



## **PUBLIC UTILITIES COMMISSION AGENDA**

City of Brainerd, Minnesota  
BPU Service Center, 8027 Highland Scenic Rd, Commission Room  
Thursday, August 28, 2025 @ 5:30 PM

The public is invited to attend these meetings in person

1. **Call To Order**
2. **Roll Call**  
  
    \_\_\_ Tabatt \_\_\_ Cross \_\_\_ Czczok \_\_\_ O'Day \_\_\_ Angland
3. **Approval Of Agenda - Voice Vote**
4. **Receive update from Bolton & Menk regarding the Wastewater Facility Plan**  
  
    A. **Bolton & Menk Inc - Presentation**
5. **Unfinished Business**
6. **New Business**
7. **Adjourn**

Visit Brainerd Public Utilities website at [www.bpu.org](http://www.bpu.org)

### **MISSION**

"The mission of Brainerd Public Utilities is to provide safe, reliable, environmentally friendly electric, water and sewer services to our customers at the lowest reasonable cost."



# Brainerd WWTF 2050 Facility Plan Discussion

Presented by: Bolton & Menk, Inc.

August 28, 2025 5:30 pm

Brainerd Public Utilities



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# Today's Topics

- Introductions
- Project Overview and Status
- Planning Document Review/Discussion
- Finalize Population Projections
- Discuss Projected Flows/Loadings
- Next Steps



# Project Overview

Morgan Salo, Water/Wastewater Project Manager



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# Project Overview

- Facility Plan used to evaluate WWTF improvements for the next 25 years
  - Design Year: 2050
  - Evaluate capital improvements to facility
  - Identify future pollutant limit considerations (e.g., Total Nitrogen, PFAS)
  - Evaluate cost considerations and funding mechanisms (capital, O&M, etc.)
  - Provide draft layouts and phasing recommendations for improvements
  - Provide final recommendations for improvements
- First step – develop population projections
  - Evaluate community growth (residential, commercial, industrial, and institutional)
  - Important to understand population/development dynamics

# Planning Stage Status

- 2050 Brainerd and Baxter populations identified.
  - City input was used to develop projections of 2050 populations
- Planning phase is the foundation for the rest of the facility plan
  - Collaborative process
  - Provides clear picture for future growth
  - Important for an existing infrastructure evaluation
  - Important for looking into new treatment alternatives
- Goal/Action Item: Confirm 2050 design populations
  - Provides foundation and direction for the facility plan





# Planning Document Discussion

Robin Caufman, Community Planning Project Manager



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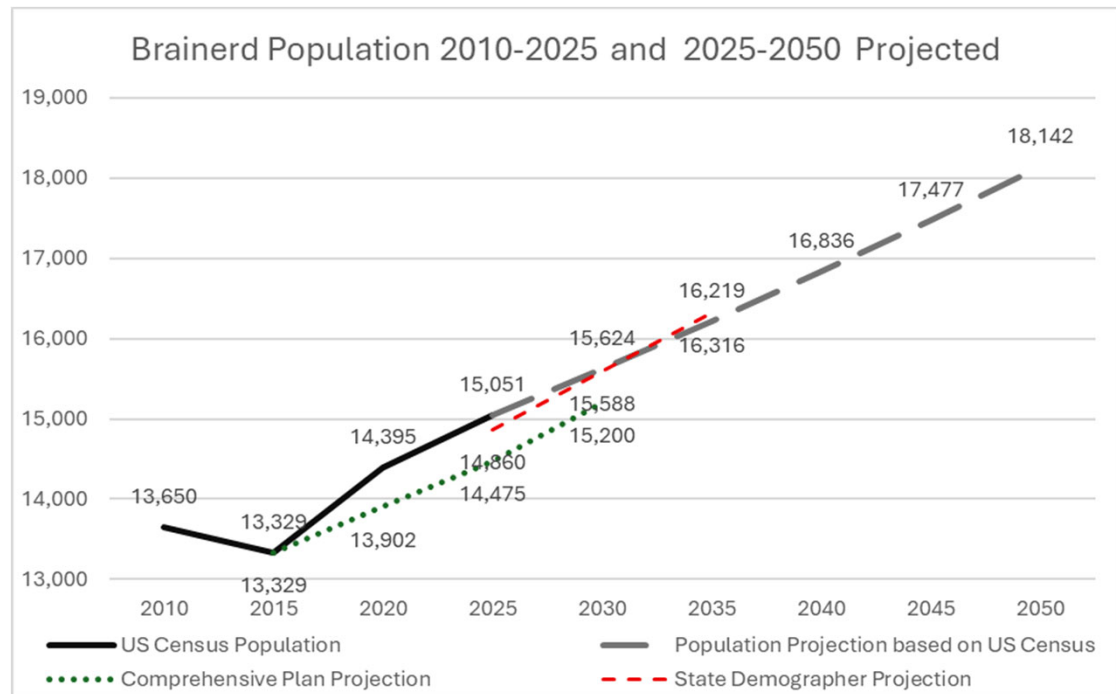


# Existing Conditions Overview

- Reviewed existing plans for both cities
- Compiled and analyzed data including census, housing units, demographer projections, jobs, building permits etc..
- Talked to city planning staff for background on plans, development trends, and anticipated growth
- Drafted existing conditions memos
- Met with both cities individually to go over the findings and review draft memos
- Refined analysis based on cities' feedback and finalized memos

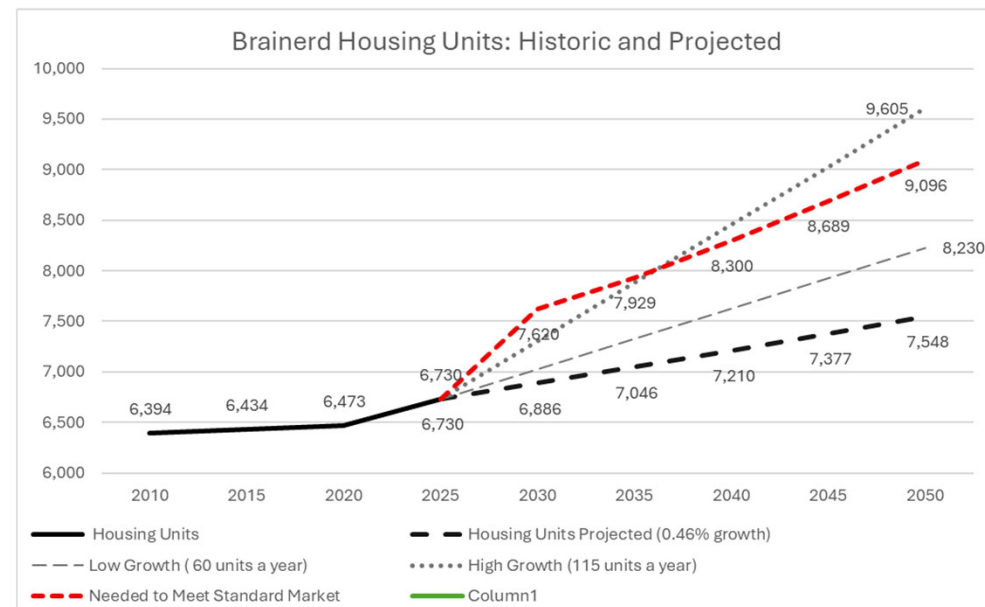
# Brainerd: Population

- State demographer projections anticipate 0.92% growth, which is comparable to city's growth
  - Used for projections based on city preference
  - Population in 2050: 18,607
- US Census data 0.75% annual growth
  - Population in 2050: 18,142
- Historical annual growth rate of 0.75% or average of 100 people per year



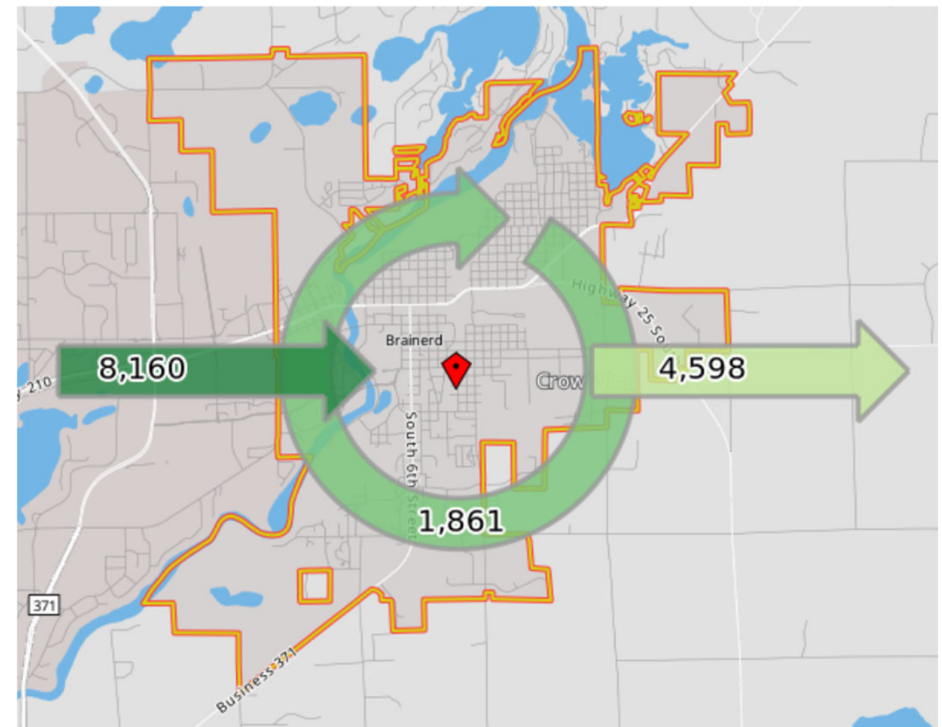
# Brainerd: Housing and Households

- Average people per households = 2.21
- 6,448 households, 6,730 housing units in 2025
- Households  $\neq$  Housing
  - Seasonal housing of 2.44%
  - Vacancy goal of 5%
- Annual housing growth of 0.46%
- Anticipate building 10-15 single-family homes and 50-100 multifamily housing units per year through 2050



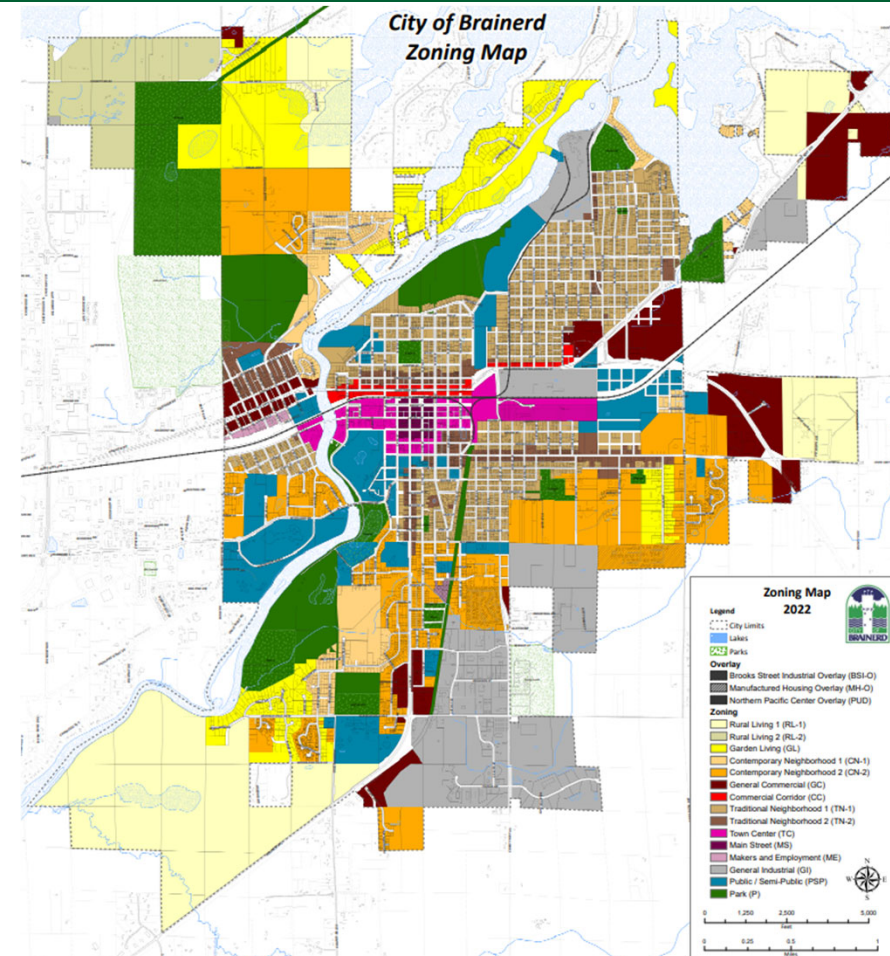
# Brainerd: Jobs and Economy

- Top industries are healthcare, retail, manufacturing, accommodations/food accounts for nearly 60% of jobs
- Job growth in Crow Wing County is 2.48%
- Labor force growth is 1.56%
- 2050 forecast
  - Jobs 23,012
  - Workers 18,367



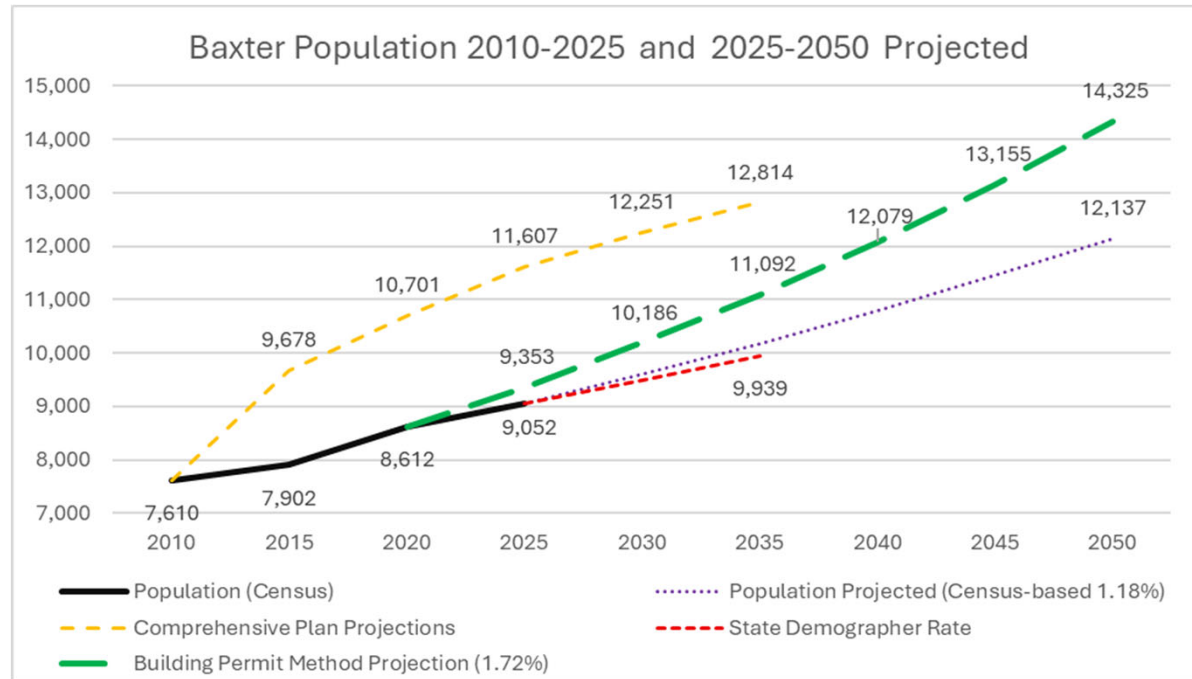
# Brainerd: Land Use and Growth

- Imagine Brainerd 2035 plans for mixed use development, infill and redevelopment
- The plan identifies areas where future growth is expected,
- City is not looking to annex



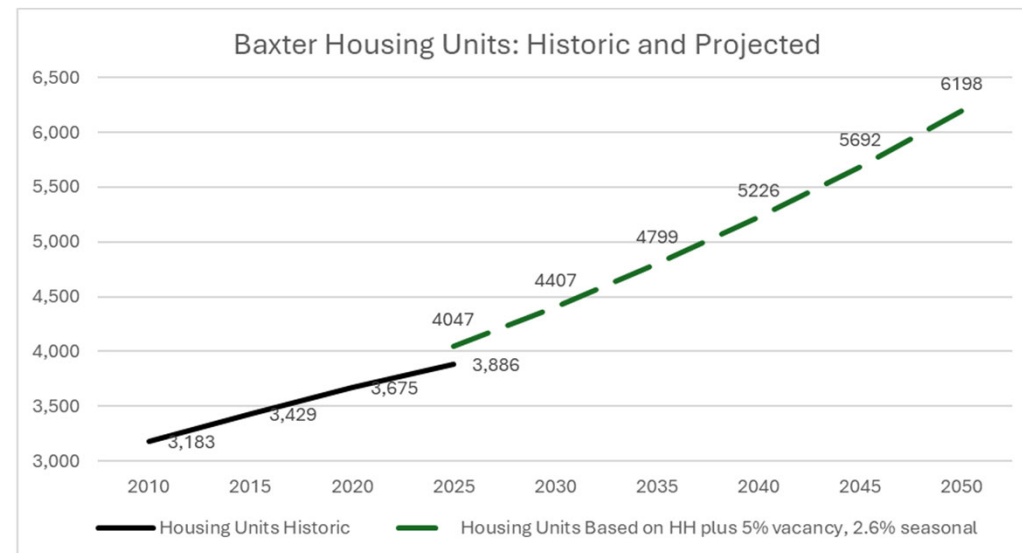
# Baxter: Population

- Census based projections of 1.18% underestimates growth
- State demographer projections even lower
- City of Baxter projecting growth of 1.72% based on building permits and sustaining recent growth
  - Population by 2050 14,325



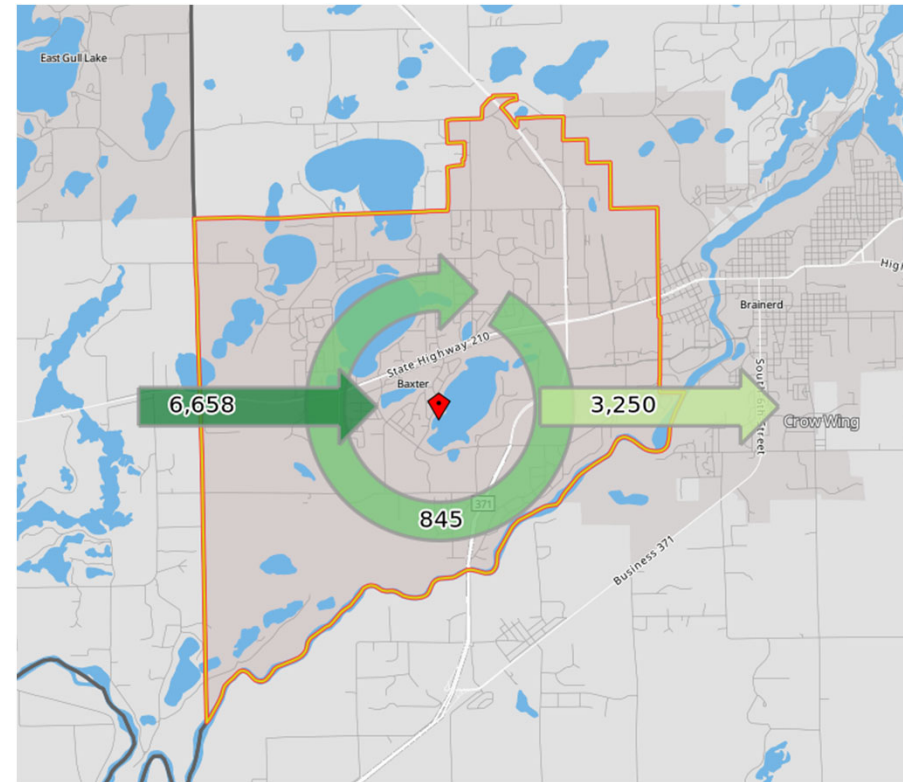
# Baxter: Housing and Households

- Average people per households = 2.49
- 3,756 households, 3,886 housing units in 2025
- Households  $\neq$  Housing
  - Seasonal housing of 2.6%
  - Vacancy goal of 5%
- Annual housing growth of 3.02%
- Based on demand, projections anticipate 2,312 new housing units by 2050 or approximately 92 new units per year



# Baxter: Jobs and Economy

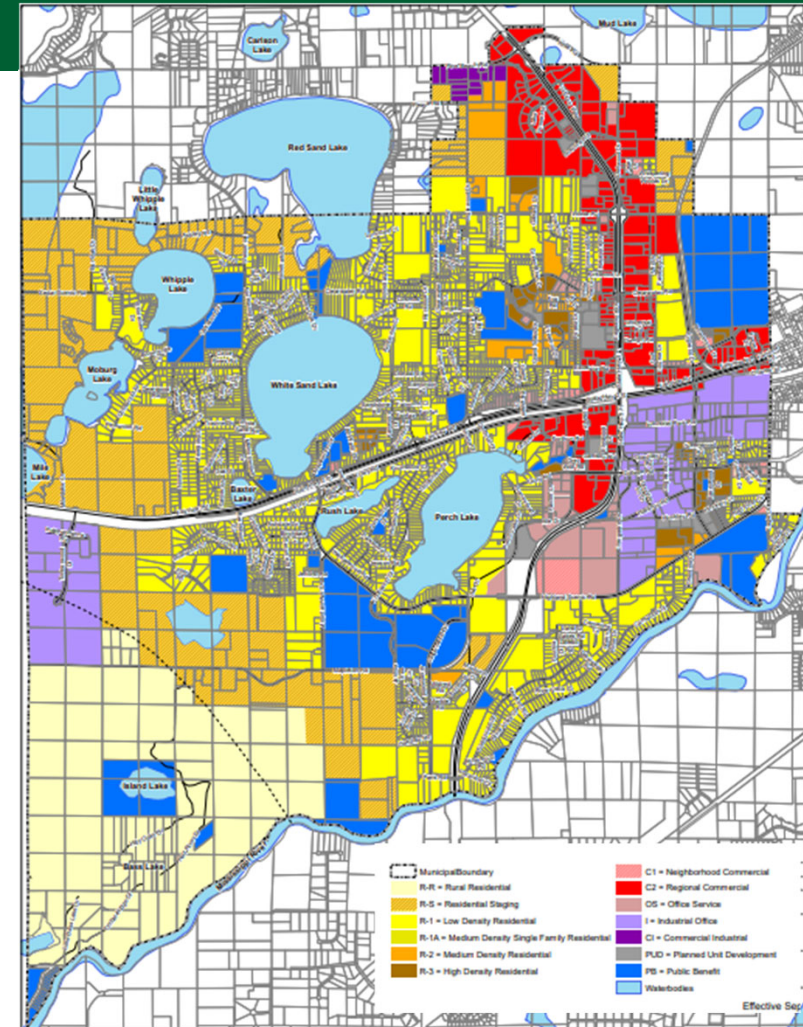
- Top industries healthcare, retail, education and manufacturing accounts for nearly 55% of jobs
- Job growth in Crow Wing County is 2.48%
- Labor force growth is 1.56%
- 2050 forecast
  - Jobs 18,030
  - Workers 14,391



# Baxter: Land Use and Growth

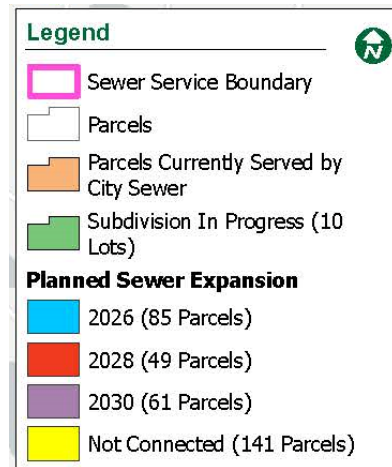
- 2015 Comprehensive Plan for developing areas already served by public utilities and orderly growth adjacent to existing growth
- City is not looking to annex, discourages leapfrog development
- Significant development not anticipated in southern end of city because it is with 3-mile buffer from Camp Ripley, which is to have limited development

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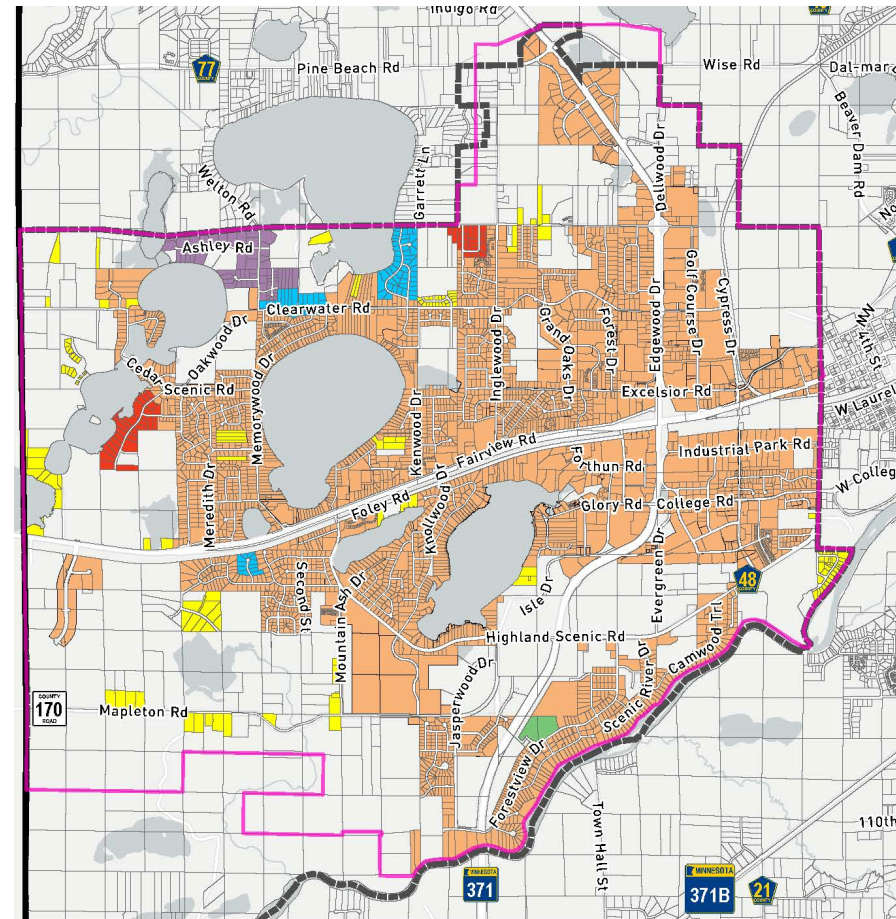


# Baxter: Existing Homes on Septic

- Over 399 existing homes on septic that will be added to the system when service is available
- Several areas planned for service connections in 2026, 2028 and 2030



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# Summary of Planning

- Brainerd Design Population: 18,607
- Baxter Design Population: 14,325



# Discussion on Flows/Loadings

Paul Saffert, Water/Wastewater Senior Principal

Morgan Salo, Water/Wastewater Project Manager



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# 2050 Projected Design Populations

Historic and Projected Populations			
Year	Baxter	Brainerd	Total
2015	8,065	13,671	21,736
2016	8,318	13,679	21,997
2017	8,360	13,719	22,079
2018	8,478	13,732	22,210
2019	8,555	13,755	22,310
2020	8,612	14,395	23,007
2021	8,911	14,679	23,590
2022	9,030	14,895	23,925
2023	8,835	14,670	23,505
2024	8,902	14,689	23,591
2025	9,052	15,051	24,103
2030	10,186	15,756	25,774
2035	11,092	16,494	27,311
2040	12,079	17,267	29,058
2045	13,155	18,076	30,929
<b>2050</b>	<b>14,325</b>	<b>18,607</b>	<b>32,932</b>

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- The 2025 populations were used for historic GPCD calculations.
- 2050 total design population of 32,932 people.
- An overall growth of 8,829 people or about 37% growth over the 25-year period.



# 2050 Projected Design Flows

Future Flow Projections			
Parameter	2050 Projected Flows – Baxter (MGD)	2050 Projected Flows – Brainerd (MGD)	2050 Design Flows (MGD)
Average Dry Weather Flow	0.85	1.39	2.24
Average Annual Flow	1.00	1.62	2.62
Average Wet Weather Flow	1.05	1.86	2.91
Peak Flow	1.17	2.72	3.89
Peak Hourly Wet Weather Flow	2.54	3.85	6.39
Peak Instantaneous Wet Weather Flow	3.72	4.37	8.09

- No projected SIU's identified
- Commercial, industrial, and institutional flows are projected to increase proportionally with residential flows (included with residential flows)
  - No major changes identified based on historical data
  - Includes WTP waste flows for Brainerd reclamation
- Reviewed historical rainfall/precipitation data

# 2050 Projected Design Loadings

Future Loadings Projections	
Parameter	2050 Total Projection (lbs/d)
CBOD <sub>5</sub>	4,446
TSS	6,586
TP	132
TKN	988

<sup>(1)</sup> TKN is not monitored for the separate cities

- Total Projected loads
  - DMR reported historic loads used for 2050 projections
- TKN loading developed using standard design parameters
- Future Considerations for Permit limits:
  - TN: 10 mg/L
  - Lower TP
  - Sulfate
  - PFAS



# Next Steps



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# Permitting/MPCA

- Preliminary Effluent Limit Request
  - Used to identify future permit requirements
    - Helps to reduce uncertainty of NPDES permitting requirements
  - Uses the design criteria developed in planning phase
  - Will drive the improvement alternative options
  - Will help guide decision making process for future treatment needs



520 Lafayette Road North  
St. Paul, MN 55155-4194

Preliminary effluent limit review request

Domestic/Sewage

**Environmental Analysis and Outcomes  
Effluent Limits Unit**

*Doc Type: Preliminary Effluent Limit Review*



# Conclusion/Summary

- Meet with each city to discuss flow and loading development
  - Will go over details how flows and loadings are projected
- Final Technical Memorandum to summarize design parameters
  - Will be sent to both cities Week of September 2 (finalized after this meeting)
- PLER submission
- Evaluation of Existing WW Infrastructure – being updated from 2024 report and City comments
  - Condition assessment
- Evaluation of WWTF Treatment Alternatives
- Next meeting: Winter 2025







## Contact Info


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