PUBLIC UTILITIES COMMISSION AGENDA

City of Brainerd, Minnesota
BPU Service Center, 8027 Highland Scenic Rd, Commission Room
Tuesday, January 28, 2025 @ 9:00 AM

The public is invited to attend these meetings in person

1. **Call To Order**

2. **Roll Call**

   ___M. Angland ___M. Higgins ___D. Matten ___M. O'Day ___P. Wussow

3. **Pledge of Allegiance**

4. **Election of Officers - 2025**

   A. **Call for Nominations of the Office of President**

   B. **Call for Nominations of the Office of Vice-President**

5. **Approval Of Agenda - Voice Vote**

6. **Commission Committee Appointments**

   A. **Personnel Committee**

   B. **Finance Committee**

   C. **Operations Policy Committee**

7. **Consent Calendar**
   NOTICE TO PUBLIC - all matters listed are considered routine by the Commission and will all be enacted by one (1) motion. There will be no separate discussion of these items unless good cause is shown prior to the time the Commission votes on the motion to be ADOPTED BY ROLL CALL

   A. **Approval of Minutes**

   B. **Approval of Bills**

8. **Public Forum**
   Time allocated for citizens to bring matters not on the agenda to the attention of the Commission - Time limits may be imposed

9. **Unfinished Business**
   (See attached separate memo regarding updates on unfinished business)

A. **See attached separate memo regarding updates to ongoing unfinished business items**

B. **Authorize staff to negotiate updated AEP Contract Amendment**

10. **New Business**

A. **Discuss ClimaVision site findings and potential lease**

B. **Consider City of Baxter Request for wholesale water rate**

C. **Consider changing sprinkling credit months**

D. **Approve Scope of work for the PPL Application services for water improvements**

E. **Review Central Business District Incentive Policy**

F. **Discuss Brainerd Industrial Centers Request for a PPA**

11. **Staff Reports**
(Verbal: Any Updates since Packet)

A. **City Administrator Report**

B. **Council Liaison Report**

C. **HR Director Report**

D. **Public Utilities Director Report**

E. **Finance Manager Report**

F. **Operations Manager Report**

G. **Water/Wastewater Manager Report**

12. **Commission Member Reports**

13. **Adjourn**

Visit Brainerd Public Utilities website at 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 PUBLIC UTILITIES
8027 Highland Scenic Rd • P.O. Box 373 • Brainerd, Minnesota 56401
Business Office: 218.829.8726 ■ ***Repair Service:*** 218.829.2193
www.bpu.org

The regular meeting of the Brainerd Public Utilities Commission was held at 9:00 AM on December 31, 2024.

Commission President Matten called the meeting to order at 9:00 AM.

Commission Roll Call

Mike Angland – Absent	Mark O'Day – Present
Patrick Wussow – Present	Tad Erickson - Absent
Dolly Matten – Present	

Utility Staff Present

Public Utilities Director	Christopher Evans
Finance Manager	Danny Loch
Water/Wastewater Manager	Charlie Gammon
Business Office Supervisor	Jana Pernula
Recording Secretary	Mandy Selisker

Others in Attendance

City Administrator	Nick Broyles
HR Director	Kris Schubert
Public Works Director	Mike Habighorst
Community Development Director	James Kramvik
Bolton & Menk	Morgan Salo, PE
Widseth	Bill Westerberg, PE
Country Manor	Kevin Hargruth
Country Manor	Anthony Fenstad
Country Manor	Scott Keho
Citizen	Brian Timmers

Commissioner Matten opened the meeting with the Pledge of Allegiance.

Approval of Agenda Items

Commissioner Matten made a request to amend the agenda to add item C under New Business, a letter for consideration from Mr. Matthew Burich.

Motion by Commissioner O'Day and seconded by Commissioner Wussow to approve the amended agenda. There was a unanimous vote in favor of the motion. Motion carried.

Approval of Consent Items

Motion by Commissioner O'Day and seconded by Commissioner Wussow to approve the minutes from November 26th, 2024, regular monthly meeting, current month's bills, regular commission meeting

dates, and the 2025 schedule of fees. There was a unanimous roll call vote in favor of the motion. Motion carried.

Public Forum
None

Commission Committee Reports
Personnel
None

Finance
None

Operations Policy Committee
Commissioner O'Day reported on the Hydro walkthrough held on December 17th. Highlights included: Those in attendance were Josh Heintzeman, Justin Eichorn, and a member from the Energy Commission. BPU staff, Finance Manager Loch, Public Utilities Director Evans and Commissioners O'Day and Angland attended. The project goals were presented, and the consensus was that they liked the facility, goals and overall seemed to think that there was a good chance at obtaining funding. Next steps for BPU will be to present and testify to both the senate and the house side; this will be coming up in February, Flaherty & Hood have been engaged to assist with this process.

Unfinished Business - *See board packet for staff memo.*
Reclamation and Backwash Project
Finance Manager Loch reported that there were additional costs incurred during the design phase which were outside Bolton & Menk's scope of work. The additional services and costs in the amount of $33,800 are being requested from Bolton & Menk.

Motion by Commissioner O'Day and seconded by Commissioner Wussow to approve the additional fees related to the design and bidding of the backwash and reclamation project with Bolton & Menk in the amount of $33,800. There was a unanimous vote in favor of the motion. Motion carried.

Commissioner Matten requested additional clarification on the items listed as completed on the unfinished business memo to provide more clarity on what was completed or what action was taken, especially for future Commissions.

New Business
Approve Barr Contract Work Order for the Hydro Facility - *See board packet for contract*
Finance Manager Loch presented. Loch summarized prior three-year contract expenses as well as current proposed. The current three-year contract is $10,399.50 less than the 2022-2024 contract. Barr Engineering assists with all the required licensing requirements for the facility.

Motion by Commissioner Wussow and seconded by Commissioner O'Day to approve the 2025-2027 Contract Work Order with Barr for the Hydro Facility. There was a unanimous vote in favor of the motion. Motion carried.

Consider Country Manor WAC/SAC Deferment – *See board packet for application*
Public Utilities Director Evans presented the request. Highlights included:

- The request is to defer the SAC/WAC fees and repay on an installment basis over a five year period with the payments being divided into 5 equal installments. The first payment is to be paid 30 days after the building opens for services and additional payments would be made on the anniversary day of the first payment each year for four consecutive years.

CEO from Country Manor, Anthony Fenstad, presented the project and associated request. Commission had a discussion on the requested deferment. Community Development Coordinator Kramvik noted that the February 3rd City Council meeting would allow for the commission to make an additional recommendation on the topic of a potential interest rate.

Motion by Commissioner Wussow and seconded by Commissioner O'Day to approve deferment of SAC/WAC fees for the Country Manor project. The deferred fees would be repaid over a 5-year period with additional discussion to occur around potential interest or security rate on the deferred fees. There was a vote in favor of the motion with Matten and O'Day voting in favor and Wussow opposed. Motion carried.

Letter Requesting Waiver of Fees
Commissioner Wussow presented a letter that was received by staff and Commission to waive excess fees for the month of September related to lawn irrigation. Discussion included:

- Dispute of charges were related to use of his sprinkler system and current sprinkling credit end date. A request to waive fees incurred on the owners' September utility bill was requested.

Motion by Commissioner Wussow and seconded by Commissioner O'Day to deny the request for waiving the wastewater treatment and collection fees in the amount of $138.92. There was a unanimous vote in favor of the motion. Motion carried.

Commissioner Wussow requested an addition to next month's agenda be added to propose new dates for the applied sprinkling credit. The request would be to consider the start to be pushed back to May (currently April) and then to end after September is over. Commissioner O'Day noted that he had received another call on this. Shifting the time frame would cover the same amount of months but just start later and end later.

Motion by Commissioner Wussow and seconded by Commissioner O'Day to add to the January 28th, 2025, meeting agenda, the topic of changing the billing dates to receive the sprinkling credit. There was a unanimous vote in favor of the motion. Motion carried.

Staff Reports

City Administrator Report

City Administrator Broyles reported on the following:

City Council

- The City Council voted to annex the Riverside property.
- At the January 6th, 2025, City Council meeting the new City Council President, Vice President, Liaisons, etc. will be named.

IT Department Integration

- IT/GIS Director Strong and Technology Supervisor Andersen have been working on creating a new Technology Director job description with HR Director and will be presented for approval at the January 6th City Council meeting. Once approved, staff will continue with the integration process.

City Council Liaison Report

None

HR Director's Report – s*ee board packet for report.*

Public Utilities Director's Report – see board packet for report

Commissioner Matten and Public Utilities Director Evans discussed the hurdles around transmission projects, revenue streams, and alternatives to rate increases. Matten encouraged staff to continue to work with third parties to advocate for BPU in obtaining grants.

Managers Reports

Finance Manager's Report – *see board packet for report.*

Operations Manager Report – *see board packet for outage report.*

Water/Wastewater Report – s*ee board packet for report.*

Wussow requested data in a chart format for the last 12 months incorporated into Gammon's monthly reporting.

- Start small with a couple of data points, showing last month vs. last year.

Matten discussed the lift station maintenance and financing costs, inquired why and how BPU acquired the financial responsibility of this. Matten would like to discuss this topic further with the City Council and the Streets department and potential allocation of costs for these.

Well #3 is currently shut down due to PFOS levels. This represents approximately 1,080 gallons per minute when in operation.

- Gammon is working with agencies and there will be an ongoing plan to mitigate and identify sources. Gammon confirmed that more testing is occurring on our side.

Commissioner Matten noted that a Town Hall meeting with the City of Baxter should be occurring around this. Gammon reported that once the 20-year plan is done, that is the goal. The timeline is looking to be in the February/March timeframe.

Commission Members – Reports

Commissioner Wussow reported on the following:

IT/Finance Integration

- Confirmed with HR that there will soon be a new Department Head with the IT Department integration in the middle to end of January.
- Requested that BPU staff and HR work together to provide a timeline at the next meeting for when the job descriptions will be completed for the budgeted IT positions and timelines for advertising.

Next Commission meeting is scheduled for January 28th, 2025.

Adjournment

Motion by Commissioner Wussow and seconded by Commissioner O'Day to adjourn the meeting. Motion carried at 9:47 AM.

_____

Dolly Matten, Commission President

_____

Danny Loch, Finance Manager/Secretary

Brainerd Public Utilities, MN

Check Report

By Check Number

Date Range: 12/27/2024 - 01/23/2025

Vendor Number / Payable #	Vendor Name / Payable Type	Post Date	Payment Date / Payable Description	Payment Type	Discount Amount / Discount Amount	Payment Amount / Payable Amount	Number
Bank Code: AP2-BREMER BANK							
00140	AEP ENERGY PARTNERS, INC.		01/21/2025	EFT	0.00	1,792,946.29	223
175-21535814	Invoice	01/17/2025	Invoice Period: 12/01/2024 - 12/31/2024		0.00	1,792,946.29	
07343	Gridiron Generation HoldCo, LLC		01/21/2025	EFT	0.00	15,557.27	224
INV-0283	Invoice	01/17/2025	Invoice Period: 12/01/2024 - 12/31/2024		0.00	15,557.27	
07715	U.S. POSTAL SERVICE		01/03/2025	Regular	0.00	-232.00	83043
00335	AMERICAN WATER WORKS ASSOCIATION		12/31/2024	Regular	0.00	240.00	83096
SO184591	Invoice	12/31/2024	Membership Dues: 12/01/2024-11/30/20...		0.00	240.00	
00670	BARR ENGINEERING CO		12/31/2024	Regular	0.00	27,470.50	83097
23181016.06-34	Invoice	12/31/2024	Work Order #6 - Support for Hydro Project		0.00	14,399.50	
23181016.08-8	Invoice	12/31/2024	BPU Powerhouse Units 4 & 6 Upgrades		0.00	13,071.00	
02025	CITY OF BRAINERD		12/31/2024	Regular	0.00	9,133.48	83098
24-0005290	Invoice	12/31/2024	Ratwik, Roszak & Maloney - 10/2024 Servi...		0.00	4,404.42	
24-0005299	Invoice	12/31/2024	MN GO Bonds 2023A - US Bank Invoice (A...		0.00	290.00	
24-0005310	Invoice	12/31/2024	4th Quarter Benefits Billing + 3rd Qtr Adju...		0.00	4,439.06	
03321	FIRST IMPRESSION PRINTING		12/31/2024	Regular	0.00	11,386.80	83099
92447	Invoice	12/31/2024	PRINTING/PUBLISHING FORMS: Envelopes		0.00	11,000.50	
92803	Invoice	12/31/2024	PRINTING/PUBLISHING FORMS: Thank You..		0.00	386.30	
03710	GRANITE ELECTRONICS, INC.		12/31/2024	Regular	0.00	454.25	83100
2250531	Invoice	12/31/2024	Testing / Swap XTL Radio to APX Mobile		0.00	454.25	
08410	SCR-NORTHERN		12/31/2024	Regular	0.00	1,305.18	83101
W52676	Invoice	12/31/2024	Replace economizer motore in data room		0.00	1,305.18	
02025	CITY OF BRAINERD		01/10/2025	Regular	0.00	192,665.73	83114
12/2024 - Mill Ra...	Invoice	01/10/2025	MONTHLY TRANSFER: 12/2024		0.00	62,434.95	
12/31/2024-SAN...	Invoice	01/10/2025	SANITARY & STORM SWR BILLING: 12/31/...		0.00	130,230.78	
06190	MINNESOTA MUNICIPAL UTILITIES ASSOCIATIO		01/10/2025	Regular	0.00	35,242.00	83115
65111	Invoice	01/10/2025	ELEC. UTILITY MEMBER DUES: 2025		0.00	35,242.00	
09948	WIDSETH SMITH NOLTING & ASSOC., INC		01/10/2025	Regular	0.00	1,031.25	83117
234456	Invoice	01/10/2025	Directional Dilling Forcemain River Crossing		0.00	1,031.25	
00075	A W RESEARCH		01/14/2025	Regular	0.00	75.00	83118
67723	Invoice	01/14/2025	INVOICE 67723 ANNUAL REPORTING FEE		0.00	75.00	
00105	ACE HARDWARE-BRAINERD		01/14/2025	Regular	0.00	47.08	83119
329187	Invoice	01/14/2025	PUR ACE INVOICES		0.00	5.76	
329522	Invoice	01/14/2025	PUR ACE INVOICES		0.00	19.22	
329622	Invoice	01/14/2025	PUR ACE INVOICES		0.00	22.10	
00315	AMERICAN STEEL INC		01/14/2025	Regular	0.00	113.17	83120
123573	Invoice	01/14/2025	PUR AMERICAN STEEL INVOICES		0.00	37.57	
123617	Invoice	01/14/2025	PUR AMERICAN STEEL INVOICES		0.00	47.80	
123653	Invoice	01/14/2025	PUR AMERICAN STEEL INVOICES		0.00	27.80	
00337	AMERICAN WELDING & GAS INC		01/14/2025	Regular	0.00	147.67	83121
0010416827	Invoice	01/14/2025	PUR AWG INVOICES		0.00	86.42	
0010533060	Invoice	01/14/2025	PUR AWG INVOICES		0.00	61.25	
00735	BEST OIL COMPANY		01/14/2025	Regular	0.00	3,309.08	83122
38774	Invoice	01/14/2025	PUR BEST OIL INVOICES		0.00	513.00	

Vendor Number / Payable #	Vendor Name / Payable Type	Post Date	Payment Date / Payable Description	Payment Type	Discount Amount / Discount Amount	Payment Amount / Payable Amount	Number
38775	Invoice	01/14/2025	PUR BEST OIL INVOICES		0.00	717.50	
38776	Invoice	01/14/2025	PUR BEST OIL INVOICES		0.00	625.59	
38894	Invoice	01/14/2025	PUR BEST OIL INVOICES		0.00	270.75	
38895	Invoice	01/14/2025	PUR BEST OIL INVOICES		0.00	448.50	
9094	Invoice	01/14/2025	PUR BEST OIL INVOICES		0.00	344.28	
9095	Invoice	01/14/2025	PUR BEST OIL INVOICES		0.00	389.46	
00825	BORDER STATES ELECTRIC		01/14/2025	Regular	0.00	22.50	83123
929637077	Invoice	01/14/2025	PUR MILWAUKEE HARDHAT AND LIGHT		0.00	22.50	
00982	BRAINERD HYDRAULIC AIR & INDUSTRIAL SUPPI		01/14/2025	Regular	0.00	738.95	83124
33879	Invoice	01/14/2025	PUR BRAINERD HYDRAULICS INVOICES		0.00	650.90	
33883	Invoice	01/14/2025	PUR BRAINERD HYDRAULICS INVOICES		0.00	54.36	
33891	Invoice	01/14/2025	PUR BRAINERD HYDRAULICS INVOICES		0.00	33.69	
02556	CORE & MAIN LP		01/14/2025	Regular	0.00	1,607.65	83125
W231122	Invoice	01/14/2025	INV WM0020 3/4 IPERL		0.00	1,607.65	
02860	Dixon Mechanical Electric, LLC		01/14/2025	Regular	0.00	215.22	83126
9574	Invoice	01/14/2025	PUR DIXON INVOICE		0.00	215.22	
06790	NAPA AUTO PARTS BAXTER		01/14/2025	Regular	0.00	631.80	83127
769997	Invoice	01/14/2025	PUR NAPA INVOICES		0.00	204.63	
769999	Invoice	01/14/2025	PUR NAPA INVOICES		0.00	16.16	
770308	Invoice	01/14/2025	PUR NAPA INVOICES		0.00	121.67	
770342	Invoice	01/14/2025	PUR NAPA INVOICES		0.00	121.10	
770386	Invoice	01/14/2025	PUR NAPA INVOICES		0.00	35.52	
770588	Invoice	01/14/2025	PUR NAPA INVOICES		0.00	51.05	
771015	Invoice	01/14/2025	PUR NAPA INVOICES		0.00	36.06	
771661	Invoice	01/14/2025	PUR NAPA INVOICES		0.00	45.61	
09663	VIKING ELECTRIC SUPPLY, INC		01/14/2025	Regular	0.00	84.57	83128
S008624278.006	Invoice	01/14/2025	PUR ELEC TAPE AND BULBS		0.00	84.57	
09201	BLM Technologies, Inc.		01/14/2025	Regular	0.00	710.92	83129
1397406	Invoice	12/31/2024	Vision X - Check Scanner		0.00	710.92	
00820	BOLTON & MENK, INC.		01/14/2025	Regular	0.00	3,668.50	83130
0353722	Invoice	12/31/2024	WTP Filter Backwash Reclaim		0.00	3,668.50	
01805	CENTERPOINT ENERGY		01/14/2025	Regular	0.00	2,181.64	83131
8000014432-1-01...	Invoice	12/31/2024	MONTHLY GAS BILL - WTR PROD/WTR DIS...		0.00	2,181.64	
02002	CITY OF BAXTER		01/14/2025	Regular	0.00	1,200.35	83132
007335-000-12/1...	Invoice	12/31/2024	STORMWATER - ACCT# 007335-000		0.00	1,200.35	
02025	CITY OF BRAINERD		01/14/2025	Regular	0.00	2,186.00	83133
24-0005315	Invoice	12/31/2024	Cities Digital/Laserfiche (Annual)/GO BOn...		0.00	2,186.00	
02650	CROW WING POWER		01/14/2025	Regular	0.00	10,775.13	83134
2024 Transfer Pmt	Invoice	12/31/2024	Service Territory Transfer Payment for: 2...		0.00	10,775.13	
03118	ESSENTIA HEALTH		01/14/2025	Regular	0.00	291.00	83135
890000327-12/1...	Invoice	12/31/2024	OCC Med Testing		0.00	291.00	
03321	FIRST IMPRESSION PRINTING		01/14/2025	Regular	0.00	13,190.56	83136
92476	Invoice	12/31/2024	PRINTING/PUBLISHING FORMS: Envelopes		0.00	12,562.46	
92954	Invoice	12/31/2024	PRINTING/PUBLISHING FORMS: Envelopes		0.00	628.10	
03542	Forum Communications		01/14/2025	Regular	0.00	604.50	83137
MP3168201224	Invoice	12/31/2024	Business Office Support Spec. Ad		0.00	604.50	
03695	GOPHER STATE ONE-CALL		01/14/2025	Regular	0.00	18.90	83138
4120111	Invoice	12/31/2024	GSOC TICKETS: December		0.00	18.90	

Vendor Number / Payable #	Vendor Name / Payable Type	Post Date	Payment Date / Payable Description	Payment Type	Discount Amount / Discount Amount	Payment Amount / Payable Amount	Number
04580	IP NETWORKS, INC.		01/14/2025	Regular	0.00	2,100.00	83139
20248413	Invoice	12/31/2024	Fortimail Cloud Spam Filtering Service		0.00	2,100.00	
05415	LANDIS-GYR TECHNOLOGY, INC/FKA CELLNET		01/14/2025	Regular	0.00	261.81	83140
90402003	Invoice	12/31/2024	Tech Studio Software Maint/Support:11/2...		0.00	261.81	
06167	MN DEPT OF TRANSPORTATION		01/14/2025	Regular	0.00	729.20	83141
00000836999	Invoice	12/31/2024	Bituminous Material on 11/08/2024 - Wtr...		0.00	729.20	
07143	NORTHLAND FIRE PROTECTION		01/14/2025	Regular	0.00	1,865.00	83142
61215	Invoice	12/31/2024	5 Year Internal Pipe Inspection		0.00	870.00	
61216	Invoice	12/31/2024	5 Year Internal Pipe Inspection		0.00	995.00	
07335	OFFICE SHOP		01/14/2025	Regular	0.00	3,649.20	83143
1148721-2	Invoice	12/31/2024	OFFICE SUPPLIES		0.00	50.80	
1148721-3	Invoice	12/31/2024	OFFICE SUPPLIES: Calendars		0.00	84.39	
1148721-4	Invoice	12/31/2024	OFFICE SUPPLIES: Calendars		0.00	209.58	
1148768-1	Invoice	12/31/2024	OFFICE SUPPLIES		0.00	16.88	
1149301-0	Invoice	12/31/2024	OFFICE SUPPLIES		0.00	68.36	
1149301-1	Invoice	12/31/2024	OFFICE SUPPLIES		0.00	47.47	
1149301-2	Invoice	12/31/2024	OFFICE SUPPLIES		0.00	14.37	
1149326-0	Invoice	12/31/2024	OFFICE SUPPLIES: Toner		0.00	320.22	
1149668-0	Invoice	12/31/2024	OFFICE SUPPLIES: Toner		0.00	226.61	
1149668-1	Invoice	12/31/2024	OFFICE SUPPLIES: Toner		0.00	320.22	
334402-0	Invoice	12/31/2024	COPIER/PRINTER MAINTENANCE		0.00	2,445.32	
334595-0	Invoice	01/14/2025	COPIER/PRINTER MAINTENANCE: Business..		0.00	144.23	
C1144259-1	Credit Memo	12/31/2024	OFFICE SUPPLIES: Toner - Return Credit		0.00	-299.25	
07339	ONLINE INFORMATION SERVICES, INC.		01/14/2025	Regular	0.00	446.96	83145
1302237	Invoice	12/31/2024	ONLINE UTILITY EXCHANGE REPORT: 12/2...		0.00	446.96	
08410	SCR-NORTHERN		01/14/2025	Regular	0.00	976.75	83146
W53113	Invoice	12/31/2024	Bump Test for LEL sensors (3) - Calibration		0.00	326.00	
W53114	Invoice	12/31/2024	Bump test for LEL sensors		0.00	109.00	
W53131	Invoice	12/31/2024	Boiler Valve/Seals		0.00	541.75	
08789	Spencer Fane LP		01/14/2025	Regular	0.00	801.85	83147
1338151	Invoice	12/31/2024	Large Power Agreements		0.00	801.85	
09728	WASTE PARTNERS		01/14/2025	Regular	0.00	1,592.90	83148
4CX94693	Invoice	12/31/2024	TRASH/RECYCLING SERVICE: ACCT#242053		0.00	1,592.90	
09925	WEX HEALTH, INC		01/14/2025	Regular	0.00	52.15	83149
0002024614-IN	Invoice	12/31/2024	MONTHLY COBRA BILLING: 09/2024		0.00	26.65	
0002092593-IN	Invoice	12/31/2024	MONTHLY COBRA BILLING: 12/2024		0.00	25.50	
09948	WIDSETH SMITH NOLTING & ASSOC., INC		01/14/2025	Regular	0.00	11,280.70	83150
235723	Invoice	12/31/2024	Directional Drilling Forcemain RIver Crossi...		0.00	3,226.57	
235798	Invoice	12/31/2024	Directional Drilling Forcemain River Crossi...		0.00	3,226.57	
235799	Invoice	12/31/2024	Prelim Design, Facility Plan, & Enviro Repo...		0.00	4,827.56	
00075	A W RESEARCH		01/17/2025	Regular	0.00	3,805.84	83171
67768	Invoice	01/17/2025	PUR AW INVOICES		0.00	696.00	
67781	Invoice	01/17/2025	PUR AW INVOICES		0.00	3,109.84	
00405	ANDERSON BROTHERS CONSTRUCTION		01/17/2025	Regular	0.00	1,776.25	83172
36386	Invoice	01/17/2025	PUR ANDERSON BROS INVOICE		0.00	1,776.25	
02785	DACOTAH PAPER CO		01/17/2025	Regular	0.00	183.94	83173
41502	Invoice	01/17/2025	PUR DACOTAH PAPER INVOICE		0.00	183.94	
03699	GRAINGER		01/17/2025	Regular	0.00	1,255.46	83174
9349404120	Invoice	01/17/2025	PUR HARDWARE GRAINGER		0.00	125.04	
9349404138	Invoice	01/17/2025	PUR HARDWARE GRAINGER		0.00	336.00	

Vendor Number / Payable #	Vendor Name / Payable Type	Post Date	Payment Date / Payable Description	Payment Type	Discount Amount / Discount Amount	Payment Amount / Payable Amount	Number
9349831165	Invoice	01/17/2025	PUR HARDWARE GRAINGER		0.00	481.92	
9351190567	Invoice	01/17/2025	PUR GRAINGER INVOICES		0.00	39.93	
9354180896	Invoice	01/17/2025	PUR GRAINGER INVOICES		0.00	11.30	
9357724500	Invoice	01/17/2025	PUR GRAINGER INVOICES		0.00	248.88	
9360908447	Invoice	01/17/2025	PUR GRAINGER INVOICES		0.00	12.39	
04613	JACO ANALYTICAL, INC.		01/17/2025	Regular	0.00	41.53	83175
S-20241205-467	Invoice	01/17/2025	JACO INVOICE CLEAN AND TEST KITS		0.00	41.53	
05334	Lakes Area Lock & Door, Inc.		01/17/2025	Regular	0.00	357.70	83176
124698	Invoice	01/17/2025	PUR LAKES AREA LOCK		0.00	357.70	
05335	LAKES AREA MAT SERVICE II, INC		01/17/2025	Regular	0.00	109.27	83177
20241209	Invoice	01/17/2025	PUR LAKES AREA MAT INVOICES		0.00	56.28	
20241223	Invoice	01/17/2025	PUR LAKES AREA MAT INVOICES		0.00	52.99	
05972	MID AMERICAN RESEARCH CHEMICAL CORP		01/17/2025	Regular	0.00	1,416.69	83178
0836478-IN	Invoice	01/17/2025	PUR MARC INVOICE		0.00	1,416.69	
05975	Midwest Motor Supply Co. Inc.		01/17/2025	Regular	0.00	680.77	83179
102859214	Invoice	01/17/2025	PUR 6 MIL NITRILE GLOVES		0.00	396.30	
102904954	Invoice	01/17/2025	PUR HARDWARE		0.00	284.47	
06266	MINNESOTA VALLEY TESTING LABS		01/17/2025	Regular	0.00	113.00	83180
1285916	Invoice	01/17/2025	PUR MVTL INVOICE		0.00	113.00	
06173	MN STATE PATROL, CMV SECTION		01/17/2025	Regular	0.00	60.00	83181
2025-DECALS	Invoice	01/17/2025	2025 Decals / Inspector #: 166016		0.00	60.00	
06790	NAPA AUTO PARTS BAXTER		01/17/2025	Regular	0.00	167.44	83182
765207	Invoice	01/17/2025	PUR NAPA INVOICES		0.00	19.49	
765337	Invoice	01/17/2025	PUR NAPA INVOICES		0.00	24.34	
767983	Invoice	01/17/2025	PUR NAPA INVOICES		0.00	27.75	
769001	Invoice	01/17/2025	PUR NAPA INVOICES		0.00	63.63	
769150	Invoice	01/17/2025	PUR NAPA INVOICES		0.00	32.23	
10341	National Conductor Inc		01/17/2025	Regular	0.00	35,736.58	83183
5812	Invoice	01/17/2025	PUR OAKRIDGE SUBSTATION MATERIAL		0.00	35,736.58	
07337	OLSEN CHAIN & CABLE, INC.		01/17/2025	Regular	0.00	1,153.00	83184
723006	Invoice	01/17/2025	PUR TENEX-TEC ROPE 2100-1320		0.00	1,153.00	
10225	POMP'S TIRE SERVICE INC.		01/17/2025	Regular	0.00	1,105.75	83185
2280007074	Invoice	01/17/2025	PUR POMP'S INVOICE		0.00	40.36	
2280007195	Invoice	01/17/2025	PUR POMP'S INVOICE		0.00	1,065.39	
00340	Vestis Group, Inc.		01/17/2025	Regular	0.00	67.62	83186
2530351329	Invoice	01/17/2025	PUR VESTIS DEC INVOICES		0.00	33.81	
2530353773	Invoice	01/17/2025	PUR VESTIS DEC INVOICES		0.00	33.81	
09899	WESCO RECEIVABLES CORP		01/17/2025	Regular	0.00	9,820.40	83187
493072	Invoice	01/17/2025	INV SM INTERFACE PARTS		0.00	4,696.40	
494380	Invoice	01/17/2025	INV ET 1P PAD MOUNTS		0.00	5,124.00	
09996	ZIEGLER INC.		01/17/2025	Regular	0.00	60.14	83188
IN001751895	Invoice	01/17/2025	ZIEGLER INVOICE		0.00	60.14	
09997	Zoro		01/17/2025	Regular	0.00	146.00	83189
INV15429878	Invoice	01/17/2025	PUR ZORO INVOICE		0.00	146.00	
00105	ACE HARDWARE-BRAINERD		01/23/2025	Regular	0.00	52.88	83190
329695	Invoice	01/23/2025	Velcro		0.00	14.42	
329854	Invoice	01/23/2025	PUR ACE INVOICE		0.00	38.46	
10188	ALPENGLOW TECHNOLOGIES, LLC		01/23/2025	Regular	0.00	400.00	83191

Vendor Number / Payable #	Vendor Name / Payable Type	Post Date	Payment Date / Payable Description	Payment Type	Discount Amount / Discount Amount	Payment Amount / Payable Amount	Number
11176	Invoice	01/23/2025	Monthly IT Billing: 01/2025		0.00	400.00	
00337	AMERICAN WELDING & GAS INC		01/23/2025	Regular	0.00	149.17	83192
0010575502	Invoice	01/23/2025	PUR AWG INVOICES		0.00	62.68	
0010579820	Invoice	01/23/2025	PUR AWG INVOICES		0.00	86.49	
00497	AUTO VALUE		01/23/2025	Regular	0.00	53.75	83193
17370559	Invoice	01/23/2025	PUR AUTO VALUE INVOICE		0.00	17.09	
182095289	Invoice	01/23/2025	PUR AUTO VALUE / RSC INVOICE		0.00	36.66	
00735	BEST OIL COMPANY		01/23/2025	Regular	0.00	747.50	83194
38967	Invoice	01/23/2025	PUR BEST OIL INVOICE		0.00	747.50	
00780	BLAEDC		01/23/2025	Regular	0.00	5,000.00	83195
2025 0553	Invoice	01/23/2025	AFFILIATE MEMBERSHIP 2025		0.00	5,000.00	
00825	BORDER STATES ELECTRIC		01/23/2025	Regular	0.00	59,171.87	83196
929660997	Invoice	01/23/2025	INV ES0300 ES0220 RESID BLK POLE AND F...		0.00	59,121.90	
929689529	Invoice	01/23/2025	PUR MILWAUKEE HARDHAT AND LIGHT		0.00	49.97	
00982	BRAINERD HYDRAULIC AIR & INDUSTRIAL SUPPI		01/23/2025	Regular	0.00	120.00	83197
34025	Invoice	01/23/2025	PUR BRD HYDRAULICS INVOICES		0.00	63.00	
34025 - #2	Invoice	01/23/2025	PUR BRD HYDRAULICS INVOICES		0.00	57.00	
10140	Brainerd Lakes Regional Airport		01/23/2025	Regular	0.00	3,993.75	83198
25-0005397	Invoice	01/23/2025	GROUND LEASE: Q1 2025		0.00	3,993.75	
03330	Calibrations and Controls, Inc.		01/23/2025	Regular	0.00	1,050.00	83199
25212	Invoice	01/23/2025	PUR CALIBRATION INVOICE		0.00	1,050.00	
01837	CENTURYLINK		01/23/2025	Regular	0.00	482.58	83200
333931378-01/0...	Invoice	01/23/2025	MONTHLY PHONE BILL: 01/2025		0.00	482.58	
00796	Certification Services LLC		01/23/2025	Regular	0.00	886.90	83201
INV992	Invoice	01/23/2025	Calibration / Testing		0.00	886.90	
01890	CHARTER COMMUNICATIONS		01/23/2025	Regular	0.00	1,288.51	83202
175590201010125	Invoice	01/23/2025	TV SERVICE		0.00	39.51	
237487601010125	Invoice	01/23/2025	237487601: FIBER INTERNET		0.00	1,249.00	
02860	Dixon Mechanical Electric, LLC		01/23/2025	Regular	0.00	1,713.48	83203
9631	Invoice	01/23/2025	PUR DIXON INVOICE		0.00	1,713.48	
03038	ELECTRIC PUMP, INC		01/23/2025	Regular	0.00	89,645.00	83204
024964	Invoice	01/23/2025	PUR WW MAIN LIFT SCREENING GRIT MO...		0.00	89,645.00	
03180	EVOLVING SOLUTIONS, INC.		01/23/2025	Regular	0.00	4,733.60	83205
204658	Invoice	01/23/2025	Veeam Backup for Microsoft 365 / Mainte...		0.00	4,733.60	
03275	FASTENAL COMPANY		01/23/2025	Regular	0.00	145.01	83206
MNBAX271590	Invoice	01/23/2025	PUR FASTENAL BATTERIES		0.00	145.01	
03282	FERGUSON WATERWORKS #2518		01/23/2025	Regular	0.00	439.91	83207
0541008-1	Invoice	01/23/2025	INV MISC WTR CONNECTORS		0.00	439.91	
03557	FRONTIER ENERGY, INC.		01/23/2025	Regular	0.00	7,236.00	83208
196519	Invoice	12/31/2024	CIP SERVICES - 12/2024		0.00	7,236.00	
04050	HAWKINS INC.		01/23/2025	Regular	0.00	1,619.44	83209
6951915	Invoice	01/23/2025	PUR HAWKINS INVOICE		0.00	1,619.44	
04555	INTEGRATED PROTECTION SYSTEMS, INC.		01/23/2025	Regular	0.00	2,380.22	83210
84374	Invoice	01/23/2025	Alarm Monitoring / Sys. Notification: Mar...		0.00	172.92	
84376	Invoice	01/23/2025	Alarm Monitoring / Sys. Notification: Mar...		0.00	491.78	
84377	Invoice	01/23/2025	Alarm Monitoring / Sys. Notification: Mar...		0.00	455.88	
84381	Invoice	01/23/2025	Alarm Monitoring / Sys. Notification: Mar...		0.00	383.88	

Vendor Number / Payable #	Vendor Name / Payable Type	Post Date	Payment Date / Payable Description	Payment Type	Discount Amount / Discount Amount	Payment Amount / Payable Amount	Number
84382	Invoice	01/23/2025	Alarm Monitoring / Sys. Notification: Mar...		0.00	383.88	
84383	Invoice	01/23/2025	Alarm Monitoring / Sys. Notification: Mar...		0.00	491.88	
05340	LAKES UTILITY COORDINATING COMMITTEE		01/23/2025	Regular	0.00	25.00	83211
202506	Invoice	01/23/2025	2025 LUCC Membership Dues		0.00	25.00	
05415	LANDIS-GYR TECHNOLOGY, INC/FKA CELLNET		01/23/2025	Regular	0.00	1,467.38	83212
90404047	Invoice	01/23/2025	MONTHLY ENDPOINT FEE: 01/2025		0.00	1,467.38	
05530	LEAGUE OF MN CITIES INS. TRUST WC		01/23/2025	Regular	0.00	18,252.75	83213
10002612-WC Q1...	Invoice	01/23/2025	ACCT: 10002612-WORK COMP - Q1 2025		0.00	18,252.75	
05976	MIDWEST MACHINERY CO.		01/23/2025	Regular	0.00	251.48	83214
10342312	Invoice	01/23/2025	PUR MIDWEST MACHINE INVOICE		0.00	251.48	
06190	MINNESOTA MUNICIPAL UTILITIES ASSOCIATIO		01/23/2025	Regular	0.00	9,106.50	83215
65402	Invoice	01/23/2025	SAFETY MGMT PROGRAM: Q1 2025		0.00	9,106.50	
06244	MINNESOTA SOCIETY OF CPA'S		01/23/2025	Regular	0.00	380.00	83216
39156	Invoice	01/23/2025	CPA Membership: Daniel Loch		0.00	380.00	
06154	MN DNR - ECOLOGICAL & WATER RESOURCES		01/23/2025	Regular	0.00	11,374.72	83217
1977-3523-2025	Invoice	01/23/2025	WATER PERMIT INVOICE 2025: MPARS		0.00	11,374.72	
06200	MPCA		01/23/2025	Regular	0.00	1,370.00	83218
10000195582	Invoice	01/23/2025	WWT LAB CERTIFICATION RENEWAL: 1629		0.00	1,370.00	
06200	MPCA		01/23/2025	Regular	0.00	55.00	83219
03/06/25 - Exam ...	Invoice	01/23/2025	WWT Exam Fee: Jesse Simenson - 03/06/...		0.00	55.00	
07335	OFFICE SHOP		01/23/2025	Regular	0.00	276.66	83220
AR1869505	Invoice	01/23/2025	Lease Contract: 20079 - Canon C5860i		0.00	276.66	
07665	PITNEY BOWES GLOBAL FINANCIAL SERV. LLC		01/23/2025	Regular	0.00	3,687.00	83221
3107010045	Invoice	01/23/2025	Relay 5000 Inserting Sys. Billing: 11/28-02...		0.00	3,687.00	
07682	PLUNKETT'S PEST CONTROL		01/23/2025	Regular	0.00	597.67	83222
8947105	Invoice	01/23/2025	GENERAL PEST CONTROL PROGRAM: 2025		0.00	597.67	
07920	QUALITY FLOW SYSTEMS, INC.		01/23/2025	Regular	0.00	1,231.18	83223
48240	Invoice	01/23/2025	PUR BOERGER PARTS		0.00	1,231.18	
02960	STEVEN W. DRYBURGH		01/23/2025	Regular	0.00	19.00	83225
12/26/24- Class A...	Invoice	01/23/2025	Reimburse difference for Class A renewal		0.00	19.00	
08895	STUART C. IRBY CO		01/23/2025	Regular	0.00	1,621.50	83226
S014142576.001	Invoice	01/23/2025	INV GUY WIRE		0.00	643.00	
S14125138.001	Invoice	01/23/2025	INV MISC ELEC PARTS		0.00	978.50	
09140	T & R ELECTRIC SUPPLY		01/23/2025	Regular	0.00	20.00	83227
181061	Invoice	01/23/2025	PUR T&R INVOICE		0.00	20.00	
09211	The Print Shop Ink		01/23/2025	Regular	0.00	220.11	83228
4046	Invoice	12/31/2024	YE Forms		0.00	220.11	
09433	TRENCHERS PLUS INC		01/23/2025	Regular	0.00	898.22	83229
IT11155	Invoice	01/23/2025	PUR TRENCHERS PLUS INVOICES		0.00	387.08	
IT11156	Invoice	01/23/2025	PUR TRENCHERS PLUS INVOICES		0.00	511.14	
09524	TYLER TECHNOLOGIES INC.		01/23/2025	Regular	0.00	14,482.50	83230
025-490937	Invoice	12/31/2024	INCODE SMART METER SMS: Q4 2024		0.00	97.50	
025-491451	Invoice	12/31/2024	INSITE TRANSACTION FEES: Q4 2024		0.00	14,385.00	
00340	Vestis Group, Inc.		01/23/2025	Regular	0.00	67.62	83231
2530356269	Invoice	01/23/2025	PUR VESTIS JAN INVOICES		0.00	33.81	
2530358732	Invoice	01/23/2025	PUR VESTIS JAN INVOICES		0.00	33.81	

Vendor Number / Payable #	Vendor Name / Payable Type	Post Date	Payment Date / Payable Description	Payment Type	Discount Amount / Discount Amount	Payment Amount / Payable Amount	Number
09663	VIKING ELECTRIC SUPPLY, INC		01/23/2025	Regular	0.00	430.42	83232
S008783461.001	Invoice	01/23/2025	PUR VIKING INVOICE		0.00	430.42	
09899	WESCO RECEIVABLES CORP		01/23/2025	Regular	0.00	2,319.94	83233
497623	Invoice	01/23/2025	PUR TRANSFORMER NUMBERS		0.00	1,552.50	
499054	Invoice	01/23/2025	PUR PPE BRIAN NEW ELECTRICIAN		0.00	252.34	
500110	Invoice	01/23/2025	PUR PPE BRIAN NEW ELECTRICIAN		0.00	515.10	
00472	AT&T MOBILITY		12/31/2024	Bank Draft	0.00	629.65	DFT0001412
287260682523X...	Invoice	12/31/2024	AT & T MONTHLY BILL: 11/05-12/04		0.00	629.65	
01655	CANON FINANCIAL SERVICES, INC		12/31/2024	Bank Draft	0.00	598.10	DFT0001413
37263536	Invoice	12/31/2024	Canon Invoice - Contract Charge		0.00	598.10	
06171	MN DEPT OF REVENUE		12/31/2024	Bank Draft	0.00	119,897.00	DFT0001415
11/2024 SALES T...	Invoice	12/31/2024	SALES TAX DRAFT: 11/2024		0.00	119,897.00	
07715	U.S. POSTAL SERVICE		12/31/2024	Bank Draft	0.00	12.45	DFT0001416
644013894	Invoice	12/31/2024	Addt'l Postage Due for Bulk Mail: 12/20/2...		0.00	12.45	
07715	U.S. POSTAL SERVICE		12/31/2024	Bank Draft	0.00	4.61	DFT0001417
643542378	Invoice	12/31/2024	Addt'l Postage Due for Bulk Mail: 12/17/2...		0.00	4.61	
09961	XCEL ENERGY		12/31/2024	Bank Draft	0.00	2,700.22	DFT0001418
906132450	Invoice	12/31/2024	Xcel Energy - Service Center/WWT		0.00	2,700.22	
07715	U.S. POSTAL SERVICE		01/14/2025	Bank Draft	0.00	8.09	DFT0001431
645208271	Invoice	12/31/2024	Additional Postage Due - Bulk Mail: 12/31...		0.00	8.09	
07640	PITNEY BOWES, INC.		01/14/2025	Bank Draft	0.00	3,500.00	DFT0001432
12/31/2024-Post...	Invoice	12/31/2024	POSTAGE REFILL		0.00	3,500.00	
01805	CENTERPOINT ENERGY		01/14/2025	Bank Draft	0.00	18.37	DFT0001433
11582840-2-12/1...	Invoice	12/31/2024	1602 E RIVER RD		0.00	18.37	
01805	CENTERPOINT ENERGY		01/14/2025	Bank Draft	0.00	252.07	DFT0001434
11595232-7-12/1...	Invoice	12/31/2024	50 JENNY STREET		0.00	252.07	
00472	AT&T MOBILITY		01/14/2025	Bank Draft	0.00	2,379.89	DFT0001435
287302792515X...	Invoice	12/31/2024	AT & T MONTHLY BILL: 11/26-12/25		0.00	2,379.89	
01191	BREMER BANK - CC		01/14/2025	Bank Draft	0.00	5,292.27	DFT0001436
11/29/2024 CC S...	Invoice	12/31/2024	CC Statement: 11/29/2024		0.00	5,292.27	
00472	AT&T MOBILITY		01/23/2025	Bank Draft	0.00	629.69	DFT0001452
287260682523X...	Invoice	01/23/2025	AT & T MONTHLY BILL: 01/2025		0.00	629.69	
01655	CANON FINANCIAL SERVICES, INC		01/23/2025	Bank Draft	0.00	96.96	DFT0001453
37948945	Invoice	01/23/2025	Canon Invoice - Contract Charge		0.00	96.96	
02455	CTC		01/23/2025	Bank Draft	0.00	1,830.48	DFT0001454
21507563	Invoice	01/23/2025	MONTHLY BILL: 01/12/25 - 02/11/2025		0.00	1,830.48	
07715	U.S. POSTAL SERVICE		01/23/2025	Bank Draft	0.00	4.32	DFT0001456
646328528	Invoice	01/23/2025	Addt'l Postage Due for Bulk Mail: 01/10/2...		0.00	4.32	
09961	XCEL ENERGY		01/23/2025	Bank Draft	0.00	4,710.13	DFT0001457
909706519	Invoice	01/23/2025	Xcel Energy - Service Center/WWT		0.00	4,710.13	
03682	Global Payments Direct, Inc.		01/23/2025	Bank Draft	0.00	65,582.66	DFT0001458
12/2024 - CC Fees	Invoice	12/31/2024	CREDIT CARD FEES: 12/2024		0.00	65,582.66	
06155	MN DEPARTMENT OF PUBLIC SAFETY		01/23/2025	Bank Draft	0.00	21.25	DFT0001459
00-041758649-11...	Invoice	12/31/2024	Registration Renewal: 2023 ALUL 8214STI...		0.00	21.25	
06155	MN DEPARTMENT OF PUBLIC SAFETY		01/23/2025	Bank Draft	0.00	24.25	DFT0001460

Vendor Number / Payable #	Vendor Name / Payable Type	Post Date	Payment Date / Payable Description	Payment Type	Discount Amount / Discount Amount	Payment Amount / Payable Amount	Number
00-045125744-11...	Invoice	12/31/2024	Renewal: 2023 NVAE KE9014SESV-070 - #...		0.00	24.25	
06154	MN DNR - ECOLOGICAL & WATER RESOURCES		01/23/2025	Bank Draft	0.00	52.60	DFT0001462
3769GW - 2024	Invoice	01/23/2025	2024 DNR Watercraft Regist. Renewal: Hy...		0.00	52.60	

Bank Code AP2 Summary

Payment Type	Payable Count	Payment Count	Discount	Payment
Regular Checks	180	103	0.00	652,027.50
Manual Checks	0	0	0.00	0.00
Voided Checks	0	1	0.00	-232.00
Bank Drafts	21	21	0.00	208,245.06
EFT's	2	2	0.00	1,808,503.56
	203	**127**	**0.00**	**2,668,544.12**

All Bank Codes Check Summary

Payment Type	Payable Count	Payment Count	Discount	Payment
Regular Checks	180	103	0.00	652,027.50
Manual Checks	0	0	0.00	0.00
Voided Checks	0	1	0.00	-232.00
Bank Drafts	21	21	0.00	208,245.06
EFT's	2	2	0.00	1,808,503.56
	203	**127**	**0.00**	**2,668,544.12**

Fund Summary

Fund	Name	Period	Amount
9	POOLED CASH CONTROL	12/2024	173,832.24
9	POOLED CASH CONTROL	1/2025	2,494,711.88
			2,668,544.12

Brainerd Public Utilities
BPU Commission Unfinished Business
January 28, 2025

A. Hydro Generation (1/31/23)
Barr Engineering and staff continue work related to procurement of two generators at the hydro facility. Staff and Barr are awaiting responses on state funding prior to bidding. Barr attended the on-site visit with the operations committee and Representative Heintzman and Senator Eichorn.
Project is awaiting funding information; Barr continues procurement specs for two generators 12/17/24.

B. Schedule of Authority Roles of Commission and Council in Operation of BPU (10/31/23)
Was presented at the joint session between council and commission, and no adjustments were made. A future meeting will be discussed to discuss potential partnership agreement
Joint meeting of Council/Commission held 12/19/24, no action taken on this item.

C. Development of Plan to be Carbon Free by 2040 (10/31/23)
BPU is subject to the State's Renewable Energy Standard (RES). The RES will require BPU to either generate or procure sufficient electricity generated by an eligible energy technology (solar, wind, hydroelectric, or biomass) to retail customers of BPU that is equivalent to at least 25% of total retail electric sales to retail customers by 2025 and 55% by 2035. In addition to the RES BPU must generate or procure sufficient electricity generated from a carbon-free energy technology (technology that generates electricity without emitting carbon dioxide) that will be 100% by 2040. AEP (American Electric Power) amendments have provided the requirement to date
State Hospital site no longer viable as a solar project site due to the bond covenants and encumbrances State has on their property 10/16/24. Met with AEP to discuss long-term power costs and strategies 10/30/24. AEP is moving forward with the updated contract pricing approved at the 11/26/24 meeting.

D. Rewrite of Brainerd City Code Section 705 – Water System (6/27/23)
The process of rewriting Section 705 has begun. Additional conversations and coordination with various departments has continued since the last Commission meeting.
Met with city personnel to restart process on 10/22/24. Review from BPU has begun as of 1/9/2025.

E. Lead Service Line (LSL) Inventory Assessment (9/26/23)
Work continues mapping of the public water system. Identification of types of materials used in water service lines along with inventory process. All known items were submitted to the MN Department of Health as required. Additional identification of the unknown services, and those where staff were not allowed to enter the home are on-going. Communication to the known services that are galvanized or unknown on the BPU or customer side were sent via mail. Additional information will be posted on the website as the details become available. Staff continue to make a plan for replacement and funding requirements.
Held meeting with BPU and department heads on 10/13/24. Notice letters mailed on 10/15/24. Staff held meeting with PFA and MN Dept. of Health on funding requests and avenues for available funding sources 12/18/24. PFA expected to have a handout or informational flyer for customers explaining the funding avenue for replacements. Scheduled meeting with MDH to occur February 12, 2025 following up on information requests.

F. Electric Transmission Service to Brainerd (1/31/23)
Continue to work on scheduling a meeting with Minnesota Power to discuss capacity constraints imposed on BPU by MP on transmission line serving Brainerd. A formal letter is being drafted to request additional capacity.
Meeting planned for 2025 Q1.

**** Notes potential action item**

G. Crypto Mining Activity (7/1/22)
JFK current mining load is approximately 20 MWs. JFK has requested additional capacity. BlockMetrix has asked for a five-year contract versus the already agreed upon two.
JFK is looking into small private solar behind the meter and not reaching grid to reduce their load 10/10/24.
BlockMetrix is still inquiring about contract extensions 11/5/24. No additional information was heard through 12/24/24.

H. Reclamation and Backwash Project (2/27/2024)
Project bids were rejected and approved at the last commission and council meeting. Bolton and Menk are suggesting we pursue construction manager at risk to oversee the project and create a maximum price. More information to follow 12/20/24.

I. Website Updates (2/27/24)
During the March commission meeting website updates were presented related to the electric generation options, development continues for those items to go live. Lead Copper Corrosion Rule (LCCR) has been identified by staff as the priority at the present time and this project has been put on hold, LCCR is due to federal regulators by October.
Added PFAS/PFOS informational resources to website 12/17/24.

J. Customer Communications Policy (2/27/24)
The customer communications policy is still being drafted as the process for after-hours communication is currently in the implementation phase. Once the implementation and understanding of functionality of the after-hours calls has been finalized, a policy will be drafted. Meetings and set up of the call trees and discussions with MPower have been on-going and in process, expect to be up and operational by year-end.
Staff is pursuing an answering service option: Gold Cross, in conjunction with policy development 12/24/24. Gold Cross is scheduled to go live on 2/3/25.

K. ClimaVision (June 2024)
Follow up on presentation from June meeting is on-going with all parties. Staff continue to work with ClimaVision providing the drawings and resources they need for the installation for the weather radar. ClimaVision's structural engineers had an on-site visit to view the site. Work on the project continues. ClimaVision is expected to present at the January 2025 Commission meeting. Engineers and site visit all came back with a passing score for the location, the next step will be to agree on a leasing agreement which is not needed until 60 days prior to site build out.
Presentation occurring as part of today's meeting.

L. Commissioners Health Insurance (11/26/2024)
Commissioners requested comparable data related to health insurance offerings be provided for decisions to be made related to offering commissioner health insurance. HR Director Schubert noted that she would work on getting this data.
Tabled until next budget cycle.

Completed in 2024:

1. Organizational Restructuring – Job Descriptions
2. Water Treatment Plant (WTP) Asset Inventory Prepared by Bolton & Menk
3. Brainerd City Code Section 700 – Sewer Code
4. Wellhead Protection Plan (WHPP)
5. Directional Drilling Forcemain River Crossing Project
6. Proposal for Strategic Visioning and momentum Services
7. Credit Card Transaction Fees
8. Joint Committee for Parking and Car Chargers
9. Water Wastewater 20-year Feasibility Quote
10. Hydro Automation – tainter gate
11. Current Unfilled Employment Positions at BPU
12. Corrosion Control Plan to Minnesota Department of Health

**** Notes potential action item**

WIDSETH

Brainerd/Baxter
7804 Industrial Park Road
Baxter MN 56425

218.829.5117
Baxter@Widseth.com
Widseth.com

To: **Charlie Gammon, Brainerd Public Utilities WWTP Supervisor**
From: **William Westerberg, Widseth**
Date: **January 21, 2025**
RE: **Directional Drilling Forcemain River Crossing – Progress Update**

The following is a progress update of the Directional Drilling Forcemain River Crossing Project.
The Original Contract amount for the Directional Drilling Forcemain River Crossing Project was $1,727,164.08.

6 change orders have been approved on this project totaling $55,781.40.

Change Order No. 1- Helicals	$16,885.57
Change Order No. 2- Raising existing MH 2-5	$7,658.53
Change Order No. 3- Change Air Release Manhole Casting to Bolt Down	$2,376.13
Change Order No. 4- Contaminated Soils	$9,249.73
Change Order No. 5- IR Mitigation	$12,611.44
Change Order No. 6- Baxter Access Road to Manholes	$7,000.00
Total Change Orders	$55,781.40

The revised total contract amount with the addition of the above 6 change orders is $1,782,945.48.

Minger Construction has completed all the work required for this project including the 6 change orders totaling $1,759,443.19 which is 98.7% of the total contract amount.
$15,000.00 is being held in retainage.
The total amount paid to the Contractor on 7 pay applications is $1,744,443.19.
The Contractor would like to reduce the retainage to $1,000.00 on next pay application.

The remaining construction items are maintenance items for work completed:

Brainerd Side of the Mississippi River

- Achieving 70% growth of vegetation on the Brainerd side of the Mississippi River

Baxter Side of the Mississippi River

- Achieving 70% growth of vegetation on the Baxter side of the Mississippi River
- Maintenance of trees and bushes planted as part of landscape plan

Schedule

- Minger Construction was substantially complete by December 22, 2023, ahead of the substantial completion date of March 1, 2024
- Minger Construction completed the following in the spring of 2024:
    - Change Order No. 3
    - Change Order No. 6
    - Access Road restoration on Brainerd side
        - Regraded Access Road
        - Seeded and mulched area outside of road surface
    - Landscaping and turf restoration on Baxter side of the River
    - Punch list items.

- The Final Completion Date for the Directional Drilling Forcemain River Crossing Project is June 1, 2026. This completion date allows for maintenance of the restoration items and landscaping.
- The City of Baxter proposes to reduce the escrow for the work in Baxter to $1,000.00 at their next scheduled Council Meeting.
    - The City of Baxter has approved the Landscaping, Bituminous Access Road construction, and Eagle Ridge Road Bituminous Pavement restoration.
    - City of Baxter will review the vegetation growth in the Spring of 2025 and release the remaining escrow amount if the proper vegetation growth has occurred.

Widseth Budget/Fees

- The original budget for construction services on this project was $178,500.00
- The fee billed through January 10, 2025 is $184,259.02
    - The fee billed includes the following Extra Work totaling $17,759.47:
        - $9,932.88 to deal with the contaminated soils issues which was an unforeseen condition
        - $3,151.00 to design Baxter access roads to manholes, prepare Change Order No. 6, stake, and observe construction as directed by Brainerd Public Utilities.
            - The Baxter Access Road to Manholes has been completed
        - $3,325.59 to delineate wetlands along Brainerd access road to Air Release Manhole and prepare options for access road improvements as directed by Brainerd Public Utilities.
            - The requirements of the governing agencies for work in the floodplain and the cost to improve the access road prevented this from proceeding.
        - $1,350.00 to prepare landscape plan for the disturbed area around the air release manhole on the Brainerd side of the river as requested by the Rotary and directed by Brainerd Public Utilities.
            - The cost to provide additional landscaping prevented this from proceeding.
- The increase fees for this project based on the extra work is $196,259.47

WIDSETH

Brainerd/Baxter
7804 Industrial Park Road
Baxter MN 56425

218.829.5117
Baxter@Widseth.com
Widseth.com

To: **Charlie Gammon, Brainerd Public Utilities WWTP Supervisor**
From: **William Westerberg, Widseth**
Date: **January 20, 2025**
RE: **Preliminary Design Report- Facility Plan/Environmental Report**
Brainerd Public Utilities Main Lift Station – Progress Update

Widseth and HRGreen are working with Brainerd Public Utilities (BPU) to provide preliminary engineering services for the main lift station to pursue Public Facilities Authority (PFA) financing to prepare a Facility Plan outlining the alternatives, costs, and timelines for PFA/Minnesota Pollution Control Agency (MPCA) review and financing.
Widseth, HRGreen, and BPU team have worked together to identify 4 options:

1. New Dry Pit Lift Station
2. Rehabilitate Existing Main Lift Station to current standards as dry pit style lift station
3. New Submersible Pump Lift Station
4. Rehabilitate Existing Main Lift Station to current standards as submersible pump lift station

The team has completed site visits to the Main Lift Station to examine and discuss the existing facility.
The environmental review of the Main Lift Station site is underway.
We have prepared a site map showing the existing topography and underground utilities and reviewed previously completed Main Pumping Station Study dated January 5, 2021.

Previous discussions indicated that 2 of the existing 4 pumps are in very poor condition. The PFA process of acquiring the funding may take 2 or 3 years to complete. Once a contractor is selected the construction of the lift station may take 1 to 2 years to complete because of the long lead times on items such as electrical equipment. BPU should come up with contingency plan which may include replacing 1 or 2 of the existing pumps in very poor condition.

The following is a summary of the work plan and schedule:

1. Prepare preliminary report on 4 options that includes:
   Widseth and HRGreen met on January 20, 2025, to discuss the 4 options. The next steps are the following:
   - Preliminary project cost estimate for each option
   - Determine pros and cons of each option
2. Meet with BPU Staff to discuss preliminary report on 4 options next week.
   - Determine 2 options to move forward with for additional review
   - Identify additional information needed
3. Prepare Project Priority List (PPL)
   - **Deadline for submittal of PPL to PFA March 7, 2025**
4. Refine scope of work for 2 selected options
   - Revise Preliminary project cost estimate for 2 options
   - Identify non-monetary factors for the 2 selected options such as social and environmental aspects which will be covered in the Environmental Report in detail
   - Revise Pros and Cons of 2 options
5. Meet with BPU to discuss the 2 options
   - Identify the recommended option

6. Further Analysis of selected option
    - Update Facility Plan based on selected option
    - Public Hearing on Facility Plan February 25, 2025, to May 27, 2025
      Finalize the Facility Plan and Environmental report for submittal to MPCA and PFA
        - The sooner the Facility Plan is submitted the better chance it has to be reviewed for inclusion in the IUP for 2026
7. Submit Facility Plan to PFA March 7, 2025, to June 6 ,2025 for approval
   The sooner the Facility plan is submitted the better chance to be reviewed for inclusion in the IUP for 2026.
   Deadline June 6, 2025
8. Submittal of application to be placed on the Intended Use Plan (IUP)
   Deadline June 6, 2025

Public Utilities Commission
Agenda Request

MEETING DATE: January 28, 2025

TITLE OF ITEM: Authorize staff to negotiate updated AEP Contract Amendment

ACTION REQUESTED: Approve/Deny Motion

ESTIMATED TIME (MIN): 4

SUBMITTED BY: Danny Loch, Finance Manager, Chris Evans, Public Utilities Director

PRESENTER: Chris Evans, Public Utilities Director, Danny Loch, Finance Manager

SUMMARY OF ISSUE: The Commission has requested that staff procure 10 years of contracted power purchases. At the November 24 Commission meeting, Commission approved a long-term power contract extension at an estimated cost of $48.05/ MWh. This price was based on the October 30, 2024 presentation AEP provided staff. Since this date, AEP has been unable to secure this pricing on the market. The markets are unpredictable and have increased since that time. The markets appear to be leveling off in the current day. The most up-to-date pricing will be available for the meeting. As of January 15, 2025 AEP has seen in the market $49.80/MWh. This is an increase of 7.5% compared to the original 5.5% for 2025-2026 contract period, and maintains the other presented all in changes from Novembers meeting.

For comparative purposes for 2024 the City's base load purchases were at a rate of $43.75-44.60/MWh, for a total billing of $6,764,884. At the $48.05/MWh which was previously approved it would cost an approximate $580,000 more for the same energy use in 2024. Considering the market rates that AEP presented in the attachment at a price of $49.80/MWh, the same energy purchases from 2024 would equate to $7,610,850 or $846,000 an increase of $267,500 over what was approved in November.

At $50.50/ MWh total comparable 2024 purchases would cost $7,717,827 or $953,000 more than the prior year. This is $375,000 more than what has previously been approved.

ALTERNATIVE, OPTIONS, EFFECTS ON OTHERS/COMMENTS: See attached presentation.

Per phone call with AEP Thursday, January 23, 2025 - latest price was $49.70 / MWh

RECOMMENDED ACTION/MOTION: Due to the volatility in the commodities trade and energy prices changing on demand, staff recommends authorizing Director Evans to negotiate with AEP for market pricing not to exceed $50.50/MWh.

FINANCIAL IMPACT: $375,000 more in purchased power than what was approved at the November meeting.

AEP ENERGY PARTNERS℠

CITY OF BRAINERD

BRAINERD
MINNESOTA
A City for all Seasons

January 16, 2025

Recent Power/Gas Volatility

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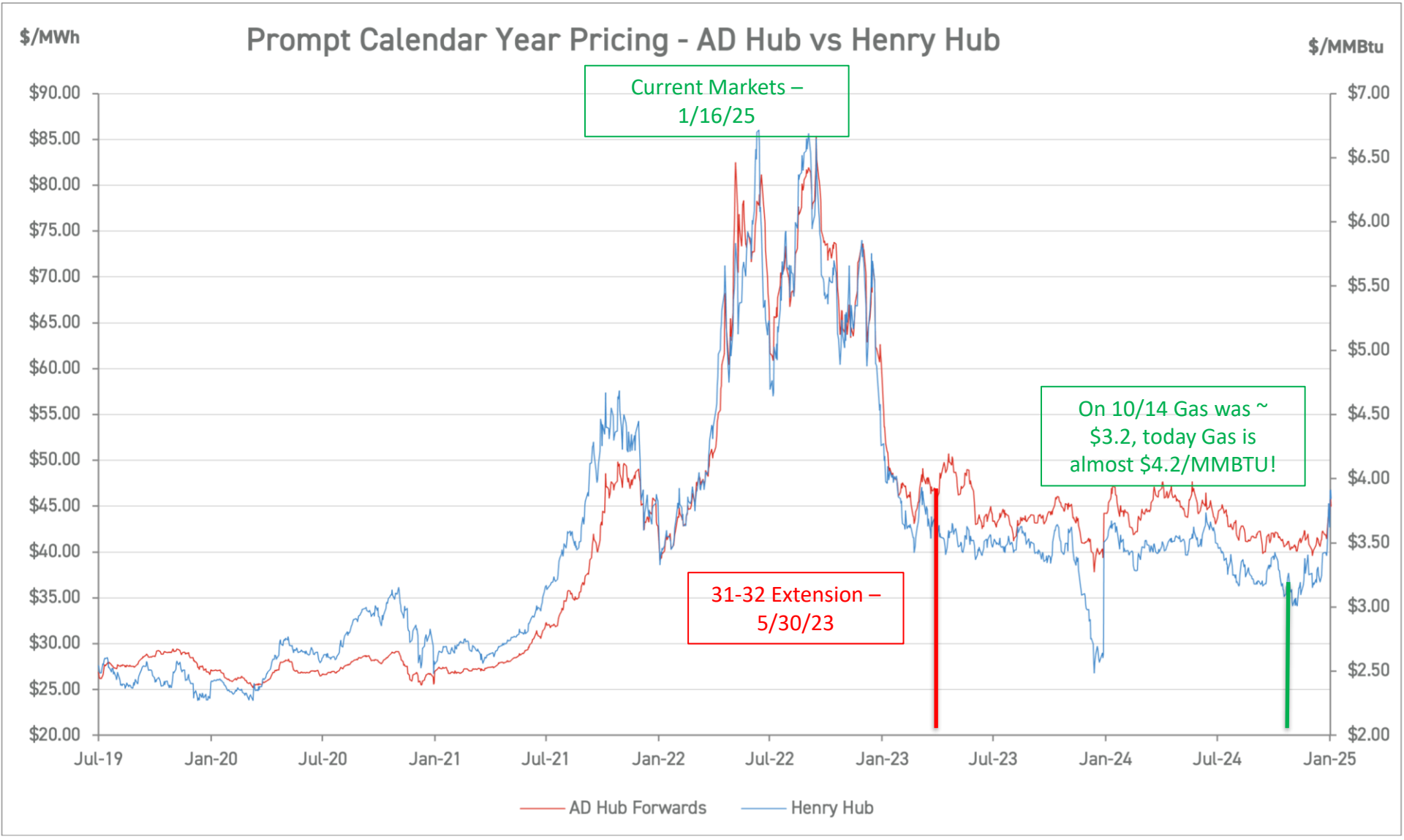
An AEP Company



AEP Proposed
PY 32/33- PY 33/34
Wholesale Extension Updates

PY 32/33 - 33/34 Extension Proposal

AEP ENERGY PARTNERS
An AEP Company

- **Extension Proposal (10/14/24 vs. 1/15/25):**
  - Note: All numbers in table other than Energy are *estimates
- ***Last meeting was held in BPU on 10/30/24***
- ***BPU Commission Approved 10/14/24 Indicative Offer on 11/25/24***
- ***Energy markets moved up considerably since October, but have leveled off***

10/14/2024	Current	Proposed					All-in
	Energy	Energy	Anc*	Capacity*	Trans*	Total*	Change
Term	$/MWh	$/MWh	$/MWh	$/MWh	$/MWh	$/MWh	$/Mwh
PY19/20	$ 43.75		$ 0.60	$ 8.79	$ 11.02	$ 64.16	
PY20/21	$ 43.75		$ 0.60	$ 11.96	$ 11.03	$ 67.34	5%
PY21/22	$ 43.75		$ 0.60	$ 12.07	$ 13.94	$ 70.36	4%
PY22/23	$ 43.75		$ 0.60	$ 12.22	$ 15.04	$ 71.61	2%
PY23/24	$ 43.75		$ 0.60	$ 12.70	$ 15.80	$ 72.85	2%
PY24/25	$ 44.60		$ 0.60	$ 12.00	$ 16.58	$ 73.78	1%
PY25/26	$ 44.60		$ 0.60	$ 12.48	$ 16.95	$ 74.62	1.1%
PY26/27	$ 44.60		$ 0.60	$ 13.45	$ 17.32	$ 75.97	2%
PY27/28	$ 44.60		$ 0.60	$ 13.65	$ 17.70	$ 76.55	1%
PY28/29	$ 44.60		$ 0.60	$ 14.25	$ 18.09	$ 77.54	1%
PY29/30	$ 44.60		$ 0.60	$ 14.89	$ 18.49	$ 78.58	1%
PY30/31	$ 44.60		$ 0.60	$ 15.95	$ 18.90	$ 80.05	2%
PY31/32	$ 44.60		$ 0.60	$ 15.81	$ 19.32	$ 80.33	0%
PY32/33		$ 62.30	$ 0.60	$ 16.97	$ 19.75	$ 99.62	19%
PY33/34		$ 62.30	$ 0.60	$ 18.08	$ 20.18	$ 101.16	2%

1/15/2025	Current	Proposed					All-in
	Energy	Energy	Anc*	Capacity*	Trans*	Total*	Change
Term	$/MWh	$/MWh	$/MWh	$/MWh	$/MWh	$/MWh	$/Mwh
PY19/20	$ 43.75		$ 0.60	$ 8.79	$ 11.02	$ 64.16	
PY20/21	$ 43.75		$ 0.60	$ 11.96	$ 11.03	$ 67.34	5%
PY21/22	$ 43.75		$ 0.60	$ 12.07	$ 13.94	$ 70.36	4%
PY22/23	$ 43.75		$ 0.60	$ 12.22	$ 15.04	$ 71.61	2%
PY23/24	$ 43.75		$ 0.60	$ 12.70	$ 15.80	$ 72.85	2%
PY24/25	$ 44.60		$ 0.60	$ 12.00	$ 16.58	$ 73.78	1%
PY25/26	$ 44.60		$ 0.60	$ 12.48	$ 16.95	$ 74.62	1.1%
PY26/27	$ 44.60		$ 0.60	$ 13.45	$ 17.32	$ 75.97	2%
PY27/28	$ 44.60		$ 0.60	$ 13.65	$ 17.70	$ 76.55	1%
PY28/29	$ 44.60		$ 0.60	$ 14.25	$ 18.09	$ 77.54	1%
PY29/30	$ 44.60		$ 0.60	$ 14.89	$ 18.49	$ 78.58	1%
PY30/31	$ 44.60		$ 0.60	$ 15.95	$ 18.90	$ 80.05	2%
PY31/32	$ 44.60		$ 0.60	$ 15.81	$ 19.32	$ 80.33	0%
PY32/33		$ 71.85	$ 0.60	$ 16.97	$ 19.75	$ 109.17	26%
PY33/34		$ 71.85	$ 0.60	$ 18.08	$ 20.18	$ 110.71	1%

***Note:** on 5/23, PY31/32 the Energy Price was $72.00*

Confidential

6/25-5/34 Blended Rate Proposal

AEP ENERGY PARTNERS
An AEP Company

- **Blended Extension Proposal (10/14/24 vs. 1/15/25):**
  - Note: All numbers in table other than Energy are *estimates

10/14/2024	Current	Blended					All-in
	Energy	Energy	Anc*	Capacity*	Trans*	Total*	Change
Term	$/MWh	$/MWh	$/MWh	$/MWh	$/MWh	$/MWh	$/Mwh
PY19/20	$ 43.75		$ 0.60	$ 8.79	$ 11.02	$ 64.16	
PY20/21	$ 43.75		$ 0.60	$ 11.96	$ 11.03	$ 67.34	5%
PY21/22	$ 43.75		$ 0.60	$ 12.07	$ 13.94	$ 70.36	4%
PY22/23	$ 43.75		$ 0.60	$ 12.22	$ 15.04	$ 71.61	2%
PY23/24	$ 43.75		$ 0.60	$ 12.70	$ 15.80	$ 72.85	2%
PY24/25	$ 44.60		$ 0.60	$ 12.00	$ 16.58	$ 73.78	1%
PY25/26	$ 44.60	$ 48.05	$ 0.60	$ 12.48	$ 16.95	$ 78.07	5.5%
PY26/27	$ 44.60	$ 48.05	$ 0.60	$ 13.45	$ 17.32	$ 79.42	2%
PY27/28	$ 44.60	$ 48.05	$ 0.60	$ 13.65	$ 17.70	$ 80.00	1%
PY28/29	$ 44.60	$ 48.05	$ 0.60	$ 14.25	$ 18.09	$ 80.99	1%
PY29/30	$ 44.60	$ 48.05	$ 0.60	$ 14.89	$ 18.49	$ 82.03	1%
PY30/31	$ 44.60	$ 48.05	$ 0.60	$ 15.95	$ 18.90	$ 83.50	2%
PY31/32	$ 44.60	$ 48.05	$ 0.60	$ 15.81	$ 19.32	$ 83.78	0%
PY32/33		$ 48.05	$ 0.60	$ 16.97	$ 19.75	$ 85.37	2%
PY33/34		$ 48.05	$ 0.60	$ 18.08	$ 20.18	$ 86.91	2%

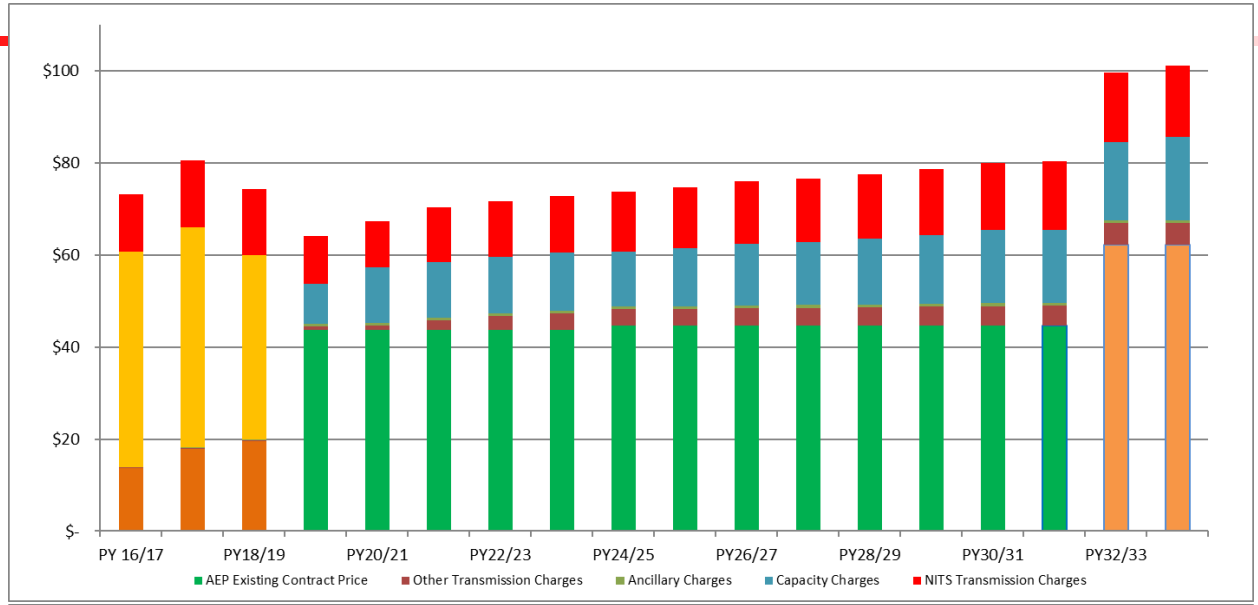
10/14/24:
6/25 Blended All-in Price
Increase = ~5.4%

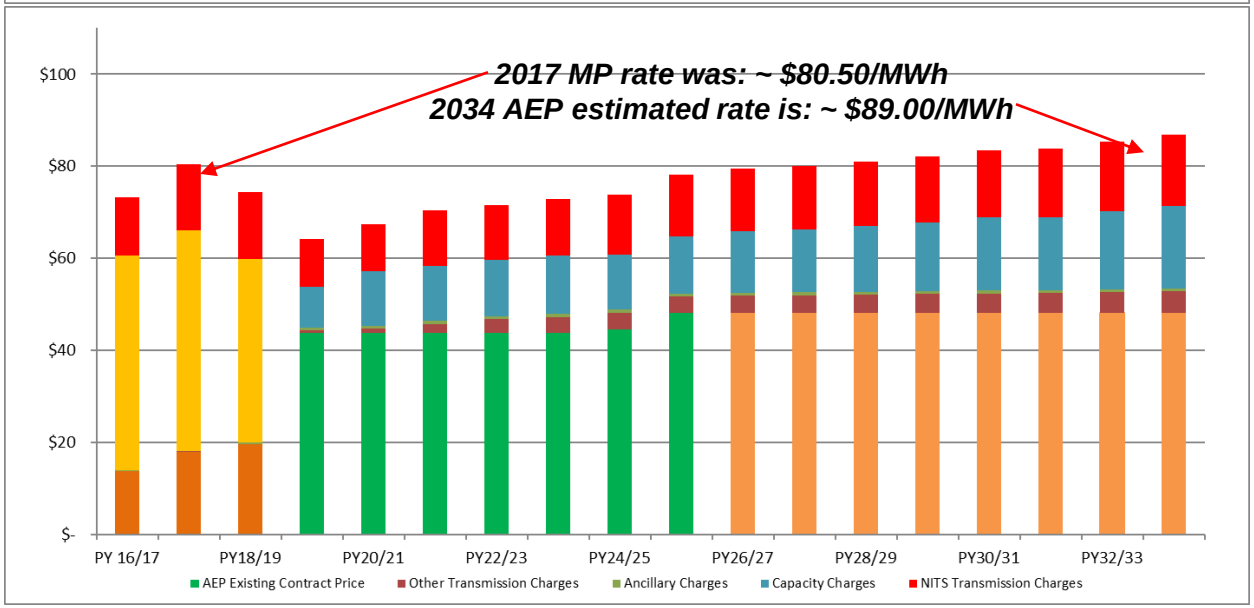
1/15/2025	Current	Blended					All-in
	Energy	Energy	Anc*	Capacity*	Trans*	Total*	Change
Term	$/MWh	$/MWh	$/MWh	$/MWh	$/MWh	$/MWh	$/Mwh
PY19/20	$ 43.75		$ 0.60	$ 8.79	$ 11.02	$ 64.16	
PY20/21	$ 43.75		$ 0.60	$ 11.96	$ 11.03	$ 67.34	5%
PY21/22	$ 43.75		$ 0.60	$ 12.07	$ 13.94	$ 70.36	4%
PY22/23	$ 43.75		$ 0.60	$ 12.22	$ 15.04	$ 71.61	2%
PY23/24	$ 43.75		$ 0.60	$ 12.70	$ 15.80	$ 72.85	2%
PY24/25	$ 44.60		$ 0.60	$ 12.00	$ 16.58	$ 73.78	1%
PY25/26	$ 44.60	$ 49.80	$ 0.60	$ 12.48	$ 16.95	$ 79.82	7.6%
PY26/27	$ 44.60	$ 49.80	$ 0.60	$ 13.45	$ 17.32	$ 81.17	2%
PY27/28	$ 44.60	$ 49.80	$ 0.60	$ 13.65	$ 17.70	$ 81.75	1%
PY28/29	$ 44.60	$ 49.80	$ 0.60	$ 14.25	$ 18.09	$ 82.74	1%
PY29/30	$ 44.60	$ 49.80	$ 0.60	$ 14.89	$ 18.49	$ 83.78	1%
PY30/31	$ 44.60	$ 49.80	$ 0.60	$ 15.95	$ 18.90	$ 85.25	2%
PY31/32	$ 44.60	$ 49.80	$ 0.60	$ 15.81	$ 19.32	$ 85.53	0%
PY32/33		$ 49.80	$ 0.60	$ 16.97	$ 19.75	$ 87.12	2%
PY33/34		$ 49.80	$ 0.60	$ 18.08	$ 20.18	$ 88.66	2%

1/15/25:
6/25 Blended All-in Price
Increase = ~7.6%

Recent blend-ups for the same term extension in WI are in the low 50's!

Projected All-in AEP Supply Rates





Other Discussion Items

AEP ENERGY PARTNERS
An AEP Company

PY 32/33 - PY 33/34 Energy Extensions
Capacity Meeting and Direction – Feb '25
PY25/26 Capacity Amendment Provided – Feb '25
Approvals for Capacity Amendments – Early Mar '25

Confidential Information

Public Utilities Commission
Agenda Request

MEETING DATE: January 28, 2025

TITLE OF ITEM: Discuss ClimaVision site findings and potential lease

ACTION REQUESTED: Direction Requested

ESTIMATED TIME (MIN): 6

SUBMITTED BY: Danny Loch, Finance Manager

PRESENTER: Trent Hawkinson, Operations Manager, Danny Loch, Finance Manager

SUMMARY OF ISSUE: Emily Pawsat from ClimaVision provided an update on the progress of the State hospital radar site evaluation. ClimaVision presented at the June 2024 meeting, presenting a radar structure for the top of the State Hospital water tower to assist in weather monitoring and response. Commission moved to approve an analysis and site review for a radar. Per Emily Pawsat, "ClimaVision first conducted a beam blockage analysis on the water tank and everything passed (no blockage present). Then Climavision invested in a tank mapping effort and structural analysis (both attached)." The site has been determined to be adequate for their needs.

Emily has provided the attached lease template for Commission's review. The lease agreement is the next step ClimaVision is requesting to continue the efforts. Lease agreements vary and they are willing to work with BPU on the language requirements. ClimaVisison would request a lease agreement be signed 60 to 90 days prior to installation, which with the site review could be as early as July from the initial plans and specifications they have presented.

ALTERNATIVE, OPTIONS, EFFECTS ON OTHERS/COMMENTS:

RECOMMENDED ACTION/MOTION: Direct staff to work with ClimaVision and the attorney to draft and complete a lease agreement for Commission's review at an upcoming meeting or another direction that Commission would like.

FINANCIAL IMPACT:

LEASE AGREEMENT

THIS LEASE AGREEMENT ("Lease") is made this _____ day of _____, 2024 ("Today's Date) by and between the _____, a municipal corporation, having an address of _____ ("Landlord") and CLIMAVISION OPERATING, LLC having an address of 552 E. MARKET STREET (SUITE 201) LOUISVILLE, KY 40202 ("Tenant").

1. PREMISES. Landlord hereby leases to Tenant, and Tenant hereby leases from Landlord, space on a water tower structure owned and operated by Landlord and certain land (collectively, the "Premises"), namely said tower being located at _____ (lat/long) (the "Tower"), said demised space on the Tower being that area used to install and attach the radar system as shown on Exhibit "A" attached hereto ("Radar System"), and said demised land being a tract of land upon which a concrete pad, utility meter(s), emergency generator, and control cabinet will be placed thereon, ("Ground Equipment"), as depicted on Exhibit "B" attached hereto, together with non-exclusive easements on property adjacent thereto and improvements thereon for access, parking, utilities, inspection, maintenance, installation, construction, operation, repair, removal, and placement at, from, of, and on the Tower and the tract of land for the Ground Equipment, all as more specifically described in this Lease (including but not limited to the non-exclusive Access Easement and Utility Easement described in Section 6 and on Exhibits "A" and "B").

2. USE. Tenant has the right to use the Premises for the purposes of installing, constructing, maintaining, upgrading, repairing, operating, inspecting, and removing (i) the Radar System, and (ii) the Ground Equipment (together Radar System and Ground Equipment constituting "Site Improvements"), as further described in this Lease. Tenant shall submit construction plans to Landlord and obtain written approval of Landlord before beginning any construction activities on the Premises. With Landlord's prior approval of Tenant's construction plans, Tenant, or its agents or contractors, shall install the Site Improvements and utility lines thereto on the Tower in accordance with good and accepted engineering practices. Tenant has the right to make alterations of the Radar System or Ground Equipment from time to time, so long as such alterations do not adversely affect the structural integrity to the Tower or interfere with its use as a water tower and the alternations are approved in advance by Landlord. Tenant shall have the rights to (i) select the position on the water tank on which the Radar System will be located, and (ii) run electrical and communications lines to and from and to the Radar System and Ground Equipment, provided, however, that installation of the Radar System and Ground Equipment shall not be done so as to cause the water tank to be structurally inadequate or to interfere with Landlord's use of the water tank. Landlord agrees that Tenant may access, and Landlord shall grant access to, the Premises for regular maintenance and as needed for urgent maintenance, provided that Tenant shall provide notice to Landlord prior to accessing the Premises for such purposes.

Landlord Contact details for notification purposes:
Name:
Title:
Cell number:
Office number:

Email:

Back-up Contact in case of urgent requests:
Name:
Title:
Cell number:
Office number:
Email:

Please notify radarops@climavision.com if this point of contact changes.

Provided that Tenant complies with the terms of this Lease, nothing contained herein shall be deemed to give any third party the right to use or occupy any portion of the ground space occupied by the Ground Equipment or any area of the Tower actually occupied by the equipment of Tenant.

Landlord acknowledges that Tenant's plans as presently submitted for the Premises do not interfere with Landlord's current water tank operations. In the event that Landlord subsequently determines that Tenant's operation of the Radar System interferes materially and unreasonably with Landlord's water tank operations, then Landlord shall so notify Tenant and shall provide specific deficiencies for Tenant to address such interference (Landlord acknowledging that operation of the Radar System on the Tower is essentially feasible and any notice shall not be designed to make operation of the Radar System impractical). Tenant shall have ninety (90) days to cure such deficiencies and remove such unreasonable interference. In the event Tenant does not cure the deficiencies within the aforementioned ninety (90) day period, Landlord may terminate this Lease with written notice to Tenant and Tenant shall completely remove the Radar System and equipment in accordance with Section 7 below.

3. INITIAL TERM; RENT. **INITIAL TERM; RENT.** This Lease shall commence sixty days before installation on _____ ("Lease Commencement Date"), and shall continue for a period of twenty (20) years from such Lease Commencement Date (the "Initial Term"), provided that (i) the Landlord shall have the right to terminate this Lease upon notice to Tenant in the event it is not provided access to the Data twelve (12) months from Lease Commencement Date, provided further that it has not been granted Data access prior to its notification of termination, and (ii) the Tenant shall have the right to terminate the Lease any time before the Radar System becomes operational by and upon notice to Landlord. During the Initial Term, the Tenant shall pay to Landlord rent in kind in the form of access, and a limited license, to the weather data collected from the Radar System (the "Data"). Access to the Data will be provided to county leadership and public safety officials via a link to secure, password protected website. Landlord will be given a password to access the Data and such password may be used by the Landlord and any of its employees, provided that it shall be kept confidential and secure. Landlord shall have a limited, nonexclusive, nontransferable, royalty-free license to use and modify the Data solely for its internal county governmental purposes, including for forecasting, public alerts and emergency preparation activities to improve response and enhance safety. In no event shall Landlord redistribute, publish, transfer, sell or otherwise provide the Data or any parts thereof to any other person. All Data is provided to Landlord '**AS IS'** and without warranty of any kind, express or implied, and Landlord acknowledges and agrees that Tenant shall have no liability whatsoever arising from Landlord's use or distribution of such Data.

4. **EXTENSION OF TERM.** Tenant shall have the option to extend the term of this Lease for one (1) additional consecutive twenty (20) year period. Said option for the extended term shall be deemed automatically exercised without notice by Tenant to Landlord unless Tenant gives Landlord written notice of its intention not to exercise such option, in which case, the term of this Lease shall expire at the end of the then current term. All references herein to the term of this Lease shall include the term as it is extended as provided in this Lease. The annual rental for the extended term shall be the same as the prior term and shall be payable in the same manner as the annual rental for the initial term.

5. **GOVERNMENT APPROVALS.** Landlord shall cooperate with Tenant's efforts to obtain and maintain in effect all certificates, permits, licenses and other approvals ("Permits") required by governmental authorities for Tenant's use of the Premises. Tenant will perform all acts and bear all expenses as necessary to obtain and maintain any required Permits. Landlord agrees to execute and deliver any applications, maps, certificates, or other documents and to provide such other information that may be required in connection with Tenant's obtaining the Permits. If at any time during the term of this Lease, Tenant is unable to use the Premises for weather surveillance in the manner intended by Tenant due to imposed zoning conditions or requirements, or in the event that any necessary Permit is finally rejected or any previously issued Permit is canceled, expires, lapses, or is otherwise withdrawn or terminated by the applicable governmental authority, or site survey, soil boring tests or radio frequency propagation tests are found to be unsatisfactory so that Tenant will be unable to use the Premises for weather surveillance in the manner intended by Tenant as determined by Tenant in its sole discretion, Tenant shall have the right to terminate this Lease by written notice to Landlord. Upon such termination, this Lease shall become null and void and Landlord and Tenant shall have no other further obligations to each other, other than Tenant's obligation to remove its property as hereinafter provided.

6. **ACCESS AND UTILITIES**: Subject to the final sentence of this Section, Tenant and its employees, agents, contractors, and utility companies are hereby given and granted a non-exclusive easement for ingress, egress, and regress to and from the Premises and easements over, under, upon, and across the Building and adjoining lands and rights-of-way owned by Landlord on a twenty-four (24) hour daily basis for the purpose of erection, installation, operation, inspection, repair, maintenance, and removal of the Site Improvements and other necessary appurtenances and an easement thereon for telephone lines, power lines, cables, and wires used in connection with the Site Improvements ("Access Easement"). Access Easement for ingress, egress, and regress and such easement for utilities shall be over existing roads, parking lots, and/or roads on the property. Tenant shall have the right but not the obligation to improve the Access Easement by grading, graveling, or paving it; provided, however that Tenant shall be obligated to repair any damage to such easement property caused by Tenant, or its agents or employees. Landlord grants to Tenant and to such power or telephone company ("Utility Company" or "Utility Companies") a non-exclusive easement for such utilities as may be reasonably necessary to serve the Premises over that property (the "Utility Easement"). The Utility Easement shall be for the installation, operation, inspection, maintenance, and repair (whether by Tenant or by Tenant's designated Utility Companies) of necessary utilities from the point of connection with the Utility Companies' distribution networks to the Building and Radar System. The Utility Easement shall be sufficiently wide for providing the applicable utilities to the Premises. It is understood that Tenant and the utility companies providing services to Tenant shall

have access to all areas of the Premises and other lands and rights-of-way owned or leased by Landlord and described on Exhibits A and B as necessary for installation, operation, inspection, upgrade, maintenance, and/or repair of such services. Landlord shall advise Tenant of any utility company requesting an easement under, over, upon and/or across the Premises. Tenant shall be solely responsible for and promptly pay all charges for gas, electricity, telephone service, or any other utility used or consumed by Tenant on the Premises. If necessary, Tenant shall have an electrical current meter and gas meter installed at the Premises for Tenant's electrical usage, and gas usage respectively and the cost of such meter(s) of installation, maintenance, upgrade, and repair thereof shall be paid for by Tenant. Notwithstanding anything to the contrary in the foregoing, prior to it or its contractors accessing the Tower and any secured area on the Premises, Tenant, its contractors and utility companies shall provide notice to Landlord at least three (3) business days in advance of such access (more immediate notice and access obtaining in the case of an emergency).

7. TENANT TERMINATION RIGHT; REMOVAL OR REPLACEMENT OF TOWER. Subject to Section 9, Tenant shall have the right terminate this Lease at any time upon six (6) months' notice to Landlord. In the event that Landlord decides to remove or replace the Tower, Landlord shall give Tenant six (6) months' notice of its intent to remove or replace same. If the Tower is not replaced, then at the expiration of said six (6) months' notice period, this Lease shall terminate, and Tenant shall remove all of its Radar System and in accordance with Section 9 below, provided, however, that if Landlord has another water tower suitable, in the reasonable judgement of Tenant, for the placement of the Radar System, it shall offer Tenant space on such water tower for the Radar System and Ground Equipment on the same terms provided herein. If the Tower is replaced either at the Premises or at another location ("Replaced Tower"), then Tenant shall have the right, at its option exercisable upon notice to Landlord prior to the aforementioned six (6) months' notice period, to lease space on the Replaced Tower and Premises (or surrounding land if at different location) for the Site Improvements on the same terms as provided herein.

8. OPERATION.

(a) Tenant shall operate the Radar System in compliance with all present and future rules and regulations imposed by any local, state, or Federal authority having jurisdiction with respect thereto including, without limitation, the rules and regulations of the Federal Communications Commission (hereinafter referred to as the "FCC") and the Federal Aviation Administration (hereinafter referred to as the "FAA"). Prior to the erection, construction, or installation of the Site Improvements, or making any modifications thereto, Tenant shall comply with the following:

(i) All plans and specifications for the Site Improvements and any subsequent modifications thereto shall be submitted to the Landlord for review by Landlord or Landlord's engineers and/or consultants;

(ii) All plans shall comply with all provisions of any approved Permit;

(iii) Tenant shall obtain any required approvals of all Federal, state and local agencies and all Permits. Upon request, Tenant shall promptly deliver to Landlord written proof of compliance with all applicable Federal, state and local laws, rules and regulations.

(b) The Radar System shall be clearly marked to show Tenant's name, address, telephone number and the name of the person to contact in case of emergency, FCC call sign, frequency(s) and location. All coaxial cable shall be identified in the same manner at the bottom and at the top of each transmission line.

(c) If Tenant obtains telephone service, it shall be Tenant's sole expense, and the telephone lines installed for the benefit of Tenant and the location thereof shall be approved by Landlord.

(d) Tenant shall have a separate electric meter if required by Landlord, and Tenant shall pay separately and directly to the electricity supplier for the installation of the meter and for any electricity used by Tenant's Radar System or Site Improvements.

9. MAINTENANCE AND REMOVAL OF EQUIPMENT.

(a) Tenant at its own cost and expense shall be responsible for maintenance and repair of the Site Improvements, in accordance with all applicable laws, rules and regulations and this Lease.

(b) RF Exposure to Maintenance Workers

(i) The Tenant shall furnish the Landlord a certified engineering report that clearly identifies the distance from its antennas in which the maximum RF exposure limits will be exceeded by maintenance workers engaged in painting, repairing or servicing the water tank or tower support structure. The report shall be in accordance with the maximum radio frequency exposure limits adopted by the Federal Communications Commission (FCC) for non-ionizing radiation. Calculations shall be based upon the combined radiation of all co-located cellular, paging and wireless transmitters at the water tank site.

(ii) The Tenant shall provide a 24-hour telephone number for the purpose of contacting someone who can turn off the transmitters when Landlord must do maintenance on the water tank or tower support structure if it is necessary to approach the RF restricted zone around the antennas. Tenant hereby informs Landlord that the minimum amount of time necessary to respond to such a request is three (3) business days.

For water tank maintenance notifications, email radarops@climavision.com.

Alternate contact information is below:

Tara Leigh Goode
552 East Market Street, Suite 201
Louisville, KY 40202
Tara.goode@climavision.com
859.473.4433

Other than emergency maintenance, Landlord shall use best efforts to minimize maintenance on the Tower that affects the operation of the Radar System. Subject to the foregoing, Landlord agrees to furnish Tenant with a schedule of any routine or planned maintenance of the water tank or tower support structure that may require workers to be within any maximum RF exposure area when such schedule is developed.

(c) Upon the expiration or earlier termination of this Lease, Tenant shall remove all of Tenant's Radar System and the generator on the Ground Equipment from the Premises. Any and all removal of Tenant's Radar System and generator shall be performed in a workmanlike manner without any interference, damage or destruction to any other equipment structures or operations at the Premises or any other equipment of other licensees thereon. Any and all interference or damage caused to the Premises or equipment of other licensees by such removal shall be promptly eliminated or repaired by Tenant.

10. LIABILITY AND INDEMNITY. Tenant agrees to indemnify and save the Landlord harmless from all third party claims (including costs and expenses of defending against such claims) arising or alleged to arise from any negligent act, negligent omission, or intentional tort of Tenant or Tenant's agents, employees, or contractors occurring during the term of this Lease in or about the Premises. Further, Tenant shall be responsible for all damages to the Premises caused by Tenant's or its contractors negligence. Tenant agrees to use and occupy the Premises at Tenant's own risk and hereby releases Landlord from all claims for any damage or injury to persons or property to the full extent permitted by law. It is understood and agreed, however, that this hold harmless and indemnification does not apply to damage or injury to persons or property caused by the negligence of Landlord. The provisions of this Section 11 shall survive the termination of this Lease. Landlord shall be liable for any damage to the Radar System or Tenant equipment caused by it, its contractors or its invitees to the Premises.

11. DAMAGE OR DESTRUCTION OF THE SITE. If Tenant's Radar System is placed upon a structure of Landlord's which is destroyed in whole or in part by fire, storm, or other causes to the extent that Tenant's Radar System cannot function, then Tenant, in its sole discretion, may elect to terminate this Lease by giving written notice thereof to Landlord within thirty (30) days of the date said destruction (in whole or in part) occurred. If this Lease is canceled, the payments required herein shall terminate as of the date of such casualty. Landlord shall not be responsible or liable to Tenant for any loss, damage or expense that may be occasioned by any structural or power failure or by the destruction of or damage to the Tower.

12. INSURANCE. Tenant shall keep in full force and effect during the Initial Term and any renewal period of this Lease a comprehensive general liability insurance policy, including blanket contractual and completed operations coverage with limits of liability of at least $2,000,000.00 in respect to bodily injury, including death, arising from any one occurrence, and $2,000,000.00 in respect of damage to property arising from any one occurrence. Said insurance policy shall be endorsed to include Landlord as an additional insured. Tenant shall, prior to the installation of the Radar System, furnish to Landlord a certificate of insurance confirming that the insurance coverage as specified herein is in full force and effect. All of Tenant's insurance requirements may be satisfied through any combination of excess liability and/or umbrella policies.

13. **END OF AGREEMENT – EQUIPMENT**. The Radar System, Ground Equipment, with the exception of the concrete pad, and site improvements of every kind and nature constructed, erected, installed or placed by Tenant on the Tower, shall be and remain the property of Tenant and none shall be treated as fixtures or become part of the property of Landlord.

14. **NOTICES.** All notices required to be given hereunder shall be given in writing, certified or registered mail, or by overnight courier at the respective addresses of the parties set forth herein or at such other address as may be designated in writing by either party. Notice by overnight courier shall be deemed give the next business day after sent and if given by mail shall be deemed given three days after the date of mailing thereof as follows:

Tenant's address for notice purposes is:
CLIMAVISION
ATTN: TARA GOODE or EMILY PAWSAT
552 E. MARKET STREET (SUITE 201) LOUISVILLE, KY 40202
PARTNERSHIPS@CLIMAVISION.COM

Landlord's address for notice purposes is CITY/COUNTY, ADDRESS, CITY/STATE, ZIP P.O. ATTN: CITY/COUNTY REP with a copy to TITLE, CITY/COUNTY, ADDRESS, CITY/STATE, ZIP, and a copy to TITLE, CITY/COUNTY, ADDRESS, CITY/STATE, ZIP.

15. **DEFAULT**. Subject to Paragraph 2 with respect to interference with water tower operations, this Lease may be terminated upon the failure of a party to comply with the terms of the Lease and such party fails to cure the default within thirty (30) days of receipt of notice from the non-defaulting party, provided that no default shall occur if the nature of the cure is such that it cannot reasonably be cured within said thirty (30) day period and the defaulting party has commenced the cure within said period and diligently pursues the cure to completion. The following, which shall not be exclusive, shall constitute a default by Tenant hereunder: (i) abandonment of either the Radar System or Ground Equipment; (ii) the filing of any case, proceeding or other action under any existing or future law of any jurisdiction, domestic or foreign, relating to bankruptcy, insolvency, reorganization or relief of debtors, seeking to have an order of relief entered with respect to Tenant; or seeking reorganization, arrangement, adjustment, winding-up, liquidation, dissolution, composition or other relief with respect to Tenant or its debts; or (iii) the making by Tenant of an assignment or any other arrangement for the general benefit of creditors under any state statute, In the case of an uncured Tenant default, Landlord shall be entitled at Landlord's option to terminate this Agreement and to remove Tenant Radar System, site improvements, or other personal property on the Premises at Tenant's cost and expense. The rights and remedies stated in this Lease are not exclusive and the parties, in the event of a breach hereof or a dispute, are entitled to pursue any of the remedies provided herein, by law or in equity.

16. **SUBLETTING AND ASSIGNMENT BY TENANT.** Tenant may, with Landlord's written consent (which shall not be unreasonably withheld), assign or sublet any or all of Tenant's interest in this Lease, any part thereof, the leaseholder's interest of Tenant created hereby and/or any or all of Tenant's right, title, and interest in and to any or all of the Radar System and Ground Equipment, except that Tenant may assign or pledge this Lease without the consent of Landlord to any bank or financial institution in connection with a financing. Any said assignee or sublessee

of this Lease shall be bound by the terms of this Lease.

17. **DEBT SECURITY**. Tenant may, without Landlord's consent, pledge, mortgage, convey by deed of trust, assign, create a security interest in, or otherwise execute and deliver any and all instruments for the purpose of securing any bona fide indebtedness or evidence thereof any or all of Tenant's interest in this Lease, any part thereof, the leaseholder's interest of Tenant created hereby, and any and all of Tenant's right, title, and interest in and to any and all of the Radar System and Ground Equipment. Promptly on Tenant's or Tenant's lender's request, Landlord shall execute and deliver, and shall assist in facilitating the execution and delivery of, all documents requested by any of the Tenant's lenders which are consistent with the terms of this Agreement including but not limited to waivers of Landlord's right to levy or distrain upon for rent any of Tenant's property given as security for a debt, consents that none of the shall become fixtures, consents as to procedure for any of Tenant's lenders' sale of the Radar System and Ground Equipment, consents to Tenant's assignment to any lender(s) of any and all of Tenant's interest in or to this Lease and the Radar System and Ground Equipment. Failure of Landlord and all other persons and entities to execute and deliver to any of Tenant's lender(s) all document requested by said lender(s) in conformance with this agreement shall entitle Tenant to terminate this Lease immediately without any further obligation to Landlord.

18. TITLE. Landlord represents and warrants to Tenant that Landlord has good and marketable title to the Premises, Access Easement, and Utility Easement, free and clear of all liens, encumbrances, and exceptions. Landlord shall warrant and defend the same to Tenant against the claims and demands of all persons and entities.

19. **INSPECTIONS**. Landlord shall permit Tenant during the term of this Lease and any extension thereof, free ingress and egress to the Premises by Tenant and its employees, agents and contractors to conduct strength analyses, subsurface boring tests, radio frequency tests and such other tests, investigations and similar activities as Tenant may deem necessary, at the sole cost of Tenant. Tenant and its employees, agents, and contractors shall have the right to bring the necessary vehicles and equipment onto the Premises and the surrounding property ("Landlord's Surrounding Property") to conduct such test, investigations and similar activities. Tenant shall indemnify and hold Landlord harmless against any loss or damage for personal injury and physical damage to the Premises, Landlord's Surrounding Property or the property of third parties resulting from any such tests, investigations and similar activities.

20. **SURVEYS**. Landlord also hereby grants to Tenant the right to survey the Premises and Landlord's Surrounding Property or portion thereof, and the legal description of the Premises.

21. **TOWER ANALYSIS.** Landlord agrees to furnish Tenant, promptly on Tenant's request, with true copies of all structural or other analyses performed on the Tower within the two (2) years preceding Tenant's possession of space on the Tower. In the absence of said Tower analyses or if the most recent analyses are insufficient for Tenant's needs, Landlord, at Tenant's request, agrees to cooperate with Tenant in acquiring new analyses of the Tower. If Tenant requests any new analyses of the Tower, Tenant shall be responsible for coordinating the said new analyses, and the cost of the new analyses shall be paid solely by Tenant. Notwithstanding the foregoing, in the event Tenant determines after reviewing any Tower analyses that the Tower is not structurally appropriate for Tenant's needs, Tenant may, at Tenant's option, either terminate this Lease or with the written consent of the Landlord pay the additional cost of reinforcing or otherwise making the

Tower structurally appropriate for Tenant's use, provided all local, State, and Federal laws, rules, and regulations are adhered to at Tenant's expense in the construction process.

22. **OTHER CONDITIONS AND PROVISIONS**. (a) Notwithstanding the provisions of Section 22, except if Landlord in its reasonable discretion based on sound engineering principles determines that the Tower has become structurally unsound should be withdrawn from use as a water storage facility or has become hazardous or dangerous to persons or property for any reason or except if the Leased Premises, Access Easement, or Utility Easement are damaged due to Tenant's negligence or Tenant's agents' or contractors' negligence, Landlord, at Landlord's expense, shall maintain in good condition and repair the Tower, Landlord's land surrounding the Tower, the Access Easement, and the Utility Easement. Landlord has the responsibility of observing Tower lights requirements and keeping applicable records (including records of notification to Federal Aviation Administration of any failure or repairs of the Tower and any corrections of same). If Landlord has the duty to maintain and repair the Tower, Premises, Access Easement and/or Utility Easement and if Landlord fails to maintain and repair as required hereunder so as to render all or any part of the Leased Premises, Access Easement, or Utility Easement materially unusable for Tenant's intended use, rent shall abate while Landlord, at Landlord's expense, promptly restores the Leased Premises, Access Easement, and Utility Easement to its condition prior to such damage; provided, however, in the event Landlord fails to so repair the Leased Premises. Access Easement or Utility Easement, as the case may be, within thirty (30) days of said damage, Tenant shall have the right to; (i) terminate this Lease without further obligations from Tenant to Landlord hereunder and without affecting Tenant's remedies permitted by law, equity, and/or this Lease for Landlord's breach of this Lease; (ii) hold Landlord in default pursuant to Section 11, or (iii) to the extent feasible, repair or have qualified contractor repair the Leased Premises. Access Easement or Utility Easement, as the case may be, and charge Landlord for the repairs with the right to withhold access to the Data until such reimbursement has been made by the Landlord,

(b) During the term of this Lease and its extensions, Landlord will not give, grant, or convey any future interest in or lease, license, or permission to use the Leased Premises, Access Easement, or Utility Easement if such transfer or use in any way adversely affects or interferes with Tenant's use of its Radar System and the Premises, Access Easement, or Utility Easement. In the event of any adverse effect or interference, Landlord shall take all steps necessary to correct and eliminate the adverse effect or interference within a reasonable time, including but not limited to Landlord taking prompt action to terminate or revoke the said other use, interest, lease, license, or permission, or otherwise remove the grantee and any interfering antenna(s) or other equipment from the Leased Premises, Access Easement, or Utility Easement.

(c) Landlord shall comply with all local, State, and Federal laws, rules, and regulations required by it to be performed as Landlord hereunder and owner of the Tower. (d) Tenant shall comply with all local, State, and Federal laws, rules, regulations required by it to be performed as Tenant hereunder.

23. QUIET ENJOYMENT. Landlord covenants that Tenant shall peaceably and quietly hold and enjoy the right to use the Leased Premises, Access Easement, and Utility Easement on the terms and conditions and for the purposes stated herein during the term of this Lease, as it may be extended, without hindrance, ejection, or molestation by Landlord or any person or persons claiming under Landlord.

24. BINDING ON SUCCESSORS. The covenants and conditions contained herein shall apply to and bind the heirs, successors, executors, administrators and assigns of the parties.

25. GOVERNING LAW. The parties intend that this Lease and the relationship of the parties shall be governed by the laws of the state of the address of the landlord first stated above.

26. ENTIRE AGREEMENT. All of the representations and obligations of the parties are contained herein, and no modification, waiver or amendment of this Lease or of any of its conditions or provisions shall be binding upon a party unless agreed to in writing by the other party.

27. SEVERABILITY. If any section, subsection, term or provision of this Lease or the application thereof to any party or circumstance shall, to any extent, be invalid or unenforceable, the remainder of said section, subsection, term or provision of this Lease or the application of same to parties or circumstances other than those to which it was held invalid or unenforceable, shall not be affected thereby and each remaining section, subsection, term or provision of this Lease shall be valid or enforceable to the fullest extent permitted by law.

28. FURTHER ASSURANCES. Each of the parties agree to do such further acts and things and to execute and deliver such additional agreements and instruments as the other may reasonably require to consummate, evidence or confirm this Lease.

29. WAIVER OF LANDLORD'S LIENS. Landlord hereby waives any and all lien rights it may have, statutory or otherwise concerning the Tenant's Facilities or any portion thereof which shall be deemed personal property for the purposes of this Lease, whether or not the same is deemed real or personal property under applicable laws, and Landlord gives Tenant and its mortgagees the right to remove all or any portion of the same from time to time, whether before or after a default under this Lease, in Tenant's and/or its mortgagee's sole discretion and without Landlord's consent.

30. HAZARDOUS MATERIALS. As of the Lease Commencement Date of this Lease: (1) Tenant hereby represents and warrants that it shall not use, generate, handle, store or dispose of any Hazardous Material in, on, under, upon or affecting the Property in violation of any applicable law or regulation, and (2) Landlord hereby represents and warrants that (i) it has no knowledge of the presence of any Hazardous Material located in, on, under, upon or affecting the Property in violation of any applicable law or regulation; (ii) no notice has been received by or on behalf of Landlord from any governmental entity or any person or entity claiming any violation of any applicable environmental law or regulation in, on, under, upon or affecting the Property; and (iii) it will not permit itself or any third party to use, generate, handle, store or dispose of any Hazardous Material in, on, under, upon, or affecting the Property in violation of any applicable law or regulation. Landlord and Tenant shall each indemnify, defend and hold the other harmless from and against all Losses (specifically including, without limitation, attorneys', engineers', consultants' and experts' fees, costs and expenses) arising from (i) any breach of any representation or warranty made in this Paragraph by such party; and/or (ii) environmental conditions or noncompliance with any applicable law or regulation that result, in the case of Tenant, from operations in or about the Property by Tenant or Tenant's agents, employees or contractors, and in the case of Landlord, from the ownership or control of, or operations in or

about, the Property by Landlord or Landlord's predecessors in interest, and their respective agents, employees, contractors, tenants, guests or other parties. The provisions of this Paragraph shall apply as of the Lease Commencement Date of this Lease and survive termination of this Lease. "**Hazardous Material**" means any solid, gaseous or liquid wastes (including hazardous wastes), regulated substances, pollutants or contaminants or terms of similar import, as such terms are defined in any applicable environmental law or regulation, and shall include, without limitation, any petroleum or petroleum products or by-products, flammable explosives, radioactive materials, asbestos in any form, polychlorinated biphenyls and any other substance or material which constitutes a threat to health, safety, property or the environment or which has been or is in the future determined by any governmental entity to be prohibited, limited or regulated by any applicable environmental law or regulation.

IN WITNESS WHEREOF, the undersigned have executed this Lease as of the date (Today's Date) first above written .

LANDLORD:

COMPANY NAME	ATTEST:
SIGNATURE: _____	SIGNATURE: _____
NAME: _____	NAME: _____
TITLE:_____	TITLE:_____

TENANT:

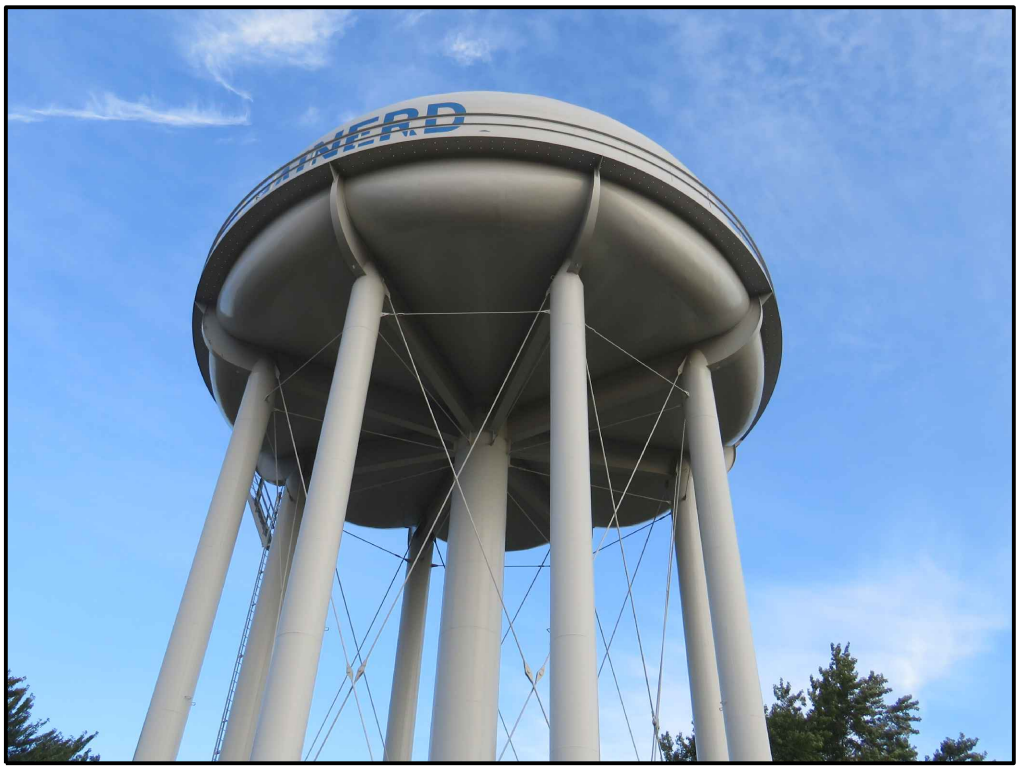
CLIMAVISION	ATTEST:
SIGNATURE: _____	SIGNATURE: _____
NAME: _____	NAME: _____
TITLE:_____	TITLE:_____

TANK MAPPING REPORT

OCTOBER 07, 2024

SITE NAME: BRAINERD, MN WT
SITE NUMBER: MN78
TEP#: 342642.996066

STATE AVENUE
BRAINERD, MN 56401
(CROW WING COUNTY)



PREPARED FOR:

Climavision

326 Tryon Road, Raleigh, NC 27603 o) 919.661.6351 f) 919.661.6350
www.tepgroup.net

TOWER MAPPING

Site Name BRAINERD, MN WT
TEP # 342642.996066
Client # MN78
Field Work Date 9/17/24
Report Date 10/7/24
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CHECKLIST

Page Title	Initials	Page # (s)	Revision	Notes
Checklist & Notes	KMM	2		
Tank Elevation	KMM	3		
I-Beam / Catwalk Supports	KMM	4		
Leg & Riser Details	KMM	5		
Catwalk Details	KMM	6		
Plan at Top	KMM	7		
Elevation at Top	KMM	8		
Transmission Cables	KMM	--		NO COAX. ONLY LIGHTING CONDUIT
Ladder Details	KMM	9		
Waveguide Details	KMM	-		NO WAVEGUIDES
Antenna and Mount Sketch	KMM	-		NO ANTENNAS
Photos	KMM	10		

NOTES

Latitude:	N 46°21'17.9"	**Longitude:**	W 94°09'05.7"
Ground Elevation:	1,246-ft (GOOGLE EARTH)		
Site Address:	STATE AVENUE, BRAINERD, MN 56401 (CROW WING COUNTY)		
FCC#:	N/A		
Tower ID Plate:	MASTER TANK COMPANY (YEAR: 1980, TYPE: 75 M PED., HT TO OVERFLOW: 100')		
Existing Carriers/Site #:	N/A		
Gate Combo:			
Special Access Issues:			

Crew Leader: SKY RIMMELE
Crew Member: ANDREW BOGART

Abbreviations:	**AGL:**	**Above Ground Level**	**L:**	**Angle**	**S.B.:**	**Stitch Bolts**
	B.C.:	**Bolt Circle**	**LLH:**	**Long Leg Horizontal**	**Schl:**	**Schifflerized Angle**
	BP:	**Bent Plate**	**LLV:**	**Long Leg Vertical**	**SM:**	**Smooth Heliax**
	C-C:	**Center to Center**	**2L:**	**Double Angle**	**SP:**	**Spacing**
	C:	**Channel**	**M.C.:**	**Metal Conduit**	**SR:**	**Solid Rod**
	CNR:	**Could Not Record**	**M.E.:**	**Minimum Edge**	**Th:**	**Thickness**
	EW:	**Elliptical Waveguide**	**MOD:**	**Modification**	**T.R.:**	**Threaded Rod**
	FH:	**Foam Heliax**	**PL:**	**Plate**	**TME:**	**Tower Mounted Equip.**
	HSS:	**Hollow Struct. Section**	**RC:**	**Rigid Conduit**	**Tri:**	**Triangular**

TOWER MAPPING

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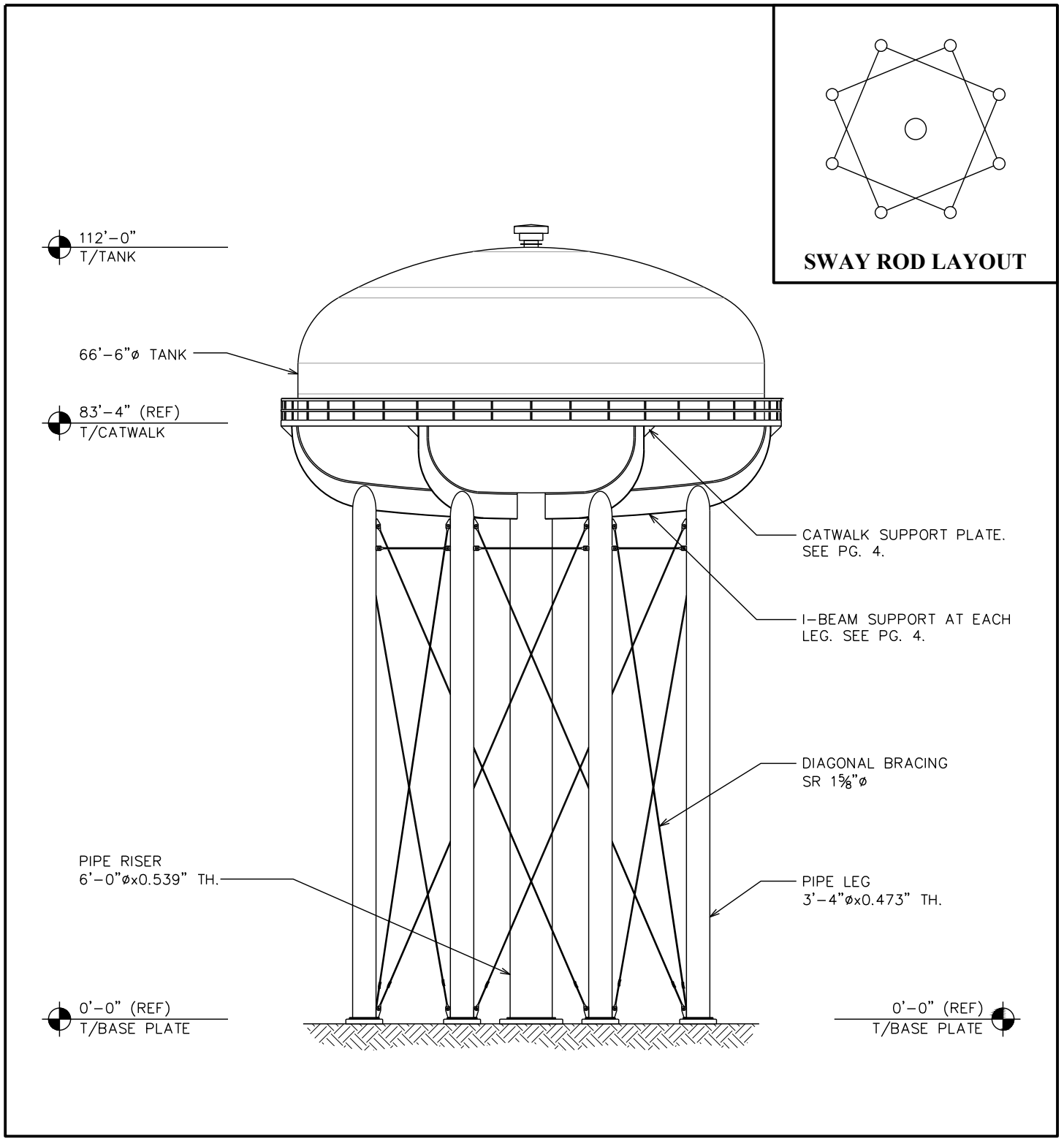
TANK ELEVATION



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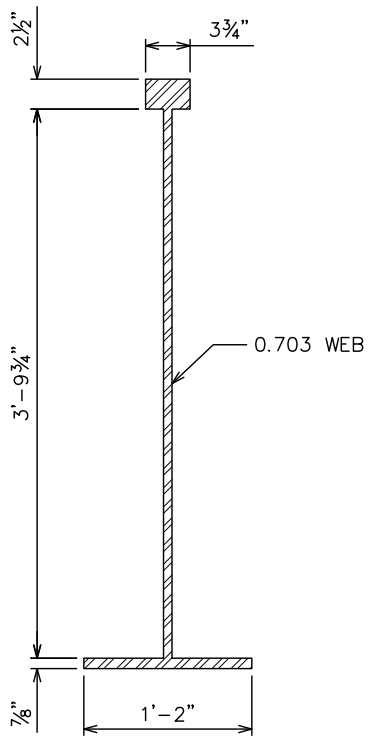
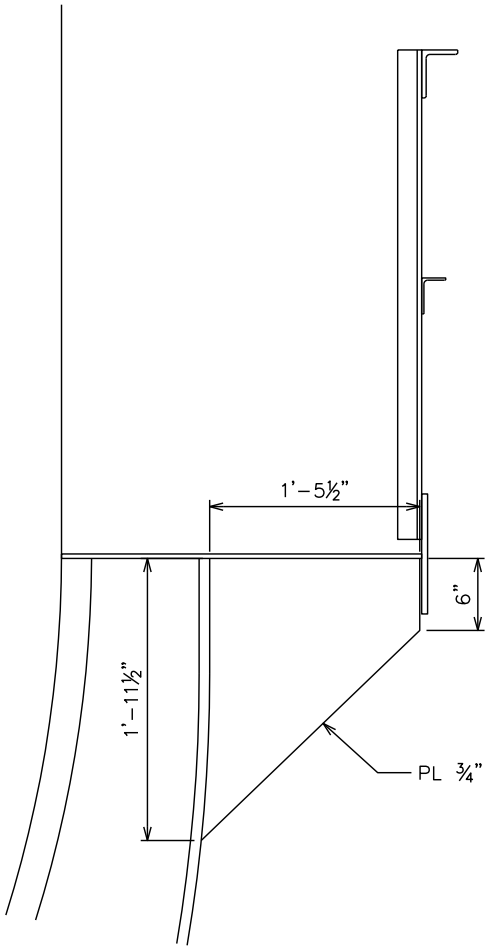
I-BEAM / CATWALK SUPPORTS





TOWER MAPPING

Site Name BRAINERD, MN WT
TEP # 342642.996066
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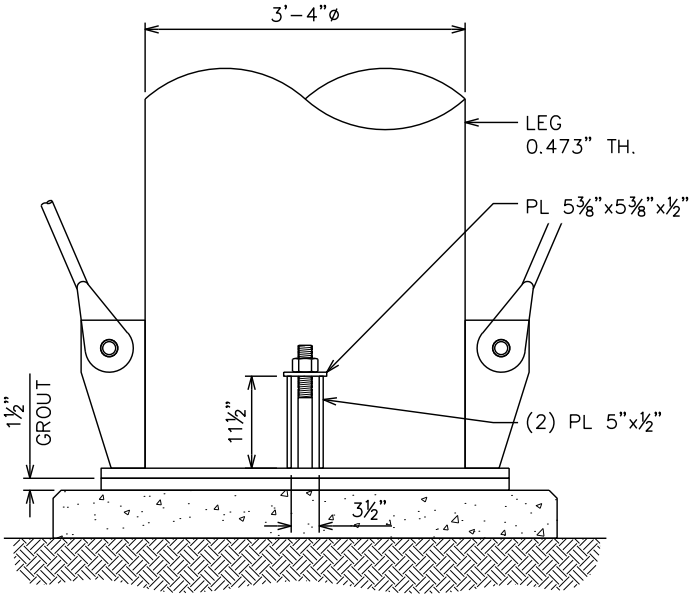
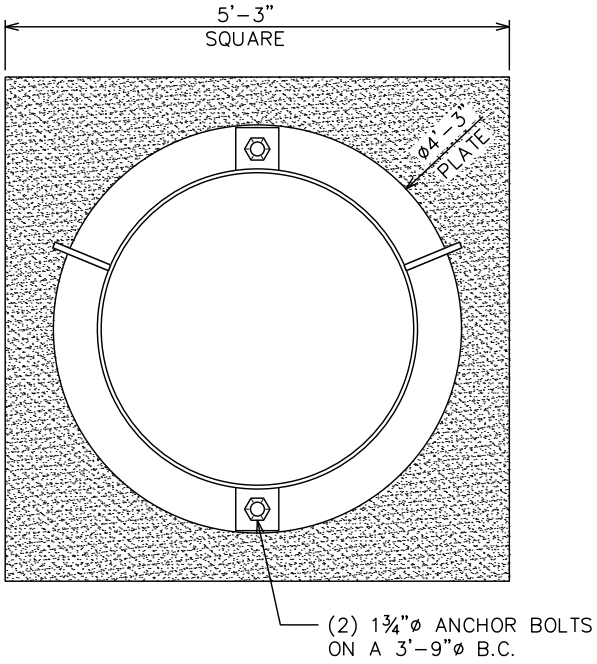
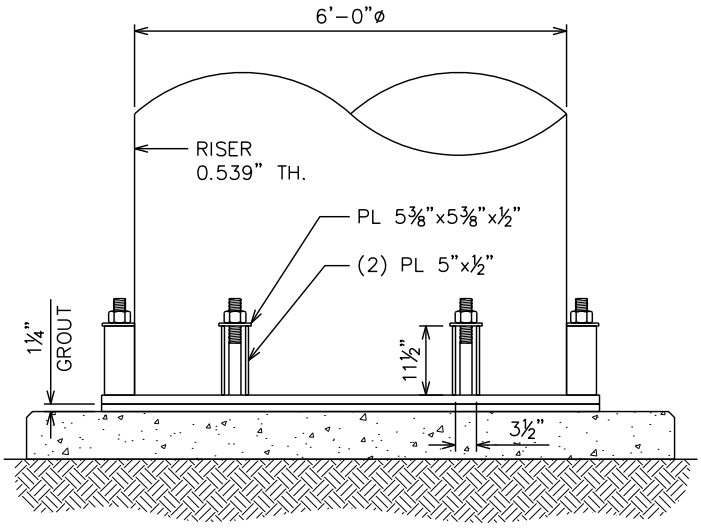
LEG & RISER DETAILS



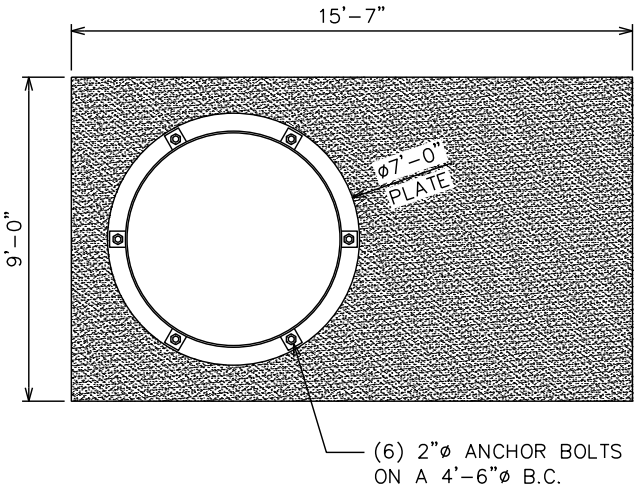
Leg Elevation View



Leg Plan View



Riser Elevation View



Riser Plan View

TOWER MAPPING

Site Name BRAINERD, MN WT
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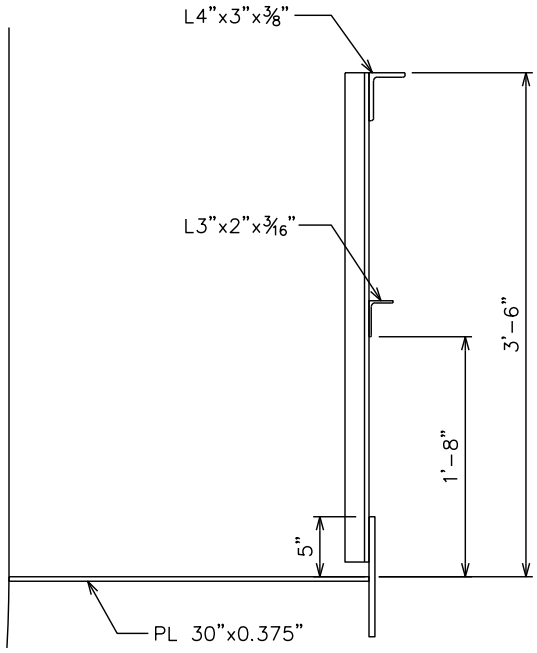
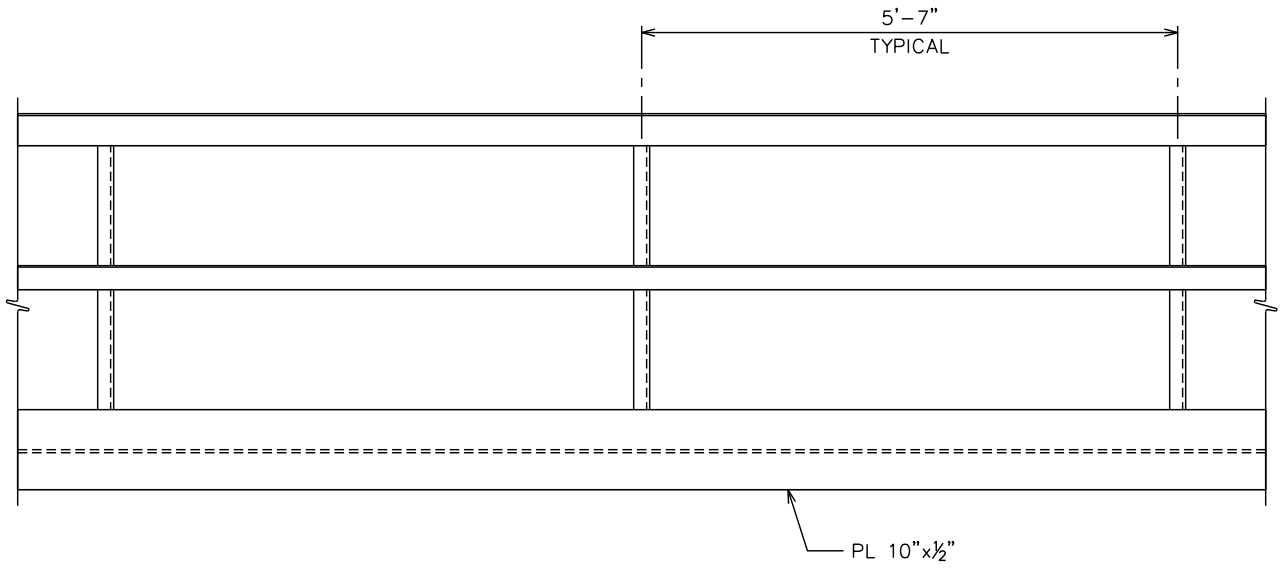
CATWALK DETAILS

Side View



Front View



TOWER MAPPING

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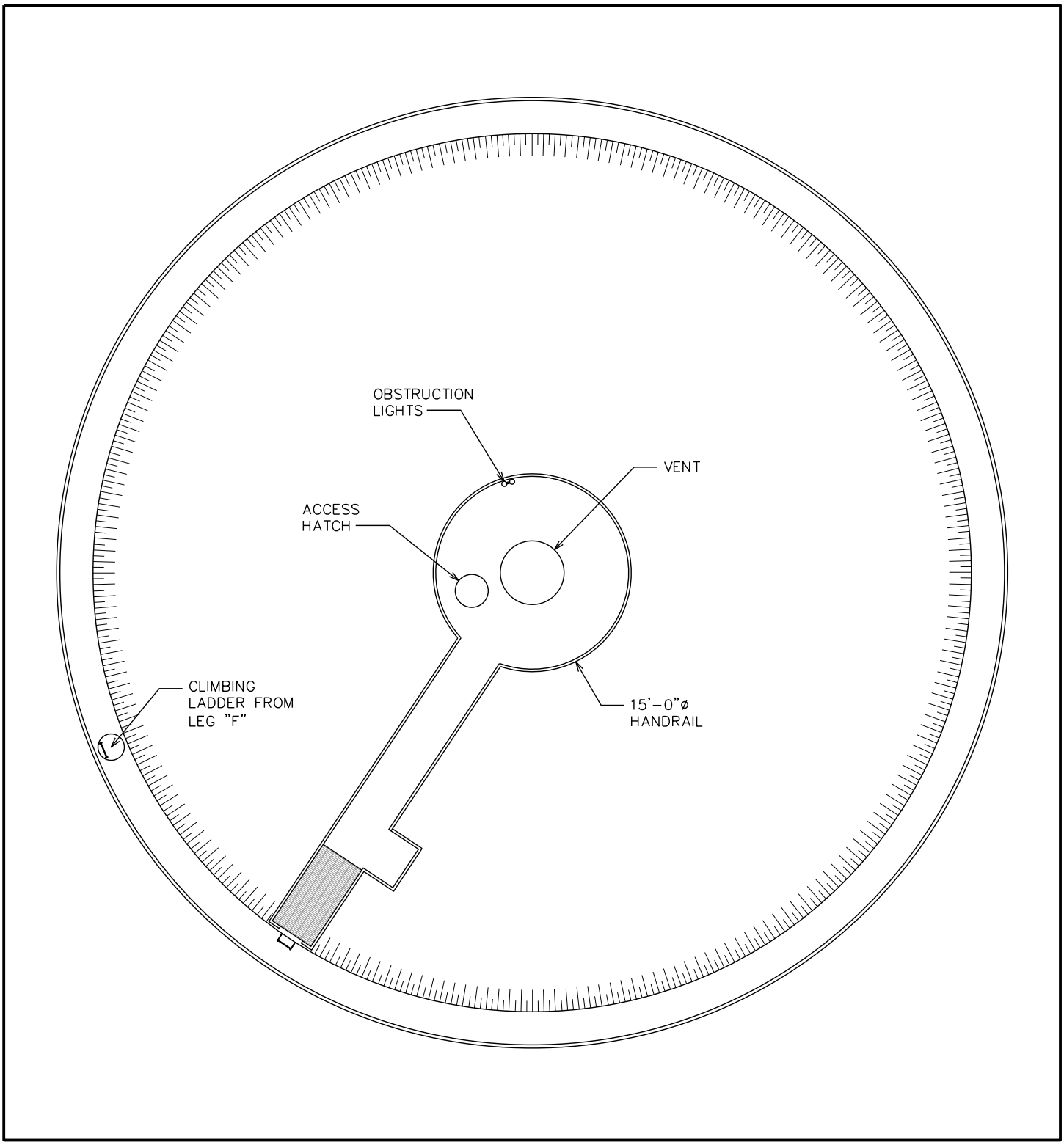
PLAN AT TOP



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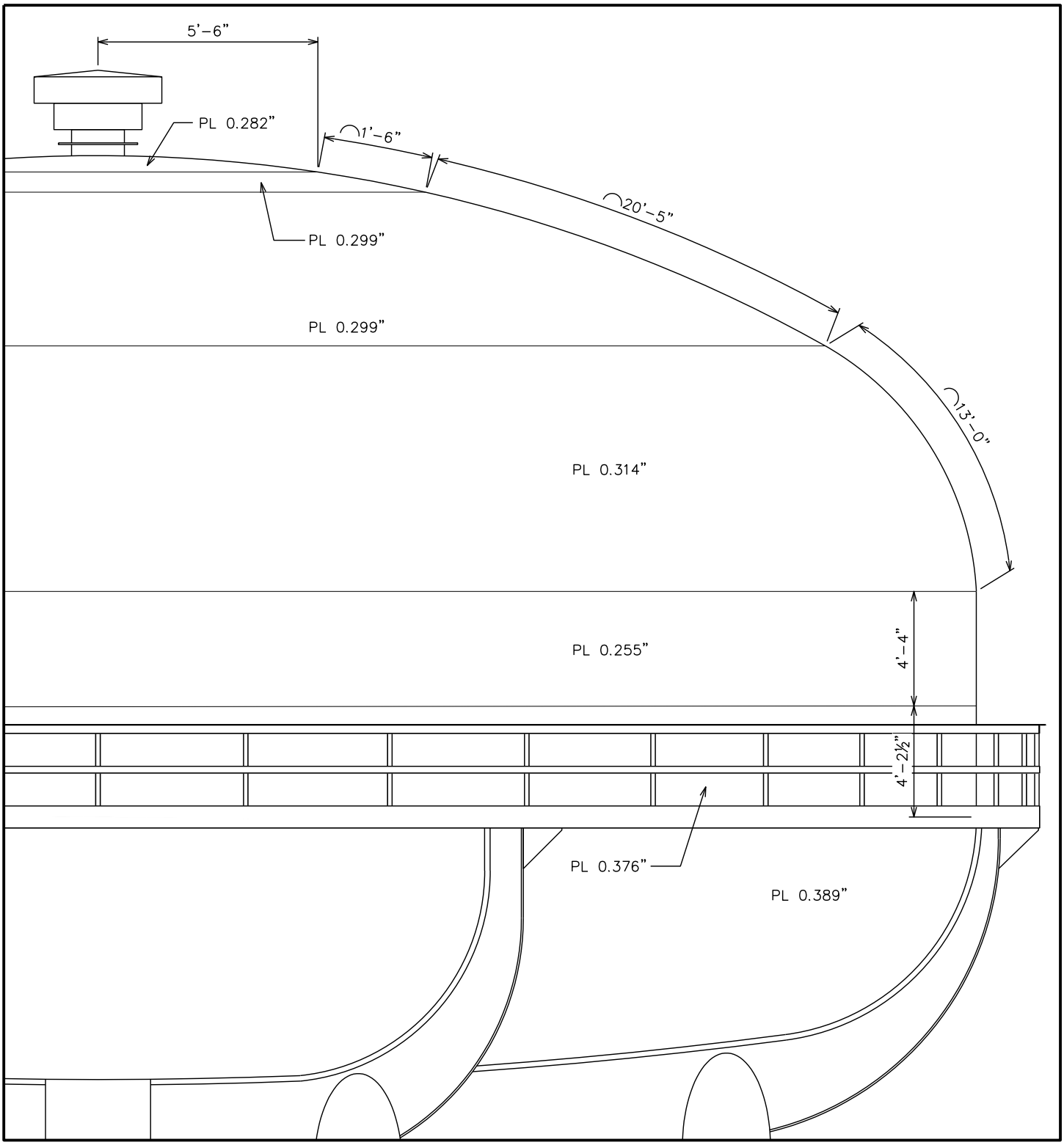
ELEVATION AT TOP



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TOWER MAPPING

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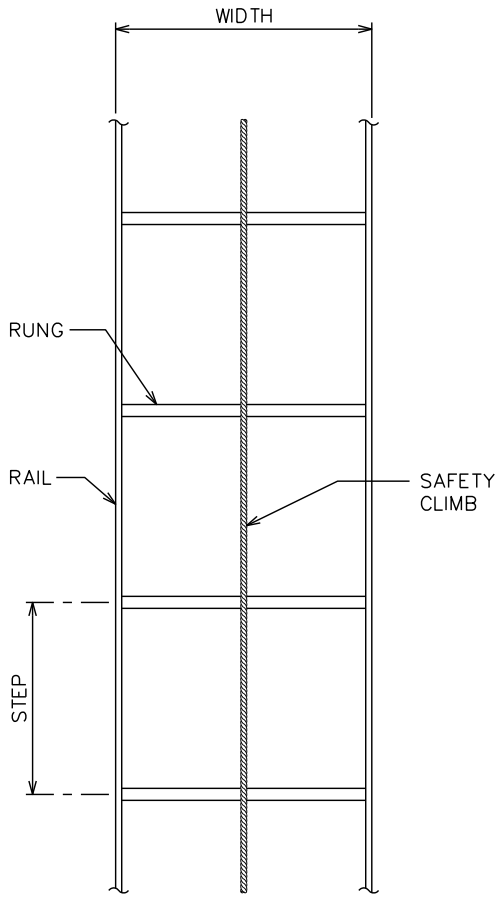
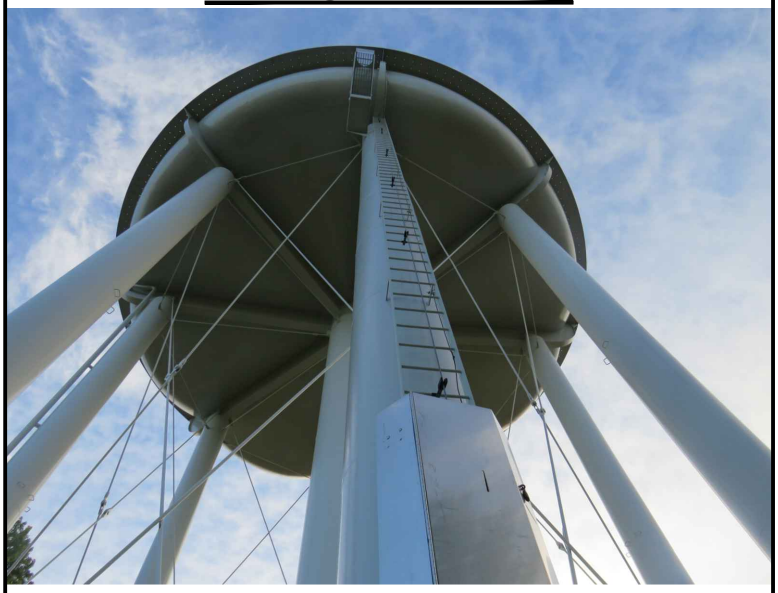
LADDER DETAILS

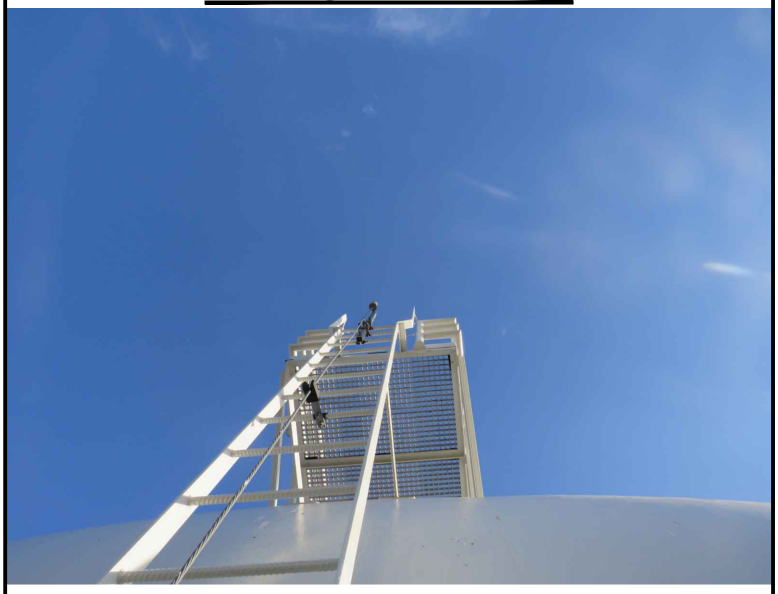
Climbing Ladder #1-2 Sketch



Climbing Ladder #1 Photo



Climbing Ladder #2 Photo



Description	#	Height	Width	Step	Rail (type & size)	Rung (type & size)	Safety (type & size)
LADDER	1	8' - 83'	17"	12"	PL 2"x3/8"	SR 3/4"Ø	3/8"Ø x 7-STRAND
LADDER	2	84' - 112'	17"	12"	PL 2"x3/8"	SR 3/4"Ø	3/8"Ø x 7-STRAND

TOWER MAPPING

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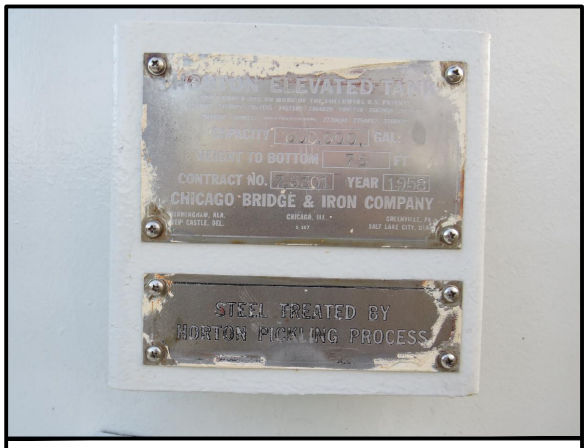
PHOTOS

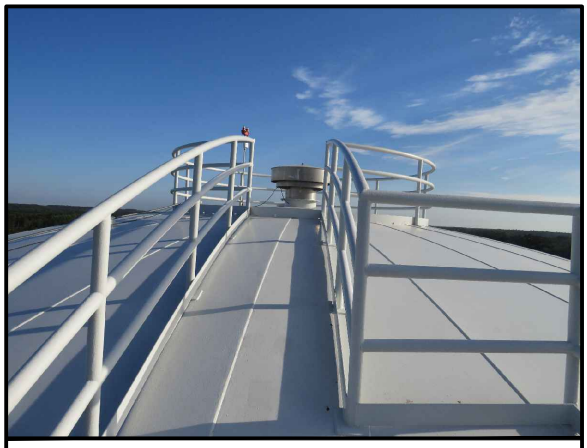


Tank ID Plate

Tank Riser at Base

Tank Leg at Base

Tank Bowl I-Beam Supports



Top of Tank

Obstruction Lights at Top

October 28, 2024

Emily Pawsat
Climavision
552 E. Market Street
Louisville, KY 40202
(502) 230-9179

326 Tryon Road
Raleigh, NC 27603
(919) 661-6351
Structures@tepgroup.net

Subject: Structural Analysis Report

Climavision Designation:	**Site Name:**	Brainerd, MN WT
	Site Number:	MN78
Engineering Firm Designation:	**TEP Project Number:**	342642.1013177
Site Data:	**State Avenue, Brainerd, Crow Wing County, MN 56401** **Latitude *46° 21' 17.9"*, Longitude *-94° 09' 05.7"*** **112.0 Foot – 600,000 Gallon - 8-Column Elevated Water Tank**	

Dear Emily Pawsat,

TEP is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above mentioned water tank.

The purpose of the analysis is to determine acceptability of the water tank stress level, including the lateral-resistance system. Based on our analysis we have determined the water tank stress level for the structure under the following load case, to be:

LC1: Existing + Proposed Equipment **Sufficient Capacity**
Note: See Table 1 for the existing and proposed loading

Structure Capacity	Controlling Component	Notes
95.9%	Sway Rods (0' – 83.3')	Lateral-Resistance System

The analysis has been performed in accordance with the loading criteria based on ANSI/AWWA D100-21 Welded Carbon Steel Tanks for Water Storage, ASCE 7-16 Minimum Design Loads for Buildings and Other Structures and the 2018 International Building Code based upon a wind speed of 117 mph 3-second gust and exposure category C.

All modifications and equipment proposed in this report shall be installed in accordance with the appurtenances listed in Table 1 for the determined available structural capacity to be effective.

We at *TEP* appreciate the opportunity of providing our continuing professional services to you and *Climavision*. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted by:

Jordan W. Shelley, P.E.

TEP Engineering, PLLC 1048
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
Print Name: JORDAN W. SHELLEY
Signature:
Date: 10/29/2024 License #: 55288

TABLE OF CONTENTS

1) INTRODUCTION

The water tank is a 112.0-ft, 600,000-gallon, 8-column elevated water tank designed by Horton Elevated Tanks in 1958. TEP visited the site in October of 2024 to collect existing steel and appurtenance information. All information provided to TEP was assumed to be accurate and complete.

2) ANALYSIS CRITERIA

The analysis has been performed in accordance with the loading criteria based on ANSI/AWWA D100-21 Welded Carbon Steel Tanks for Water Storage , ASCE 7-16 Minimum Design Loads for Buildings and Other Structures, and the 2018 International Building Code using a 3-second gust wind speed of 117 mph with the following design criteria. Seismic loading was not considered in this analysis. The structure may remain unaltered with respect to the seismic loading per Section 1103.2 of the 2018 IEBC because the additional loading does not increase the seismic forces in any structural element by more than 10% cumulative since the original construction.

Classification of Structure: **Class III**
Exposure Category: **Exposure C**
Topographic Category: **Category 1**

Table 1 - Existing and Proposed Antenna and Cable Information

Existing/ Proposed/ Reserved	Mount CL (ft)	Ant CL (ft)	Qty	Antenna Model	Mount Type	Qty Coax	Coax Size	Coax Location	Owner/ Tenant
Proposed	***119***	***125***	***1***	***Radome w/ Shroud***	***Platform Mount***	***2*** ***1***	***Power*** ***Fiber***	***A Leg***	***Clima-vision***

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

Document	Remarks	Source
Tower Mapping Report	Tower Engineering Professionals, Inc., dated October 17, 2024 TEP No. 342642.996066	TEP
Correspondence	Correspondence from Climavision in reference to the existing and proposed loading.	Climavision

3.1) Analysis Method

RISA-3D (version 17.0.4), a commercially available analysis software package, was used to create a three-dimensional model of the water tank structure and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

1) The water tank, tank components, and foundation were built in accordance with the manufacturer's specifications.
2) The water tank, tank components, and foundation have been maintained in accordance with the manufacturer's specification.
3) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Table 1.
4) All water tank components are in sufficient condition to carry their full design capacity.
5) Serviceability with respect to antenna twist, tilt, roll, or lateral translation, is not checked and is left to the carrier or tank owner to ensure conformance.
6) All antenna mounts and mounting hardware are structurally sufficient to carry the full design capacity requirements of appurtenance wind area and weight as provided by the original manufacturer specifications. It is the carrier's responsibility to ensure compliance to the structural limitations of the existing and/or proposed antenna mounts. TEP did not perform a site visit to verify the size, condition or capacity of the antenna mounts and did not analyze antennas supporting mounts as part of this structural analysis report.
7) The member stresses in the catwalk handrail, catwalk platform, painters railing and platform mount were not considered as part of this analysis.
8) All member connections are assumed to have a greater capacity than the supporting member.
9) The following material grades were assumed:
    a) All steel members: ASTM A36
    b) Anchor bolts: ASTM A36

This analysis may be affected if any assumptions are not valid or have been made in error. Tower Engineering Professionals should be notified to determine the effect on the structural integrity of the water tank.

4) ANALYSIS RESULTS

Table 3 - Water Tank Component Capacity

Notes	Component	% Capacity	Pass / Fail
1	Riser	3.2	Pass
1	Columns	72.0	Pass
1	Sway Rods	95.9	Pass
1	Hub Rods	9.6	Pass
1	Anchor Bolts	42.0	Pass

Table 4 - Foundation Comparison Results

Component	Analysis without Antennas (kips)	Analysis with Antennas (kips)	Ratio	Notes
Column Download	930.9	931.7	1.00	Maximum Water
Column Uplift	58.7	62.8	1.07	Minimum Water
Column Shear	31.8	32.7	1.03	-
Riser Download	106.8	106.8	1.00	-
Riser Shear	4.7	4.7	1.00	-

Structure Rating (max from all components) =	**95.9%**

Notes:
1) See additional documentation in “Appendix A - Analysis Calculations” for calculations supporting the % capacity listed.

4.1) Recommendations

1) This analysis assumes the structural integrity of the tank and tank components has not been compromised. TEP recommends inspection and maintenance be performed at regular intervals as prescribed by AWWA M42 (every three years).
2) If the load differs from that described in Table 1 of this report or the provisions of this analysis are found to be invalid, another structural analysis should be performed.
3) The tank, tank components, have sufficient capacity to carry the existing and proposed loads. No modifications are required at this time.

APPENDIX A

ANALYSIS CALCULATIONS

Water Tank Analysis

Water Tank Type:	Multi Column	**Exposure:**	C
Standard:	ASCE 7 / AWWA D100-21	**Topo:**	1
Ult. Wind Speed:	117 mph	**Crest Ht.:**	0
		Ground Elev.:	1236 ft

Column Quantity	Bays	Column Radius Bot. (ft)	Column Radius Top (ft)	Tank Radius (ft)
8	1	25.75	25.75	33.25

Riser Shape:	Pipe
Riser Size:	P72x0.539
Riser Height:	75.0 ft
BCL (estimated):	77.0 ft

☑ Hub Rods @ top of Riser?

	Height (ft)	Column Type	Column Size	Sway Rod Type	Sway Rod Size	Sway Rod Stagger (0,1,2)	Strut Type	Strut Size	Hub Rod Type	Hub Rod Size
Hub Rods:	72.50	Pipe	P40x0.473	SR	SR 1-5/8	1			SR	SR 1
B/Catwalk:	83.25									

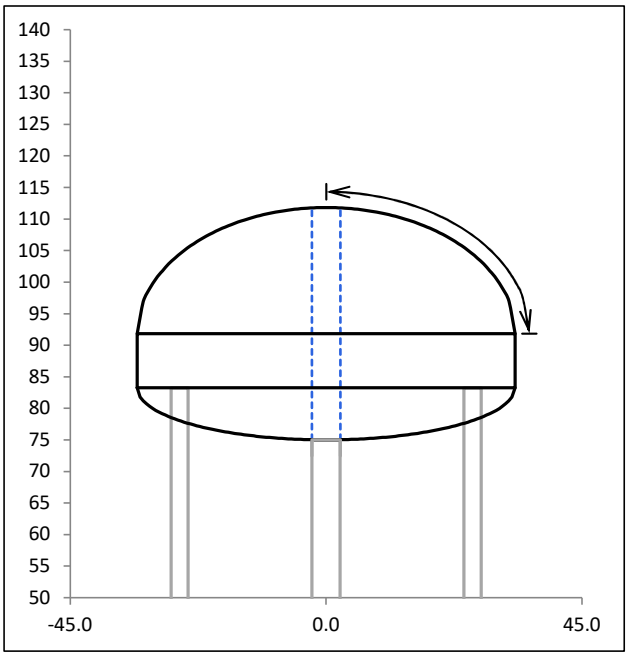
Tank Shape
Double Ellipsoid

	Height (ft)	t_{AVG} (in)
Top:	20.00	0.3140
Middle:	8.54	0.2550
Bottom:	8.30	0.3890

Arc Length:	42.472	ft
Volume:	95,190	ft³
Volume:	712,067	gal
Assumed Rated Tank Volume:	600,000	gal
Water Weight:	5005.00	kip
Weight to Riser:	45.14	kip

☐ Dry Riser?

$S_{Area,top}$:	5,196.4	ft²	**$A_{Proj,top}$:**	1,044.6	ft²
$S_{Area,mid}$:	1,784.1	ft²	**$A_{Proj,mid}$:**	567.9	ft²
$S_{Area,bot}$:	3,934.8	ft²	**$A_{Proj,bot}$:**	433.5	ft²
Total:	10,915.3	ft²	**Total:**	2,046.0	ft²
Wt_{top}:	66.63	kip	**$Wind_{top}$:**	22.01	kip
Wt_{mid}:	18.58	kip	**$Wind_{mid}$:**	11.96	kip
Wt_{bot}:	62.50	kip	**$Wind_{bot}$:**	9.13	kip
Total:	147.70	kip	**Total:**	43.10	kip



BASE REACTIONS

Member	Download (k)	Uplift (k)	Shear (k)
Columns	931.7	62.8	32.7
Riser	106.8	0.0	4.7

COLUMN ANCHOR RODS

Total Area (in²)	ϕTn (kips)	ϕVn (kips)	Capacity
4.81	149.50	94.17	42.0%

BASE REACTIONS			
Member	**Download (k)**	**Uplift (k)**	**Shear (k)**
Columns	931.69	62.79	32.72
Riser	106.82	0.00	4.67

Anchor Bolt Diameter:	1.750	in
Anchor Bolt Quantity:	2	
Fy:	36	ksi
Fu:	58	ksi

Ab =	2.405	in^2
Qty*Ab =	4.811	in^2

Tension

ft =	13.051	ksi
Fnt =	43.50	ksi
F'nt =	41.44	ksi
F'nt =	41.44	ksi
Tu =	62.79	kips
ϕTn =	149.50	kips

Shear

fv =	6.801	ksi
Fnv =	26.10	ksi
F'nv =	26.10	ksi
F'nv =	26.10	ksi
Vu =	32.72	kips
ϕVn =	94.17	kips

Tension Capacity =	**42.0%**
Shear Capacity =	**34.7%**
Max Capacity =	**42.0%**

Handrail Wind and Weight Calculations

Catwalk Radius	35.75	ft	Elevation of Appurtenances:	83.25 ft
Number of Posts	40			

Horizontal Properties

Height Perpendicular to Wind of Horizontals			Shape	Area (ft^2)	C_f	EPA (ft^2)
Top Rail	4.00	in	F	41.71	1.80	75.08
Mid Rail	3.00	in	F	31.28	1.80	56.31
Lower	10.00	in	F	104.27	1.80	187.69
Platform	0.00	in	F	0.00	1.80	0.00
Other 2	0.00	in	F	0.00	1.80	0.00

Weight of Horizontals			Weights
Top Rail	8.50	plf	1909
Mid Rail	3.07	plf	690
Lower	17.01	plf	3822
Platform	38.28	plf	8599
Other 2	0.00	plf	0

Post Properties			Shape	Area (ft^2)	C_f	EPA (ft^2)	Wt (lbs)
Post Width	2.00	in	F	10.56	1.77	18.65	293
Post Length	3.00	ft					
Post Weight	2.44	plf					

Appurtenance Properties	**Catwalk Stiffeners**		Shape	Area (ft^2)	C_f	EPA (ft^2)	Wt (lbs)
App. Height	23.50	in					
App. Width (Wind)	17.50	in	F	29.83	1.306	15.41	175
App. Depth	0.38	in					
App. Weight	21.87	lbs					
Number of App.	8						

Appurtenance Properties	**I beam stiffeners**		Shape	Area (ft^2)	C_f	EPA (ft^2)	Wt (lbs)
App. Height	49.13	in					
App. Width (Wind)	330.00	in	F	1170.81	1.300	587.32	40266
App. Depth	0.70	in					
App. Weight	5033.22	lbs					
Number of App.	8						

Total Weight (kips) =	55.753	
Total EPA =	940.4	ft^2
Pw =	40.60	psf
Tank Shielding Factor =	0.75	
Ka Factor (Members, Antennas, Mnt Pipes) =	1.00	
Wind Force =	28.638	kips

BLC 6: HANDRAIL DL (WEIGHT)

N28	L	Y	-55.753

BLC 7: HANDRAIL LL (WIND)

N28	L	X	-28.638

Top of Tank Wind and Weight Calculations

Corral Radius	7.50	ft	Elevation of Appurtenances:	112.00 ft
Number of Posts	9			

Horizontal Properties

Height Perpendicular to Wind of Horizontals			Shape	Area (ft^2)	C_f	EPA (ft^2)
Top Rail	2.38	in	R	5.20	1.20	6.23
Mid Rail	2.38	in	R	5.20	1.20	6.23
Lower	2.38	in	R	5.20	1.20	6.23
Toe	6.00	in	F	13.13	1.80	23.63

Weight of Horizontals			Weights
Top Rail	3.65	plf	172
Mid Rail	3.65	plf	172
Lower	3.65	plf	172
Toe	7.66	plf	361

Post Properties			Shape	Area (ft^2)	C_f	EPA (ft^2)	Wt (lbs)
Post Width	2.38	in	R	2.55	0.98	2.50	99
Post Length	3.00	ft					
Post Weight	3.65	plf					

Appurtenance Properties	**Vent**		Shape	Area (ft^2)	C_f	EPA (ft^2)	Wt (lbs)
App. Height	30.00	in					
App. Width (Wind)	24.00	in	R	2.52	0.504	2.52	50
App. Depth	24.00	in					
App. Weight	50.00	lbs					
Number of App.	1						

Appurtenance Properties	**Proposed - Platform Mount**		Shape	Area (ft^2)	C_f	EPA (ft^2)	Wt (lbs)
App. Height	90.00	in					
App. Width (Wind)	138.94	in	F	11.05	1.300	14.37	3283
App. Depth	115.19	in					
App. Weight	3282.70	lbs					
Number of App.	1						

Appurtenance Properties	**Painters rail straight (Horizontals)**		Shape	Area (ft^2)	C_f	EPA (ft^2)	Wt (lbs)
App. Height	2.38	in					
App. Width (Wind)	309.00	in	R	15.29	0.500	7.73	564
App. Depth	2.38	in					
App. Weight	93.99	lbs					
Number of App.	6						

Appurtenance Properties	**Painters rail straight (Verticals)**							
App. Height	36.00	in	Shape	Area (ft^2)	C_f	EPA (ft^2)	Wt (lbs)
App. Width (Wind)	2.38	in	R	6.99	0.981	6.99	131
App. Depth	2.38	in					
App. Weight	10.95	lbs					
Number of App.	12						

Appurtenance Properties	**Painters rail straight (Toes)**							
App. Height	8.00	in	Shape	Area (ft^2)	C_f	EPA (ft^2)	Wt (lbs)
App. Width (Wind)	309.00	in	F	44.63	1.300	44.63	394
App. Depth	0.38	in					
App. Weight	197.15	lbs					
Number of App.	2						

Total Weight (kips) = 5.398

Total EPA = 121.1 ft^2

Pw = 43.22 psf

Ka Factor (Members, Antennas, Mnt Pipes) = 1.00

Wind Force = 5.232 kips

BLC 8: CORRAL DL (WEIGHT)

N29	L	Y	-5.398

BLC 9: CORRAL LL (WIND)

N29	L	X	-5.232

Top of Tank Wind and Weight Calculations

Elevation of Appurtenances: 125.00 ft

Appurtenance Properties	**Proposed - Radome w/ Shroud**							
App. Height	139.58	in	Shape	Area (ft^2)	C_f	EPA (ft^2)	Wt (lbs)
App. Width (Wind)	139.58	in	R	128.00	0.500	64.00	1515
App. Depth	139.58	in					
App. Weight	1515.00	lbs					
Number of App.	1						

Total Weight (kips) = 1.515

Total EPA = 64.0 ft^2

Pw = 44.23 psf

Ka Factor (Members, Antennas, Mnt Pipes) = 1.00

Wind Force = 2.831 kips

BLC 8: CORRAL DL (WEIGHT)

N30	L	Y	-1.515

BLC 9: CORRAL LL (WIND)

N30	L	X	-2.831

Feed Line Wind and Weight Calculations

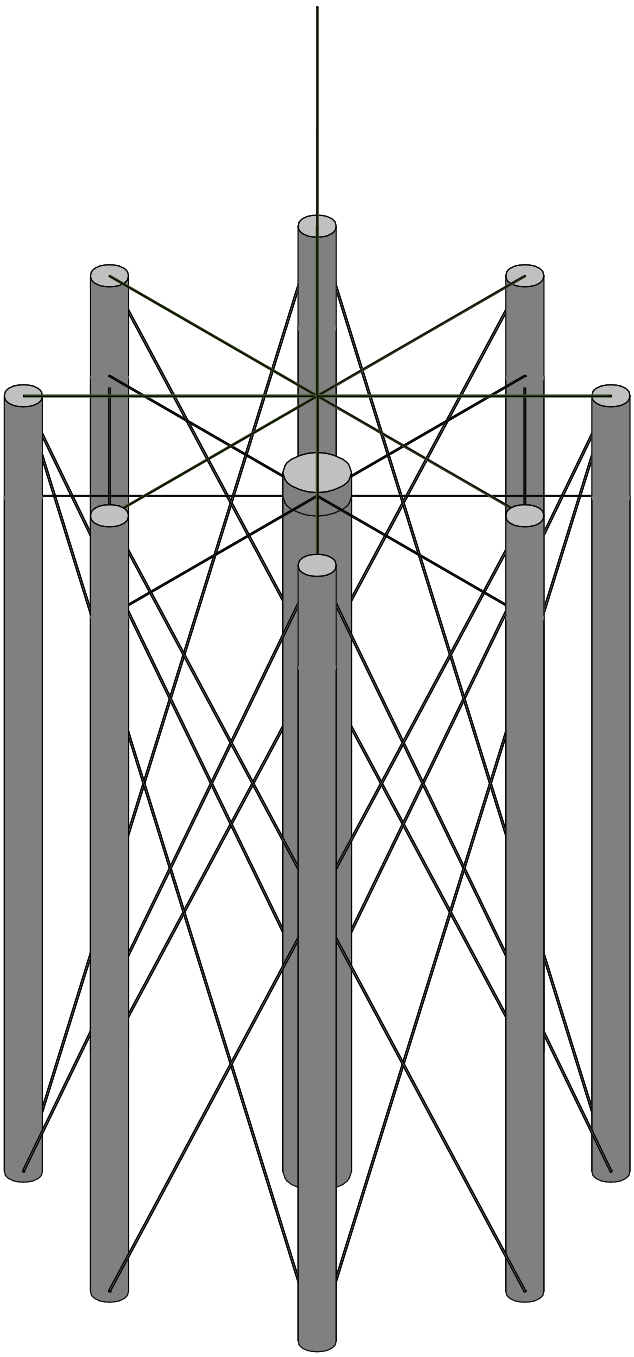
Leg	Description of Lines	Weight (plf)	R Width (in)	R Width (ft)	F Width (in)	F Width (ft)
A	Overflow + Climavision	20.63	8.17	0.681	0.00	0.000
B		0.00	0.00	0.000	0.00	0.000
C		0.00	0.00	0.000	0.00	0.000
D		0.00	0.00	0.000	0.00	0.000
E		0.00	0.00	0.000	0.00	0.000
F		0.00	0.00	0.000	0.00	0.000
G	Ladder	6.92	0.00	0.000	2.00	0.167
H		0.00	0.00	0.000	0.00	0.000
Riser		0.00	0.00	0.000	0.00	0.000

BLC 6: HANDRAIL DL (WEIGHT)

COL_1	Y	-20.625	-20.625	0	%100
COL_2	Y	0.000	0.000	0	%100
COL_3	Y	0.000	0.000	0	%100
COL_4	Y	0.000	0.000	0	%100
COL_5	Y	0.000	0.000	0	%100
COL_6	Y	0.000	0.000	0	%100
COL_7	Y	-6.920	-6.920	0	%100
COL_8	Y	0.000	0.000	0	%100
RISER_1	Y	0.000	0.000	0	%100
RISER_2	Y	0.000	0.000	0	%100

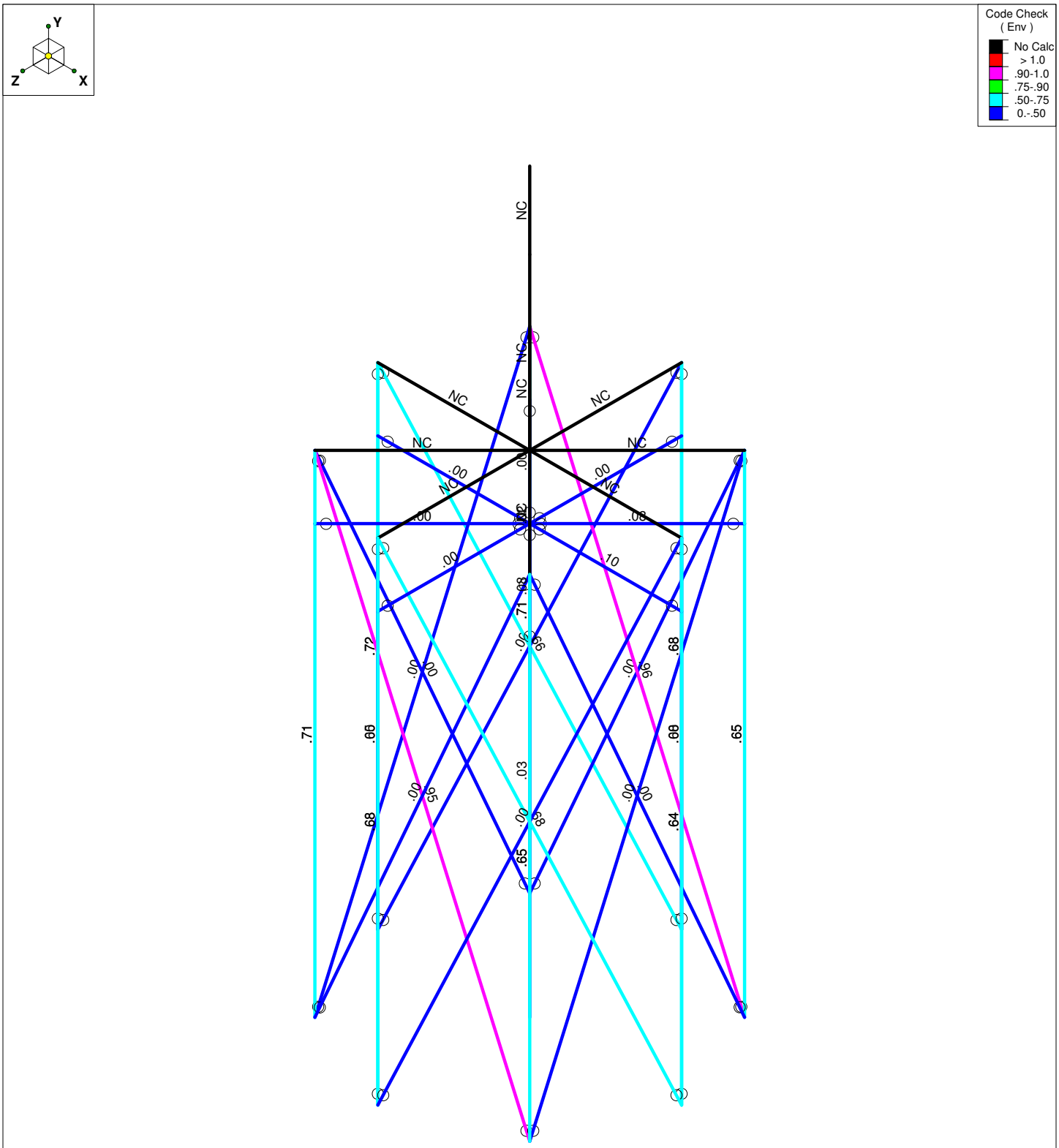
BLC 7: HANDRAIL LL (WIND)

COL_1	X	-28.678	-28.678	0	%100
COL_2	X	0.000	0.000	0	%100
COL_3	X	0.000	0.000	0	%100
COL_4	X	0.000	0.000	0	%100
COL_5	X	0.000	0.000	0	%100
COL_6	X	0.000	0.000	0	%100
COL_7	X	-11.696	-11.696	0	%100
COL_8	X	0.000	0.000	0	%100
RISER_1	X	0.000	0.000	0	%100
RISER_2	X	0.000	0.000	0	%100



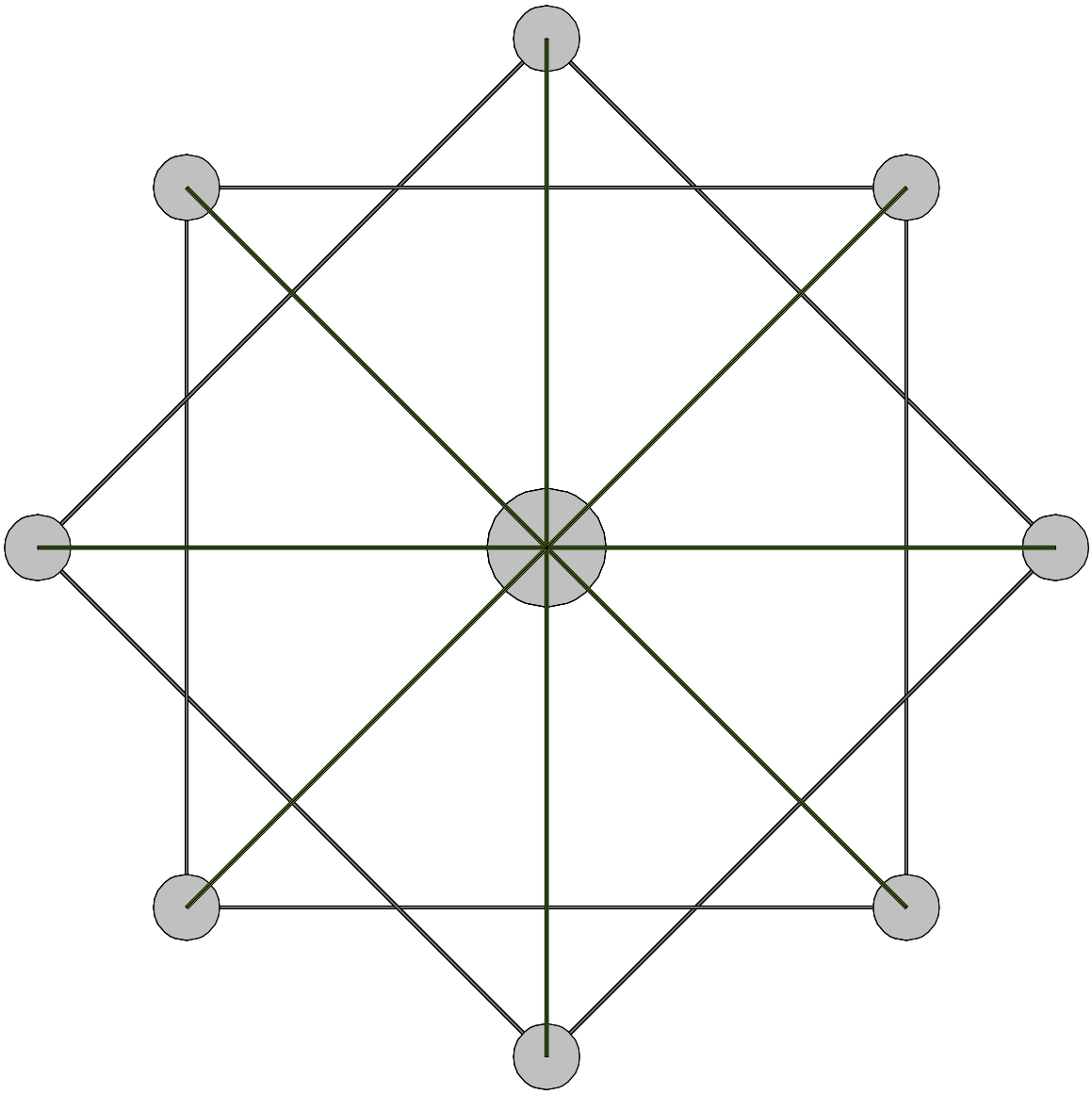
Envelope Only Solution

Tower Engineering Profes...	Brainerd, MN WT	SK - 1
MSD		Oct 28, 2024 at 4:18 PM
TEP No. 342642.1013177		Brainerd, MN WT.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Tower Engineering Profes...	Brainerd, MN WT	SK - 2
MSD		Oct 28, 2024 at 4:18 PM
TEP No. 342642.1013177		Brainerd, MN WT.r3d



Envelope Only Solution

Tower Engineering Profes...	Brainerd, MN WT	SK - 3
MSD		Oct 28, 2024 at 4:18 PM
TEP No. 342642.1013177		Brainerd, MN WT.r3d

(Global) Model Settings

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation?	Yes
Increase Nailing Capacity for Wind?	Yes
Include Warping?	Yes
Trans Load Btwn Intersecting Wood Wall?	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Include P-Delta for Walls?	Yes
Automatically Iterate Stiffness for Walls?	No
Max Iterations for Wall Stiffness	3
Gravity Acceleration (ft/sec^2)	32.2
Wall Mesh Size (in)	12
Eigensolution Convergence Tol. (1.E-)	4
Vertical Axis	Y
Global Member Orientation Plane	XZ
Static Solver	Sparse Accelerated
Dynamic Solver	Accelerated Solver

Hot Rolled Steel Code	AISC 15th(360-16): LRFD
Adjust Stiffness?	Yes(Iterative)
RISAConnection Code	AISC 13th(360-05): ASD
Cold Formed Steel Code	None
Wood Code	AF&PA NDS-91/97: ASD
Wood Temperature	< 100F
Concrete Code	ACI 318-02
Masonry Code	ACI 530-05: ASD
Aluminum Code	AA ADM1-05: ASD - Building
Stainless Steel Code	None

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	PCA Load Contour
Parme Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections?	Yes
Use Cracked Sections Slab?	No
Bad Framing Warnings?	No
Unused Force Warnings?	Yes
Min 1 Bar Diam. Spacing?	No
Concrete Rebar Set	REBAR_SET_ASTMA615
Min % Steel for Column	1
Max % Steel for Column	8

Company : Tower Engineering Professionals, Inc.
Designer : MSD
Job Number : TEP No. 342642.1013177
Model Name : Brainerd, MN WT

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(Global) Model Settings, Continued

Seismic Code	UBC 1997
Seismic Base Elevation (ft)	Not Entered
Add Base Weight?	No
Ct X	.035
Ct Z	.035
T X (sec)	Not Entered
T Z (sec)	Not Entered
R X	8.5
R Z	8.5
Ca	.36
Cv	.54
Nv	1
Occupancy Category	4
Seismic Zone	3
Om Z	1
Om X	1
Rho Z	1
Rho X	1

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1...	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
2	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	58	1.2
3	A992	29000	11154	.3	.65	.49	50	1.1	58	1.2
4	A500 Gr.42	29000	11154	.3	.65	.49	42	1.3	58	1.1
5	A500 Gr.46	29000	11154	.3	.65	.49	46	1.2	58	1.1
6	33 ksi	29000	11154	.3	.65	.49	33	1.5	58	1.2

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	HR1	W10X33	Beam	None	A36 Gr.36	Typical	9.71	36.6	171	.583

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	25.75	0	0	0	
2	N2	18.208	0	18.208	0	
3	N3	0	0	25.75	0	
4	N4	-18.208	0	18.208	0	
5	N5	-25.75	0	0	0	
6	N6	-18.208	0	-18.208	0	
7	N7	0	0	-25.75	0	
8	N8	18.208	0	-18.208	0	
9	N9	25.75	72.5	0	0	
10	N10	18.208	72.5	18.208	0	
11	N11	0	72.5	25.75	0	
12	N12	-18.208	72.5	18.208	0	
13	N13	-25.75	72.5	0	0	
14	N14	-18.208	72.5	-18.208	0	
15	N15	0	72.5	-25.75	0	
16	N16	18.208	72.5	-18.208	0	
17	N17	25.75	83.25	0	0	
18	N18	18.208	83.25	18.208	0	
19	N19	0	83.25	25.75	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
20	N20	-18.208	83.25	18.208	0	
21	N21	-25.75	83.25	0	0	
22	N22	-18.208	83.25	-18.208	0	
23	N23	0	83.25	-25.75	0	
24	N24	18.208	83.25	-18.208	0	
25	N25	0	0	0	0	
26	N26	0	72.5	0	0	
27	N27	0	75	0	0	
28	N28	0	83.25	0	0	
29	N29	0	112	0	0	
30	N30	0	125	0	0	

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N1	Reaction	Reaction	Reaction			
2	N2	Reaction	Reaction	Reaction			
3	N3	Reaction	Reaction	Reaction			
4	N4	Reaction	Reaction	Reaction			
5	N5	Reaction	Reaction	Reaction			
6	N6	Reaction	Reaction	Reaction			
7	N7	Reaction	Reaction	Reaction			
8	N8	Reaction	Reaction	Reaction			
9	N25	Reaction	Reaction	Reaction		Reaction	

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate...	Section/Shape	Type	Design List	Material	Design ...
1	COL_1	N1	N17			P40x0.473	None	None	A36 Gr.36	Typical
2	COL_2	N2	N18			P40x0.473	None	None	A36 Gr.36	Typical
3	COL_3	N3	N19			P40x0.473	None	None	A36 Gr.36	Typical
4	COL_4	N4	N20			P40x0.473	None	None	A36 Gr.36	Typical
5	COL_5	N5	N21			P40x0.473	None	None	A36 Gr.36	Typical
6	COL_6	N6	N22			P40x0.473	None	None	A36 Gr.36	Typical
7	COL_7	N7	N23			P40x0.473	None	None	A36 Gr.36	Typical
8	COL_8	N8	N24			P40x0.473	None	None	A36 Gr.36	Typical
9	SW_RD_1	N1	N19			SR 1-5/8	None	None	A36 Gr.36	Typical
10	SW_RD_2	N2	N20			SR 1-5/8	None	None	A36 Gr.36	Typical
11	SW_RD_3	N3	N21			SR 1-5/8	None	None	A36 Gr.36	Typical
12	SW_RD_4	N4	N22			SR 1-5/8	None	None	A36 Gr.36	Typical
13	SW_RD_5	N5	N23			SR 1-5/8	None	None	A36 Gr.36	Typical
14	SW_RD_6	N6	N24			SR 1-5/8	None	None	A36 Gr.36	Typical
15	SW_RD_7	N7	N17			SR 1-5/8	None	None	A36 Gr.36	Typical
16	SW_RD_8	N8	N18			SR 1-5/8	None	None	A36 Gr.36	Typical
17	SW_RD_9	N17	N3			SR 1-5/8	None	None	A36 Gr.36	Typical
18	SW_RD_10	N18	N4			SR 1-5/8	None	None	A36 Gr.36	Typical
19	SW_RD_11	N19	N5			SR 1-5/8	None	None	A36 Gr.36	Typical
20	SW_RD_12	N20	N6			SR 1-5/8	None	None	A36 Gr.36	Typical
21	SW_RD_13	N21	N7			SR 1-5/8	None	None	A36 Gr.36	Typical
22	SW_RD_14	N22	N8			SR 1-5/8	None	None	A36 Gr.36	Typical
23	SW_RD_15	N23	N1			SR 1-5/8	None	None	A36 Gr.36	Typical
24	SW_RD_16	N24	N2			SR 1-5/8	None	None	A36 Gr.36	Typical
25	HB_RD_1	N9	N26			SR 1	None	None	A36 Gr.36	Typical
26	HB_RD_2	N10	N26			SR 1	None	None	A36 Gr.36	Typical
27	HB_RD_3	N11	N26			SR 1	None	None	A36 Gr.36	Typical
28	HB_RD_4	N12	N26			SR 1	None	None	A36 Gr.36	Typical

Company : Tower Engineering Professionals, Inc.
Designer : MSD
Job Number : TEP No. 342642.1013177
Model Name : Brainerd, MN WT

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Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate...	Section/Shape	Type	Design List	Material	Design ...
29	HB_RD_5	N13	N26			SR 1	None	None	A36 Gr.36	Typical
30	HB_RD_6	N14	N26			SR 1	None	None	A36 Gr.36	Typical
31	HB_RD_7	N15	N26			SR 1	None	None	A36 Gr.36	Typical
32	HB_RD_8	N16	N26			SR 1	None	None	A36 Gr.36	Typical
33	RISER_1	N25	N26			P72x0.539	None	None	A36 Gr.36	Typical
34	RISER_2	N26	N27			P72x0.539	None	None	A36 Gr.36	Typical
35	RIG1	N27	N28			Rigid	None	None	RIGID	Typical
36	RIG2	N28	N29			Rigid	None	None	RIGID	Typical
37	RIG3	N17	N28			Rigid	None	None	RIGID	Typical
38	RIG4	N18	N28			Rigid	None	None	RIGID	Typical
39	RIG5	N19	N28			Rigid	None	None	RIGID	Typical
40	RIG6	N20	N28			Rigid	None	None	RIGID	Typical
41	RIG7	N21	N28			Rigid	None	None	RIGID	Typical
42	RIG8	N22	N28			Rigid	None	None	RIGID	Typical
43	RIG9	N23	N28			Rigid	None	None	RIGID	Typical
44	RIG10	N24	N28			Rigid	None	None	RIGID	Typical
45	M45	N30	N29			Rigid	None	None	RIGID	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	COL_1						Yes	** NA **			None
2	COL_2						Yes	** NA **			None
3	COL_3						Yes	** NA **			None
4	COL_4						Yes	** NA **			None
5	COL_5						Yes	** NA **			None
6	COL_6						Yes	** NA **			None
7	COL_7						Yes	** NA **			None
8	COL_8						Yes	** NA **			None
9	SW_RD_1	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
10	SW_RD_2	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
11	SW_RD_3	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
12	SW_RD_4	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
13	SW_RD_5	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
14	SW_RD_6	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
15	SW_RD_7	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
16	SW_RD_8	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
17	SW_RD_9	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
18	SW_RD_10	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
19	SW_RD_11	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
20	SW_RD_12	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
21	SW_RD_13	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
22	SW_RD_14	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
23	SW_RD_15	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
24	SW_RD_16	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
25	HB_RD_1	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
26	HB_RD_2	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
27	HB_RD_3	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
28	HB_RD_4	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
29	HB_RD_5	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
30	HB_RD_6	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
31	HB_RD_7	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
32	HB_RD_8	BenPIN	BenPIN			Tension ...	Yes	** NA **			None
33	RISER_1						Yes	** NA **			None
34	RISER_2						Yes	** NA **			None
35	RIG1						Yes	** NA **		Inactive	None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...		Inactive	Seismic...
36	RIG2						Yes	** NA **				None
37	RIG3						Yes	** NA **				None
38	RIG4						Yes	** NA **				None
39	RIG5						Yes	** NA **				None
40	RIG6						Yes	** NA **				None
41	RIG7						Yes	** NA **				None
42	RIG8						Yes	** NA **				None
43	RIG9						Yes	** NA **				None
44	RIG10						Yes	** NA **				None
45	M45						Yes	** NA **				None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[...	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torq...	Kyy	Kzz	Cb	Functi...
1	COL_1	P40x0.473	83.25						1	1		Lateral
2	COL_2	P40x0.473	83.25						1	1		Lateral
3	COL_3	P40x0.473	83.25						1	1		Lateral
4	COL_4	P40x0.473	83.25						1	1		Lateral
5	COL_5	P40x0.473	83.25						1	1		Lateral
6	COL_6	P40x0.473	83.25						1	1		Lateral
7	COL_7	P40x0.473	83.25						1	1		Lateral
8	COL_8	P40x0.473	83.25						1	1		Lateral
9	SW_RD_1	SR 1-5/8	90.866						1	1		Lateral
10	SW_RD_2	SR 1-5/8	90.866						1	1		Lateral
11	SW_RD_3	SR 1-5/8	90.866						1	1		Lateral
12	SW_RD_4	SR 1-5/8	90.866						1	1		Lateral
13	SW_RD_5	SR 1-5/8	90.866						1	1		Lateral
14	SW_RD_6	SR 1-5/8	90.866						1	1		Lateral
15	SW_RD_7	SR 1-5/8	90.866						1	1		Lateral
16	SW_RD_8	SR 1-5/8	90.866						1	1		Lateral
17	SW_RD_9	SR 1-5/8	90.866						1	1		Lateral
18	SW_RD_10	SR 1-5/8	90.866						1	1		Lateral
19	SW_RD_11	SR 1-5/8	90.866						1	1		Lateral
20	SW_RD_12	SR 1-5/8	90.866						1	1		Lateral
21	SW_RD_13	SR 1-5/8	90.866						1	1		Lateral
22	SW_RD_14	SR 1-5/8	90.866						1	1		Lateral
23	SW_RD_15	SR 1-5/8	90.866						1	1		Lateral
24	SW_RD_16	SR 1-5/8	90.866						1	1		Lateral
25	HB_RD_1	SR 1	25.75						1	1		Lateral
26	HB_RD_2	SR 1	25.75						1	1		Lateral
27	HB_RD_3	SR 1	25.75						1	1		Lateral
28	HB_RD_4	SR 1	25.75						1	1		Lateral
29	HB_RD_5	SR 1	25.75						1	1		Lateral
30	HB_RD_6	SR 1	25.75						1	1		Lateral
31	HB_RD_7	SR 1	25.75						1	1		Lateral
32	HB_RD_8	SR 1	25.75						1	1		Lateral
33	RISER_1	P72x0.539	72.5						1	1		Lateral
34	RISER_2	P72x0.539	2.5						1	1		Lateral

Joint Loads and Enforced Displacements (BLC 3 : TANK DL (WATER))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	N27	L	Y	-45.14
2	N17	L	Y	-619.983
3	N18	L	Y	-619.983
4	N19	L	Y	-619.983

Joint Loads and Enforced Displacements (BLC 3 : TANK DL (WATER)) (Continued)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
5	N20	L	Y	-619.983
6	N21	L	Y	-619.983
7	N22	L	Y	-619.983
8	N23	L	Y	-619.983
9	N24	L	Y	-619.983

Joint Loads and Enforced Displacements (BLC 4 : TANK DL (STEEL))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	N17	L	Y	-18.463
2	N18	L	Y	-18.463
3	N19	L	Y	-18.463
4	N20	L	Y	-18.463
5	N21	L	Y	-18.463
6	N22	L	Y	-18.463
7	N23	L	Y	-18.463
8	N24	L	Y	-18.463

Joint Loads and Enforced Displacements (BLC 5 : TANK LL (WIND))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	N17	L	X	-5.388
2	N18	L	X	-5.388
3	N19	L	X	-5.388
4	N20	L	X	-5.388
5	N21	L	X	-5.388
6	N22	L	X	-5.388
7	N23	L	X	-5.388
8	N24	L	X	-5.388

Joint Loads and Enforced Displacements (BLC 6 : HANDRAIL DL (WEIGHT))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	N28	L	Y	-55.753

Joint Loads and Enforced Displacements (BLC 7 : HANDRAIL LL (WIND))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	N28	L	X	-28.638

Joint Loads and Enforced Displacements (BLC 8 : CORRAL DL (WEIGHT))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	N29	L	Y	-5.398
2	N30	L	Y	-1.515

Joint Loads and Enforced Displacements (BLC 9 : CORRAL LL (WIND))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	N29	L	X	-5.232
2	N30	L	X	-2.831

Member Point Loads

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
No Data to Print ...			

Member Distributed Loads (BLC 2 : MEMBER WIND FORCES)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	COL_1	X	-81.858	-81.858	0	%100
2	COL_2	X	-81.858	-81.858	0	%100
3	COL_3	X	-81.858	-81.858	0	%100
4	COL_4	X	-81.858	-81.858	0	%100
5	COL_5	X	-81.858	-81.858	0	%100
6	COL_6	X	-81.858	-81.858	0	%100
7	COL_7	X	-81.858	-81.858	0	%100
8	COL_8	X	-81.858	-81.858	0	%100
9	SW_RD_1	X	-5.468	-5.468	0	%100
10	SW_RD_2	X	-5.224	-5.224	0	%100
11	SW_RD_3	X	-5.468	-5.468	0	%100
12	SW_RD_4	X	-5.702	-5.702	0	%100
13	SW_RD_5	X	-5.468	-5.468	0	%100
14	SW_RD_6	X	-5.224	-5.224	0	%100
15	SW_RD_7	X	-5.468	-5.468	0	%100
16	SW_RD_8	X	-5.702	-5.702	0	%100
17	SW_RD_9	X	-5.468	-5.468	0	%100
18	SW_RD_10	X	-5.224	-5.224	0	%100
19	SW_RD_11	X	-5.468	-5.468	0	%100
20	SW_RD_12	X	-5.702	-5.702	0	%100
21	SW_RD_13	X	-5.468	-5.468	0	%100
22	SW_RD_14	X	-5.224	-5.224	0	%100
23	SW_RD_15	X	-5.468	-5.468	0	%100
24	SW_RD_16	X	-5.702	-5.702	0	%100
25	HB_RD_1	X	0	0	0	%100
26	HB_RD_2	X	-2.789	-2.789	0	%100
27	HB_RD_3	X	-3.944	-3.944	0	%100
28	HB_RD_4	X	-2.789	-2.789	0	%100
29	HB_RD_5	X	0	0	0	%100
30	HB_RD_6	X	-2.789	-2.789	0	%100
31	HB_RD_7	X	-3.944	-3.944	0	%100
32	HB_RD_8	X	-2.789	-2.789	0	%100
33	RISER_1	X	-128.945	-128.945	0	%100
34	RISER_2	X	-149.741	-149.741	0	%100

Member Distributed Loads (BLC 6 : HANDRAIL DL (WEIGHT))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	COL_1	Y	-20.625	-20.625	0	%100
2	COL_2	Y	0	0	0	%100
3	COL_3	Y	0	0	0	%100
4	COL_4	Y	0	0	0	%100
5	COL_5	Y	0	0	0	%100
6	COL_6	Y	0	0	0	%100
7	COL_7	Y	-6.92	-6.92	0	%100
8	COL_8	Y	0	0	0	%100
9	RISER_1	Y	0	0	0	%100
10	RISER_2	Y	0	0	0	%100

Member Distributed Loads (BLC 7 : HANDRAIL LL (WIND))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	COL_1	X	-28.678	-28.678	0	%100
2	COL_2	X	0	0	0	%100
3	COL_3	X	0	0	0	%100
4	COL_4	X	0	0	0	%100
5	COL_5	X	0	0	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : MSD
Job Number : TEP No. 342642.1013177
Model Name : Brainerd, MN WT

Oct 28, 2024
4:13 PM
Checked By: ATR

Member Distributed Loads (BLC 7 : HANDRAIL LL (WIND)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
6	COL_6	X	0	0	0	%100
7	COL_7	X	-11.696	-11.696	0	%100
8	COL_8	X	0	0	0	%100
9	RISER_1	X	0	0	0	%100
10	RISER_2	X	0	0	0	%100

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(...
1	GRAVITY	None		-1						
2	MEMBER WIND FORCES	None						34		
3	TANK DL (WATER)	None				9				
4	TANK DL (STEEL)	None				8				
5	TANK LL (WIND)	None				8				
6	HANDRAIL DL (WEIGHT)	None				1		10		
7	HANDRAIL LL (WIND)	None				1		10		
8	CORRAL DL (WEIGHT)	None				2				
9	CORRAL LL (WIND)	None				2				

Load Combinations

	Description	Solve	PDelta	S...	B...	Fa...	BLC	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.4D	Yes			1	1.4	2		3	1.4	4	1.4	5		L4	1.4	L5							
2	1.2D+1W	Yes			1	1.2	2	1	3	1.2	4	1.2	5	1	L4	1.2	L5	1						
3	0.9D+1W	Yes			1	.9	2	1	3		4	.9	5	1	L4	.9	L5	1						
4	ADD DL				6	1	8	1																
5	ADD WL				7	1	9	1																

Envelope Joint Reactions

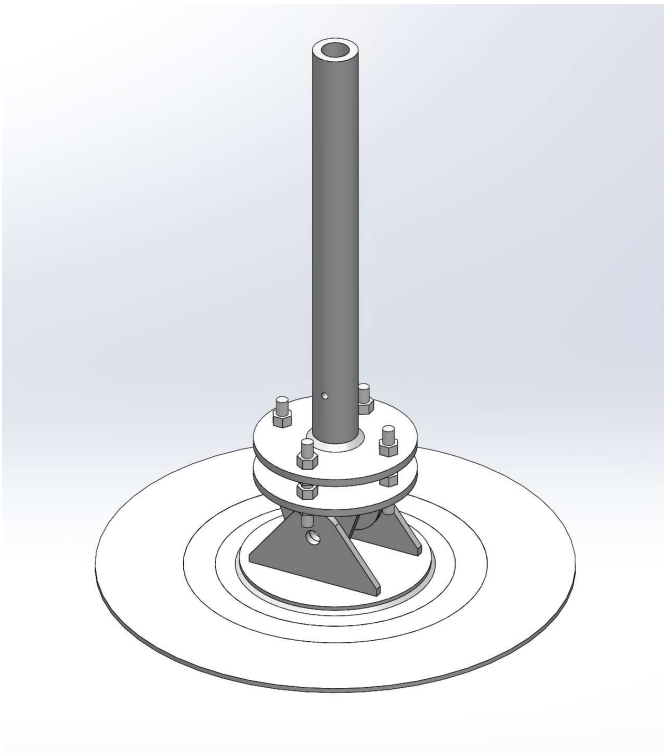
	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N1	max	32.716	3	931.694	1	.174	2	0	3	0	3	0	3
2		min	0	1	-62.785	3	0	1	0	1	0	1	0	1
3	N2	max	32.402	2	930.24	1	.047	2	0	3	0	3	0	3
4		min	0	1	-23.575	3	0	1	0	1	0	1	0	1
5	N3	max	18.309	3	930.02	1	12.346	3	0	3	0	3	0	3
6		min	0	1	35.452	3	0	1	0	1	0	1	0	1
7	N4	max	6.956	2	929.853	1	0	1	0	3	0	3	0	3
8		min	0	1	113.894	3	-.014	2	0	1	0	1	0	1
9	N5	max	6.969	2	929.838	1	0	1	0	3	0	3	0	3
10		min	0	1	131.327	3	-.018	2	0	1	0	1	0	1
11	N6	max	6.981	2	929.983	1	0	1	0	3	0	3	0	3
12		min	0	1	114.297	3	-.012	3	0	1	0	1	0	1
13	N7	max	18.865	3	930.643	1	0	1	0	3	0	3	0	3
14		min	0	1	35.786	3	-12.501	3	0	1	0	1	0	1
15	N8	max	32.646	2	930.37	1	0	1	0	3	0	3	0	3
16		min	0	1	-23.717	3	-.022	2	0	1	0	1	0	1
17	N25	max	4.668	2	106.816	1	0	1	0	3	0	3	0	3
18		min	0	1	28.041	3	0	2	0	1	0	1	0	1
19	Totals:	max	155.84	3	7549.458	1	0	3						
20		min	0	1	348.72	3	0	1						

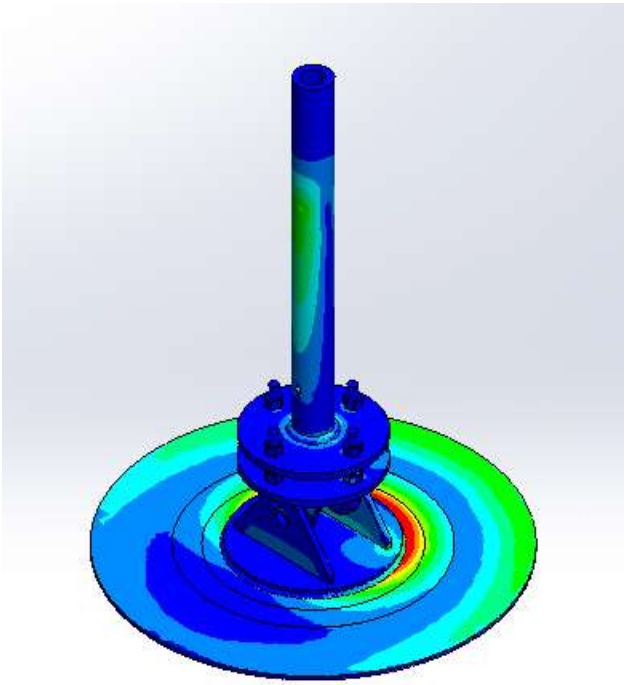
Envelope AISC 15th(360-16): LRFD Steel Code Checks

	Member	Shape	Code Check	Loc[ft]	LC	Shea...	Loc[ft]	...	L...	phi*Pn...	phi*Pn...	phi*Mn y...	phi*Mn z-...	Cb	Eqn
1	SW_RD_...	SR 1-5/8	.959	0	3	.012	90.866		2	.065	67.196	1.82	1.82	1.1...	H1-1a*
2	SW_RD_2	SR 1-5/8	.951	90.866	3	.012	0		2	.065	67.196	1.82	1.82	1.1...	H1-1a*
3	COL_5	P40x0.473	.720	74.578	2	.011	0		2	1454.2...	1903.0...	1858.635	1858.635	1.27	H1-1a
4	COL_6	P40x0.473	.709	74.578	2	.011	0		2	1454.2...	1903.0...	1858.635	1858.635	1.27	H1-1a
5	COL_4	P40x0.473	.707	74.578	2	.011	0		2	1454.2...	1903.0...	1858.635	1858.635	1.2...	H1-1a
6	SW_RD_...	SR 1-5/8	.684	0	3	.013	0		2	.065	67.196	1.82	1.82	1.1...	H1-1a*
7	COL_3	P40x0.473	.679	73.711	2	.011	0		2	1454.2...	1903.0...	1858.635	1858.635	1.2...	H1-1a
8	COL_7	P40x0.473	.678	69.375	2	.012	0		2	1454.2...	1903.0...	1858.635	1858.635	1.2...	H1-1a
9	SW_RD_1	SR 1-5/8	.676	90.866	3	.013	0		2	.065	67.196	1.82	1.82	1.1...	H1-1a*
10	SW_RD_...	SR 1-5/8	.659	0	3	.013	0		2	.065	67.196	1.82	1.82	1.1...	H1-1a*
11	COL_8	P40x0.473	.652	71.977	2	.011	0		2	1454.2...	1903.0...	1858.635	1858.635	1.2...	H1-1a
12	SW_RD_3	SR 1-5/8	.651	90.866	3	.013	90.866		2	.065	67.196	1.82	1.82	1.1...	H1-1a*
13	COL_2	P40x0.473	.651	71.977	2	.011	0		2	1454.2...	1903.0...	1858.635	1858.635	1.2...	H1-1a
14	COL_1	P40x0.473	.640	0	1	.013	0		2	1454.2...	1903.0...	1858.635	1858.635	2.5...	H1-1a
15	HB_RD_1	SR 1	.096	0	3	.004	25.75		1	.116	25.447	.424	.424	1.1...	H1-1b*
16	HB_RD_2	SR 1	.080	0	2	.007	0		2	.116	25.447	.424	.424	1.1...	H1-1b*
17	HB_RD_8	SR 1	.080	0	2	.007	0		2	.116	25.447	.424	.424	1.1...	H1-1b*
18	RISER_1	P72x0.539	.032	0	1	.004	72.5		3	3299.6...	3920.6...	6527.202	6527.202	1	H1-1b*
19	RISER_2	P72x0.539	.018	0	1	.000	0		3	3511.9...	3920.6...	6527.202	6527.202	1	H1-1b*
20	HB_RD_3	SR 1	.000	0	1	.004	25.75		1	.116	25.447	.424	.424	1.1...	H1-1b*
21	HB_RD_6	SR 1	.000	0	1	.004	0		1	.116	25.447	.424	.424	1.1...	H1-1b*
22	HB_RD_4	SR 1	.000	0	1	.004	0		1	.116	25.447	.424	.424	1.1...	H1-1b*
23	HB_RD_5	SR 1	.000	0	1	.004	25.75		1	.116	25.447	.424	.424	1.1...	H1-1b*
24	HB_RD_7	SR 1	.000	0	1	.004	25.75		1	.116	25.447	.424	.424	1.1...	H1-1b*
25	SW_RD_4	SR 1-5/8	.000	0	3	.000	0		3	.065	67.196	1.82	1.82	1	H1-1a
26	SW_RD_5	SR 1-5/8	.000	0	3	.000	0		3	.065	67.196	1.82	1.82	1	H1-1a
27	SW_RD_6	SR 1-5/8	.000	0	3	.000	0		3	.065	67.196	1.82	1.82	1	H1-1a
28	SW_RD_7	SR 1-5/8	.000	0	3	.000	0		3	.065	67.196	1.82	1.82	1	H1-1a
29	SW_RD_8	SR 1-5/8	.000	0	3	.000	0		3	.065	67.196	1.82	1.82	1	H1-1a
30	SW_RD_9	SR 1-5/8	.000	0	3	.000	0		3	.065	67.196	1.82	1.82	1	H1-1a
31	SW_RD_...	SR 1-5/8	.000	0	3	.000	0		3	.065	67.196	1.82	1.82	1	H1-1a
32	SW_RD_...	SR 1-5/8	.000	0	3	.000	0		3	.065	67.196	1.82	1.82	1	H1-1a
33	SW_RD_...	SR 1-5/8	.000	0	3	.000	0		3	.065	67.196	1.82	1.82	1	H1-1a
34	SW_RD_...	SR 1-5/8	.000	0	3	.000	0		3	.065	67.196	1.82	1.82	1	H1-1a

Client Site Name:	Brainerd, MN WT		Tower Engineering Professionals	**Engineer:**	ALD
Client Site Number:	MN78			**Check:**	SM
Client Order Number:	N/A			**Date:**	11/1/2024
TEP Project Number:	342642.101614			**Page:**	1

Water Tank Shell Simulation





Model Loads

Tension Axial	4,077	lb
Compression Axial	6,481	lb
Shear	2,852	lb

Overall Results

Sufficient

Model Part Information

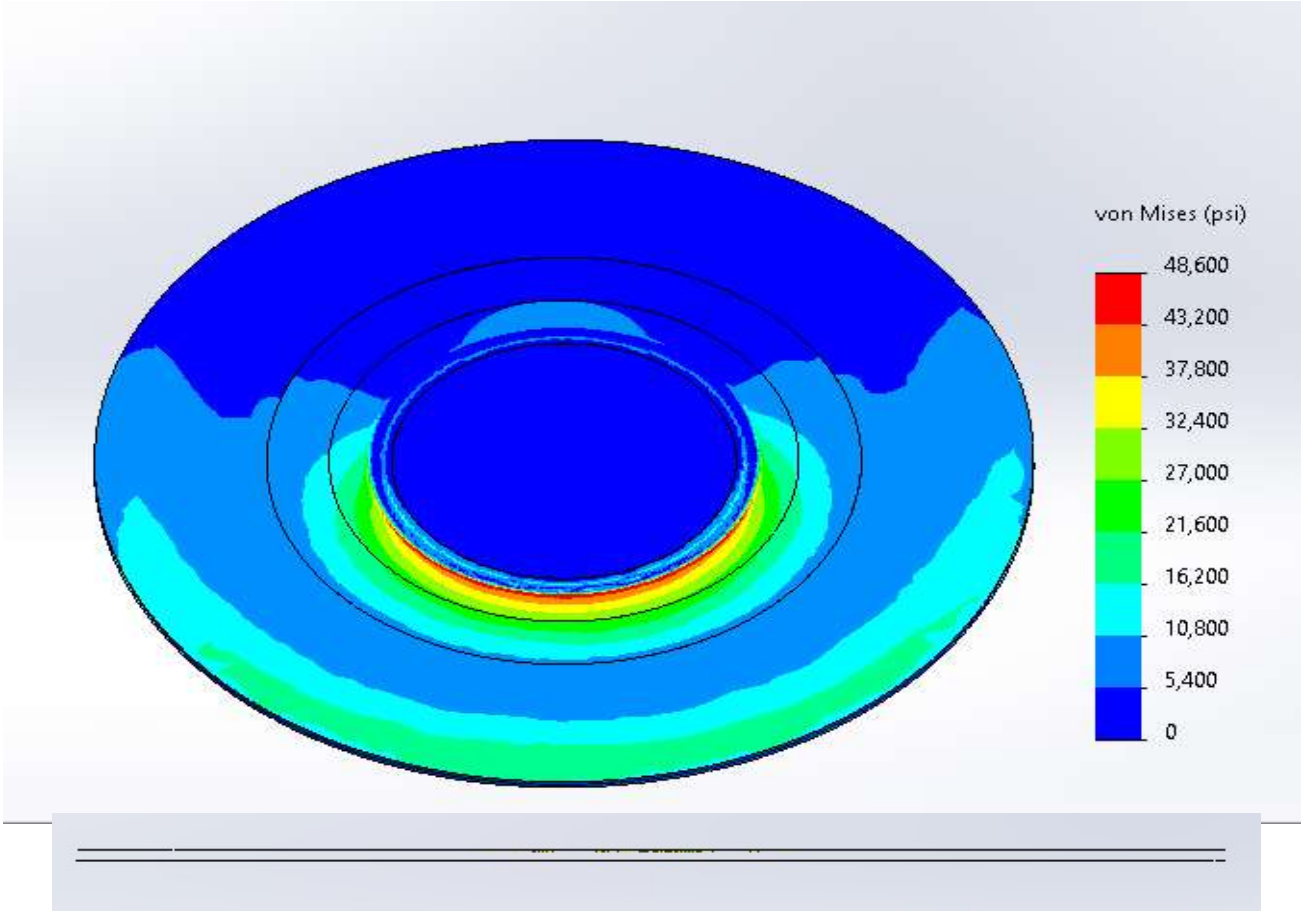
Part	Part Grade
Adjustable Leg	A500-50
Base Plate Welds	E70XX
Footpad	A572-50
Tank Shell	A36

Client Site Name:	Brainerd, MN WT	**Engineer:**	ALD
Client Site Number:	MN78	**Check:**	SM
Client Order Number:	N/A	**Date:**	11/1/2024
TEP Project Number:	342642.101614	**Page:**	2

Tower Engineering Professionals

Study: Tension

Tank Shell

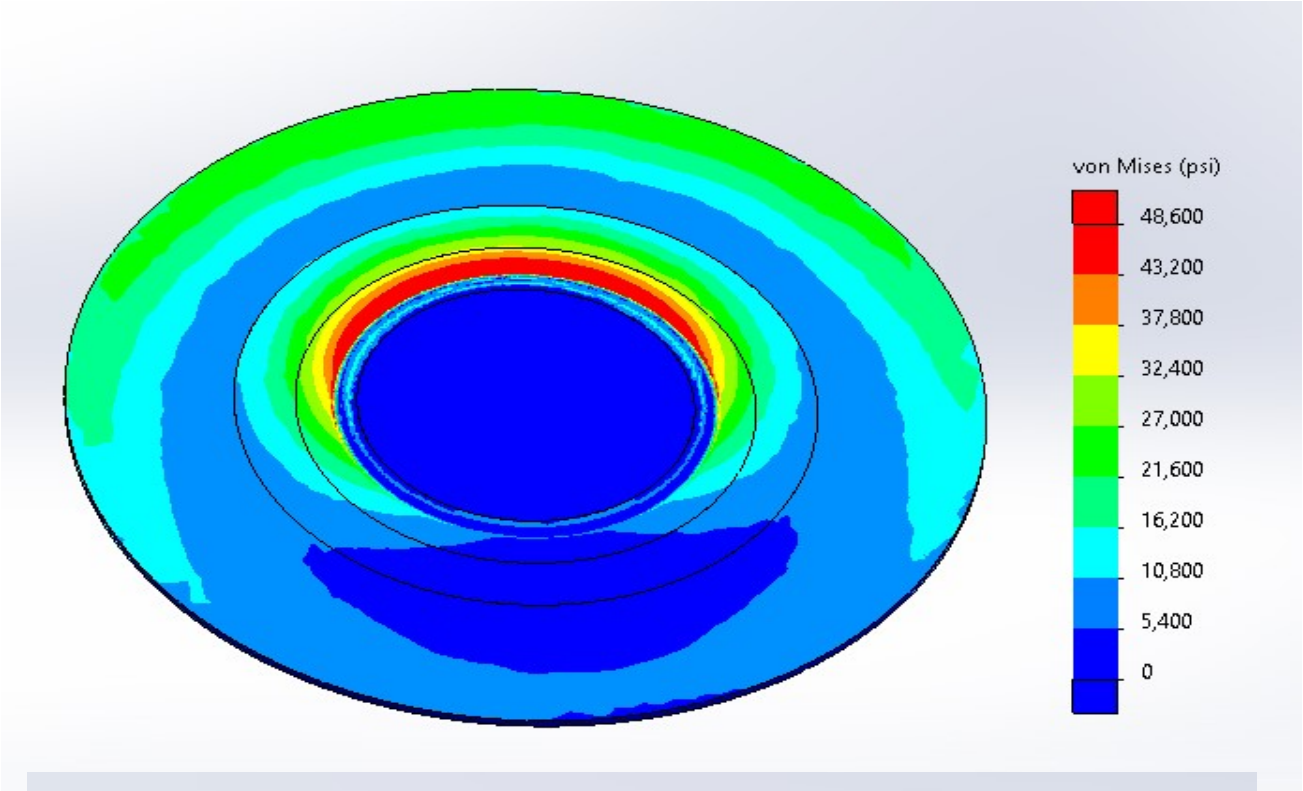


Assumptions	**Results**
Grade A36	Sufficient

Client Site Name:	Brainerd, MN WT		Tower Engineering Professionals	**Engineer:**	ALD
Client Site Number:	MN78			**Check:**	SM
Client Order Number:	N/A			**Date:**	11/1/2024
TEP Project Number:	342642.101614			**Page:**	3

Study: Compression

Tank Shell



Assumptions	**Results**
Grade A36	Sufficient

Method of Procedure for Internal Elevated Water Tank (EWT)
Inspection and Repair

Phase I – Internal (wet) Co**ating Inspection:**

- Contractor to coordinate with the tank owner to raise, or lower, the water level to an elevation that is acceptable for making the required internal (wet) repairs.
- Contractor will visually assess the entry point (top vent or hatch) of the tank to determine whether the internal (wet) inspection can be completed safely and according to OSHA guidelines.
- Contractor will disinfect all tools / equipment by spraying or brushing with a 200(ppm) solution of chlorine per AWWA Standard C652 (method 2).
- Contractor will rig the tank to make areas, in the High-Water Level (HWL), accessible for coatings touch-up. The top vent will be removed, if necessary, for this task.
- Contractor will make entry into the tank using a bosun's chair suspended by the rigging at the top vent or top hatch.
- Contractor will visually inspect and photograph all weld areas pertaining to the radar platform installation to verify damage has or has not occurred to the internal (wet) water tank coating.
- Contractor to provide a detailed report of all findings, including photographs, which will be submitted to the client in the Closeout Report.

Phase II – Internal **Coating Re**pairs:

- Prior to any interior touch-up, the contractor will properly prepare the damaged areas per the SSPC-SP2/3 (AMPP) "hand tool" method.
- Contractor will apply (1-2) coat(s) of an ultra-high-build NSF 600 compliant epoxy coating to each of the damaged areas. Product for touch-up will be either Raven Lining Systems AquataPoxy A-61 or Tnemex Epoxiline Series FC22. Coating coverage, either product, (8-12) mils – (1-2) coats.
- Once touch-up is complete the contractor will exit the tank removing the bosun's chair, tank rigging and re-install the top vent or hatch.

Elevated Water Tank (EWT) Owner Responsibility:

- Owner will be responsible for maintaining the agreed High-Water Level (HWL) during inspection and repair.
- Owner will be responsible for coordinating the de-energizing of communication antennas.
- Owner will be responsible for providing documentation for the existing coating system, internal and external.

Tank Downtime Expectations

With WIT, we do not need to drain the tank. Partners should expect the tank to be offline for 4-8 hours as WIT either floats a raft or suspends from the top of the tank to conduct repairs. During this time, the tank does not have to be drained, but must remain offline while crews are inside. WIT will select the appropriate repair method (suspension or raft) and sanitize everything before it goes into the tank. They will make appropriate spot repairs, take photos, and exit the tank upon completion. They will then create a report to share with us, which we can relay to you.

Public Utilities Commission
Agenda Request

MEETING DATE: January 28, 2025

TITLE OF ITEM: Consider City of Baxter Request for wholesale water rate

ACTION REQUESTED: Direction Requested

ESTIMATED TIME (MIN): 6

SUBMITTED BY: Chris Evans, Public Utilities Director, Danny Loch, Finance Manager

PRESENTER: Chris Evans, Public Utilities Director

SUMMARY OF ISSUE: The City of Baxter has determined they have a need to purchase water during the peak summer months of 2025. In the attached letter and report their request documents the need for up to 85 million gallons during 2025. Baxter has requested the Commission consider, "establishing a wholesale rate that is reflective of BPU's additional costs for the estimated volume that Baxter may need to purchase in 2025... additionally, the City of Baxter would propose to pay for their share of the DNR Summer Surcharge fee during the time period."

ALTERNATIVE, OPTIONS, EFFECTS ON OTHERS/COMMENTS: The 2021 wholesale rate was $2.60 per 1,000 gallons as discussed in the March 30, 2021 Commission minutes.
During 2024 Baxter purchased 50,742,000 gallons.

RECOMMENDED ACTION/MOTION: Based on current rate adjustments, staff recommend approving a wholesale water rate of $3.32 / 1,000.

FINANCIAL IMPACT:

BAXTER

"A Growing Community"

January 21, 2024

Mr. Chris Evans, Public Utilities Director
Brainerd Public Utilities
PO Box 373
Brainerd, Minnesota 56401

Dear Mr. Evans:

As I recently shared with you, the City of Baxter is diligently working on drilling new municipal wells to meet water capacity needs. Unfortunately, the new wells will likely not be operational until fall of 2025. The 2024 rehabilitation project helped the City reclaim some of the capacity in our existing wells but not to the extent needed to meet seasonal demands. Utilizing the existing infrastructure in place, Baxter may need to purchase approximately 300 - 400 gallons per minute of supplemental water during the peak periods this year (May-September). This flow represents the minimum gravity flow through the interconnect building, based on our testing in 2024. By our calculations, this would equate to approximately 432,000 to 576,000 gallons per day, 13 to 17 million gallons per month, or 65 to 85 million gallons for the said peak period. Attached is a copy of the SEH memorandum dated November 25, 2024 for your use and reference.

Per the 2011 Water Sales Agreement, BPU is to charge the current commercial rate when the City of Baxter purchases water from BPU. The agreement was structured with the understanding that purchasing water would be for short periods of time and does not take into consideration the extended time and volume of water that would be purchased due to long-term infrastructure issues. With up to 85 million gallons needing to be purchased in 2025, the current commercial rate creates a financial hardship for the City.

The City of Baxter respectfully requests BPU formally consider establishing a wholesale rate that is reflective of BPU's additional costs for the estimated volume that Baxter may need to purchase in 2025. This is the same request as the one the City made in 2021 when it experienced significant failure of its water filtration system. Additionally, the City of Baxter would propose to pay for our share of the DNR Summer Surcharge fee during this period as well.

Please let me know if there is any additional information that BPU will need to consider this request.

Thank you for your time, consideration, and willingness to assist the City of Baxter.

Sincerely,

Bradley Chapulis
City Administrator

Trevor Walter
Public Works Director

13190 Memorywood Drive • • Baxter, MN 56425
(218) 454-5100 • Fax (218) 454-5103 • www.baxtermn.gov • cityhall@baxtermn.gov

Building a Better World for All of Us®

MEMORANDUM

TO: Trevor Walter, PE

FROM: Kevin Young, PE (Lic. MN, VA)

DATE: November 25, 2024

RE: 2024 Well Rehabilitation Project Summary
SEH No. BAXTE 177535 14.00

On January 25, 2024, Thein Well provided the City of Baxter (City) well inspection reports for Wells 1(R), 2(R), 3, and 4(R) which recommended that each well be rehabilitated. The City contracted with SEH in February 2024 to assist with the well rehabilitation project. This memorandum summarizes the results of the 2024 well rehabilitations.

SEH assisted the City in collecting samples from Well 3 to send to Water Systems Engineering, Inc. of Ottawa, KS, to perform a complete well profile analysis. The well profile report (attached) concluded:

- Well 3 had "an increased potential for iron-related fouling downhole and in the produced water."
- Manganese was identified at levels exceeding the fouling threshold of 0.1 mg/L in all samples.
- The organics and nutrients in the well could indicate future growth of microbial populations in the well as it ages.

Based on the results, Water Systems Engineering, Inc. recommended the following chemical and mechanical cleaning for Well 3. The recommended chemicals and cleaning procedures were specified for all wells and adjusted based on the site and well conditions during the rehabilitations.

- Pull pump equipment and visually inspect for corrosion or degradation.
- Mechanical pre-treatment (brushing).
- Combined chemical and mechanical cleaning using the following chemicals.
  - Johnson Screens Nu-Well 120 Phosphoric Acid (75% strength) 45 gallons
  - Johnson Screens Nu-Well 310 Biodispersant 20 gallons
  - Potable water for blending 300 gallons
- Blend chemicals and introduce to well. Surge chemicals using surge block.
- Pump well until pH and conductivity return to normal and visible turbidity is zero.
- Disinfect well and leave overnight.
- Final disinfection.
- Disinfect piping and equipment prior to placement.
- Collect bacteriological samples for regulatory testing.

WELL 3 REHABILITATION – 04.12.2024 – 04.25.2024

Thein began the initial rehabilitation for Well 3 by pulling the pump and associated equipment on April 12. The pre-rehabilitation specific capacity for the well was 12.9 gpm/ft. The well was televised after flushing and allowing the well to sit stagnant for two days.

The project kick off meeting was held on site on April 15. Mechanical cleaning was then completed with the wire brush and the casing was bailed. The following day, chemical cleaning began with the addition of 70 gallons of Nu-Well 120/Nu-Well 310. The next morning, the pH was at 4, therefore, Thein added another 28 gallons of Nu-Well 120/Nu-Well 310 to bring the pH back down to 3.

Surging was completed and the well was pumped to remove the chemical and return the water to a normal pH. Performance pumping took place on April 19 and the specific capacity was calculated to be 16 gpm/ft pumping at 600 gpm, representing a 20% increase in specific capacity.

On April 22, Thein televised prior to chlorinating the well and pumping to waste. The pumping equipment was replaced, and the well was put back in service following receipt of bacteria testing results on April 25. Thein Well replaced 42 feet of drop pipe in Well 3 due to concerns over pitting and corrosion on the pipe.

Since the rehabilitation was not able to return Well 3 to it's 2023 inspection specific capacity, the City asked SEH to review the results with Thein Well and evaluate whether a second rehabilitation would be beneficial. Well 1 required back-to-back rehabilitations in 2011 to return its capacity to near design conditions.

WELL 2 REHABILITATION – 04.25.2024 – 05.06.2024

Following the rehabilitation of Well 3, Thein began pulling pump and equipment from Well 2 on April 25. The pre-rehabilitation specific capacity for the well was 19.8 gpm/ft. The well was flushed and allowed to sit stagnant for two days before televising.

Well 2 was televised on April 29 before mechanical cleaning by wire brushing was completed. Televising for this well showed a similar state of the screen as Well 3, with minimal build up visible on the screen. The following day, Thein jetted the well for 8 hours, at which point, the specific capacity plateaued so jetting was stopped. After jetting was complete, 70 gallons of Nu-Well 120/Nu-Well 310 chemical was added to Well 2 for the initial chemical treatment on May 1. When the pH was verified the next day, it had remained below 2, therefore, additional chemical was not added. Surging was completed and the well was pumped to remove the chemical and return the water to a normal pH.

On May 2, Thein completed performance pumping of the well until there was no more improvement in specific capacity. The final specific capacity was 21.0 gpm/ft, an approximately 6% increase from the initial specific capacity of 19.8 gpm/ft. On May 6, Thein televised prior to chlorinating the well and pumping to waste. Pumping equipment was replaced and the well was put back in service following receipt of bacteria testing results on May 7.

WELL 3 ADDITIONAL REHABILITATION – 6.7.2024 – 6.19.2024

Since the initial Well 3 rehabilitation was not able to restore the specific capacity to January 2023 values, the City decided to conduct a second rehabilitation utilizing WaterSafe AR for the chemical treatment. Thein Well previously used WaterSafe AR successfully in Baxter and other cities so it was decided to use it for the second rehabilitation instead of the Johnson Screens Nu-Well chemicals in an attempt to further increase the Well 3 specific capacity. The starting specific capacity for this rehabilitation was 16.0 gpm/ft.

The Well 3 pump equipment was pulled and jetting began on June 10. Thein continued to jet at approximately 175 gpm and monitor specific capacity. On June 11, chemical treatment began with the addition of 180 gallons of WaterSafe AR to the well. Surging began and continued the following day, while the chemical mixture was left in the well overnight. At the conclusion of the second day of surging, chlorine and acetic acid were added to the well and left overnight for disinfection. On June 19, Thein removed the surge block and began pumping the well and chlorine to waste, followed by collecting bacteria testing samples. Pumping equipment was replaced and the well was put back in service following receipt of bacteria testing results.

The final specific capacity for Well 3 was 18 gpm/ft, resulting in a 13% increase in specific capacity for this rehabilitation and a total of nearly 40% increase in specific capacity between both rehabilitations.

Following the rehabilitation of Wells 2 and 3, the City decided to delay the rehabilitations of Wells 1 and 4 until the fall of 2024.

WELL 4 REHABILITATION – 09.09.2024 – 09.16.2024

After the Well 3 rehabilitation was complete in June 2024, SEH reached out to Johnson Screens for a recommendation to improve the rehabilitation results. Johnson Screens recommend adding Nu-Well 400 to the chemical solution used for cleaning. Nu-Well 400 is a dispersant chemical which is designed to increase the chemical penetration into the aquifer formation to improve the cleaning process.

Thein began the rehabilitation of Well 4 by pulling the pump and equipment on September 9. The initial specific capacity for the well was 13.8 gpm/ft. The well was televised the following day. Thein then began jetting and pumping to loosen material on the screen. On September 11, Thein added 20 gallons of Nu-Well 310, 50 gallons of Nu-Well 120, and 1 gallon of Nu-Well 400 to the well to react overnight. The following day, Thein began surging and continued throughout the day.

The pH in the well remained adequately low overnight and additional chemical did not need to be added. Thein continued surging throughout the following day. Thein started and stopped pumping to “burp” any extra chemical out. The post-rehabilitation specific capacity was 21.1 gpm/ft at a pumping rate of 590 gpm. Thein then put chlorine in the well for disinfection over the weekend. Thein televised on September 16 and collected bacteria samples for analysis. Bacteriological testing results were received on September 18 before the well was put online.

When the drop pipe was removed from Well 4 it was found to have corrosion pitting and was recommended to be replaced. All the drop pipe was replaced. Thein left the abandoned well drop pipe for Well 4 per the City’s request.

WELL 1 REHABILITATION – 09.23.2024 – 09.30.2024

Thein began pulling the pump and equipment from Well 1 on September 23. The initial specific capacity for the well was 18.9 gpm/ft with the well being pumped at 270 gpm. The well was televised the next day, followed by jetting and pumping to loosen material on the screen. On September 24, Thein added 20 gallons of Nu-Well 310, 50 gallons of Nu-Well 120, and 1 gallon of Nu-Well 400 to the well to react overnight. The following day, Thein began surging and continued throughout the day.

The pH of the water in the well remained at an acceptable level so no additional chemical was added and Thein continued to surge on September 26. The next day, Thein installed the pump and pumped to determine the specific capacity. Thein recorded the final specific capacity at 22.2 gpm/ft being pumped at 633 gpm. On September 30, Thein completed post-televising of the well and collected bacteria testing samples. The well was placed in service upon receipt of bacteria testing results on October 2. After the wells were placed back in service, Thein assisted with identifying the depth of the well level transducers. Their report of the transducer level is attached.

SUMMARY OF REHABILITATION RESULTS

The results of the 2024 well rehabilitations are presented below in terms of both flow and specific capacity.

Flow

When the wells were drilled the well pumps were capable of individually producing more than 700 gpm, which was not advised. In 2013, the well pumps were replaced to target a flow rate of 700 gpm. During the 2023 well inspection by Thein Well, all pumps could produce about 700 gpm before the historically high water demand experienced during the summer of 2023 required all four (4) wells to run at the same time for the first time since the wells were drilled.

The maximum flow rate from each well, with all four (4) wells running for a short period of time, was tested on November 21, 2024, after the 2024 rehabilitation work was complete. The testing information is provided in Table 1, and only Well 3 was capable of pumping more than 600 gpm to the WTP. **The total pumping capacity from the well pumps is nearly 500 gpm less than the 2013 design flow rates.**

Table 1 – Historical Well Flow Comparison

	Current Max. Flow Rate (all wells running) (11/21/2024)	2023 Well Inspection Pumping Rate	2013 Design Flow	Difference (Current Flow – Design Flow)
Well 1R (gpm)	585	691	700	-115
Well 2R (gpm)	578	674	700	-122
Well 3 (gpm)	628	741	700	-72
Well 4R (gpm)	513	661	700	-187
Total Capacity	2,304 gpm	2,767 gpm	2,800 gpm	-496 gpm
	3.3 MGD	4.0	4.0	-0.7
Firm Capacity (1)	1,676 gpm	2,026 gpm	2,100 gpm	-424 gpm
	2.4 MGD	2.9 MGD	3.0 MGD	-0.6 MGD

Notes: (1) Firm capacity is defined as the capacity with the highest capacity pump/well out of service.

Source: City Records

Reduced pumping rates are often correlated to clogged well screens, pump or motor issues, declining water levels, or changing aquifer conditions. Knowing the wells screens are not clogged after rehabilitation, the reduced flows can be correlated to the lower pumping water levels. It is also possible that the pump impellers are experiencing some wear and are no longer able to pump at their original capacity or that the aquifer conditions changed outside of the radius that can be reached by the typical well rehabilitation methods used. Discussion on increasing well flow by replacing pumps is included below.

Specific Capacity

Specific capacity is the volume of water that can be pumped from a well per foot of decreased water level during pumping, measured in gallons per minute of foot of drawdown (gpm/ft). It is often tracked to use as an indicator of well condition. The 2024 well rehabilitation efforts increased the specific capacity of each well when compared to the pre-rehabilitation specific capacities with improvements ranging from 6% to 53%, as presented in Table 2. However, **none of the wells had the specific capacity restored to their March 2023 levels**. The specific capacities were restored to 52-60% of the March 2023 specific capacities.

Table 2 – Historical Well Specific Capacity Information

Description	Well [1]			
	1R	2R	3	4R
March 2023 Specific Capacity (gpm/ft)	41.0	34.9	34.9	36.1
2024 Pre-Rehabilitation Specific Capacity (gpm/ft)	18.9	19.8	12.9	13.8
2024 Post-Rehabilitation Specific Capacity (gpm/ft)	22.2	21.0	18.0	21.1
% Increase from 2024 Rehabilitation	17%	6%	40%	53%
Well Rehabilitation Trigger[2] Specific Capacity (gpm/ft)	17.8	16.8	14.4	16.9

Notes:
[1] Individual well specific capacities calculated while on the single well is running. Running multiple wells in the well field will cause the specific capacity to be calculated at a lower value due to well interference.
[2] "Trigger" specific capacity represents a decrease in specific capacity of 20%, at which time the City should consider rehabilitating the well.

Source: Thein Well Inspection Reports, City Records

For reference, Figure 1 presents the historical specific capacity of the City's four (4) existing wells, including the pre- and post-rehabilitation specific capacities from 2024. This data shows that there was a slight decreasing trend in specific capacity from about 2015 to 2023 before the specific capacity dropped sharply due to the high 2023 water demands caused by a drought.

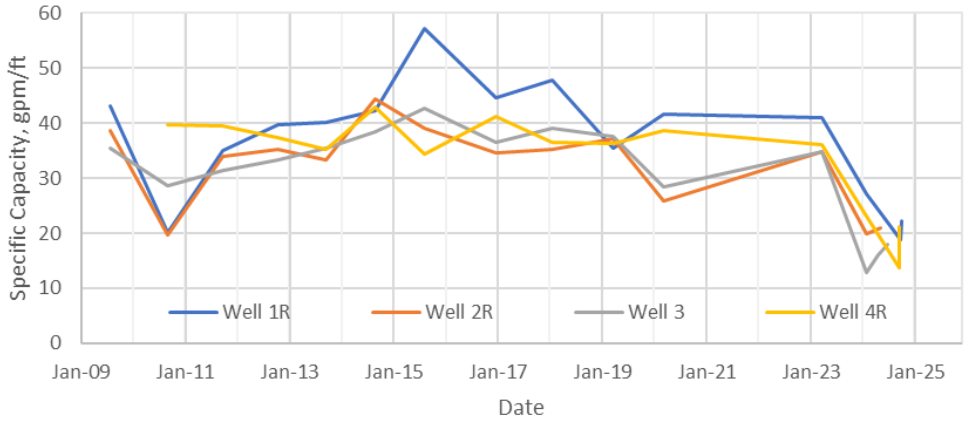


Figure 1 – Historical Well Specific Capacity

2025 WATER DEMAND PROJECTIONS

It is important to look ahead to 2025 and begin to plan for the possibility of high summer demands like those experienced in 2023 to determine if the wells will be able to meet the City's water demand. As part of a separate project to update the City's water distribution system hydraulic model, SEH evaluated recent summer demands to calculate potential 2025 demands. The results are summarized below.

2025 demand projections were calculated in terms of average summer day (ASD) and maximum summer day (MSD) and are presented below. Instantaneous flows are provided in both 24-hour and 18-hour intervals, as staff try to limit the WTP run time to about 18 hours per day to allow the well field to recharge.

- **ASD**: 2.5 million gallons per day (MGD), which equates to 1,740 gpm over a full 24-hour day or 2,320 gpm over 18 hours.
- **MSD**: 2.96 MGD, which equates to 2,075 gpm over a full 24-hour day or 2,740 gpm over 18 hours.

By comparing the above post-rehabilitation well flows data above to potential 2025 water demands it is possible to project if the wells will be able to meet the City's short-term needs until Wells 5 and 6 are constructed. Figure 2 presents the 2023 and 2024 water demands and includes horizontal lines representing the 2025 ASD and MSD and dots representing various well flow scenarios, described below:

- **1,800 gpm – 18 hrs**: This flow scenario represents a conservative 450 gpm being pumped out of each of the existing four (4) wells for 18 hours per day. This scenario provides an indicator of flows if the pumping rates continue to drop. When compared to the projected 2025 ASD, the City would need to purchase about 600,000 gallons per day (420 gpm) from Brainerd on average.
- **2,300 gpm – 18 hrs**: This flow scenario represents pumping the four (4) existing wells at the current pumping capacity of between 510-630 gpm per well for 18 hours per day. This scenario represents flows if the well pumps maintain their current capacity and the well condition stabilizes after the 2024 rehabilitation. In this scenario, the City would be able to produce the projected 2025 ASD flows, but would fall short of producing the projected 2025 MSD flows without extending the WTP run time. The City would need to purchase about 400,000 gallons per day from Brainerd to meet maximum day demands.

- **2,300 gpm – 24 hrs**: This flow scenario represents pumping the four (4) existing wells at the current pumping capacity of between 510-630 gpm per well for 24 hours per day. This scenario represents flows if the well pumps maintain their current capacity and the well condition stabilizes after the 2024 rehabilitation. In this scenario, the City would be able to produce both projected 2025 ASD and MSD flows. However, the aquifer may not recharge as desired if the wells are pumped 24 hours per day for extended periods of time and the City may experience issues like those of 2023. The City may not need to purchase water from Brainerd in this scenario.

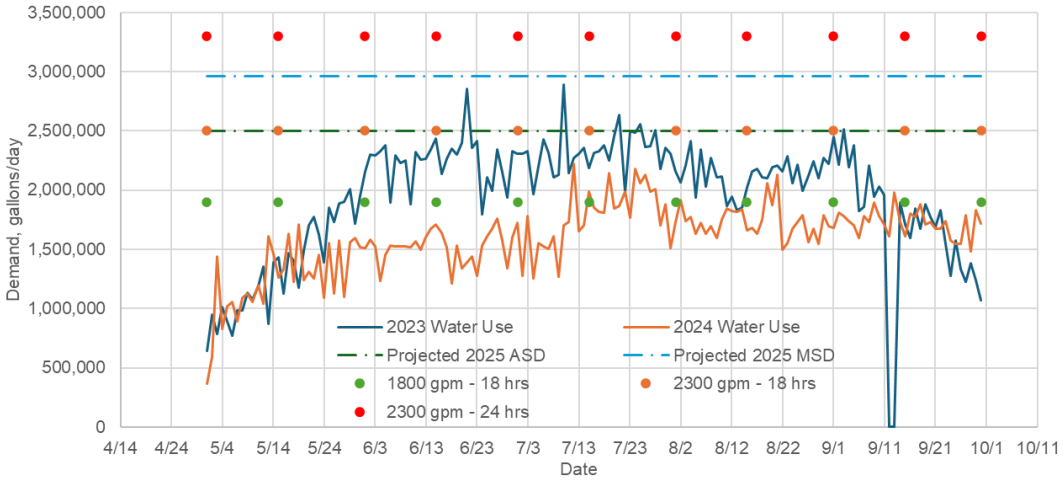


Figure 2 – 2023/2024 Summer Demands & 2025 Flow Projections

Based on the projected 2025 water demands, the City may need to purchase up to roughly 600,000 gallons per day (420 gpm) from Brainerd to meet ASD demands if the well field is only able to sustainably produce 1,800 gpm over 18 hours per day. If the well field is able to sustain 2,300 gpm the City would likely keep up with demands on an average day. However, up to 1,000,000 gallons per day (700 gpm) may need to be purchased on an intermittent basis to meet MSD demands. **The volume of supplemental water that may be needed will depend on well/pumping conditions, weather (which impacts water demand), and operational limitations of the interconnect.**

In its current configuration, the minimum gravity flow through the interconnect with no pumps running is about 300 gpm, or 0.43 MGD. A modulating valve actuator could be installed to adjust gravity interconnect flows from Brainerd to less than 300 gpm, but the existing valves require manual adjustments. During the summer of 2024, Brainerd Public Utilities (BPU) requested that Baxter purchase a consistent volume of water to reduce the stress on their system. The City of Baxter currently charges $3.68/1,000 gallons while BPU charges $4.10/1,000 gallons for commercial customers.

If the minimum flow of 300 gpm was purchased from BPU consistently throughout the summer, it would cost the City about $27,600 more than customers would be charged for the water. For comparison, the average cost of the well rehabilitations completed in 2024 was nearly $32,000 per well, not including engineering, meaning the added cost of purchasing supplemental water from Brainerd is estimated to be less than the cost to rehabilitate one well.

RECOMMENDATIONS

- **Operate multiple wells at lower flow rates to reduce the drawdown** in the well field. For example, rather than pumping two (2) wells at 700 gpm each to produce 1,400 gpm the City could use three (3) wells each pumping about 465 gpm to keep the water level in the wells higher. Pumping from a higher water surface elevation in the aquifer also reduces the amount of electricity used to pump the water. SEH recommends targeting a pumping water level of less than about 60' across the well field, consistent with the summer 2024 recommendations. This recommendation is not a hard limit, as operators need to balance water production and pumping water level. If pumping levels begin to follow a dropping trend as demands pick up, water may need to be purchased from Brainerd.
  - The maximum pumping level for the wells is about 80' to maintain a required column of water over top of the pump without breaking suction. However, as the pumping level drops below 60' it is anticipated that the formation in the vicinity of the well will foul at an increased rate like it did in 2023, so there may be diminishing returns from dropping the pumping level below 60' to not purchase water from Brainerd.
- **Replace pumps for Wells 1 and 4 to achieve up to 700 gpm from each well.** The existing well pumps are no longer capable of producing 700 gpm as they were designed. This is likely due to a combination of lower pumping water levels or pump/impeller wear. Prior to the filter rehabilitation project when variable frequency drives (VFDs) were installed, the City relied on pump impellers being trimmed to target a desired flow. Now that VFDs are in place, the City has more flexibility to operate the wells at varying flow rates and dial the VFD speed back to reduce the flow rate as aquifer conditions require.
  - It is recommended that the City's future well field operation strategy consist of primarily operating existing Wells 1 and 4 with the proposed Wells 5 and 6 to maximize pump spacing and reduce interference between the wells. In this case Wells 1 and 4 would still be relied on to produce up to 700 gpm. When Wells 2 and 3 are used it would be recommended to pump Wells 1 and 3 or Wells 2 and 4, again to minimize interference between the wells. Wells 5 and 6 would be allowed to pump with either previous combination or with Wells 2 or 3. Assuming Wells 5 and 6 are constructed with a 700 gpm capacity, this would not require Wells 2 and 3 to produce 700 gpm in the short-term.
  - SEH recommends purchasing new pumps for Wells 1 and 4 so they are able to pump 700 gpm to the WTP, but dial the speed setting back during lower demand periods or as aquifer conditions require to reduce stress on the aquifer.
  - Thein Wells has indicated that the lead time for new pumps matching the existing pump model would be about 5-6 weeks after the pump is ordered. The lead time could be reduced to about 4 weeks if a different pump manufacturer was selected.
  - Thein Wells reported that it will be cheaper to install new pumps than to pull the pumps, replace the impellers, and then reinstall them. It is estimated that each new pump will cost about $15,000.
- **Drill additional production wells** to relieve the stress on the existing well field. SEH is currently under design on proposed Wells 5 and 6. It is anticipated that the wells will be drilled during the summer of 2025, but it is unlikely that they will be able to pump water to the WTP until the end of the summer high demand period.
- **Monitor specific capacity.** If the individual well specific capacities drop to the Well Rehabilitation Trigger Specific Capacity provided in Table 2, the well(s) should be rehabilitated. The Well Rehabilitation Trigger Specific Capacity is based on the specific capacity dropping 20% from the 2024 post-rehabilitation level.

- **Discuss wholesale water rates with Brainerd Public Utilities.** While the volume of water that may be required to supplement flows from Baxter's wells can't be quantified to an exact number, it could be up to 85 million gallons during the summer of 2025. Similar to 2021 when the City purchased all of its water from Brainerd when the WTP was offline for filter reconstruction, the City should discuss water rates with BPU prior to summer demands picking up. Also, it may be beneficial to install a modulating flow control valve at the interconnect if supplemental flows less than 300 gpm would be sufficient to meet the City's water demand.

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Attachments:

- Water System Engineering, Inc. Well Samples Report
- Well Figures
- Well Summary Table
- Thein Well Level Transducers Measurement Summary

c: Trevor Thompson, Assistant City Engineer

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WATER SYSTEMS ENGINEERING

Date: April 25, 2024

Lab Report No. 22986

Brian Berent
City of Baxter
13190 Memory Wood Dr.
Baxter, MN 56425

Project Description: City of Baxter, MN, Well No.3; Samples dated 02/29/2024
Complete Well Profile (1); Job Reference: Baxter Well No.3

Test Description:

The Complete Well Profile analysis is designed for comparative analysis of two samples, typically one static and one pumping sample. The Complete Well Profile utilizes a series of inorganic chemical and microbiological tests to identify fouling and corrosion issues with potential impacts on the operation of the sampled well. The tests include a number of inorganic chemical parameters such as pH, total dissolved solids/conductivity, hardness, alkalinity, oxidation reduction potential (ORP), bicarbonate, carbonates, silica, sodium, potassium, chloride, iron, manganese, phosphate, nitrate, sulfate, and total organic carbon (TOC). Biological assessment is designed to quantify the total bacterial population, identify two dominant populations of bacteria, assess anaerobic conditions, and identify the presence of iron related bacteria and sulfate reducing organisms. Also included are tests for Adenosine triphosphate (ATP), heterotrophic plate count (HPC), and a microscopic evaluation; and in potable systems, total coliform and E. coli coliform presence/absence.

Testing Procedures:

All laboratory testing procedures are performed according to the guidelines set forth in *Standard Methods for the Examination of Water and Wastewater* as established by the American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF). Corrosion analyses are performed in accordance with the guidelines as set forth by the National Association of Corrosion Engineers (NACE). In general, these methods are approved by both the Environmental Protection Agency (EPA) and AWWA for the reporting of water and/or wastewater data.

Sample collection and shipment is the responsibility of the customer, performed according to protocol and procedures defined by the laboratory in advance of the sampling event with regards to the specific project and nature of the problem.

Disclaimer:

The data and interpretations presented are based on an evaluation of the samples and submitted data. Conclusions reached in this report are based upon the data available at the time of submittal and the accuracy of the report depends upon the validity of information submitted. Any recommendations presented are based on laboratory and field evaluations of similar fouling occurrences within potable water systems. Further investigative efforts, such as efficiency testing, site inspection, video survey, or other evaluation methods may offer additional insight into the system's condition and the degree of fouling present.

Client: City of Baxter
Date: April 25, 2024
Lab Report No. 22986

Re: City of Baxter, MN, Well No.3; Samples dated 02/29/2024
Complete Well Profile (1); Job Reference: Baxter Well No.3

ND - Not Detected NA - Not Applicable * as $CaCO_3$	**Well 3 Casing**	**Aquifer (after 20 min)**	**Detection Limits**
pH Value	7.47	7.48	NA
Phenolphthalein Alkalinity*	ND	ND	4 mg/l
Total Alkalinity*	156	164	4 mg/l
Hydroxide Alkalinity*	ND	ND	4 mg/l
Carbonate Alkalinity*	ND	ND	4 mg/l
Bicarbonate Alkalinity*	156	164	4 mg/l
Total Dissolved Solids	270	265	1.0 mg/l
Conductivity (µm or µS/cm)	375	368	NA
ORP (mV)	271.2	267.6	NA
Langelier Saturation Index (at 16°C)	- 0.29	- 0.23	NA
Total Hardness*	156	188	4 mg/l
Carbonate Hardness	156	164	4 mg/l
Non Carbonate Hardness	ND	24	4 mg/l
Calcium*	140	152	4 mg/l
Magnesium*	16	36	4 mg/l
Sodium (as Na)	11.00	10.50	0.02 mg/l
Potassium (as K)	0.1	0.1	0.1 mg/l
Phosphorus, Reactive (as PO_4^{3-})	ND	ND	0.06 mg/l
Chlorides (as Cl)	28.7	28.4	1 mg/l
Nitrate (Nitrogen)	ND	ND	0.3 mg/l
Chlorine (as Cl)	ND	ND	0.02 mg/l
Dissolved Iron (as Fe^{2+})	ND	ND	0.02 mg/l
Suspended Iron (as Fe^{3+})	0.05	0.02	0.02 mg/l
Iron Total (as Fe)	0.05	0.02	0.02 mg/l
Iron (resuspended)	3.76	4.05	0.02 mg/l
Copper (as Cu)	ND	ND	0.04 mg/l
Manganese (as Mn)	0.291	0.413	0.007 mg/l
Sulfate (as SO_4)	ND	ND	2 mg/l
Silica (as SiO_2)	17.5	17.5	1.0 mg/l
Tannin/Lignin	ND	ND	0.1 mg/l
Total Organic Carbon (C)	1.6	1.5	0.3 mg/l

Biological Analysis:

	Well No.3 Casing	Well No.3 Aquifer	Detection Limit
Plate Count (colonies/ml)	2	1	NA
Anaerobic Growth (%)	<10	<10	NA
Sulfate Reducing Bacteria	Negative	Negative	NA
Fe/Mn Oxidizing Bacteria	Negative	Negative	NA
ATP (cells per ml) Initial	26,000	61,000	NA
ATP (cells per ml) 24 Hour	67,000	97,000	NA
Total Coliform	Negative	Negative	NA
E. Coli	Negative	Negative	NA
Bacterial Identification	-	*Acidovorax tempereans*	NA

Microscopic Evaluation:

Casing: Heavy visible bacterial activity, low crystalline debris, very low number of protozoa, low amount of plant particulate, very low iron oxide with a moderate amount of iron oxide entrained biomass.

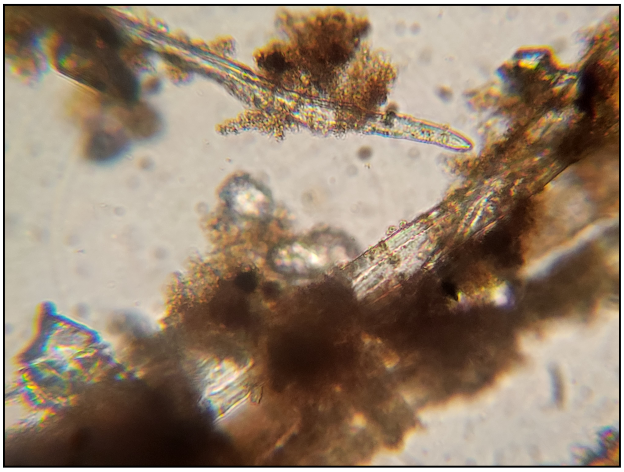

Figure 1: Plant particulate and biomass at 200x magnification

Aquifer: Heavy visible bacterial activity, very low amount of plant particulate, very low iron oxide with a moderate amount of iron oxide entrained biomass.

Observations:

Samples were submitted for the City of Baxter, MN for Well No. 3 for analysis due to low production and upcoming rehabilitation plan. Upon arrival in the laboratory, the initial testing noted a neutral pH value in the casing and aquifer sample. The Oxidation Reduction Potential (ORP) measurements for the well samples were high and indicate an oxidative environment is

present. With ORP levels at this point it is sufficient to expect oxidation of metals such as iron and manganese. An oxidative environment such as this will also impact corrosion rates as well as aerobic bacterial stimulation and activity.

Total alkalinity was in the expected range in the casing and aquifer sample. The alkalinity contribution in the samples were solely from bicarbonate (HCO_3^-) ions, as carbonate and hydroxide ions were not identified. These values, in conjunction with the pH suggest moderate buffering capability within the water chemistry. Although not excessive, the total alkalinity level and pH are sufficient to impact chlorination efforts as a result of the buffering capability. Total dissolved solids (TDS) levels, calculated as a function of electrical conductivity, were measured in expected concentrations for the region.

The Langelier Saturation Index (LSI) calculation predicts scale formation and the likelihood for chemical corrosion. The calculated LSI values for both samples were slightly negative, but still within the expected range for regional groundwater conditions. Negative values indicate an undersaturated environment with a reduced likelihood of calcium scale development and the potential for chemical corrosion to occur.

Water hardness measures the calcium (Ca^{2+}) and magnesium (Mg^{2+}) concentrations in groundwater. Total Hardness was elevated in the aquifer sample. Hardness levels at greater than 180 mg/L are considered very hard and highly mineralized. The calcium levels are on the higher end of the expected range and could be influencing hardness concentrations, impacting the potential for scale and influencing treatment measures.

Dissolved iron, suspended iron and iron total were either not detected or minimal amounts were identified in both samples. Resuspended iron, a test that accounts for dissolved and suspended iron as well as iron that has been mobilized by bacteria, was found in elevated amounts in the casing and aquifer samples. Typically, resuspended iron concentrations above 1.0 mg/l indicate an increased potential for iron-related fouling downhole and in the produced water. In the microscopic evaluations, it was identified to have iron oxide entrained biomass which will impact these concentrations.

Manganese, a mineral that behaves very similar to iron in its fouling characteristics, was detected at levels exceeding the fouling threshold of 0.1 mg/l in both of the Well 3 samples. At these levels, manganese scale is likely, especially in areas seeing more oxidation such as in the vicinity of the pump.

Total Organic Carbon (TOC) is used as an indicator of water quality and the potential for bacterial stimulation and biofouling. Elevated levels of TOC were detected in both samples. These TOC values suggest a potential for the concentrating of organics within the well which could lead to an increase in microbial activity downhole.

Biological analysis of the samples included heterotrophic plate count (HPC) and adenosine triphosphate (ATP) analysis. The observed level of plate growth was limited in both samples despite a high degree of visible bacterial activity and moderate amounts of biomass noted microscopically. The initial ATP counts were in the average range for the well samples. A second evaluation conducted following a 24-hour period under ideal environmental conditions reported levels that increased and were still within the expected range for an active well. As a point of reference, potable wells typically exhibit an ATP range of 10,000 to 70,000 cpm, with values in excess of 100,000 cpm a concern for biofouling.

Anaerobic growth, reported as a percentage of the total population, was expected at less than 10% in both samples. Typically, as anaerobic levels increase, biofouling becomes more dynamic with increases in the occurrence of total coliforms and problematic bacteria. Testing for sulfate reducing bacteria (SRB), a nuisance anaerobe associated with H_2S generation, was negative in the casing and aquifer sample. Sulfate-related bacterial effect water quality in regard to taste and odor as hydrogen sulfide (H_2S) and can impact pH levels, influencing the corrosion potential.

Testing for the presence of iron and manganese-oxidizing bacteria was negative in both the casing and aquifer samples. Microscopic evaluation of both samples reported a very low rate of iron oxide with moderate amounts of iron oxide entrained biomass in both samples.

Total coliform tests, including environmental coliforms were negative in both of the Well No. 3 samples. *E. coli* specific coliform testing was negative for each of the well samples.

Microscopic evaluation of the well samples noted heavy visible bacterial activity along with plant particulate, iron oxide and iron oxide entrained biomass present. In the casing sample, it was reported that crystalline debris and protozoa were also present.

Identification of the dominant bacteria within the samples included species of soil bacterium. Background on the identified species is provided below.

Acidovorax temperans is an aerobic, gram negative soil bacterium. The bacteria's presence in the sample is likely a relation to the area of recharge for the well and aquifer, reflecting interaction with the upper soil horizons.

Microscopic evaluation of the samples reported a high level of visible bacterial activity in both samples. Crystalline debris and plant particulate were identified in the samples as well as a moderate amount of iron oxide entrained biomass.

Interpretations and Recommendations:

The Well No. 3 samples exhibit an elevated potential for iron related fouling. Although iron bacteria were not present, the samples each exhibited a concentrating of iron oxide and iron oxide entrained biomass. Iron and manganese were both present at concentrations in which scale development is expected.

While the microbial populations were limited in size, visible activity was high. Additionally, organics and nutrients are concentrating in the well which could lead to expansive growth as the well ages.

Submitted operation and efficiency data indicates that the well is experiencing a sharp decline in production capability. Based on the analysis, a combined chemical and mechanical cleaning is recommended. In addition, once fully flushed, a multi-volume, pH adjusted chlorination is advised. The goal of a more enhanced chlorination effort is to expand the reach of the cleaning efforts thereby extending the treatment life.

A video survey of the sampled well is highly recommended prior to conducting any maintenance or treatment efforts. This valuable resource will not only provide a pre-rehabilitation assessment of the well structure, but will aid in the directing of mechanical treatment efforts. The goal of the survey is to assess structural integrity of the well and current conditions downhole that may not

be accurately reflected in the submitted sample. Furthermore, this will allow an evaluation of the amount (and type) of fill present in the lower extension of the well.

Recommended treatments are based upon well specification and design information provided, which are summarized below:

Well No. 3 Information:

Total depth:	136-ft
Diameter:	12-in
Statice water level:	33-ft
Single well volume:	605 gallons
Treatment volume:	900 gallons
Disinfection Volume	2,000 gallons
Avg. Total alkalinity	160 mg/l $CaCO_3$
Aquifer Conductivity:	368 µS/cm

Rehabilitation:

NW-120 Phosphoric acid (75% strength)	45 gallons
NW-310 Biodispersant	20 gallons
Potable water for blending	300 gallons

Disinfection

Sodium Hypochlorite (12% active)	5 gallons
NW-410 chlorine enhancer	4 gallons
Potable Water	2,000 gallons

Prior to any treatment efforts, the pump should be pulled and evaluated for signs of corrosion or material degradation which can be addressed, modified or replaced while outside of the well. Place the column pipe and pumping equipment on an elevated rack, power-wash, and treat with a 50-ppm sodium hypochlorite solution before re-installing into the well.

Next (and depending upon the results of video survey), begin with mechanical pre-treatment of the well. Brush the well casing and screened zone in an effort to knock loose scale and biomass accumulations. Use of an appropriately sized, nylon brush is recommended to disrupt accumulations yet reduce physical damage to the well and potential development of additional reactive surfaces. Once the entire well has been brushed, remove the disrupted material and pre-existing fill from the bottom of the well. Bail or airlift in an effort to purge the disrupted material from the well. Evacuate the material until visual turbidity has lessened and the conductivity has returned to a near normal background level for the wells (approximately 400 µS/).

Again, record the achievable well depth to confirm removal of material from the bottom of the well. Once mechanical pretreatment and subsequent evacuation is complete, a combined chemical and mechanical cleaning process should then be enacted.

Prepare a chemical solution comprised of Johnson Screen's 6% NW-120 phosphoric acid (75% strength), 3% NW-310 biodispersant, and potable water for introduction into the well. Phosphoric acid is a strong, slow reacting mineral acid that is recommended to target the

concentration of iron scale identified within the well without jeopardizing the well structure. NW-310 biodispersant is recommended as a polymeric enhancer that improves the activity of acids towards mineral scale while improving the disruption and penetration of biomass. Additionally, the NW-310 aids in the removal of the disrupted materials following treatment. The treatment concentrations for each well in percent weight/volume below, are based upon a total treatment volume equivalent to 1.5-times the standing well volume.

Blend the chemicals on the surface and introduce evenly into the well. For blending of the acid treatment solution, mix the chemicals in this order: water, acid, biodispersant. Mix lightly. Surge the introduced chemicals using a surge bock which appropriately compliments the inner diameter of the well. Surge the entire well column over a twenty-four-hour period focusing a larger percentage of the time on the screened zones and lower extension of the well. During treatment, periodically monitor the activity of the chemical solution, maintaining a pH below 3 during the treatment process. If during acid treatment, the downhole pH rises to a level above 3.0, add additional acid and water to lower the pH. No additional dispersant should be needed.

Once surging is complete, thoroughly airlift or pump the well until the pH has returned to normal (6.5 or greater), the conductivity has returned to near normal background levels for the wells (approximately 400 µS/cm), visible turbidity is zero, and clear water is being evacuated. Begin evacuation from the lowest extension of the well moving upwards as conditions improve. Collect and neutralize the evacuated material above ground according to state and local regulations.

Following cleaning efforts, the well should be disinfected. The use of a pH adjusted method of disinfection is recommended based on the observed biomass and microbial activity. Use of alternative disinfection chemicals, such as chlorine dioxide or hydrogen peroxide, are not advised.

Final chlorination should then utilize sodium hypochlorite in a pH adjusted chlorination treatment of a 300-ppm chlorine level in a pH range of 6.5 to 7.0. The volume of the disinfection solution should be equivalent to 3-times the standing well volume within the well. This larger volume is utilized to flood the borehole with the disinfection solution in order to increase the effectiveness of treatment as well as the effective treatment area. Utilization of Johnson Screen's NW-410 product, an NSF approved chlorine enhancing chemical is strongly encouraged to aid in both effective disinfection as well as to increase the treatment area. The disinfection volumes below are based upon a total disinfection volume roughly equivalent to 3-times the standing well volume for each of the wells.

The disinfection solution should, likewise, be blended above ground and introduced into the well by a tremie pipe. In preparing the chlorine treatment above ground, mix the chemicals in this order: water, chlorine enhancer, check the pH (not below 5.5), add chlorine. Mix lightly. Efforts should be made to evenly disperse the disinfection solution evenly throughout the well and screened zones. Once the solution is placed into the well, it should be lightly agitated with a single disc surge block or similar tool to supply agitation and dispersion throughout the well columns and screened zones. During disinfection, if the chlorine residual has dropped to below 100 ppm, add additional sodium hypochlorite in to raise it to that level.

Allow the chlorine solution to remain downhole overnight. Following this period, begin evacuation of the well from the bottom, working upwards, until a minor residual (~ 50 ppm) is present and all debris has been evacuated from the well. At this time, the permanent pump and column pipe can be placed back into the well and utilized to purge the remaining chlorine solution from the well.

Prior to placing the piping and associated equipment back into the well, disinfect using a handheld or Hudson type spray rig with a 100-ppm sodium hypochlorite solution. Using 12% sodium hypochlorite, mix 5-ml of chlorine with every 1-gallon of potable water to achieve the desired concentration.

With the pump installed, actively pump the well until the conductivity has returned to a near normal background level for the wells (approximately 400 µS/cm,).

Evacuated material should be collected above ground in a storage tank, neutralizing rapidly with sodium bisulfate or sodium thiosulfate, and dispose of according to local and state regulations.

Please Note: Chlorine consumption may occur downhole as a result of iron, bacterial count, ORP values, and pH adjustment. Field monitoring during all phases of the recommended treatment procedures is advised. Additional sodium hypochlorite and physical agitation may be required, and as such, adjustments to these procedures may be necessary.

Following disinfection, collect representative samples for required regulatory testing. While awaiting test results, actively cycle the well sufficient to turn over the entire column at least once a week. This will provide additional benefit by limiting stagnation within the well environment which can reduce the benefits of disinfection efforts.

If you have any questions regarding these recommendations or require additional information, please contact our office.

Michael Schnieders, PG, PH-GW
Hydrogeologist

Baxter Well Information

	Well Field	Mapleton Rd WTP			
Well Information	**Baxter Well Number**	**1R**	**2R**	**3**	**4R**
	MDH Well Number	**4**	**5**	**6**	**7**
	Unique Well No.	752207	741694	733068	752208
	Address	Baxter 133 29 13 SW1/4 SW1/4 SE1/4	Baxter 133 29 13 SW 1/4 SW 1/4 SE 1/4	Baxter 133 29 13 SW 1/4 SW 1/4 SE 1/4	Baxter 133 29 13 SW 1/4 SW 1/4 SE 1/4
	Year Drilled	2007	2006	2006	2007
	Well Depth (completed)	132	121	136	135
	Aquifer	QWTA	QWTA	QWTA	QWTA
	Capacity (gpm) - Original	700	700	700	700
	Flow Rate (gpm) - 11/2024	585	578	628	513
	Static Water Level (ft bgs) - Original	30.7	29.7	28.6	27.8
	Pumping Water Level (ft bgs) - Original	48.5	47.9		50.7
	Specific Capacity (gpm/ft) - Original	39.3	38.6	34.3	30.6
	Specific Capacity (gpm/ft) - 10/2024	22.2	21.0	18.0	21.1
	Casing Diameter (in)	12	12	12	12
	Casing Depth (ft)	102	96	111	105
	Screen Diameter (in)	12	12	12	12
	Screen Length (ft)	30	25	25	30
	Screen Set Between (ft)	102 - 132	96 - 121	111 - 136	105 - 135
	Year Televised	2024	2024	2024	2024
	Year Cleaned	2011 2024	2011 2021/2022 2024	2013 2021/2022 2024	2011 2024
Well Pump Information	**Pump Manufacturer**	Goulds	Goulds	Goulds	Goulds
	Model Number	2-Stage 7THC	2-Stage 7THC	2-Stage 7THC	2-Stage 7THC
	Pump Type	Submersible	Submersible	Submersible	Submersible
	Pump Capacity (gpm)	700	700	700	700
	TDH	131	131	131	131
	Year Installed/Replaced	2007 2013	2007 2013	2007 2013	2007 2013
	Pump Set Depth (ft)	95.5	91	93	99.5
Well Pump Motor Information	**Motor Manufacturer**	Hitachi	Hitachi	Hitachi	Hitachi
	Motor Type	Submersible	Submersible	Submersible	Submersible
	Starter[2]	VFD	VFD	VFD	VFD
	Horse Power	40	40	40	40
	Year Installed/Replaced	2007 2013	2007 2013	2007 2013	2007 2013
	Voltage	460	460	460	460
	RPM	3450	3450	3450	3450
	Emergency Backup	WTP Gen.	WTP Gen.	WTP Gen.	WTP Gen.

[1] *When pumps are pumping alone*

[2] *FV=Full Voltage; VFD=Variable Frequency Drive*

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PO BOX 778 · 11355 HWY 71 NE · SPICER, MN 56288
102 DUNDAS RD · MONTICELLO, MN 55362
CLARA CITY, MN 56222 · VERMILLION, SD 57069
www.theinwell.com · E-mail: theinwell@tds.net
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November 5, 2024

Baxter Water Level Readings take 10/11/2024

Well 1R:

- Static Water Level = 30.08' from top of well – Manual Reading
- Static Water Level = 29.00' from top grade/concrete – Manual Reading
- Static Water Level = 30.50' on SCADA
- Transducer is hung 98.92' from top of well to bottom of transducer
- Transducer measures 3.5" in length

Well 2R:

- Static Water Level = 30.17' from top of well – Manual Reading
- Static Water Level = 29.33' from top grade/concrete – Manual Reading
- Static Water Level = 35.20' on SCADA
- Transducer is hung 94.33' from top of well to bottom of transducer
- Transducer measures 3.5" in length

Well 3R:

- Static Water Level = 30.08' from top of well – Manual Reading
- Static Water Level = 28.83' from top grade/concrete – Manual Reading
- Static Water Level = 103.8' on SCADA
- Transducer is hung 104.42' from top of well to bottom of transducer
- Transducer measures 3.5" in length

Well 4R:

- Static Water Level = 26.75' from top of well – Manual Reading
- Static Water Level = 25.42' from top grade/concrete – Manual Reading
- Static Water Level = 103.8' on SCADA
- Transducer is hung 97.83' from top of well to bottom of transducer
- Transducer measures 6.5" in length

Public Utilities Commission
Agenda Request

MEETING DATE: January 28, 2025

TITLE OF ITEM: Consider changing sprinkling credit months

ACTION REQUESTED: Direction Requested **ESTIMATED TIME (MIN):** 4

SUBMITTED BY: Danny Loch, Finance Manager **PRESENTER:** Danny Loch, Finance Manager

SUMMARY OF ISSUE: At the December 24 Commission meeting, Commission requested an agenda item to discuss the Sprinkling credit and the impacts of an extension of the credit. Our current practice is to provide all residential customers a sprinkling credit on their wastewater treatment and collection rate for the billing months June through September from the customers meter read date. Their wastewater charges are based on the average water consumption from December through February. Note that the credit is only on usage that is above a customer's average usage from December through February.

With our current bill Cycles our process is to end the sprinkling credit as of September 30 of each year. The chart below indicates the bill period end dates for each cycle. As an example Cycle 1 credit is only received for usage through September 3rd of each year. Cycle 2 through the 10th of September each year etc.

		Currently Process	
Billing Cycles	**Mo Bill Dates**	**Turn On Credits June 1st Start Date**	**Off Sept 30th End Date**
Cycle 1	3rd	May 3rd - June 3rd	Sept 3rd
Cycle 2	10th	May 10th - June 10th	Sept 10th
Cycle 3	17th	May 17th - June 17th	Sept 17th
Cycle 4	24th	May 24th - June 24th	Sept 24th
Cycle 5	15th	May 15th - June 15th	Sept 15th
Cycle 6	24th	May 24th - June 24th	Sept 24th

There is a potential to extend the Credit period through October 31 of each year. By adjusting the credit through October 31, all customers would receive credit for the entire month of September's usage. If

Commission desires to extend through October 31, staff recommend removing the specification that the credit starts with meter read in may and ends with the meter read in September. The billing period then covered by each of the Cycles would be as follows:

		Change Shut off to October 31st	
Billing Cycles	**Mo Bill Dates**	**October 31st Shut Off**	
		Start Date	**End Date**
Cycle 1	3rd	May 3rd	Oct 3rd
Cycle 2	10th	May 10th	Oct 10th
Cycle 3	17th	May 17th	Oct 17th
Cycle 4	24th	May 24th	Oct 24th
Cycle 5	15th	May 15th	Oct 15th
Cycle 6	24th	May 24th	Oct 24th

ALTERNATIVE, OPTIONS, EFFECTS ON OTHERS/COMMENTS: Staff recommend considering changing the months utilized to determine a customer's average usage to all the months outside of the credit period of May through October.

RECOMMENDED ACTION/MOTION: Staff request direction from Commission on how to proceed with the sprinkling credit treatment.

FINANCIAL IMPACT:

Public Utilities Commission
Agenda Request

MEETING DATE: January 28, 2025

TITLE OF ITEM: Approve Scope of work for the PPL Application services for water improvements

ACTION REQUESTED: Approve/Deny Motion **ESTIMATED TIME (MIN):** 4

SUBMITTED BY: Danny Loch, Finance Manager **PRESENTER:** Chris Evans, Public Utilities Director

SUMMARY OF ISSUE: As part of the funding needs for future water improvements and the replacement of galvanized service lines as required by the EPA, Commission must obtain funding through the drinking water revolving fund to provide funding for customers. Bolton & Menk have been approved by MDH for these applications and assisted with our inventory over the past year. The attached contract for service allows the Commission to obtain the priority for state funding as required by MN Department of Health and EPA for these funding opportunities.

ALTERNATIVE, OPTIONS, EFFECTS ON OTHERS/COMMENTS:

RECOMMENDED ACTION/MOTION: Staff recommend approving the Bolton & Menk scope of work for PPL application services.

FINANCIAL IMPACT: $15,000

BOLTON & MENK
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7656 Design Road
Suite 200
Baxter, MN 56425-8676

Ph: (218) 825-0684
Fax: (218) 825-0685
Bolton-Menk.com

Via Email

January 17, 2025

Chris Evans
Brainerd Public Utilities
8027 Highland Scenic Dr.
Baxter, MN 56425

RE: Water System Improvements CIP Planning Phase
Engineering Services Proposal
Brainerd Public Utilities

Dear Mr. Evans:

Bolton & Menk, Inc. is pleased to provide this scope and fee in support of your water treatment and system improvements. Brainerd Public Utilities (BPU) has identified needed improvements for the water treatment facility and system and is now looking to move the project forward to capitalize on funding dollars through the Public Facilities Authority (PFA). The first step in the funding process is applying to be included on the Minnesota Department of Health (MDH) Project Priority List (PPL) and the PFA Intended Use Plan (IUP). These applications are due in May and June respectively. The major drivers for this project are enhanced treatment, safety/reliability, improved water quality, wellhead protection and capacity improvements, and infrastructure age. The key to a successful project is a well-laid out plan that positions the BPU for funding and develops a work plan between Bolton & Menk and the BPU. The following sections of this letter provide details for the capital planning phase of water system improvements.

I. Project Understanding

Brainerd currently pumps its drinking water supply from 6 wells. The utility treatment process includes pyrolusite oxidation media, coke bed filtration, tertiary sand filtration, and disinfection prior to being pumped to the distribution system. Disinfection of finished water started in the fall of 2023 and is expected to continue. The facility has aging equipment and outdated filtration media that is obsolete. Significant building improvements and additions are recommended to provide separate rooms for the chemical feed systems.

Applying for placement on the FY2026 Project Priority List (PPL) and Intended Use Plan (IUP) is a top priority for BPU to capitalize on funding for these needed water system improvements. The city has also been awarded $5 million in state appropriation dollars for the water treatment facility backwash and reclamation improvements. Positioning for additional grant funding is a top priority of our work in advancing this facility forward to take advantage of positive funding environment in the State of Minnesota. The scope of work in this proposal will develop the plan to best position the BPU for funding and capitalize on the planning work already started.

It is our assumption that BPU desires to apply for the PPL for the following list of improvements:

- Lead Service Line/Galvanized Requiring Replacement/Unknown Service Line replacement,
    - Final quantity of service lines and addresses to be provided by BPU.

- Water system modifications for pressure zone changes, pump upgrades, tank rehabilitations and improvements,
- Construction of two (2) new municipal supply wells
  - Assumption is that 2 new wells will be installed in recently procured property by BPU.
- Construction of a new water treatment facility with a backwash reclaim system.
  - The final treatment processes are unknown at this time. It is recommended the utility complete a full water system evaluation to finalize future design flows and treatment technologies needed to meet treatment goals and regulatory requirements. Bolton & Menk will provide a scope and fee letter for this study separately from this proposal.

II. Scope of Work

To meet the project schedule and provide the city with the best opportunity for funding we propose to complete the following capital planning phase tasks:

Planning Phase Tasks - Funding

- Write the MDH PPL application and submit to the agency and include a summary of the projects described above.
- Write PFA IUP application and submit to PFA for placement on the Drinking Water Revolving Fund list for the projects described above.
- Throughout work during the planning phase, Bolton and Menk will work closely with the BPU to apply for and position the community for funding. The funding environment has been very positive recently and this work will help position the city for funding dollars and will allow the city to proceed with design and construction when funding is available. Work will include:
  - Public Facilities Authority (PFA) Funding Sources
  - Drinking Water Revolving Fund
  - Water Infrastructure Financing Grants
- Other funding sources as identified
- We will Assist the city to develop a comprehensive funding package with state and federal agencies as appropriate.

Improvement Costs

The scope of work for the improvements is highly variable and it will be better defined as we work through the preliminary engineering phase.

III. Proposed Fees

Based on estimated hours for our design staff and coordination work with BPU, we propose a total **hourly fee of $15,000** for the planning phase work. This fee would not be increased without prior authorization from the city.

As the project progresses, we will provide additional scope and fee information for preliminary engineering and final design/bidding and construction services for the utility approved project. This

would be adjusted to account for decisions made during planning phase work, preliminary engineering and the actual time anticipated to complete the project. Separate scope and fee letters will be provided for both preliminary engineering and design and bidding services once preliminary engineering is complete, and a final scope of work has been developed.

IV. Proposed Schedule

Below is the approximate schedule for the completion of the planning phase. The schedule below accounts for specific funding deadlines and time for funding applications to be completed. Please review this schedule and let me know if any modifications are required to meet the utility's goals/objectives. This schedule can be changed and should be considered a living document to account for design considerations, review time, needs of the utility, and the regulatory agency to develop a quality project.

Water Treatment System Capital Improvements Proposed Project Schedule	
Milestone	**Approximate Period**
Planning Phase	January – June 2025
MDH PPL application due	May 2, 2025
PFA IUP application due	June 6, 2025
Water System Study	TBD

Finding funding sources for municipal infrastructure projects can be a real challenge. Bolton & Menk has developed expertise and knowledge of current programs, relationships with funding agencies, and understanding of application processes to help and assist BPU through the entire process. We appreciate our excellent working relationship with Brainerd Public Utilities and thank you for this opportunity to provide further service. We are excited at the prospect of assisting BPU with this important project and are readily available to begin work on these projects upon authorization.

If you have any questions or comments regarding this proposal, please contact me at 218-839-2303 or morgan.salo@bolton-menk.com.

Sincerely,

Bolton & Menk, Inc.

Morgan Salo, P.E.
Principal Environmental Engineer

Approved By: **Brainerd Public Utilities**	
Chris Evans, Public Utilities Director	Date

cc: Danny Loch, Brainerd Public Utilities
Paul Saffert, P.E., Bolton & Menk, Inc.

Public Utilities Commission
Agenda Request

MEETING DATE: January 28, 2025

TITLE OF ITEM: Review Central Business District Incentive Policy

ACTION REQUESTED: Discussion Item

ESTIMATED TIME (MIN): 10 min

SUBMITTED BY: James Kramvik, Community Development Director

PRESENTER: James Kramvik, Community Development Director

SUMMARY OF ISSUE:
City Council considered and approved Ordinance 1578 at the January 21st City Council meeting. Ordinance 1578 allows for mixed-use development in the Commercial Corridor District, similar to the Mainstreet District which prohibits ground floor residential units.

The City Council approved the Central Business District Incentive Policy which forgives Sewer Availability Charges (SAC) and Water Availability Charges (WAC) in certain areas of Brainerd. The policy includes commercial properties along Washington Street, which are now permitted for mixed-use development. A new mixed-use building in the CC District could have a substantial amount of SAC and WAC fees forgiven as each residential unit typically accounts for $3,300 in charges.

City Council directed the Public Utilities Commission to review the effects of Ordinance 1578 on the Central Business District Incentive Policy, specifically related to SAC and WAC fees in the Commercial Corridor District.

ALTERNATIVE, OPTIONS, EFFECTS ON OTHERS/COMMENTS:
Staff has attached Section 703 and 706 pertaining to SAC and WAC charges along with emails from former City Engineer Paul Sandy and City Attorney Joe Langel.

The Central Business District Incentive Policy originated from the River to Rails District Incentive Policy, which was created to assist investors and entrepreneurs to make small or large investments in the corridor and to inform on the potential incentives available to promote incremental or large changes within this core area of Brainerd. The areas included in the District were those that have sufficient infrastructure to support increased usage and those areas that City Council would like to see redevelopment occur. The primary areas include in the Central Business District are all of Washington Street/ Highway 210, South 6th Street, and Downtown Brainerd.

RECOMMENDED ACTION/MOTION:
Discuss SAC and WAC forgiveness in the Central Business District Incentive Policy, specifically related to mixed-use development in the Commercial Corridor District and provide comments and recommendations to the City Council.

Note: The Commission could request additional information at a future meeting prior to making a recommendation to City Council.

FINANCIAL IMPACT: N/A

City of Brainerd, Minnesota
Central Business District
Incentives Policy

1. Policy Introduction

The Central Business District Incentives Policy focuses on the area of Brainerd, Minnesota bound by the Mississippi River on the west, the Northern Pacific Center on the east, Oak Street on the south, and Washington Street on the north. In addition, the policy also focuses on two major corridors which include 6th Street South to Buffalo Hills Lane East and Washington Street/ Highway 210 from the east to west City boundary. In recent years, momentum to revitalize the core downtown of Brainerd has been building due to the hard work of several organizations including the City of Brainerd, the Brainerd HRA, the Brainerd Lakes Area Chamber of Commerce, the Brainerd Lakes Area Economic Development Corporation, Sourcewell, and the Region 5 Development Commission. These organizations, along with entrepreneurs and developers, worked together to create a shared vision for this core area of Brainerd known as the River to Rail Initiative. The Central Business District Incentives Policy expands on the River to Rail Initiative by incorporating all of Washington Street/ Highway 210 and the majority of 6th Street South.

2. Policy Purpose and Need

Generally, the City of Brainerd City Council finds it necessary and advantageous to outline specific policy decisions it has made for the Central Business District corridor as it relates to potential development incentives that developers or entrepreneurs can tap into as resources to complete important projects within the Central Business District corridor. The incentives in this policy provide baseline guidance to staff, City Council members, developers, entrepreneurs, and economic development agencies about what options are available to promote development, redevelopment, and economic vibrancy to the corridor.

This policy is not intended to be an exhaustive list of all the City of Brainerd is willing to make available for potential investors within the corridor, nor is it meant to mean that the City will not consider these same incentives in other areas of the community; rather it is meant to be a trial run at an economic development policy that provides as a guiding document for potential investors that want to develop or re-develop areas within the corridor, and may be expanded in the future to include all of Brainerd upon success stories shared due to this policy.

3. Policy Statement

The following incentives, based upon City Council action, are available for use within the Central Business District corridor and may vary due to project construction costs as outlined further in this policy:

- Waiving of City Building Permit Fees (not including State of Minnesota surcharge). This does not waive the requirement to obtain a permit, but rather just the fee.
- Waiving of Sewer and Water Availability Charges (SAC and WAC)
- Tax-Increment Financing
- Tax Abatement
- Parking Assistance
- Land Acquisition

These listed incentives do not limit potential investors from tapping into other resources available within the community for financial assistance including the following list:

- City of Brainerd/Brainerd HRA Revolving Loan Fund
- EDA Façade Improvement Grant
- Brainerd HRA Small Cities Development Program (SCDP) Grants
- Brainerd Lakes Area Economic Development Corporation Unified Fund Loans
- Brainerd Public Utilities Economic Development Electric Rate Reduction if applicable based on load capacity.
- Opportunity Zone Assistance
- New Market Tax Credits
- State and Federal Historic Tax Credits

Waiving of City Building Permit Fees

Generally, the Brainerd City Council has elected to waive City building permit and inspection fees for all construction projects less than $150,000 in total construction costs. This does not waive the requirement to obtain a permit or the ability for investors that exceed this threshold the ability to see reduction or waiver of fees during the development or re-development negotiation process. This does not include a waiver of the State of Minnesota surcharge, which is a requirement of all building permits within the City.

Waiving of Sewer and Water Availability Charges (SAC and WAC)

The City of Brainerd City Council has elected to waive all sewer and water availability charges (SAC and WAC charges) within the Central Business District corridor, as identified in the introduction.

Tax-Increment Financing (TIF)

Generally, tax-increment financing (TIF) is available for construction projects in excess of $1,000,000 total construction costs. However, upon the proof of need shown by the investor that the development would not occur without the assistance of tax-increment financing, the Brainerd City Council is willing to negotiate the term and amount of increment with said investor. All tax-increment financing applications must be approved by the Brainerd City Council, upon completion of negotiations.

Tax Abatement

Tax abatement may be considered if tax increment financing is not an option because the project doesn't qualify under state law or the project is not in excess of $1,000,000.

- Tax abatement will be considered on the new proposed value created, not the land or buildings' existing or "base" value (base being a definition related to tax increment financing).
- Tax abatement will be considered only if the County is requested to participate, although the City's provision of abatement is not contingent upon the County agreeing to participate.
- The Council will carefully deliberate abatement requests that ask for the maximum amount and term, only agreeing to provide abatements for the maximum amount and term where the developer can support the request with evidence of special need, or the proposal is for a project that is a high priority for the Council.
- Although not required by state law, abatement projects will be required to meet the "but-for" test as defined in the Tax Increment Financing statute.

Parking Assistance

Generally, the Brainerd City Council is willing to negotiate parking needs of the proposed development to come to a mutually beneficial parking solution to serve both the new investment and other areas within the Central Business District corridor.

Land Acquisition

The Brainerd City Council continues to seek opportunities to acquire blighted property and make the property marketable for future investment including the razing of old structures, beautifying said property, or any other means to make property marketable and attractive to potential investors.

4. Policy Conclusion

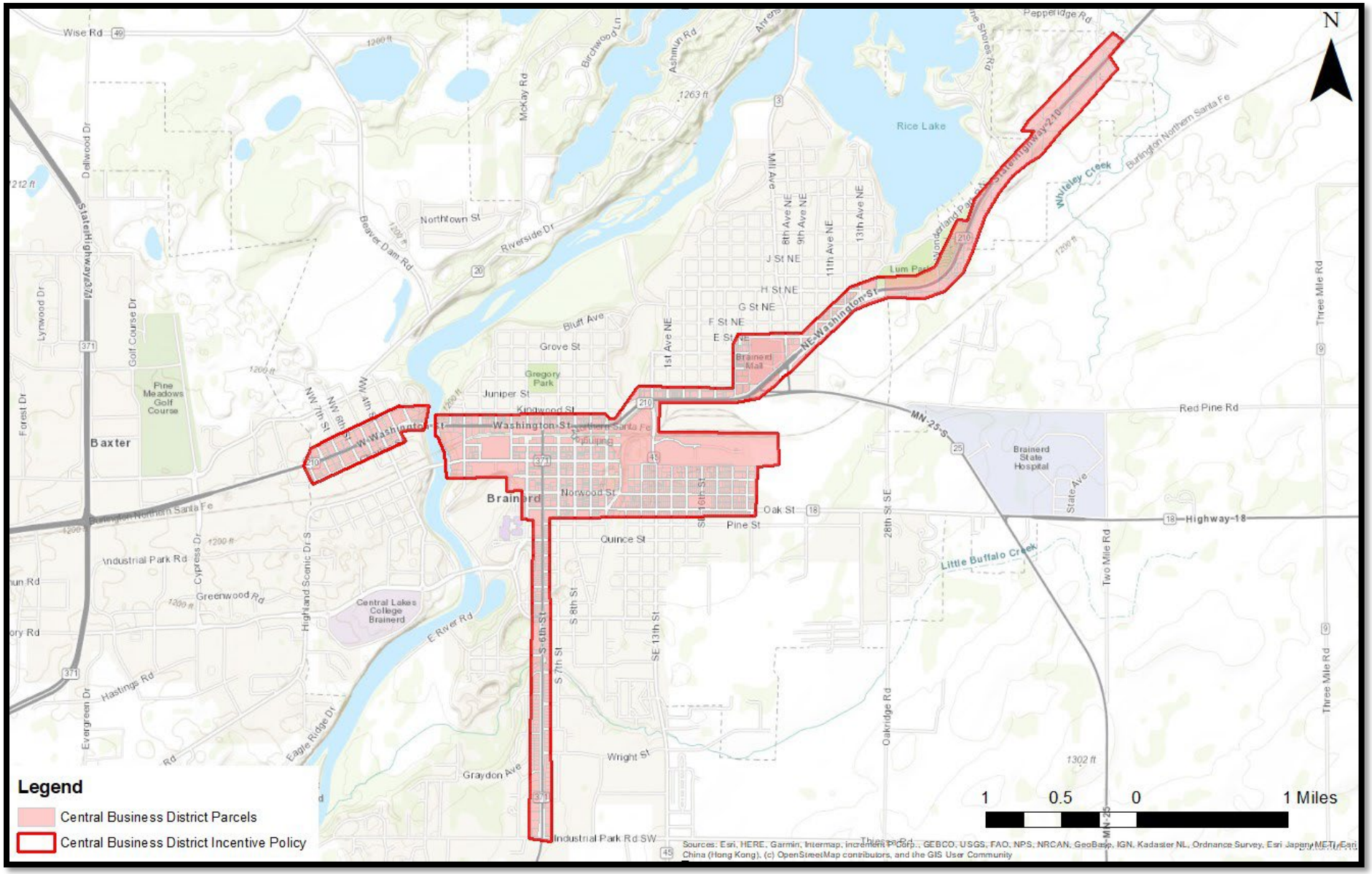
It is the intent of this policy to assist investors and entrepreneurs to make small or large investments in the Central Business District corridor and to inform on the potential incentives available to promote incremental or large changes within this core area of Brainerd.

The incentives and funding mechanisms presented in this policy are all negotiable during the development agreement process, and the City of Brainerd City Council has indicated is not tied to any specific threshold of development for each incentive. This list is to provide for opportunities for incentives and is not intended to close the door on any development request or proposal.

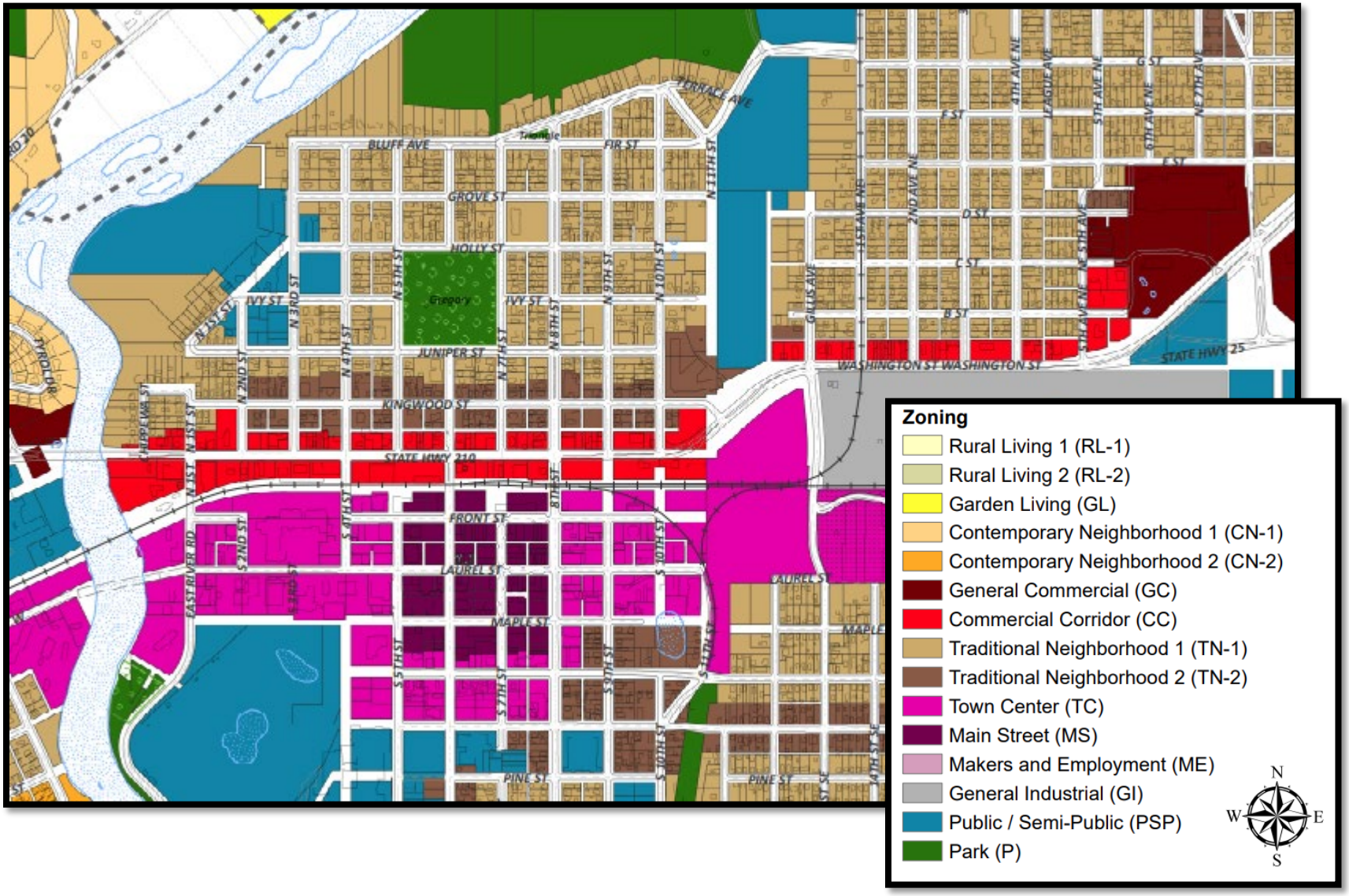
Term

This policy shall be reviewed before its expiration on July 2, 2029 to evaluate its effectiveness. It shall be reviewed, amended, renewed, or revoked after that review.

Central Business District Incentives Policy Map



City of Brainerd Zoning Map



Section 703 – Sewer Availability Charge (SAC)

703.01 Charges Established. For the purpose of providing funds for the City's wastewater treatment, force mains, lift stations and sewage collection systems, and the plant and facilities connected therewith, and the payment of capital charges represented by bonds, certificates of indebtedness or otherwise, which may be used to finance the costs of additions or expansions to the facilities, and the payment of reasonable requirements or reserves for replacement in obsolescence thereof, there is hereby imposed upon each lot, parcel of land, building or premises having any connection with the City's public sewer system a sewer availability charge (SAC) as hereinafter provided. Said charge shall be in addition to any other previous or future charge or assessment levied against the property.

703.02 Determination and Administration of Charge. The availability charge as hereinabove authorized shall be imposed in addition to the user charges for sewer service and shall be determined and administered as follows:

Subd. 1. Payment Required.

a) Payment Required Prior To Connection: Prior to the issuance of the applicable permit and before connecting to the City's sewer system, a City sewer availability charge as hereinafter provided for shall be paid.

b) Additional Building Permit: If, after the initial availability charge is paid, an additional building permit is issued, the use of the property changes, or new sewer connection is made, the availability charge shall be recalculated and any additional charges shall be paid.

c) Change by Resolution: Any change in the City sewer availability charge as hereinafter set forth shall be by Council resolution.

Subd. 2. Determination of Charge. The amount of the availability charge shall be determined by the City by first determining the number of Equivalent Residential Connections (ERC's) applicable to the particular property. This charge shall be calculated in accordance with the most current ERC Table on file in the office of the City Engineer. Once the appropriate number of ERC's are determined in this manner, the availability charge shall be calculated using the charge in the most recent resolution setting the availability charge.

Subd. 3. Determination of ERC’s. The City shall determine the number of ERC’s.

Subd. 4. Transfer of ERC’s. Once established, the number of ERC's shall remain the same on the property. An ERC can be transferred on the property from a structure being removed to a structure being constructed.

Subd. 5. Uses Not on Table. Any use not represented in the ERC table shall be subject to determination of the appropriate number of ERC's by the City based on estimated flows. The most recent edition of the Service Availability Charge Procedures Manual prepared by the Metropolitan Council Environmental Services division may also be utilized as a tool for calculating ERC's.

(Added Ord. 1146 – 2002)

Section 706 – Water Availability Charge (WAC)

706.01 Charge Established. For the purpose of providing funds for the City's wells, water treatment, water storage, and water distribution systems, and the plant and facilities connected therewith, and the payment of capital charges represented by bonds, certificates of indebtedness or otherwise, which may be used to finance the costs of additions or expansions to the facilities, and the payment of reasonable requirements or reserves for replacement in obsolescence thereof, there is hereby imposed upon each lot, parcel of land, building, or premises having any connection with the City's public water system a water availability charge (WAC) as hereinafter provided. Said charge shall be in addition to any other previous or future charge or assessment levied against the property.

706.02 Determination and Administration of Charge. The availability charge as hereinabove authorized shall be imposed in addition to the user charges for water service and shall be determined and administered as follows:

Subd. 1. Payment Required:

a) Payment Required Prior to Connection: Prior to the issuance of the applicable permit and before connecting to the City's water system, a City water availability charge as hereinafter provided for shall be paid.

b) Additional Building Permit: If, after the initial availability charge is paid, an additional building permit is issued, the use of the property changes, or new water connection is made, the availability charge shall be recalculated and any additional charges shall be paid.

c) Change by Resolution: Any change in the City water availability charge as hereinafter set forth shall be by Council Resolution.

Subd. 2. Determination of Charge. The amount of the availability charge shall be determined by the City by first determining the number of Equivalent Residential Connections (ERC's) applicable to the particular property. This charge shall be calculated in accordance with the most current ERC Table on file in the office of the City Engineer. Once the appropriate number of ERC's are determined in this manner, the availability charge shall be calculated using the charge in the most recent resolution setting the availability charge.

Subd. 3. Determination of ERC’s. The City shall determine the number of ERC’s.

Subd. 4. Transfer of ERC’s. Once established, the number of ERC's shall remain the same on the property. An ERC can be transferred on the property from a structure being removed to a structure being constructed.

Subd. 5. Uses Not on Table. Any use not represented in the ERC tables shall be subject to determination of the appropriate number of ERC's by the City based on estimated flows. The most recent edition of the Service Availability Charge Procedures Manual prepared by the Metropolitan Council Environmental Services division may also be utilized as a tool for calculating ERC's.

(Added Ord. 1147 – 2002)

From: Joseph J. Langel
To: Connie Hillman
Cc: Jennifer Bergman
Subject: RE: Clarification on Use of SAC/WAC Fees
Date: Tuesday, October 31, 2023 5:45:01 PM
Attachments: image001.png
image002.png

*** **Warning**: External sender, use extreme caution with attachments and links ***

Connie,

From what I can piece together, this started a long conversation that was both verbal and via e-mail. The context at the time was an I&I investigation project and how it fit within the City Code and state law.

Minn. Stat. § 444.075 authorizes use charges, availability charges and connection charges. SAC/WAC fees are generally intended to pay for infrastructure, not use and not connections (see, e.g., City Code § 703.01). So, whether SAC/WAC fees can be used for a particular purpose depends on the purpose and how that fits into the water/sewer funding scheme.

What is the current issue that gives rise to this question?

Joe

Joseph J. Langel
Ratwik, Roszak & Maloney, P.A.
444 Cedar St., Suite 2100
St. Paul, MN 55101-1865
Ph: 612-339-0060 | Fax: 612-339-0038
Web: www.ratwiklaw.com

From: Connie Hillman <chillman@ci.brainerd.mn.us>
Sent: Tuesday, October 31, 2023 4:48 PM
To: Joseph J. Langel <jjl@ratwiklaw.com>
Cc: Jennifer Bergman <jbergman@ci.brainerd.mn.us>
Subject: FW: Clarification on Use of SAC/WAC Fees

Joe –

Do you have the reply that you would have sent to us? I cannot find it and I'm not sure where Paul

might have saved it.

Connie

Email correspondence to and from the City of Brainerd government offices is subject to the Minnesota Government Data Practices Act and may be disclosed to third parties.

From: Paul Sandy <psandy@ci.brainerd.mn.us>
Sent: Thursday, January 9, 2020 7:29 AM
To: Joseph Langel <jjl@ratwiklaw.com>
Cc: Scott Magnuson BPU <smagnuson@bpu.org>; Connie Hillman <chillman@ci.brainerd.mn.us>; Todd Wicklund BPU <twicklund@bpu.org>
Subject: Clarification on Use of SAC/WAC Fees

Hey Joe,

We were having a conversation a few days ago about the use of SAC/WAC fees for improvements and wanted to get some clarification from you. I have attached both of the ordinances for your review.

The way I read the ordinance, we can basically use (in both circumstances) these collected SAC/WAC fees for the expansions or additions to the wastewater treatment plant, force mains, lift stations, and the collection system, etc. "and the payment of reasonable requirements or reserves for replacement in obsolescence thereof". That last statement leads us to believe that we may use these funds when previous expansions to these systems become obsolete and replacement is necessary. Is this correct in that interpretation? It seems like the definition is pretty loose and left up to some interpretation, but wanted to get your two cents.

Thanks

Paul G. Sandy, P.E.
City Engineer | City Of Brainerd
501 Laurel Street, Brainerd, MN 56401
218.454.3411 direct | 218.828.2316 fax
218.513.0172 mobile
Email | psandy@ci.brainerd.mn.us
www.ci.brainerd.mn.us

Public Utilities Commission
Agenda Request

MEETING DATE: January 28, 2025

TITLE OF ITEM: Discuss Brainerd Industrial Centers Request for a PPA

ACTION REQUESTED: Discussion Item

ESTIMATED TIME (MIN): 10

SUBMITTED BY: Chris Evans, Public Utilities Director, Mike Angland, Commission Member

PRESENTER: Mike Angland, Commission Member, Chris Evans, Public Utilities Director

SUMMARY OF ISSUE: Commissioner Angland and staff received a request from Brainerd Industrial Center (BIC) to obtain a Purchase Power Agreement for 30MW.

ALTERNATIVE, OPTIONS, EFFECTS ON OTHERS/COMMENTS:

RECOMMENDED ACTION/MOTION: Staff recommend having a discussion and providing direction on future PPA's.

FINANCIAL IMPACT:

HR Director's Report to Public Utilities Commission

January 23, 2025

Personnel:

- Two Public Utilities Department employees were off work intermittently this past month with one of them being a work-related medical issue.
- Rebecca Ridlon was offered and accepted the Business Office Support Specialist position. She will be starting with us on Tuesday, January 28, 2025.
- At the December 2024 Commission meeting, Commissioner Wussow requested that Staff continue to fill vacant positions identified in the August 2023 Org Chart. Staff has discussed this and identified that it can be cumbersome to prepare job descriptions with reporting officials and duties and hire new employees until the Integration discussions are complete. With that in mind, Staff will be recommending an updated Org Chart incorporating each Department Head's vision for their Department after Council makes their Integration decisions.

IT and Finance Integration Update:

On December 19, 2024, the City Council approved creation of a single integrated IT Department for both the City-side and the Public Utilities Department. Earlier this month, an internal job posting process was conducted for the Technology Director position. Two individuals applied and were interviewed for the position. Council approved the reclassification of Shawn Strong to the Technology Director position effective January 22, 2025.

Staff is continuing to discuss a proposed Technology Department Org Chart and sample Job Descriptions and are working through some operational and legal questions. Technology Director Strong and HR Director Schubert met with members of the Public Utilities Department Management team on January 21st to learn more about the Department's Technology needs as well as current and future priorities. Staff is planning to present a Department Org Chart and job descriptions for Council consideration at its February 3, 2025, meeting.

Research and discussions about possibly creating a single integrated Finance Department have started with a presentation to the Integration Work Group expected within the next month.

Wellness Committee:

Our January Lunch-N-Learn will take place on Wednesday, January 29, 2025. This Lunch-N-Learn will be a refresher of WellRight (our online wellness platform) as well as updated programs due to the transition to Blue Cross/Blue Shield health insurance effective January 1st.

The City has received the incentive payout from Sourcewell for any employee on the City's Health Plan that is enrolled in WellRight and earned points in 2024. The incentive payments will be distributed to the employee's HSA account in the near future! If you have not taken advantage of this great opportunity, please reach out to the HR Assistant to get enrolled and start earning money today!

Performance Evaluations:

The Performance Evaluation Work Group provided and discussed the updated Evaluation Form, Criteria, and timeframe with Supervisory Staff on January 7th. City Administrator Broyles distributed the updated documents to all employees on January 13th. Employees are currently completing their reviews for the timeframe of 9/1/23 – 12/31/23 as that will help us transition to a calendar year review cycle going forward.

BRAINERD PUBLIC UTILITIES
8027 Highland Scenic Rd • P.O. Box 373 • Brainerd, Minnesota 56401
Business Office: 218.829.8726 ■ ***Repair Service:*** 218.829.2193
www.bpu.org

Utility Director Report
January 2025

Headlines with Implications

General:
California wildfires made headlines. Repair and replacement of damaged or destroyed water, wastewater and electric facilities has a preliminary estimated cost of $285 billion and will put future constraints for equipment and materials we use and on supply chain in general. A less-covered story in California is the withdrawal of its Advanced Clean Fleets EPA Waiver which, if passed, would have required all manufacturers to phase out diesel trucks by 2036 as part of the strictest emissions rules.

Water/ Wastewater:
EPA Administrator nominee Lee Zeldin indicated he would prioritize compliance regarding PFAS and other initiatives while trying to reign in overall agency spending.

Electric:
In the last weeks of the Biden term, he signed an executive order to have the DoE and DoD lease lands for projects to accelerate development of data centers and emissions-free electricity. Obviously, data centers can be built faster than energy projects so the capacity availability to need ratio and the data center energy demand will keep pressure on transmission and energy costs. Energy costs in 2025 already have enough pressure from increasing natural gas prices as well as electricity market changes, renewables, battery costs and other factors.

Voltus agreed to pay $18 million to settle allegations it violated MISO demand response rules by overstating demand response resources.

Supply:
Carriers Estes and R+L have acquired 12 more former Yellow Trucking terminals to improve supply logistics.

UPS will temporarily close several facilities in four other states to implement upgrades for its “Network of the Future”.

As of 6 January, the US postal service is offering limited “Next Day Priority”

Despite the strikes at some East Coast and Gulf Coast Ports being averted, shippers front-loaded cargo and paused bookings to mitigate the potential situation. Longer transit times, higher transportation costs and imbalanced inventory levels will be seen for a few weeks.

MN:
On January 21, the House Energy Policy and Finance Committee, chaired by Rep. Chris Swedzinski (R–Ghent), is scheduled to take up HF 9, a bill to repeal the current ban on new nuclear energy facilities in Minnesota, allow new large hydropower to count toward the renewable energy standard, and exempt summer sales tax on most residential natural gas and electricity. As of the writing of this report, much is uncertain due to the unfortunate events and actions to what was supposed to be the start of the 2025 legislative session. On 23 January, the MN Supreme Court will hear arguments on the interpretation of quorum

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Brainerd Public Utilities
Finance Managers Report
January 28, 2025

Financial Reports
November's financial report is attached, December is on-going as we prepare for the audit and year-end entries and cost studies.

Audit Preparation
The 2024 audit is underway. We continue our work with CliftonLarsonAllen on the audit. Preliminary documents and items have been prepared and provided to CLA. At the Commission meeting you will be receiving interest statements that will need to be completed and returned for submission.

MN Dept Health/PFA Funding
Staff met with the MN Department of Health and MN Public Facilities Authority related to funding options on the lead service line replacements. Staff continue to work on a replacement plan. A plan for funding must be submitted to PFA by May 1st, 2025, for funding considerations in 2026. Bolton & Menk has already been hired from an earlier grant to assist with this preparation. Project planning is on-going. Note, PFA and MDH indicated that BPU customers showed a lot of interest in the funding avenues. PFA and MDH are working on additional flyers and informational pamphlets for all customers statewide. Staff are working on website updates. Indications are that there are grant options for cost-free options for customers and no interest loans for the Commissions portion of the replacements. Staff have scheduled a meeting with MDH on-site at the BPU offices for February 12, 2025.

Streetlighting/Water/Wastewater Cost Studies
The cost studies for streetlighting/water/wastewater have begun and are collecting data for Utility Financial Solutions. Meetings with UFS have continued to determine their data needs and requests for the cost studies. UFS is awaiting staff responses before continuing. Staff are compiling information and expect to have all information to UFS in early January 2025.

Communities Local Energy Action Program:
Staff continue discussion with Region 5, Tri County Community Action and the National Renewable Energy Laboratory related to the technical assistance program and the program preparation related to renewable by 2040 initiative. Scoping of the project is on-going, staff reviewed a draft of the project scope document and provided comments to NREL staff for additional consideration. Staff met with all members of the coalition and discussed the revised scoping document, which all scoping was agreed upon and staff are awaiting updates from NREL. Staff have seen the scoping document from Region 5 and are assisting with the technical items that NREL has requested. We expect additional requests as the project moves forward. NREL has asked for staff and coalition members to review their website publication that was created.

After Hours Call Center:
Staff have stressed concerns about after-hours call capabilities. Staff attended presentations from both Cooperative Response Center and Gold Cross answering services. Staff have included in the budget an additional amount for call center services from Gold Cross Answering services. This will enable and allow customers to call and receive a live person on the call center, as they would have with Central station operating 24 hours a day, as well as give us the ability to set up our processes and procedures for dispatching after-hours calls. Set up with Gold Cross has been ongoing and trial run scheduled to begin February 3, 2025.

Monthly Financial Report

November 2024

BRAINERD PUBLIC UTILTIES
COMPARISON OF OPERATING RESULTS
FOR THE ELEVEN MONTH PERIOD ENDED NOVEMBER 30, 2024 AND 2023

	2024		2023	
	Amount	Percent of Sales	Amount	Percent of Sales
OPERATING REVENUE				
Department				
Electric	$ 25,539,312	79.6%	$ 22,380,568	78.6%
Water	3,408,448	10.6%	3,104,453	10.9%
Wastewater	3,118,740	9.7%	2,998,728	10.5%
Total Operating Revenue	32,066,500	100.0%	28,483,749	100.0%
OPERATING EXPENSES				
Salaries and Wages	4,359,631	13.6%	4,342,330	15.2%
Purchased Power	16,853,434	52.6%	12,457,717	43.7%
Operations and Maintenance	2,783,231	8.7%	3,011,006	10.6%
Other Charges	876,151	2.7%	699,376	2.5%
Employee Benefits	1,480,170	4.6%	1,572,608	5.5%
Insurance and Bonds	362,499	1.1%	347,467	1.2%
Depreciation and Amortization	4,852,685	15.1%	4,616,691	16.2%
Total Operating Expenses	31,567,801	98.4%	27,047,195	95.0%
OPERATING INCOME	498,699	1.6%	1,436,554	5.0%
NONOPERATING REVENUE				
Interest Revenue - Investments	522,985	1.6%	250,396	0.9%
Sale of Renewable Energy Credits	-	0.0%	-	0.0%
Interest Revenue - Notes Receivable	97,059	0.3%	95,470	0.3%
Bond Premium	134,312	0.4%	156,620	0.5%
Bond Issuance Costs	-	0.0%	-	0.0%
Interest Expense - Bonds	(753,625)	-2.4%	(733,380)	-2.6%
Local Option Sales Tax	1,606,475	5.0%	1,750,434	6.1%
Other	86,827	0.3%	47,467	0.2%
Total Nonoperating Revenue	1,694,033	5.3%	1,567,007	5.5%
INCOME BEFORE OPERATING TRANSFERS TO THE CITY	2,192,732	6.8%	3,003,561	10.5%
CAPITAL CONTRIBUTIONS	-	0.0%	-	0.0%
TRANSFERS TO THE CITY	(702,716)	-2.2%	(724,300)	-2.5%
CHANGE IN NET ASSETS	$ 1,490,016	4.6%	$ 2,279,261	8.0%

BRAINERD PUBLIC UTILITIES
COMBINING STATEMENT OF NET POSITION BY DEPARTMENT
NOVEMBER 30, 2024 AND 2023

	Electric	Water	Wastewater Treatment	Totals 2024	Totals 2023
ASSETS					
UTILITY PLANT					
Construction in Progress	$ 3,703,154	$ 727,930	$ 4,152,544	$ 8,583,628	$ 11,937,143
Right-to-Use	421,686	20,146	20,146	461,978	461,978
In Service	48,274,091	38,137,995	39,581,432	125,993,518	116,438,391
Total Investment in Utility Plant	52,398,931	38,886,071	43,754,122	135,039,124	128,837,512
Less: Accumulated Depreciation	(27,635,507)	(16,728,066)	(22,729,830)	(67,093,403)	(61,611,097)
Net Utility Plant	24,763,424	22,158,005	21,024,292	67,945,721	67,226,415
CASH AND INVESTMENTS					
Nonrestricted	3,979,532	(2,754,393)	5,323,609	6,548,748	7,708,869
Restricted					
Customer Deposits	533,814	-	-	533,814	478,852
City of Brainerd Contribution	127,248	-	-	127,248	56,667
Conservation Incentive Program	559,098	-	-	559,098	393,876
Water and Sewer Accessiblity Charges	-	551,964	7,138	559,102	559,102
Construction Bond Proceeds	-	-	-	-	-
Debt Service Reserve	1,117,250	1,542,554	2,140,023	4,799,827	4,799,578
Total Restricted Cash and Investments	2,337,410	2,094,518	2,147,161	6,579,089	6,288,075
Total Cash and Investments	6,316,942	(659,875)	7,470,770	13,127,837	13,996,944
CURRENT ASSETS					
Accounts Receivable	3,606,471	431,833	3,122,301	7,160,605	4,262,028
Interest Receivable	13,057	5,603	14,634	33,294	31,749
Inventory	2,470,567	141,035	-	2,611,602	2,014,688
Prepaid Expenses	189,190	41,588	37,226	268,004	211,001
Total Current Assets	6,279,285	620,059	3,174,161	10,073,505	6,519,466
OTHER ASSETS					
Bonds and Notes Receivable	-	-	-	-	3,818,334
Interest Receivable - Notes Receivable	-	-	22,842	22,842	26,700
Service Territory Acquisitions, Net of Accumulated Amortization	179,183	-	-	179,183	215,483
Deferred Outflows of Resources	630,567	210,190	210,190	1,050,947	1,647,319
Investment in Solar Generation Facility	662,073	-	-	662,073	567,000
Total Other Assets	1,471,823	210,190	233,032	1,915,045	6,274,836
Total Assets	38,831,474	22,328,379	31,902,255	93,062,108	94,017,661
LIABILITIES AND NET ASSETS					
NET POSITION					
Net Investment in Capital Assets	20,361,084	11,686,886	11,373,525	43,421,495	41,899,437
Restricted	-	1,619,433	2,071,665	3,691,098	7,519,712
Unrestricted	7,108,757	(2,933,615)	7,395,600	11,570,742	8,386,850
Total Net Position	27,469,841	10,372,704	20,840,790	58,683,335	57,805,999
LONG-TERM LIABILITIES					
Revenue Bonds Payable	3,390,000	9,810,000	2,408,200	15,608,200	14,172,400
PFA Construction Loan Payable	-	-	5,285,000	5,285,000	6,870,000
Compensated Absences	598,214	228,805	184,178	1,011,197	1,127,720
Other Postemployment Benefit Obligation	219,726	73,241	73,241	366,208	384,493
Net Pension Liability	2,043,276	681,092	681,092	3,405,460	4,926,260
Deferred Inflows of Resources	781,982	260,661	260,661	1,303,304	169,995
Capital Lease Payable	362,506	540	540	363,586	388,283
Revenue Bond Premium	34,897	580,299	103,369	718,565	734,108
Total Long-Term Liabilities	7,430,601	11,634,638	8,996,281	28,061,520	28,773,259
CURRENT LIABILITIES					
Accounts Payable	1,318,006	13,344	-	1,331,350	2,170,908
Revenue Bonds Payable	1,040,000	75,000	79,200	1,194,200	1,924,200
PFA Construction Loan Payable	-	-	1,585,000	1,585,000	1,585,000
Capital Lease Payable	17,937	5,280	5,280	28,497	28,790
Payable to City of Brainerd	127,248	19,550	247,611	394,409	275,282
Conservation Incentive Program Payable	559,098	-	-	559,098	393,876
Accrued Expenses					
Salaries and Withholding Taxes	160,358	127,813	56,893	345,064	298,583
Sales Taxes	174,551	3,171	-	177,722	136,962
Bond Interest	20	76,879	91,200	168,099	145,950
Customer Deposits	533,814	-	-	533,814	478,852
Total Current Liabilities	3,931,032	321,037	2,065,184	6,317,253	7,438,403
Total Liabilities	11,361,633	11,955,675	11,061,465	34,378,773	36,211,662
Total Liabilities and Net Position	$ 38,831,474	$ 22,328,379	$ 31,902,255	$ 93,062,108	$ 94,017,661

BRAINERD PUBLIC UTILITIES
COMBINING STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION BY DEPARTMENT
FOR THE ELEVEN MONTH PERIOD ENDED NOVEMBER 30, 2024, 2023, AND 2022

	November 30, 2024				Totals November 30,	
	Electric	Water	Wastewater Treatment	Total	2023	2022
OPERATING REVENUES						
Utility Revenues	$ 25,009,602	$ 3,229,873	$ 2,346,981	$ 30,586,455	$ 27,119,736	$ 24,860,424
Other Operating Revenue	529,710	178,575	771,759	1,480,044	1,364,013	1,038,387
Total Operating Revenue	25,539,312	3,408,448	3,118,740	32,066,500	28,483,749	25,898,811
OPERATING EXPENSES						
Purchased Power	16,853,434	-	-	16,853,434	12,457,717	11,289,372
Production/Generation						
Salaries and Wages	260,295	443,582	404,464	1,108,341	1,254,905	1,176,130
Operations and Maintenance	20,732	302,420	762,658	1,085,810	1,281,322	1,001,292
Employee Benefits	89,341	133,204	131,589	354,134	396,322	386,803
Other Charges	339	536	11,343	12,218	29,132	73,013
Total Generation/Production Expenses	370,707	879,742	1,310,054	2,560,503	2,961,681	2,637,238
Distribution						
Salaries and Wages	1,407,515	546,542	96,085	2,050,142	1,902,528	1,810,367
Operations and Maintenance	420,524	239,860	141,162	801,546	812,684	846,712
Employee Benefits	406,426	139,778	35,268	581,472	552,317	541,698
Other Charges	51,739	17,806	51	69,596	88,140	50,860
Total Distribution Expenses	2,286,204	943,986	272,566	3,502,756	3,355,669	3,249,637
General and Administrative						
Salaries and Wages	713,630	252,535	234,983	1,201,148	1,184,897	1,229,604
Operations and Maintenance	570,397	170,906	154,572	895,875	917,000	799,530
Insurance and Bonds	213,267	62,532	86,700	362,499	347,467	277,279
Employee Benefits	323,360	116,497	104,707	544,564	623,969	482,000
Other Charges	509,169	134,657	150,511	794,337	582,104	500,905
Total Gen. and Admin. Expenses	2,329,823	737,127	731,473	3,798,423	3,655,437	3,289,318
Depreciation and Amortization	2,091,254	1,156,865	1,604,566	4,852,685	4,616,691	4,794,500
Total Operating Expenses	23,931,422	3,717,720	3,918,659	31,567,801	27,047,195	25,260,065
NET OPERATING INCOME (LOSS)	1,607,890	(309,273)	(799,919)	498,699	1,436,554	638,746
NONOPERATING REVENUE (EXPENSE)						
Interest Revenue - Investments	128,590	29,615	364,780	522,985	250,396	(802,367)
Sale of Renewable Energy Credits	-	-	-	-		482,463
Bond Premium	11,088	115,392	7,832	134,312	156,620	368,251
Interest Revenue - Notes Receivable	-	-	97,059	97,059	95,470	108,405
Local Option Sales Tax	-	-	1,606,475	1,606,475	1,750,434	1,696,475
Interest Expense - Bonds	(141,217)	(281,182)	(331,226)	(753,625)	(733,380)	(871,773)
Other	-	832	85,995	86,827	47,467	116,569
Total Nonoperating Revenue (Expense)	(1,539)	(135,343)	1,830,915	1,694,033	1,567,007	1,098,023
INCOME BEFORE CAPITAL CONTRIBUTIONS AND TRANSFERS	1,606,351	(444,616)	1,030,996	2,192,732	3,003,561	1,736,769
TRANSFERS TO THE CITY	(702,716)	-	-	(702,716)	(724,300)	(695,787)
CHANGE IN NET POSITION	$ 903,635	$ (444,616)	$ 1,030,996	$ 1,490,016	$ 2,279,261	$ 1,040,982

BRAINERD PUBLIC UTILITIES
COMBINING STATEMENT OF NET POSITION FOR ELECTRIC DEPARTMENT
NOVEMBER 30, 2024 AND 2023

	November 30, 2024			
	Generation	Distribution	Total	2023
ASSETS				
UTILITY PLANT				
Construction in Progress	$ 1,107,801	$ 2,595,353	$ 3,703,154	$ 2,967,995
Right-to-Use	-	421,686	421,686	421,686
In Service	7,737,334	40,536,757	48,274,091	47,147,901
Total Investment in Utility Plant	8,845,135	43,553,796	52,398,931	50,537,582
Less: Accumulated Depreciation	(2,853,921)	(24,781,586)	(27,635,507)	(25,328,854)
Net Utility Plant	5,991,214	18,772,210	24,763,424	25,208,728
CASH AND INVESTMENTS				
Nonrestricted	(4,890,918)	8,870,450	3,979,532	5,627,290
Restricted				
Customer Deposits	-	533,814	533,814	478,852
City of Brainerd Contribution	-	127,248	127,248	56,667
Conservation Incentive Program	-	559,098	559,098	393,876
Debt Service Reserve	686,750	430,500	1,117,250	1,117,250
Total Restricted Cash and Investments	686,750	1,650,660	2,337,410	2,046,645
Total Cash and Investments	(4,204,168)	10,521,110	6,316,942	7,673,935
CURRENT ASSETS				
Accounts Receivable	-	3,606,471	3,606,471	3,096,151
Interest Receivable	-	13,057	13,057	14,040
Inventory	-	2,470,567	2,470,567	1,852,629
Prepaid Expenses	30,951	158,239	189,190	176,619
Total Current Assets	30,951	6,248,334	6,279,285	5,139,439
OTHER ASSETS				
Service Territory Acquisitions, Net of Accumulated Amortization	-	179,183	179,183	215,483
Deferred Outflows of Resources	105,093	525,474	630,567	988,391
Investment in Solar Generation Facility	-	662,073	662,073	567,000
Total Other Assets	105,093	1,366,730	1,471,823	1,770,874
Total Assets	1,923,090	36,908,384	38,831,474	39,792,976
LIABILITIES AND NET ASSETS				
Net Investment in Capital Assets	3,224,817	17,136,267	20,361,084	19,780,218
Unrestricted	(5,016,030)	12,124,787	7,108,757	6,886,900
Total Net Position	(1,791,213)	29,261,054	27,469,841	26,667,118
LONG-TERM LIABILITIES				
Revenue Bonds Payable	2,430,000	960,000	3,390,000	4,500,000
Compensated Absences	71,911	526,303	598,214	672,185
Other Postemployment Benefit Obligation	36,622	183,104	219,726	230,697
Net Pension Liability	340,546	1,702,730	2,043,276	2,955,756
Deferred Inflows of Resources	130,330	651,652	781,982	101,997
Capital Lease Payable	-	362,506	362,506	377,430
Revenue Bond Premium	34,897	-	34,897	47,143
Total Long-Term Liabilities	3,044,306	4,386,295	7,430,601	8,885,208
CURRENT LIABILITIES				
Accounts Payable	-	1,318,006	1,318,006	1,943,971
Revenue Bonds Payable	605,000	435,000	1,040,000	1,040,000
Capital Lease Payable	-	17,937	17,937	17,937
Payable to City of Brainerd	-	127,248	127,248	56,667
Conservation Incentive Program Payable	-	559,098	559,098	393,876
Accrued Expenses				
Salaries and Withholding Taxes	18,417	141,941	160,358	175,275
Sales Taxes	8	174,543	174,551	134,072
Bond Interest	46,572	(46,552)	20	-
Customer Deposits	-	533,814	533,814	478,852
Total Current Liabilities	669,997	3,261,035	3,931,032	4,240,650
Total Liabilities	3,714,303	7,647,330	11,361,633	13,125,858
Total Liabilities and Net Position	$ 1,923,090	$ 36,908,384	$ 38,831,474	$ 39,792,976

BRAINERD PUBLIC UTILITIES
STATEMENT OF REVENUE, EXPENSES, AND CHANGES IN NET POSITION - ELECTRIC DEPARTMENT
FOR THE ELEVEN MONTH PERIOD ENDED NOVEMBER 30, 2024, 2023, AND 2022

	November 30, 2024			Variance With Budget -	Year to Date November 30,	
	Current Month	Year to Date	Budget	Positive (Negative)	2023	2022
OPERATING REVENUES						
Utility Revenues						
Residential	$ 493,731	$ 5,794,380	$ 6,380,000	$ (585,620)	$ 6,323,422	$ 5,986,717
Commercial	770,988	9,241,550	9,735,000	(493,450)	9,787,858	9,285,877
Medium/Large Commercial	195,168	2,200,342	2,519,000	(318,658)	2,505,371	3,038,960
Industrial	725,408	6,778,354	3,300,000	3,478,354	2,303,157	506,095
City of Brainerd	26,789	316,929	332,200	(15,271)	331,455	317,809
BPU	59,802	678,047	715,000	(36,953)	745,149	684,205
Total Utility Revenue	2,271,886	25,009,602	22,981,200	2,028,402	21,996,412	19,819,663
Other Operating Revenue						
Penalties	10,231	126,667	93,500	33,167	123,672	101,478
Other	23,336	403,043	90,200	312,843	260,484	229,051
Total Other Operating Revenue	33,567	529,710	183,700	346,010	384,156	330,529
Total Operating Revenue	2,305,453	25,539,312	23,164,900	2,374,412	22,380,568	20,150,192
OPERATING EXPENSES						
Purchased Power						
All Other Customers	752,061	10,035,061	7,741,800	(2,293,261)	9,635,039	10,809,596
Solar Generation - Airport	17,792	671,683	660,000	(11,683)	702,937	
Crypto Mining Customers	613,366	6,146,690	5,601,200	(545,490)	2,119,741	479,776
Total Purchased Power Expense	1,383,219	16,853,434	14,003,000	(2,850,434)	12,457,717	11,289,372
Generation						
Salaries and Wages	27,525	260,295	140,800	(119,495)	425,473	464,237
Operations and Maintenance	1,534	20,732	36,300	15,568	39,336	20,566
Employee Benefits	9,927	89,341	47,300	(42,041)	121,715	143,050
Other Charges	40	339	5,500	5,161	1,038	32,395
Depreciation	27,400	301,400	299,200	(2,200)	299,200	296,000
Total Generation Expenses	66,426	672,107	529,100	(143,007)	886,762	956,248
Distribution						
Salaries and Wages	120,382	1,407,515	1,476,200	68,685	1,291,410	1,274,944
Operations and Maintenance	46,670	420,524	420,200	(324)	330,120	428,078
Employee Benefits	41,055	406,426	429,000	22,574	369,688	365,738
Other Charges	4,244	51,739	51,700	(39)	61,082	35,943
Depreciation and Amortization	147,500	1,622,500	1,569,700	(52,800)	1,567,500	1,584,400
Total Distribution Expenses	359,851	3,908,704	3,946,800	38,096	3,619,800	3,689,103
General and Administrative						
Salaries and Wages	56,902	713,630	790,900	77,270	696,369	719,110
Operations and Maintenance	61,407	570,397	466,400	(103,997)	535,929	473,655
Insurance and Bonds	19,899	213,267	207,900	(5,367)	215,767	169,909
Employee Benefits	16,001	323,360	405,900	82,540	370,910	293,605
Other Charges	50,884	509,169	363,000	(146,169)	376,198	328,296
Depreciation and Amortization	15,214	167,354	155,100	(12,254)	152,453	162,000
Total Gen. and Admin. Expenses	220,307	2,497,177	2,389,200	(107,977)	2,347,626	2,146,575
Total Operating Expenses	2,029,803	23,931,422	20,868,100	(3,063,322)	19,311,905	18,081,298
NET OPERATING INCOME	275,650	1,607,890	2,296,800	(688,910)	3,068,663	2,068,894
NONOPERATING REVENUE						
Interest Revenue - Investments	3,145	128,590	8,800	119,790	40,074	(281,881)
Interest Expense - Bonds	(13,200)	(141,217)	(143,733)	2,516	(169,798)	(195,083)
Sale of Renewable Energy Credits	-	-	-	-	-	482,463
Bond Premium	1,008	11,088	12,100	(1,012)	13,067	55,532
Gain on Disposal of Capital Assets	-	-	1,100	(1,100)	-	33,954
Total Nonoperating Revenue	(9,047)	(1,539)	(121,733)	120,194	(116,657)	94,985
INCOME BEFORE TRANSFERS TO THE CITY	266,603	1,606,351	2,175,067	(568,716)	2,952,006	2,163,879
TRANSFERS TO THE CITY	(57,604)	(702,716)	(748,000)	45,284	(724,300)	(695,787)
CHANGE IN NET POSITION	$ 208,999	$ 903,635	$ 1,427,067	$ (523,432)	$ 2,227,706	$ 1,468,092

BRAINERD PUBLIC UTILITIES
OPERATING STATISTICS - ELECTRIC DEPARTMENT
FOR THE ELEVEN MONTH PERIOD ENDED NOVEMBER 30, 2024, 2023, AND 2022

	KWH SOLD			REVENUE			AVERAGE REVENUE PER KWH		
	PERIOD ENDED NOVEMBER 30,			PERIOD ENDED NOVEMBER 30,			PERIOD ENDED NOVEMBER 30,		
	2024	2023	2022	2024	2023	2022	2024	2023	2022
Residential	47,597,633	50,082,504	49,783,683	$ 5,794,380	$ 6,323,422	$ 5,986,717	$ 0.1217	$ 0.1263	$ 0.1203
Commercial	35,437,949	36,577,980	38,368,719	9,241,550	9,787,858	9,285,877	0.2608	0.2676	0.2420
Medium/Large Commercial	64,052,760	65,138,652	68,579,482	2,200,342	2,505,371	3,038,960	0.0344	0.0385	0.0443
Industrial	146,870,888	38,372,795	5,217,970	6,778,354	2,303,157	506,095	0.0462	-	-
City of Brainerd	1,797,043	1,802,851	1,857,381	316,929	331,455	317,809	0.1764	0.1839	0.1711
BPU	6,404,213	6,665,075	6,504,464	678,047	745,149	684,205	0.1059	0.1118	0.1052
Total	302,160,486	160,267,062	165,093,729	25,009,602	19,693,255	19,313,568	$ 0.0828	$ 0.1229	$ 0.1170
% Change From Previous Year	88.54%	-2.92%	NA	27.00%	1.97%	NA	-32.64%	5.04%	NA

	% TO TOTAL - KWH			% TO TOTAL - REVENUE			TOTAL METERS IN SERVICE		
	PERIOD ENDED NOVEMBER 30,			PERIOD ENDED NOVEMBER 30,			PERIOD ENDED NOVEMBER 30,		
	2024	2023	2022	2024	2023	2022	2024	2023	2022
Residential	15.75%	31.25%	30.15%	23.17%	32.11%	31.00%	6,955	6,943	7,030
Commercial	11.73%	22.82%	23.24%	36.95%	49.70%	48.08%	1,231	1,198	1,230
Medium/Large Commercial	21.20%	40.64%	41.54%	8.80%	12.72%	15.73%	67	65	67
Industrial	48.61%	23.94%	3.16%	27.10%	11.70%	2.62%	1	1	1
City of Brainerd	0.59%	1.12%	1.13%	1.27%	1.68%	1.65%	42	37	43
BPU	2.12%	4.16%	3.94%	2.71%	3.78%	3.54%	39	39	38
Total	100.00%	123.94%	103.16%	100.00%	111.70%	102.62%	8,335	8,283	8,409
% Change From Previous Year							0.63%	-1.50%	NA

BRAINERD PUBLIC UTILITIES
STATEMENT OF REVENUE, EXPENSES, AND CHANGES IN NET POSITION - WATER DEPARTMENT
FOR THE ELEVEN MONTH PERIOD ENDED NOVEMBER 30, 2024, 2023, AND 2022

	November 30, 2024			Variance With Budget -	Year to Date November 30,	
	Current Month	Year to Date	Budget	Positive (Negative)	2023	2022
OPERATING REVENUES						
Utility Revenues						
Residential	$ 129,442	$ 1,484,988	$ 1,542,200	$ (57,213)	$ 1,525,198	$ 1,436,788
Commercial	102,604	1,537,771	1,347,500	190,271	1,294,936	1,435,236
City of Brainerd	7,406	118,546	126,500	(7,954)	131,253	117,092
BPU	5,452	88,568	88,000	568	100,668	82,793
Total Utility Revenue	244,904	3,229,873	3,104,200	125,673	3,052,055	3,071,909
Other Operating Revenue						
Penalties	2,221	25,289	18,700	6,589	23,185	18,870
Other	470	153,286	20,350	132,936	29,213	25,032
Total Other Operating Revenue	2,691	178,575	39,050	139,525	52,398	43,902
Total Operating Revenue	247,595	3,408,448	3,143,250	265,198	3,104,453	3,115,811
OPERATING EXPENSES						
Production						
Salaries and Wages	74,657	443,582	497,200	53,618	430,929	269,966
Operations and Maintenance	23,633	302,420	250,800	(51,620)	303,025	241,967
Employee Benefits	12,477	133,204	161,700	28,496	156,608	119,367
Other Charges	-	536	550	14	592	-
Depreciation	15,200	167,200	245,300	78,100	244,200	252,600
Total Production Expenses	125,967	1,046,942	1,155,550	108,608	1,135,354	883,900
Distribution						
Salaries and Wages	47,960	546,542	547,800	1,258	531,486	410,653
Operations and Maintenance	28,868	239,860	274,450	34,590	316,534	259,712
Employee Benefits	15,393	139,778	182,600	42,822	152,832	134,040
Other Charges	-	17,806	14,850	(2,956)	23,574	13,304
Depreciation	85,400	939,400	759,000	(180,400)	746,900	759,800
Total Distribution Expenses	177,621	1,883,386	1,778,700	(104,686)	1,771,326	1,577,509
General and Administrative						
Salaries and Wages	19,558	252,535	277,200	24,665	249,611	260,174
Operations and Maintenance	13,398	170,906	186,450	15,544	243,490	189,312
Insurance and Bonds	6,070	62,532	62,700	168	61,988	47,222
Employee Benefits	14,157	116,497	146,300	29,803	130,438	96,825
Other Charges	13,327	134,657	86,350	(48,307)	99,185	88,165
Depreciation	4,570	50,265	44,000	(6,265)	43,670	58,000
Total Gen. and Admin. Expenses	71,080	787,392	803,000	15,608	828,382	739,698
Total Operating Expenses	374,668	3,717,720	3,737,250	19,530	3,735,062	3,201,107
NET OPERATING INCOME (LOSS)	(127,073)	(309,273)	(594,000)	284,728	(630,609)	(85,296)
NONOPERATING REVENUE						
Interest Revenue - Investments	1,249	29,615	8,800	20,815	25,023	(32,730)
Local Option Sales Tax - Baxter	-	-	320,100	(320,100)	348,693	323,758
Bond Premium	10,490	115,392	135,300	(19,908)	135,497	275,682
Bond Issuance Costs	-	-	-			-
Interest Expense - Bonds	(25,276)	(281,182)	(277,200)	(3,982)	(263,499)	(326,630)
Gain on Disposal of Capital Assets	-	832	-	832	-	11,157
Total Nonoperating Revenue	(13,537)	(135,343)	187,000	(322,343)	245,714	251,237
INCOME (LOSS) BEFORE CAPITAL CONTRIBUTIONS AND TRANSFERS	(140,610)	(444,616)	(407,000)	(37,616)	(384,895)	165,941
CAPITAL CONTRIBUTIONS	-	-	-	-	-	-
CHANGE IN NET POSITION	$ (140,610)	$ (444,616)	$ (407,000)	$ (37,616)	$ (384,895)	$ 165,941

BRAINERD PUBLIC UTILITIES
OPERATING STATISTICS - WATER DEPARTMENT
FOR THE ELEVEN MONTH PERIOD ENDED NOVEMBER 30, 2024, 2023, AND 2022

	GALLONS SOLD			REVENUE			AVERAGE PER 1,000 GALLONS		
	PERIOD ENDED NOVEMBER 30,			PERIOD ENDED NOVEMBER 30,			PERIOD ENDED NOVEMBER 30,		
	2024	2023	2022	2024	2023	2022	2024	2023	2022
Residential	148,689,296	167,363,585	152,996,197	$ 1,484,988	$ 1,525,198	$ 1,436,788	$ 9.99	$ 9.11	$ 9.39
Commercial	208,766,972	226,112,492	215,659,029	1,530,772	1,517,831	1,370,964	7.33	6.71	6.36
City of Baxter	50,537,000	1,545,000	98,939,000	214,113	9,026	264,157	4.24	5.84	-
Total	407,993,268	395,021,077	467,594,226	$ 3,229,873	$ 3,052,055	$ 3,071,909	$ 7.92	$ 7.73	$ 6.57
% Change From Previous Year	3.28%	-15.52%	NA	5.83%	-0.65%	NA	2.46%	17.61%	NA

	% TO TOTAL - GALLONS			% TO TOTAL - REVENUE			TOTAL METERS IN SERVICE		
	PERIOD ENDED NOVEMBER 30,			PERIOD ENDED NOVEMBER 30,			PERIOD ENDED NOVEMBER 30,		
	2024	2023	2022	2024	2023	2022	2024	2023	2022
Residential	36.44%	42.37%	32.72%	45.98%	49.97%	46.77%	4,080	4,061	4,105
Commercial	51.17%	57.24%	46.12%	47.39%	49.73%	44.63%	856	853	850
City of Baxter	12.39%	0.39%	21.16%	6.63%	0.30%	8.60%	1	1	1
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	4,937	4,915	4,956
% Change From Previous Year							0.45%	-0.83%	NA

BRAINERD PUBLIC UTILITIES
STATEMENT OF REVENUE, EXPENSES, AND CHANGES IN NET POSITION - WASTEWATER TREATMENT DEPARTMENT
FOR THE ELEVEN MONTH PERIOD ENDED NOVEMBER 30, 2024, 2023, AND 2022

	November 30, 2024			Variance With Budget - Positive	Year to Date November 30,	
	Current Month	Year to Date	Budget	(Negative)	2023	2022
OPERATING REVENUES						
Utility Revenues						
Residential	$ 129,790	$ 1,409,658	$ 1,380,500	$ 29,158	$ 1,333,892	$ 1,289,135
Commercial	69,660	937,323	751,850	185,473	737,377	679,716
Total Utility Revenue	199,450	2,346,981	2,132,350	214,631	2,071,269	1,968,851
Other Operating Revenue						
Penalties	3,301	33,948	25,300	8,648	28,475	24,785
Reimbursement of Expenses - Baxter	56,266	730,670	682,000	48,670	716,313	631,889
Other	620	7,141	5,500	1,641	182,671	7,283
Total Other Operating Revenue	60,187	771,759	712,800	58,959	927,459	663,957
Total Operating Revenue	259,637	3,118,740	2,845,150	273,590	2,998,728	2,632,808
OPERATING EXPENSES						
Treatment						
Salaries and Wages	31,991	404,464	378,400	(26,064)	398,503	441,927
Operations and Maintenance	71,055	762,658	887,150	124,492	938,961	738,759
Employee Benefits	14,226	131,589	133,100	1,511	117,999	124,386
Other Charges	-	11,343	36,300	24,957	27,502	40,618
Depreciation	119,200	1,311,200	1,298,000	(13,200)	1,287,000	1,386,300
Total Treatment Expenses	236,472	2,621,254	2,732,950	111,696	2,769,965	2,731,990
Lift Stations						
Salaries and Wages	7,932	96,085	133,100	37,015	79,632	124,770
Operations and Maintenance	14,203	141,162	173,800	32,638	166,030	158,922
Employee Benefits	3,798	35,268	48,400	13,132	29,797	41,920
Other Charges	-	51	2,200	2,149	3,484	1,613
Depreciation	23,000	253,000	246,400	(6,600)	244,200	254,100
Total Collection Expenses	48,933	525,566	603,900	78,334	523,143	581,325
General and Administrative						
Salaries and Wages	19,115	234,983	259,600	24,617	238,917	250,320
Operations and Maintenance	9,480	154,572	123,200	(31,372)	137,581	136,563
Insurance and Bonds	7,610	86,700	70,400	(16,300)	69,712	60,148
Employee Benefits	11,617	104,707	141,900	37,193	122,621	91,570
Other Charges	15,131	150,511	99,000	(51,511)	106,721	84,445
Depreciation and Amortization	3,670	40,366	31,900	(8,466)	31,568	41,300
Total Gen. and Admin. Expenses	66,623	771,839	726,000	(45,839)	707,120	664,346
Total Operating Expenses	352,028	3,918,659	4,062,850	144,191	4,000,228	3,977,661
NET OPERATING LOSS	(92,391)	(799,919)	(1,217,700)	417,781	(1,001,500)	(1,344,853)
NONOPERATING REVENUE						
Interest Revenue - Investments	6,523	364,780	49,500	315,280	185,299	(487,756)
Interest Revenue - Notes Receivable	7,600	97,059	84,700	12,359	95,470	108,405
Interest Expense - Bonds	(26,800)	(331,226)	(333,300)	2,074	(300,083)	(350,060)
Bond Premium	712	7,832	7,700	132	8,056	37,037
Local Option Sales Tax - Brainerd	139,892	1,606,475	1,349,700	256,775	1,309,213	1,294,976
Local Option Sales Tax - Baxter	-	-	67,100	(67,100)	92,528	77,742
Federal Grant Revenue - Build America Bond	5,100	85,995	57,200	28,795	47,467	71,458
Gain (Loss) on Disposal of Capital Assets	-	-	-	-	-	-
Total Nonoperating Revenue	133,027	1,830,915	1,282,600	548,315	1,437,950	751,802
CHANGE IN NET POSITION	$ 40,636	$ 1,030,996	$ 64,900	$ 966,096	$ 436,450	$ (593,051)

BRAINERD PUBLIC UTILITIES
OPERATING STATISTICS - WASTEWATER TREATMENT DEPARTMENT
FOR THE ELEVEN MONTH PERIOD ENDED NOVEMBER 30, 2024, 2023, AND 2022

	GALLONS PROCESSED			REVENUE			AVERAGE PER 1,000 GALLONS		
	PERIOD ENDED NOVEMBER 30,			PERIOD ENDED NOVEMBER 30,			PERIOD ENDED NOVEMBER 30,		
	2024	2023	2022	2024	2023	2022	2024	2023	2022
Residential	147,668,979	166,118,033	151,843,234	$ 1,409,658	$ 1,333,892	$ 1,289,135	$ 9.55	$ 8.03	$ 8.49
Commercial	157,452,177	153,404,042	152,181,773	937,323	737,377	679,717	5.95	4.81	4.47
City of Baxter	216,993,000	218,639,000	211,617,000	730,670	716,313	631,889	3.37	3.28	2.99
Total	522,114,156	538,161,075	515,642,007	$ 3,077,651	$ 2,787,582	$ 2,600,741	$ 5.89	$ 5.18	$ 5.04
% Change From Previous Year	-2.98%	4.37%	NA	10.41%	7.18%	NA	13.80%	2.70%	NA

	% TO TOTAL - GALLONS			% TO TOTAL - REVENUE			TOTAL METERS IN SERVICE		
	PERIOD ENDED NOVEMBER 30,			PERIOD ENDED NOVEMBER 30,			PERIOD ENDED NOVEMBER 30,		
	2024	2023	2022	2024	2023	2022	2024	2023	2022
Residential	28.28%	30.87%	29.45%	45.80%	47.85%	49.57%	4,069	4,047	4,081
Commercial	30.16%	28.51%	29.51%	30.46%	26.45%	26.14%	903	901	837
City of Baxter	41.56%	40.63%	41.04%	23.74%	25.70%	24.30%	1	1	1
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	4,973	4,949	4,919
% Change From Previous Year							0.48%	0.61%	NA

Brainerd Public Utilities
Calculation of Net Benefit of Hydro Generation
For the Year Ended December 31, 2024

	January	February	March	April	May	June	July	August	September	October	November	December	Total
Total Hydro Generation - kWh	863,000	952,000	968,000	978,000	802,000	745,000	794,000	941,000	909,000	4,000	539,000	708,000	9,203,000
Station Usage	-	-	-	-	-	-	-	-	-	-	-	-	-
Line Loss %5 Estimate	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Generation	863,000	952,000	968,000	978,000	802,000	745,000	794,000	941,000	909,000	4,000	539,000	708,000	9,203,000
Blended AEP Cost	$ 0.07291	$ 0.07199	$ 0.07821	$ 0.08334	$ 0.08305	$ 0.08360	$ 0.07682	$ 0.07970	$ 0.07785	$ 0.08055	$ 0.06268	$ 0.06268	$ 0.0761
Calculated Full Benefit	62,921.33	68,534.48	75,707.28	81,506.52	66,606.10	62,282.00	60,995.08	74,997.70	70,765.65	322.20	33,784.52	44,377.44	702,800.30

Brainerd Public Utilities
Calculation of Net Benefit of Hydro Generation
For the Year Ended December 31, 2023

	January	February	March	April	May	June	July	August	September	October	November	December	Total
Total Hydro Generation - kWh	1,897,400	1,781,600	2,001,600	863,400	296,400	828,000	282,000	449,000	87,000	1,057,000	959,000	936,000	11,438,400
Station Usage	-	-	-	-	-	-	-	-	-	-	-	-	-
Line Loss	(94,870)	(89,080)	(100,080)	(43,170)	(14,800)	(41,400)	(14,100)	(22,500)	(4,400)	(52,900)	(48,000)	(46,800)	(572,100)
Net Generation	1,802,530	1,692,520	1,901,520	820,230	281,600	786,600	267,900	426,500	82,600	1,004,100	911,000	889,200	10,866,300
Blended AEP Cost	$ 0.06892	$ 0.07144	$ 0.07376	$ 0.07996	$ 0.07078	$ 0.07540	$ 0.07558	$ 0.07602	$ 0.07198	$ 0.06065	$ 0.07009	$ 0.07016	$ 0.0721
Calculated Full Benefit	124,230.37	120,913.63	140,256.12	65,585.59	19,931.65	59,309.64	20,247.88	32,422.53	5,945.55	60,898.67	63,851.99	62,386.27	775,979.88

Brainerd Public Utilities, MN

Packet Summary Budget Report

Group Summary

For Fiscal: 2025 Period Ending: 01/31/2025

Account Typ…	Original YTD Budget	Current YTD Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Remaining
Fund: 1 - ELECTRIC						
Revenue	2,566,606.28	2,566,606.28	1,833,685.37	1,833,685.37	-732,920.91	28.56 %
Expense	2,432,026.80	2,432,026.80	2,047,328.55	2,047,328.55	384,698.25	15.82 %
Fund: 1 - ELECTRIC Surplus (Deficit):	**134,579.48**	**134,579.48**	**-213,643.18**	**-213,643.18**	**-348,222.66**	**258.75 %**
Fund: 2 - WATER						
Revenue	383,938.03	383,938.03	170,281.82	170,281.82	-213,656.21	55.65 %
Expense	398,616.31	398,616.31	134,115.42	134,115.42	264,500.89	66.35 %
Fund: 2 - WATER Surplus (Deficit):	**-14,678.28**	**-14,678.28**	**36,166.40**	**36,166.40**	**50,844.68**	**346.39 %**
Fund: 3 - WASTEWATER TREATMENT						
Revenue	441,290.08	441,290.08	193,717.10	193,717.10	-247,572.98	56.10 %
Expense	431,229.09	431,229.09	84,116.78	84,116.78	347,112.31	80.49 %
Fund: 3 - WASTEWATER TREATMENT Surplus (Deficit):	**10,060.99**	**10,060.99**	**109,600.32**	**109,600.32**	**99,539.33**	**-989.36 %**
Fund: 4 - HYDRO DAM						
Revenue	1,099.56	1,099.56	0.00	0.00	-1,099.56	100.00 %
Expense	52,435.68	52,435.68	31,511.64	31,511.64	20,924.04	39.90 %
Fund: 4 - HYDRO DAM Surplus (Deficit):	**-51,336.12**	**-51,336.12**	**-31,511.64**	**-31,511.64**	**19,824.48**	**38.62 %**
Report Surplus (Deficit):	**78,626.07**	**78,626.07**	**-99,388.10**	**-99,388.10**	**-178,014.17**	**226.41 %**

Fund Summary

Fund	Original YTD Budget	Current YTD Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)
1 - ELECTRIC	134,579.48	134,579.48	-213,643.18	-213,643.18	-348,222.66
2 - WATER	-14,678.28	-14,678.28	36,166.40	36,166.40	50,844.68
3 - WASTEWATER TREATMENT	10,060.99	10,060.99	109,600.32	109,600.32	99,539.33
4 - HYDRO DAM	-51,336.12	-51,336.12	-31,511.64	-31,511.64	19,824.48
Report Surplus (Deficit):	**78,626.07**	**78,626.07**	**-99,388.10**	**-99,388.10**	**-178,014.17**

Public Utilities Commission
Agenda Request

MEETING DATE: January 28, 2025

TITLE OF ITEM: Operations Manager Report

ACTION REQUESTED: Discussion Item **ESTIMATED TIME (MIN):** 2

SUBMITTED BY: Danny Loch, Finance Manager **PRESENTER:** Trent Hawkinson, Operations Manager

SUMMARY OF ISSUE: A verbal update will be provided at the Commission meeting.

ALTERNATIVE, OPTIONS, EFFECTS ON OTHERS/COMMENTS:

RECOMMENDED ACTION/MOTION:

FINANCIAL IMPACT:

OUTAGES Dec.

Location	Date	Meters	Time	Cause	Solution	Staff Involved
700 block 8th St S	4-Dec	2	1hr 32 min	resieved complaint tree may fall on power lines	Re- routed service lines to prevent damage	2
NE, riverside Dr. Airport	9-Dec	2,149	2 hr 10 min	R-13 internal fault / equipment failure	Installed new Viper Reclosure	4
1600 block 10th ave	14-Dec	1	4 min	bad connectors	changed connectors	2
8000 block highland scenic	16-Dec	1	1hr	Primary fuse failure	Installed new fuse and held	2
500 block 10th St N	25-Dec	1	1 hr 7 min	bad connectors	changed connectors	2

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Brainerd Public Utilities
Wastewater Manager's Report
January 2025

Lift Station
Ongoing maintenance of wet wells, pumps, generators, and controls for the 17 lift stations. Ongoing cleaning and painting of main lift pumps and piping as time allows. Ongoing SCADA improvements at main lift.

Wastewater Treatment Plant
On-call operator tested Wastewater Treatment Facility and lift stations SCADA alarms. Equipment maintenance is ongoing. Replaced SBR 2 jet motive pump volute and wear ring and inspected piping. Put SBR 2 back online. Took SBR 1 offline and washed tank out.

Biosolids
Developing the Minnesota Biosolids PFAS Strategy program for the approved Biosolids application sites that could impact the Surface Water Contribution Area and Vulnerability in Brainerd's wellhead Protection area.

Lab
Sent December 2024 Electronic Daily Monitoring Report. Preparing Significant Industrials User (SIU) annual report for MPCA. On going updating of Standard Operation Program and Standard Operation Guide to AI for MPCA. Sampled influent and effluent for copper. On going Mercury Minimization, Copper Minimization Plan. Ongoing delegation with Brainerd Significant and Categorical Industrial Users.

Drinking Water
Continuing to update the Lead and Copper program. Sampled 11 sites for Alkalinity and Orthophosphate and sent to MDH lab. Ongoing testing for the Optimal Corrosion Control Treatment (OCCT) requirements. Collected the 15 required Coliform samples. Responded to 11 residential drinking water concerns from December 19, 2024 – January 21, 2025.

River crossing
Working on final payment and landscaping approval.

Generators
Test ran Evergreen Lift, Main Lift, SW6th Lift, portable 25KW, 150KW, 45KW and both plant generators. Added fuel where needed.

Personnel
Looking at schools to attend in 2025 to keep current in the required training hours.

December 2024 Wastewater Manager's Report

December DMR Results

Wastewater Influent Flows
Brainerd monthly total flow 34,470,000 gallons
Daily average flow 1,112,000 gallons
Baxter monthly total flow 19,270,000 gallons
Baxter daily average flow 622,000 gallons.
Combined monthly total flow 53,653,000 gallons
Combine daily average flow 1,730,000 gallons.
Design capacity-6,000,000 gallons per day

Carbonaceous Biological Oxygen Demand (CBOD) (strength of wastewater)
Brainerd composite monthly average 113 mg/L.
Baxter composite monthly average 203 mg/L.
Combined composite monthly average 220 mg/L. Combined average of 240 mg/L, Total daily pounds 12,000. (Design calculations)

Total Suspended Solids (TSS) (solids in wastewater)
Brainerd composite monthly average 207 mg/L.
Baxter composite monthly average 281 mg/L.
Combined monthly average 340 mg/L. Combined average of 240 mg/L, Total daily pounds 12,000. (Design calculations)

Total Phosphorus Influent (P) (nutrients in wastewater)
Brainerd monthly average 7.03 mg/L.
Baxter monthly average 7.73 mg/L.
Combine monthly average 6.70 mg/L. Combine monitor only (used for calculation)

Copper Influent (Cu) (metals in wastewater)
Brainerd monthly average 231 ug/L.
Baxter monthly average 152 ug/L.
Combine monthly average 190 ug/L. Combine monitor only (used for calculation)

Mercury Influent (Hg) (metals in wastewater) (November)
Brainerd monthly 100 ng/L.
Baxter monthly 119 ng/L.
Combine monthly 113 ng/L. Combine monthly monitor only (used for mercury minimization plan requirements)

Nitrite+Nitrate Influent (N+N) (nutrients in wastewater)
2.94 mg/L. Combine monthly monitor only (used for calculations)

Total Kjeldahl Nitrogen Influent (TKN) (nutrients in wastewater)
41.20 mg/L. Combine monthly monitor only (used for calculations)

Wastewater Effluent Flows
Monthly total flow 53,011,000 gallons
Daily average flow 1,710,000 gallons

Carbonaceous Biological Oxygen Demand Effluent (CBOD) (strength of wastewater)
23 kg/d CBOD monthly average Permit maximum 296 kg/d monthly average
35 kg/d CBOD maximum calendar week average Permit maximum 473 kg/d calendar week average
4 mg/L CBOD monthly average permit Permit maximum 25 mg/L monthly average
6 mg/L CBOD calendar week average Permit maximum 40 mg/L calendar week average
98% CBOD removal Permit minimum 85% removal required

Total Suspended Solids Effluent (TSS) (solids in wastewater)
35 kg/d TSS monthly average Permit maximum 355 kg/d monthly average
57 kg/d TSS calendar week average Permit maximum 533 kg/d calendar week average

Total Suspended Solids Effluent (TSS) (solids in wastewater)
5 mg/L TSS monthly average Permit maximum 30 mg/L monthly average
9 mg/L TSS calendar week average Permit maximum 45 mg/L calendar week average
98% TSS removal Permit minimum 85% removal

Total Phosphorus Effluent (P) (nutrients in wastewater)
0.58 kg/y phosphorus monthly average
2239 kg/y phosphorus 12-month moving total Permit maximum 8278 kg/y for the 12-month moving total
0.795 mg/L phosphorus 12-month moving average Permit maximum 1.0 mg/L for the 12-month moving average

Copper Effluent (Cu) (metals in wastewater)
24 ug/L copper monthly average Permit maximum 235 ug/L monthly average
28 ug/L copper daily maximum Permit maximum 581 ug/L daily

Mercury Effluent (Hg) (metals in wastewater) (November)
<0.5 ng/L mercury monthly average Permit maximum 6.9 ng/L monthly average
<0.5 ng/L mercury daily maximum Permit maximum 11.95 ng/L daily

Nitrite+Nitrate Effluent (N+N) (nutrients in wastewater)
3.27 mg/L N+N monthly average Monitor only (used for calculation)

Ammonia Nitrogen Total (N) (nutrients in wastewater)
4.70 mg/L Ammonia Nitrogen Total monthly average Monitor only (used for calculation)

Total Kjeldahl Nitrogen (TKN) Effluent (nutrients in wastewater)
6.81 mg/L TKN monthly average Monitor only (used for calculation)

Perfluorooctane Sulfonate Effluent (PFOS) (forever chemicals) (December)
8.70 ng/L PFOS quarterly average Permit maximum 287 ng/L quarterly average
8.70 ng/L PFOS daily maximum Permit maximum 497ng/L daily

Fecal Effluent (Bacteria associated with human or animal wastes) (Most Probal Number) Geometric Mean (April – October)
10 organisms per 100 milliliters Permit maximum <=200 geometric mean

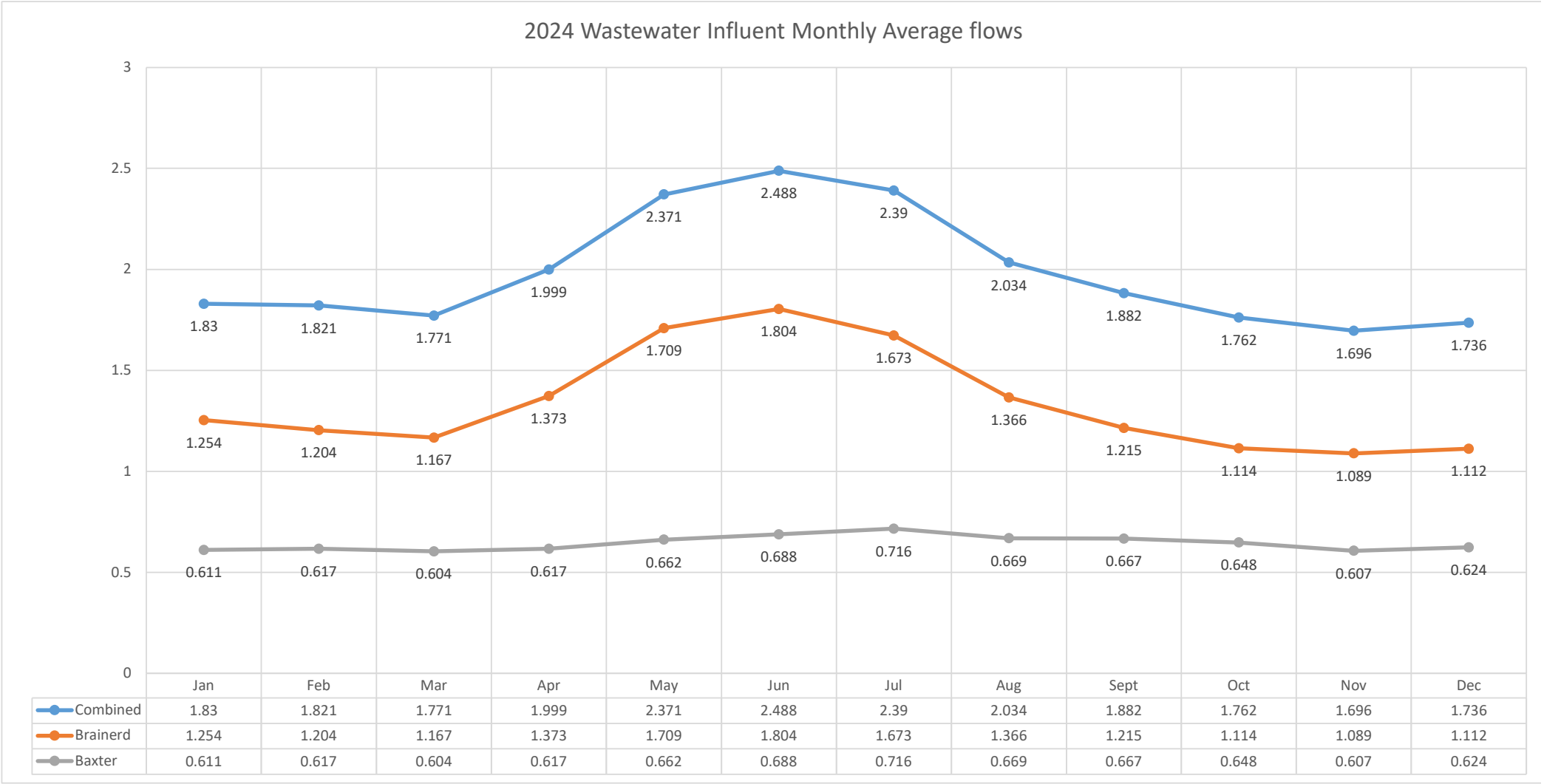
Biosolids Process Analysis
3,076,000 gallons Waste Activated Sludge (WAS) Average 0.5% solids.
3,048,000 gallons Gravity Belt Thickeners (GBT) Average 7% solids.
3,023,000 gallons Filtrate return to headworks

5.09% average raw feed to Primary Digesters
82.78% volatile raw feed solids to Primary Digesters
3.17% average solids in Primary Digesters
70.63% average volatile solids in Primary Digesters

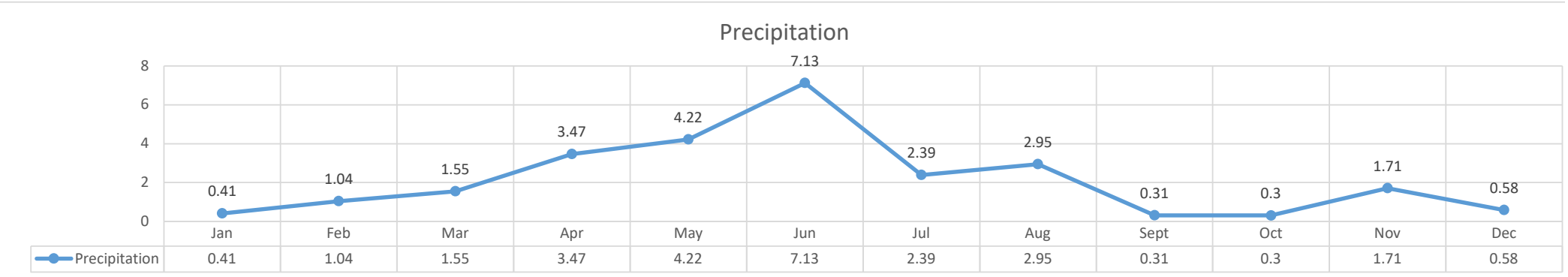
626,000 gallons in Biosolids Storage Tanks at 3.0% solids.
46% Average Volatile Solids reduction
38% minimum volatile solids reduction required for land application of biosolids.

Concentration
1 mg/L = 1 milligram per liter = 1 part per million
1 ug/L = 1 microgram per liter = 1 part per billion
1 ng/L = 1 nanogram per liter = 1 part per trillion

Loading
kg/d = kilogram per day
kg/y = kilogram per year



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Combined	1.83	1.821	1.771	1.999	2.371	2.488	2.39	2.034	1.882	1.762	1.696	1.736
Brainerd	1.254	1.204	1.167	1.373	1.709	1.804	1.673	1.366	1.215	1.114	1.089	1.112
Baxter	0.611	0.617	0.604	0.617	0.662	0.688	0.716	0.669	0.667	0.648	0.607	0.624



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Precipitation	0.41	1.04	1.55	3.47	4.22	7.13	2.39	2.95	0.31	0.3	1.71	0.58

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Brainerd Public Utilities
Water Production Department Report
January 17, 2025

December 2024 Water Pumping Statistics

Water pumped to the North distribution system was 23.8 MG for an average of 0.770 MGD. Water pumped to the South distribution system was 4.288 MG for an average of 0.136 MGD. Chemical usage averages for the month: 1.96 gallons of fluoride per day, 3.04 gallons of caustic soda per day, 6.344 gallons of orthophosphate per day, and 20.89 pounds of chlorine per day. Went through 17 filter backwash events while using an average of 0.186 MG for each event.

Wells

BPU Staff and Minnesota Department of Health district engineer collected raw water samples from all wells to test for PFOS. Well 3, which had previously been identified as our highest source of PFOS was operated for about 6 hours prior to sampling, then turned off and locked out. We will wait for the results of the testing before deciding whether to put it back in filter combination rotation.

Staff changed oil and greased bearings in all well pump motors, a once-yearly maintenance operation. Started working on corroded bolt replacement and prep for paint in well houses.

Filtration Plant

December 2024 daily test results indicate finished water is achieving an average of 96.1% removal of iron from the raw water concentration and 97.8% removal of manganese.

Booster Pump Stations

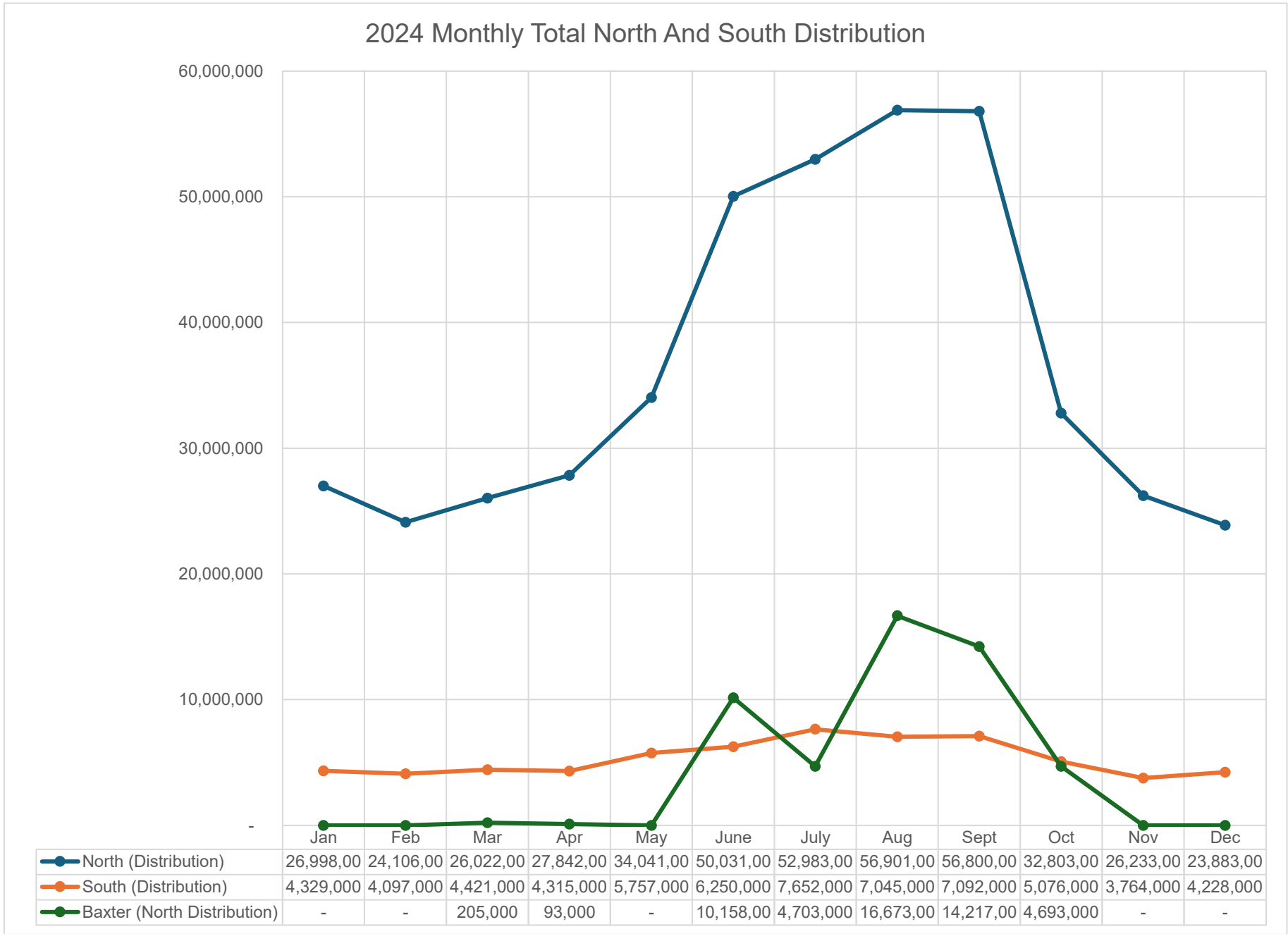
Riverside booster station and Lum Park booster station continue to operate effectively. Pump and motor bearings were greased by staff at both locations.

North System Flow meter issue

Saturday 12/28/2024 staff encountered an issue with the north system flow meter not working one morning. Division manager decided to have staff engage chemical feed pumps manually since they are designed to pace up and down based on the flow meter reading and thus could not operate as usual in auto. A brief testing regimen was performed to set them correctly and they were left to run. Staff returned to the chemical feed pumps when the towers were near full and shut them off. The same operation was performed on Sunday 12/29/2024. On Monday 12/30/2024, we contacted the technicians from First Systems. (installers and calibrators of the flow meters). They disconnected some wires, reconnected them and verified the flow meter was reading within manufacturers specifications. North chemical feed pumps were then turned back to auto.

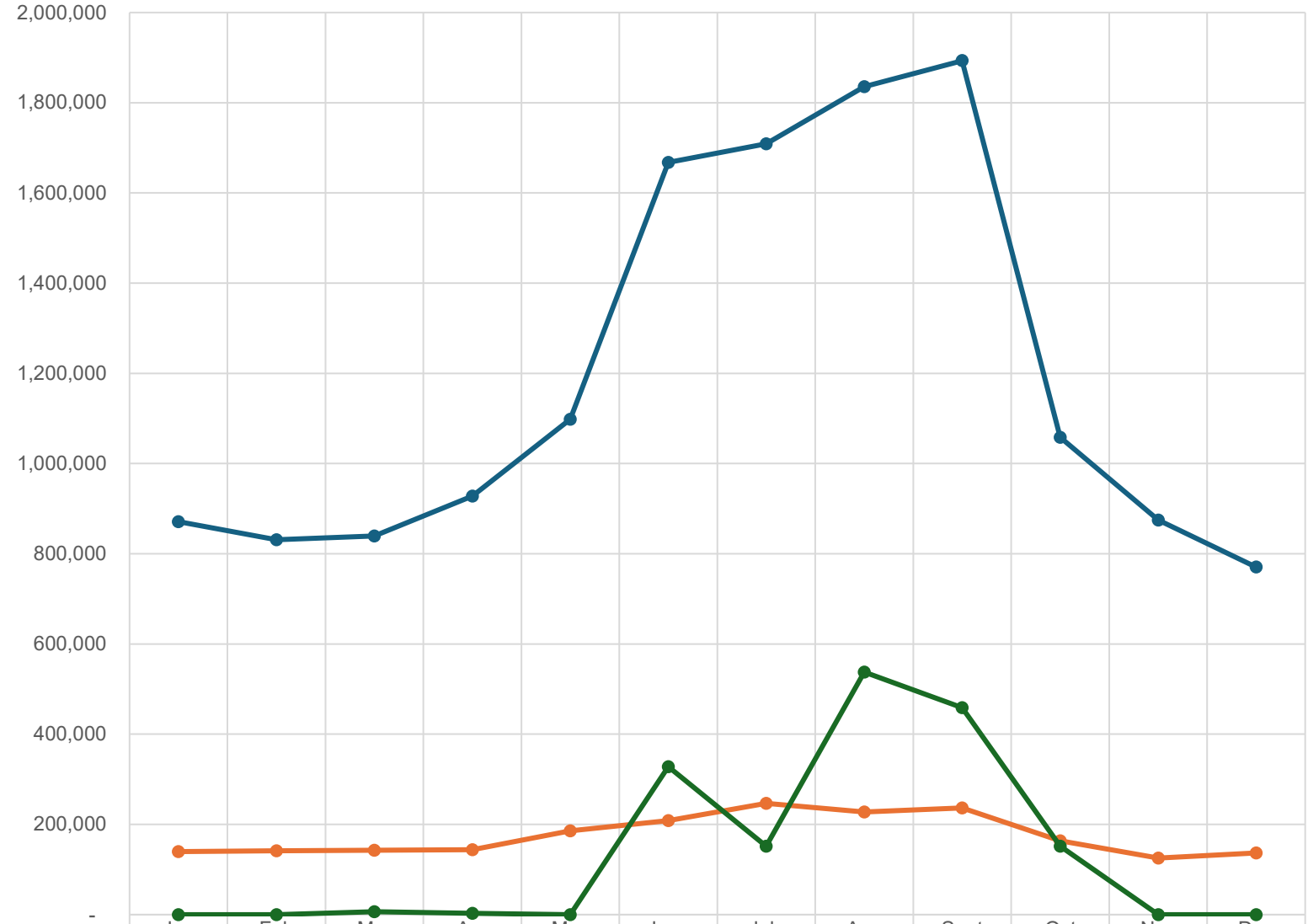
Call-out event

Sunday 1/5/24 18:30 Telephone dialer alarm- Alert condition 8- generator on. Staff arrived and found the automatic transfer switch on well 5 had a breaker tripped. The breaker was re-set and held closed. Staff waited for the generator cool down timer to expire and shut down.



	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
North (Distribution)	26,998,00	24,106,00	26,022,00	27,842,00	34,041,00	50,031,00	52,983,00	56,901,00	56,800,00	32,803,00	26,233,00	23,883,00
South (Distribution)	4,329,000	4,097,000	4,421,000	4,315,000	5,757,000	6,250,000	7,652,000	7,045,000	7,092,000	5,076,000	3,764,000	4,228,000
Baxter (North Distribution)	-	-	205,000	93,000	-	10,158,00	4,703,000	16,673,00	14,217,00	4,693,000	-	-

2024 Daily Average Water North And South Distribution



	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
North (Distribution)	870,903	831,241	839,419	928,067	1,098,097	1,667,700	1,709,129	1,835,516	1,893,333	1,058,161	874,433	770,419
South (Distribution)	139,645	141,276	142,613	143,833	185,710	208,333	246,839	227,258	236,400	163,742	125,467	136,387
Baxter (North Distribution)	-	-	6,613	3,000	-	327,677	151,710	537,839	458,613	151,387	-	-