



# Sanitary Sewer System Feasibility Study



Real People. Real Solutions.

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# Overview

- Background and Goals
- Land Use Updates
- Study Results
  - Lift Stations
  - Gravity Sewer
- Next Steps & Funding Opportunities



## Sanitary Sewer System Feasibility Study

City of New Prague, MN  
August 21, 2024



**BOLTON  
& MENK**

Real People. Real Solutions.

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# Background

- Comprehensive Plan (2005-2015, Amendments 2022)
  - Leveraging land use and utility plans
- Sanitary Sewer Comprehensive Plan (2018)
  - Sewer hydraulic modeling
  - Future lift station planning
- Coordination with City Staff
  - Ken Ondich
  - Matt Rynda
- Numerous coordination meetings throughout.

# Goals

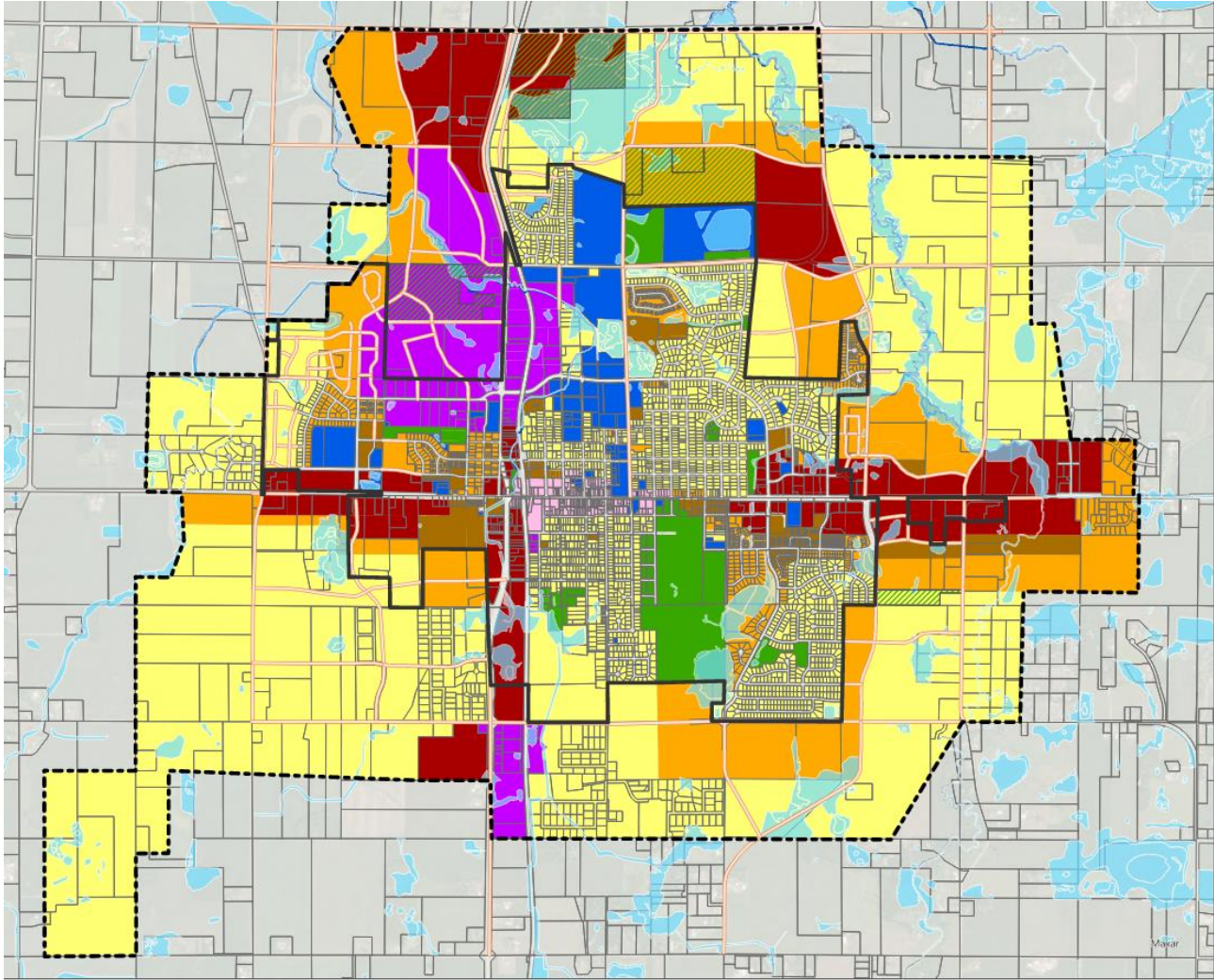
- Update future land use
- Expand hydraulic modeling
- Identify pipe routes along future road networks
- Provide gravity capacity for future growth
- Establish preliminary lift station depths and sizes



# Land Use Updates

- 2024 updates
- Land use impacts expected sanitary sewer discharge

Land Use Code	Sanitary Loading Rate (Gal/Acre/Day)	Land Use Description
AG_VAC	2	Agricultural / Vacant
COM	1020	Commercial
GOLF	4	Golf Course
INDUSTRIAL	933	Industrial
PARK	4	Park
PUBLIC	310	Public
RED_MED	990	Medium Density Residential
RESINGLE	512	Low Density Residential
RESMULTI	1350	High Density Residential
ROW	0	Right-of-way



## DRAFT FUTURE LAND USE

CITY OF NEW PRAGUE  
 COMPREHENSIVE PLAN UPDATE  
 CITY OF NEW PRAGUE  
 SCOTT/LE SUEUR COUNTY, MINNESOTA

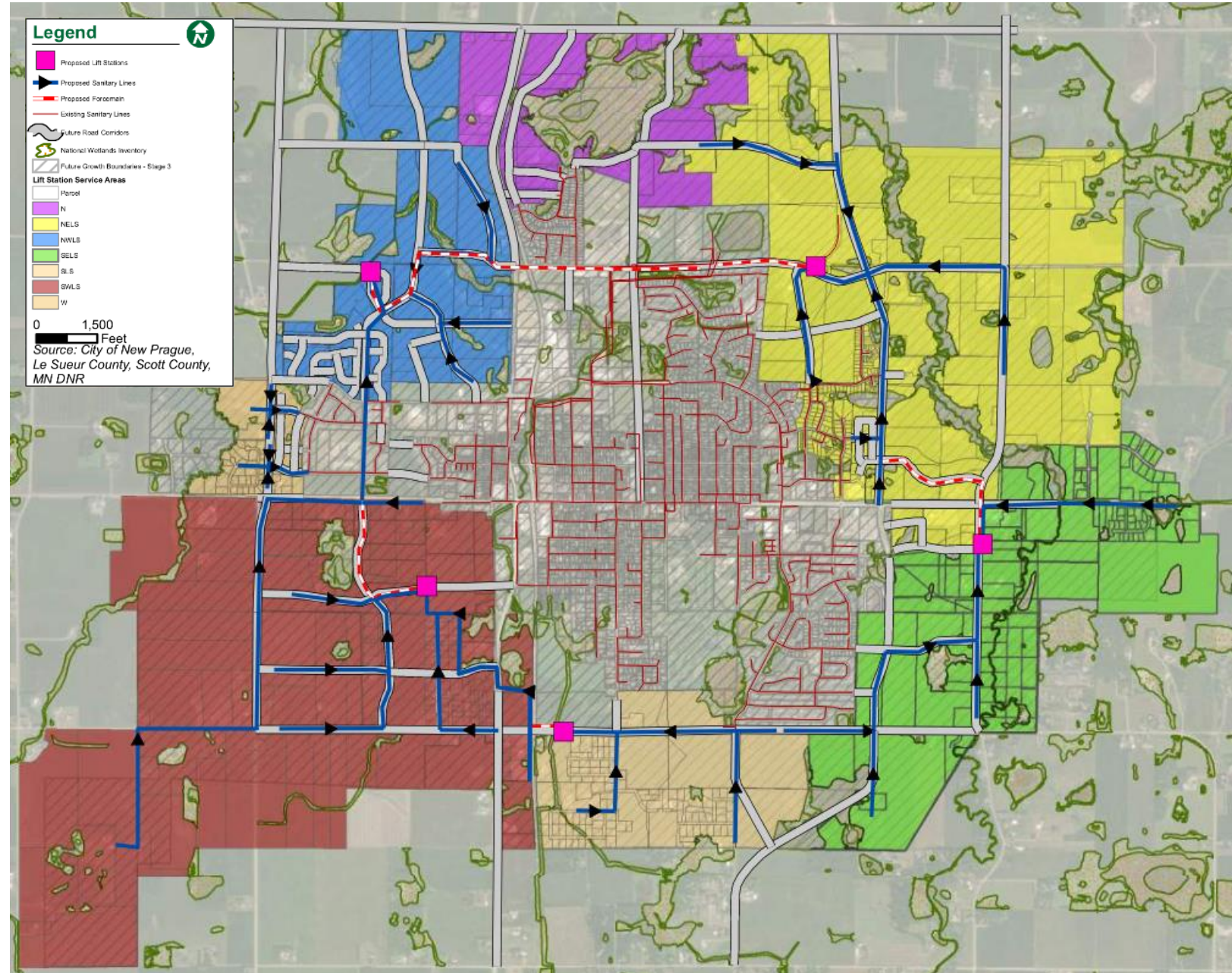
- Future Land Use Categories
- Single Family Res
  - Medium Density Res
  - High Density Res
  - Downtown Flex
  - Business Flex
  - Industrial
  - Public
  - Parks and Green Space
- [Dashed Box] New Prague City Limits  
 [Dotted Box] Comprehensive Plan Boundary  
 [Thin Line] New Prague Parcels  
 [Orange Line] Future Road Corridors  
 [Light Blue] Wetlands

Data Sources:  
 Scott County, Le Sueur County, City of New Prague, FEMA



# Study Results

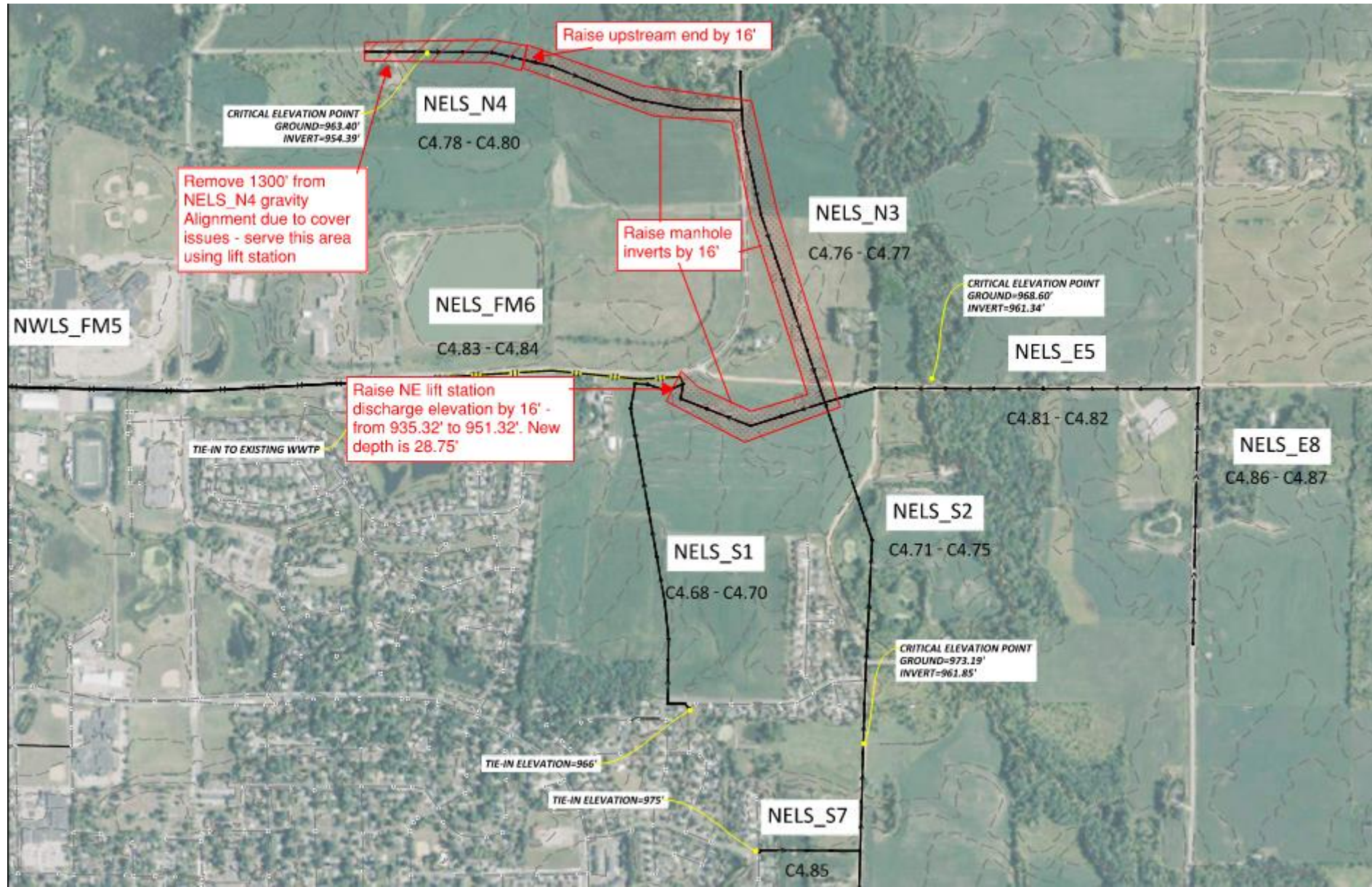
- Model expansion
  - Future growth areas
  - Extend service
- Gravity sewer, lift station, and force main locations
- Develop preliminary pipe grades



# Study Results – Pipe Profile



# Study Results – Understand Elevation Issues



# Study Results – Lift Stations

- Identified critical elevations
  - Depth and constructability
- Preliminary cost estimates
  - Backup power, supervisory controls, pumps, piping and wet/dry well structures

Table 4: Summary of Proposed Lifts Stations and Force Mains				
Lift Station Area	Design Pumping Capacity (GPM)	Force Main Size (inches)	Number of Pumps	Estimated Construction Cost
Southwest Lift Station (SWLS)	2,393	10	2	\$1,080,000
South Lift Station (SLS)	587	6	2	\$570,000
Southeast Lift Station (SELS)	1,363	8	2	\$1,075,000
Northeast Lift Station (NELS)	2,816	12	2	\$1,060,000
Northwest Lift Station (NWLS)	4,290	14	3	\$1,340,000





# Study Results – Preliminary Costs

- Broken down by major sewershed area
- Includes gravity pipe, manholes, lift station, and force main
- Estimated construction costs include 20% contingency.

**TOTAL ESTIMATED CONSTRUCTION COST: \$31,220,880**

**DESIGN, ADMINISTRATION AND CONSTRUCTION ENGINEERING: \$4,683,130**

**TOTAL ESTIMATED PROJECT COST: \$35,904,010**



# Next Steps

- Evolve modeling/study with:
  - Changes to land use planning
  - Changes to transportation network planning
  - Proposed property acquisition and development scenarios
- Explore/evaluate funding mechanisms



# Funding Opportunities

- Local Wastewater Rates and Sewer Access Charges
  - Offset cost of implementing comprehensive sewer collection system costs
  - Need a comprehensive fee and rate study
- Bonding
  - sell general obligation, local improvement, or revenue bonds in order to raise the capital costs for the sanitary sewer improvements
- Assessments
  - portion of the capital costs of the sanitary sewer improvements can be assessed to local property owners under Minnesota Statute 429
- State Revolving Fund Loan
  - Clean Water Revolving Fund (CWRF) loan program to provide financial assistance for water pollution control projects



# Funding Opportunities

- Small Cities Development Program
  - Benefit to low and moderate low-income persons
  - Additional documentation needed
- PFA Wastewater Infrastructure Funding (WIF) Program
  - Supplemental assistance, zero percent loans that may be forgiven
- Economic Development Administration (EDA)
  - Grants to help communities develop infrastructure to attract or maintain business/industry
- League of Minnesota Cities
  - Grant Navigator program to help members assess grant programs and local needs



**Thank You**  
Questions?



**Tim Olson, PE**

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