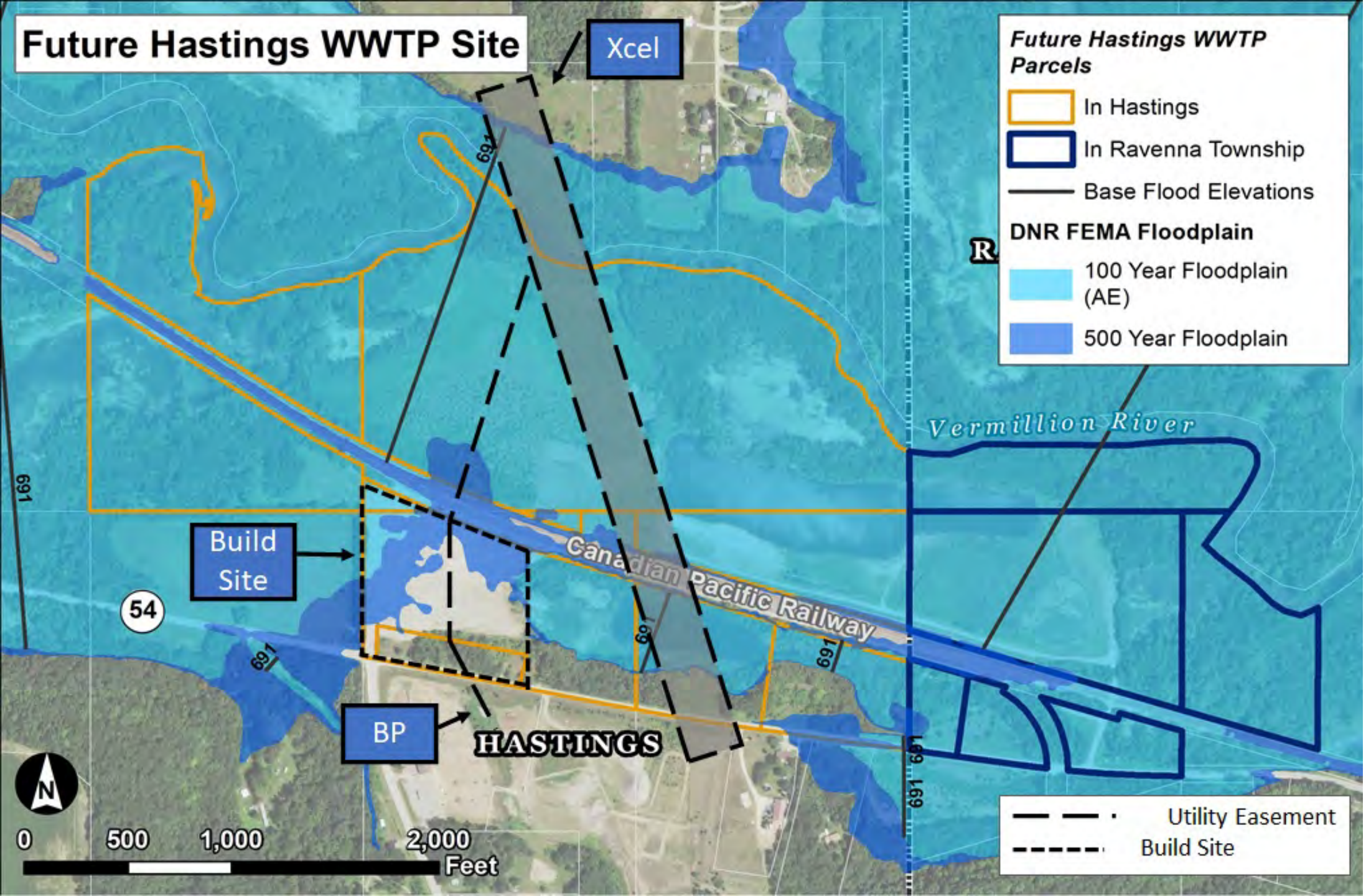
- Wastewater Treatment Plant ($119M)
- Outfall to the Mississippi River ($20M)

Decommission Existing Facilities ($3M)*

2028 to 2029

- Decommission Existing Facility

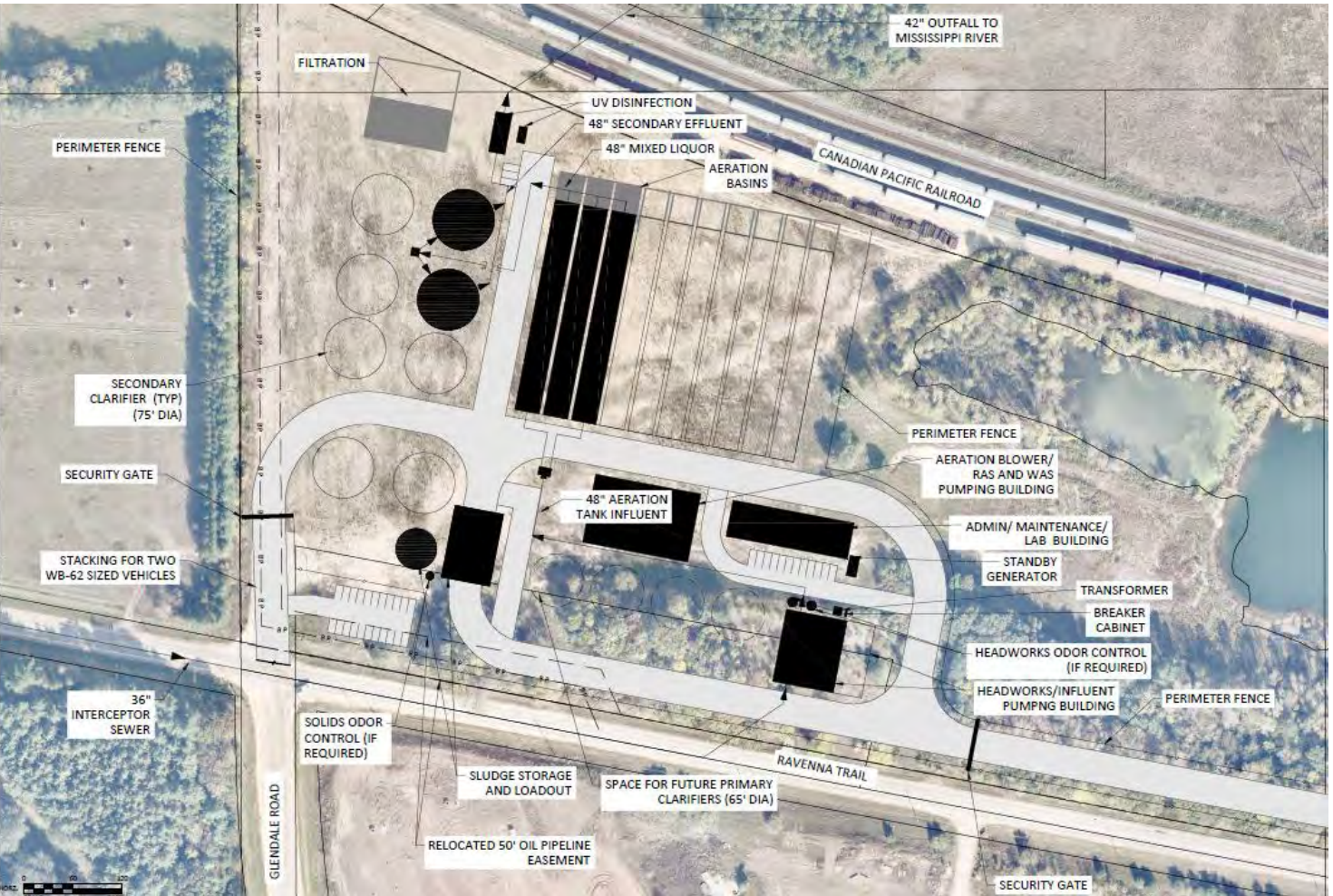
*Rounded costs. See Facility Plan for further detail.
Planning level costs include 30% contingency, 3% annual escalation cost, 20% Engineering and Administration.


Future Hastings WWTP Site
Xcel
Build Site
BP
HASTINGS
Canadian Pacific Railway
Vermillion River
54
691
Future Hastings WWTP Parcels
In Hastings
In Ravenna Township
Base Flood Elevations
DNR FEMA Floodplain
100 Year Floodplain (AE)
500 Year Floodplain
Utility Easement
Build Site
N
0
500
1,000
2,000
Feet

Wastewater Treatment Plant and Outfall ($139M)

2022 — 2024 — 2027 — 2028

Preliminary Design & Bid/Award | **Design/Build** | **Commissioning**



- Relocate Oil Line
- Preliminary Treatment
  - Influent Pumping
  - Screening
  - Grit Removal and Processing
- Primary/Secondary Treatment
  - Primary Clarifiers (future)
  - Biological Phosphorus Removal
- UV Disinfection
- Gravity Outfall to the Mississippi River
- Solids Thickening, Storage, and Loadout
- Odor Management Systems
- Facility Support Systems
- Site Access and Security

Effluent Discharge - Alternatives

ALTERNATIVE	CAPITAL COSTS ($)	O & M COSTS ($)	SALVAGE VALUE ($)	TOTAL NPV WITH ADJUSTMENT ($)
Alternative 1 – Outfall to Mississippi River **(Recommended)**	$5,910,000	$6,025,000	$(2,308,000)	$9,927,000
Alternative 2 – Outfall to Vermillion River	$9,932,000	$8,903,000	$(2,223,000)	$16,611,000
Alternative 3 – Rapid Infiltration Basin	$14,645,000	$28,937,000	$(4,159,000)	$39,424,000
Alternative 4 – Deep Injection wells	$31,475,000	$23,496,000	$(7,384,000)	$47,588,000

Alternative 1 is recommended

- Lowest Net Present Value
- Large Assimilative Capacity
- Supports Expanded Flows
- Included in MCES Mississippi Basin Total Phosphorus Permit

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Preliminary Treatment: Influent Pumping Alternatives

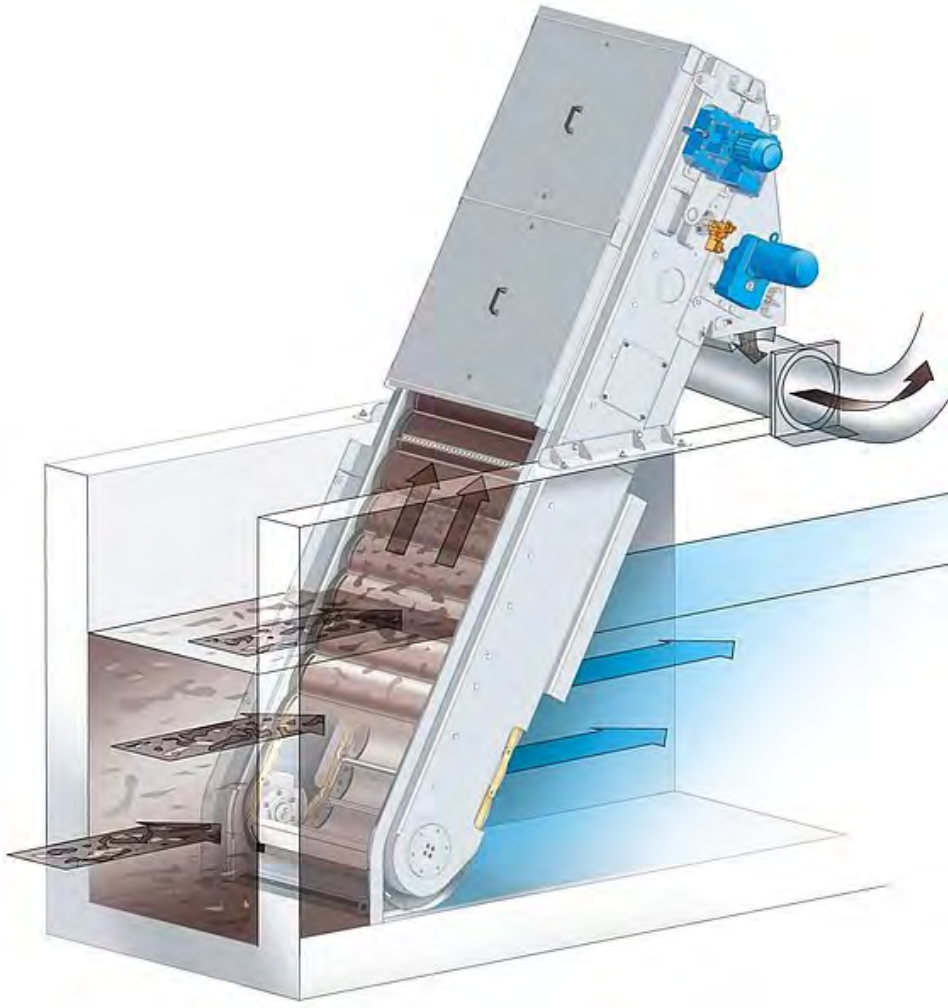
INFLUENT PUMPING ALTERNATIVES	CAPITAL COSTS ($)	O & M COSTS ($)	TOTAL NPV WITH ADJUSTMENT ($)
Alternative 1 – Wetwell with Submersible Pumps	15,550,000	8,180,000	23,730,000
Alternative 2 – Wetwell/Drywell **(Recommended)**	17,125,000	8,320,000	25,440,000

Alternative 2 is recommended

- Highest Net Present Value
- Ease of Maintenance
- Expandability

Preliminary Treatment: Screenings Alternatives

SCREENINGS ALTERNATIVES	CAPITAL COSTS ($)	O & M COSTS ($)	TOTAL NPV WITH ADJUSTMENT ($)
Alternative 1 – Perforated Plate	820,000	1,680,000	2,500,000
Alternative 2 – Multi-Rake **(Recommended)**	880,000	1,560,000	2,440,000
Alternative 3 – Climber	1,050,00	1,865,000	2,920,000



Alternative 2 is recommended

- Lowest Net Present Value
- Ease of Maintenance
- Lowest Operating Cost

Preliminary Treatment: Grit Removal and Processing Alternatives

GRIT REMOVAL ALTERNATIVES	CAPITAL COSTS ($)	O & M COSTS ($)	TOTAL NPV WITH ADJUSTMENT ($)
Alternative 1 – Smith and Loveless Vortex	250,000	442,000	692,000
Alternative 2 – Hydro International HeadCell	331,000	587,000	917,000

ALTERNATIVE	CAPITAL COSTS ($)	O & M COSTS ($)	TOTAL NPV WITH ADJUSTMENT ($)
Alternative 1 – WEMCO Hydrogritter II	453,000	802,000	1,255,000
Alternative 2 – Hydro International GritCleanse	438,000	776,000	1,215,000
Alternative 3 – Smith and Loveless Grit Washer	174,000	308,000	482,000

Selection will be based on performance specifications developed during design.

Primary and Secondary Treatment Alternatives

ALTERNATIVE	CAPITAL COSTS ($)	O & M COSTS ($)	TOTAL NPV ($)
Alternative 1: Nitrifying Activated Sludge with Chemical Phosphorus Removal	$63,800,000	$540,000	$77,000,000
Alternative 2: Activated Sludge with Enhanced Biological Phosphorus Removal	$64,400,000	$258,000	$71,000,000
Alternative 3: Activated Sludge with Enhanced Biological Phosphorus Removal and no Primary Clarifiers **(Recommended)**	$62,800,000	$160,000	$67,000,000
Alternative 4: Simultaneous Nitrification/Denitrification	$65,400,000	$247,000	$72,000,000
Alternative 5: BIOCOS	$62,900,000	$129,000	$66,000,000
Alternative 6: Mobile Organic Biofilm	$68,000,000	$316,000	$76,000,000

Alternative 3 is recommended

- Second Lowest Net Present Value Alternative
- Proven for Phosphorus Removal
- Progression Path for Potential Future Nutrient Reduction

Alternative 5 may be evaluated further in preliminary design if Total Phosphorus removal below 1 mg/L is proven.

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Disinfection Alternatives

ALTERNATIVE	CAPITAL COSTS ($)	O & M COSTS ($)	TOTAL NPV WITH ADJUSTMENT ($)
Alternative 1 - Sodium Hypochlorite	6,400,000	9,300,000	15,700,000
Alternative 2 – UV Disinfection **(Recommended)**	5,200,000	5,700,000	11,000,000

Alternative 2 is recommended

- Lowest Net Present Value
- Reduced Chemical Handling
- Smaller Footprint
- Remote Operation Potential

Solids Processing Alternatives

ALTERNATIVE	CAPITAL COSTS ($)	O & M COSTS ($)	TOTAL NPV ($)
Alternative 1: Mesophilic Anaerobic Digestion and Land Application	$15,400,000	$788,000	$35,100,000
Alternative 2a: Liquid Sludge Hauling, Thickened Primary and Waste Activated Sludge	$4,500,000	$569,300	$18,700,000
Alternative 2b: Liquid Sludge Hauling, Thickened Waste Activated Sludge Only – No Primary Clarifiers **(Recommended)**	$5,700,000	$485,700	$17,900,000
Alternative 3: Dewatered Cake Hauling, Thickened Primary Sludge and Non-thickened Waste Activated Sludge	$14,600,000	$544,300	$28,200,000
Alternative 4: Dewatered Cake Hauling, Thickened Primary and Waste Activated Sludge	$11,500,000	$566,100	$25,700,000

Alternative 2b is recommended

- Lowest Net Present Value
- Simplifies Solids Processing

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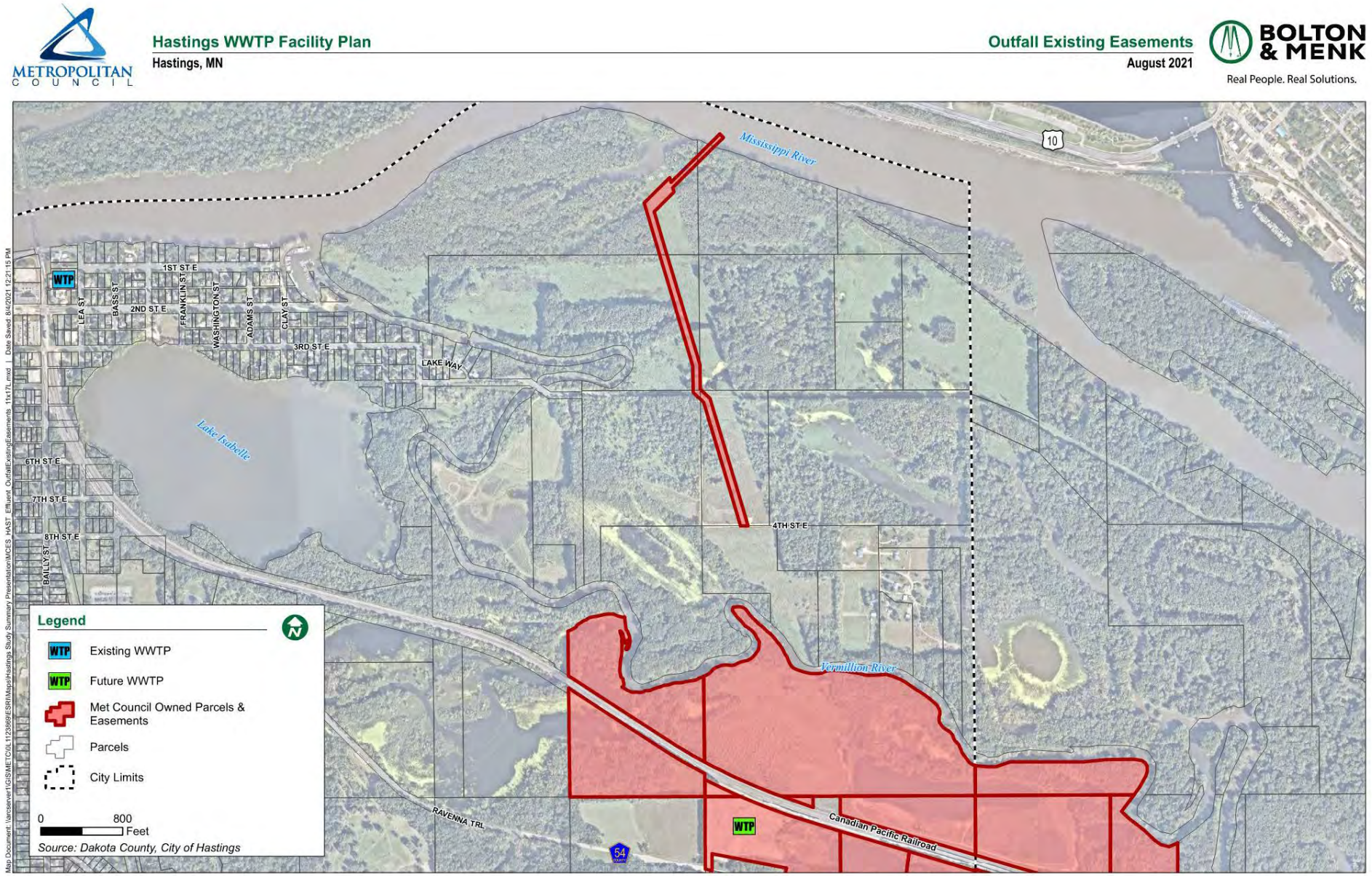
Discharge Alignment Existing Easements



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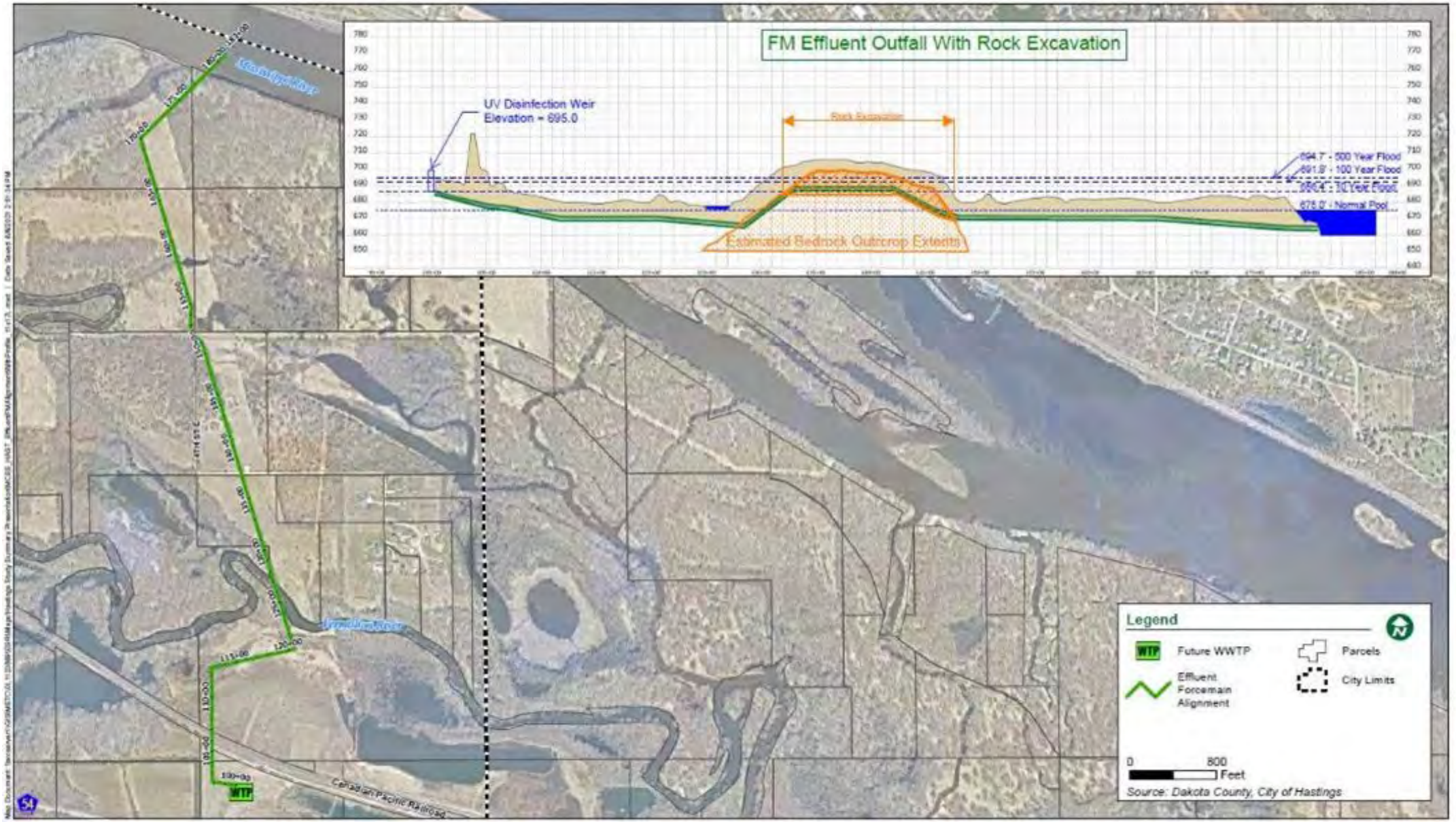
Treated Water Discharge Alignment



Effluent Pumping Alternatives

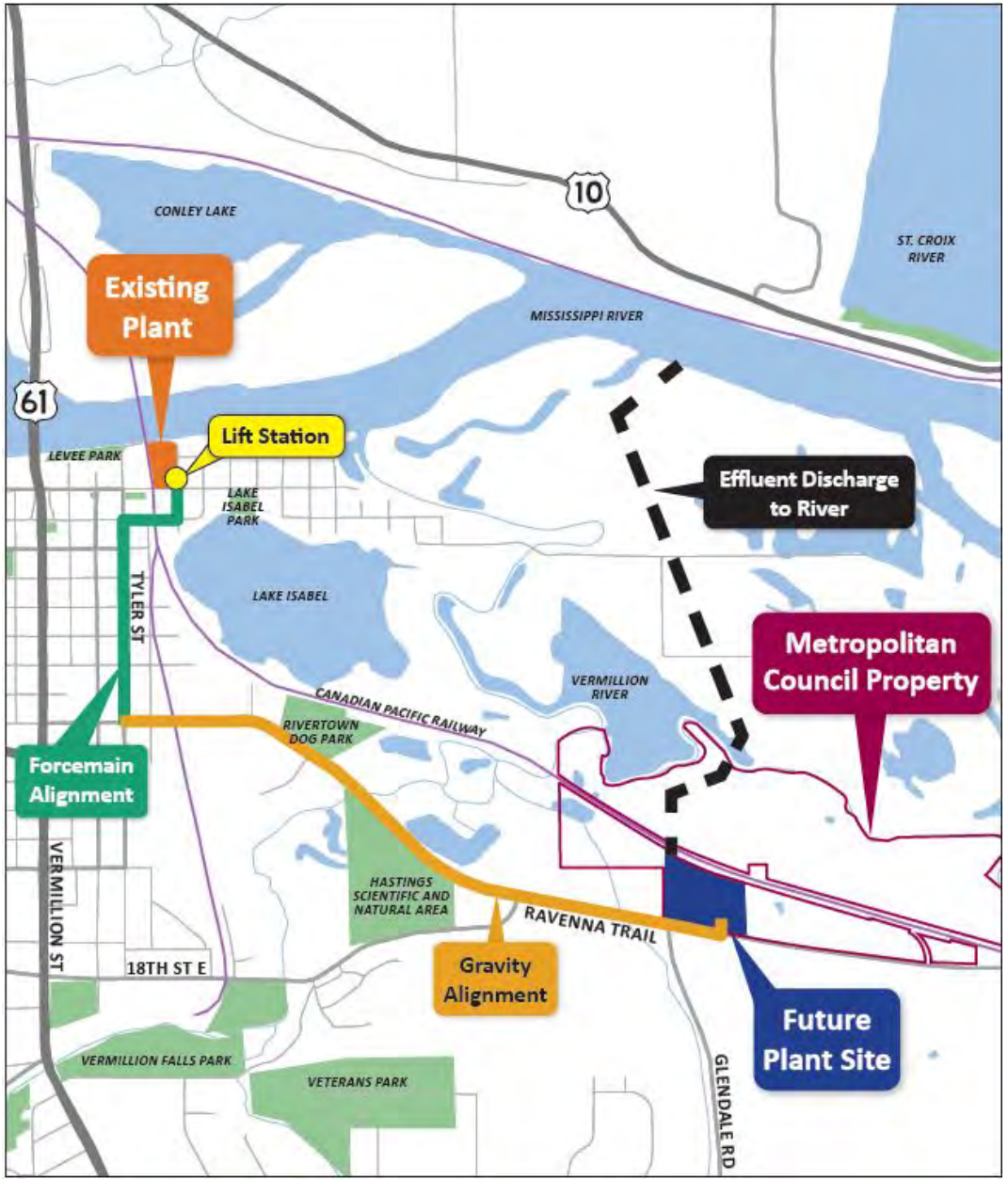
ALTERNATIVE	CAPITAL COSTS ($)	O & M COSTS ($)	TOTAL NPV WITH ADJUSTMENT ($)
Alternative 1 Only Influent Pumping (Recommended)	22,300,000	327,000	22,627,000
Alternative 2 - Influent and Effluent Pumping	29,113,000	3,500,000	32,613,000

Alternative 1 is Recommended

- Lowest Net Present Value
- One Pumping Station at the Plant
- Gravity Flow to the Mississippi River

Lift Station and Conveyance Systems ($23M)

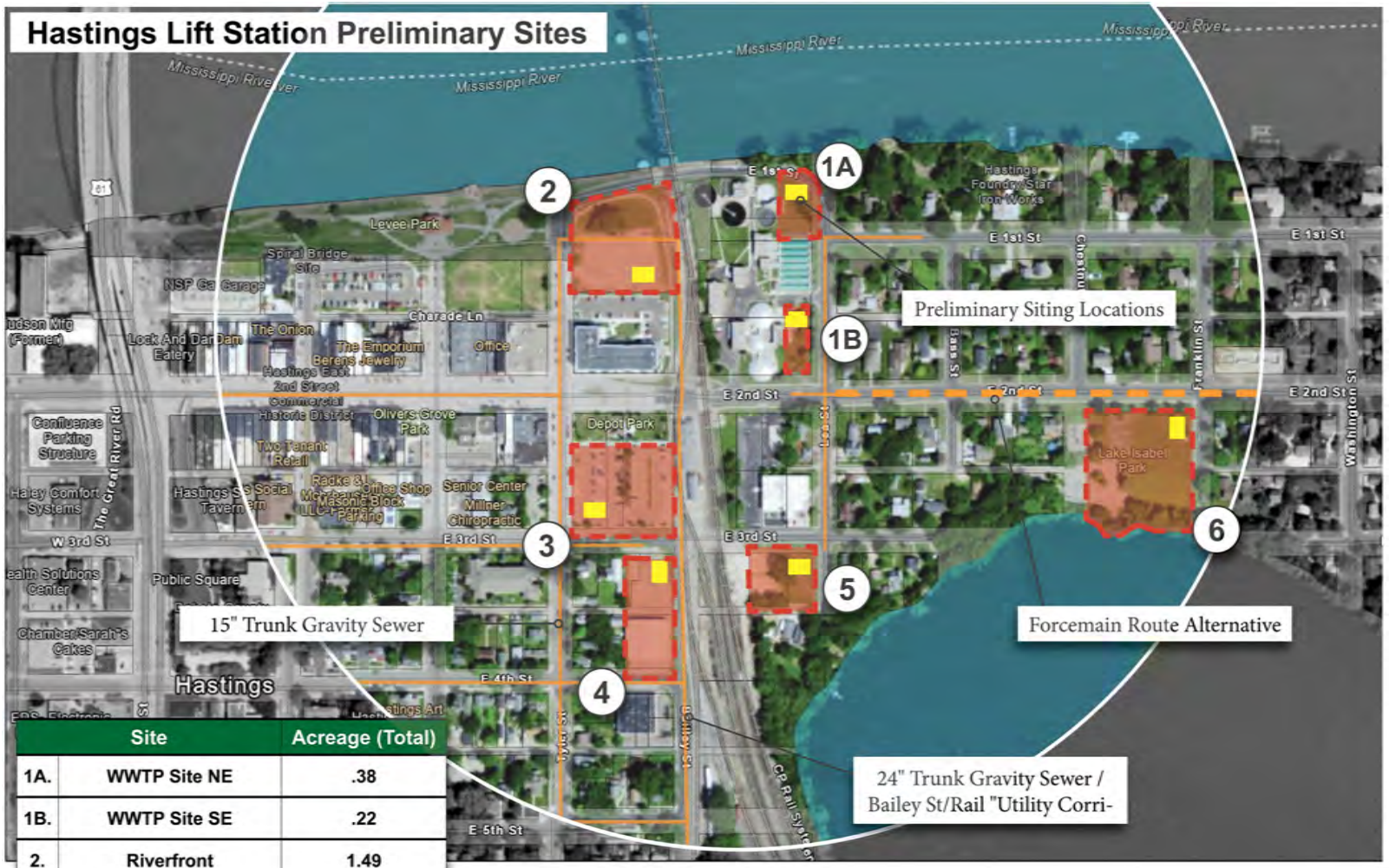
- 0.2 mgd lift station located on the existing Hastings WWTP site
- 6-inch diameter forcemain from the lift station to the new gravity trunk sewer
- Gravity trunk sanitary sewer from the forcemain to the new plant



2022 — 2024 — 2026 — 2027

Design | Construction | Commissioning

Lift Station Siting Map



	Site	Acreage (Total)
1A.	WWTP Site NE	.38
1B.	WWTP Site SE	.22
2.	Riverfront	1.49
3.	Municipal Parking Lot	.93
4.	UBC/City Storage	.85
5.	Lea St Lots	.53
6.	Lake Isabel Park	1.79

- Reviewed undeveloped properties within 1300 feet of existing WWTP
- 6 properties total reviewed

Lift Station Siting - Major Criteria Reviewed

- Site Characteristics
  - lot size
  - current land use
  - existing encumbrances
- Development Potential
  - future land use designation
  - estimated market value
  - potential market value
- Environmental Considerations
  - prevailing winds
  - flood plain
  - MRCCA
  - historic
  - cultural
  - active MPCA site
- Constructability
  - Geotechnical
  - temp conveyance needs
  - operations of existing plant
  - existing utilities)
- Capital Cost
  - pipe routing to lift station
  - land acquisition

Lift Station Siting Comparison

Site 1B | WWTP SE

Pros

- Met Council owned land
- No easements or restrictions
- Would require minimal infrastructure improvements compared to other sites
- Not located within a flood zone
- Lowest capital costs
- Minimal impacts to existing WWTP plant
- Sufficient site access with existing roadway infrastructure

Cons

- Falls within MRCCA, which has regulations around siting and construction (*not anticipated to present a significant issue*)
- May require screening, setbacks, and site design considerations to buffer from adjacent residential

Site 1B Quick Facts

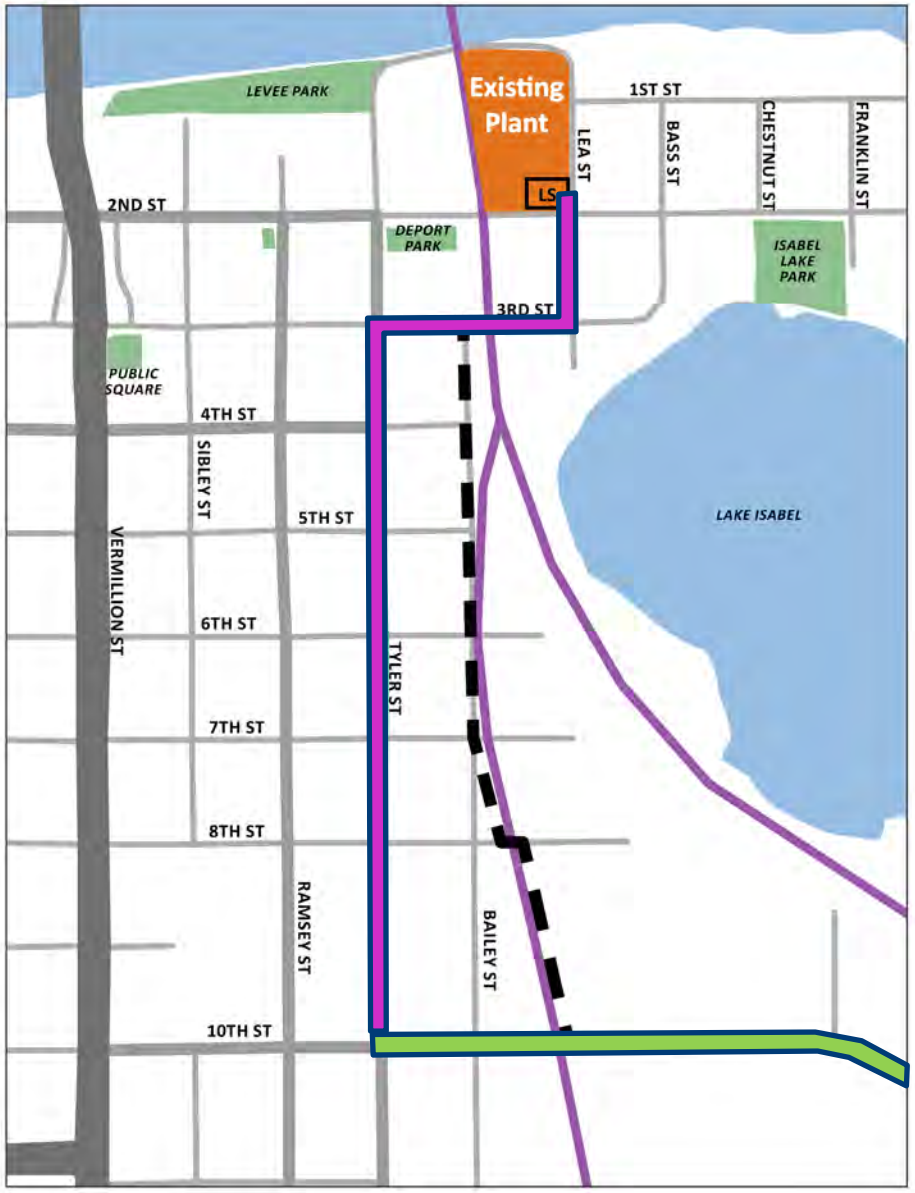
.50 Acre Site

80ft from nearest residential property

Located on existing WWTP

Siting may allow for future develop on surrounding site

Forcemain Alignments



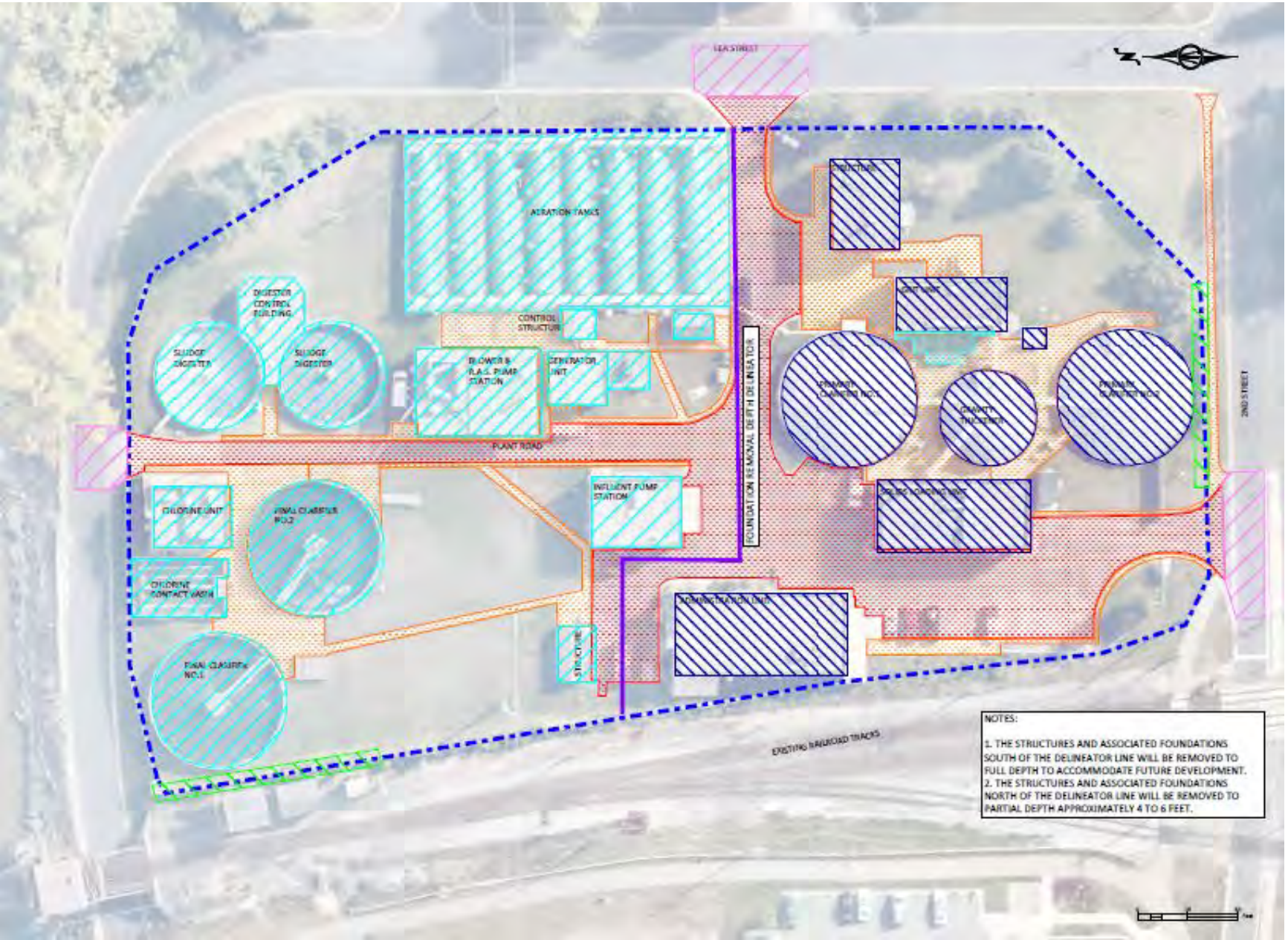
- 2 forcemain alignments reviewed
  - Tyer Street and Bailly Street
- Tyler Street is the recommended alignment
  - Bailly Street has been recently reconstructed and has complications with the railroad to the east
- Met Council will repair or replace any City utilities impacted by the forcemain installation

Legend

- LS — Future lift station
- Proposed forcemain
- Proposed alternate forcemain
- Proposed Gravity Sewer

Gravity Alignment

Decommission Existing Facilities ($3M)



- Concept to be used as a starting point for our intergovernmental agreement negotiations.
- South half of property shows removal of structures to bottom of footings.
- North half shows partial removal to 6 feet below ground elevation.

2028 2029

Decommissioning

Sustainability & Community Impacts

Environmental Sustainability

- Environmental Sustainability
  - Energy Conservation

Sustainable Services

- Sustainable Services
  - Odor Management

Community Impacts

- Community Impacts
  - Hauling
  - Archeological and Historical Review

Environmental Sustainability

- B3 SB2030 Guidelines
  - Administration/Maintenance Building
- Energy and Carbon Efficient Approaches
  - High Efficiency Equipment, Lighting, and Building Systems
  - Tier 4 Generator
  - Gravity Flow to Mississippi River
- Sustainable Landscapes and Green Infrastructure Best Management Practices
- On-site Non-Potable Effluent Water Use

Image of Green Roof at the MCES Empire Wastewater Treatment Plant in Farmington, MN

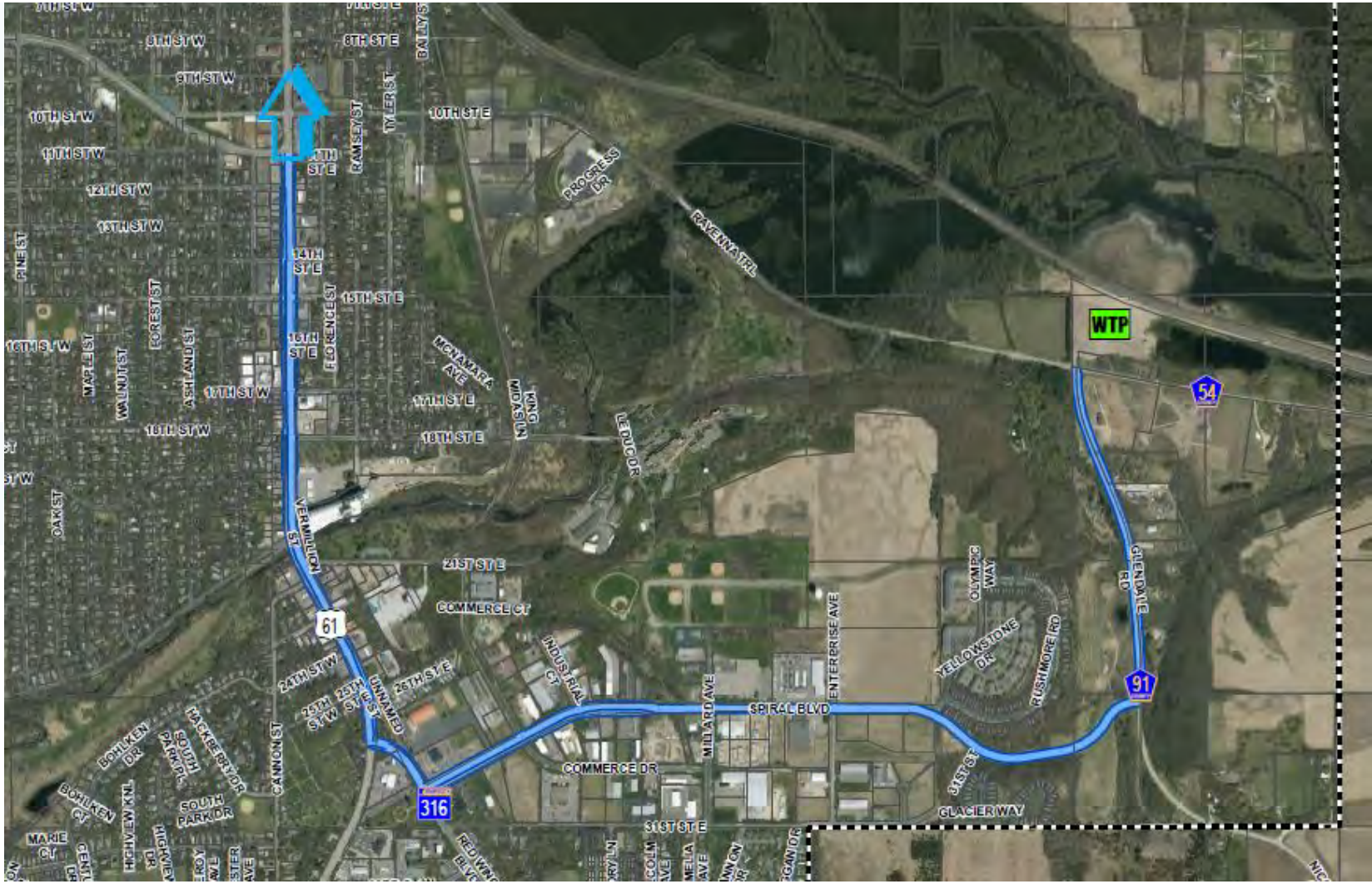
Sustainable Services and Community Impacts

Odor Management

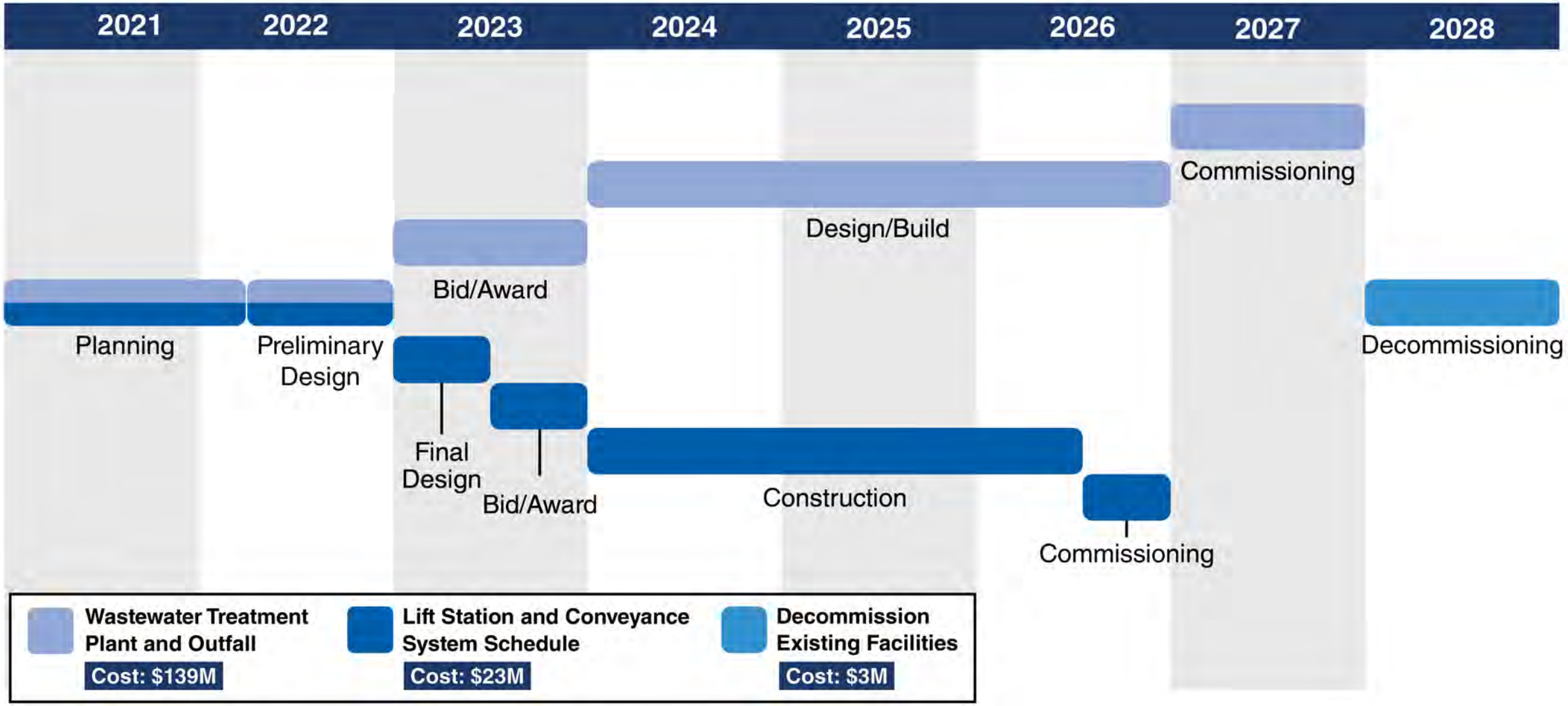
- Headworks
- Gravity Thickening
- Sludge Loadout
- Lift Station

Community Impacts

- Hauling Route
  - 4 trucks/day
  - 9-ton minimum roadway design
- Archeological and Historical Review



Implementation Schedule

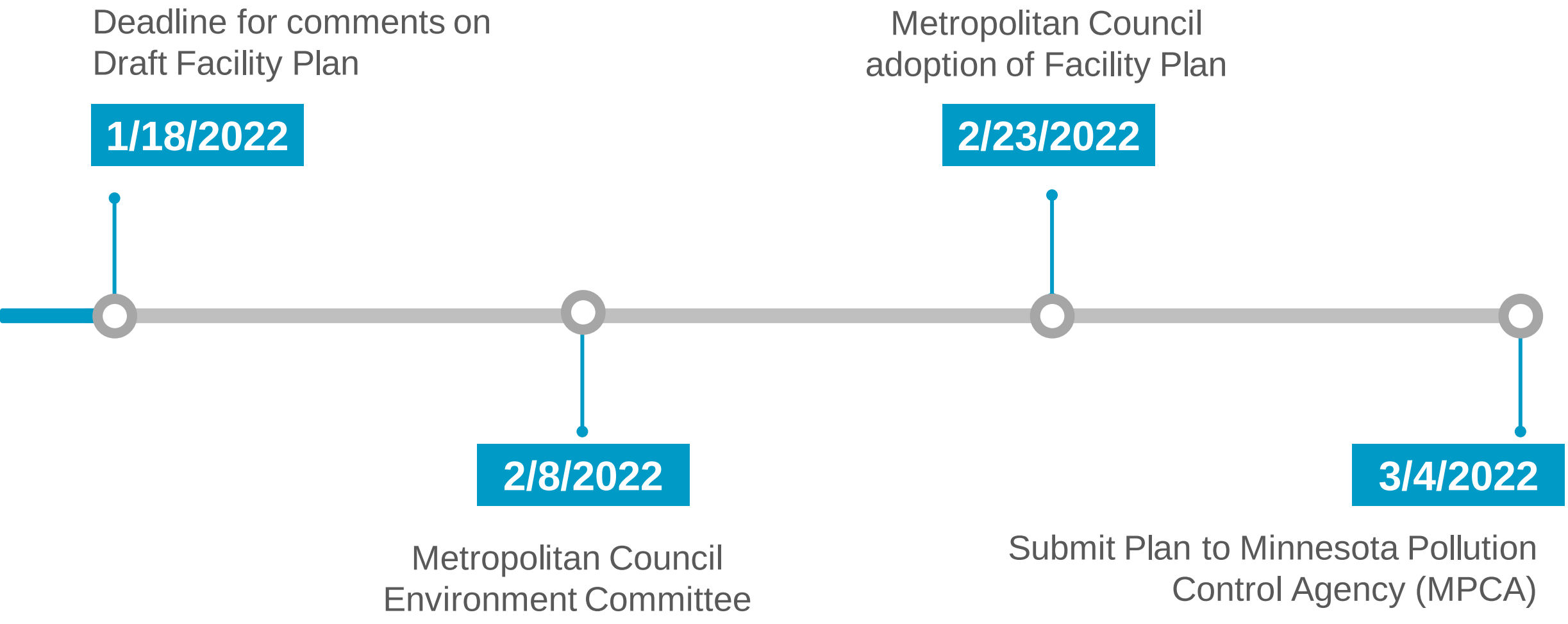


Total Cost and Rate Impacts

- MCES project funding: Public Facilities Authority (PFA) loans (20-year term)
- Loans for these projects are paid from two funding sources:
  1. Municipal Wastewater Charge (MWC): This is the MCES portion of your sewer bill.
  2. Sewer Availability Charge (SAC): This is a one-time charge for new connections.
- Impact to rates from $165 million in loans*:
  1. $6.25 = increase to the annual sewer billing per household (average $199 per year).
  2. $80 = per new household connection (or equivalent) per year paid from the SAC fund (for 20 years).

* 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.

Next Steps


Deadline for comments on Draft Facility Plan
1/18/2022
2/8/2022
Metropolitan Council Environment Committee Plan Review
Metropolitan Council adoption of Facility Plan
2/23/2022
3/4/2022
Submit Plan to Minnesota Pollution Control Agency (MPCA)

Next Steps – Environmental Assessment Worksheet

Some of the items included in the EAW:

- Natural Heritage Review
- Land Use Compatibility Review
- Environmental Assessment
- Air and Water Resource Review
- Historical Property Survey
- Noise and Transportation Assessment
- Cultural Properties Review and Assessment

Submit your comments

- Submit comments no later than **January 18, 2022**
- Submit comments via:

  - **E-mail:** comment@hastingswwtp.com
  - **Postal mail:** Heidi M. Hutter,
    Metropolitan Council Environmental Services,
    390 Robert St. N., St. Paul, MN 55101-1805
  - **Record comments:** 651.302.2908
    (Project Comment Line)
  - **Send TTY comments:** to 651.291.0904

Draft Facility Plan – Report Available for Review

- Hastings City Hall, 101 Fourth St. E., Hastings
- Pleasant Hill Library, 1490 S. Frontage Rd., Hastings
- Metropolitan Council Website: MetroCouncil.org/HastingsWWTPProject.com

Stay Informed

Share questions and comments:

Email: comment@hastingswwtp.com

Call the Project Hotline: (651) 302 - 2908

Learn more about the project:

MetroCouncil.org/HastingsWWTPProject

METROPOLITAN COUNCIL

Thank you for joining us!

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