City of Ramsey
Agenda
City Council Work Session
Tuesday, September 13, 2022
5:30 pm
Lake Itasca Room, 7550 Sunwood Drive NW

Remote Attendance available at www.cityoframsey.com/meetings.
Those joining remotely and requesting to speak are asked to use a webcam when speaking.

1. Call to Order

2. Topics for Discussion

1. Discuss 2022 Game Fair Invoice

2. Final 2023 Budget/Levy Review Before Preliminary Adoption on 9-27-22

3. Review Estimated Project Costs, Funding Sources, and Construction Schedules for Proposed Water Treatment Plant Improvements

3. Topics for Future Discussion

1. Review Future Topics/Calendar

4. Mayor/Council/Staff Input

5. Adjournment*

***Note: the City Council may motion to recess this Work Session meeting and reconvene after the regular City Council meeting if items on the agenda are not completed.**

CC Work Session **2. 1.**

Meeting Date: 09/13/2022

Information

Title:

Discuss 2022 Game Fair Invoice

Purpose/Background:

Armstrong Kennels hosts an annual event known as Game Fair. This event has become a staple event for the business, and the event generates a large amount of vehicle and pedestrian traffic over two separate weekends in August. Due to this, the City has provided assistance for the event.

Public Works staff hauls picnic tables and extra trash receptacles to Central Park for the use and benefit to the Lions Club. Central Park is an alternate parking location for Game Fair visitors and the Lions staff the area during the event. Public Works also provides signage for traffic control and street sweeping around the event location.

Ramsey Police provides Officer coverage at two Officers per day for nine hours each and six total days. If Ramsey Police did not provide coverage, Game Fair would be expected to hire a private company to provide the same coverage.

In total for 2022, the Police Department provided a total 108 labor hours and Public Works/Parks Department provided 46 labor hours and eight hours for both a street sweeper and tandem dump truck. The City invoiced Game Fair for only the Police Department coverage for a total of $11,016 and received payment from Game Fair for $5,508.

The reduced payment on behalf of Game Fair followed past practice where the City would waive half of the invoice in exchange for a City Booth at the event. Historically the City would staff a booth at the event with a main objective of promoting the development of the COR. The last couple of years the City did not have a booth, and when the offer was presented for a booth this year we did not have the staff availability to have representatives at the booth the entire time (Friday-Sunday for two weekends).

Because the past practice of fee waiver was initiated under different representatives on City Council and Administration. Current Administration is seeking guidance whether this practice is supported to continue.

Timeframe:

Funding Source:

Responsible Party(ies):

Brian Hagen, City Administrator

Outcome:

Provide direction to current Administration on the practice of the fee waiver for Game Fair events.

Attachments

No file(s) attached.

Form Review

Inbox	Reviewed By	Date

Brian Hagen	Brian Hagen	09/08/2022 01:38 PM
Form Started By: Brian Hagen		Started On: 09/07/2022 12:42 PM
Final Approval Date: 09/08/2022		

CC Work Session **2. 2.**

Meeting Date: 09/13/2022

Information

Title:

Final 2023 Budget/Levy Review Before Preliminary Adoption on 9-27-22

Purpose/Background:

At the July 12, 2022 budget worksession the council was presented with the 2023 General Fund budget and its effect on the tax levy. This was the first look at the budget which included all department requests.

At the July 26, 2022 worksession the entire worksession was spent discussing options of how to fund the roads due to the additional needs of roads that were falling apart outside those currently listed in the City's 2022-2031 CIP. The consensus at this meeting was to bring back two options: Option 1: Annual Property Tax levy based on the **average** of costs for the City's 2023-2031 CIP Street Reconstructions/Overlays and the additional reconstruction needs for a period of 9 years and Option #3 (pertaining to the option # as they were presented at the July 26 meeting) which is to bond for the additional funding needs and place an annual debt service levy on the property taxes for a period of 15 years. These numbers have been updated to reflect the removal of $750,000 from the ARPA funds that were going to be used to offset road reconstruction costs.

In regards to the ARPA funds, the $750,000 will be reflected in the General Fund budget for the respective years of 2023 and 2024. The public works line item pertaining to street maintenance will increase an additional $375,000 from the current $200,000 to $575,000 to cover spray patching.

At the August 8, 2022 worksession staff was asked to prepare the net effect to the taxpayer if Option 3 was chosen for the roads, which is adding $1,145,607 annually to the debt service levy for the next 15 years. Some of the other items that were requested was the additional cost for the Rec Specialist position at 29, 30, & 40 hours per week, non-discretionary items in the 2023 Proposed General Fund Budget, and if the current General Fund levy increase is 13.82% what does an increase of 8%, 10%, etc. increase look like. These items were presented to City Council at the worksession of August 23.

After review at the August 23 worksession, the consensus of the council was to bring back the budget/levies that was presented at this worksession that included the additional $1,145,607 debt levy for pavement management projects and remove the capital items related to the police squad cameras and unmanned aerial vehicle. The attached documents reflect the removal of these capital items and have been updated to show the net effect of the proposed levies on the taxpayer.

Preliminary adoption of the 2023 General Fund Budget and preliminary levies is scheduled at the regular City Council meeting of September 27, 2022.

Three items staff is seeking feedback on that would have an impact of the budget is as follows:
1) Temporary Snowplow Wages
2) Membership in the Mississippi River Cities & Towns Initiative
3) Cell Tower Lease

Timeframe:

15 minutes.

Funding Source:

Responsible Party(ies):

Finance Director

Outcome:

Determination of final preliminary levy amount to be adopted at September 27, 2022 regular City Council meeting.

Attachments

2023 Budget Notes for 9-14-22
Effect On Taxpayers Preliminary Levy
Tax Capacity
2023 Personnel Requests
2023 Capital Requests
2023 Preliminary General Fund Budget
2023 Preliminary EDA Budget
MRCTI

Form Review

Inbox	Reviewed By	Date
Brian Hagen	Brian Hagen	09/08/2022 12:03 PM
Form Started By: Diana Lund		Started On: 08/30/2022 10:16 AM
Final Approval Date: 09/08/2022		

2023 Preliminary* (Working Document) Budget/Levy

#'s Represent Consensus from 8-23-22 WS

GENERAL FUND LEVY:

$13,145,820. Increase of $1,433,230 (12.24%)

2022 Adopted General Fund Levy: $11,712,590

PAVEMENT MANAGEMENT ROAD LEVY: $1,756,889. Increase of $83,662 (5% per CM Heineman 2021 Proposal)

2022 Adopted Pavement Management Road Levy: $1,673,227

EDA LEVY: $82,610 . Increase of $7,250 (9.62%)

2022 Adopted EDA Levy: $75,360

DEBT SERVICE LEVY: $3,306,926 . Increase of $1,455,247 (78.59)

Includes new debt levy for roads – Est of $1,145,607 annually for 15 years

2022 Adopted Debt Service Levy: $1,851,679

TOTAL LEVY:

$18,292,245. Increase of $2,979,389 (19.46%)

2022 Adopted Total Levy: $15,312,856

TAXABLE VALUE: $39,726,089- $31,432,767 (2022) Increase of $8,293,322 (increase 26.38%)
(Estimated value: from County 7-21-22)

ESTIMATED TAX CAPACITY RATE: 40.562% 42.238%- in 2022

LEVY BREAKDOWN:

General Fund: Levy Increase of $1,433,230

A. Contributing Factors of Increase:

1. Personnel – Wages & Benefits ($1,348,032 increase):
   - $1,116,558 Current Positions)
   - $231,474 New Position, Reclasses & Additional Hours Requests

     - Further Breakdown of $1,348,032 Personnel Increase:
       - **$942,000** Wages only
         - $166,600 New requests (hours, reclasses, new positions)
         - $241,908 Positions added in 2022 not included in original 2022 Budget: HR Specialist, Building Inspector, Fire Capt of admin, Street Maintenance Worker
         - $202,000 Fire Relief (offset with revenue line)
         - 3% COLA (union negotiated) & Steps: $261,792 (net of PW Super Savings)
         - $69,700 DUI Officer Discontinued – no offset grant funding

       - Pera Increase**: $81,593** ($19,560 new personnel requests)
       - Health Insurance Increase**: $147,683** (Includes $29,261 related to new personnel requests) 8.92% increase for single coverage & 4.5% increase for employee w spouse/child & family
       - Workers Comp Increase: $**138,421** Understated in 2022 & Ever-increasing police rates

   a. NEW Personnel Requests/ Reclassifications & Additional Hours: $231,474
      1. **PT Community Service Officer: $39,171**
      2. **FT Patrol Officer: $102,032**
      3. **FT Engineering Tech II: $57,979**
      4. **PT to FT Rec Specialist: $24,195**
      5. **Permit Tech increase Hours: 1.5 Hours week - $2,894**
      6. **Reclass Records Tech to Data Analyst: $1,176**
      7. **Reclass Engr Tech II to Engr Tech III: $4,027**

2. Gas: $76,000 Increase (69% increase over 22 adopted)
   Diesel Fuel: $18,000 increase (33% increase over 22 adopted)

3. Capital Equipment Requests: See Capital Spreadsheet
   Total Requested: $ 1,095,383
   Trade Ins: $ (49,000)
   PW Campus Funds: $(750,000)
   Fleet Vehicle Fund: $(104,310)
   Equipment Fund: $(192,073)

4. Other State Grants & Aids: $202,000 Increase. Offsetting expense under Fire Personnel. Required to book this way for audit purposes 9101.4273 & 0220.6104

5. Interest Earnings: (-$25,000) Decreased funding due to Water Treatment Plant. Line item 9101.4701

6. LGA: No increase due to Legislative Session not taking action on bill.

7. Happy Days Funding: $5,000 increase

8. Citizen Survey: $15,000 Line Item 0111.6315. This was pushed out to 2023 budget as 2020 survey was not received until January 2021

9. Non-Election Year

10. Assessment Contract: $(20,000) Decrease. County new software more efficient.

11. LOGIS Contract: $20K increase. Line item 0192.6405

12. Replace PC's, laptops (replacement schedule), Anything that breaks-IT related: $12,000 increase. Line item 0192.6281

13. Uniforms: $17,000 increase New officer & new CSO. Line Item 0211.6231

14. Set up for 5 new squads, gunlocks: $29,500 increase (includes $12K for knox boxes). Line Item 0211.6281

15. Software upgrade ProjectDox (building inspection software): $30,000 Line Item 0240.6405

16. Road Funding $575,000. $200,000 for Cracksealing/Rejuvenations 0311.6488.
    $375,000 – Spray Patching (2-Years funded from ARPA Funds)
    Pavement Management Funding included under Pavement Management Road Levy
    & additional $1,145,607 annual debt levy

17. Salt Quantity: $(35,000) Decrease. Line item 0312.6267

-EDA Levy:

EDA Fund: $7,250 increase.
EDA Recommended a levy of $82,610 at August 11, 2022 Meeting.

-**Debt Levy**: Levy Increase of $1,455,247

A. Contributing Factors of Increase:

- *Municipal Center Debt at full levy was reduced by $300,000 in 2022 from debt service funds available (2022 was last year of available debt service funds to offset debt.

- **Proposed New Debt for Pavement Management - $1,145,607 Est annual levy for 15 years

- Debt Summary:

2020 Public Works Campus (2041 last year)	**127,276**
2021 Road Improvement Debt (2037 last year)	**1,145,607****
2013 Capital Equipment Certificates (2023 last year)	**75,705**
2014 Capital Equipment Certificates (2024 last year)	**104,438**
2015 Road Improvement Debt (2025 last year)	**114,668**
Muni Center (2031 last year)	**1,103,900***
Fire Station #2 (2033 last year)	**281,623**
2016 Road Improvement Debt (2026 last year)	**151,108**
2017 Road Improvement Debt (2027 last year)	**94,558**
2018 Road Improvement Debt (2028 last year)	**108,043**
Total Bonded Debt Levied	**3,306,926**

GENERAL FUND BUDGET:

Proposed Budget: $17,027,353 ($14,492,640 2022 final) Increase of $2,534,713 (increase 17.49%)

Major Changes from 2022 Adopted Budget:

Revenue:

-Property tax: $13,274,709 ($11,655,590 in 2022**)** **Increase of $1,433,230**

-LGA: $0

-Permit Revenue: **Increase of $10,500 (electrical inspections)**

-Intergovernmental Revenue**:** **Increase of $202,000 Fire state aid offset by fire payroll expense.**

-Charges for Services: **Increase of $33,000 Engineering billable time.**

-Investment Earnings: **Decrease of $25,000. Reduced funds to invest.**

-Transfers In: $1,829,383 ($973,800 in 2022) **Increase of $855,583**

-Increase in Capital Equipment Requests Non Property Tax Levies: $437,583

-$375,000 Spray Patching from ARPA Funding

Expenditures:

-Cola – 3% For Everyone + Steps (if available)

-Single Dental for all full-time employees

-Health Insurance: 8.92% Increase for single plans & 4.5% increase for all other plans

-Capital Equipment: See A3 above outlining Capital Equipment funding

Departmental Budget Changes:

Note: All departments with staff have increases in personnel costs due to COLA, Steps & Health Ins.

-City Council (111) – $31,029 Increase (31.48% increase):
Bi-Annual Resident Survey – $15,000 pushed out to 2023
Happy Days Contribution - $5,000 increase to $12,000

-Administration (130) – $117,807 Increase (13.06% increase):
HR Specialist not budgeted in 2022 added as FT position in 22 - $81,044
Deputy City Clerk reclassed to City Clerk in '22. Budget neutral: 40 hours to 32 hours.
Public Info & event Specialist reclassed to Communications Coordinator

-Elections (141) – $48,873 Decrease (88.02% decrease):
Non-Election Year

-Finance (153) – $1,975 Increase (00.5% increase):
Expectation of Single Audit in 2023 (ARPA funds)

-Assessing (155) – ($20,000) Decrease (13.33% decrease):
Per County: Assessing software more efficient.

-Legal (161) – ($0) – No changes

-Community Development (191) - $90,819 Increase (11.89% increase):
COLA, Steps
Promotions within department in 2022

-Data Processing (192) – $22,078 Increase (2.77% increase):
Laptop replacement schedule: $12,000
LOGIS Contract: $20,000
No Capital Equipment Requests: $(30,000) requested in '22

-Government Buildings (194) – $15,038 Increase (2.31% increase):
Gas & electric for buildings: $24,000 increase
Capital Equipment Requests: $(45,000) budgeted in 2022

-Newsletter (195) – $5,763 (10.81% increase):
Printing & postage cost increase

GENERAL FUND BUDGET CONTINUED:

Departmental Budget Changes Continued:

-Police (211): $720,740 Increase (15.06% increase):

FT Patrol Officer with Uniform & Training: $112,032
PT Community Services Officer (CSO) - $44,671
Current Records Tech reclassed to Data Analyst - $1,176
DWI Grant: Jan-Sept – $69,700 – 2022 budget was reduced by this amount. Not reapplying for
Workers Comp - $98,676
Gas - $41,000
Set up for 5 new squads, knox boxes - $29,500
Capital Equipment Requests - $184,626 (see breakdown below)
Replace 2005- F150 Pickup - $38,521
Replace 2017 Ford Explorer - $41,230
Replace 2017 Chev Tahoe - $40,875
Replace 2018 Ford Taurus - $32,000
Replace 2018 Ford Taurus - $32,000

Fire (220): $540,970 Increase (44.31% increase): Includes $202,000 Fire Relief Aid*
$338,970 Increase (19.24% Increase): Not including $202,000 Fire Relief Aid*

*Fire Relief State Aid Expensed here & offsetting revenue reported under 9101.4273 - $202,000
Fire Captain of Administration not budgeted in 2022 added as FT Position in '22 - $82,377 (Net of Fire Tech)
Capital Equipment Requests - $290,000 (See breakdown below)
Replace Fire Rescue #21 - $265,000
SCBA Compressor - $25,000

-Building (240): $225,903 Increase (45.59% increase)

Increase Hours Permit Tech from 32.5 hours to 35 hours week - $2,894
Building Inspector not budgeted in 2022 added as FT position in '22 -$119,930
Upgrade ProjectDox Software - $30,000
New vehicle for additional inspector - $30,000

-Civil Defense (250): $0 No changes

-Traffic Engineering (260): $14,264 Increase (14.64% Increase)

Staff time redistributed between Traffic Engineering, Streets, Snow Removal & Storm Drainage

GENERAL FUND BUDGET CONTINUED:

Departmental Budget Changes Continued:

-Animal Control (270): $3,000 Increase (92.31% increase):
- New vendor for animal impound service

-Community Orienting - Police (280): $1,450 Increase (9.88% increase):
- Supplies for events such as nite-to-unite

-Engineering (301): $67,337 Increase (13.81% increase):
FT Engineering Tech II $57,979 (Net utility funds of $24,736)
Reclass Engr Tech II to Engr Tech III $4,027
Several reclasses in the department in 2022 due to City Engr becoming PW Director (interim)
City Engr/PW Director salary split out more to respective street/park departments
Replace 2006 Chev Impala - $29,000

-Public Works (311): $574,710 Increase (41.08% increase):
Street Maintenance worker not budgeted in 2022 added in 22 - $74,310
City Engr/PW Director salary % included here
PW Superintendent position not refilled
Spray Patching - $375,000 (funded by ARPA funds)
Capital Equipment Requests - $423,657:
Replace 2007 Tandem Axle Plow Truck less $20,000 trade in - $270,950
Replace 2010 Chev Silverado less $12,000 resale - $75,310
New Snow Pusher box for front end loader - $18,855
New ¾ ton pickup with plow equipment - $58,542

-Snow & Ice (312): $0. No budget change:
Salt Price Quantity needed reduced - $(35,000)
Increase in Gas & other individual line items to offset salt reduction

-Park & Rec (452): $177,711 Increase (11.98% increase):
PT Rec Specialist to FT – additional 11 hours week $24,195
Reclassed in Dept due to PW Superintendent retiring
Replace 2006 F250 with topper to a 1-ton with plow - $59,100

-Council Contingency (892): ($6,400 decrease) (4.87% decrease)
$18,600 remains for contingency

Proposed Property Taxes - Tax Capacity Based Only
(Holds County & Anoka Henn School Levies **constant with 2022 levels**)

2023 Proposed: GF Levy Increase of $1,433,230 (12.24%)/ Pavement Levy Increase $83,662 (5.0%)/ Bond Levy Increase of $1,455,247 (78.59%)/ EDA Levy $7,250 = Overall Levy Increase of $2,979,389 (19.46%)

2022 House Market Value	RESIDENTIAL 2022 House Tax Value er Mkt Value Excl	2022 42.239% (Tax Cap. Based Only)	45.799% 2022 City Portion of Taxes (A)	2023 House Market Value	2023 House Tax Value After Mkt Value Excl	Increase 40.562% Tax Cap	2023 44.796% City Portion of Taxes (B)	City Portion Increase Over 2022	House Tax Market Value Increase	City Portion Tax % Increase
$ 159,600	$ 136,724	$ 1,261	$ 577	$ 193,600	$ 173,784	$ 1,574	$ 705	$ 128	27.11%	22.09%
$ 218,500	$ 200,925	$ 1,853	$ 849	$ 254,700	$ 240,383	$ 2,177	$ 975	$ 126	19.64%	14.79%
$ 210,100	$ 191,769	$ 1,769	$ 810	$ 252,300	$ 237,767	$ 2,153	$ 965	$ 155	23.99%	19.19%
$ 249,900	$ 235,151	$ 2,169	$ 993	$ 312,200	$ 303,058	$ 2,745	$ 1,229	$ 236	28.88%	23.75%
$ 251,400	$ 236,786	$ 2,184	$ 1,000	$ 308,200	$ 298,698	$ 2,705	$ 1,212	$ 212	26.15%	21.23%
$ 254,500	$ 240,165	$ 2,215	$ 1,015	$ 316,100	$ 307,309	$ 2,783	$ 1,246	$ 231	27.96%	22.76%
$ 265,900	$ 252,591	$ 2,330	$ 1,067	$ 331,900	$ 324,531	$ 2,938	$ 1,316	$ 249	28.48%	23.37%
$ 265,600	$ 252,264	$ 2,327	$ 1,066	$ 330,200	$ 322,678	$ 2,922	$ 1,309	$ 243	27.91%	22.83%
$ 280,300	**$ 268,287**	**$ 2,474**	$ 1,133	**$ 346,700**	**$ 340,663**	**$ 3,085**	**$ 1,382**	**$ 249**	**26.98%**	14.99%
$ 292,200	$ 281,258	$ 2,594	$ 1,188	$ 384,300	$ 341,647	$ 3,455	$ 1,548	$ 360	21.47%	30.27%
$ 311,900	$ 283,656	$ 2,792	$ 1,279	$ 392,500	$ 390,585	$ 3,537	$ 1,584	$ 305	37.70%	23.84%
$ 306,300	$ 296,627	$ 2,735	$ 1,253	$ 364,600	$ 360,174	$ 3,262	$ 1,461	$ 208	21.42%	16.62%
$ 327,300	$ 320,273	$ 2,947	$ 1,350	$ 414,000	$ 414,000	$ 3,749	$ 1,679	$ 329	29.26%	24.36%
$ 341,200	$ 334,668	$ 3,087	$ 1,414	$ 416,700	$ 416,700	$ 3,773	$ 1,690	$ 276	24.51%	19.49%
$ 403,700	$ 402,793	$ 3,715	$ 1,701	$ 473,700	$ 473,700	$ 4,289	$ 1,921	$ 220	17.60%	12.93%
$ 411,700	$ 411,513	$ 3,797	$ 1,739	$ 521,500	$ 521,500	$ 4,771	$ 2,137	$ 398	26.73%	22.90%
$ 419,000	$ 419,000	$ 3,864	$ 1,770	$ 556,500	$ 556,500	$ 5,167	$ 2,314	$ 544	32.82%	30.72%
$ 437,400	$ 437,400	$ 4,034	$ 1,848	$ 584,400	$ 584,400	$ 5,483	$ 2,456	$ 608	33.61%	32.88%
$ 453,200	$ 453,200	$ 4,180	$ 1,914	$ 583,600	$ 583,600	$ 5,474	$ 2,452	$ 539	28.77%	28.14%
$ 477,800	$ 477,800	$ 4,407	$ 2,018	$ 606,800	$ 606,800	$ 5,736	$ 2,570	$ 551	27.00%	27.33%
$ 617,500	$ 617,500	$ 5,966	$ 2,732	$ 667,600	$ 667,600	$ 6,424	$ 2,878	$ 146	8.11%	5.36%

House Values Noted in black are from actual tax statements

*** Median Market Value home was $280,300 for pay 2022 and $346,700 for pay 2023**

Proposed Property Taxes - Tax Capacity Based Only
(Holds County & Anoka Henn School Levies **constant with 2022 levels**)

2023 Proposed: GF Levy Increase of $1,433,230 (12.24%)/ Pavement Levy Increase $83,662 (5.0%)/ Bond Levy Increase of $1,455,247 (78.59%)/ EDA Levy $7,250 = Overall Levy Increase of $2,979,389 (19.46%)

COMMERCIAL 2022 Valuation	2022 42.239% (Tax Capacity Based Only)	45.799% 2022 City Portion of Taxes (A)	2023 Commerical Value	40.562% Tax Cap	2023 43.348% City Portion of Taxes (B)	City Portion Increase Over 2022	Tax Market Value Increase	City Portion Tax % Increase
$ 741,600	$ 8,147	$ 3,731	$ 967,100	$ 10,561	$ 4,578	$ 847	30.41%	22.69%
$ 2,890,000	$ 33,007	$ 15,117	$ 3,035,400	$ 34,058	$ 14,764	$ (353)	5.03%	-2.34%
$ 3,123,800	$ 35,713	$ 16,356	$ 4,513,000	$ 50,845	$ 22,040	$ 5,684	44.47%	34.75%
$ 3,525,500	$ 40,361	$ 18,485	$ 4,443,300	$ 50,054	$ 21,697	$ 3,212	26.03%	17.38%
$ 4,741,000	$ 54,425	$ 24,926	$ 5,525,000	$ 62,342	$ 27,024	$ 2,098	16.54%	8.42%
$ 11,700,000	$ 134,948	$ 61,805	$ 9,400,000	$ 106,366	$ 46,108	$ (15,697)	-19.66%	-25.40%
$ 6,699,400	$ 77,086	$ 35,305	$ 7,954,600	$ 89,945	$ 38,989	$ 3,684	18.74%	10.44%

Commercial Values Noted in black are from actual tax statements

2023 - For Preliminary Adoption

	Certified		County # 8-19-22 Fiscal Disp Dist	Local Levy	26.38% County #'s 7-21-22 Taxable Value	Estimated Tax Capacity
General	**13,145,820**	*	1,896,624	11,249,196	39,726,089	28.317%
Pavement Levy	**1,756,889**	**		1,756,889	39,726,089	4.423%
EDA	82,610	***	10,384	72,226	39,726,089	0.182%
Bonds	3,306,926	****	271,675	3,035,251	39,726,089	7.640%
Total Levy	**18,292,245**	*****	2,178,683	16,113,562		**40.562%**

* Levy increase of 12.24% over 2022 adopted - $1,433,230 increase

***** Total Levy increase of 19.46% over 2022 adopted -$2,979,389 increase

** Pavement Levy = 5% increase over prior year pavement levy $83,662 increase

***EDA Levy - $7,250 increase over 2022 adopted

****$1,455,247 Increase - 78.59% Increase. Muni Debt was reduced by $300,000 in 2022 for 2022 Only
Additional Debt levy for Pavement Management - $1,145,607

2022 Adopted

MUNI Debt Reduced

	Certified		Fiscal Disp	Local Levy	11.36% inc County #'s Taxable Value	Estimated Tax Capacity
General	**11,712,590**	*	1,779,967	9,932,623	31,432,767	31.600%
Pavement Levy	**1,673,227**	**		1,673,227	31,432,767	5.323%
EDA	75,360	***	10,021	65,339	31,432,767	0.208%
Bonds	1,851,679	****	246,225	1,605,454	31,432,767	5.108%
Total Levy	**15,312,856**	*****	2,036,213	13,276,643		**42.238%**

* Levy increase of 5.00% over 2021 adopted - $557,742 increase

***** Total Levy increase of 17.70% over 2021 adopted -$2,303,048 increase

** Pavement Levy = 15% over 2021 General Fund levy of $11,154,848

**EDA Levy constant with 2021 adopted

***Muni Debt reduced by $300,000 to debt service fund balance - 2022 Only (would add approx .85% to tax cap rate)

2021 Adopted

	Certified		Fiscal Disp	Local Levy	5.31% County #'s Taxable Value	Estimated Tax Capacity
General	**11,154,848**	*	1,655,238	9,499,610	28,227,332	33.654%
EDA	75,360	**	11,182	64,178	28,227,332	0.228%
Bonds	1,779,600	***	264,070	1,515,530	28,227,332	5.369%
Total Levy	**13,009,808**		1,930,490	11,079,318		**39.251%**

* Levy increase of 4.53% over 2020 adopted

**EDA Levy reduced by $13,000 per EDA 8/13/20

***Muni Debt reduced by $362,300 to debt service fund balance, $2Minternal loan for PW Campus, & Fund Balance from CARES Fund Balance

***Fire Station Debt Reduced by $93,000 from closed debt service fund in 2019

2023 PERSONNEL REQUESTS							
		RECLASS	RECLASS	RECLASS	INCREASE IN HOURS	INCREASE IN HOURS	
2023 Budget	**Cost Center**	**Police 211**	**Engineering 301**	**Utilities 601**	**Building 240**	**Park & Rec 452**	
		Records Technician to Data Analyst	**Engineering Tech II to Engineering Tech III**	**Utilty Maintenance Worker to Utilities Lead Person**	**Permit Tech**	**Recreation Specialist**	
6102	Full-Time Regular	1,013	3,469	1,777	2,493	14,374	
6104	Part-Time Regular	-	-	-			
6121	Pera	77	260	133	187	1,078	
6122	FICA/Medicare	78	265	136	191	1,100	
6131	Group Insurance		-	-	-	7,510	
6151	Workers Comp	8	32	82	23	133	
6105	Current Rec & Summer Interns)						
	Total Funding Required	1,176	4,027	2,128	2,894	24,195	
	Additional Expense:						
	Uniform & training						
	Add'l Net Funding Required	**1,176**	**4,027**	**2,128**	**2,894**	**24,195**	
	Offset Funding:						
	PT Fire Tech						
	Utility Funds			**(2,128)**			
	Net Funding Required	**1,176**	**4,027**	**0**	**2,894**	**24,195**	
STATUS OF REQUEST		Position Reclass	Position Reclass	Position Reclass	INCREASE IN HOURS	INCREASE IN HOURS	
		(Step 5)	(Step 5)	(Step 3)	(Step 6)	(Step 1/2)	
		2080 hours	2080 hours	2080 hours	1768 Hours	2080 Hours	
					(32.5 to 34 hours week)	(29 to 40 hours week)	
		$29.300/hr	$36.965/hr	$32.569/hr	$31.962/hr	$23.96/$25.158	
	Full-Time Equivalent	1	1	1	0.85	1	
	PERSONNEL JUSTIFICATION for Reclassifications, New Positions, Additional Hours	**Current Records Tech has obtained additional training in data analysis/statistics. This position is responsible for all crime statistics and officer stats (# of CFS, arrests, citations, shifts worked, etc.). 50% of the time the position will work on data analysis/intelligence led policing and 50% on current police tech job duties.**	**Current Engineering Tech II inspects construction under current classification. Employee plans to take the State of MN Professional Engineer's examination in 2023 and upon receiving confirmation that he has passed the PE exam, employee will be eligible to be reclassified to Civil Engr. II. Until then, employee will be working to increase both the complexity and volume of technical work including designing PMP projects and preparing feasibility studies, plans and specifications.**	**With the design/construction/commissioning of the new water treatment plant, the utilities supervisor's time will be primarily spent in all phases of the project. The need for someone to take over some of the responsibilities of the day-to-day operation will be required. This person would be responsible to make sure all the MN Dept of Health requirements are met and current, as well as, give staff direction on daily maintenance functions.**	**Increase hours of Permit Technician from 32.5 hours to 34 hours due to ever-increasing demand in building permit issuance.**	**The availability of parks and trails, as well as recreation opportunities and programming continues to be valued, and a priority for residents, as reported in the Citizens Survey. An increase of 11 hours to a total of 40 per week better aligns with the work load, ability to respond to the public in a timely manner, and for an ever-increasing number of residents that appreciate the rec programs offered. This position also provides back-up to the PW Admin Assistant including in assisting the publc in park and facility reservations.**	

2023 PERSONNEL REQUESTS		NEW POSITION	NEW POSITION	NEW POSITION	NEW POSITION	
2023 Budget	**Cost Center**	**Police 211 Part-time**	**Police 211 Full-Time**	**Engineering 301 Full-Time**	**Utilities 601 Full-Time**	
		Community Service Officer (CSO)	**Patrol Officer**	**Engineering Tech II**	**Utility Maintenance Worker**	
						TOTALS
6102	Full-Time Regular	-	69,268	60,335	53,558	206,287
6104	Part-Time Regular	33,749	-	-	-	33,749
6121	Pera	2,531	12,260	4,525	4,017	25,068
6122	FICA/Medicare	2,581	1,004	4,616	4,098	14,069
6131	Group Insurance	-	12,795	12,795	12,795	45,895
6151	Workers Comp	310	6,705	444	2,464	10,201
6105	Current Rec & Summer Interns)					-
	Total Funding Required	39,171	102,032	82,715	76,932	335,269
	Additional Expense:					-
	Uniform & training	5,500	10,000			15,500
	Add'l Net Funding Required	**44,671**	**112,032**	**82,715**	**76,932**	**350,769**
	Offset Funding:					-
	PT Fire Tech					-
	Utility Funds			**(24,736)**	**(76,932)**	(103,796)
	Net Funding Required	**44,671**	**112,032**	**57,979**	**-**	**246,973**
STATUS OF REQUEST		**NEW**	**NEW**	**NEW**	**NEW**	
		(Step 1)	(Step 1)	(Step 1)	(Step 1)	
		1508 Hours	2080 Hours	2080 Hours	2080 Hours	
		$22.38 /hr	$32.459/hr	$29.007/hr	$25.749/hr	
	Full-Time Equivalent	0.725	1	1	1	
	PERSONNEL JUSTIFICATION for Reclassifications, New Positions, Additional Hours	**Assigned to community service to continue level of basic services in animal control, patrol assistance, administrative tasks and code enforcement. Based on estimated growth and actual calls for service/response times.**	**Assigned to patrol to continue level of basic services. Based on estimated growth and actual calls for service/response times.**	**With the reclass of the current Engr Tech II to Eng Tech III a vacancy will be created. This position will primarily inspect construction in the field under the direct supervision of the Sr Engr Tech.**	**The last maintenance worker hired to work in the utility department ws February 2014. Since that time 1053 new services have been added to the system. With several new subdivisions in the planning stage, the need for maintenance also increases. Areas such as water meter installs, hydrant flushing, hydrant repairs, valve maintenance, utility locates, sewer cleaning, and water testing all add to the department work load.**	

ITEM #	COST CNTR	DESCRIPTION	ESTIMATED PURCHASE PRICE	USEFUL LIFE	TOTAL OF PURCH PRC		NOTES	OTHER FUND AVAILABLE	OTHER FUND SOURCE	Net 2023 FUNDING REQUIRED
2023 CAPITAL OUTLAY										
POLICE PROTECTION #211										
6550	211	Replace 2005 Ford F150 with F150	38,521.00	8	38,521.00		Replace 2005-#359 F150 Pickup Explorer			38,521.00
6550	211	Replace 2017 Chev Tahoe with Chev Tahoe	40,875.00	4	40,875.00		Replace 2017 #373 Chev Tahoe			40,875.00
6550	211	Replace 2015 Ford Explorer with Ford Expl hybrid	41,230.00	4	41,230.00		Replace 2017 #351 Ford Explorer			41,230.00
6550	211	Replace 2018 Taurus with Dodge Charger	32,000.00	4	32,000.00		Replace 2018 #383 Ford Taurus			32,000.00
6550	211	Replace 2018 Taurus with Dodge Charger	32,000.00	4	32,000.00		Replace 2018 #384 Ford Taurus			32,000.00
Total Police Protection #211			**184,626.00**		**184,626.00**			**0.00**		**184,626.00**
FIRE #220										
6540	220	Replace 2000 Ford F450 Rescue #21	275,000.00	15	275,000.00		Replace 2000 #557 Ford F450	10,000.00	Resale	265,000.00
6580	220	Replace SCBA Compressor	25,000.00	15	25,000.00		Replace 2001 Compressor			25,000.00
Total Fire #220			**300,000.00**		**300,000.00**			**10,000.00**		**290,000.00**
Protective Inspections #240										
6550	250	New Vehicle request for new building inspector	30,000.00	10	30,000.00		To be used by new building inspector position			30,000.00
TotaL Protective Inspections #240			**30,000.00**		**30,000.00**			**0.00**		**30,000.00**
CIVIL DEFENSE #250										
6580	250	Replace 2 emergency sirens	30,000.00	15	30,000.00		Currently 17 sirens installed between 2003 and 2008			30,000.00
TotaL Civil Defense #250			**30,000.00**		**30,000.00**			**0.00**		**30,000.00**
ENGINEERING #301										
6550	301	Replace 2006 Chev Impala with Chev Equinox	30,000.00	15	30,000.00		Replace 2006 #407 Chev Impala	1,000.00	Resale	29,000.00
TotaL Engineering #301			**30,000.00**		**30,000.00**			**1,000.00**		**29,000.00**
PUBLIC WORKS #311										
155.6489	311	New Snow Pusher Box for Front End Loader for snow removal at PW Parking Lot	18,855.00	25	18,855.00		Snow Removal at PW Campus			18,855.00
6550	311	New 3/4 ton Pick-up with Plow Equipment	58,542.00	15	58,542.00		Used for Road Maint & Snow Removal			58,542.00
6540	311	Replace 2010 3/4 ton Chev Silverado with dump & plow	87,310.00	15	87,310.00		Replace 2010 -#676 Chev Silver	12,000.00	Resale	75,310.00
6540	311	Replace 2007 Tandem dump with plow	290,950.00	15	290,950.00		Replace 2007 #662 Sterling Tanc	20,000.00	Trade in	270,950.00
Total Public Works #311			**455,657.00**		**455,657.00**			**32,000.00**		**423,657.00**
PARK & RECREATION #452										
6550	452	Replace 2006 F250 with topper with 1-ton & plow	65,100.00	15	65,100.00		Replace 2006 #654 Ford F250	6,000.00	Resale	59,100.00
Total Park & Recreation #452			**65,100.00**		**65,100.00**			**6,000.00**		**59,100.00**
TOTAL GENERAL FUND - 2023			**1,095,383.00**		**1,095,383.00**			**49,000.00**		**1,046,383.00**

Funding Sources:

Fleet Vehicle Fund	**104,310.00**
PW Campus Funds Remaining	**750,000.00**
Equipment Fund	**192,073.00**
Property Tax Levy	**0.00**
Total	**1,046,383.00**

ENTERPRISE FUNDED										
6540	**9605**	**NEW Vactor Trailer**	121,500.00	15	121,500.00		Used for Stormwater Maintenance			121,500.00
TOTAL ENTERPRISE FUNDS - 2022			**121,500.00**		**121,500.00**			**0.00**		**121,500.00**

9/13/22

GENERAL FUND 101 - BUDGET SUMMARY

REVENUES

	-2018 Actual-	-2019 Actual-	-2020 Actual-	-2021 Actual-	-2022 Adopted-	-2023 Requested-	% of Budget
TAXES	9,361,993	9,902,004	10,577,806	11,184,493	11,655,590	13,088,820	76.87%
LICENSES AND PERMITS	1,031,944	901,222	850,504	917,645	688,900	699,400	4.11%
INTERGOVERNMENTAL REVENUES	418,106	442,366	2,497,148	513,730	474,300	696,700	4.09%
CHARGES FOR SERVICES	815,127	790,112	731,187	760,740	589,300	622,300	3.65%
FINES AND FORFEITS	46,651	49,479	34,735	51,153	45,000	50,000	0.29%
MISCELLANEOUS	21,873	16,637	12,861	29,201	15,750	15,750	0.09%
INVESTMENT EARNINGS	104,401	174,930	185,750	(29,897)	50,000	25,000	0.15%
OTHER FINANCING SOURCES	936,450	953,354	766,049	1,321,201	973,800	1,829,383	10.74%
TOTAL REVENUES	12,736,544	13,230,103	15,656,038	14,748,266	14,492,640	17,027,353	100.00%

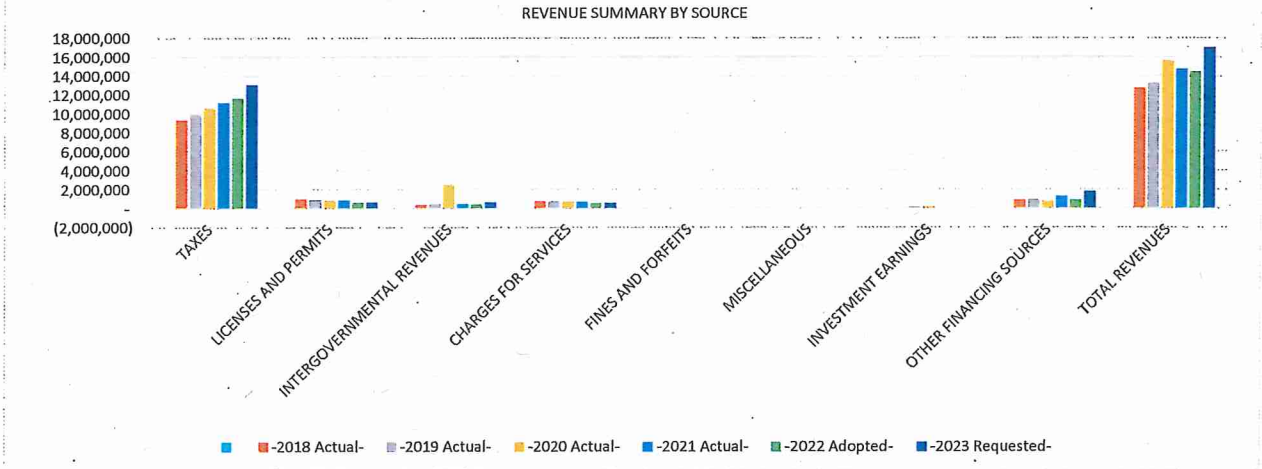
EXPENDITURES

	-2018 Actual-	-2019 Actual-	-2020 Actual-	-2021 Actual-	-2022 Adopted-	-2023 Requested-	% of Budget
GENERAL GOVERNMENT	3,291,647	3,468,059	3,390,435	3,540,820	3,988,041	4,203,044	24.68%
PUBLIC SAFETY	5,103,105	5,511,745	6,112,194	6,526,621	6,659,902	8,166,229	47.96%
PUBLIC WORKS	2,005,042	2,047,054	2,009,196	2,393,459	2,229,499	2,871,571	16.86%
PARKS AND RECREATION	1,302,547	1,303,410	1,418,871	1,481,802	1,483,825	1,661,536	9.76%
MISCELLANEOUS/CONTINGENCY	705,685	637,670	1,875,063	474,396	131,373	124,973	0.73%
TOTAL EXPENDITURES	12,408,025	12,967,938	14,805,758	14,417,097	14,492,640	17,027,353	100.00%

GENERAL FUND 101 - REVENUE SUMMARY	-2018 Actual-	-2019 Actual-	-2020 Actual-	-2021 Actual-	-2022 Adopted-	-2023 Requested-
TAXES	9,361,993	9,902,004	10,577,806	11,184,493	11,655,590	13,088,820
LICENSES AND PERMITS	1,031,944	901,222	850,504	917,645	688,900	699,400
INTERGOVERNMENTAL REVENUES	418,106	442,366	2,497,148	513,730	474,300	696,700
CHARGES FOR SERVICES	815,127	790,112	731,187	760,740	589,300	622,300
FINES AND FORFEITS	46,651	49,479	34,735	51,153	45,000	50,000
MISCELLANEOUS	21,873	16,637	12,861	29,201	15,750	15,750
INVESTMENT EARNINGS	104,401	174,930	185,750	(29,897)	50,000	25,000
OTHER FINANCING SOURCES	936,450	953,354	766,049	1,321,201	973,800	1,829,383
TOTAL REVENUES	**12,736,544**	**13,230,103**	**15,656,038**	**14,748,266**	**14,492,640**	**17,027,353**

HISTORICAL LEVY AMOUNTS

2018 LEVY	$ 9,395,242	8.36%
2019 LEVY	$ 9,972,432	6.14%
2020 LEVY	$ 10,670,932	7.00%
2021 LEVY	$ 11,060,589	3.65%
2022 LEVY	$ 11,712,590	5.89%
2023 LEVY	$ 13,145,820	12.24%

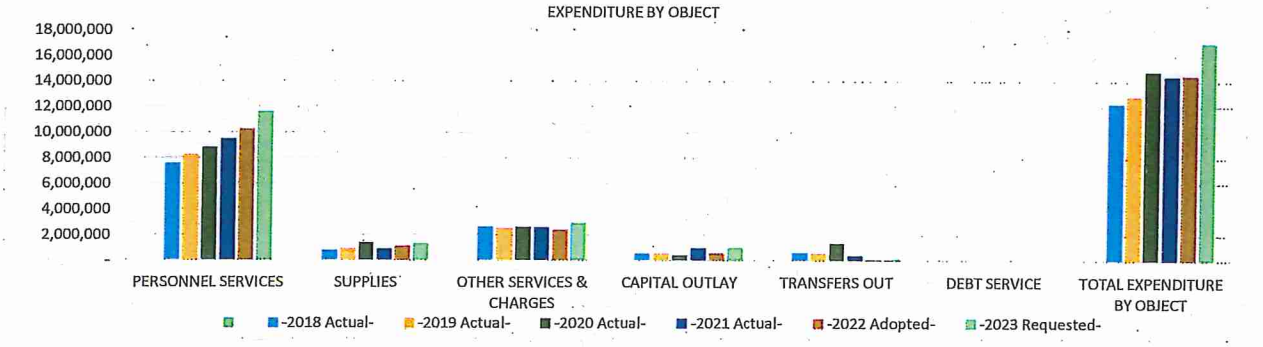


GENERAL FUND 101 - REVENUE BY SOURCE		-2018 Actual-	-2019 Actual-	-2020 Actual-	-2021 Actual-	-2022 Adopted-	-2023 Requested-
TAXES							
4011	CURRENT-AD VALOREM TAXES	7,821,806	8,383,643	8,929,345	9,415,148	10,212,590	11,570,820
401A	CURRENT-UNCOLLECTED ALLOWANCE		-	-	-	(100,000)	(100,000)
4012	DELINQUENT-AD VALOREM TAXES	57,625	37,958	39,951	112,159	40,000	40,000
4014	FISCAL DISPARITIES	1,472,625	1,477,121	1,607,454	1,645,441	1,500,000	1,575,000
4015	EXCESS TAX INCREMENTS	16	179	-	-	-	-
4018	PENALTY/INT-AD VALOREM TAXES	9,921	3,104	1,056	11,745	3,000	3,000
TAXES Total		**9,361,993**	**9,902,004**	**10,577,806**	**11,184,493**	**11,655,590**	**13,088,820**
LICENSES AND PERMITS							
- BUSINESS LICENSES/PERMITS							
4140	CREDIT CARD PROCESSING FEES	(11,494)	(5,960)	(2,032)	(2,994)	(4,000)	(4,000)
4155	LIQUOR-ON SALE	55,500	48,740	49,348	47,360	50,000	50,000
4156	LIQUOR-OFF SALE	740	-	-	-	-	-
4159	MECHANICAL LICENSE	12,200	14,300	13,550	13,850	12,000	13,000
4163	PAWNSHOP LICENSE	5,891	9,868	4,250	4,250	4,000	4,000
4164	CIGARETTE SALES LICENSE	550	3,050	3,050	3,700	3,000	3,000
4165	REFUSE HAULERS LICENSE	200	450	350	350	400	400
4168	PEDDLERS LICENSE	2,535	2,820	1,910	6,500	4,000	5,000
4170	OTHER BUSINESS LICENSES & PERM	1,125	2,180	2,080	1,360	2,000	2,000
4171	INVESTIGATIVE FEES	414	3,451	1,906	2,684	2,000	2,000
- NON-BUSINESS LICENSES/PERMITS							
4205	BUILDING PERMIT	626,166	577,644	522,922	566,419	400,000	400,000
4206	PLUMBING PERMIT	64,517	46,218	39,175	52,806	40,000	40,000
4207	ANIMAL LICENSE	2,590	1,250	1,110	1,930	-	-
4208	HEATING PERMIT	96,141	53,963	62,471	69,045	50,000	50,000
4209	CONDITIONAL USE PERMIT	3,006	8,750	6,864	8,450	8,000	8,000
4211	SIGN PERMITS	2,101	2,625	2,155	1,550	2,500	2,000
4212	RENTAL LICENSE	6,275	1,525	10,700	5,135	3,000	4,000
4213	FIRE PERMIT	10,160	8,386	10,963	7,550	10,000	10,000
4214	ELECTRICAL INSPECTION PERMIT	100,338	92,148	85,140	90,306	70,000	80,000
4220	SEPTIC SYSTEM PERMIT	32,409	21,159	22,920	21,310	20,000	15,000
4221	URBAN SEWER PERMIT	8,855	2,850	4,408	4,350	5,000	5,000
4222	URBAN WATER PERMIT	8,855	3,525	5,138	5,050	5,000	5,000
4230	OTHER NON-BUSINESS LIC & PERM	2,870	2,280	2,125	6,685	2,000	5,000
LICENSES AND PERMITS Total		**1,031,944**	**901,222**	**850,504**	**917,645**	**688,900**	**699,400**
INTERGOVERNMENTAL REVENUES							
- FEDERAL INTERGOVERNMENTAL							
4253	FEDERAL EXCISE TAX REFUND	8,409	8,863	9,432	9,310	9,000	9,200
4252	FEDERAL GRANTS	-	-	-	-	-	-
- STATE INTERGOVERNMENTAL							
4255	FEDERAL CARES ACT	-	-	2,050,863	-	-	-
4263	MARKET VALUE HOMESTEAD CREDIT	2,902	2,689	2,834	2,963	-	-
4268	MSA FOR STREETS	140,000	150,000	150,000	180,000	200,000	210,000
4269	POLICE - INSURANCE PREMIUM TAX	207,352	228,225	241,001	248,199	230,000	240,000
4271	POST BOARD REIMBURSEMENT	22,968	23,860	24,464	27,820	20,000	20,000
4272	STATE EXCISE TAX REFUND	337	364	522	571	300	500
4273	OTHER STATE GRANTS & AIDS	36,139	28,365	17,282	28,867	15,000	217,000
- LOCAL INTERGOVERNMENTAL							
4287	OTHER LOCAL GOVERNMENT GRANTS	-	-	750	16,000	-	-
INTERGOVERNMENTAL REVENUES Total		**418,106**	**442,366**	**2,497,148**	**513,730**	**474,300**	**696,700**

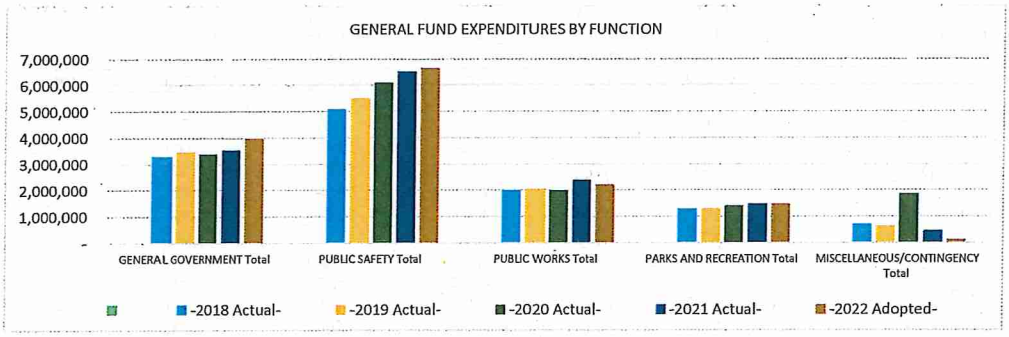
CHARGES FOR SERVICES							
4304	RENTAL FEES - REAL PROPERTY	149,819	153,799	155,808	156,109	130,000	135,000
4305	RENTAL FEES	9,739	11,042	4,804	12,224	12,000	12,000
4306	ZONING & SUBDIVISION FEES	3,739	2,082	1,130	2,585	1,000	2,000
4307	PLAN CHECKING FEES	296,301	241,565	184,169	199,008	198,000	200,000
4308	SALES OF MAPS & PUBLICATIONS	499	358	73	123	100	100
4309	ASSESSMENT SEARCHES	840	630	90	540	200	200
4312	GENERAL GOVERNMENT STAFF TIME	33,889	39,694	41,045	31,870	25,000	25,000
4326	SPECIAL POLICE SERVICES	16,645	21,082	3,325	7,808	5,000	5,000
4327	SPECIAL FIRE PROTECTION SERVIC	55,953	86,157	72,414	23,144	-	-
4328	ACCIDENT REPORTS	1,657	1,373	1,114	1,033	1,000	1,000
4329	OPEN BURN PERMIT FEES	675	975	750	500	1,000	1,000
4330	OTHER PUBLIC SAFETY	6,995	4,935	2,400	5,370	3,000	3,000
4337	ENGINEERING	214,693	200,453	243,514	302,408	200,000	225,000
4338	PLAN & SPECIFICATION FEES	-	-	570	-	-	-
4339	OTHER PUBLIC WORKS	14,862	13,460	15,647	7,860	8,000	8,000
4347	OTHER CULTURE-RECREATION	8,821	12,507	4,334	10,159	5,000	5,000
CHARGES FOR SERVICES Total		**815,127**	**790,112**	**731,187**	**760,740**	**589,300**	**622,300**
FINES AND FORFEITS							
4452	COURT FINES	44,569	45,404	32,505	46,250	40,000	45,000
4453	OTHER FINES & FORFEITS	33	405	291	-	-	-
4454	ADMINISTRATIVE FINES	2,049	3,669	1,940	4,903	5,000	5,000
FINES AND FORFEITS Total		**46,651**	**49,479**	**34,735**	**51,153**	**45,000**	**50,000**
MISCELLANEOUS							
4604	SURCHARGES	689	690	608	675	700	700
4605	ELECTION FILING FEES	55	20	50	-	50	50
4609	OTHER MISCELLANEOUS REVENUES	21,129	15,927	12,202	28,526	15,000	15,000
4608	CONTRIBUTIONS & DONATIONS	-	-	-	-	-	-
MISCELLANEOUS Total		**21,873**	**16,637**	**12,861**	**29,201**	**15,750**	**15,750**
INVESTMENT EARNINGS							
4701	INTEREST ON INVESTMENTS	104,401	174,930	185,750	(29,897)	50,000	25,000
INVESTMENT EARNINGS Total		**104,401**	**174,930**	**185,750**	**(29,897)**	**50,000**	**25,000**
OTHER FINANCING SOURCES							
TRANSFERS IN							
4901	TRANSFER IN FROM OTHER FUNDS	936,450	953,354	766,049	1,321,201	973,800	1,829,383
OTHER FINANCING SOURCES Total		**936,450**	**953,354**	**766,049**	**1,321,201**	**973,800**	**1,829,383**
TOTAL REVENUE		**12,736,544**	**13,230,103**	**15,656,038**	**14,748,266**	**14,492,640**	**17,027,353**

GENERAL FUND 101 - LINE ITEM DETAIL	-2018 Actual-	-2019 Actual-	-2020 Actual-	-2021 Actual-	-2022 Adopted-	-2023 Requested-
4901 Other Finance Sources						
Water Fund Administrative Transfer	41,000	43,000	45,000	47,000	49,000	51,000
Sewer Fund Administrative Transfer	35,000	37,000	39,000	41,000	43,000	45,000
St. Lighting Fund Administrative Transfer	20,000	21,000	22,000	23,000	25,000	27,000
Recycling Fund Administrative Transfer	11,500	-	-	-		
Storm Water Utility Fund Administrative Transfer	30,000	32,000	34,000	36,000	38,000	40,000
PW Campus Fund					20,000	750,000
ARPA Funds	-	-	-	-	-	375,000
Landfill Fund	-	-	-	1,000,000	63,000	-
Capital Maintenance Fund - For Trail Maintenance	-	50,000	60,000	60,000	60,000	70,000
Capital Maintenance Fund - For Capital Improvements	-				35,000	-
Insurance Fund	22,588	-	-	-		-
Fleet Vehicle Fund	-	87,000	-	-	17,800	104,310
PIR Fund-Street Maintenance	100,000	125,000	125,000	125,000	150,000	175,000
Equipment Revolving Fund	676,362	558,354	471,000	90,200	473,000	192,073
	936,450	953,354	796,000	1,422,200	973,800	1,829,383

EXPENDITURE BY OBJECT SUMMARY	-2018 Actual-	-2019 Actual-	-2020 Actual-	-2021 Actual-	-2022 Adopted-	-2023 Requested-
PERSONNEL SERVICES	7,570,878	8,240,485	8,859,253	9,471,467	10,261,237	11,609,269
SUPPLIES	789,128	913,056	1,413,878	915,468	1,136,500	1,326,261
OTHER SERVICES & CHARGES	2,632,664	2,502,520	2,626,465	2,577,885	2,399,730	2,939,067
CAPITAL OUTLAY	565,955	549,084	467,070	977,809	588,800	1,046,383
TRANSFERS OUT	643,832	575,817	1,376,215	409,801	106,373	106,373
DEBT SERVICE	61,853	61,853	61,853	61,853	-	-
TOTAL EXPENDITURE BY OBJECT	**12,264,311**	**12,842,815**	**14,804,733**	**14,414,283**	**14,492,640**	**17,027,353**



EXPENDITURE BY OBJECT RECAP ALL SUB-FUNCTIONS		-2018 Actual-	-2019 Actual-	-2020 Actual-	-2021 Actual-	-2022 Adopted-	-2023 Requested-
GENERAL GOVERNMENT							
0111	MAYOR AND COUNCIL	125,890	118,969	104,534	100,563	98,578	129,607
0114	CHARTER/PLAN/HORSE COMMISSIONS	4,141	3,642	3,213	3,666	4,486	3,853
0130	ADMINISTRATION	861,767	812,003	795,368	852,730	901,971	1,019,778
0141	ELECTIONS	59,959	22,103	53,763	7,784	55,523	6,650
0153	FINANCE	350,532	367,590	379,167	408,717	384,935	386,910
0155	ASSESSING	140,246	143,667	147,722	120,463	150,000	130,000
0161	LEGAL	121,965	152,821	124,533	125,477	126,600	126,600
0191	PLANNING & ZONING	583,331	681,120	653,382	733,882	763,831	854,650
0192	DATA PROCESSING	505,957	623,164	582,467	606,281	796,584	818,662
0194	GENERAL GOVERNMENT BUILDINGS	483,815	494,094	501,162	529,125	652,216	667,254
0195	NEWSLETTER	54,043	48,885	45,123	52,132	53,317	59,080
GENERAL GOVERNMENT Total		**3,291,647**	**3,468,059**	**3,390,435**	**3,540,820**	**3,988,041**	**4,203,044**
PUBLIC SAFETY							
0211	POLICE PROTECTION	3,502,113	3,794,498	4,122,916	4,547,484	4,784,883	5,505,623
0220	FIRE PROTECTION	999,255	1,024,125	1,384,635	1,352,166	1,220,790	1,761,760
0240	PROTECTIVE INSPECTIONS	450,223	600,831	519,585	538,198	495,512	721,415
0250	CIVIL DEFENSE	11,627	15,164	2,288	3,287	43,350	43,350
0260	TRAFFIC ENGINEERING	124,516	59,904	68,686	71,628	97,442	111,706
0270	ANIMAL CONTROL	4,381	4,336	993	743	3,250	6,250
0280	COMMUNITY ORIENTING POLICING	10,990	12,888	13,092	13,115	14,675	16,125
PUBLIC SAFETY Total		**5,103,105**	**5,511,745**	**6,112,194**	**6,526,621**	**6,659,902**	**8,166,229**
PUBLIC WORKS							
0301	ENGINEERING	229,140	379,804	383,947	381,476	487,638	554,975
0311	STREET MAINTENANCE	1,474,670	1,306,948	1,336,038	1,747,168	1,399,064	1,973,774
0312	SNOW & ICE REMOVAL	301,233	360,301	289,211	264,815	342,797	342,822
PUBLIC WORKS Total		**2,005,042**	**2,047,054**	**2,009,196**	**2,393,459**	**2,229,499**	**2,871,571**
PARKS AND RECREATION							
0452	PARK & RECREATION	1,292,547	1,283,410	1,418,871	1,481,802	1,483,825	1,661,536
0455	COMMUNITY PROGRAMS	10,000	20,000	-	-	-	-
0461	ENVIRONMENTAL SERVICES			-	-	-	-
PARKS AND RECREATION Total		**1,302,547**	**1,303,410**	**1,418,871**	**1,481,802**	**1,483,825**	**1,661,536**
MISCELLANEOUS/CONTINGENCY							
0892	EXPENDITURE RESERVE	705,685	637,670	1,875,063	474,396	131,373	124,973
MISCELLANEOUS/CONTINGENCY Total		**705,685**	**637,670**	**1,875,063**	**474,396**	**131,373**	**124,973**
TOTAL EXPENDITURES & OTHER FINANCING		**12,408,025**	**12,967,938**	**14,805,758**	**14,417,097**	**14,492,640**	**17,027,353**



EXPENDITURE BY OBJECT RECAP ALL SUB-FUNCTIONS		-2018 Actual-	-2019 Actual-	-2020 Actual-	-2021 Actual-	-2022 Adopted-	-2023 Requested-
PERSONNEL SERVICES							
WAGES AND SALARIES							
6102	F.T. REGULAR-WAGES & SALARIES	5,118,209	5,513,787	5,908,446	6,275,314	6,858,133	7,629,646
6103	FULL TIME-REGULAR-OVERTIME	123,989	146,188	148,960	166,477	127,700	134,000
6104	PART TIME-WAGES & SALARIES	462,116	496,943	539,851	577,699	596,408	809,700
6105	TEMPORARY-WAGES & SALARIES	154,422	149,284	167,447	133,432	207,967	158,862
6106	OVERTIME-TEMPORARY	1,404	926	259	878	-	-
6107	OVERTIME-PART TIME	-	1,905	1,408	-	-	-
WAGES AND SALARIES		**5,860,140**	**6,309,033**	**6,766,371**	**7,153,799**	**7,790,208**	**8,732,208**
OTHER GROSS EARNINGS							
6108	SEVERANCE PAY	33,314	45,355	-	67,885	-	-
OTHER GROSS EARNINGS		**33,314**	**45,355**	**-**	**67,885**	**-**	**-**
EMPLOYER CONTRIBUTIONS							
6121	PERA CONTRIBUTIONS	607,458	678,558	754,905	807,600	874,133	955,726
6122	FICA/MEDICARE CONTRIBUTIONS	293,341	315,349	327,544	350,762	405,969	446,291
6123	ICMA RETIREMENT TRUST	2,000	2,000	2,000	2,000	2,000	-
6131	GROUP INSURANCE	594,449	683,256	764,786	848,602	889,527	1,037,210
6132	DISABILITY INSURANCE	1,284	1,313	1,313	1,313	1,300	1,313
6133	WORKERS COMP INSURANCE PREMIUM	178,892	205,620	242,334	239,505	298,100	436,521
EMPLOYER CONTRIBUTIONS		**1,677,424**	**1,886,097**	**2,092,882**	**2,249,782**	**2,471,029**	**2,877,061**
PERSONNEL SERVICES Total		**7,570,878**	**8,240,485**	**8,859,253**	**9,471,467**	**10,261,237**	**11,609,269**
SUPPLIES							
OFFICE SUPPLIES							
6203	DUPLICATING SUPPLY & COPY PAPE	3,596	2,174	4,725	2,174	4,500	5,000
6204	STATIONERY, ENVELOPES & FORMS	4,764	4,725	4,784	3,872	6,500	6,750
6205	DRAFTING SUPPLIES	-	-	-	-	-	-
6206	FILM, MICROFILM, TAPES, DISKS	1,150	1,983	837	568	1,900	1,600
6207	TRAINING SUPPLIES	1,951	2,565	3,609	3,154	3,550	12,700
6208	MISCELLANEOUS OFFICE SUPPLIES	15,723	12,357	9,440	8,460	13,300	12,375
OFFICE SUPPLIES		**27,184**	**23,804**	**23,395**	**18,228**	**29,750**	**38,425**
OPERATING SUPPLIES							
6221	CLEANING SUPPLIES	1,946	1,503	1,391	2,496	3,000	3,500
6223	GASOLINE	108,942	105,124	98,273	129,654	112,500	188,500
6225	DIESEL FUEL	44,225	57,591	39,882	42,031	54,000	71,900
6227	LUBRICANTS & ADDITIVES	4,011	6,247	4,486	7,580	5,600	6,200
6229	SHOP MATERIALS	4,008	2,537	4,149	5,781	4,700	4,800
6231	UNIFORMS & TURN-OUT GEAR	56,745	63,103	104,570	92,594	111,750	139,450
6233	BATTERIES	1,105	1,071	652	1,262	2,000	2,000
6235	AMMUNITION	7,135	9,386	15,970	1,700	12,000	12,000
6237	CRIME SCENE KIT MATERIALS	894	669	368	1,843	1,000	1,000
6239	FIRST AID SUPPLIES	17,964	2,560	12,345	5,922	10,300	10,500
6241	COMMUNITY POLICING SUPPLIES	4,880	7,750	10,310	9,190	9,000	10,000
6247	HAPPY DAYS SUPPLIES	11,750	12,000	-	7,000	7,000	12,000
6249	MISCELLANEOUS OPERATING SUPPLY	114,828	113,972	118,336	100,912	132,200	140,550
6246	MARKETING	1,391	1,210	-	1,051	3,000	3,000
OPERATING SUPPLIES		**379,822**	**384,725**	**410,732**	**409,016**	**468,050**	**605,400**
REPAIR AND MAINTENANCE SUPPLIES							
6251	BATTERIES	2,051	812	678	516	3,000	2,500
6253	BRAKES	2,281	2,342	3,421	3,466	3,000	3,500
6255	TIRES	6,427	7,271	7,458	10,708	8,000	9,000
6257	OTHER VEHICLE PARTS	99,426	98,407	122,447	77,127	114,000	118,700
6259	BUILDING MAINT/REPAIR SUPPLIES	3,852	14,227	4,028	20,639	42,500	45,522
6261	SAND & GRAVEL	2,355	4,726	2,907	-	4,000	4,400
6263	SALT	72,544	97,334	92,362	68,800	112,000	77,000
6265	ASPHALT	53,060	107,676	120,283	134,086	129,000	140,794
6266	SCBA-PARTS	2,292	4,843	4,679	4,055	6,000	20,000
6267	OTHER STREET MAINTENANCE SUPPL	4,279	7,353	4,798	5,303	5,800	13,100
6269	LANDSCAPE MATERIALS	28,460	24,972	18,304	12,623	32,500	27,500
6271	SIGN REPAIR MATERIALS	-	121	382	-	2,000	2,000
6275	OTHER EQUIPMENT PARTS	4,362	6,158	662	3,074	6,100	7,500
6268	IRRIGATION SUPPLIES	15,111	9,317	13,000	6,025	15,000	10,000
REPAIR AND MAINTENANCE SUPPLIES		**296,500**	**385,559**	**395,411**	**346,421**	**482,900**	**481,516**
SMALL TOOLS AND MINOR EQUIPMENT							
6282	EMERGENCY SUPPLIES - COVID	-	-	436,995	-	-	-
6281	SMALL TOOLS & MINOR EQUIPMENT	85,622	118,464	147,294	141,803	155,600	200,720
SMALL TOOLS AND MINOR EQUIPMENT		**85,622**	**118,464**	**584,290**	**141,803**	**155,600**	**200,720**
MERCHANDISE FOR RESALE							
6291	CULVERTS, SIGNS, STREET SUPPLY	-	505	50	-	200	200
MERCHANDISE FOR RESALE		**-**	**505**	**50**	**-**	**200**	**200**
SUPPLIES Total		**789,128**	**913,056**	**1,413,878**	**915,468**	**1,136,500**	**1,326,261**

OTHER SERVICES & CHARGES							
PROFESSIONAL SERVICES							
6302	AUDITING & ACCOUNTING SERVICES	34,235	36,580	36,455	42,501	39,000	43,800
6304	LEGAL FEES	120,873	151,343	123,305	124,320	125,000	125,000
6305	MEDICAL/PSYCHOLOGICAL FEES	9,391	6,425	-	-	-	-
6306	PERSONNEL TESTING & RECRUITMT	1,598	800	14,042	16,825	16,050	20,000
6315	MISCELLANEOUS PROFESSIONAL SER	435,732	422,044	392,060	289,515	258,500	275,000
PROFESSIONAL SERVICES		**601,829**	**617,192**	**565,862**	**473,160**	**438,550**	**463,800**
COMMUNICATION							
6321	TELEPHONE	18,190	17,842	15,787	15,624	16,900	15,000
6322	POSTAGE	18,564	17,517	16,852	19,170	22,355	23,004
6323	CELLULAR PHONES	34,945	33,701	35,590	39,113	47,150	50,520
6325	LONG DISTANCE CHARGES	-	-	-	-	-	-
COMMUNICATION		**71,699**	**69,060**	**68,229**	**73,907**	**86,405**	**88,524**
EMPLOYEE REIMBURSEMENTS							
6331	TRAVEL & LODGING	8,060	11,972	3,012	6,500	13,300	15,650
6334	MILEAGE REIMBURSEMENT	2	639	170	93	950	1,250
6335	TRAINING	76,282	91,174	71,345	95,871	107,750	122,945
EMPLOYEE REIMBURSEMENTS		**84,344**	**103,785**	**74,528**	**102,463**	**122,000**	**139,845**
ADVERTISING AND PUBLISHING							
6352	GENERAL NOTICE & PUBLIC INFOR	40,224	34,969	30,311	35,265	36,500	42,500
6353	ORDINANCE PUBLICATION	941	876	2,575	1,301	2,000	2,000
6354	HELP WANTED ADVERTISEMENTS	3,850	2,305	1,905	3,276	2,500	3,500
ADVERTISING AND PUBLISHING		**45,015**	**38,150**	**34,790**	**39,841**	**41,000**	**48,000**
INSURANCE							
6361	GENERAL LIABILITY/PROPERTY INS	127,215	145,692	154,021	154,910	189,510	199,601
INSURANCE		**127,215**	**145,692**	**154,021**	**154,910**	**189,510**	**199,601**
UTILITIES							
6371	ELECTRIC UTILITIES	161,824	153,221	158,084	170,313	193,200	198,200
6372	WATER/IRRIGATION	19,775	15,205	22,127	24,446	23,000	27,200
6373	GAS	44,072	45,139	33,540	51,899	66,000	80,000
6374	REFUSE/RECYCLING	12,728	12,945	12,803	15,322	13,400	11,450
UTILITIES		**238,398**	**226,511**	**226,554**	**261,980**	**295,600**	**316,850**
REPAIRS AND MAINTENANCE - LABOR							
6381	BUILDING & STRUCTURE REPAIR	33,741	19,827	27,600	23,340	28,200	35,200
6382	MACHINERY & EQUIPMENT REPAIR	43,700	33,424	28,075	34,588	50,500	50,500
6383	OFFICE EQUIPMENT REPAIR	-	-	-	-	-	-
6386	BRAKE REPAIR	-	-	-	-	-	-
6387	TIRE MOUNTING & BALANCING	278	160	300	255	400	400
6388	OTHER VEHICLE REPAIR	71,178	102,635	72,106	73,784	78,500	89,500
6389	TOWING SERVICES	3,224	1,623	2,037	240	3,000	3,500
REPAIRS AND MAINTENANCE - LABOR		**152,122**	**157,669**	**130,118**	**132,207**	**160,600**	**179,100**
REPAIRS AND MAINTENANCE - CONTRACTS							
6404	MACHINERY & EQUIPMENT	1,221	1,332	1,332	1,221	1,500	-
6405	OFFICE & DATA PROCESSING EQUIP	336,747	344,102	366,660	415,748	379,328	439,497
REPAIRS AND MAINTENANCE - CONTRACTS		**337,968**	**345,433**	**367,991**	**416,968**	**380,828**	**439,497**
RENTALS							
6413	OFFICE EQUIPMENT RENTAL	5,966	4,837	5,995	5,265	6,000	6,000
6415	OTHER EQUIPMENT RENTAL	93,483	119,147	36,671	46,406	54,125	54,325
6416	MACHINERY RENTAL	-	275	-	-	300	300
6417	UNIFORM RENTAL	1,530	1,948	1,710	1,841	800	800
RENTALS		**100,979**	**126,208**	**44,376**	**53,512**	**61,225**	**61,425**
DUES, SUBSCRIPTIONS, AND REGISTRATION FEES							
6451	MEMBERSHIP DUES	56,703	58,318	48,325	44,801	49,812	50,725
6452	SUBSCRIPTIONS	799	2,238	1,321	1,216	1,900	1,900
DUES, SUBSCRIPTIONS, AND REGISTRATION FEES		**57,502**	**60,556**	**49,647**	**46,017**	**51,712**	**52,625**
BOOKS AND PAMPHLETS							
6471	BOOKS & PAMPHLETS	3,055	862	2,331	1,132	3,300	3,800
BOOKS AND PAMPHLETS		**3,055**	**862**	**2,331**	**1,132**	**3,300**	**3,800**
CONTRACTED SERVICES							
6488	STREET MAINTENANCE CONTRACT	467,265	237,483	500,000	462,784	200,000	575,000
6489	OTHER CONTRACTED SERVICES	345,273	373,918	408,019	359,004	369,000	371,000
CONTRACTED SERVICES		**812,538**	**611,401**	**908,019**	**821,788**	**569,000**	**946,000**
OTHER SERVICES & CHARGES Total		**2,632,664**	**2,502,520**	**2,626,465**	**2,577,885**	**2,399,730**	**2,939,067**
CAPITAL OUTLAY							
CAPITAL OUTLAY							
6520	BUILDINGS	-	-	-	-	-	-
6540	HEAVY MACHINERY	220,423	185,980	42,861	116,891	265,800	270,950
6550	MOTOR VEHICLES	98,487	145,289	351,094	477,246	109,000	701,578
6580	OTHER EQUIPMENT	247,045	136,289	48,692	383,672	184,000	73,855
6585	COMPUTER HARDWARE/SOFTWARE	-	81,526	24,423	-	30,000	-
CAPITAL OUTLAY		**565,955**	**549,084**	**467,070**	**977,809**	**588,800**	**1,046,383**
CAPITAL OUTLAY Total		**565,955**	**549,084**	**467,070**	**977,809**	**588,800**	**1,046,383**
TRANSFERS OUT							
OPERATING TRANSFERS							
6820	OPERATING TRANSFERS TO OTHER F	643,832	575,817	1,376,215	409,801	106,373	106,373

OPERATING TRANSFERS	643,832	575,817	1,376,215	409,801	106,373	106,373
TRANSFERS OUT Total	**643,832**	**575,817**	**1,376,215**	**409,801**	**106,373**	**106,373**
DEBT SERVICE						
DEBT SERVICE						
6603 OTHER L.T. OBLIGATION PRINCIPA	61,853	61,853	61,853	61,853	-	-
DEBT SERVICE	61,853	61,853	61,853	61,853	-	-
DEBT SERVICE Total	**61,853**	**61,853**	**61,853**	**61,853**	**-**	**-**
TOTAL EXPENDITURES & OTHER FINANCING	12,264,311	12,842,815	14,804,733	14,414,283	14,492,640	17,027,353

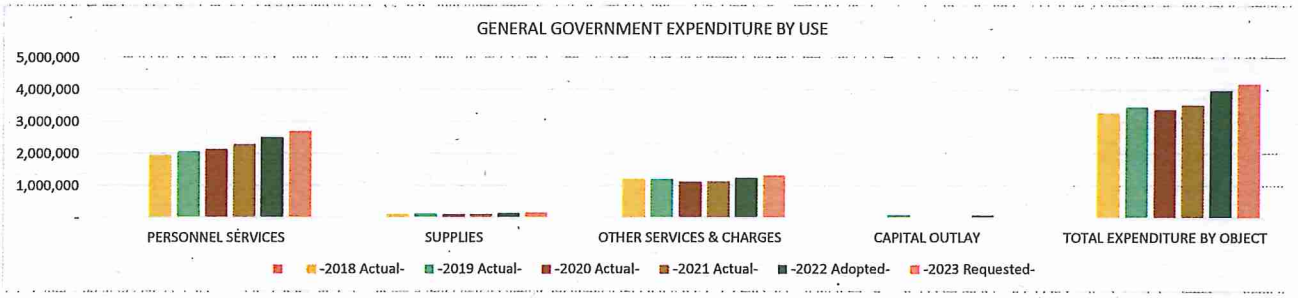
FUND: GENERAL

Business Unit	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
REVENUE				
9101 - GENERAL FUND REVENUE	15,656,715	14,748,266	14,492,640	17,027,353
TOTAL REVENUE	**15,656,715**	**14,748,266**	**14,492,640**	**17,027,353**
EXPENDITURES				
111 - MAYOR AND COUNCIL	104,534	100,563	98,578	129,607
114 - COMMISSIONS	3,213	3,666	4,486	3,853
130 - ADMINISTRATION	795,368	852,730	901,971	1,019,778
141 - ELECTIONS	53,763	7,784	55,523	6,650
153 - FINANCE	379,167	408,717	384,935	386,910
155 - ASSESSING	147,722	120,463	150,000	130,000
161 - LEGAL SERVICES	124,533	125,477	126,600	126,600
191 - PLANNING AND ZONING	653,382	733,882	763,831	854,650
192 - DATA PROCESSING	582,467	606,281	796,584	818,662
194 - GENERAL GOVERNMENT BUILDINGS	501,162	529,125	652,216	667,254
195 - NEWSLETTER	45,123	52,132	53,317	59,080
211 - POLICE PROTECTION	4,122,916	4,547,484	4,784,883	5,505,623
220 - FIRE PROTECTION	1,384,635	1,352,166	1,220,790	1,761,760
240 - BUILDING INSPECTION	519,585	538,198	495,512	721,415
250 - CIVIL DEFENSE	2,288	3,287	43,350	43,350
260 - TRAFFIC ENGINEERING	68,686	71,628	97,442	111,706
270 - ANIMAL CONTROL	993	743	3,250	6,250
280 - COMMUNITY ORIENTING POLICING	13,092	13,115	14,675	16,125
301 - ENGINEERING	383,947	381,476	487,638	554,975
311 - STREET MAINTENANCE	1,336,038	1,747,168	1,399,064	1,973,774
312 - SNOW AND ICE REMOVAL	289,211	264,815	342,797	342,822
452 - PARK AND RECREATION	1,418,871	1,481,802	1,483,825	1,661,536
892 - MISCELLANEOUS/CONTINGENCY	1,875,063	474,396	131,373	124,973
TOTAL EXPENDITURES	**14,805,758**	**14,417,097**	**14,492,640**	**17,027,353**
Excess (deficiency) of revenue over expenditures	850,956.54	331,168.36	-	-

GENERAL FUND 101 - GENERAL GOVERNMENT

GENERAL GOVERNMENT	111-195

EXPENDITURE BY OBJECT SUMMARY	-2018 Actual-	-2019 Actual-	-2020 Actual-	-2021 Actual-	-2022 Adopted-	-2023 Requested-
PERSONNEL SERVICES	1,952,471	2,064,540	2,140,494	2,289,527	2,520,685	2,711,907
SUPPLIES	115,396	120,179	98,236	112,476	148,400	166,295
OTHER SERVICES & CHARGES	1,212,768	1,201,658	1,127,282	1,138,745	1,243,956	1,324,842
CAPITAL OUTLAY	-	81,526	24,423	-	75,000	-
TOTAL EXPENDITURE BY OBJECT	**3,280,635**	**3,467,904**	**3,390,435**	**3,540,747**	**3,988,041**	**4,203,044**



LINE ITEM DETAIL BY COST CENTER OR SUB-FUNCTION

GENERAL GOVERNMENT	111-195

EXPENDITURE BY OBJECT RECAP ALL SUB-FUNCTIONS	-2018 Actual-	-2019 Actual-	-2020 Actual-	-2021 Actual-	-2022 Adopted-	-2023 Requested-
PERSONNEL SERVICES						
WAGES AND SALARIES						
6102 F.T. REGULAR-WAGES & SALARIES	1,362,167	1,432,355	1,520,613	1,599,305	1,788,541	1,923,768
6103 FULL TIME-REGULAR-OVERTIME	5,289	2,645	4,762	2,051	1,700	-
6104 PART TIME-WAGES & SALARIES	110,163	154,597	120,512	124,988	144,468	167,400
6105 TEMPORARY-WAGES & SALARIES	55,266	31,496	37,425	20,245	39,000	3,500
6107 OVERTIME-PART TIME	-	1,905	1,408	-	-	-
TOTAL WAGES AND SALARIES	**1,532,885**	**1,622,998**	**1,684,720**	**1,746,589**	**1,973,709**	**2,094,668**
OTHER GROSS EARNINGS						
6108 SEVERANCE PAY	22,741	14,464	-	63,330	-	-
TOTAL OTHER GROSS EARNINGS	**22,741**	**14,464**	**-**	**63,330**	**-**	**-**
EMPLOYER CONTRIBUTIONS						
6121 PERA CONTRIBUTIONS	105,289	112,726	117,717	124,209	139,772	151,514
6122 FICA/MEDICARE CONTRIBUTIONS	110,784	117,515	119,590	128,509	155,167	168,547
6123 ICMA RETIREMENT TRUST	2,000	2,000	2,000	2,000	2,000	-
6131 GROUP INSURANCE	165,274	178,168	197,561	209,243	223,919	263,827
6133 WORKERS COMP INSURANCE PREMIUM	13,499	16,670	18,906	15,646	26,118	33,351
TOTAL EMPLOYER CONTRIBUTIONS	**396,845**	**427,079**	**455,775**	**479,607**	**546,976**	**617,239**
Total PERSONNEL SERVICES	**1,952,471**	**2,064,540**	**2,140,494**	**2,289,527**	**2,520,685**	**2,711,907**
SUPPLIES						
OFFICE SUPPLIES						
6203 DUPLICATING SUPPLY & COPY PAPE	3,596	2,174	4,725	2,174	4,500	5,000
6204 STATIONERY, ENVELOPES & FORMS	2,870	1,472	1,242	1,579	3,400	3,600
6206 FILM, MICROFILM, TAPES, DISKS	-	-	-	-	-	-
6208 MISCELLANEOUS OFFICE SUPPLIES	10,084	4,052	5,918	4,711	6,650	6,675
TOTAL OFFICE SUPPLIES	**16,550**	**7,698**	**11,886**	**8,464**	**14,550**	**15,275**
OPERATING SUPPLIES						
6221 CLEANING SUPPLIES	1,946	1,503	1,391	2,496	3,000	3,500
6223 GASOLINE	3,111	2,466	1,543	2,455	3,500	4,000
6225 DIESEL FUEL	978	793	758	451	1,000	1,500
6231 UNIFORMS & TURN-OUT GEAR	2,278	1,605	2,269	1,575	2,000	2,000
6247 HAPPY DAYS SUPPLIES	11,750	12,000	-	7,000	7,000	12,000
6249 MISCELLANEOUS OPERATING SUPPLY	42,942	32,969	35,036	35,526	42,850	42,800
6246 MARKETING	1,391	1,210	-	1,051	3,000	3,000
TOTAL OPERATING SUPPLIES	**64,396**	**52,547**	**40,997**	**50,554**	**62,350**	**68,800**
REPAIR AND MAINTENANCE SUPPLIES						
6257 OTHER VEHICLE PARTS	1,168	4,101	623	280	1,500	1,500
6259 BUILDING MAINT/REPAIR SUPPLIES	3,067	4,001	1,994	4,036	7,000	7,000
TOTAL REPAIR AND MAINTENANCE SUPPLIES	**4,236**	**8,103**	**2,617**	**4,316**	**8,500**	**8,500**
SMALL TOOLS AND MINOR EQUIPMENT						
6281 SMALL TOOLS & MINOR EQUIPMENT	30,214	51,832	42,736	49,142	63,000	73,720
TOTAL SMALL TOOLS AND MINOR EQUIPMENT	**30,214**	**51,832**	**42,736**	**49,142**	**63,000**	**73,720**
Total SUPPLIES	**115,396**	**120,179**	**98,236**	**112,476**	**148,400**	**166,295**
OTHER SERVICES & CHARGES						
PROFESSIONAL SERVICES						
6302 AUDITING & ACCOUNTING SERVICES	30,485	32,680	32,405	38,260	35,000	39,500
6304 LEGAL FEES	120,873	151,343	123,305	124,320	125,000	125,000
6305 MEDICAL/PSYCHOLOGICAL FEES	9,391	6,425	-	-	-	-
6306 PERSONNEL TESTING & RECRUITMT	1,598	800	14,042	16,825	16,050	20,000
6315 MISCELLANEOUS PROFESSIONAL SER	198,252	148,577	110,803	60,556	65,000	85,000
TOTAL PROFESSIONAL SERVICES	**360,599**	**339,824**	**280,554**	**239,961**	**241,050**	**269,500**
COMMUNICATION						
6321 TELEPHONE	10,829	10,261	8,838	9,368	16,900	15,000
6322 POSTAGE	15,031	13,119	14,202	14,529	16,605	17,050
6323 CELLULAR PHONES	6,878	5,136	4,554	5,743	47,150	50,520
6325 LONG DISTANCE CHARGES	-	-	-	-	-	-
TOTAL COMMUNICATION	**32,738**	**28,515**	**27,594**	**29,640**	**80,655**	**82,570**

EMPLOYEE REIMBURSEMENTS							
6331	TRAVEL & LODGING	2,700	7,938	155	804	6,000	6,500
6334	MILEAGE REIMBURSEMENT	2	111	-	-	200	500
6335	TRAINING	12,514	19,771	7,611	16,580	23,000	29,300
TOTAL EMPLOYEE REIMBURSEMENTS		**15,215**	**27,820**	**7,765**	**17,385**	**29,200**	**36,300**
ADVERTISING AND PUBLISHING							
6352	GENERAL NOTICE & PUBLIC INFOR	40,224	34,969	30,311	35,265	36,500	42,500
6353	ORDINANCE PUBLICATION	941	876	2,575	1,301	2,000	2,000
6354	HELP WANTED ADVERTISEMENTS	3,850	2,305	1,905	3,276	2,500	3,500
TOTAL ADVERTISING AND PUBLISHING		**45,015**	**38,150**	**34,790**	**39,841**	**41,000**	**48,000**
INSURANCE							
6361	GENERAL LIABILITY/PROPERTY INS	29,491	33,983	34,162	35,616	44,660	45,401
TOTAL INSURANCE		**29,491**	**33,983**	**34,162**	**35,616**	**44,660**	**45,401**
UTILITIES							
6371	ELECTRIC UTILITIES	98,140	90,508	94,612	99,184	100,000	112,000
6372	WATER/IRRIGATION	3,044	2,057	2,853	2,412	4,000	3,200
6373	GAS	28,789	29,313	20,395	30,273	30,000	42,000
6374	REFUSE/RECYCLING	3,882	4,790	5,230	4,852	5,300	5,650
TOTAL UTILITIES		**133,854**	**126,668**	**123,090**	**136,723**	**139,300**	**162,850**
REPAIRS AND MAINTENANCE - LABOR							
6381	BUILDING & STRUCTURE REPAIR	12,463	7,641	9,855	7,747	15,000	22,000
6382	MACHINERY & EQUIPMENT REPAIR	12,587	11,461	12,554	13,193	22,000	22,000
6388	OTHER VEHICLE REPAIR	1,771	1,845	343	2,043	1,500	1,500
TOTAL REPAIRS AND MAINTENANCE - LABOR		**26,821**	**20,947**	**22,752**	**22,982**	**38,500**	**45,500**
REPAIRS AND MAINTENANCE - CONTRACTS							
6405	OFFICE & DATA PROCESSING EQUIP	295,378	302,488	314,997	366,110	339,794	358,971
TOTAL REPAIRS AND MAINTENANCE - CONTRACTS		**295,378**	**302,488**	**314,997**	**366,110**	**339,794**	**358,971**
RENTALS							
6415	OTHER EQUIPMENT RENTAL	-	-	-	-	-	-
TOTAL RENTALS		**-**	**-**	**-**	**-**	**-**	**-**
DUES, SUBSCRIPTIONS, AND REGISTRATION FEES							
6451	MEMBERSHIP DUES	49,518	51,387	39,559	38,598	38,897	39,850
6452	SUBSCRIPTIONS	799	1,551	1,280	589	1,900	1,900
TOTAL DUES, SUBSCRIPTIONS, AND REGISTRATION FEES		**50,317**	**52,938**	**40,840**	**39,187**	**40,797**	**41,750**
BOOKS AND PAMPHLETS							
6471	BOOKS & PAMPHLETS	-	155	-	-	-	-
TOTAL BOOKS AND PAMPHLETS		**-**	**155**	**-**	**-**	**-**	**-**
CONTRACTED SERVICES							
6489	OTHER CONTRACTED SERVICES	223,340	230,169	240,738	211,300	249,000	234,000
TOTAL CONTRACTED SERVICES		**223,340**	**230,169**	**240,738**	**211,300**	**249,000**	**234,000**
Total OTHER SERVICES & CHARGES		**1,212,768**	**1,201,658**	**1,127,282**	**1,138,745**	**1,243,956**	**1,324,842**
CAPITAL OUTLAY							
CAPITAL OUTLAY							
6520	BUILDINGS	-	-	-	-	-	-
6550	MOTOR VEHICLES	-	-	-	-	45,000	-
6580	OTHER EQUIPMENT	-	-	-	-	-	-
6585	COMPUTER HARDWARE/SOFTWARE	-	81,526	24,423	-	30,000	-
TOTAL CAPITAL OUTLAY		**-**	**81,526**	**24,423**	**-**	**75,000**	**-**
Total CAPITAL OUTLAY		**-**	**81,526**	**24,423**	**-**	**75,000**	**-**
TOTAL EXPENDITURES & OTHER FINANCING		**3,280,635**	**3,467,904**	**3,390,435**	**3,540,747**	**3,988,041**	**4,203,044**
					3540820		

FUND GENERAL

DEPARTMENT: MAYOR AND COUNCIL
FUNCTION: GENERAL GOVERNMENT

BUDGET SUMMARY:

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0111	6104	PART TIME-WAGES & SALARIES	31,412	36,932	33,605	40,350	38,000	46,400
0111	6121	PERA CONTRIBUTIONS	600	775	1,002	1,300	1,000	1,300
0111	6122	FICA/MEDICARE CONTRIBUTIONS	2,403	2,838	2,571	3,093	2,907	3,366
0111	6131	GROUP INSURANCE	3,171	3,648	7,895			
0111	6133	WORKERS COMP INSURANCE PREMIUM	98	130	148	242	224	250
0111	6247	HAPPY DAYS	11,750	12,000	-	7,000	7,000	12,000
0111	6249	MISCELLANEOUS OPERATING SUPPLY	12,698	11,485	6,530	13,684	13,000	14,000
0111	6315	MISCELLANEOUS PROFESSIONAL SER	16,740	-	15,170		-	15,000
0111	6322	POSTAGE	-		-	-		
0111	6331	TRAVEL & LODGING	1,331	2,268	136	-	1,000	1,000
0111	6335	TRAINING	56	753	903	175	1,000	1,000
0111	6361	GENERAL LIABILITY/PROPERTY INS	1,148	1,177	1,070	1,011	1,350	1,291
0111	6451	MEMBERSHIP DUES	44,482	46,963	35,504	33,708	33,097	34,000
Total Expenditure			**125,890**	**118,969**	**104,534**	**100,563**	**98,578**	**129,607**

PERSONNEL COMPLEMENT

Mayor	1.00	1.00	1.00	1.00	1.00	1.00
Council	6.00	6.00	6.00	6.00	6.00	6.00
Mayor and Council Total	7.00	7.00	7.00	7.00	7.00	7.00

6249 Miscellaneous Operating Supplies

Mayor's Prayer Breakfast	400	400	-	270	400	400
Meals for Council Work sessions	3,491	2,861	3,435	3,364	4,000	4,000
Employee Recognition Event	2,439	3,153	2,193	-	2,750	2,750
Tree Lighting	750	1,400	-	8,932	750	750
Gala/Fundraising Events	2,000	1,340	-	225	2,000	2,000
Miscellaneous	3,618	2,331	902	893	3,100	4,100
	12,698	11,485	6,530	13,684	13,000	14,000

6315 Miscellaneous Professional Services

Citizen Survey	16,740		15,170			15,000
	16,740	-	15,170	-	-	15,000

6451 Dues

Anoka County Mediation Services	**2,883**	**2,882**	-	-		
Mississippi River Cities & Towns Initiatives (MRCTI)	**3,000**	-	-	-		
North Metro Mayors Association	**12,008**	**12,008**	**11,768**	**11,533**	**11,417**	**11,575**
North Metro Chamber (EDA)	**370**	**660**	-	-		
Missippi/Champlin Streamgage Agreement			**620**	**620**	**350**	**350**
Anoka Area Chamber of Commerce (EDA)	**410**	**410**	**410**	-		
Association of Metro Municipalities	**4,155**	**8,429**	-	-		
League of Minnesota Cities	**19,765**	**20,627**	**20,723**	**21,525**	**21,300**	**22,046**
MN Mayors Assoc	**30**	**30**	**30**	**30**	**30**	**30**
Metro Cities			-	-		
National League of Cities	**1,861**	**1,917**	**1,953**	-		
	44,482	46,963	35,504	33,708	33,097	34,000

DESCRIPTION OF SERVICES:

The Mayor and Council budget provides for legislative and policy making activities of the city on behalf of the citizens of Ramsey. They provide for the planning and control of all financial activities including approving the tax levy, rates and charges, and approval of expenditures.

BUDGET HIGHLIGHTS

- Citizen Survey - Biannual Survey not completed in 2022 - $15,000
- Happy Days Funding Increase: $5,000
- 1-3 new members on Council

GOALS OF CURRENT YEAR BUDGET:

Establish and implement a Strategic Action Plan
Establish legislative priorities for the City
Maintain a stable tax levy rate
Advocate for Highway 10 Improvements at the State and Federal Level

Performance Measurements:

	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Estimate	2023 Projected
Tax Levy Rate	41.73%	40.35%	39.59%	39.25%	42.24%	TBD

FUND GENERAL

DEPARTMENT: COMMISSIONS
FUNCTION: GENERAL GOVERNMENT

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0114	6105	TEMPORARY-WAGES & SALARIES	3,785	3,335	2,940	3,360	4,000	3,500
0114	6122	FICA/MEDICARE CONTRIBUTIONS	300	255	225	257	383	268
0114	6133	WORKERS COMP INSURANCE PREMIUM	18	16	15	12	43	25
0114	6322	POSTAGE	-		-			
0114	6361	GENERAL LIABILITY/PROPERTY INS	38	36	33	36	60	60
Total Expenditure			**4,141**	**3,642**	**3,213**	**3,666**	**4,486**	**3,853**

PERSONNEL COMPLEMENT						
Charter Commission Members	9.00	9.00	9.00	9.00	9.00	9.00
Planning Commission Members	7.00	7.00	7.00	7.00	7.00	7.00
Commission Total	16.00	16.00	16.00	16.00	16.00	16.00

DESCRIPTION OF SERVICES:

The Commissions budget provides council-appointed committee members tasked to review and provide feedback on city plans, intiatives, and policies. Commissions include: Charter Commission, Economic Development Authority Commission, Environmental Policy Board Commission, Parks and Recreation Commission, and Planning Commission.

BUDGET HIGHLIGHTS

- No Major Changes

GOALS OF CURRENT YEAR BUDGET:

Assist the City Council in the implementation of the City's 3-Year Strategic Action Plan
Implement individual commissions' work plans and missions
Implement and manage individual commissions' budgets

Performance Measurements:

	2018 Actual	2019 Actual	2020 Actual	2021 Projected	2022 Projected	2023 Projected
# of Meetings: Charter Commission	1	2	1	2	2	2
# of Meetings: Economic Development Authority Commission	12	10	12	12	12	12
# of Meetings: Environmental Policy Board Commission	10	10	10	11	11	11
# of Meetings: Parks and Recreation Commission	9	11	11	10	10	10
# of Meetings: Planning Commission	16	13	15	17	17	17
# of Meetings: City Council Regular Session	23	23	23	23	23	23
# of Meetings: City Council Work Session	26	31	26	25	25	25
# of Meetings: Public Works Committee	10	9	10	8	8	8

FUND GENERAL

DEPARTMENT: ADMINISTRATION
FUNCTION: GENERAL GOVERNMENT

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0130	6102	F.T. REGULAR-WAGES & SALARIES	512,646	497,636	524,501	554,618	573,934	649,108
0130	6103	FULL TIME-REGULAR-OVERTIME	1,116	261	1,315			
0130	6104	PART TIME-WAGES & SALARIES	30,124	36,677	580		14,770	24,553
0130	6105	TEMPORARY-WAGES & SALARIES	8,653	9,685	-	9,394	-	
0130	6108	SEVERANCE PAY	22,741	14,464				
0130	6121	PERA CONTRIBUTIONS	37,440	36,244	38,391	40,765	44,603	50,525
0130	6122	FICA/MEDICARE CONTRIBUTIONS	40,475	38,717	37,053	40,080	49,651	56,154
0130	6123	ICMA RETIREMENT TRUST	2,000	2,000	2,000	2,000	2,000	-
0130	6131	GROUP INSURANCE	62,195	58,925	73,945	80,105	74,982	81,197
0130	6133	WORKERS COMP INSURANCE PREMIUM	3,144	3,007	3,210	2,447	4,928	5,941
0130	6203	DUPLICATING SUPPLY & COPY PAPE	3,596	2,174	4,725	2,174	4,500	5,000
0130	6204	STATIONERY, ENVELOPES & FORMS	2,240	1,039	870	738	2,800	3,000
0130	6208	MISCELLANEOUS OFFICE SUPPLIES	8,934	3,046	3,455	2,570	5,000	5,000
0130	6246	MARKETING	1,391	1,210	-	1,051	3,000	3,000
0130	6249	MISCELLANEOUS OPERATING SUPPLY	6,115	4,305	6,527	2,707	6,500	6,500
0130	6305	MEDICAL/PSYCHOLOGICAL FEES	9,391	6,425	-	-		-
0130	6306	PERSONNEL TESTING	1,598	800	14,042	16,825	16,050	20,000
0130	6315	MISCELLANEOUS PROFESSIONAL SER	66,292	44,262	52,159	57,453	55,000	60,000
0130	6321	TELEPHONE	1,518	1,006	1,044	1,082	-	-
0130	6322	POSTAGE	391	356	424	385	1,000	1,000
0130	6323	CELLULAR PHONES	2,566	1,397	883	933	-	-
0130	6331	TRAVEL & LODGING	975	4,409	-	804	3,500	4,000
0130	6334	MILEAGE REIMBURSEMENT	-	111	-	-	200	-
0130	6335	TRAINING	9,877	14,233	4,787	11,598	15,000	20,000
0130	6352	GENERAL NOTICE & PUBLIC INFOR	495	285	570	188	1,000	1,000
0130	6353	ORDINANCE PUBLICATION	941	876	2,575	1,301	2,000	2,000
0130	6354	HELP WANTED ADVERTISEMENTS	3,850	2,305	1,905	3,276	2,500	3,500
0130	6361	GENERAL LIABILITY/PROPERTY INS	7,876	8,008	8,108	8,410	10,000	10,000
0130	6405	OFFICE & DATA PROCESSING EQUIP	9,792	14,129	9,462	9,130	5,153	4,400
0130	6451	MEMBERSHIP DUES	3,053	3,247	2,418	2,109	3,000	3,000
0130	6452	SUBSCRIPTIONS	343	764	421	589	900	900
0130	6489	OTHER CONTRACTED SERVICES	-	-	-			
Total Expenditure			**861,767**	**812,003**	**795,368**	**852,730**	**901,971**	**1,019,778**

PERSONNEL COMPLEMENT						
City Administrator	1.00	1.00	1.00	1.00	1.00	1.00
Assistant City Administrator/Econ Dev Dir	1.00	-	-	-	-	-
Human Resources Manager	1.00	-	-	-	-	-
Director of Administrative Services	-	1.00	1.00	1.00	1.00	1.00
City Clerk	0.50	0.50	-	-	1.00	0.80
Deputy City Clerk	-	-	-	1.00	-	-
HR Generalist	-	-	1.00	1.00	1.00	1.00
HR Specialist	-	-	-	-	1.00	1.00
Administrative Clerks	1.00	1.00	1.00	1.00	1.00	1.00
Mgmt Intern	0.50	0.50	0.50	0.50	-	-
Administrative Assistant	1.50	1.73	1.00	-	-	-
Public Information & Events Specialist	1.00	1.00	1.00	1.00	-	-
Communications Coordinator	-	-	-	-	1.00	1.00
Receptionist	1.00	1.00	1.00	1.00	1.50	1.50
Administration Total	8.50	7.73	7.50	7.50	8.50	8.30

6249 Miscellaneous Operating Supplies						
Employee Recognition	2,810	1,813	1,703	1,713	2,900	2,900
Expenses for staff workshops and other misc. operating supplies.	3,305	2,492	4,824	994	3,600	3,600
	6,115	4,305	6,527	2,707	6,500	6,500

6315 Miscellaneous Professional Services						
Insurance Agent of Record Annual Fee	6,400	7,000	7,000	7,000	7,000	7,000
Excess Liability Insurance Coverage -$1M for total of $3M	22,848	-		-		
Flex Spending(admin & deposit)	4,248	4,248	4,301	5,436	4,800	5,500
Employee Assistance Program-Cobra/HSA/Group Health	1,300	1,300	4,211	3,468	2,800	3,500
City Code Codification	3,609	1,677	2,016	8,266	3,000	8,000
Miscellaneous department charges-WC Deduction	4,324	5,417	6,070	5,193	7,900	10,000
Recruiting Software	3,000	3,000	3,440	3,681	4,000	4,000
Health admin/enrollment	2,900	2,900	4,320		3,500	
Minute Taking	17,663	18,720	20,801	24,410	22,000	22,000
	66,292	44,262	52,159	57,453	55,000	60,000

6451 Dues						
IPMA - National		150	156	-	150	-
ICMA	1,152	1,200	1,300	1,259	1,200	1,375
MCCMA	168	168	338	188	375	350
MAMA	45	45		-	45	45
Miscellaneous	1,088	1,084	474	524	1,230	1,230
HR organizations-misc				138		
Rotary	600	600	150	-	-	
	3,053	3,247	2,418	2,109	3,000	3,000

DESCRIPTION OF SERVICES:

The Administration Department is generally responsible for the execution of city policy/ strategic plan as adopted by the City Council, prepares and maintains official records, provides for the licensing of local businesses and activities as required by state law or city ordinance, provides Human Resource services, and generally oversees the coordination of events and communications for the City.

BUDGET HIGHLIGHTS

- Part-Time Receptionist Full Year funding- 2022 Budget starting date of May 16, 2022
- HR Specialist not budgetd in 2022 but added as full-time position in 2022 $81,044 (2023 Expense)
- Deputy City Clerk Promoted to City Clerk - From 40 hours to 32 hours so budget neutral
- Public Info & Event Specialist Reclassed to Communications Coordinator

GOALS OF CURRENT YEAR BUDGET:

Oversee implementation of the Council Strategic Action Plan and Legislative Priorities
Optimize use of non-city funding through joint projects, grants, and partnerships

FUND GENERAL

DEPARTMENT: ELECTIONS
FUNCTION: GENERAL GOVERNMENT

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0141	6102	F.T. REGULAR-WAGES & SALARIES	7,550	1,716	5,842	388	6,000	-
0141	6103	FULL TIME-REGULAR-OVERTIME	2,189	1,309	1,583		1,700	-
0141	6104	PART TIME-WAGES & SALARIES	1,615	392	1,562	128		-
0141	6105	TEMPORARY-WAGES & SALARIES	34,516	9,264	34,485	1,583	35,000	-
0141	6121	PERA CONTRIBUTIONS	730	256	671	39	578	-
0141	6122	FICA/MEDICARE CONTRIBUTIONS	843	246	677	36	590	-
0141	6133	WORKERS COMP INSURANCE PREMIUM	213	57	212	7	400	-
0141	6208	MISCELLANEOUS OFFICE SUPPLIES	176	-	-	-	-	-
0141	6249	MISCELLANEOUS OPERATING SUPPLY	5,371	1,184	2,602	-	2,600	500
0141	6281	SMALL TOOLS & MINOR EQUIPMENT	5,949	7,425	5,476	5,524	8,000	6,000
0141	6322	POSTAGE	60	36	105	3	105	50
0141	6361	GENERAL LIABILITY/PROPERTY INS	547	219	550	77	550	100
0141	6451	MEMBERSHIP DUES	200	-	-	-	-	
0141	6580	OTHER EQUIPMENT	-	-			-	-
Total Expenditure			**59,959**	**22,103**	**53,763**	**7,784**	55,523	6,650

DESCRIPTION OF SERVICES:

The Elections budget provides funds needed to conduct the national, state, and local elections in accordance with statutory requirements.

BUDGET HIGHLIGHTS

- Non-Election year.
-

Performance Measurements:

	2014	2016	2018	2020	2022	2024
Number of Votes	9097	16927	11764	16483	TBD	
Number of Voters registered Election Day	15130	17280	15890	17428	TBD	
Percent (votes/registered)	60.13%	97.96%	74.03%	94.58%	#VALUE!	#DIV/0!
Number of Wards	4	4	4	4	4	4
Number of Precincts	8	8	8	8	9	9

FUND GENERAL

DEPARTMENT: FINANCE
FUNCTION: GENERAL GOVERNMENT

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0153	6102	F.T. REGULAR-WAGES & SALARIES	246,595	256,779	265,330	276,264	270,855	260,839
0153	6108	SEVERANCE PAY	-	-		11,013		
0153	6121	PERA CONTRIBUTIONS	18,175	18,954	19,489	20,428	20,314	19,563
0153	6122	FICA/MEDICARE CONTRIBUTIONS	17,834	18,222	19,025	20,511	21,266	20,957
0153	6131	GROUP INSURANCE	26,524	28,896	27,432	26,242	19,151	25,801
0153	6133	WORKERS COMP INSURANCE PREMIUM	660	1,395	1,568	1,190	2,249	2,400
0153	6204	STATIONERY, ENVELOPES & FORMS	630	433	372	841	600	600
0153	6208	MISCELLANEOUS OFFICE SUPPLIES	112	390	1,861	264	400	400
0153	6302	AUDITING & ACCOUNTING SERVICES	30,485	32,680	32,405	38,260	35,000	39,500
0153	6321	TELEPHONE	343	447	464	443	-	-
0153	6322	POSTAGE	1,910	1,689	1,574	1,571	2,000	2,000
0153	6335	TRAINING	-	225	1,739	3,002	3,500	2,000
0153	6352	GENERAL NOTICE & PUBLIC INFOR	527	263	296	409	500	500
0153	6361	GENERAL LIABILITY/PROPERTY INS	3,200	3,637	3,874	4,052	4,300	4,500
0153	6451	MEMBERSHIP DUES	659	544	623	777	800	850
0153	6489	OTHER CONTRACTED SERVICES	2,877	3,035	3,114	3,450	4,000	7,000
Total Expenditure			**350,532**	**367,590**	**379,167**	**408,717**	**384,935**	**386,910**

PERSONNEL COMPLEMENT							
Finance Director		1.00	1.00	1.00	1.00	1.00	1.00
Asst. Finance Director		1.00	1.00	1.00	1.00	1.00	1.00
Accountant I		1.00	-	-	-	-	1.00
Accountant II		-	1.00	1.00	-	-	-
Accountant III		-	-	-	1.00	1.00	-
Accounting Clerk		1.00	-	-	-	1.00	1.00
Sr. Accounting Clerk		-	1.00	1.00	1.00	-	-
	Finance Total	4.00	4.00	4.00	4.00	4.00	4.00

DESCRIPTION OF SERVICES:

The Finance Department is responsible for financial reporting and budgeting, assessments, cash receipts, accounts receivable, accounts payable, payroll processing, debt service management and investment of all city funds.

BUDGET HIGHLIGHTS

- Single Audit due to ARPA Funds $4,000
-

GOALS OF CURRENT YEAR BUDGET:

- Continued long-term financial planning (5-Year Budget & 10-Year CIP)
- Continued CAFR award recognition
- Ensure compliance with state and federal laws

Performance Measurements:						
	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Projected	2023 Projected
Average Rate of Return	1.53%	2.18%	2.00%	1.53%	0.50%	2.00%
Bond Rating	AA+	AA+	AA+	AA+	AA+	AA+

FUND GENERAL

DEPARTMENT: ASSESSING
FUNCTION: GENERAL GOVERNMENT

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0155	6489	OTHER CONTRACTED SERVICES	140,246	143,667	147,722	120,463	150,000	130,000
Total Expenditure			**140,246**	**143,667**	**147,722**	**120,463**	**150,000**	**130,000**

DESCRIPTION OF SERVICES:

The Assessing budget provides contractual assessing services provided by Anoka County.

BUDGET HIGHLIGHTS

- County implemented more efficient appraisal software

GOALS OF CURRENT YEAR BUDGET:

Increase number of in-person assessment appraisals to better reflect market values

Performance Measurements:

	2018 Actual	2019 Actual	2020 Actual	2021 Projected	2022 Projected	2023 Projected
Number of Assessed Parcels - Residential Properties	8,717	8,848	8,993	9,128	9,347	9,487
Number of Assessed Parcels - Commercial Properties	378	384	383	389	402	408

FUND GENERAL

DEPARTMENT: LEGAL
FUNCTION: GENERAL GOVERNMENT

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0161	6304	LEGAL FEES	120,873	151,343	123,305	124,320	125,000	125,000
0161	6361	GENERAL LIABILITY/PROPERTY INS	1,092	1,479	1,229	1,157	1,600	1,600
Total Expenditure			**121,965**	**152,821**	**124,533**	**125,477**	**126,600**	**126,600**

DESCRIPTION OF SERVICES:

The Legal budget provides for legal counsel to the City Council and city staff, reviews ordinances, resolutions, contracts and other legal documents. The budget also provides for prosecution services. The City's prosecution services are provided by Eckberg, Lammers Attorneys at Law and other legal services are provided by Holstad & Knaak, PLC

BUDGET HIGHLIGHTS

- No Major Changes

GOALS OF CURRENT YEAR BUDGET:

Ensure city compliance with all laws

FUND GENERAL

DEPARTMENT: PLANNING AND ZONING
FUNCTION: GENERAL GOVERNMENT

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0191	6102	F.T. REGULAR-WAGES & SALARIES	342,609	408,399	446,437	486,561	520,222	572,465
0191	6104	PART-TIME WAGES & SALARIES	8,873	31,332	34,004	40,016	65,513	67,500
0191	6105	TEMPORARY-WAGES & SALARIES	7,516	9,212	-	5,908	-	
0191	6108	SEVERANCE PAY	-	-		47,657		
0191	6121	PERA CONTRIBUTIONS	25,938	32,796	33,872	37,293	39,998	44,853
0191	6122	FICA/MEDICARE CONTRIBUTIONS	26,675	33,750	35,801	40,393	46,426	51,824
0191	6131	GROUP INSURANCE	35,865	42,110	39,841	49,990	52,929	77,009
0191	6133	WORKERS COMP INSURANCE PREMIUM	2,006	2,415	2,792	2,350	4,743	5,499
0191	6208	MISCELLANEOUS OFFICE SUPPLIES	803	464	565	1,805	1,000	1,000
0191	6249	MISCELLANEOUS OPERATING SUPPLY	1,091	473	3,551	2,374	3,000	3,000
0191	6315	MISCELLANEOUS PROFESSIONAL SER	115,220	104,315	43,474	3,103	10,000	10,000
0191	6321	TELEPHONE	432	559	585	637	-	
0191	6322	POSTAGE	2,598	481	754	851	1,000	1,000
0191	6323	CELLULAR PHONES	2,607	2,163	2,267	3,139	-	-
0191	6325	LONG DISTANCE CHARGES	-	-				-
0191	6331	TRAVEL & LODGING	394	1,261	19	-	1,500	1,500
0191	6334	MILEAGE REIMBURSEMENT	2		-	-	-	500
0191	6335	TRAINING	2,581	1,852	90	1,805	3,500	3,500
0191	6352	GENERAL NOTICE & PUBLIC INFOR	1,252	1,145	574	581	2,000	3,000
0191	6361	GENERAL LIABILITY/PROPERTY INS	5,289	6,663	6,884	7,415	9,000	9,000
0191	6451	MEMBERSHIP DUES	1,124	633	1,015	2,004	2,000	2,000
0191	6452	SUBSCRIPTIONS	456	787	859	-	1,000	1,000
0191	6471	BOOKS & PAMPHLETS	-	155				
0191	6550	VEHICLES	-	155			-	-
Total Expenditure			**583,331**	**681,120**	**653,382**	**733,882**	**763,831**	**854,650**

PERSONNEL COMPLEMENT						
City Planner	2.00	2.00	2.00	1.00	-	1.00
Planning Manager					1.00	1.00
Senior City Planner	-	-	1.00	1.00	1.00	1.00
Community Development Director	1.00	1.00	-	-	-	-
Zoning Code Enforcment Officer	-	-	-	1.00	1.00	1.00
Deputy City Administrator/Community Development Director	-	-	1.00	1.00	1.00	-
Community Development Director						1.00
Planning Technician	-	-	-	1.00	1.00	-
Economic Development Manager	-	1.00	1.00	1.00	1.00	1.00
Community Development Assistant	1.00	1.00	0.40	0.40	0.50	0.50
Planning Intern	0.50	0.50	0.50	0.50	-	-
Administrative Assistant	-	0.73	0.73	0.73	0.73	0.73
Planning & Zoning Total	4.50	6.23	6.63	7.63	7.23	7.23

DESCRIPTION OF SERVICES:

The mission of the Community Development Department is to guide residential and commercial growth through comprehensive planning processes and administer the city's building and zoning codes in a equitable and professional manner to promote and sustain public safety, quality of life, and the health and well being of the whole community.

The Planning Division's function is to prepare and implement the City's Comprehensive Plan (the City's land use guide) and comprises of two (2) major functions: long-range land use planning and zoning administration.

BUDGET HIGHLIGHTS

- Planning Tech was promoted to City Planner in 2022 (2022 budget included for Planning Tech)
- Code Enforcment Officer Started at Higher step in 2022 than budgeted
- City Planner was promoted to Senior City Planner in 2022 (2022 budget included for City Planner)

GOALS OF CURRENT YEAR BUDGET:
All Land Use Applications processed with 60 days.
Standard plan review completed within 5 business day (previously 10 business days).
Improve Responsiveness to Code Violation Complaints
Improve image of key nodes/corridors and be proactive on site plans due to Ramsey Gateway Project.
Improve the application process for land use applications.

Performance Measurements:						
	2018 Actual	2019 Actual	2020 Actual	2021 Projected	2022 Projected	2023 Projected
Number of Land Use Applications	64	53	43	40	40	40
Number of Permits	2,681	3,313	3,600	2,500	2,500	2,500
Number of Code Enforcement Cases	158	147	183	300	300	300

FUND GENERAL

DEPARTMENT: DATA PROCESSING
FUNCTION: GENERAL GOVERNMENT

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0192	6102	F.T. REGULAR-WAGES & SALARIES	138,336	149,915	158,179	146,476	235,810	246,091
0192	6104	PART TIME-WAGES & SALARIES	1,004	-	-	-		
0192	6108	SEVERANCE PAY	-	-		4,660		
0192	6121	PERA CONTRIBUTIONS	10,384	11,173	11,761	10,880	17,686	18,457
0192	6122	FICA/MEDICARE CONTRIBUTIONS	10,084	11,182	11,752	11,118	18,039	18,826
0192	6131	GROUP INSURANCE	21,240	20,645	22,369	22,400	36,330	37,888
0192	6133	WORKERS COMP INSURANCE PREMIUM	812	836	967	691	2,028	2,264
0192	6206	FILM, MICROFILM, TAPES, DISKS	-	-	-	-		
0192	6208	MISCELLANEOUS OFFICE SUPPLIES	59	153	37	71	250	275
0192	6249	MISCELLANEOUS OPERATING SUPPLY	2,353	1,060	455	299	750	800
0192	6281	SMALL TOOLS & MINOR EQUIPMENT	22,974	41,290	34,196	39,098	49,000	61,720
0192	6321	TELEPHONE	8,536	8,249	6,746	7,206	16,900	15,000
0192	6323	CELLULAR PHONES	-	-	-	72	47,150	50,520
0192	6335	TRAINING	-	2,708	91	-		2,800
0192	6361	GENERAL LIABILITY/PROPERTY INS	4,590	6,070	5,957	6,329	8,000	9,000
0192	6374	REFUSE/RECYCLING	-	-	-	-	-	450
0192	6405	OFFICE & DATA PROCESSING EQUIP	285,585	288,359	305,535	356,981	334,641	354,571
0192	6580	OTHER EQUIPMENT	-	-	-	-		
0192	6585	COMPUTER HARDWARE/SOFTWARE	-	81,526	24,423	-	30,000	
Total Expenditure			**505,957**	**623,164**	**582,467**	**606,281**	**796,584**	**818,662**

PERSONNEL COMPLEMENT						
IT Manager	1.00	1.00	1.00	1.00	1	1
Systems & Security					1	1
IT Tech	0.73	0.73	1.00	1.00	1	1
Data Processing Total	1.73	1.73	2.00	2.00	3.00	3.00

6405 Office Equipment Contracts						
Support	10,000	10,000	4,120	7,519		
Financial Support(General Ledger,P/R, S/A, F/A & System Dev)(LOGIS)	93,222	93,222	100,741	108,545	96,110	100,795
PIMS System Support (LOGIS)	35,169	35,169	44,271	46,115	47,875	49,880
Tungsten(LOGIS)	-	-	-	5,000	3,860	4,055
GIS (LOGIS)	38,500	38,500	42,753	48,415	50,115	52,620
Laser Fiche Licensing	7,000	7,000	8,000	8,000	14,250	14,250
Licensing/maintenance through Logis	62,287	65,417	58,783	57,290	20,011	15,191
Other Licensing/Maintenance (Civic Rec/Engineering)				10,877	25,180	25,180
Internet (Included in LOGIS Support)	12,344	12,344	15,219	16,660	17,560	18,440
Server Backup/Hosting LOGIS			26,648	35,975	39,790	54,270
Copier/Printer Support	4,000	5,180	5,000	4,772	13,849	13,849
Phone Support					6,041	6,041
Website Annual Fee	23,063	21,527		7,814		
	285,585	288,359	305,535	356,981	334,641	354,571

6585 Computer Hardware / Software						
Server Virtualization	-	81,526	24,423	-		
Universal Power Supply					30,000	-
Police Copiers - File & Patrol Rooms				-		
	-	81,526	24,423	-	30,000	-

DESCRIPTION OF SERVICES:

The Information Technology Department manages and maintains all voice, network, and data systems for the city. They also handle long-term project planning, technology implementations and helpdesk support for city staff.

BUDGET HIGHLIGHTS

- Annual LOGIS increase - $20,000
- Line Item #6281 - Replace Laptops (8 of 40 every 5 years) $2,800 additional laptop for fire chief
- No Capital Budgeted for in 2023. $30,000 in 2022

GOALS OF CURRENT YEAR BUDGET:
Ensure staff access to tools and resources in order to provide effective services to citizens. Identify efficiency, security, and cost-saving opportunities that improve/maintain city services using technology & staff.

Performance Measurements:						
	2018 Actual	2019 Actual	2020 Actual	2021 Projected	2022 Projected	2023 Projected
Number of Physical Servers	8	4	4	2	3	3
Number of Virtualized Servers	0	7	7	12	14	13
Number of Desktop PCs / Laptops	160	162	162	173	177	180
Number of Phones	104	105	105	105	109	112
Number of Mobile Phones	61	62	62	62	65	65
Number of Tablets	16	18	18	20	23	30
Number of Wireless Access Points	8	8	8	11	18	28

FUND GENERAL

DEPARTMENT: GENERAL GOVERNMT. BUILDINGS
FUNCTION: GENERAL GOVERNMENT

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0194	6102	F.T. REGULAR-WAGES & SALARIES	109,443	113,982	116,505	130,000	175,672	189,035
0194	6103	FULL TIME-REGULAR-OVERTIME	1,985	1,075	1,864	2,051		
0194	6104	PART TIME-WAGES & SALARIES	46,008	49,263	50,761	44,495	26,185	28,947
0194	6107	OVERTIME-PART TIME	-	1,905	1,408			
0194	6121	PERA CONTRIBUTIONS	11,666	12,232	12,245	13,130	15,139	16,349
0194	6122	FICA/MEDICARE CONTRIBUTIONS	11,775	11,980	12,171	12,608	15,442	16,676
0194	6131	GROUP INSURANCE	19,450	23,944	26,079	30,506	40,527	41,932
0194	6133	WORKERS COMP INSURANCE PREMIUM	6,523	8,796	9,975	8,687	11,451	16,915
0194	6221	CLEANING SUPPLIES	1,946	1,503	1,391	2,496	3,000	3,500
0194	6223	GASOLINE	3,111	2,466	1,543	2,455	3,500	4,000
0194	6225	DIESEL FUEL	978	793	758	451	1,000	1,500
0194	6231	UNIFORMS & TURN-OUT GEAR	2,278	1,605	2,269	1,575	2,000	2,000
0194	6249	MISCELLANEOUS OPERATING SUPPLY	15,313	14,463	15,371	16,462	17,000	18,000
0194	6257	OTHER VEHICLE PARTS	1,168	4,101	623	280	1,500	1,500
0194	6259	BUILDING MAINT/REPAIR SUPPLIES	3,067	4,001	1,994	4,036	7,000	7,000
0194	6275	OTHER EQUIPMENT PARTS	-	-				
0194	6281	SMALL TOOLS & MINOR EQUIPMENT	1,291	3,117	3,064	4,520	6,000	6,000
0194	6323	CELLULAR PHONES	1,705	1,575	1,403	1,671	-	
0194	6361	GENERAL LIABILITY/PROPERTY INS	5,217	6,210	5,995	6,609	9,000	9,000
0194	6371	ELECTRIC UTILITIES	98,140	90,508	94,612	99,184	100,000	112,000
0194	6372	WATER/IRRIGATION	3,044	2,057	2,853	2,412	4,000	3,200
0194	6373	GAS	28,789	29,313	20,395	30,273	30,000	42,000
0194	6374	REFUSE/RECYCLING	3,882	4,790	5,230	4,852	5,300	5,200
0194	6381	BUILDING & STRUCTURE REPAIR	12,463	7,641	9,855	7,747	15,000	22,000
0194	6382	MACHINERY & EQUIPMENT REPAIR	12,587	11,461	12,554	13,193	22,000	22,000
0194	6388	OTHER VEHICLE REPAIR	1,771	1,845	343	2,043	1,500	1,500
0194	6415	OTHER EQUIPMENT RENTAL	-	-				
0194	6417	UNIFORM RENTAL	-	-				
0194	6489	OTHER CONTRACTED SERVICES	80,216	83,467	89,902	87,387	95,000	97,000
0194	6520	BUILDINGS	-	-	-	-		-
0194	6550	MOTOR VEHICLES	-	-	-	-	45,000	-
0194	6580	OTHER EQUIPMENT	-	-	-	-	-	-
Total Expenditure			**483,815**	**494,094**	**501,162**	**529,125**	**652,216**	**667,254**

PERSONNEL COMPLEMENT

Gen. Gov't. Bldgs.							
Building Maintenance	2.63	3.13	3.13	3.13	3.50	3.50
Gen Govt Bldgs Total	2.63	3.13	3.13	3.13	3.50	3.50

6550 Motor Vehicles						
Utility Tractor (net of $10,000 trade in)	-	-	-	-	45,000	

6580 Other Equipment						
	-	-	-	-		

DESCRIPTION OF SERVICES:

The General Government Buildings Department is responsible for cleaning city buildings and the repair and maintenance of all building systems.

BUDGET HIGHLIGHTS

- Market Rate Adjustments from AFSCME Contract - Building maintenance workers
- Gas & Electric Utility Increases - Rate increases from Connexus & Centerpoint
-

GOALS OF CURRENT YEAR BUDGET:
Clean and maintain our municipal buildings to the highest level possible
Continue to prepare and support voting precincts during elections
Respond to all maintenance requests in a timely manner

Performance Measurements:						
	2018 Estimate	2019 Projected	2020 Projected	2021 Projected	2022 Projected	2023 Projected
Buildings Maintained	12	12	12	13	13	13
Rooms Prepared for Meetings Annually	1210	1210	1210	1210	1210	1210
Maintenance Request Cleared	40	40	40	45	45	45

FUND GENERAL

DEPARTMENT: NEWSLETTER
FUNCTION: GENERAL GOVERNMENT

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0195	6102	F.T. REGULAR-WAGES & SALARIES	4,751	3,928	3,819	4,997	6,048	6,230
0195	6121	PERA CONTRIBUTIONS	356	295	286	375	454	467
0195	6122	FICA/MEDICARE CONTRIBUTIONS	395	327	316	413	463	476
0195	6133	WORKERS COMP INSURANCE PREMIUM	25	20	21	19	52	57
0195	6322	POSTAGE	10,072	10,557	11,346	11,721	12,500	13,000
0195	6352	GENERAL NOTICE & PUBLIC INFOR	37,951	33,276	28,872	34,088	33,000	38,000
0195	6361	GENERAL LIABILITY/PROPERTY INS	493	484	463	519	800	850
Total Expenditure			**54,043**	**48,885**	**45,123**	**52,132**	**53,317**	**59,080**

DESCRIPTION OF SERVICES:

The community newsletter, The Ramsey Resident, is distributed to residential homes every two months. It is intended to provide public information about community events and local government.

BUDGET HIGHLIGHTS

- Cost of paper is increasing
- Likely postage increase

GOALS OF CURRENT YEAR BUDGET:

Implement refreshed Ramsey branding items into the newsletter

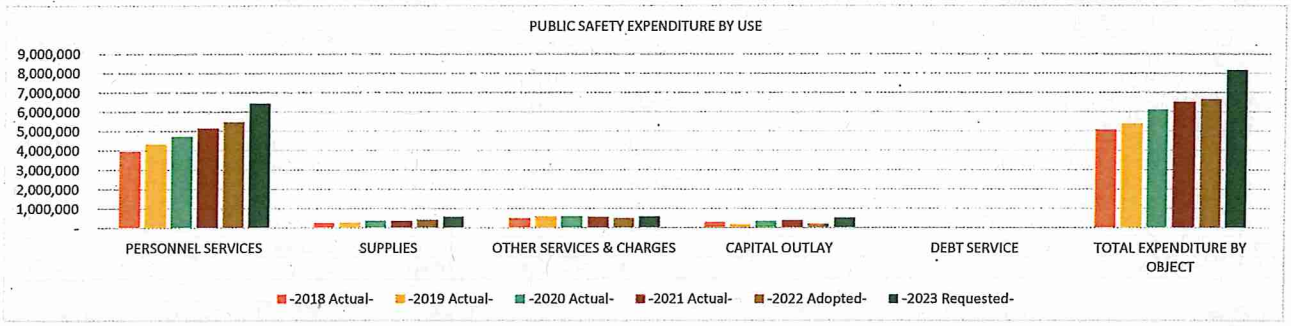
Performance Measurements:

	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Projected	2023 Projected
Number of newsletters completed annually	6	6	6	6	6	6
Number of full color newsletters completed annually	6	6	6	6	6	6
Number of pages published annually	100	100	100	100	100	100
Annual quantity of paid ads	60	60	60	60	60	60

GENERAL FUND 101 - GENERAL GOVERNMENT

PUBLIC SAFETY	211-280

EXPENDITURE BY OBJECT SUMMARY	-2018 Actual-	-2019 Actual-	-2020 Actual-	-2021 Actual-	-2022 Adopted-	-2023 Requested-
PERSONNEL SERVICES	3,970,489	4,337,124	4,749,611	5,155,607	5,481,238	6,446,330
SUPPLIES	283,527	284,616	382,703	369,266	436,300	585,872
OTHER SERVICES & CHARGES	524,332	596,473	611,818	587,273	513,364	599,401
CAPITAL OUTLAY	314,203	187,166	367,037	414,474	229,000	534,626
DEBT SERVICE	-	-	-	-	-	-
TOTAL EXPENDITURE BY OBJECT	5,092,551	5,405,379	6,111,169	6,526,621	6,659,902	8,166,229



LINE ITEM DETAIL BY COST CENTER OR SUB-FUNCTION

PUBLIC SAFETY						211-280
EXPENDITURE BY OBJECT RECAP ALL SUB-FUNCTIONS	-2018 Actual-	-2019 Actual-	-2020 Actual-	-2021 Actual-	-2022 Adopted-	-2023 Requested-
PERSONNEL SERVICES						
WAGES AND SALARIES						
6102 F.T. REGULAR-WAGES & SALARIES	2,629,530	2,867,497	3,073,112	3,322,106	3,600,399	4,100,645
6103 FULL TIME-REGULAR-OVERTIME	94,925	100,480	107,397	124,171	101,000	101,000
6104 PART TIME-WAGES & SALARIES	351,953	342,346	419,339	452,711	451,940	642,300
6105 TEMPORARY-WAGES & SALARIES	-	-	7,697	2,964	-	-
6107 OVERTIME-PART TIME	-	-	-	-	-	-
TOTAL WAGES AND SALARIES	**3,076,408**	**3,310,324**	**3,607,545**	**3,901,953**	**4,153,339**	**4,843,945**
OTHER GROSS EARNINGS						
6108 SEVERANCE PAY	6,894	22,719	-	-	-	-
TOTAL OTHER GROSS EARNINGS	**6,894**	**22,719**	**-**	**-**	**-**	**-**
EMPLOYER CONTRIBUTIONS						
6121 PERA CONTRIBUTIONS	418,119	471,042	538,587	577,818	617,089	678,390
6122 FICA/MEDICARE CONTRIBUTIONS	87,930	92,679	100,100	109,484	121,817	138,589
6131 GROUP INSURANCE	273,027	315,534	353,522	404,748	413,915	491,187
6132 DISABILITY INSURANCE	1,284	1,313	1,313	1,313	1,300	1,313
6133 WORKERS COMP INSURANCE PREMIUM	106,826	123,514	148,543	160,291	173,778	292,906
TOTAL EMPLOYER CONTRIBUTIONS	**887,186**	**1,004,081**	**1,142,066**	**1,253,655**	**1,327,899**	**1,602,385**
Total PERSONNEL SERVICES	**3,970,489**	**4,337,124**	**4,749,611**	**5,155,607**	**5,481,238**	**6,446,330**
SUPPLIES						
OFFICE SUPPLIES						
6204 STATIONERY, ENVELOPES & FORMS	1,894	3,253	3,541	2,293	3,100	3,150
6206 FILM, MICROFILM, TAPES, DISKS	1,150	1,983	837	568	1,900	1,600
6207 TRAINING SUPPLIES	1,951	2,565	3,609	3,154	3,550	12,700
6208 MISCELLANEOUS OFFICE SUPPLIES	3,335	3,487	2,164	2,152	4,850	4,000
TOTAL OFFICE SUPPLIES	**8,330**	**11,288**	**10,151**	**8,167**	**13,400**	**21,450**
OPERATING SUPPLIES						
6223 GASOLINE	73,963	70,208	63,697	90,220	76,000	126,000
6225 DIESEL FUEL	3,617	3,783	4,315	5,959	5,000	8,400
6227 LUBRICANTS & ADDITIVES	939	951	934	1,312	1,100	1,200
6229 SHOP MATERIALS	647	962	906	3,149	1,000	1,000
6231 UNIFORMS & TURN-OUT GEAR	45,597	52,434	95,064	79,822	100,750	127,750
6233 BATTERIES	1,105	1,071	652	1,262	2,000	2,000
6235 AMMUNITION	7,135	9,386	15,970	1,700	12,000	12,000
6237 CRIME SCENE KIT MATERIALS	894	669	368	1,843	1,000	1,000
6239 FIRST AID SUPPLIES	17,964	2,560	12,345	5,922	10,300	10,500
6241 COMMUNITY POLICING SUPPLIES	4,880	7,750	10,310	9,190	9,000	10,000
6249 MISCELLANEOUS OPERATING SUPPLY	43,103	35,512	40,731	27,675	47,350	55,250
TOTAL OPERATING SUPPLIES	**199,844**	**185,286**	**245,292**	**228,054**	**265,500**	**355,100**
REPAIR AND MAINTENANCE SUPPLIES						
6251 BATTERIES	2,051	812	678	516	3,000	2,500
6253 BRAKES	2,281	2,342	3,421	3,466	3,000	3,500
6255 TIRES	6,427	7,271	7,458	10,708	8,000	9,000
6257 OTHER VEHICLE PARTS	19,638	9,690	19,967	17,590	29,000	29,000
6259 BUILDING MAINT/REPAIR SUPPLIES	118	7,844	357	16,040	33,000	36,022
6266 SCBA-PARTS	2,292	4,843	4,679	4,055	6,000	20,000
6271 SIGN REPAIR MATERIALS	-	121	382	-	2,000	2,000
6275 OTHER EQUIPMENT PARTS	4,362	6,158	662	3,074	6,100	7,500
TOTAL REPAIR AND MAINTENANCE SUPPLIES	**37,168**	**39,081**	**37,604**	**55,448**	**90,100**	**109,522**
SMALL TOOLS AND MINOR EQUIPMENT						
6281 SMALL TOOLS & MINOR EQUIPMENT	38,186	48,456	89,606	77,596	67,100	99,600
TOTAL SMALL TOOLS AND MINOR EQUIPMENT	**38,186**	**48,456**	**89,606**	**77,596**	**67,100**	**99,600**
MERCHANDISE FOR RESALE						
6291 CULVERTS, SIGNS, STREET SUPPLY	-	505	50	-	200	200
TOTAL MERCHANDISE FOR RESALE	**-**	**505**	**50**	**-**	**200**	**200**
Total SUPPLIES	**283,527**	**284,616**	**382,703**	**369,266**	**436,300**	**585,872**

OTHER SERVICES & CHARGES							
PROFESSIONAL SERVICES							
6302	AUDITING & ACCOUNTING SERVICES	3,750	3,900	4,050	4,241	4,000	4,300
6315	MISCELLANEOUS PROFESSIONAL SER	160,494	212,959	225,996	170,096	111,000	112,400
TOTAL PROFESSIONAL SERVICES		**164,244**	**216,859**	**230,046**	**174,337**	**115,000**	**116,700**
COMMUNICATION							
6321	TELEPHONE	4,395	4,459	4,400	4,045	-	-
6322	POSTAGE	2,118	1,991	2,029	4,547	4,450	4,450
6323	CELLULAR PHONES	17,080	17,549	22,235	24,384	-	-
TOTAL COMMUNICATION		**23,594**	**24,000**	**28,664**	**32,975**	**4,450**	**4,450**
EMPLOYEE REIMBURSEMENTS							
6331	TRAVEL & LODGING	5,216	3,962	2,765	5,695	7,300	9,000
6334	MILEAGE REIMBURSEMENT	-	528	170	93	750	750
6335	TRAINING	55,005	60,763	56,199	72,214	73,600	83,800
TOTAL EMPLOYEE REIMBURSEMENTS		**60,221**	**65,253**	**59,135**	**78,002**	**81,650**	**93,550**
INSURANCE							
6361	GENERAL LIABILITY/PROPERTY INS	60,944	71,100	80,624	75,223	92,850	97,200
TOTAL INSURANCE		**60,944**	**71,100**	**80,624**	**75,223**	**92,850**	**97,200**
UTILITIES							
6371	ELECTRIC UTILITIES	31,589	32,858	32,059	31,983	34,200	36,200
6372	WATER/IRRIGATION	4,994	4,397	4,797	3,847	5,000	5,000
6373	GAS	6,077	7,072	5,034	8,552	7,000	9,000
6374	REFUSE/RECYCLING	1,122	1,250	1,363	1,431	1,400	1,600
TOTAL UTILITIES		**43,782**	**45,576**	**43,253**	**45,813**	**47,600**	**51,800**
REPAIRS AND MAINTENANCE - LABOR							
6382	MACHINERY & EQUIPMENT REPAIR	20,796	4,542	5,491	15,907	16,500	16,500
6383	OFFICE EQUIPMENT REPAIR	-	-	-	-	-	-
6386	BRAKE REPAIR	-	-	-	-	-	-
6388	OTHER VEHICLE REPAIR	45,129	70,917	55,013	53,322	52,000	58,000
6389	TOWING SERVICES	3,224	1,623	2,037	240	3,000	3,500
TOTAL REPAIRS AND MAINTENANCE - LABOR		**69,149**	**77,081**	**62,541**	**69,470**	**71,500**	**78,000**
REPAIRS AND MAINTENANCE - CONTRACTS							
6405	OFFICE & DATA PROCESSING EQUIP	41,370	41,614	50,694	49,637	30,639	80,526
TOTAL REPAIRS AND MAINTENANCE - CONTRACTS		**41,370**	**41,614**	**50,694**	**49,637**	**30,639**	**80,526**
RENTALS							
6413	OFFICE EQUIPMENT RENTAL	5,966	4,837	5,995	5,265	6,000	6,000
6415	OTHER EQUIPMENT RENTAL	31,613	31,014	33,601	37,295	37,125	37,125
TOTAL RENTALS		**37,578**	**35,851**	**39,596**	**42,560**	**43,125**	**43,125**
DUES, SUBSCRIPTIONS, AND REGISTRATION FEES							
6451	MEMBERSHIP DUES	5,421	5,546	6,067	4,887	8,250	8,250
6452	SUBSCRIPTIONS	-	688	41	627	-	-
TOTAL DUES, SUBSCRIPTIONS, AND REGISTRATION FEES		**5,421**	**6,234**	**6,108**	**5,514**	**8,250**	**8,250**
BOOKS AND PAMPHLETS							
6471	BOOKS & PAMPHLETS	3,020	626	2,331	1,132	3,300	3,800
TOTAL BOOKS AND PAMPHLETS		**3,020**	**626**	**2,331**	**1,132**	**3,300**	**3,800**
CONTRACTED SERVICES							
6489	OTHER CONTRACTED SERVICES	15,010	12,279	8,826	12,611	15,000	22,000
TOTAL CONTRACTED SERVICES		**15,010**	**12,279**	**8,826**	**12,611**	**15,000**	**22,000**
Total OTHER SERVICES & CHARGES		**524,332**	**596,473**	**611,818**	**587,273**	**513,364**	**599,401**
CAPITAL OUTLAY							
CAPITAL OUTLAY							
6540	HEAVY MACHINERY	-	-	-	-	-	-
6550	MOTOR VEHICLES	98,487	111,789	351,094	414,474	64,000	479,626
6580	OTHER EQUIPMENT	215,716	75,378	15,943	-	165,000	55,000
TOTAL CAPITAL OUTLAY		**314,203**	**187,166**	**367,037**	**414,474**	**229,000**	**534,626**
Total CAPITAL OUTLAY		**314,203**	**187,166**	**367,037**	**414,474**	**229,000**	**534,626**
DEBT SERVICE							
DEBT SERVICE							
6603	OTHER L.T. OBLIGATION PRINCIPA	-	-	-	-	-	-
TOTAL DEBT SERVICE		-	-	-	-	-	-
TOTAL DEBT SERVICE		-	-	-	-	-	-
TOTAL EXPENDITURES & OTHER FINANCING		**5,092,551**	**5,405,379**	**6,111,169**	**6,526,621**	**6,659,902**	**8,166,229**

FUND GENERAL

DEPARTMENT: POLICE PROTECTION
FUNCTION: PUBLIC SAFETY

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0211	6102	F.T. REGULAR-WAGES & SALARIES	2,226,750	2,382,526	2,566,863	2,778,260	3,019,624	3,277,345
0211	6103	FULL TIME-REGULAR-OVERTIME	94,598	100,248	95,476	117,561	101,000	101,000
0211	6104	PART TIME-WAGES & SALARIES	86,060	77,511	84,498	115,637	97,721	137,311
0211	6105	TEMPORARY-WAGES & SALARIES		-				
0211	6108	SEVERANCE PAY	6,894	22,719				
0211	6121	PERA CONTRIBUTIONS	369,085	408,862	466,528	499,077	532,307	568,131
0211	6122	FICA/MEDICARE CONTRIBUTIONS	50,348	53,390	55,299	62,071	70,292	78,141
0211	6131	GROUP INSURANCE	226,600	258,970	294,930	336,074	343,537	383,719
0211	6133	WORKERS COMP INSURANCE PREMIUM	79,187	94,302	111,190	129,942	130,402	229,078
0211	6204	STATIONERY, ENVELOPES & FORMS	911	2,567	2,654	1,602	1,600	1,900
0211	6206	FILM, MICROFILM, TAPES, DISKS	1,150	1,101	837	568	1,600	1,300
0211	6207	TRAINING SUPPLIES	1,951	2,565	3,609	3,154	3,550	12,700
0211	6208	MISCELLANEOUS OFFICE SUPPLIES	2,579	2,561	1,838	1,718	3,500	3,000
0211	6223	GASOLINE	58,811	55,400	50,539	72,247	60,000	101,000
0211	6227	LUBRICANTS & ADDITIVES	939	951	934	1,312	1,100	1,200
0211	6229	SHOP MATERIALS	647	962	906	3,149	1,000	1,000
0211	6231	UNIFORMS & TURN-OUT GEAR	18,878	30,905	65,867	40,663	55,000	72,000
0211	6233	BATTERIES	1,105	1,071	652	1,262	2,000	2,000
0211	6235	AMMUNITION	7,135	9,386	15,970	1,700	12,000	12,000
0211	6237	CRIME SCENE KIT MATERIALS	894	669	368	1,843	1,000	1,000
0211	6239	FIRST AID SUPPLIES	15,719	1,164	4,304	2,488	4,300	4,500
0211	6249	MISCELLANEOUS OPERATING SUPPLY	5,742	9,644	8,940	7,865	9,100	17,500
0211	6251	BATTERIES	961	812	678	516	2,000	1,500
0211	6253	BRAKES	2,281	2,342	3,421	3,466	3,000	3,500
0211	6255	TIRES	6,427	7,271	7,458	10,708	8,000	9,000
0211	6257	OTHER VEHICLE PARTS	10,986	6,795	8,724	13,015	15,000	15,000
0211	6259	BUILDING MAINT/REPAIR SUPPLIES	118	7,844	357	16,040	13,000	16,022
0211	6275	OTHER EQUIPMENT PARTS	964	1,268	443	1,770	1,100	2,500
0211	6281	SMALL TOOLS & MINOR EQUIPMENT	17,568	31,268	42,701	56,920	34,500	64,000
0211	6315	MISCELLANEOUS PROFESSIONAL SER	3,444	4,730	8,190	6,198	11,000	10,000
0211	6321	TELEPHONE	2,233	2,124	2,203	2,072	-	
0211	6322	POSTAGE	1,020	1,259	1,331	3,141	2,600	2,600
0211	6323	CELLULAR PHONES	10,166	10,072	13,184	15,313	-	
0211	6331	TRAVEL & LODGING	4,716	3,549	2,492	5,421	5,000	6,000
0211	6334	MILEAGE REIMBURSEMENT	-	-	-	-	250	250
0211	6335	TRAINING	24,495	26,762	21,693	32,990	32,500	35,000
0211	6361	GENERAL LIABILITY/PROPERTY INS	42,787	49,548	56,773	52,507	62,000	64,000
0211	6382	MACHINERY & EQUIPMENT REPAIR	373	235	410	1,244	500	500
0211	6383	OFFICE EQUIPMENT REPAIR	-	-	-			
0211	6386	BRAKE REPAIR	-	-	-			
0211	6388	OTHER VEHICLE REPAIR	7,904	5,643	10,152	16,616	12,000	13,000
0211	6389	TOWING SERVICES	3,224	1,623	2,037	240	3,000	3,500
0211	6405	OFFICE & DATA PROCESSING EQUIP	2,830	2,445	10,419	7,856	12,000	12,000
0211	6413	OFFICE EQUIPMENT RENTAL	5,966	4,837	5,995	5,265	6,000	6,000
0211	6415	OTHER EQUIPMENT RENTAL	30,485	31,014	33,601	37,295	37,000	37,000
0211	6451	MEMBERSHIP DUES	2,422	3,018	3,473	2,757	3,800	3,800
0211	6489	OTHER CONTRACTED SERVICES	7,467	5,410	3,195	8,942	6,000	10,000
0211	6550	MOTOR VEHICLES	57,293	67,155	35,841	69,000	64,000	184,626
0211	6580	OTHER EQUIPMENT	-		15,943			
Total Expenditure			**3,502,113**	**3,794,498**	**4,122,916**	**4,547,484**	**4,784,883**	**5,505,623**

PERSONNEL COMPLEMENT							
Police Chief		1.00	1.00	1.00	1.00	1.00	1.00
Captain		2.00	2.00	2.00	2.00	2.00	2.00
Sergeant		4.00	4.00	4.00	4.00	4.00	4.00
Drug Task Force Officer		1.00	1.00	1.00	1.00	1.00	1.00
Patrol Officer		17.00	19.00	19.00	21.00	21.00	22.00
Community Service Officer		1.26	1.26	1.26	1.26	1.26	2.00
Police Office Supervisor		1.00	1.00	1.00	1.00	1.00	1.00
Clerical/Support Personnel		2.50	2.50	2.63	3.26	3.64	3.64
	Public Safety Total	29.76	31.76	31.89	34.52	34.90	36.64

6550 Motor Vehicles						
Ford Interceptor	28,646	-	35,841	-		
Malibu	-	-	-	28,479		
Taurus		29,592	-	-		
2 Ford Explorers				40,521	64,000	
Ford F150						38,521
2 Chargers						64,000
Ford Interceptor	28,646	-	35,841	-		41,230
Tahoe						40,875
	28,646	29,592	35,841	69,000	64,000	184,626

6580 Other Equipment						
ATV	-	-	15,943	-		
	-	-	15,943	-	-	-

DESCRIPTION OF SERVICES:

The Police Department is responsible for the protection of life and property and an atmosphere of community security through the deterrence of criminal activity by visible patrols; the enforcement of traffic laws; the apprehension of criminal offenders; emergency response services; and the delivery of other community services such as animal control and school liaison. The department provides for the investigation of criminal incidents and the apprehension of criminal offenders through the gathering, analysis, preservation and presentation of evidence.

BUDGET HIGHLIGHTS

- Part-time Community Service Officer - $39,171, Training - $500, Uniform - $5,000 TOTAL= $44,671
- Full-time Patrol Officer ; $102,032, Training - $1,000, Uniform - $9,000 TOTAL = $112,032
- Reclass Records Tech to Data Analyst - $1,176
- No longer have DUI Officer reimbursed through Grant funds: $69,700
- Workers Comp - Through League: Rising cases of PTSD, Claims
- Gasoline cost increase: based on $4.50 Gallon
- New squad set-up for 5 squads - $29,500 (6281)
- Replace 5 squads - $184,626
-

GOALS OF CURRENT YEAR BUDGET:

Reduce Illegal drug activity in the community
Adequately staff public safety based on changing demographics and needs
Leverage technology to create operational efficiencies
Enhance traffic safety in the community

Performance Measurements:						
Police Department Activity	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Projected	2023 Projected
Dispatched Calls for Service	12102	13484	14918	16258	16000	16700
Motor Vehicle Accidents	466	423	335	443	450	450
Citations and Warnings	1812	1278	1207	1340	1300	1300
Criminal	1257	1217	1020	988	1000	1000
Non-Criminal	7413	8531	8834	8500	9000	9000
State CPM Performance Measurement Results	2018	2019	2020	2021	2022	2023
Part 1 and Part 2 Crime Rates (per 1000)	*13.92/21.25*	*11.59/21.24*	*8.76/15.74*	2020 last yr avail	>15/>25	>15/>25
Part 1 and Part 2 Crime Clearance Rates (per 1000)	44%	43%	32%	2020 last yr avail	>15/>25	>15/>25
Average police response time - highest priority calls	6:03	5:42	5:44	5:54	under 7 min	under 7 min

FUND GENERAL

DEPARTMENT: FIRE PROTECTION
FUNCTION: PUBLIC SAFETY

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0220	6102	F.T. REGULAR-WAGES & SALARIES	192,691	260,037	292,458	305,378	323,711	437,888
0220	6103	FULL TIME-REGULAR-OVERTIME	327	232	9,814	6,610		
0220	6104	PART TIME-WAGES & SALARIES	260,022	264,836	321,487	283,535	275,990	443,925
0220	6105	TEMPORARY-WAGES & SALARIES						
0220	6108	SEVERANCE PAY						
0220	6121	PERA CONTRIBUTIONS	32,865	45,362	55,059	56,867	59,635	76,772
0220	6122	FICA/MEDICARE CONTRIBUTIONS	21,170	21,479	26,860	25,281	25,876	26,292
0220	6131	GROUP INSURANCE	18,479	35,216	36,495	39,920	39,139	54,178
0220	6132	DISABILITY INSURANCE	1,284	1,313	1,313	1,313	1,300	1,313
0220	6133	WORKERS COMP INSURANCE PREMIUM	24,715	26,414	34,093	27,527	37,000	55,066
0220	6206	FILM, MICROFILM, TAPES, DISKS	-	-				
0220	6208	MISCELLANEOUS OFFICE SUPPLIES	356	602	242	393	600	500
0220	6223	GASOLINE	12,220	12,643	11,675	15,187	13,000	21,000
0220	6225	DIESEL FUEL	3,617	3,783	4,315	5,959	5,000	8,400
0220	6231	UNIFORMS & TURN-OUT GEAR	26,159	21,515	29,057	38,926	45,000	55,000
0220	6233	BATTERIES	-			-		
0220	6239	FIRST AID SUPPLIES	2,245	1,396	8,041	3,434	6,000	6,000
0220	6249	MISCELLANEOUS OPERATING SUPPLY	14,171	14,880	17,523	12,117	21,000	21,000
0220	6255	TIRES	-	-				
0220	6257	OTHER VEHICLE PARTS	8,652	2,895	11,243	4,575	14,000	14,000
0220	6259	BUILDING MAINT/REPAIR SUPPLIES					20,000	20,000
0220	6266	SCBA-PARTS	2,292	4,843	4,679	4,055	6,000	20,000
0220	6275	OTHER EQUIPMENT PARTS	-	-				
0220	6281	SMALL TOOLS & MINOR EQUIPMENT	20,561	16,725	46,706	20,676	32,000	35,000
0220	6302	AUDITING & ACCOUNTING SERVICES	3,750	3,900	4,050	4,241	4,000	4,300
0220	6315	MISCELLANEOUS PROFESSIONAL SER	-	-				
0220	6321	TELEPHONE	1,772	2,000	1,849	1,624	-	
0220	6322	POSTAGE	251	146	111	70	300	300
0220	6323	CELLULAR PHONES	6,256	6,906	6,960	6,448	-	
0220	6335	TRAINING	27,695	27,851	32,432	36,629	35,000	40,000
0220	6361	GENERAL LIABILITY/PROPERTY INS	12,402	14,493	17,229	16,241	21,000	23,000
0220	6371	ELECTRIC UTILITIES	18,308	17,327	17,774	17,688	20,000	20,000
0220	6372	WATER/IRRIGATION	4,994	4,397	4,797	3,847	5,000	5,000
0220	6373	GAS	6,077	7,072	5,034	8,552	7,000	9,000
0220	6374	REFUSE/RECYCLING	1,122	1,250	1,363	1,431	1,400	1,600
0220	6388	OTHER VEHICLE REPAIR	37,225	65,273	44,861	36,706	40,000	45,000
0220	6405	OFFICE & DATA PROCESSING EQUIP	14,056	14,685	15,792	17,298	18,639	18,526
0220	6451	MEMBERSHIP DUES	2,035	1,236	2,003	1,214	2,200	2,200
0220	6452	SUBSCRIPTIONS	-	688	41	627		
0220	6471	BOOKS & PAMPHLETS	95	275	518	280	1,000	1,500
0220	6489	OTHER CONTRACTED SERVICES	3,038	2,444	3,508	2,045	5,000	5,000
0220	6550	MOTOR VEHICLES	41,195	44,634	315,253	345,474		265,000
0220	6580	OTHER EQUIPMENT	177,160	75,378			135,000	25,000
Total Expenditure			999,255	1,024,125	1,384,635	1,352,166	1,220,790	1,761,760

PERSONNEL COMPLEMENT							
Fire Chief		1.00	1.00	1.00	1.00	1.00	1.00
Fire Secretary		0.70	0.70	0.70	0.70	0.70	-
Fire Captain of Administration		-	-	-	-	1.00	1.00
Fire Inspector			1.00	1.00	1.00	1.00	1.00
Fire Marshall		1.00	1.00	1.00	1.00	1.00	1.00
Firefighters		7.58	7.58	7.58	7.58	7.58	7.58
	Fire Total	10.28	11.28	11.28	11.28	12.28	11.58

6550 Motor Vehicles						
1st half funding Replace 1999 Fire Engine #556			270,626	-		
2nd half funding Replace 1999 Fire Engine #556			-	345,474		
Replace Rescue #21						265,000
Replace Fire Prevention Veh #386			44,627	-		
Replace Grass Truck #21	41,195	44,634	-	-		
	41,195	44,634	315,253	345,474	-	265,000

6580 Other Equipment						
SCBA Compressor	-	-	-	-		25,000
SCBA's - 28	177,160	-	-	-		
Thermal Imaging Camera		23,897				
Bullex Attack Training Prop		16,515				
Fire Training Room Table & Chairs					25,000	
Epoxy Flooring Fire 1 (Capital Maintenance Funded)					20,000	
Appratus Bay Painting Fire 1 (Capital Maintenance Funded)					15,000	
Extrication Tools		34,966			50,000	
Refurbish Tanker II	-	-	-	-	25,000	
	177,160	75,378	-	-	135,000	25,000

BUDGET HIGHLIGHTS

- Full-time Fire Captain of Administration added in 2022, not inluced in 2022 budget $110,273 less ($48,693 fire tech not refilled) = $61,580
- Fire Relief Aid recored here. Offset under revnue account 9101.4273 - $202,000 (audit requirement)
- Replace Rescue #21 - $265,000
- Replace SCBA Compressor - $25,000

GOALS OF CURRENT YEAR BUDGET:

Replacement of expired structural fire turn out gear
Revise and update department policies/procedures and Standard Operating Guidelines
Additional air pack inventory to outfit firefighters while operating in hazardous conditions
Establish and maintain outreach programs that enhance fire safety within community
Ensure adequate staff numbers to meet increased demand of calls for service

Performance Measurements:

	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Projected	2023 Projected
Number of Calls for Service	821	975	1133	1301	1350	1400
Mutual Aid	44	41	47	35	45	45
Given	33	19	29	20	27	27
Received	11	22	18	15	18	18
Number of firefighters	52	52	53	42	44	48
Prevention:						
# of Public Education contacts	62	57	28	38	60	70
# of commericial property inspections	194	282	177	304	320	320
# of permits issued	90	96	83	70	115	115

State CPM Performance Measurement Results	2018	2019	2020	2021	2022 Estimated	2023 Estimated
Insurance industry rating of fire services	4/7	4/7	4/7	4/7	4/7	4/7
Fire calls per 1,000 population	16.7	15.3	15.6	14	16	17
Average response times	8:16	8:41	6:19	6:20	6:15	6:15
EMS calls per 1,000 population	14.85	20.8	26.3	33	38	40

FUND GENERAL

DEPARTMENT: PROTECTIVE INSPECTIONS
FUNCTION: PUBLIC SAFETY

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0240	6102	F.T. REGULAR-WAGES & SALARIES	185,628	199,091	184,625	209,127	212,968	331,776
0240	6103	FULL TIME-REGULAR-OVERTIME	-	-	2,045			
0240	6104	PART TIME-WAGES & SALARIES	5,871	-	13,354	53,539	78,229	61,064
0240	6105	TEMPORARY-WAGES & SALARIES	-	-	7,697	2,964		
0240	6108	SEVERANCE PAY	4,541	16,493				
0240	6121	PERA CONTRIBUTIONS	14,291	14,888	14,847	19,644	21,840	29,464
0240	6122	FICA/MEDICARE CONTRIBUTIONS	14,566	15,876	15,747	19,869	22,276	30,053
0240	6131	GROUP INSURANCE	27,948	21,348	22,097	28,754	31,239	53,290
0240	6133	WORKERS COMP INSURANCE PREMIUM	1,133	1,160	1,232	1,124	2,210	3,618
0240	6204	STATIONERY, ENVELOPES & FORMS	983	393	654	330	1,000	750
0240	6208	MISCELLANEOUS OFFICE SUPPLIES	400	323	84	41	750	500
0240	6223	GASOLINE	2,932	2,165	1,482	2,787	3,000	4,000
0240	6231	UNIFORMS & TURN-OUT GEAR	560	14	140	234	750	750
0240	6249	MISCELLANEOUS OPERATING SUPPLY	1,093	2,404	1,723	176	2,500	2,000
0240	6315	MISCELLANEOUS PROFESSIONAL SER	157,050	208,230	217,807	163,898	100,000	102,400
0240	6321	TELEPHONE	390	335	348	349	-	
0240	6322	POSTAGE	847	585	586	1,334	1,500	1,500
0240	6323	CELLULAR PHONES	658	570	1,073	1,505	-	
0240	6331	TRAVEL AND LODGING			135	274	1,000	1,500
0240	6334	MILEAGE REIMBURSEMENT	-	528	170	93	500	500
0240	6335	TRAINING	1,945	5,496	2,075	940	5,000	7,500
0240	6361	GENERAL LIABILITY/PROPERTY INS	4,468	6,237	5,787	5,668	8,000	8,000
0240	6405	OFFICE & DATA PROCESSING EQUIP	24,484	24,484	24,484	24,484		50,000
0240	6451	MEMBERSHIP DUES	435	360	165	470	750	750
0240	6471	BOOKS & PAMPHLETS	-	100	1,228	595	2,000	2,000
0240	6550	MOTOR VEHICLES	-	79,752				30,000
Total Expenditure			**450,223**	**600,831**	**519,585**	**538,198**	**495,512**	**721,415**

PERSONNEL COMPLEMENT						
Building Official	1.00	1.00	1.00	1.00	1.00	1.00
Building Inspector	-	-	-	1.00	2.00	2.00
Permit Technicians	2.00	1.81	1.81	1.81	1.81	1.85
Inspectors	0.25	0.25	0.25	0.25	0.25	-
Building Inspection Total	3.25	3.06	3.06	4.06	5.06	4.85

6550 Motor Vehicles						
Replace Veh #401	-	26,584	-	-		
Replace Veh #405		26,584	-	-		
New Vehicle for building inspector						30,000
Replace Veh #406		26,584	-	-		
		79,752	-	-	-	30,000

DESCRIPTION OF SERVICES:

The mission of the Community Development Department is to guide residential and commercial growth through comprehensive planning processes and administer the city's building and zoning codes in a equitable and professional manner to promote and sustain public safety, quality of life, and the health and well being of the whole community.

The purpose of the Building Division is to help ensure all your construction projects meet the requirements of both the Minnesota State Building Code and the City Zoning regulations.

BUDGET HIGHLIGHTS

- Additional building inspector added in 2022, not included in 2022 budget - $119,930 expensed 2023
- Increase permit tech hours / 3 hours bi/weekly - $2,894
- $30,000 Software upgrade of ProjectDox (6-years old)(6405)
- $30,000 Vehicle for additional inspector added in 22

GOALS OF CURRENT YEAR BUDGET:
Complete standard residential plan review within 10 business days. Complete standard commercial plan review within 30 business days. Allow for inspection availability within 48 hours.

Performance Measurements:						
	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 YTD	2023 Projected
New Residential Units	139	135	176	183	54	190
Total Permits	2,697	3,339	3,630	3,458	1,187	3,700
Number of Inspections	8,090	9,764	12,765	12449-Est.	4273-Est.	13,500

FUND GENERAL

DEPARTMENT: CIVIL DEFENSE

FUNCTION: PUBLIC SAFETY

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0250	6251	BATTERIES	1,090	-	-	-	1,000	1,000
0250	6275	OTHER EQUIPMENT PARTS	3,398	4,891	219	1,303	5,000	5,000
0250	6361	GENERAL LIABILITY/PROPERTY INS	106	150	23	23	150	150
0250	6371	ELECTRIC UTILITIES	1,020	1,020	1,020	1,020	1,200	1,200
0250	6382	MACHINERY & EQUIPMENT REPAIR	6,013	9,104	1,025	940	6,000	6,000
0250	6580	OTHER CAPITAL EQUIPMENT	-	-	-	-	30,000	30,000
Total Expenditure			**11,627**	**15,164**	**2,288**	**3,287**	**43,350**	**43,350**

DESCRIPTION OF SERVICES:

The Civil Defence budget funds expenditures related to the city-wide emergency siren notification system.

BUDGET HIGHLIGHTS

- Replace 2 Civil Defense Sirens

GOALS OF CURRENT YEAR BUDGET:

Maintain infastructure of siren warning system

Performance Measurements:

	2018 Actual	2019 Projected	2020 Projected	2021 Projected	2022 Projected	2023 Projected
Number of Sirens	17	17	17	17	17	17

FUND GENERAL

DEPARTMENT: TRAFFIC ENGINEERING

FUNCTION: PUBLIC SAFETY

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0260	6102	F.T. REGULAR-WAGES & SALARIES	24,461	25,844	29,166	29,341	44,096	53,636
0260	6103	FULL TIME-REGULAR-OVERTIME	-	-	62			
0260	6105	TEMPORARY-WAGES & SALARIES	-	-				
0260	6121	PERA CONTRIBUTIONS	1,878	1,930	2,154	2,231	3,307	4,023
0260	6122	FICA/MEDICARE CONTRIBUTIONS	1,845	1,934	2,195	2,264	3,373	4,103
0260	6133	WORKERS COMP INSURANCE PREMIUM	1,790	1,639	2,027	1,699	4,166	5,144
0260	6249	MISCELLANEOUS OPERATING SUPPLY	21,921	8,448	11,868	7,108	14,000	14,000
0260	6271	SIGN REPAIR MATERIALS	-	121	382	-	2,000	2,000
0260	6361	GENERAL LIABILITY/PROPERTY INS	1,081	572	680	697	1,500	1,800
0260	6371	ELECTRIC UTILITIES	12,261	14,511	13,265	13,275	13,000	15,000
0260	6382	MACHINERY & EQUIPMENT REPAIR	20,422	4,307	5,081	13,723	10,000	10,000
0260	6489	CONTRACTED SERVICES	300	600	1,807	1,291	2,000	2,000
0260	6580	OTHER EQUIPMENT	38,556	-				
Total Expenditure			**124,516**	**59,904**	**68,686**	**71,628**	**97,442**	**111,706**

DESCRIPTION OF SERVICES:

The Traffic Engineering budget funds the installation and maintenance of traffic signage on, above, and/or near city streets.

BUDGET HIGHLIGHTS

- No major changes. Staff time redistributed between streets, traffic engr & snow plowing

GOALS OF CURRENT YEAR BUDGET:

Continue to meet FHWA guidelines for traffic signage
Replace damaged or defective signs within 48 hours
Bring signage up to current standards on all reconstruct and overlay projects
Continue to support Engineering and Community Development departments with traffic issues

Performance Measurements:

	2018 Estimate	2019 Actual	2020 Projected	2021 Projected	2022 Projected	2023 Projected
Total Hours	610	539	610			
Number of Traffic Signs in System	2390	2390	2390			
Number of Traffic Counts Performed	15	15	15			

FUND GENERAL

DEPARTMENT: ANIMAL CONTROL
FUNCTION: PUBLIC SAFETY

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0270	6249	MISCELLANEOUS OPERATING SUPPLY	176	136	678	411	750	750
0270	6281	SMALL TOOLS & MINOR EQUIPMENT	-	375			500	500
0270	6489	OTHER CONTRACTED SERVICES	4,205	3,825	315	332	2,000	5,000
Total Expenditure			**4,381**	**4,336**	**993**	**743**	**3,250**	**6,250**

DESCRIPTION OF SERVICES:

This fund covers expenditures related to animal control. Ramsey PD provides animal containment services and incurs expenses for boarding animals at Anoka PD.

BUDGET HIGHLIGHTS

- Increase due to no longer contracting service with NMACC. Services now provided in-house/Anoka PD

GOALS OF CURRENT YEAR BUDGET:

Provide animal containment services to residents

Performance Measurements:

	2018 Actual	2019 Actual	2020 Actual	2021 Projected	2022 Projected	2023 Projected
Animal Complaints	456	375	539	390	390	390
Number of Animals Impounded	70	33	53	45	45	45
Number of Animals Released to Owners	59	26	47	45	45	45
Number of Euthanizations	0	0	0	0	0	0

FUND GENERAL

DEPARTMENT: COMMUNITY ORIENTATING POLICE
FUNCTION: PUBLIC SAFETY

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0280	6204	STATIONERY, ENVELOPES & FORMS	-	293	233	361	500	500
0280	6206	FILM, MICROFILM, TAPES, DISKS	-	883	-	-	300	300
0280	6241	COMMUNITY POLICING SUPPLIES	4,880	7,750	10,310	9,190	9,000	10,000
0280	6281	SMALL TOOLS & MINOR EQUIPMENT	56	88	199	-	100	100
0280	6291	CULVERTS, SIGNS, STREET SUPPLY	-	505	50	-	200	200
0280	6322	POSTAGE	1	-	-	1	50	50
0280	6323	CELLULAR PHONES	-	1,018	1,018	1,118	-	-
0280	6331	TRAVEL & LODGING	500	413	138	-	1,300	1,500
0280	6335	TRAINING	870	655	-	1,655	1,100	1,300
0280	6361	GENERAL LIABILITY/PROPERTY INS	100	101	131	88	200	250
0280	6415	OTHER EQUIPMENT RENTAL	1,127	-	-	-	125	125
0280	6451	MEMBERSHIP DUES	530	933	427	446	1,500	1,500
0280	6471	BOOKS & PAMPHLETS	2,925	251	585	257	300	300
Total Expenditure			**10,990**	**12,888**	**13,092**	**13,115**	**14,675**	**16,125**

DESCRIPTION OF SERVICES:

The Community Orientating Policing funds expenditures related to community programs such as: Kids Safety Camp, Car Seat Inspections, Night to Unite, Pet Clinics, Bike Helmet Fitting and Sale, Police Explorers, and Drug Take Back Program

BUDGET HIGHLIGHTS

- No Major Changes

GOALS OF CURRENT YEAR BUDGET:

Increase participation in community based programs

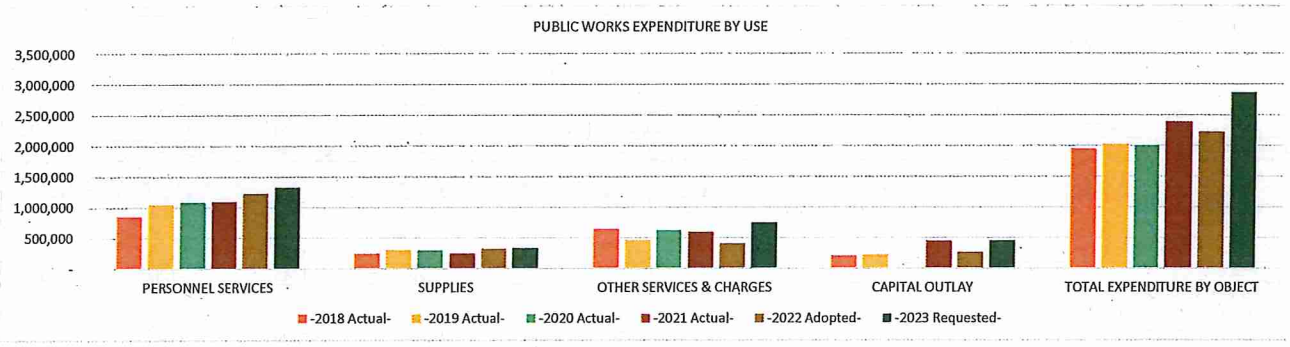
Performance Measurements:

	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Projected	2023 Projected
# of participants attending Kids Safety Camp	125	144	0	0	145	145
# of car seat inspections	50	29	9	15	30	30
Night to Unite - # of Parties	45	48	26	50	48	48
# of participants at Kids Summer Safety Series				139	150	150

GENERAL FUND 101 - GENERAL GOVERNMENT

PUBLIC WORKS	301-312

EXPENDITURE BY OBJECT SUMMARY	-2018 Actual-	-2019 Actual-	-2020 Actual-	-2021 Actual-	-2022 Adopted-	-2023 Requested-
PERSONNEL SERVICES	851,970	1,047,527	1,091,120	1,096,459	1,233,089	1,332,390
SUPPLIES	241,961	301,182	297,565	247,499	322,000	335,000
OTHER SERVICES & CHARGES	649,658	460,263	620,510	598,537	408,610	751,524
CAPITAL OUTLAY	211,093	219,480	-	450,964	265,800	452,657
TOTAL EXPENDITURE BY OBJECT	1,954,681	2,028,451	2,009,196	2,393,459	2,229,499	2,871,571



LINE ITEM DETAIL BY COST CENTER OR SUB-FUNCTION

PUBLIC WORKS						301-312
EXPENDITURE BY OBJECT RECAP ALL SUB-FUNCTIONS	-2018 Actual-	-2019 Actual-	-2020 Actual-	-2021 Actual-	-2022 Adopted-	-2023 Requested-
PERSONNEL SERVICES						
WAGES AND SALARIES						
6102 F.T. REGULAR-WAGES & SALARIES	594,983	697,857	742,654	735,374	830,737	883,813
6103 FULL TIME-REGULAR-OVERTIME	22,650	38,755	36,306	38,417	24,000	32,000
6105 TEMPORARY-WAGES & SALARIES	19,178	28,718	23,232	24,632	53,175	61,255
6106 OVERTIME-TEMPORARY	1,404	926	259	878	-	-
TOTAL WAGES AND SALARIES	638,215	766,256	802,452	799,301	907,912	977,068
OTHER GROSS EARNINGS						
6108 SEVERANCE PAY	3,678	8,173	-	4,555	-	-
TOTAL OTHER GROSS EARNINGS	3,678	8,173	-	4,555	-	-
EMPLOYER CONTRIBUTIONS						
6121 PERA CONTRIBUTIONS	43,216	53,931	52,794	57,508	66,445	71,183
6122 FICA/MEDICARE CONTRIBUTIONS	47,778	58,394	57,007	58,852	71,209	76,690
6131 GROUP INSURANCE	87,178	120,893	135,034	140,084	135,392	152,531
6133 WORKERS COMP INSURANCE PREMIUM	31,905	39,881	43,834	36,159	52,131	54,918
TOTAL EMPLOYER CONTRIBUTIONS	210,077	273,098	288,669	292,604	325,177	355,322
Total PERSONNEL SERVICES	851,970	1,047,527	1,091,120	1,096,459	1,233,089	1,332,390
SUPPLIES						
OFFICE SUPPLIES						
6205 DRAFTING SUPPLIES	-	-	-	-	-	-
6208 MISCELLANEOUS OFFICE SUPPLIES	1,803	3,377	1,010	1,096	1,200	1,100
TOTAL OFFICE SUPPLIES	1,803	3,377	1,010	1,096	1,200	1,100
OPERATING SUPPLIES						
6221 CLEANING SUPPLIES	-	-	-	-	-	-
6223 GASOLINE	13,235	13,344	17,893	17,420	14,000	30,500
6225 DIESEL FUEL	34,393	48,516	34,544	32,384	43,000	50,000
6227 LUBRICANTS & ADDITIVES	3,072	5,296	3,553	6,269	4,500	5,000
6229 SHOP MATERIALS	2,588	922	2,720	1,692	2,700	2,800
6231 UNIFORMS & TURN-OUT GEAR	4,582	5,176	3,825	6,315	4,800	5,500
6249 MISCELLANEOUS OPERATING SUPPLY	6,769	9,669	9,794	7,331	9,000	9,500
TOTAL OPERATING SUPPLIES	64,639	82,923	72,328	71,411	78,000	103,300
REPAIR AND MAINTENANCE SUPPLIES						
6257 OTHER VEHICLE PARTS	63,272	66,918	85,883	52,237	66,500	71,200
6259 BUILDING MAINT/REPAIR SUPPLIES	667	2,382	1,677	563	2,500	2,500
6261 SAND & GRAVEL	2,355	4,726	2,907	-	4,000	4,400
6263 SALT	72,544	97,334	92,362	68,800	112,000	77,000
6265 ASPHALT	11,129	14,235	22,316	32,491	24,000	32,500
6267 OTHER STREET MAINTENANCE SUPPL	4,279	7,353	4,798	5,303	5,800	13,100
6269 LANDSCAPE MATERIALS	5,929	5,675	1,520	1,174	7,500	7,500
6275 OTHER EQUIPMENT PARTS	-	-	-	-	-	-
TOTAL REPAIR AND MAINTENANCE SUPPLIES	160,176	198,622	211,463	160,568	222,300	208,200
SMALL TOOLS AND MINOR EQUIPMENT						
6281 SMALL TOOLS & MINOR EQUIPMENT	15,343	16,261	12,764	14,424	20,500	22,400
TOTAL SMALL TOOLS AND MINOR EQUIPMENT	15,343	16,261	12,764	14,424	20,500	22,400
Total SUPPLIES	241,961	301,182	297,565	247,499	322,000	335,000

OTHER SERVICES & CHARGES							
PROFESSIONAL SERVICES							
6315	MISCELLANEOUS PROFESSIONAL SER	21,585	28,986	21,794	28,146	24,500	26,000
TOTAL PROFESSIONAL SERVICES		**21,585**	**28,986**	**21,794**	**28,146**	**24,500**	**26,000**
COMMUNICATION							
6321	TELEPHONE	2,182	2,337	2,394	2,211	-	-
6322	POSTAGE	1,221	2,328	531	40	1,200	1,404
6323	CELLULAR PHONES	6,662	6,427	5,653	5,816	-	-
TOTAL COMMUNICATION		**10,065**	**11,092**	**8,578**	**8,067**	**1,200**	**1,404**
EMPLOYEE REIMBURSEMENTS							
6331	TRAVEL & LODGING	145	72	92	-	-	150
6335	TRAINING	8,236	7,726	4,821	6,623	8,650	7,345
TOTAL EMPLOYEE REIMBURSEMENTS		**8,380**	**7,798**	**4,913**	**6,623**	**8,650**	**7,495**
INSURANCE							
6361	GENERAL LIABILITY/PROPERTY INS	22,473	25,244	21,831	26,966	32,000	35,000
TOTAL INSURANCE		**22,473**	**25,244**	**21,831**	**26,966**	**32,000**	**35,000**
UTILITIES							
6371	ELECTRIC UTILITIES	7,422	7,555	7,382	8,153	39,000	15,000
6372	WATER/IRRIGATION	2,677	2,656	7,034	7,020	4,000	7,000
6373	GAS	5,304	5,240	4,690	6,001	25,000	15,000
6374	REFUSE/RECYCLING	3,912	2,167	2,353	3,611	2,800	3,400
TOTAL UTILITIES		**19,317**	**17,618**	**21,458**	**24,785**	**70,800**	**40,400**
REPAIRS AND MAINTENANCE - LABOR							
6381	BUILDING & STRUCTURE REPAIR	2,102	3,393	3,645	1,248	3,200	3,200
6382	MACHINERY & EQUIPMENT REPAIR	6,704	4,820	-	4,944	5,000	5,000
6387	TIRE MOUNTING & BALANCING	278	160	300	255	400	400
6388	OTHER VEHICLE REPAIR	19,809	23,444	15,523	15,242	20,000	25,000
TOTAL REPAIRS AND MAINTENANCE - LABOR		**28,894**	**31,817**	**19,468**	**21,689**	**28,600**	**33,600**
REPAIRS AND MAINTENANCE - CONTRACTS							
6404	MACHINERY & EQUIPMENT	1,221	1,332	1,332	1,221	1,500	-
6405	OFFICE & DATA PROCESSING EQUIP	-	-	968	-	8,895	-
TOTAL REPAIRS AND MAINTENANCE - CONTRACTS		**1,221**	**1,332**	**2,300**	**1,221**	**10,395**	**-**
RENTALS							
6415	OTHER EQUIPMENT RENTAL	60,355	86,565	1,581	8,333	15,000	15,200
6417	UNIFORM RENTAL	1,268	1,672	1,479	1,583	400	400
TOTAL RENTALS		**61,623**	**88,237**	**3,061**	**9,916**	**15,400**	**15,600**
DUES, SUBSCRIPTIONS, AND REGISTRATION FEES							
6451	MEMBERSHIP DUES	1,484	1,084	2,279	1,017	2,065	2,025
TOTAL DUES, SUBSCRIPTIONS, AND REGISTRATION FEES		**1,484**	**1,084**	**2,279**	**1,017**	**2,065**	**2,025**
BOOKS AND PAMPHLETS							
6471	BOOKS & PAMPHLETS	35	82	-	-	-	-
TOTAL BOOKS AND PAMPHLETS		**35**	**82**	**-**	**-**	**-**	**-**
CONTRACTED SERVICES							
6488	STREET MAINTENANCE CONTRACT	467,265	237,483	500,000	462,784	200,000	575,000
6489	OTHER CONTRACTED SERVICES	7,316	9,489	14,830	7,324	15,000	15,000
TOTAL CONTRACTED SERVICES		**474,582**	**246,971**	**514,830**	**470,108**	**215,000**	**590,000**
Total OTHER SERVICES & CHARGES		**649,658**	**460,263**	**620,510**	**598,537**	**408,610**	**751,524**
CAPITAL OUTLAY							
CAPITAL OUTLAY							
6540	HEAVY MACHINERY	197,061	185,980	-	116,891	265,800	270,950
6550	MOTOR VEHICLES	-	33,500	-	62,772	-	162,852
6580	OTHER EQUIPMENT	14,032	-	-	271,302	-	18,855
TOTAL CAPITAL OUTLAY		**211,093**	**219,480**	**-**	**450,964**	**265,800**	**452,657**
Total CAPITAL OUTLAY		**211,093**	**219,480**	**-**	**450,964**	**265,800**	**452,657**
TOTAL EXPENDITURES & OTHER FINANCING		**1,954,681**	**2,028,451**	**2,009,196**	**2,393,459**	**2,229,499**	**2,871,571**

FUND GENERAL

DEPARTMENT: ENGINEERING
FUNCTION: PUBLIC WORKS

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0301	6102	F.T. REGULAR-WAGES & SALARIES	132,852	206,802	245,602	240,248	308,856	327,183
0301	6103	FULL TIME-REGULAR-OVERTIME	6,020	9,788	17,702	20,287	12,000	20,000
0301	6104	PART TIME-WAGES & SALARIES	12,784	-	-			
0301	6105	TEMPORARY-WAGES & SALARIES	10,046	11,915	11,110	14,550	31,200	33,280
0301	6106	OVERTIME-TEMPORARY	1,404	926	259	878		
0301	6108	SEVERANCE PAY	-	18,602				
0301	6121	PERA CONTRIBUTIONS	7,989	15,192	19,434	19,411	26,404	28,535
0301	6122	FICA/MEDICARE CONTRIBUTIONS	11,695	17,825	18,924	19,849	26,932	29,106
0301	6131	GROUP INSURANCE	19,753	36,693	41,855	42,747	44,225	57,480
0301	6133	WORKERS COMP INSURANCE PREMIUM	687	1,180	1,445	1,198	2,811	3,367
0301	6205	DRAFTING SUPPLIES	-	-	-	-	-	-
0301	6208	MISCELLANEOUS OFFICE SUPPLIES	1,706	2,755	734	795	800	700
0301	6223	GASOLINE	3,540	3,917	3,677	4,789	4,000	7,000
0301	6231	UNIFORMS & TURN-OUT GEAR	1,711	2,156	1,327	1,170	1,800	1,500
0301	6249	MISCELLANEOUS OPERATING SUPPLY	98	841	2,255	-	1,000	-
0301	6257	OTHER VEHICLE PARTS	1,436	893	1,122	2,108	1,500	1,200
0301	6281	SMALL TOOLS & MINOR EQUIPMENT	144	218	86	-	500	400
0301	6315	MISCELLANEOUS PROFESSIONAL SER	4,730	967	4,139	197	2,500	4,000
0301	6321	TELEPHONE	1,140	1,285	1,334	1,239	-	-
0301	6322	POSTAGE	980	2,298	460	7	1,000	1,204
0301	6323	CELLULAR PHONES	3,268	2,660	2,589	3,427	-	-
0301	6331	TRAVEL & LODGING	145	72	92	-	-	150
0301	6335	TRAINING	3,148	4,090	2,112	3,699	4,550	3,245
0301	6361	GENERAL LIABILITY/PROPERTY INS	2,593	4,415	4,799	4,131	7,000	6,000
0301	6405	OFFICE & DATA PROCESSING EQUIP	-	-	968	-	8,895	-
0301	6451	MEMBERSHIP DUES	1,239	732	1,919	748	1,665	1,625
0301	6471	BOOKS & PAMPHLETS	35	82	-	-	-	-
0301	6550	MOTOR VEHICLES	-	33,500			-	29,000
Total Expenditure			**229,140**	**379,804**	**383,947**	**381,476**	**487,638**	**554,975**

PERSONNEL COMPLEMENT						
PW Director/City Engineer	-	-	-	-	-	1.00
City Engineer	1.00	1.00	1.00	1.00	1.00	-
Assistant City Engineer	-	-	-	-	0.50	1.00
Engineering Tech IV	1.00	0.50	1.00	1.00	1.00	
Engineering Tech II	1.00	1.00	1.00	1.00	1.00	1.00
Engineering Tech III	1.00	1.00	-	-	-	1.00
Senior Engineering Technician						1.00
Civil Engineer IV	1.00	1.00	1.00	1.00	1.00	1.00
Civil Engineer II	-		1.00	1.00	0.50	0.00
Secretary (Moved to PW)	1.00	-	-	-	-	-
Administrative Assistant	-	0.50	1.00	1.00	1.00	1.00
Interns (2)	1.00	1.00	1.00	1.00	1.00	1.00
Engineering Total	7.00	6.00	7.00	7.00	7.00	8.00

DESCRIPTION OF SERVICES:

The Engineering budget covers engineering functions not charged to specific projects. The City Engineer oversees all engineering including working with the Minnesota Department of Transportation, Anoka County, other cities and regulating agencies, maintaining mapping and GIS data, managing stormwater runoff, responding to citizen and staff requests, and general engineering functions.

BUDGET HIGHLIGHTS

- Full-Time Engineering Tech II - $82,715 - $24,736 Utility Funded = $57,979
- Reclass Engineering Tech II to Engineering Tech III - $4,027
- $29,000 capital request to replace 2006 Impala used by engineering office staff.
- Reclasses in Engr Dept due to PW Superintendent retiring (311 dept) in 2022 not in 2022 budget

GOALS OF CURRENT YEAR BUDGET:

Ensure stable and sustainable funding exists for the Pavement Management Program.
Research external funding opportunities for Water Treatment Plant improvements.
Implement improvements proposed with Anoka County CSAH 5/Nowthen Blvd. transportation corridor study.
Conduct well siting study for new municipal well #9.
Develop and plan for key infrastructure improvements (AUAR, utilities, transportation).
Support implementation of the Ramsey Gateway Highway 10 improvements.
Implement improved pavement condition rating system.
Continue implementing approved pavement rejuvenation program to replace suspended sealcoat program.

Performance Measurements:

	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Projected	2023 Projected
Active Engineering Projects	12	12	12	13	14	18
Completed Engineering Projects	9	10	10	11	11	14
Infrastructure Asset Management System Upgrades	1		0	0	0	

FUND GENERAL

DEPARTMENT: STREET MAINTENANCE
FUNCTION: PUBLIC WORKS

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0311	6102	F.T. REGULAR-WAGES & SALARIES	367,183	379,894	422,342	403,503	420,242	448,809
0311	6103	FULL TIME-REGULAR-OVERTIME	810	1,533	679	1,008	2,000	2,000
0311	6105	TEMPORARY-WAGES & SALARIES	2,888	9,361	9,971	5,160	13,200	19,200
0311	6108	SEVERANCE PAY	3,678	8,173		4,555		
0311	6121	PERA CONTRIBUTIONS	27,316	28,192	31,401	30,100	31,668	33,811
0311	6122	FICA/MEDICARE CONTRIBUTIONS	27,607	29,153	31,632	30,462	35,065	37,899
0311	6131	GROUP INSURANCE	67,425	84,200	93,179	97,338	91,167	95,051
0311	6133	WORKERS COMP INSURANCE PREMIUM	21,034	29,349	35,662	28,331	37,522	39,447
0311	6208	MISCELLANEOUS OFFICE SUPPLIES	97	622	276	301	400	400
0311	6221	CLEANING SUPPLIES	-	-				
0311	6223	GASOLINE	9,695	9,427	7,580	10,759	10,000	15,500
0311	6225	DIESEL FUEL	12,992	22,378	20,148	13,194	18,000	22,000
0311	6227	LUBRICANTS & ADDITIVES	3,072	5,296	3,553	6,269	4,500	5,000
0311	6229	SHOP MATERIALS	2,377	865	2,697	1,548	2,500	2,600
0311	6231	UNIFORMS & TURN-OUT GEAR	2,871	3,020	2,497	5,145	3,000	4,000
0311	6249	MISCELLANEOUS OPERATING SUPPLY	6,671	8,828	7,538	7,331	8,000	9,500
0311	6257	OTHER VEHICLE PARTS	22,718	30,149	30,188	21,869	30,000	32,000
0311	6259	BUILDING MAINT/REPAIR SUPPLIES	667	2,382	1,677	563	2,500	2,500
0311	6261	SAND & GRAVEL	-	-	-	-	1,000	1,000
0311	6265	ASPHALT	11,129	14,235	22,316	32,491	24,000	32,500
0311	6267	OTHER STREET MAINTENANCE SUPPL	418	1,577	19	1,019	2,000	2,100
0311	6269	LANDSCAPE MATERIALS	5,929	5,675	1,520	1,174	7,500	7,500
0311	6275	OTHER EQUIPMENT PARTS	-	-				
0311	6281	SMALL TOOLS & MINOR EQUIPMENT	15,199	16,043	12,678	14,424	20,000	22,000
0311	6315	MISCELLANEOUS PROFESSIONAL SER	16,855	28,019	17,655	27,948	22,000	22,000
0311	6321	TELEPHONE	1,042	1,052	1,060	973	-	-
0311	6322	POSTAGE	241	30	71	33	200	200
0311	6323	CELLULAR PHONES	3,394	3,767	3,063	2,389	-	-
0311	6335	TRAINING	5,088	3,636	2,709	2,924	4,100	4,100
0311	6361	GENERAL LIABILITY/PROPERTY INS	17,130	17,277	14,126	20,250	21,000	23,000
0311	6371	ELECTRIC UTILITIES	7,422	7,555	7,382	8,153	39,000	15,000
0311	6372	WATER/IRRIGATION	2,677	2,656	7,034	7,020	4,000	7,000
0311	6373	GAS	5,304	5,240	4,690	6,001	25,000	15,000
0311	6374	REFUSE/RECYCLING	3,912	2,167	2,353	3,611	2,800	3,400
0311	6381	BUILDING & STRUCTURE REPAIR	2,102	3,393	3,645	1,248	3,200	3,200
0311	6382	MACHINERY & EQUIPMENT REPAIR	6,704	4,820	-	4,944	5,000	5,000
0311	6387	TIRE MOUNTING & BALANCING	278	160	300	255	400	400
0311	6388	OTHER VEHICLE REPAIR	4,400	13,953	14,814	12,400	10,000	11,000
0311	6404	MACHINERY & EQUIPMENT	1,221	1,332	1,332	1,221	1,500	
0311	6415	OTHER EQUIPMENT RENTAL	60,355	86,565	1,581	8,333	15,000	15,200
0311	6417	UNIFORM RENTAL	1,268	1,672	1,479	1,583	400	400
0311	6451	MEMBERSHIP DUES	245	353	360	269	400	400
0311	6488	STREET MAINTENANCE CONTRACT	467,265	237,483	500,000	462,784	200,000	575,000
0311	6489	OTHER CONTRACTED SERVICES	7,316	9,489	14,830	7,324	15,000	15,000
0311	6540	HEAVY MACHINERY	197,061	185,980		116,891	265,800	270,950
0311	6550	MOTOR VEHICLES	37,577	-		62,772		133,852
0311	6580	OTHER EQUIPMENT	14,032			271,302		18,855
Total Expenditure			**1,474,670**	**1,306,948**	**1,336,038**	**1,747,168**	**1,399,064**	**1,973,774**

PERSONNEL COMPLEMENT						
Public Works Superintendent	1.00	1.00	1.00	1.00	1.00	1.00
Secretary (Formerly under Engineering)	1.00	1.00	1.00	1.00	1.00	1.00
Mechanic	2.00	2.00	2.00	2.00	2.00	2.00
Street Supervisor	-	-	-	-	1.00	1.00
Streets Lead Worker	1.00	1.00	1.00	1.00	1.00	1.00
PW Maintenance Worker	4.00	5.00	5.00	5.00	5.00	5.00
Temporary - Streets	0.50	0.50	0.50	0.50	0.50	0.50
Street Maintenance Total	9.50	10.50	10.50	10.50	11.50	11.50

6488/6489 Other Contracted Services						
Pavement Management Program Funding (Transfer to Pavement Management Fund)			260,742	300,000	-	-
Cracksealing/Rejuvenation/Spray Patching	237,483	237,483	239,258	162,784	200,000	200,000
Spray Patching	-	-	-	-	-	375,000
Curb Repair/Tree Removal			-	-	15,000	15,000
	237,483	237,483	500,000	462,784	215,000	590,000

6540 - Heavy Machinery						
F350 truck with plow	197,061	-	-	116,891		
1-Ton Truck	37,577	-	-	-		
Sidewalk Machine		148,292	-	-		
Tractor Backhoe ($84,000 total remainder utility funded)		37,688	-	-		
Tandem Axle Truck with Plow	-	-	-	-	265,800	270,950
	234,638	185,980	-	116,891	265,800	270,950

6550-Motor Vehicle						
1-ton truck			-	62,772		
2-3/4 ton trucks with plows (1 new & 1 replacement)	-	-	-	-	-	133,852
	-	-	-	62,772	-	133,852

6580 - Other Equipment						
Sidewalk Machine	-	-	-	162,723		
Snow Pusher Box for Front End Loader						18,855
Trailer for skidsteer	-	-	-	15,102		
Toolcat				36,105		
Skidsteer	-	-	-	57,372		
ATV Athletic Field Maintenance Machine	14,032	14,032	-	-		
	14,032	14,032	-	271,302	-	18,855

DESCRIPTION OF SERVICES:

The Street Maintenance Department is responsible for maintaining city streets, sidewalks, traffic signs, boulevards, ROW mowing and the storm water collection system.

BUDGET HIGHLIGHTS

- Additional street maintenance worker added in 2022, not included in 2022 budget - $74,310 - 2023 exp
- (Coded under departments, 260, 311, 312)
- PW Superintendent position not refilled
- City Engr/PW Direction Salary %
- Additional Spray Patching - 2 Year Funding from ARPA Funds - $375,000 Each Year
- New Snow Pusher Box for Front-end loader - $18,855
- New 3/4 ton pick-up with plow equipment -$58,542
- Replace 3/4 pickup with dump & plow - $75,310
- Replace tandem dump with plow - $270,950

GOALS OF CURRENT YEAR BUDGET:

Maintain and improve city's rating of 7.0 average of road condition
Increase use of contracted services on pothole repair (velocity patching)
Increase prevenative maintenace to prolong the life of our public streets
Maintain our city vehicles and equipment to the highest level possible

Performance Measurements:

	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Projected	2023 Projected
Crack filling (miles)	7.95	21.5	7	20.88	10.37	15
Sealcoating (miles)	7.5	0	0	0	0	0
Asphalt patching (tons)	150	532	500			

FUND GENERAL

DEPARTMENT: SNOW & ICE REMOVAL
FUNCTION: PUBLIC WORKS

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0312	6102	F.T. REGULAR-WAGES & SALARIES	94,947	111,161	74,710	91,623	101,639	107,821
0312	6103	FULL TIME-REGULAR-OVERTIME	15,820	27,433	17,925	17,122	10,000	10,000
0312	6105	TEMPORARY-WAGES & SALARIES	6,244	7,443	2,151	4,922	8,775	8,775
0312	6121	PERA CONTRIBUTIONS	7,911	10,547	1,959	7,997	8,373	8,837
0312	6122	FICA/MEDICARE CONTRIBUTIONS	8,476	11,416	6,451	8,541	9,212	9,685
0312	6133	WORKERS COMP INSURANCE PREMIUM	10,184	9,353	6,726	6,629	11,798	12,104
0312	6223	GASOLINE	-	-	6,636	1,873		8,000
0312	6225	DIESEL FUEL	21,401	26,138	14,396	19,191	25,000	28,000
0312	6229	SHOP MATERIALS	211	57	24	144	200	200
0312	6251	BATTERIES	-	-				
0312	6257	OTHER VEHICLE PARTS	39,117	35,875	54,572	28,260	35,000	38,000
0312	6261	SAND & GRAVEL	2,355	4,726	2,907	-	3,000	3,400
0312	6263	SALT	72,544	97,334	92,362	68,800	112,000	77,000
0312	6267	OTHER STREET MAINTENANCE SUPPL	3,861	5,777	4,779	4,284	3,800	11,000
0312	6361	GENERAL LIABILITY/PROPERTY INS	2,750	3,553	2,906	2,586	4,000	6,000
0312	6388	OTHER VEHICLE REPAIR	15,410	9,491	709	2,842	10,000	14,000
0312	6489	OTHER CONTRACTED SERVICES	-	-				
Total Expenditure			**301,233**	**360,301**	**289,211**	**264,815**	**342,797**	**342,822**

DESCRIPTION OF SERVICES:

The Snow and Ice Removal budget provides for snow removal and for ice control on city streets, parking lots, and pathways.

BUDGET HIGHLIGHTS

- Staff time redistributed between streets, traffic engr & snow plowing
- Salt Quantity needed reduced due to reduced # of minor snow events - $35,000 decrease

GOALS OF CURRENT YEAR BUDGET:

Clearing of parking ramp utilizing PW Staff (full time, temp on call, & seasonal staff) See PUMA Budget
Continue to monitor and reduce salt usage
Continue to complete citywide plowing in 8 hours or less
Upgrade weather service to MDSS (maintenance decision support software)
Equip cul-de-sac trucks and sidewalk plowing equipment with AVL to track snow removal operations

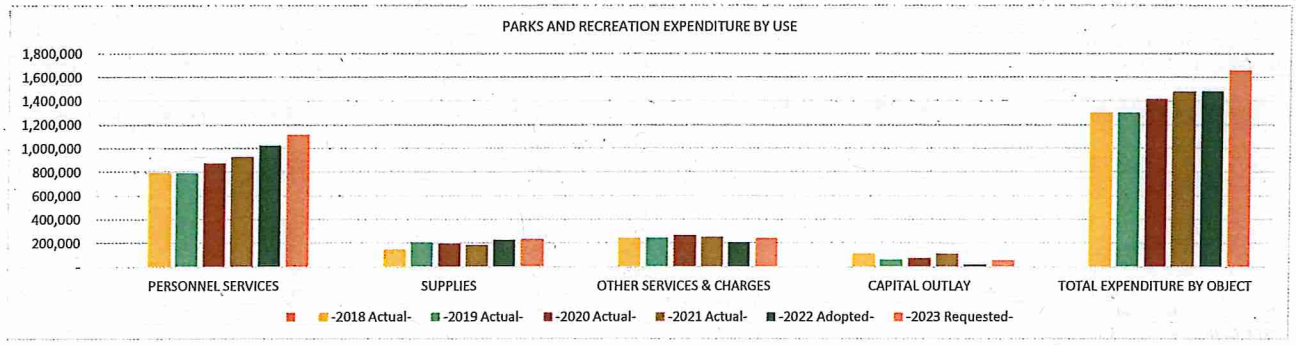
Performance Measurements:

	2018 Actual	2019 Actual	2020 Actual	2021 Projected	2022 Projected	2023 Projected
Miles of Streets Plowed	175	181.8	181.8			
Cul-de-sacs	275	283	283			
Salt/Sand Purchased (tons)	1200	1200	1200			
Snow Removal Hours	4110	5161	3090			
Full Scale Plowing Events	17.00	9.00	9.00			

GENERAL FUND 101 - GENERAL GOVERNMENT

PARKS AND RECREATION	452-455

EXPENDITURE BY OBJECT SUMMARY	-2018 Actual-	-2019 Actual-	-2020 Actual-	-2021 Actual-	-2022 Adopted-	-2023 Requested-
PERSONNEL SERVICES	795,948	791,294	878,027	929,874	1,026,225	1,118,642
SUPPLIES	148,244	207,079	198,379	186,228	229,800	239,094
OTHER SERVICES & CHARGES	245,907	244,126	266,854	253,330	208,800	244,700
CAPITAL OUTLAY	112,448	60,911	75,610	112,370	19,000	59,100
TOTAL EXPENDITURE BY OBJECT	**1,302,547**	**1,303,410**	**1,418,871**	**1,481,802**	**1,483,825**	**1,661,536**



LINE ITEM DETAIL BY COST CENTER OR SUB-FUNCTION

PARKS AND RECREATION	452-455

EXPENDITURE BY OBJECT RECAP ALL SUB-FUNCTIONS	-2018 Actual-	-2019 Actual-	-2020 Actual-	-2021 Actual-	-2022 Adopted-	-2023 Requested-
PERSONNEL SERVICES						
WAGES AND SALARIES						
6102 F.T. REGULAR-WAGES & SALARIES	531,530	516,077	572,067	618,528	638,456	721,420
6103 FULL TIME-REGULAR-OVERTIME	1,124	4,308	494	1,837	1,000	1,000
6105 TEMPORARY-WAGES & SALARIES	79,978	89,070	99,094	85,592	115,792	94,107
TOTAL WAGES AND SALARIES	**612,632**	**609,455**	**671,654**	**705,957**	**755,248**	**816,527**
EMPLOYER CONTRIBUTIONS						
6121 PERA CONTRIBUTIONS	40,833	40,860	45,806	48,065	50,827	54,639
6122 FICA/MEDICARE CONTRIBUTIONS	46,849	46,762	50,846	53,916	57,776	62,465
6131 GROUP INSURANCE	68,971	68,662	78,670	94,527	116,301	129,665
6133 WORKERS COMP INSURANCE PREMIUM	26,663	25,555	31,051	27,409	46,073	55,346
TOTAL EMPLOYER CONTRIBUTIONS	**183,316**	**181,839**	**206,373**	**223,916**	**270,977**	**302,115**
Total PERSONNEL SERVICES	**795,948**	**791,294**	**878,027**	**929,874**	**1,026,225**	**1,118,642**
SUPPLIES						
OFFICE SUPPLIES						
6208 MISCELLANEOUS OFFICE SUPPLIES	501	1,441	348	501	600	600
TOTAL OFFICE SUPPLIES	**501**	**1,441**	**348**	**501**	**600**	**600**
OPERATING SUPPLIES						
6223 GASOLINE	18,633	19,107	15,140	19,559	19,000	28,000
6225 DIESEL FUEL	5,237	4,500	265	3,238	5,000	12,000
6229 SHOP MATERIALS	773	654	523	939	1,000	1,000
6231 UNIFORMS & TURN-OUT GEAR	4,287	3,888	3,412	4,882	4,200	4,200
6249 MISCELLANEOUS OPERATING SUPPLY	22,014	35,821	32,775	30,380	33,000	33,000
TOTAL OPERATING SUPPLIES	**50,943**	**63,970**	**52,116**	**58,998**	**62,200**	**78,200**
REPAIR AND MAINTENANCE SUPPLIES						
6257 OTHER VEHICLE PARTS	15,348	17,698	15,975	7,020	17,000	17,000
6265 ASPHALT	41,931	93,441	97,967	101,594	105,000	108,294
6269 LANDSCAPE MATERIALS	22,531	19,297	16,785	11,449	25,000	20,000
6268 IRRIGATION SUPPLIES	15,111	9,317	13,000	6,025	15,000	10,000
TOTAL REPAIR AND MAINTENANCE SUPPLIES	**94,921**	**139,753**	**143,727**	**126,088**	**162,000**	**155,294**
SMALL TOOLS AND MINOR EQUIPMENT						
6281 SMALL TOOLS & MINOR EQUIPMENT	1,878	1,915	2,189	641	5,000	5,000
TOTAL SMALL TOOLS AND MINOR EQUIPMENT	**1,878**	**1,915**	**2,189**	**641**	**5,000**	**5,000**
Total SUPPLIES	**148,244**	**207,079**	**198,379**	**186,228**	**229,800**	**239,094**

OTHER SERVICES & CHARGES							
PROFESSIONAL SERVICES							
6315	MISCELLANEOUS PROFESSIONAL SER	55,401	31,522	33,468	30,717	33,000	33,000
TOTAL PROFESSIONAL SERVICES		**55,401**	**31,522**	**33,468**	**30,717**	**33,000**	**33,000**
COMMUNICATION							
6321	TELEPHONE	784	784	155	-	-	-
6322	POSTAGE	194	79	90	54	100	100
6323	CELLULAR PHONES	4,325	4,590	3,149	3,171	-	-
TOTAL COMMUNICATION		**5,303**	**5,453**	**3,394**	**3,225**	**100**	**100**
EMPLOYEE REIMBURSEMENTS							
6331	TRAVEL & LODGING			-	-	-	-
6334	MILEAGE REIMBURSEMENT			-	-	-	-
6335	TRAINING	528	2,914	2,714	453	2,500	2,500
TOTAL EMPLOYEE REIMBURSEMENTS		**528**	**2,914**	**2,714**	**453**	**2,500**	**2,500**
ADVERTISING AND PUBLISHING							
6352	GENERAL NOTICE & PUBLIC INFOR			-	-	-	-
TOTAL ADVERTISING AND PUBLISHING		**-**	**-**	**-**	**-**	**-**	**-**
INSURANCE							
6361	GENERAL LIABILITY/PROPERTY INS	14,308	15,364	17,404	17,104	20,000	22,000
TOTAL INSURANCE		**14,308**	**15,364**	**17,404**	**17,104**	**20,000**	**22,000**
UTILITIES							
6371	ELECTRIC UTILITIES	24,672	22,301	24,032	30,992	20,000	35,000
6372	WATER/IRRIGATION	9,060	6,095	7,444	11,167	10,000	12,000
6373	GAS	3,902	3,514	3,421	7,073	4,000	14,000
6374	REFUSE/RECYCLING	3,812	4,739	3,857	5,428	3,900	800
TOTAL UTILITIES		**41,445**	**36,648**	**38,753**	**54,660**	**37,900**	**61,800**
REPAIRS AND MAINTENANCE - LABOR							
6381	BUILDING & STRUCTURE REPAIR	19,176	8,793	14,100	14,346	10,000	10,000
6382	MACHINERY & EQUIPMENT REPAIR	3,612	12,601	10,031	543	7,000	7,000
6388	OTHER VEHICLE REPAIR	4,470	6,429	1,226	3,177	5,000	5,000
TOTAL REPAIRS AND MAINTENANCE - LABOR		**27,259**	**27,823**	**25,357**	**18,066**	**22,000**	**22,000**
RENTALS							
6415	OTHER EQUIPMENT RENTAL	1,515	1,568	1,489	777	2,000	2,000
6416	MACHINERY RENTAL	-	275	-	-	300	300
6417	UNIFORM RENTAL	263	276	231	258	400	400
TOTAL RENTALS		**1,777**	**2,119**	**1,719**	**1,036**	**2,700**	**2,700**
DUES, SUBSCRIPTIONS, AND REGISTRATION FEES							
6451	MEMBERSHIP DUES	280	300	420	300	600	600
TOTAL DUES, SUBSCRIPTIONS, AND REGISTRATION FEES		**280**	**300**	**420**	**300**	**600**	**600**
CONTRACTED SERVICES							
6489	OTHER CONTRACTED SERVICES	99,607	121,982	143,625	127,769	90,000	100,000
TOTAL CONTRACTED SERVICES		**99,607**	**121,982**	**143,625**	**127,769**	**90,000**	**100,000**
Total OTHER SERVICES & CHARGES		**245,907**	**244,126**	**266,854**	**253,330**	**208,800**	**244,700**
CAPITAL OUTLAY							
CAPITAL OUTLAY							
6540	HEAVY MACHINERY	23,362	-	42,861	-	-	-
6550	VEHICLES	-	-	-	-	-	59,100
6580	OTHER EQUIPMENT	17,298	60,911	32,749	112,370	19,000	-
TOTAL CAPITAL OUTLAY		**40,660**	**60,911**	**75,610**	**112,370**	**19,000**	**59,100**
Total CAPITAL OUTLAY		**40,660**	**60,911**	**75,610**	**112,370**	**19,000**	**59,100**
TOTAL EXPENDITURES & OTHER FINANCING		**1,230,759**	**1,303,410**	**1,418,871**	**1,481,802**	**1,483,825**	**1,661,536**

FUND GENERAL

DEPARTMENT: PARK & RECREATION
FUNCTION: PARKS AND RECREATION

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0452	6102	F.T. REGULAR-WAGES & SALARIES	531,530	516,077	572,067	618,528	638,456	721,420
0452	6103	FULL TIME-REGULAR-OVERTIME	1,124	4,308	494	1,837	1,000	1,000
0452	6104	PART TIME-WAGES & SALARIES	1,550	23,517	30,275	17,113	31,645	
0452	6105	TEMPORARY-WAGES & SALARIES	78,428	65,553	68,819	68,479	84,147	94,107
0452	6121	PERA CONTRIBUTIONS	40,833	40,860	45,806	48,065	50,827	54,639
0452	6122	FICA/MEDICARE CONTRIBUTIONS	46,849	46,762	50,846	53,916	57,776	62,465
0452	6131	GROUP INSURANCE	68,971	68,662	78,670	94,527	116,301	129,665
0452	6133	WORKERS COMP INSURANCE PREMIUM	26,663	25,555	31,051	27,409	46,073	55,346
0452	6208	MISCELLANEOUS OFFICE SUPPLIES	501	1,441	348	501	600	600
0452	6223	GASOLINE	18,633	19,107	15,140	19,559	19,000	28,000
0452	6225	DIESEL FUEL	5,237	4,500	265	3,238	5,000	12,000
0452	6229	SHOP MATERIALS	773	654	523	939	1,000	1,000
0452	6231	UNIFORMS & TURN-OUT GEAR	4,287	3,888	3,412	4,882	4,200	4,200
0452	6249	MISCELLANEOUS OPERATING SUPPLY	22,014	35,821	32,775	30,380	33,000	33,000
0452	6257	OTHER VEHICLE PARTS	15,348	17,698	15,975	7,020	17,000	17,000
0452	6265	ASPHALT	41,931	93,441	97,967	101,594	105,000	108,294
0452	6268	IRRIGATION SUPPLIES	15,111	9,317	13,000	6,025	15,000	10,000
0452	6269	LANDSCAPE MATERIALS	22,531	19,297	16,785	11,449	25,000	20,000
0452	6281	SMALL TOOLS &.MINOR EQUIPMENT	1,878	1,915	2,189	641	5,000	5,000
0452	6315	MISCELLANEOUS PROFESSIONAL SER	55,401	31,522	33,468	30,717	33,000	33,000
0452	6321	TELEPHONE	784	784	155	-	-	
0452	6322	POSTAGE	194	79	90	54	100	100
0452	6323	CELLULAR PHONES	4,325	4,590	3,149	3,171	-	
0452	6335	TRAINING	528	2,914	2,714	453	2,500	2,500
0452	6361	GENERAL LIABILITY/PROPERTY INS	14,308	15,364	17,404	17,104	20,000	22,000
0452	6371	ELECTRIC UTILITIES	24,672	22,301	24,032	30,992	20,000	35,000
0452	6372	WATER/IRRIGATION	9,060	6,095	7,444	11,167	10,000	12,000
0452	6373	GAS	3,902	3,514	3,421	7,073	4,000	14,000
0452	6374	REFUSE/RECYCLING	3,812	4,739	3,857	5,428	3,900	800
0452	6381	BUILDING & STRUCTURE REPAIR	19,176	8,793	14,100	14,346	10,000	10,000
0452	6382	MACHINERY & EQUIPMENT REPAIR	3,612	12,601	10,031	543	7,000	7,000
0452	6388	OTHER VEHICLE REPAIR	4,470	6,429	1,226	3,177	5,000	5,000
0452	6415	OTHER EQUIPMENT RENTAL	1,515	1,568	1,489	777	2,000	2,000
0452	6416	MACHINERY RENTAL	-	275	-	-	300	300
0452	6417	UNIFORM RENTAL	263	276	231	258	400	400
0452	6451	MEMBERSHIP DUES	280	300	420	300	600	600
0452	6489	OTHER CONTRACTED SERVICES	89,607	101,982	143,625	127,769	90,000	100,000
0452	6540	HEAVY MACHINERY	23,362	-	42,861			
0452	6550	MOTOR VEHICLES	71,788	-	-	-		59,100
0452	6580	OTHER EQUIPMENT	17,298	60,911	32,749	112,370	19,000	
Total Expenditure			**1,292,547**	**1,283,410**	**1,418,871**	**1,481,802**	**1,483,825**	**1,661,536**

PERSONNEL COMPLEMENT						
Park Maintenance Worker	5.00	4.00	4.00	5.00	6.00	6.00
Utilities Maintenance Worker (Enterprise Funded)	3.00	3.00	3.00	3.00	3.00	3.00
Utilities Supervisor (Enterprise Funded)	1.00	1.00	1.00	1.00	1.00	1.00
Parks/Assistant PW Superintendent	1.00	1.00	1.00	1.00	1.00	1.00
Park Supervisor	1.00	1.00	1.00	1.00	1.00	1.00
Parks Lead Worker	-	1.00	1.00	1.00	1.00	1.00
Recreation Specialist	-	0.50	0.50	0.50	0.50	1.00
Temporary - Parks	3.62	3.62	3.62	3.62	3.62	3.62
Parks Intern	0.34	0.34	-	-	-	-
	14.96	15.46	15.12	16.12	17.12	17.62

6540/6550 Heavy Machinery						
3/4 ton 4/4 Truck			42,861	-		
3/4 Ton 4/4 Truck with plow equipment	36,580	-	-	-		
1-ton truck with plow equipment	58,570	-	-	-		59,100
	95,150	-	42,861	-	-	59,100

6580 Other Equipment						
ATV Athletic Field Maintenance Machine	17,298	-	-	-		
Kubota Tractor Attachment			32,749	-		
Large Area Mower			-	101,509		
Line Striper					19,000	
John Deere Mower				10,861		
3-Zero-Turn Mowers	-	21,338	-			
Chipper		33,800	-			
	17,298	55,138	32,749	112,370	19,000	-

DESCRIPTION OF SERVICES:

The Park and Recreation Department is responsible for the maintenance of all city parks and facilities. These parks and facilities include playgrounds, shelters, ballfields,trails, public grounds and streetscapes.

BUDGET HIGHLIGHTS

- Increase hours for Rec Specialist: 29 hours to 40 hours/week: $24,195
- Reclass Asst PW Superintendent to Asst PW Director in 2022 but not in 2022 budget
- Replace F250 with topper with a 1-ton with plow - $59,100
-

GOALS OF CURRENT YEAR BUDGET:

Continue new trail maintenance policy developed in 2015
Continue to coordinate trail, sidewalk, parking lot and rink snow removal with city-wide snow plowing for
Continue to work year-round with the athletic associations in the provision of youth recreation
Complete a citizen survey to identify community need for recreation programming
Following the conclusion of the 2018 comprehensive plan update and master park planning endeavor begin implementing the park and trail plan objectives
Continue organizing a Master Park and Trail Plan, including cost estimates for the emerging future vison

Performance Measurements:						
	2018 Actaul	2019 Actual	2020 Actual	2021 Projected	2022 Projected	2023 Projected
Number of City Parks	23	23	23	26	26	26
Number of Athletic Fields Maintained	42	42	42	42	42	42
Number of Playgrounds Maintained	17	17	17	17	17	17
Miles of Trails Maintained	41	70	70	70	70	70
Total Acreage Mowed	150.11	150.11	150.11	150.11	150.11	150.11

FUND GENERAL

DEPARTMENT: COMMUNITY PROGRAMS
FUNCTION: PARKS AND RECREATION

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Adopted Budget
0455	6489	OTHER CONTRACTED SERVICES	10,000	20,000			
Total Expenditure			**10,000**	**20,000**	-	-	-

6489 Other Contracted Services					
Alexandra House (Gambling Funds)	-	10,000	-	-	-
Family Promise Donation	-	-	-	-	-
Ramsey Foundation - Draw Park Events (Gambling Funds)	5,000	10,000	-	-	-
	5,000	20,000	-	-	-

DESCRIPTION OF SERVICES:

The Community Programs budget provides funding for those organizations that provide programs and support to Ramsey residents in need.

BUDGET HIGHLIGHTS

- Funding For Alexandra House and Draw Park Events Funded via Gambling Fund

GOALS OF CURRENT YEAR BUDGET:

- Increase citizens knowledge of programs offered

FUND GENERAL

DEPARTMENT: EXPENDITURE RESERVE
FUNCTION: MISCELLANEOUS/CONTINGENCY

Business Unit	Object Account	Description	2018 Actual	2019 Actual	2020 Adopted Budget	2021 Actual	2022 Adopted Budget	2023 Requested Budget
0892	6105	TEMPORARY-WAGES & SALARIES	-	-	-	-		
0892	6282	EMERGENCY SUPPLIES - COVID	-	-	436,995	2,741		
0892	6315	MISCELLANEOUS PROFESSIONAL SER	-	-	-	-	25,000	18,600
0892	6603	OTHER L.T. OBLIGATION PRINCIPA	61,853	61,853	61,853	61,853		
0892	6820	OPERATING TRANSFERS TO OTHER F	643,832	575,817	1,376,215	409,801	106,373	106,373
Total Expenditure			**705,685**	**637,670**	**1,875,063**	**474,396**	**131,373**	**124,973**

6603/6820 Principal & Transfers							
Bury Carlson Internal Loan (PIR Fund)*	-	44,520	44,520	44,520	44,520	44,520	
Minicipal Center debt transfer interfund	61,853	61,853	61,853	61,853	61,853	61,853	
	61,853	106,373	106,373	106,373	106,373	106,373	

*Coded directly against property tax when collected

6820 Transfers to Other Funds				
Excess Revenue Transfer	643,832	575,817	1,376,215	-
	-	-	-	-
	643,832	575,817	1,376,215	-

DESCRIPTION OF SERVICES:

The Contingency budget is to be used for unforeseen expenditures or for anticipated expenditures of uncertain amounts.

BUDGET HIGHLIGHTS

- No Major Changes

GOALS OF CURRENT YEAR BUDGET:

Minimize unbudgeted/unallocated expenses

FUND ECONOMIC DEVELOPMENT AUTHORITY

BUDGET SUMMARY:								
Business Unit	**Object Account**	**Description**	**2018 Actual**	**2019 Actual**	**2020 Actual**	**2021 Actual**	**2022 Adopted Budget**	**2023 Requested Budget**
9230	4011	CURRENT-AD VALOREM TAXES	84,583	85,062	76,787	63,927	75,360	82,610
9230	4012	DELINQUENT-AD VALOREM TAXES	919	434	410	1,060		
9230	4014	FISCAL DISPARITIES	18,824	14,360	13,753	11,146		
9230	4273	OTHER STATE GRANTS & AIDS	-	-				
9230	4609	OTHER MISCELLANEOUS REVENUES	3,816	46,972		10		
9230	4701	INTEREST ON INVESTMENTS	16,059	35,028	40,633	(3,673)	10,000	5,000
9230	4901	TRANSFER IN FROM OTHER FUNDS	-	-				
Total Revenue			**124,202**	**181,856**	**131,583**	**72,470**	**85,360**	**87,610**

Business Unit	**Object Account**	**Description**	**2018 Actual**	**2019 Actual**	**2020 Actual**	**2021 Actual**	**2022 Adopted Budget**	**2023 Requested Budget**
9230	6102	F.T. REGULAR-WAGES & SALARIES	-	-				
9230	6105	TEMPORARY-WAGES & SALARIES	1,435	840	755	560	1,500	1,500
9230	6121	PERA CONTRIBUTIONS	-	-		-		
9230	6122	FICA/MEDICARE CONTRIBUTIONS	120	64	58	43	100	100
9230	6131	GROUP INSURANCE	-	-				
9230	6133	WORKERS COMP INSURANCE PREMIUM	7	4	4	2	10	10
9230	6246	MARKETING	4,150	22,027	2,430	7,190	30,000	25,000
9230	6249	MISCELLANEOUS OPERATING SUPPLY	15,261	10,771	9,562	2,364	19,000	19,000
9230	6304	LEGAL FEES	-	-				
9230	6315	MISCELLANEOUS PROFESSIONAL SER	27,889	20,999	70,426	46,082	30,000	35,000
9230	6322	POSTAGE	-	-				
9230	6323	CELLULAR PHONES	-	-				
9230	6331	TRAVEL & LODGING	347	850	-	312	1,000	2,300
9230	6335	TRAINING	511	2,048	483	575	1,000	1,500
9230	6361	GENERAL LIABILITY/PROPERTY INS	511	590	877	3,242	750	1,000
9230	6371	ELECTRIC UTILITIES	-	-				
9230	6433	REFUNDS/REIMBURSEMENTS	-	-	-	250,000		
9230	6530	IMPROVEMENTS OTHER THAN BUILDINGS	-	-		15,151		
9230	6451	MEMBERSHIP DUES	1,370	1,437	940	1,121	2,000	2,200
9230	6452	SUBSCRIPTIONS	-	-	-	5	-	-
Total Expenditure			**51,601**	**59,630**	**85,534**	**326,645**	**85,360**	**87,610**

DESCRIPTION OF SERVICES:

The primary objective of the Economic Development Authority is to aid, assist and promote the growth and expansion of commercial, retail and industrial development in the City of Ramsey.

GOALS OF CURRENT YEAR BUDGET:

Enhance Business Retention and Expansion Program
Increase number of jobs
Increase retail base
Reduce the amount of land owned by City for development

Mississippi River Cities & Towns Initiative

An Association of 101 U.S. Mayors

Vision • Leadership • Results

Full Membership Brings Resources to Your City:

- Access to the **MRCTI Infrastructure Facility** to help your city secure Jobs Act grants
- Access to an exclusive **project investment matchmaking service** that exposes your city projects to global investors:
- Access to the MRCTI / Quantified Ventures **Environmental Impact Bond Challenge** to fund infrastructure projects;
- Access to **MRCTI's exclusive Earmark Developer** to maximize your City's chances for Congressional spending;
- **Grant consulting** for your City;
- Opportunity to seek **leadership positions and host meetings**.















MRCTI 2012-2022

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Mississippi River Cities & Towns Initiative

INVOICE



1520 Market Street, Suite 2000
St. Louis, MO 63103
Phone (314) 657-3863 Fax (314) 613-7011

INVOICE #114
DATE 07/12/2022

TO:
The Honorable Mark Kuzma
Office of the Mayor
7550 Sunwood Drive, NW
Ramsey MN, 55303

FOR One Year Membership on MRCTI

Description	Amount
One Year Membership 2022	3000
Total	**3000**

Make all checks payable to Mississippi River Cities & Towns Initiative
Payment is due within 30 days.
If you have any questions concerning this invoice, contact Tiara Lumas, tlumas@mrcti.org

THANK YOU FOR YOUR MEMBERSHIP!!

CC Work Session **2. 3.**

Meeting Date: 09/13/2022

Information

Title:

Review Estimated Project Costs, Funding Sources, and Construction Schedules for Proposed Water Treatment Plant Improvements

Purpose/Background:

Purpose:

The purpose of this case is to receive City Council consensus for Staff to request City Council approval of plans and specifications and authorization to advertise bids for the Water Treatment Plant project on September 27, 2022.

Background:

Feasibility Study

Attached is a copy of the Feasibility Study dated March 4, 2021 for the proposed municipal water treatment plant improvements prepared by SEH, Inc. This study documents the City's existing water supply source, quality and quantity, existing water supply system infrastructure and proposed trunk watermain improvements, proposed water treatment process options and recommendations, water treatment plant site evaluations and recommendations, estimated costs, alternative funding sources, impacts to water rates, and a proposed project schedule. This study identified estimated project costs for both the necessary trunk watermain improvements and a centralized gravity filter water treatment plant at $28.67M.

Water Treatment Plant Trunk Watermain Improvements

On March 9, 2021, the City Council awarded a contract to SEH Inc. to prepare plans and specifications for Improvement Project #21-08, Water Treatment Plant Trunk Watermain Improvements.

On October 26, 2021, the City Council approved plans and authorized bids using both a base bid and an alternate bid. The base bid specified a combination of open trenching and directional drilling the watermain, whereas the alternate bid specified directional drilling watermain across as much of the project area as feasible, and open trenching the remainder. As the time, the bidding environment for utility pipes was extremely volatile due to an overall shortage of pipe and appurtenant materials for various material types caused by supply chain disruptions due to extreme weather events, a shortage of drivers, shipping lane blockages, etc. These issues resulted in increased pipe costs and long delivery times between the time materials were being ordered and the time they were being delivered. On average, pipes were being delivered to project sites generally 3 to 6 months or more from the time they were ordered. Staff therefore recommended bidding this project as soon as possible, allowing an extended bidding window of 2 months, and allowing bidders as much time as possible to substantially complete the work in hopes of receiving the best bid prices possible.

Construction costs for the trunk watermain improvements per SEH's Feasibility Study were estimated at $3,424,750. Construction cost estimates based on SEH's final plans and specifications were $4,875,068.50 for the base bid, and $4,916,194.50 for the alternate bid. The lowest base bid for construction costs was $6,737,287.45, and the lowest alternate bid received was $7,059,102.16. Due to the significant cost increase, the two bids received were rejected by the City Council on January 25, 2022, and Staff was directed to work with SEH to revise the approved plans to reduce costs and monitor the bidding environment to identify the most favorable time to re-bid the project.

SEH has been working to reduce project costs by exploring alternate construction materials and methods, reducing watermain depths, reducing the amount of directionally drilled watermain, and exploring the viability of the City pre-purchasing watermain materials to avoid sales tax. However, SEH has also been working to incorporate

numerous proposed improvements required to switch chemical treatment processes from individual pump houses to the Water Treatment Plant before the plant is commissioned, which significantly increased project costs. Based on SEH's current revised plans, the engineer's project cost estimate is $8,950,000.

The anticipated construction schedule for this work is 3 to 4 months, depending on weather and material availability. Work on this project can therefore start well after the Water Treatment Plant improvements are under construction. However, keep bid prices as low as possible Staff is proposing to re-bid this project this Fall to allow bidders to order materials many months before construction needs to start.

Water Treatment Plant

On May 20, 2021, the city issued a Request for Proposals (RFP) for Design/Bid/Build services for a centralized Water Treatment Plant. Five firms submitted proposals and the firm of AE2S was selected based on experience in designing water treatment facilities, proposed work plan, ability to meet construction time lines, and proposed fees for services.

AE2S recently completed the final plans and specifications and Staff is preparing to present the plans to the City Council for approval on September 27, 2022, and to request authorization to advertise bids for the Water Treatment Plant project.

The engineer's Preliminary Opinion of Probable Total Project Costs for the Water Treatment Plant is $38,648,644.

Funding

Total estimated project costs for both the Water Treatment Plant and the Trunk Watermain Improvements total $47,598,644. It is worth noting that these costs include indirect costs for administrative, engineering, finance and legal fees so several hundred thousand dollars in engineering fees were previously paid.

Funding for these improvements is proposed to include a mix of internal funds and bonding. Staff will explain the proposed funding sources and amounts in more detail at the work session.

The 2022 - 2031 CIP identifies a total project cost of $32,000,000 based on the SEH Feasibility Study.

Project Schedule

This project is intended to reduce Manganese concentrations in our water supply system. In 2019, the Minnesota Department of Health (MDH) recommended that the City of Ramsey develop short and long-term plans to reduce manganese concentrations in our water supply system. In April of 2019, the City began supplying water to municipal water users using only the three wells with the lowest manganese concentrations to make sure manganese concentrations throughout the water supply system would not exceed the MDH Health Based Value (HBV) for manganese of 0.100 mg/L, which addressed the City's short-term plans. The City's long-term solution requires construction of a water treatment plant to remove manganese from the municipal water supply system.

Since the Spring of 2019, the City of Ramsey has been collecting water samples from random locations and has had the samples tested for Manganese. In general, these test results have indicated that utilizing municipal wells with the lowest historical Manganese concentrations has allowed Manganese concentrations in the City's water supply system to remain below 0.100 mg/L the vast majority of the time, and no tests to date have exceeded 0.300 mg/L, which MDH has identified as the highest concentration of Manganese fit for adult consumption. However, the City is planning to construct its next municipal water supply well (well #9) within the next few years and it is not known how much Manganese will be produced by that well.

Originally, the intent was to have the WTP operational before the high-water use season started in the Summer of 2024. However, due to current supply chain issues, Water Treatment Plants are now averaging approximately 2 years to construct. Bidding the WTP project in October/November 2022 will allow the plant could be operational by the Summer of 2025.

Timeframe:

Staff estimates this case will take 30 minutes to present and discuss.

Funding Source:

Dependent on discussions.

Responsible Party(ies):

City Engineer Westby will present the case. Finance Director Lund and City Administrator Hagen will be available to assist in responding to questions.

Outcome:

Receive City Council consensus for Staff to request City Council approval of plans and specifications and authorization to advertise bids for the Water Treatment Plant project on September 27, 2022.

Attachments

WTP Feasibility Study

Form Review

Inbox	Reviewed By	Date
Brian Hagen	Brian Hagen	09/08/2022 12:08 PM
Form Started By: Bruce Westby		Started On: 09/02/2022 03:59 PM
Final Approval Date: 09/08/2022		

Feasibility Study

Water Treatment Plant

City of Ramsey, Minnesota

RAMSY 154354 | March 4, 2021

SEH

Building a Better World for All of Us®

Engineers | Architects | Planners | Scientists

Feasibility Study

Water Treatment Plant
City of Ramsey, Minnesota

SEH No. RAMSY 154354

March 4, 2021

I hereby certify that this 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.

Miles B. Jensen, P.E.

Date: March 4, 2021 License No.: 19869

Short Elliott Hendrickson Inc.
3535 Vadnais Center Drive
St. Paul, MN 55110-3507
651.490.2000

Executive Summary

The City of Ramsey has eight water supply wells with concentrations of manganese ranging from 0.02 mg/L to 0.37 mg/L. The Minnesota Department of Health (MDH) has established a Health Based Value (HBV) for manganese of 0.100 mg/L. Four of Ramsey's eight water supply wells exceed the MDH HBV for manganese. MDH has recommended to the City that they develop plans to address the manganese. In addition to the potential health concerns with manganese, Ramsey's drinking water also exceeds the Secondary Standards for iron and manganese. Water with concentrations of iron and manganese above the Secondary Standard causes aesthetic problems including red and black staining of plumbing fixtures and laundry and taste complaints.

The City of Ramsey currently utilizes groundwater from the Tunnel City-Wonewoc (TCW) aquifer as its exclusive source of drinking water. An evaluation was conducted of the TCW aquifer which determined that the TCW should be able to continue to produce potable water to meet present and foreseeable future demands.

The most cost-effective method for removing manganese and iron from drinking water is chemical oxidation followed by sand filtration. These processes require construction of a water treatment plant. Based upon an analysis of Ramsey's 2040 water demand, the initial capacity of the water treatment plant should be 10 million gallons per day (MGD), with the ability to expand to 20 MGD.

Four water treatment plant sites were evaluated including the Fire Station site, Public Works site, Water Shop site, and Vacant City property site. The Public Works site would be the least expensive to construct because it could share garage space, a generator, and security infrastructure with the onsite Public Works facility. The Public Works site also offers operational efficiencies because it is on the same site as the new Public Works facility. In January of 2020, the City of Ramsey's Planning Commission, Economic Development Authority, and Public Works Committee all voted unanimously to recommend City Council approval to construct the water treatment plant on the Public Works site.

This study evaluated two treatment process alternatives including gravity filtration and pressure filtration. With gravity filtration, the water flows by gravity through concrete filter cells into a holding tank (clearwell). The water is then pumped into the distribution system. With pressure filtration, the water is pumped from the wells through steel pressure filters and directly into the distribution system.

Report level project and life cycle cost opinions for the two alternatives are included below. The project costs include the capital cost plus 10-percent contingency, 1-percent administration, and 12-percent engineering costs. Life cycle costs represent the total cost of owning and operating the water treatment plant for 50 years and include capital cost, equipment replacement, labor, gas, chemicals, insurance, electricity, and annual equipment repair.

	Project Cost	**50 Year Life Cycle Cost**
Gravity Filter Treatment Plant	$32,400,000	$71,880,000
Pressure Filter Treatment Plant	$30,780,000	$75,440,000

As the table indicates, the gravity filter treatment plant has a slightly higher project cost, but a lower overall life cycle cost. The pressure filter treatment plant has a higher life cycle cost due to the expense of painting and maintaining the steel filters; whereas concrete gravity filters require very little maintenance.

Executive Summary (continued)

In addition to having lower life cycle costs, gravity filters have other advantages over pressure filters including: (1) more treatment options including aeration and detention without requiring another pumping step, (2) water from the gravity filters does not go immediately into the distribution system so if problems occur with treatment processes operators have time to react, (3) gravity filters are open to view and access, and (4) gravity filtration systems have a greater amount of operational flexibility including the ability to treat surface water.

A gravity filter treatment plant is the recommended alternative due to the advantages it offers at a comparable cost.

If the City elects to proceed with a water treatment plant project, the proposed project schedule could be as follows:

Item	Completion Date
Public Involvement	March 2021 – April 2021
Preparation of Plans	May 2021 – September 2021
Ad for Bid	October 2021
Bid Opening	November 2021
Construction Start	December 2021
Construction Complete	June 2023

However, Anoka County is planning “interim” improvements to Bunker Lake Boulevard between Armstrong Boulevard and Sunfish Lake Boulevard in 2021 to improve operations and safety in anticipation of traffic volumes doubling while planned improvements to Highway 10 are constructed between 2022 and 2025. Therefore, to construct the raw and finished watermain associated with the water treatment plant project as cost-effectively as possible, plans and specifications for the raw and finished watermain improvements are recommended to be prepared and bid in conjunction with Anoka County’s proposed improvements to Bunker Lake Boulevard.

Operating the water treatment plant is not anticipated to require additional Staff. While Staff will need to visit the plant on a daily basis to operate and maintain it, this time will generally be offset by the time Staff currently spends operating and maintaining the six municipal wells and three pump houses within The COR.

If a water treatment plant project is pursued, immediate distribution water quality improvements should not be expected. The water treatment plant will produce water free of iron and manganese; however, it takes time for the iron and manganese deposits in the distribution system to dissipate and overall water quality to improve.

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Feasibility Study

Water Treatment Plant

Prepared for City of Ramsey

1 Existing Water Infrastructure

1.1 Overall System Description

The City of Ramsey's water system dates back to 1985 when a well, pressure tank storage, and distribution piping was constructed. Today, Ramsey's water system provides drinking water to approximately 4,400 residences and approximately 340 businesses. The existing water system consists of the following major components:

- Eight municipal wells
- Four pump houses
- Chemical feed systems in each pump house to add chlorine, fluoride, and polyphosphate
- Over 83 miles of watermain
- Over 900 fire hydrants
- Three water towers with a combined storage of 4 million gallons (MG)

The wells pump water to their respective pump houses, with Wells No. 1 and 2 pumping to Pump House 1, Wells No. 3 and 4 pumping to Pump House 2, Wells No. 5 and 6 pumping to Pump House 3, and Wells No. 7 and 8 pumping to Pump House 4. Following chemical addition at the Pump Houses, water is pumped directly into the distribution system.

1.2 Raw Water Supply

The City of Ramsey operates eight (8) municipal wells finished in the Tunnel City-Wonewoc (TWC) aquifer. Table 1 provides a summary of each well. Figure 1 in Appendix A shows the Ramsey distribution system map that identifies the locations of the wells, as well as the towers.

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Table 1 – Well Data

Well No.	Year Constructed	Formation	Depth	Casing Depth (ft)	Casing Size (in)	Capacity (gpm)
1	1984	Ironton-Galesville	320	243	14	700
2	1987	Ironton-Galesville	320	240	14	220
3	1997	Ironton-Galesville	345	222	30	1,450
4	1998	Ironton-Galesville	321	191	30	850
5	2000	Ironton-Galesville	316	215	30	850
6	2005	Ironton-Galesville	390	282	30	900
7	2007	Ironton-Galesville	332	216	30	850
8	2007	Ironton-Galesville	354	245	30	1,400

Notes: Well No. 2 used exclusively for irrigation of River's Bend Park.

The combined capacity of all of the wells is 7,220 gallons per minute (gpm) which is equivalent to 10.4 million gallons per day (MGD). The firm capacity (capacity with the largest well out of service) is 5,770 gpm or 8.3 MGD.

If a centralized water treatment plant is constructed, Wells No. 1 and 2 would not initially be connected to the water treatment plant due to the significant expense required to extend trunk watermain to the water treatment plant. The firm capacity without considering Wells No. 1 and 2 is 4,850 gpm or 7.0 MGD.

All of the wells are located in the southern part of the City north of U.S. Highway 10, with Wells No. 1 and 2 located in the south-eastern portion of Ramsey, and Wells No. 3 through 8 located in the south-central portion of Ramsey.

Maintenance records indicate that the wells, pumps, and motors are inspected and repaired on a routine basis. The condition of the wells, pumps, and motors system-wide appears to be good.

1.3 Current Water Treatment

Chlorine is added to the well water to provide a disinfectant residual in the distribution system. The City utilizes a free chlorine residual in the distribution system rather than chloramine, which is a less powerful disinfecting agent created when chlorine is mixed with ammonia. The City does have low levels of naturally occurring ammonia in their well water, although chlorine is fed past the breakpoint to completely oxidize the ammonia.

Polyphosphate is added to the water to sequester iron and manganese. Sequestering of iron and manganese keeps the metals in solution and prevents them from precipitating to form oxides, and thus preventing aesthetic water quality issues such as color, taste, and sedimentation. Sequestration does not remove iron or manganese, and polyphosphate degrades over time which may cause aesthetic issues at dead-ends and outer ends of the distribution system.

In accordance with Minnesota State Statute, fluoride is also added to the treatment process to promote strong teeth.

The chemicals are added to the raw water from the wells in each of the pump houses prior to being pumped into the distribution system.

1.4 Existing Water Towers

The City of Ramsey currently has three water towers with storage capacities of 0.5 MG (tower 1), 1.5 MG (tower 2), and 2.0 MG (tower 3). Towers 1 and 2 are located in the south-eastern and south-central parts of the City respectively, while tower 3 is located in the north-eastern part of the City. The 0.5 MG tower is a spheroid style steel water tower constructed in 1989, while the 1.5 MG and 2.0 MG towers are fluted column steel water towers constructed in 2000 and 2010, respectively.

2 Distribution System Modeling

A hydraulic computer model was generated to evaluate the performance of the City's current water distribution system, as well as evaluate the system into the future as the water system expands, experiences increasing demands, and utilizes a water treatment plant instead of individual wells pumping into the system. The model used the most recent GIS information for the City's water system assets, and was created using WaterGEMS®, a pipe network program developed by Bentley®. Flow testing was conducted within the distribution system in October 2019 to calibrate and help verify the accuracy of the computer model. A summary of the flow test results and locations are listed in Table 2.

The water model allows the water system to be examined, while adding proposed features to the system. This provides an indication as to what pressures and flows would be available in the water system with the various proposed features. The model also allows for the examination of component operation within the system such as water tank filling cycles. There are many other exercises that the model can be used for in the future in relation to water system operations and planning. The water model can continue to be an operations and planning tool for the expanding water system.

Table 2 – Hydrant Flow Test Results

Flow Test	Location	Field Hydrant Flow (gpm)	Pressure Differential Field Results (psi)	Pressure Differential Model Results (psi)	Pressure Differential (psi)
1	Olivine St. NW south off of 147th Ln. NW	1,171	2	1	-1
2	Dead-end on Vanadium St. NW	1,123	4	2	-2
3	Dead-end on 140th Ave. NW	1,205	8	10	2
4	Dead-end on 142nd Ln. NW	984	26	42	16
5	Corner of Tonto St. NW and Alpine Dr. NW	1,188	4	6	2
6	Dead-end on 152nd Ave. NW	1,047	9	7	-2
7	Corner of 157th Ave. NW and Krypton St. NW	1,152	7	9	2
8	Dead-end on Lithium St. NW	1,047	7	8	1
9	Dead-end of east end of 167th Ln. NW	1,197	4	2	-2
10	Dead-end of new cul-de-sac off of 159th Ave. NW	1,078	6	7	1

Flow Test	Location	Field Hydrant Flow (gpm)	Pressure Differential Field Results (psi)	Pressure Differential Model Results (psi)	Pressure Differential (psi)
11	Current dead-end on 149th Ave. NW	1,234	5	5	0
12	West dead-end on 147th Ln. NW	1,123	3	8	5
13	Dead-end on 137th Ave. NW	1,188	11	10	-1
14	East dead-end on Rivlyn Ave. NW	1,031	10	10	0

During the calibration process of the Ramsey water system hydraulic model, pumping rates, customer demands, and tower water levels were set to the conditions recorded during the field testing. Individual pipe roughness coefficients (C-factors) were adjusted until the calibrated system model closely simulated field test data as indicated in Table 2. As indicated from Tests 4 and 12, the model was unable to be calibrated to match the field tests. For Test 4, it is believed there was an error when measuring during the field test. The age and size of the pipe on 142nd Ln. NW is the same as the pipe on 140th Ave. NW (Test 3), which the model calibrated closely with. It is believed that the pipe roughness coefficient used for the pipe on 142nd Ln. NW is accurate. For Test 12, it is believed that there is another pipe off of Bunker Lake Blvd. that connects to the new development along 147th Ln. NW that is not yet geo-located, because when adding an additional pipe, the model calibrates closely with the field data. The pipe along 147th Ln. NW is a new 8" pipe, so it is believed that the pipe roughness coefficient used for the pipe is accurate. Additionally, Test 10 was conducted on hydrants in a new development. Previously, this area was at a lower elevation than it is currently. This caused the model to not correlate well with the field-testing data. The elevations of the hydrants in the model were adjusted to more closely correlate with the field data, and as the pipe in the development is new, it is believed that the pipe roughness coefficient used for the pipe is accurate.

Once the computer water model was constructed and calibrated, the model was used to calculate the operating conditions in the water distribution system.

2.1 Existing System Static Pressures

Water system pressure is primarily a function of elevation with some degree of pressure loss as water flows across the system. Static pressures throughout the distribution system as determined by the water model are shown in Figures 1-3 in Appendix B for average day demand (ADD), maximum day demand (MDD), and Peak Hour Demand. Low pressures generally occur in areas where the elevations are relatively high compared to the overflow elevation or hydraulic grade line (HGL) of the system.

As you can see in Figures 1-3 in Appendix B, the pressures across the system are generally consistent, and are approximately the same between the three demand scenarios. All areas of the system are within the range of 50 to 80 psi as you can see in Table 3.

Table 3 – Water System Static Pressures

	Average Day Demand	Maximum Day Demand	Peak Hour Demand
Minimum Pressure (psi)	56	56	56
Average Pressure (psi)	68.5	68.1	67.5
Maximum Pressure (psi)	77	77	76
Demand (gpm)	1,221	3,330	5,498

All three demand scenarios were done with the towers at an HGL of 1,031 feet. No wells were running during the model simulation.

2.2 Existing System 24-Hour Simulation

A 24-hour extended period simulation was run for average day demand (ADD) and maximum day demand MDD to model how the existing system performs in terms of pressure, velocity, and tank levels. System pressures are recommended to be in the range of 35 psi to 80 psi, and pipe velocities are recommended to not exceed 5 feet per second. For an average day demand, 1.72 MGD was assumed, and for maximum day demand, a maximum day peaking factor of 2.73 was assumed to get a maximum day demand of 4.7 MGD. For both demand scenarios, diurnal demand curves were used, and were developed by analyzing SCADA operation data documenting system water tower levels, as well as using industry standards and previous experience. These diurnal demand curves are shown in Figures 1 and 2 and were used for all modeling simulations. The operating range of Tower 1 was assumed to be 6 feet where wells would initially turn on when the HGL of Tower 1 went below 1,025 feet, and the wells would turn off when the HGL of Tower 1 went above 1,031 feet. Figures 4-5 in Appendix B show the operation of the wells and towers for both demand scenarios.

The pressures across the system were generally consistent throughout the 24-hour simulation for both demand scenarios. As can be seen in Figures 6-7 in Appendix B, at no point did pressures drop below 50 psi, and at no point did pipe velocities exceed 3 feet per second for the ADD simulation or exceed 5 feet per second for the MDD simulation. In fact, only one segment of pipe exceeded 4 feet per second during the MDD simulation.

Figure 1 – ADD Diurnal Curve

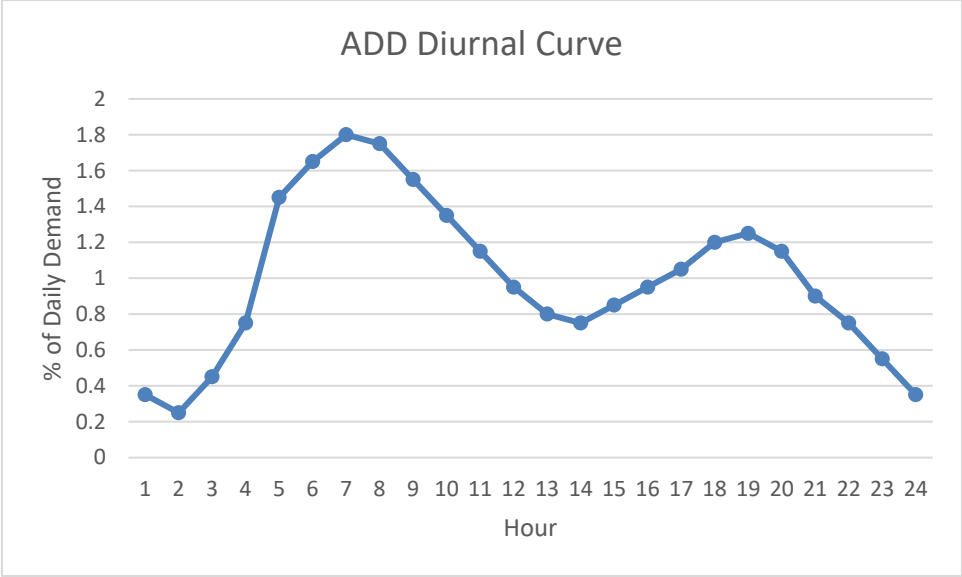
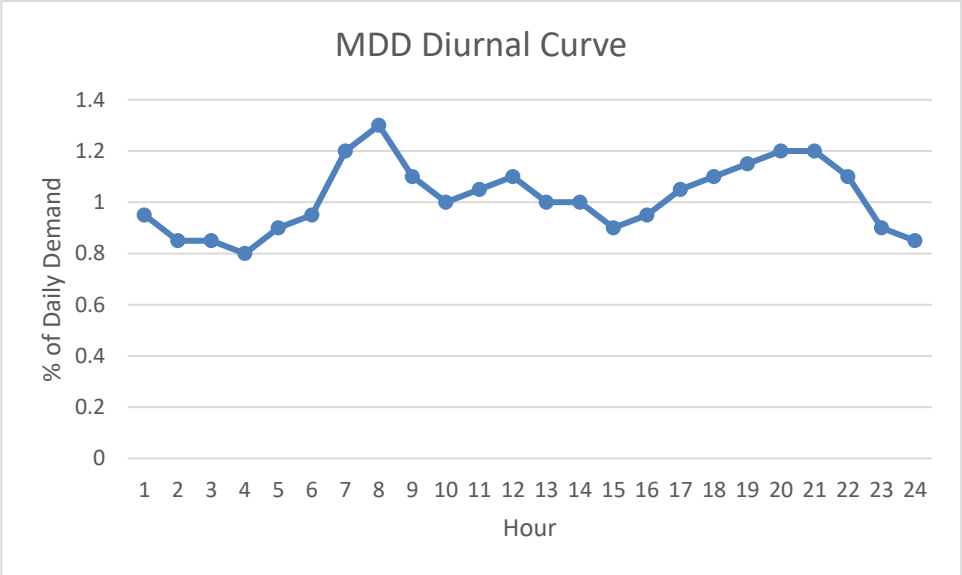


Figure 2 – MDD Diurnal Curve



2.3 Existing System Available Flow for Fire Protection

Designing a water system to provide adequate fire protection is an important consideration. Adequately sized watermain is an important consideration to supply desired fire flows. Guidelines for determining fire flow requirements are provided by the ISO. ISO is the insurance service organization responsible for evaluating and classifying municipalities for fire insurance rating purposes. Available fire flow for fire protection (fire flow) in this report is defined as the flow capacity at a point in the water distribution system which causes the pressure to fall to 20 psi (residual pressure). A map of the fire flow analysis for the distribution system under a maximum day demand is shown in Figure 8 in Appendix B. Note that the fire flow analysis for the

distribution system was done for junctions (watermain intersections and at dead-ends) instead of hydrants, so the fire protection in some areas may be better than shown as a hydrant may be nearby on a larger sized watermain. In general, low fire flows occur where normal pressures are already low, and in areas with small diameter watermains, or in areas with older watermains. Dead-ends typically have noticeably weaker fire flows than looped watermain as well.

To determine if the water system is deficient in available fire flow, a basis for fire protection must be established. For planning purposes, the minimum fire protection requirement can be based on land use according to Table 4.

Table 4 – Minimum Fire Flows

Land Use	Flow (gpm)
Park	500
Single-Family	1,000
R-1 Low-Density Single Family	1,000
Two-Family	1,000
Multi-Family	1,500
High-Density Multi-Family	1,500
Service Office	1,500
Community Commercial	2,500
General Commercial	2,500
Industrial	3,500
Mixed Use-Neighborhood	2,000
Mixed Use-Community	2,000
Mixed Use-Regional	2,000

In general, the City is well protected with over 98% of the distribution system having fire flows of 1,500 gpm or higher. When comparing available fire flows with the City's existing land use map there are a few areas where the available fire flow may be deficient. Specifically, a small industrial land use area north of Highway 10 and south of the southern dead-end of Jaspar Street NW, as well as the dead-end of 142nd Lane NW in the southeastern part of the City.

2.4 Existing System 24-Hour Simulation – Treatment Plant

Similar to the existing system 24-Hour simulation, a 24-hour extended period simulation was run for ADD and MDD demands to model how the existing system performs in terms of pressure, velocity, and tank levels with a treatment plant as the sole source of water. With a single source versus wells spaced throughout town, the worry is that the furthest points from the treatment plant may experience lower pressures due to headloss through the distribution system. An ADD of 1.72 MGD and a MDD of 4.7 MGD were assumed.

Figures 9-10 in Appendix B show the operation of the treatment plant high service pumps and towers for both demand scenarios, and Figures 11-12 in Appendix B show the minimum pressures for both demands scenarios. Pressures across the system were generally consistent throughout the 24-hour simulation for both demand scenarios, and at no point did the pressure drop below 50 psi during both demand scenarios, and at no point did velocities exceed 5 feet per

second. Modeling of both demand scenarios show that the existing system performs very well with a treatment plant as the sole source of water.

2.5 2040 System 24-Hour Simulation

By 2040, Ramsey's estimated average day demand is expected to increase to 3.5 MGD, and the maximum day demand is expected to increase to 10.3 MGD. With this increased demand, it is important to ensure that the distribution system and storage facilities are adequately sized to meet the future demand. The storage capacity of the current water system is 4 MG, which will still meet the Minnesota Department of Health's recommendation of having enough storage to meet or exceed the ADD, so additional storage will not be required through 2040.

Although it is impossible to know where future watermain will be required, future watermain was added and sized according to previous reports, which can be seen in Figures 15-16 in Appendix B. Future demands were allocated based on locations future pipes and future development areas.

Figures 13-14 in Appendix B show the operation of the treatment plant and towers for both demand scenarios, and Figures 15-16 in Appendix B show the minimum pressures for both demands scenarios of the 2040 24-hour simulation. Again, the pressures across the system were generally consistent throughout the 24-hour simulation for both demand scenarios, and at no point did the pressure drop below 50 psi during the ADD scenario. Pressures did drop to as low as 37 psi during the MDD scenario in some areas in the future north development between 173rd Ave NW and 181st Ave NW due to the higher elevations, although this can be alleviated by keeping the towers at a higher level. Velocities were kept below 5 feet per second, although a short segment of 16" pipe on Bunker Lake Blvd NW approached around 5.5 feet per second during the MDD scenario for a short period of time, although this is not a concern.

2.6 Distribution Modeling Conclusions and Recommendations

Modeling of Ramsey's water system shows that it performs well currently and with a treatment plant now and in the future. If the City chooses to build a water treatment plant, raw watermain will be needed to bring the well water to the treatment plant. Currently there is raw watermain for bringing well water to the pumphouses, which can be utilized for the treatment plant, although additional and bigger sized raw watermain will be required. The raw watermain required is shown in Figure 1 in Appendix I and was assumed in the modeling. Of note, the 16" watermain along Bunker Lake Blvd NW should be used as finished watermain and was assumed to be in the modeling.

As the population grows, and thus the water demand, there are a few recommendations for improving the water system to be able to operate efficiently with 2040 demands. First, it is recommended that the 16" watermain along Bunker Lake Blvd NW be tied into the 12" watermain along E Town Center Drive. Modeling did not assume this, although it may be advantageous to do so beyond 2040 if the private well owners in the center of town go on city water. The models did assume that the 16" watermain along Bunker Lake Blvd NW ties into the 8" and 12" watermain along Rhinestone Street NW.

Second, with the proposed treatment plant location being on the west side of town, it may be beneficial depending on future demands to extend the 12" watermain along Armstrong Blvd NW to Bunker Lake Blvd, and to extend the 16" watermain along Bunker Lake Blvd NW to E Town

Center Drive. The extensions of those pipes was assumed in the 2040 modeling analysis and prevented additional pipes in the area from exceeding a velocity of 5 feet per second.

Third, as can be seen in Figure 19 in Appendix B, the water level in Tower 2 approached and stayed at an HGL of 1,033 feet. This was done by utilizing an altitude valve in the model for the tower. Due to Tower 2's close proximity to the treatment plant, there is a risk of the tower to overflow, especially during a MDD scenario, as the treatment plant pumps into the system to fill Tower 1. Because of this, an altitude may have to be installed in the future

3 Drinking Water Quality

The City of Ramsey's water is tested on a regular basis by the City and by Minnesota Department of Health (MDH). The following sections discuss Primary and Secondary test results for the City's wells and distribution system.

3.1 Primary Drinking Water Standards

Primary Standards are legally enforceable standards that public water suppliers are required to meet. Primary standards protect public health by regulating the levels of certain contaminants in public water supplies. The United States Environmental Protection Agency (US EPA) establishes maximum contaminant levels (MCLs) for primary standard constituents. Regulated constituents include microorganisms, disinfectants, disinfection byproducts, inorganic chemicals, organic chemicals and radionuclides. A few primary contaminants have been detected in Ramsey's water as shown on Table 5; however, the contaminants detected well below their respective MCLs.

Table 5 – Water Quality - Primary Drinking Water Standards

Contaminant	Highest Average or Highest Single Test Result	Range of Detected Test Results	MCL	90% of Results Were Less Than	EPA Action Level
Lead	-	-	-	1.9 ppb	90% of homes less than 15 ppb
Copper	-	-	-	0.82 ppm	90% of homes less than 1.3 ppm
Barium	0.11 ppm	-	2 ppm	-	-
Arsenic	1.49 ppb	-	10.4 ppb	-	-
2,4-D	0.03 ppb	-	70 ppb	-	-
Combined Radium	2.2 pCi/l	-	5.4 pCi/l	-	-
Total Trihalomethanes (TTHMs)	2.1 ppb	1.70 – 2.10 ppb	80 ppb	-	-
Total Chlorine	1.14 ppm	0.77 – 1.64 ppm	4.0 ppm	-	-
Fluoride	0.81 ppm	0.59 – 1.00 ppm	4.0 ppm	-	-

Notes: Data from Ramsey's Consumer Confidence Report

3.2 Manganese

According to the Minnesota Department of Health (MDH), too much manganese in drinking water can have negative health effects for babies under one year old. At high concentrations, manganese can also have negative health effects for children and adults. To protect bottle-fed infants, MDH recommends manganese levels of less than 0.100 mg/L. To protect children and adults, a manganese level of less than 0.300 mg/L is recommended. To ensure that all residents are protected, MDH has established a Health Based Value (HBV) for Manganese of 0.100 mg/L.

Manganese also has a secondary standard of 0.05 mg/L where levels above can cause color, staining, and taste issues.

Recently, manganese was included as a contaminant to be monitored under the Fourth Unregulated Contaminant Monitoring Rule (UCMR4), which is discussed in later in this chapter. The City of Ramsey conducted UCMR4 sampling in 2019 which included sampling for manganese. As shown in Table 6, Wells No. 1, 3, 4, and 8 tested above the MDH HBV. Due to the high levels of manganese, MDH has recommended to the City that they develop short-, mid-, and long-term plans to address the high levels. In response to the high levels, the City began using wells with the lowest levels of manganese, and when required to use more wells during higher demand times, the City developed a plan to mix the water from the low level wells with the

high-level wells. As a long-term plan, the City is in the process of determining the best option, but are considering:

- Mixing water from different wells to lower manganese wells;
- Drilling new drinking water wells;
- Installing City filtration systems;
- Constructing a water treatment plant; and
- Using water from neighboring municipal water systems.

Table 6 – Manganese in Ramsey Wells

Well	Manganese (mg/L)	MDH HBV (mg/L)
Well 1	**0.320**	0.100
Well 3	**0.229**	0.100
Well 4	**0.371**	0.100
Well 5	0.022	0.100
Well 6	0.023	0.100
Well 7	0.052	0.100
Well 8	**0.223**	0.100
Note: Well 2 used exclusively for irrigation		

3.3 Secondary Drinking Water Standards

Secondary Standards are non-enforceable guidelines for contaminants that cause aesthetic or cosmetic effects, such as taste, odor and color, and can cause problems with piping. The Secondary Standard for manganese is discussed in Section 3.2. Table 7 presents the iron and hardness data for Ramsey's wells.

Table 7 – Iron and Hardness in Ramsey Wells

Well	Iron (mg/L)	Hardness (mg/L $CaCO_3$)
Well 1	0.551	256
Well 3	0.529	280
Well 4	0.240	-
Well 5	0.801	-
Well 6	0.787	211
Well 7	0.818	225
Well 8	0.704	-

3.3.1 Iron

The secondary standard for iron is 0.3 mg/L where iron concentrations above the secondary standard can cause a rusty color to the water, sediment build-up, a metallic taste, and reddish or orange staining. As shown on Table 2, the drinking water from the Ramsey wells consistently

exceeds the Secondary Standard for iron with concentrations ranging from 0.240 mg/L to 0.818 mg/L.

3.3.2 Hardness

Hardness, which is a measurement of multivalent cations, such as calcium and magnesium, is an aesthetic issue due to its ability to cause scaling and build-up on fixtures, as well as its reaction with soaps producing a sticky and gummy deposit. Although not included as a secondary standard, water with a hardness above 120 mg/L as $CaCO_3$ is considered hard water.

As shown on Table 2, the drinking water from Ramsey's wells is considered hard with a hardness ranging from 211 mg/L to 280 mg/L.

3.4 Emerging Contaminants

The US EPA uses the Contaminant Candidate List (CCL) and the Unregulated Contaminant Monitoring Rule (UCMR) to screen potential contaminants for further regulation. The CCL and UCMR are discussed in the following sections.

3.4.1 Contaminant Candidate List

The US EPA maintains a Contaminant Candidate List (CCL) for contaminants that may need to be regulated, which is published every five years. The current CCL includes 97 chemicals or chemical groups and 12 microbiological contaminants and can be seen in Appendix C along with the other published CCLs. The list includes chemicals used in commerce, pesticides, biological toxins, disinfection byproducts, and waterborne pathogens. The contaminants on the list are not currently regulated by existing Primary drinking water standards. It should also be noted that the US EPA reviews existing regulated contaminants. If existing standards are modified, they are typically lowered (i.e. arsenic) and not raised.

3.4.2 Unregulated Contaminant Monitoring Rule

Along with the CCL, UCMR is used by the EPA to collect data for contaminants that are suspected to be present in drinking water, but do not have health-based standards set under SDWA. Occurrence data are then used to determine whether particular contaminants should be regulated in the interest of protecting public health. Monitoring under UCMR is conducted every five years for no more than 30 contaminants and is required for all community water systems over 10,000 people, and for a representative sample of systems with populations less than or equal to 10,000 people. Selection of contaminants to be monitored is determined through existing prioritization processes, including contaminants previously monitored under UCMR, and the CCL. Other contaminants of interest may also be chosen. Since the promulgation of UCMR, there have been four rounds of sampling with the fourth round (UCMR4) currently underway. Among the four rounds of UCMR sampling, some of the contaminants include:

- Pesticides
- Volatile Organic Compounds (VOCs)
- Synthetic Organic Compounds (SOCs)
- Metals
- Hormones
- Flame Retardants

- Perfluorinated Compounds (PFAS)
- Disinfection Byproducts
- Cyanotoxin Chemicals
- Other chemicals used in industrial and manufacturing practices

The majority of these contaminants are from anthropogenic, or human activity, sources, and thus necessitates the need to be vigilant in protecting City wells from pollution. As discussed further in Chapter 5, the City's wells are well protected from anthropogenic pollution, but continued safeguarding of the wells will be crucial in preventing a new contaminant in the City's drinking water supply that requires treatment.

Although it isn't possible to predict what contaminants will be regulated in the future, having flexibility in a treatment system is important to provide treatment options for possible future contaminations, new regulations for contaminants, and as testing abilities continue to improve.

4 Water Demand

Ramsey's average daily water demand from 2009 to 2019 ranged from 1.6 to 1.9 million gallons (MGD). The maximum daily demand, usually occurring during summer months due to lawn watering and other non-consumptive use, ranged from 4.1 to 5.5 MGD.

The projected annual average water demand for the City is expected to increase to 3.5 MGD and up to a projected daily maximum of 10.3 MGD in the year 2040. A list of future water projections from the City's Water Supply Plan is included below.

Table 8 – Projected Water Demands

Year	Projected Total Population	Projected Population Served	Projected Average Daily Demand (MGD)	Projected Maximum Daily Demand (MGD)
2020	27,550	13,921	1.8	5.3
2025	30,450	18,547	2.4	7.0
2030	33,350	22,987	3.0	8.7
2040	39,150	26,988	3.5	10.3

4.1 Adequacy of Existing Water Supply

As discussed in Section 1.2, if a centralized water treatment plant is constructed, Wells No. 1 and 2 would not initially be connected to the water treatment plant due to the significant expense required to extend trunk watermain to the water treatment plant. The existing firm capacity without considering Wells No. 1 and 2 is 4,850 gpm or 7.0 MGD. Table 8 predicts that Ramsey has sufficient firm capacity without Wells No. 1 and 2 through the year 2025. When maximum day demands reach 7.0 MGD, Ramsey should consider drilling another well.

By the year 2040, Ramsey will need 10.3 MGD in firm capacity. To provide this capacity without using Wells 1 and 2, an additional 3 wells will be needed by 2040 (assuming 850 gpm per well).

5 Groundwater Availability

The City of Ramsey currently utilizes groundwater as its exclusive source of drinking water. For planning purposes, the City needs to understand whether groundwater can continue to provide existing and future water demands.

5.1 Description of the Hydrogeological Setting

The following sections describe the hydrogeology (groundwater) in Ramsey.

5.1.1 Surficial Hydrogeological Setting

The surficial geology in the region is primarily associated with erosional and depositional glacial events during the Quaternary Period. Surficial aquifers throughout this region have highly variable aquifer properties. The Metropolitan Council classifies these as having a moderate to high water yield for potable use; however, it is often challenging to identify the locations for the most productive units with some areas providing little or no yield for water supply. Depending on the location, the presence of finer grained units that can act as confining layer will affect water recharge rates to these aquifers and limit the quantity of water these aquifers can supply. Surficial aquifers are often the first aquifer to be recharged and thus can be more vulnerable to contamination. Therefore, the overall water quantity and quality is described by the Metropolitan Council as variable.

5.1.2 Bedrock Hydrogeologic Setting

The bedrock underlying the City of Ramsey and surrounding areas consists of Precambrian to Ordovician age Paleozoic sedimentary strata overlying Precambrian age basement rock. While variation and extent of bedrock aquifers occur, in general five regional aquifers are described and support much of the potable water for the Twin Cities region, from oldest to youngest: (1) Mt Simon-Hinckley (2) Tunnel City-Wonewoc (3) Prairie du Chien-Jordan (4) St. Peter, and (5) Quaternary aquifers. These aquifers are hydrologically disconnected by a variety of interbedded confining layers. Regional aquifers can also be subdivided further; for example, the Tunnel City-Wonewoc Aquifer maybe be hydraulically disconnected if the Lone Rock Formation (of the Tunnel City Group) acts as a confining unit. Primary lithology, and hydrogeologic designations are summarized in the table below, from oldest to youngest, for the area.

Table 9 – Bedrock Aquifers

Geologic Formation	Age	Primary Hydrogeologic Designation	Approximate Thickness	Primary Regional Lithology
Hinckley Sandstone	Pre-Cambrian	Aquifer	Not Available	Quartzose sandstone overlying the Precambrian bedrock
Mt Simon Sandstone	Middle Cambrian	Aquifer	~200 to 336 ft	Quartz sandstone that contains interbedded siltstone and very fine sand.
Eau Claire Formation	Middle to Upper Cambrian	Confining	~60 to 90 ft	Fine grained sandstone, siltstone and shale.
Wonewoc Sandstone	Upper Cambrian	Aquifer	~ 50 to 60 ft	Very fine to very coarse grained Sandstone.
Tunnel City Group	Upper Cambrian	Aquifer / Confining	~ 150 to 180 ft	Lower is massively bedded very fine to fine-grained sandstone; upper is coarse grained sandstone.
St Lawrence Formation	Upper Cambrian	Confining	~ 38 to 59 ft	Dolomitic siltstone with interbedded very fine-grained sandstone and shale.
Jordan Sandstone	Upper Cambrian	Aquifer	~ 85 to 100 ft	Upward sequence of fine to coarser grained sandstone.

Regionally other bedrock aquifers exist that are not listed above, the following are aquifers present within the City of Ramsey area. These aquifers are discussed in detail in the following sections. Throughout the City of Ramsey, The Tunnel City group is the uppermost Bedrock unit meaning the St Lawrence and Jordan Sandstone is only sparsely present. Above these Bedrock units are unconsolidated sediment discussed in sections above.

5.1.2.1 Jordan Aquifer

The Jordan Aquifer is generally considered to be hydrologically connected to the Prairie Du Chien Unit. However, as evident from the geologic bedrock map (Figure 2 in Appendix D) the Prairie Du Chien Unit was either not deposited or has been entirely eroded through much of this area. The thickness and presence of this aquifer through this area is scarce and laterally disconnected. Where present, Within the City of Ramsey, the Jordan Sandstone thickness is minimal at around 20-30 feet and appears heavily eroded. Quaternary deposits directly overlay this unit and the Jordan Sandstone is likely recharged by these deposits.

5.1.2.2 Wonewoc / Tunnel City Group

The Tunnel City Group and the underlying Wonewoc Sandstone (formerly known as the Franconia-Ironton-Galesville Aquifer) supply water for much of the Northwest Metro region. Presence and thickness of the Tunnel City is depicted on Figure 6 in Appendix D, and for the Wonewoc on Figure 8 in Appendix D. Areas where the Aquifer is not present primarily occur within bedrock valleys where previous streams and surface water features carved away the bedrock unit. A large unconformity of the Wonewoc Sandstone is depicted within Anoka County where heavy erosion of this unit appears to have taken place prior to the deposition of the Tunnel City Aquifer. This area is depicted where the Wonewoc aquifer thickness thins or is not present

(Figure 8 in Appendix D). Potentiometric surfaces of this units are depicted on Figures 7 in Appendix D for the Tunnel City and Figure 9 in Appendix D for the Wonewoc Sandstone. Potentiometric surfaces were created by the Minnesota Geologic Survey and provide a rough estimate for water elevations for a proposed well within these units and their groundwater flow direction.

The Metropolitan Council generally describes the productivity of the Tunnel City – Wonewoc Aquifer as variable. Yields tend to be moderate to low with some of the highest yields reported where bedrock units are highly fractured.

5.1.2.3 Mt. Simon-Hinckley Aquifer

The Mount Simon-Hinckley Aquifer is generally described by the Metropolitan Council as a high to moderate yield aquifer. New high-capacity wells are generally not permitted by the Minnesota Department of Natural Resources as use has been restricted by Minnesota Law, therefore it is not discussed in this report in greater detail.

5.1.3 Ramsey Municipal Wells

The City of Ramsey wellfields are comprised of 8 wells. Wells 1 and 2 are located in the southeastern portion of city limits, while Wells 3 through 8 are located in the south-central portion of the City. The City of Ramsey currently receives all of its potable water from the Tunnel City-Wonewoc aquifer. The well locations are depicted on Figure 1 in Appendix D. These wells are detailed in the table below.

Table 10 – Ramsey Well Data

Well No.	Unique Well No.	Date Constructed	Aquifer	Total Depth (ft)	Casing Depth (ft)	Casing Diameter (in)
1	161441	1984	Tunnel City Group	323	243	14
2	416183	1987	Tunnel City Group	320	240	14
3	580306	1997	Tunnel City-Wonewoc	345	222	30 x 24
4	580313	1998	Tunnel City-Wonewoc	321	191	30 x 24
5	593672	2000	Tunnel City-Wonewoc	316	215	30 x 24
6	706840	2005	Tunnel City-Wonewoc	390	282	30 x 24
7	743832	2007	Tunnel City-Wonewoc	332	216	30 x 24
8	743833	2007	Tunnel City-Wonewoc	354	245	30 x 24

5.1.4 Daily Volume of Water Pumped

The Minnesota Department of Natural Resources (MnDNR) permits high-capacity wells and records total water use within wells deemed to be high capacity. All of the City of Ramsey wells are considered high-capacity wells with an approved MnDNR appropriation permit. All yearly water use is recorded within MnDNR's Water Permitting and reporting system (MPARS). Additionally, The City of Ramsey has an approved Water Supply Plan (Third Generation for 2018-2028).

The City of Ramsey currently preferentially utilizes wells from their south-central well field that includes wells 3 through 8. City Wells 1 and 2 are to the southeast of the primary well field and has a decreasing utilization rate. Well locations are depicted on Figure 1 in Appendix D.

As discussed in Section 4, the average daily water demand from 2007 to 2017 ranged from 1.62 to 1.92 million gallons (MGD). The maximum daily demand ranged from 4.1 to 5.5 MGD. The projected annual average water demand for the City is expected to increase to 3.5 MGD and up to a projected daily maximum of 10.2 MGD in the year 2040.

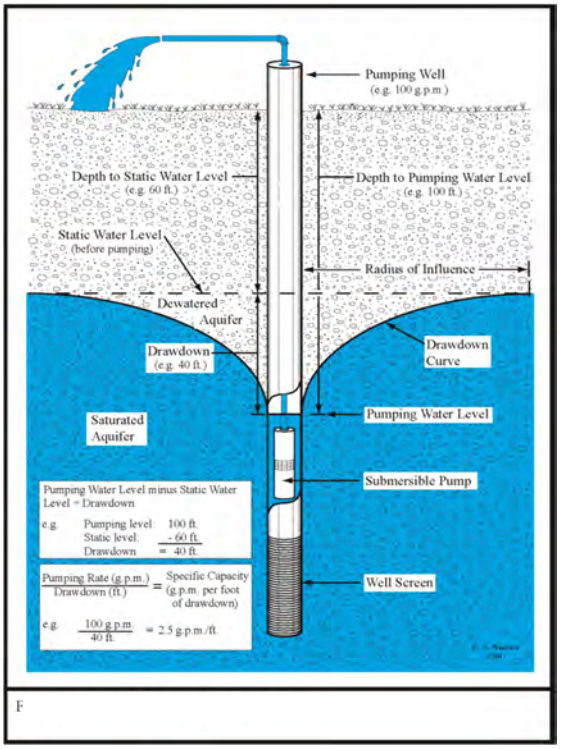
5.1.5 Aquifer Response to Well Pumping

Aquifer response to well pumping can be measured in many ways. The most common and observable measurement within a well is through measurement of the drawdown, or change in static water levels, and also through calculating the well specific capacity. These measurements help to quantify water use within a well. As a well continues to pump it creates a radius of influence where nearby water is drawn down into what is called a cone of depression. This correlates to well interference and can have a combining effect when multiple high capacity wells are pumping. These terms are discussed in the Minnesota Department of Health publication, "A Guide to the Rules Relating to Wells and Borings" (Minnesota Rules, Chapter 4725). The adjacent image from the handbook describes this terminology. The following sections will discuss these terms in detail.

5.1.5.1 Well Drawdown

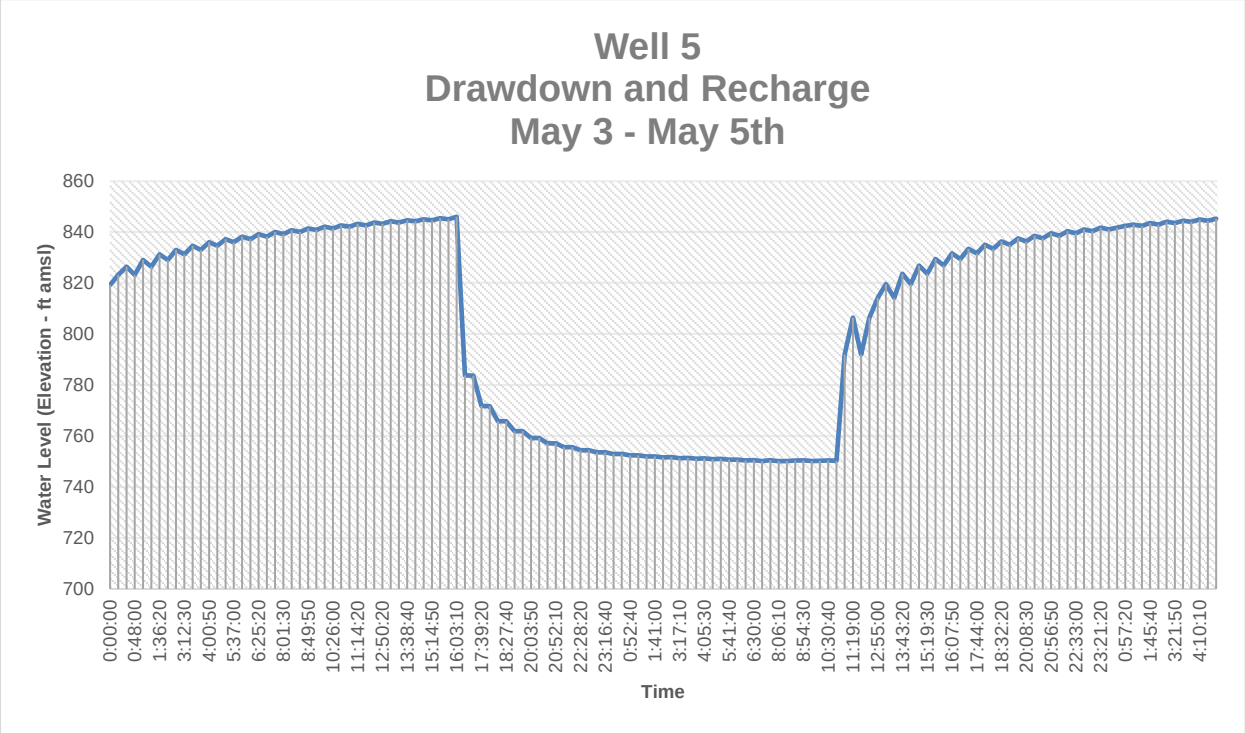
Well drawdown is the decrease of water from the baseline static water level. It can also be described as a decrease in water elevation, potentiometric surface, or water head. As a well is pumped, drawdown is induced by the removal of a volume of water from the aquifer. As the well continues to operate it can also create an area around the well where water is drawdown. This area of drawdown is known as a cone of depression or the area of Influence from a pumping well.

Figure 3 – Terms Relating to Well Performance



When a well discontinues pumping, water from surrounding aquifers will flow into the area and bring water levels back to static levels. Pumping temporary creates an area of low potentiometric water pressure, and when the well is shut off water will flow into the area to balance out that change in potentiometric surface. This is known as recharge, or recovery. The recovery period like the drawdown is determined by the hydrogeological properties of the aquifer. Drawdown observed in the City of Ramsey wells are typical for Twin Cities bedrock aquifers. The following chart depicts a drawdown and recover of Well 5 during a 2-day period starting May 3rd to May 5th in 2019.

Figure 4 – Well 5 Drawdown and Recharge



At the start of this period, Well 5 water levels were recovering to static at approximately 23 feet below ground surface. Pumping commenced at 15:15 on May 3rd and continued for the next 18 hours. Initial drawdown or instantaneous drawdown is depicted by the step increase in drawdown from 16:51 to 18:27. Water levels over this period fell 80 feet. Water levels over the following 18 hours decreased another 40 feet. The well ceased pumping at 10:30 on May 3rd and recharge to the aquifer took 17 hours to return to static water levels.

Current well pumping and rates of recharge appear good with the aquifer being able to recharge water to static in a relatively low period of time.

5.1.5.2 Well Drawdown and Available Head

Water levels from the source water aquifer, the Tunnel City-Wonewoc Aquifer, are much higher than the topographic elevation of the top of bedrock. This scenario is known as a confined aquifer, where the potentiometric surface, or water head, is higher than the topographic location of the aquifer.

Presently, water quantity throughout the region is good and there are no regulations actively being enforced on pumping levels within a well. Well interference and long-term groundwater trends through pumping/drawdown is conducted on a case by case basis by the Minnesota DNR if a problem arises.

Typically, it is not a good idea to drawdown water levels in a confined aquifer below the top of bedrock as it can introduce oxygen into the formation. Additionally, water levels should stay sufficiently above the specifications of the water pump design.

For confined aquifers, the Minnesota DNR has established a two-tiered aquifer protection threshold system to ensure the long-term viability of the pumped aquifer and to prevent exceedance of the aquifer safe yield as defined by MN Rule 6115.0630 Definitions Subps.15 and 16. These thresholds allow for appropriation from the aquifer but establishes minimum water level elevations to be maintained as a safeguard to protect the structural integrity of the aquifer itself. Threshold elevations are set in observation wells completed in the source aquifer and not pumped wells.

- The first threshold is set at an elevation that is 50% of the pre-pumping available head above the top of the aquifer. If water levels drop to the 50% threshold, pumping will need to be evaluated and a possible reduction in rate and volume may be required.
- The second is a water level elevation associated with 25% of the pre-pumping available head above the aquifer. At the 25% threshold, pumping would need to cease to prevent exceeding the safe yield for the artesian aquifer.
- If more than one aquifer is impacted by pumping, then thresholds are set similarly in the other aquifers.

The table below depicts the static water level and the approximate available head above top of aquifer in the City of Ramsey's current municipal wells taking account the Minnesota DNR 50% and 25% thresholds.

Table 11 – Drawdown in Ramsey Wells

Well No.	Unique Well No.	Total Depth (ft)	Casing Depth (ft)	Static Water Level Depth (ft)	Approximate Drawdown to Top of Aquifer (ft)	Approximate Drawdown to 50% threshold (ft)	Approximate Drawdown to 25% threshold (ft)
1	161441	323	243	9.5	233.5	116.75	175.1
2	416183	320	240	9.5	230.5	115.25	172.8
3	580306	345	222	26	196	98	147
4	580313	321	191	18	173	86.5	129.7
5	593672	316	215	25	190	95	142.5
6	706840	390	282	37	245	122.5	183.7
7	743832	332	216	25	191	95.5	143.2
8	743833	354	245	15	230	115	172.5

These MnDNR threshold values are approximate as an observation well has to be established by the MnDNR for baseline water elevations; however, the table above provides an estimate for which the city should manage water levels.

5.1.5.3 Well Specific Capacity

Well specific capacity is the rate of pumping per unit of drawdown expected. This is generally expressed as gallons per minute (GPM) per foot of drawdown. All of the City of Ramsey wills experience a sharp initial displacement of water as the wells are turned on (as seen in Well 5 drawdown examples above). For the purpose of this report, this initial displacement was not considered in the calculations for Well Specific Capacity in order to give a more accurate depiction of how the aquifer will respond once stabilized to various pumping rates.

Well Specific Capacity for the City of Ramsey was determined to be approximately 30 to 40 GPM / ft after initial displacement. This indicates a 30 to 40 GPM increase in pumping rate will increase total drawdown by 1 foot. The Specific Capacity was established analyzing the following recent results from pumping.

5.1.6 Bedrock Hydrogeologic Sensitivity to Pollution

Water quality for bedrock aquifers are generally a function of recharge rates for water originating from surficial waters, or percolation from direct precipitation, that may carry contaminants. Aquifers generally flow from areas of high potentiometric conditions to areas of low potentiometric conditions which can be influenced by surface topography, bedrock topography, Well Influence, and the hydraulic properties of the geologic units.

The areas of higher potentiometric conditions often correspond to recharge areas or where water enters the aquifer and, as a result, are the most susceptible to distributing such contamination to the bedrock aquifer. Recharge areas may have variable recharge rates and may even decrease because of the properties of the material in which it flows. Confining units, formations primarily made up of fine-grained material, reduce groundwater flow rates and provide more geologic protection. Geologic protection can be described in categories as to how quickly water can percolate from the surface to the bedrock from ‘Low’ to ‘High’.

Figure 4 in Appendix D depict bedrock protection ‘Geologic Sensitivity’ for Anoka County. While the majority of the bedrock aquifers exhibit a low geologic sensitivity, some areas are depicted with a high sensitivity. The areas of high sensitivity do not appear to correspond to specific bedrock geologic conditions. Instead, high sensitivity is more likely related to where confining units have been removed and where coarse-grained Quaternary sediment overlies the bedrock surface.

Figure 5 in Appendix D depicts tritium samples taken within the City of Ramsey. Tritium is a radioactive isotope of hydrogen that can be used to indicate water age. MDH classifies young (post-1953) water, as indicated by the presence of 1 TU or greater in the well water. Tritium results for these samples depict a mixed result. This mixed result reflects uncertainty about the pathway for young water (containing tritium) to reach the deeper bedrock aquifers. Although the presence of tritium may be the result of a compromised well casing allowing surface water seepage, conservatively, it is assumed that some pathways may exist.

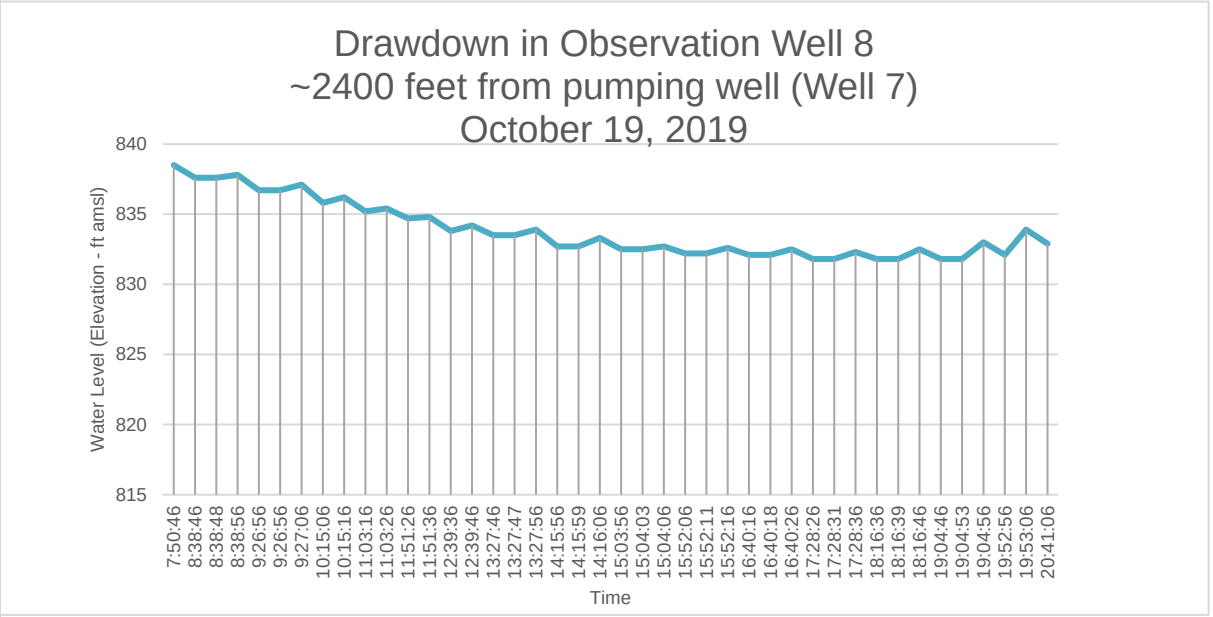
5.1.7 Well Spacing

Determining the proper spacing of wells in Artesian Aquifers is a balance of well drawdown, the ability of the surrounding formation to recharge, and further economic considerations (USGS 1961). In general, the farther apart high-capacity wells are from one another, the less mutual interference will occur on the wells. Additionally, the economics of well spacing needs to be weighed against the potential drawdown of the wells.

The USGS in 1961 developed a method utilizing the Theis equation for hydraulics to determine expected well drawdown and the surrounding cone of depression. Calculations using this equation were completed to understand the hydrogeology of this aquifer system.

The following example depicts drawdown in well 8 over the course of 12-hour period while well 7 was pumping at an Average of 800 GPM.

Figure 5 – Drawdown in Observation Well 8



During the course of Well 7 pumping, Well 8 at a distance of 2,400 feet observed approximately 6 to 9 feet of drawdown.

The Theis equation predicts a cone of depression approximately 2,448 feet from pumping well 7.

Theis Equation for the City of Ramsey		
Time =	0.5	days
Theis W(u) Function	0.752	unitless
Drawdown =	6	ft
Transmissivity =	11493	gpd/ft
Pumping Rate =	800	gpm
Theis u variable =	0.390	unitless
$r^2 = 4Ttu\ 4S$		
Storativity =	0.0002	unitless
Radius rounded for map	2400	ft

These results indicate that a single well pumping at current well field spacing does not induce mutual well interference. This 6-foot cone of depression is depicted on Figure 11.

However, complexities arise as present-day conditions see the use of 3 to 5 concurrent wells, and a 2040 demand increasing up to a projected 500% daily maximum demand. In order to model these scenarios and their resulting cone of depressions a groundwater model was developed.

5.1.8 Model

The groundwater flow and cone of depression calculation for the City of Ramsey were determined using an existing regional MODFLOW model that was developed by Barr Engineering Company for the Metropolitan Council (Metro Council, 2014). MODFLOW is a 3D, cell-centered, finite difference, saturated flow model developed by the U.S. Geological Survey (McDonald and Harbaugh, 1988; Harbaugh et al., 2000).

MODFLOW was developed by the United States Geological Survey and is publicly available. The specific software code used for this delineation was MODFLOW-2005 (Harbaugh, 2005). The program has been thoroughly documented, is widely used by consultants, government agencies, and researchers and consistently accepted in regulatory proceedings. MODFLOW is also an extremely versatile program capable of simulating groundwater flow in up to three dimensions while offering a variety of boundary condition options, confined or unconfined aquifer conditions and allowing for vertical discretization through the use of layering.

The Metro Model consists of nine layers that represent the major aquifers and aquitards within the seven-county metropolitan area. These layers represent, from top to bottom (youngest to oldest), the following units: (1) surficial aquifer of glacial deposits; (2) St. Peter Sandstone or Quaternary Buried Artesian Aquifer; (3) Prairie du Chien Group; (4) Jordan Sandstone; (5) St. Lawrence Formation (aquitard); (6) Tunnel City Group; (7) Wonewoc Aquifer, (8) Eau Claire Formation (aquitard); and (9) Mt. Simon Sandstone. The regional groundwater model was calibrated to steady-state water levels and river base flows. Model parameter development and error is discussed in the Metro Model report.

A local model limited to an approximate radius around the city limits was extracted from the regional seven-county model using telescopic mesh refinement with the Groundwater Vistas software. Constant and general head boundaries around the limits of the model along with wells, rivers and lakes, and infiltration, provided the model boundary conditions.

The model grid was refined around the City of Ramsey wells. Variable grid spacing was used, ranging from approximately 2 meters near the City of Ramsey wells to approximately 500 meters at the edge of the grid.

Prior to their use in the delineations, the following modifications were incorporated in the refined models:

- Local areas of modified horizontal conductivity were included in the model.
- The pumping rates for baseline (no pumping), maximum present-day use, and projected 2040 demand were inputted into scenarios of the model.

To determine the water contours of the aquifer and the resulting cone of depressions multiple model runs using multiple flow rates were inputted into the city wells. Baseline conditions were established creating a model that input no pumping from the City wells. This represents static aquifer water levels without influence of the City wells. Water elevations from this baseline condition is depicted on Figure 12 in Appendix D. The results from this model run are verified and match MnDNR hydrogeologic atlas potentiometric surface predictions depicted in Figure 7 and Figure 9 in Appendix D.

The second model run input pumping values from June 12, 2019 to predict the cone of depression caused from 8 hours of pumping 4 wells. The resulting head values from this model

were subtracted from the baseline model. Results from this calculation are shown in Figure 13 in Appendix D. This Figure depicts the cone of depression created on June 12, 2019. To check accuracy of the model results Well 3 a non-pumping observation well saw water levels drop approximate 12-15 feet from baseline conditions, essentially matching modeled results.

The third model run adjusted June 12, 2019 pumping wells to be increased to projected 2040 demand. The resulting cone of depression is depicted on Figure 14 in Appendix D. Results indicated almost double the drawdown depicted from the second model run. Well 3 was again input as a non-pumping observation well and would observe 40 feet of drawdown under these conditions.

5.1.8.1 Model Calibration

A qualitative evaluation of the calibration can be made by comparing the simulated potentiometric surface (Figure 12 in Appendix D) with observed water level targets obtained from the MWI database and Minnesota Department of Natural Resources Potentiometric Surfaces (Figure 7 and Figure 9 in Appendix D). Upon review, the calibrated flow model generally captures the major features of the groundwater flow system along with the elevation, shape, magnitude, and gradient of the MWI database observed flow field.

A quantitative measure by which to evaluate the success obtained during calibration is to compare the root mean square of the residuals (RMS) and the maximum observed head difference of the calibration dataset. The calibration dataset included water level information from wells in an approximate 16-mile radius of the city's wells. The root mean square residual of the calibration for layers 6 and 7 for the model was approximately 5.15 meters with a Normalized Root Mean Squared of 5.0 percent. It is noted that this error is less than the calibration target of 15 percent (Anderson et al., 2015).

5.2 Groundwater Modeling Conclusions

The Source water aquifer that the City of Ramsey currently utilizes is a deep-confined aquifer comprised of two geologic units, the Tunnel City and Wonewoc Aquifers. Throughout the region, numerous other unconsolidated and bedrock aquifers exist along with substantial surface water bodies such as the Mississippi River. Overall, the area surrounding the Twin Cities has substantial surface and groundwater resources to support present and long term portable water.

At present, there is no reason to assume that the current source water aquifer for the City of Ramsey will not be able to supply potable water for the foreseeable future. The City of Ramsey's source water aquifer and wells are able to meet present day demand and appear to have a noticeable but temporary radius of influence on the surrounding aquifer. The wells are able to support high pumping rates with specific capacity showing acceptable drawdown alongside the aquifer's ability to recharge to static levels within a day of pumping.

The City of Ramsey will need to balance water demand with drawdown to meet Minnesota Department of Natural Resources drawdown thresholds described in MN Rule 6115.0630 Definitions Subps.15 and 16. Two thresholds are in place and regulate that wells must not drawdown MnDNR assigned static water levels to within 50-percent and 25-percent to the top of aquifer. These threshold values are set by a MnDNR observation well and would typically be enforced if long term issues are observed. Thresholds for the City of Ramsey could become a concern if there is extended pumping within a single well or pumping by multiple wells in close proximity.

In summary, it is SEH's opinion that there is a 95% to 99% certainty that the source water aquifer for the City of Ramsey will continue to produce potable water to meet present and foreseeable future demands; however, the City of Ramsey should plan additional well sites to ensure static water levels remain sufficiently above top of aquifers to meet MnDNR thresholds.

Single well pumping for the City of Ramsey, as depicted by Well 5 in May, 2019 saw approximately 90 to 100 feet of temporary drawdown. This observed drawdown nears the MnDNR 50-percent threshold; however, the pumping extended multiple days and recharged within the same time period back to static levels. This supports the ability of the wells to supply continued water and ability to stay within prescribed State Statute.

A single well also creates a radius of influence drawing down adjacent water levels. The zone of influence for a single well was observed and modeled to be approximately two to three thousand feet, meaning that a single well pumping at approximately 800 feet will not cause a significant drawdown in another well. When multiple wells are being utilized such as under heavy day demand or under 2040 conditions the modeled and observed drawdown in nearby wells sees a substantial drop in static water levels from that of a single well pumping. Modeled drawdown during present heavy day conditions depict 30-40 feet of drawdown approximately 1,500 feet around the wellfield. After pumping stops, the aquifer will recharge to static levels within one or two days. In general, it appears new well sites should be spaced at least 1,500 to 2,000 feet away from existing wells to ensure a pumping scheme that gives the aquifer sufficient time to recharge.

Future well sites should attempt to balance the City's current economics, well spacing, and take into account the underlying geology. The City of Ramsey should continue to utilize the current source water aquifer for both a water quantity and a water quality standpoint. The source water aquifer is underneath protective "confining" units that appear to inhibit the influence of new water from brining contaminants to the City's wells and will likely produce consistent water quality unlikely unconfined sources such as surface water that may have a highly variable water quality.

Additional considerations for well Sites should take into account the thickness of the two hydrogeologic units that make up the source water aquifer. The Tunnel City aquifer is not as prolific an aquifer as the Wonewoc aquifer, meaning that the Wonewoc aquifer is a more economical source of water. Figure 15 in Appendix D depicts three potential well sites taking into account these issues. Well Site Area A has Tunnel City aquifer thickness ranging from 100 to 150 feet and Wonewoc thickness ranging from 45 to 60 feet. Well Site Area B has Tunnel City aquifer thickness ranging from 0 to 80 feet and Wonewoc thickness ranging from 35 to 100 feet. Well Site Area C has Tunnel City aquifer thickness ranging from 90 to 100 feet and Wonewoc thickness ranging from 15 to 35 feet. All of these sites have potential for potable water sources, but a test well will need to be installed to confirm their viability. As opportunities to investigate these well sites present themselves the City should consider these as potential well sites.

6 Regional Water Supply Study

Metropolitan Council Environmental Services in conjunction with the Cities of Ramsey, Dayton, Rogers, and Corcoran prepared a study in 2020 that looked at various options for a regional water system. SEH was the consulting engineer on the project. The *Northwest Metro Area Regional Water Supply System Study* (Study) evaluated four approaches to water supply:

- Approach 1: Regional Surface Water Treatment Plant
- Approach 2: Regional Lime Softening Groundwater Treatment Plant
- Approach 3: Regional Conjunctive Use System (Surface Water Augmented with Groundwater)
- Approach 4: Status Quo (communities construct individual lime softening groundwater treatment plants)

So that similar treated water qualities were being evaluated, Approach 2 and Approach 4 assumed that the communities would construct lime softening groundwater treatment plants. A potential driver ultimately requiring lime softened groundwater or the use of surface water is a chloride discharge limit in wastewater.

A finding in the report as it relates to surface water treatment in the vicinity of Ramsey was that *"The Mississippi River has sufficient water quantity to serve the Northwest Metro communities. The water quality in the Mississippi River appears to be acceptable for a conventional surface water treatment plant. St. Could, St. Paul, and Minneapolis utilize the Mississippi River as their source of drinking water."*

The capital cost of a surface water treatment plant is significantly higher than an iron and manganese groundwater treatment plant. Based on costs presented in the report, the project cost for a 10 MGD surface water treatment plant would be $50 million or more. In addition, the Operation and Maintenance costs of treating surface water is approximately twice as high as iron and manganese treatment.

It should be noted that a surface water treatment plant could provide softened water to the residents of Ramsey; whereas an iron and manganese treatment plant would not provide softened water. However, residents that are concerned about hard water are likely already softening their water with a home softener.

As of the preparation of this report, the Study was still in draft form. When the Study is complete, it will be available to the public on the MCES website. The citation for the report is: *Metropolitan Council. 2020. Northwest Metro Area Regional Water Supply System Study. Prepared by Short Elliott Hendrickson Inc. Metropolitan Council: Saint Paul*.

Because it has been demonstrated that Ramsey should have sufficient groundwater available to meet future demands, a surface water treatment plant is not recommended at this time. A potential Ramsey groundwater treatment plant will be located close enough to the Mississippi River that it could be converted to a surface water treatment plant in the future if it became necessary. It is recommended that surface water features be designed into a potential water treatment plant. The additional cost of the surface water features is approximately $250,000.

7 Water Treatment

To remove manganese, iron, or hardness from Ramsey's drinking water, a centralized water treatment plant should be constructed. Adding the necessary processes to treat the water supply at each pump house would not be cost-effective.

7.1 Current and Future Treatment Needs

Many of Ramsey's wells are high in manganese, which has necessitated a solution to reduce the levels due to its health concerns. Ramsey's water is also high in iron and hardness. Ramsey's water otherwise meets all of the primary and aesthetic drinking water standards.

Manganese and iron can be removed with oxidation and sand filtration as discussed in the pilot study in Appendix E. Hardness removal options are discussed in Section 7.5.

Future treatment requirements will depend upon the class of contaminant being treated. Volatile chemicals can typically be removed using an aerator (i.e. gasoline constituents, trichloroethylene [TCE], radon, hydrogen sulfide, etc.). Some organic chemical may be removed using granular activated carbon (potential taste and odor causing contaminants). It may also be possible to add chemical feed systems to remove new contaminants using sand filters (i.e. arsenic, radium). If it is not possible to remove the contaminants by volatilization, carbon filtration, or sand filtration, membrane filters could be necessary (i.e. reverse osmosis). It should be noted that sand filtration is typically required ahead of membrane filters because iron and manganese causes fouling on the membranes.

In addition to potential future contaminants, a water treatment plant could be designed with features that would allow it to be converted to a surface water treatment plant in the future. One of these features would be filter-to-waste piping and valves. Filter-to-waste piping is required for surface water treatment, but is not generally used with groundwater treatment.

Ultimately, having a treatment facility that is flexible and can be retrofitted to meet new potential requirements is very important.

7.2 Treatment Capacity

As discussed in Chapter 4, the maximum day demand ranged from 4.1 to 5.5. MGD in the last 10 years. While the overall maximum day water demand has been flat in the last 10 years, the maximum day demand nearly triples the average day demand. The projected 2040 maximum day water demand is 10.3 MGD.

The recommended capacity of a water treatment plant for Ramsey is 10 MGD under normal conditions with the ability to operate up to 15 MGD for shorter periods. This will allow the City to comfortably treat maximum days through 2040 and possibly beyond.

7.3 Manganese and Iron Removal Options

The most common and most cost effective option for manganese and iron removal is chemical oxidation followed by sand filtration. In groundwater, the manganese and iron ions are in solution. When a strong oxidant is added to the water, it converts the manganese and iron to filterable solids.

The oxidant that is added for iron oxidation is typically oxygen via aeration or chlorine. The chemical oxidant that is added for manganese oxidation is typically sodium permanganate. Chlorine is a less expensive chemical oxidant, but the reaction with manganese is too slow to be used in a filtration process. Options for gravity and pressure filtration are presented later in this chapter.

Other options for iron and manganese removal are chemical oxidation followed by membrane filtration or reverse osmosis. Both of these options are very expensive from a capital cost and operations and maintenance standpoint and are not being considered further.

7.4 Hardness Removal

Hardness in water is caused by excess calcium and magnesium ions in the water. Hard water causes scaling on fixtures and can plug pipes. Hardness can be removed from water on a municipal scale by lime softening or ion exchange softening.

7.4.1 Lime Softening

Lime softening involves adding lime to water to raise the pH to a point where the calcium carbonate is no longer soluble in the water. By forming calcium carbonate precipitate; the calcium can be removed by filtration. A lime softening water treatment plant requires sedimentation, clarification, and filtration and is very expensive. The capital cost of a lime softening water treatment facility for Ramsey could be as much as $50 million. The operation and maintenance (O&M) of a lime softening water treatment facility would also be significantly more than an iron and manganese removal water treatment facility. Higher O&M for a lime softening plant is due to a larger facility and more chemical processes. It should be noted that a lime softening water treatment plant would also remove manganese and iron, and would not require a separate treatment process.

Due to the high capital and O&M costs associated with a lime softening water treatment plant, it is not recommended for the City of Ramsey.

7.4.2 Ion Exchange Softening

Ion exchange softening involves exchanging calcium and magnesium ions for sodium ions with an ion exchange resin. This is exactly the same process that is used in a home water softener. To regenerate an ion exchange softener, the resin is flushed with a concentrated solution of brine. This regeneration process uses large quantities of salt. A municipal ion exchange water softening system treating 3.5 MGD (Ramsey's 2040 average day demand) would use as much as 6 tons of salt every day.

The capital cost of adding an ion exchange water softening treatment process to a new water treatment facility would be approximately $5 million. This cost would be in addition to an iron and manganese removal water treatment plant.

The operation cost for salt and wasted water for an ion exchange softening process is approximately $500 per million gallons of water treated. This is independent of whether it is done by the City or by a resident.

An ion-exchange softening process would add approximately 3 tons of chloride to the wastewater system which is ultimately discharged to the Mississippi River. While the MCES Metro Wastewater Treatment Plant currently meets its discharge limits, chlorides have received more regulatory scrutiny recently. Operating a municipal scale ion exchange softening process may become less feasible in the future due to chlorides in wastewater. In addition, municipal scale ion exchange softening might not be considered environmentally responsible. Due to the higher operation and maintenance costs, potential future regulations, and environmental responsibility, an ion-exchange softening process is not recommended.

7.5 Pilot Study Results

A pilot study was performed by John Thom of SEH of Ramsey's water in January 2020. The Pilot Study Report is included in Appendix E. The objectives of the pilot study were to evaluate the effectiveness of detention time prior to filtration, and to determine the optimal filter media.

The pilot study found no significant difference between direct filtration and utilizing 30 minutes of detention time prior to filtration, and found no significant difference between the silica sand/anthracite and greensand/anthracite filter media. Because the manganese oxide coating on manganese greensand filters is helpful for manganese removal, greensand/anthracite filter media is recommended.

7.6 Filter Sizing

The required filter area is determined by dividing the nominal filtration capacity by a flux rate (filtration rate). Ten States Standards requires sand filtration rates from 2 to 4 gpm / ft^2. Because the required filtration capacity is 10 MGD under normal operating conditions, the facility will be designed for 10 MGD at 2 gpm / ft^2. Therefore, if 15 MGD is necessary for short periods of time, the filtration rate will still be in the acceptable range. With a capacity of 10 MGD and a filtration rate of 2 gpm / ft^2, it is necessary to have 3,200 ft^2 of filter media. To have reasonable backwash rates and operational flexibility, this will be broken into eight filters.

7.7 Operator Input

Ramsey operators and City Staff toured existing water treatment plants in Andover and Brooklyn Center as part of this feasibility study. Operator feedback from the tours was gathered and incorporated into the building layouts discussed in the following sections.

7.8 Treatment Alternative 1 - Gravity Filter Layout

7.8.1 General

In an iron and manganese gravity filtration system, water to be filtered is pumped, under low pressure, to the treatment facility where it flows by gravity through the various treatment processes. Following the oxidation process, the water flows through the filter cells from top to bottom. As the water passes through the filter media, the insoluble particles of iron and manganese are removed.

As more and more water is filtered, the restriction to flow, created by the accumulation of iron and manganese solids on the media, steadily increases. In a gravity facility, this restriction to flow, called head, is measured in feet of water depth in the filter cells. As the solids accumulate, the depth of water in the filter cells increases. Due to the physical nature of a gravity filter, when the depth of water in a cell reaches its maximum designed head (high water level) backwashing is required. Failure to backwash at the proper time could result in the filter overflowing or poor effluent water quality being produced. Gravity filters are typically constructed of concrete or steel. Steel filters are generally found in smaller water systems. Because of the large size of the filters required for Ramsey, steel filters are not being considered.

The advantages to gravity filtration systems are:

1. Gravity filters provide for more treatment options including aeration and detention without requiring another pumping step. If regulations change or the water becomes contaminated, additional treatment steps can be added to gravity filters.
2. Water from the gravity filters does not go immediately into the distribution system. If problems with the filters occur or if sodium permanganate is overfed (causing pink water), operators have time to react and correct the problem.
3. Gravity filters are open to view and access. This is advantageous in that it enhances the observation, operation and maintenance of the filter functions and components.
4. Gravity filtration systems have a greater amount of flexibility with less disruption during normal maintenance procedures.

The disadvantages to gravity filtration systems are:

1. The facilities tend to have more capital cost than pressure type facilities.
2. Typically requires the facility to be constructed on two floor levels.
3. Provides for less available headloss than pressure facilities which can result in shorter filter run times. Shorter filter run times result in more backwashing which takes a filter out of service.

7.8.2 Building Layout/General Sequence

Gravity filter building layouts are included in Appendix F. The chemical rooms are located on the east side of the building, with exterior doors accessible for deliveries. The electrical, mechanical, high service pump room, and generator rooms are located in close proximity to each other to allow for short conduit runs to motor controls.

The gravity filter layout occurs on two levels to allow for filter height to provide head for the filtering process. The raw water enters the building through the high service pump room where chlorine and potassium permanganate are added. The water travels through the filters by gravity to the clearwell. The water travels from the clearwell to the high service pump chamber where it is pumped into the distribution system. Fluoride, chlorine, and phosphate will be added to the finished water.

7.8.3 Main Level

7.8.3.1 Chemical Rooms

Chemical rooms are clustered on the east side of the building with exterior doors to allow easy access for chemical deliveries. It is expected that chemical rooms will be required for chlorine gas, sodium permanganate, fluoride, phosphate, and possibly polymer to aid in backwash settling.

7.8.3.2 High Service Pump Room

The high service pump room contains the pumps that pump treated water from the clearwell into the distribution system. Because most of the electrical load is located in the high service pump room, it is in close proximity to the electrical room and generator room.

7.8.3.3 Electrical Room

The electrical room contains the motor control equipment and electrical panels. The location of this room in close proximity to the high service pump room, mechanical room, and generator room provide for short conduit and wire runs.

7.8.3.4 Mechanical Room

This room contains the make-up air, dehumidification, and HVAC equipment. The location of this room on an outside wall provides space for air louvers.

7.8.3.5 Blower Room

The blower room contains the filter backwash blower. The backwash blower provides air which is used to help clean the filter media during a backwash.

7.8.3.6 Office/Control Room/Lab

An office/control room/lab is provided for operators to have a SCADA computer to monitor and control the water system. A lab sink and desktop analyzer will be provided to allow operators to monitor water quality. The office is located in the front of the building next to the entrance, and has lots of windows for natural light.

7.8.3.7 Generator Room

A standby generator will be located in the generator room. The generator is capable of running the water treatment plant in the event of a power outage or possibly for peak shaving (peak shaving requires additional emissions compliance). The service entrance and automatic transfer switch are located in this room. Two exterior walls are provided for intake and exhaust louvers.

7.8.4 Upper Level

The upper level is depicted on the Upper Level Floor Plan in Appendix F. The upper level consists of filters and walkways. Windows will be provided in the filter room to allow for natural lighting. Walkways will be provided around the filters to allow the plant operator to inspect the operating conditions of the filters. Control panels (fixed or mobile) will be provided to allow the operators to manually initiate backwashes from the upper level.

7.8.5 Clearwell

A clearwell is located adjacent to the gravity filter treatment facility. The clearwell provides storage and operational flexibility (the box shown on Figure 1A in Appendix F represents 1 million gallons of underground storage). This storage is necessary to (1) maintain a volume of water for backwashing filter cells, (2) to provide the flexibility to treat water at a rate different than the raw water pumping rate, and (3) to provide additional storage for the distribution system.

To provide operational flexibility and to supplement system storage, a 1 million gallon clearwell is the minimum size recommended.

7.9 Treatment Alternative 2 – Pressure Filter Layout

7.9.1 General

In an iron and manganese pressure filtration system, water to be filtered is pumped directly to, and through, the facility's components under pressure. Oxidation occurs inside the pipelines and filter vessels upstream of the filter media. Following the oxidation process, the water flows through the filter vessels from top to bottom. As the water passes through the filter media, the insoluble particles of iron and manganese are removed from the flow.

As more and more water is filtered, the restriction to flow, created by the accumulation of iron and manganese solids on the media, steadily increases. In a pressure facility, this restriction to flow, called head, is measured in pounds per square inch (psi). As the solids accumulate, the headloss, or difference in pressures between the top and bottom sides of the filter media, increases. Due to the design and construction of pressure filters, headloss can be driven as high as 15 psi, although 5 to 6 psi is the preferred upper limit to ensure water quality.

The advantages to pressure filtration systems are:

1. The facilities tend to have less capital cost than gravity facilities.
2. Plants are typically constructed on one floor level.
3. Provide for greater available headloss than gravity facilities which can result in longer filter run times than a comparably sized gravity facility. Longer filter run times require less backwashing which keeps a filter in service longer.

The disadvantages to pressure filtration systems are:

1. Pressure filter systems have less ability to add additional treatment processes (aeration, detention) if regulations or water quality changes.
2. Closed from view and difficult to access internally. This prevents observation of the systems operation. Condition of the filter media and flow distribution during a backwash cycle cannot be readily monitored.
3. Pressure filters are constructed out of steel and require periodic blasting and painting.
4. Inspection of the pressure filters requires entry into a confined space which is a safety hazard.

7.9.2 Building Layout/General Sequence

Pressure filter building layouts are included in Appendix G. The chemical rooms are located on the east side of the building, with exterior doors accessible for deliveries. The electrical, mechanical, and generator rooms are located in close proximity to each other to allow for short conduit runs and motor controls.

The pressure filter layout occurs on one level. The raw water enters the building in pressure pipe and chlorine and permanganate are added. The water goes directly through the filters under pressure where the iron and manganese are removed. Fluoride, chlorine, and phosphate will be added to the finished water.

7.9.3 Main Level

7.9.3.1 Chemical Rooms

Chemical rooms are clustered on the east side of the building with exterior doors to allow easy access for chemical deliveries. It is expected that chemical rooms will be required for chlorine gas, sodium permanganate, fluoride, phosphate, and possibly polymer to aid in backwash settling.

7.9.3.2 Electrical Room

The electrical room contains the motor control equipment and electrical panels. The location of this room in close proximity to the mechanical room and generator room provide for short conduit and wire runs.

7.9.3.3 Mechanical Room

This room contains the make-up air, dehumidification, and HVAC equipment. The location of this room on an outside wall provides space for air louvers.

7.9.3.4 Blower Room

The blower room contains the filter backwash blower. The backwash blower provides air which is used to help clean the filter media during a backwash.

7.9.3.5 Office/Control Room/Lab

An office/control room/lab is provided for operators to have a SCADA computer to monitor and control the water system. A lab sink and desktop analyzer will be provided to allow operators to monitor water quality. The office is located in the front of the building next to the entrance, and has lots of windows for natural light.

7.9.3.6 Generator Room

A standby generator will be located in the generator room. The generator is capable of running the water treatment plant in the event of a power outage or possibly for peak shaving (peak shaving requires additional emissions compliance). The service entrance and automatic transfer switch are located in this room. Two exterior walls are provided for intake and exhaust louvers.

7.10 Backwash Alternatives

Sand filters (gravity and pressure) require periodic backwashing to remove solids from the filters. Backwashing one of the filters (either gravity or pressure) will consume between 40,000 and 70,000 gallons of water. After a backwash, the solids are allowed to settle and the clear water is recycled back to the filters. This can be done with backwash tanks or lamella plate settlers as discussed below.

7.10.1 Backwash Alternative 1 – Backwash Tanks

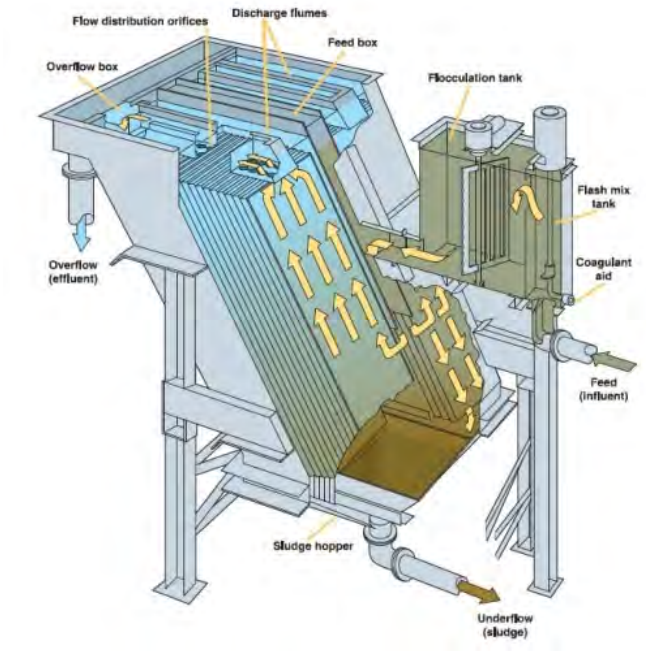
Backwash tanks simply involve discharging the backwash water to a tank where the water is allowed to settle for a period of time (typically 8 hours). Clear water is decanted from the backwash tank and recycled to the beginning of the treatment process. A backwash polymer may be utilized to increase settling efficiency.

To allow for more than one filter to be backwashed in one day, multiple backwash tanks are required. To provide for efficient operation, three backwash tanks are recommended.

7.10.2 Backwash Alternative 2 – Lamella Plate Settlers

Lamella settling is a process that receives continuous flow from the backwash tank, and provides high rate thickening of the sludge, and reclaims decanted clear water to the beginning of the treatment train. High rate inclined plate settlers typically thicken backwash sludge to approximately 0.5 to 1.5% solids prior to discharging to either a sludge storage tank for further thickening, or directly to the sanitary sewer.

Backwash waste water is pumped from the backwash tank directly into the gravity settler, alleviating settling time. A coagulant is added immediately, as the water flows through a flash mixer and into a flocculation tank. The coagulated sludge then flows into a series of inclined plates, the surfaces which collect the sludge and direct it to a sludge hopper. The clear effluent flows out the overflow and is recycled to the raw water. The inclined orientation of the plates allows for more surface area for the solids to settle upon, while limiting the total space taken up by the equipment.



As with treatment process equipment in general, redundancy is recommended so that in the event that one lamella settler is down, settling operations can continue seamlessly. Therefore, one single lamella settler is not recommended.

7.10.3 Backwash Alternative Comparison

The advantages of lamella plate settlers is that they do not require settling time prior to recycling the backwash water. This eliminates the need for batch processing of backwash water from backwash tanks and provide significant operational flexibility. Backwash tanks can dictate when and if a filter can be backwashed.

Lamella plate settlers waste between 60 and 900 gallons per million gallons of water treated, depending upon whether a sludge holding tank is utilized. Backwash tanks waste between 750 and 5,000 gallons of water per million gallons of water treated.

Because lamella plate settlers provide significantly more operational flexibility and waste less water, lamella plate settlers are recommended for Ramsey.

8 Architectural Design

The City of Ramsey's goal for the water treatment facility is to provide a building that fits with adjacent structures, includes cost effective sustainable design features, is operator friendly, and provides a civic presence to the public.

The water treatment functions of the building will be constructed of poured in-place concrete foundations with masonry, brick, and stone façade. A glass atrium is proposed as an architectural feature and to provide additional natural light. Architectural features from adjacent structures will be incorporated into the design.

For walls that are less visible to the public, cost-effective insulated load bearing precast wall panels will be use. The roof will be constructed of precast concrete double 'T's for the roof structure of the filter room which allows for a greater clear spans and more daylighting.

Sustainable architectural features will include natural daylighting throughout including the filter room, low maintenance poured-in-place and plant precast concrete structure and wall panels, building insulation which surpasses the current energy code. Rain gardens and low maintenance landscaping features can be included in the site design.

An architectural rendering that further demonstrates the design concept for the Fire Station Site is included in Appendix H. If the water treatment plant is constructed elsewhere the architectural treatments will be modified to fit with the adjacent structures.

9 Utility Space Needs Evaluation

City staff was solicited for additional space needs and features in the water treatment plant building in addition to the necessary filters and process rooms. The additional features requested in the building included a training room, and a separate laboratory. An optional 8,000 square foot garage is also included in some of the building layouts.

10 Water Treatment Plant Site Alternatives and Evaluation

Four alternatives for a new water treatment plant site were provided by the City. These alternatives include the Fire Station Site, Public Works Site, Water Shop Site, and Vacant City Property Site. These sites are shown on Figure 1 in Appendix I and are discussed below.

The watermain costs in the following sections assume that watermain is primarily installed within public utility easements, City-owned properties, or in County/City right-of-way next to roads, either in the boulevard or under paved trails.

The costs shown in this section are for purposes of comparing alternatives and do not contain contingency or indirect costs. The costs for the selected alternative are incorporated into the overall project costs presented in Section 12 where contingency and indirect costs are added.

10.1 Fire Station Site

The Fire Station Site is currently private property and would need to be acquired by the City. It was determined that a 3.2-acre site would be sufficient for the water treatment plant and a future

expansion to 20 MGD. Portions of the water treatment plant would be constructed on the existing City-owned Fire Station property. A water treatment plant layout for the Fire Station Site is shown on Figure 4 in Appendix I.

10.1.1 Raw Watermain and Costs – Fire Station Site

The raw watermain required to construct a water treatment plant at the Fire Station Site is shown on Figure 2 in Appendix I. The water main and site acquisition costs are included in Table 12. Because the Fire Station Site is remote from other City garage facilities, it is assumed that a water treatment plant garage is needed.

Table 12 – Fire Station Site Costs

Item	Unit	Est. Quantity	Unit Price	Cost[1]
24" Raw Watermain	LF	3950	$230	$908,500
24" Road Crossing (Armstrong and Bunker Lake Blvd) - Jacked Casing	LF	400	$525	$210,000
16" Raw Watermain (Bunker Lake Blvd) - Jacked Casing	LF	100	$425	$42,500
12" Raw Watermain	LF	1850	$125	$231,250
Land Purchase	LS	1	$750,000	$750,000
Garage	LS	1	$1,450,000	$1,450,000
			Total	**$3,592,250**

[1] Costs are for comparison of alternatives and are not meant to represent the full project costs.

10.2 Public Work Site

The City is in the process of constructing a new Public Works Facility on a 19.9-acre parcel shown on Figure 1 in Appendix I. The proposed water treatment plant site is a 3.5-acre portion in the northeast corner of the Public Works Site. The northwest corner of the Public Works Site will remain available for other uses or development as it offers the best visibility and has access to both 143rd Avenue and Jasper Street. In addition, constructing the water treatment plant in the northeast corner of the Public Works Site will allow the City to control access to the existing cemetery on the site. A water treatment plant layout for the Public Works Site is shown on Figure 5 in Appendix I.

10.2.1 Raw and Finished Watermain Costs – Public Works Site

The raw and finished watermain required to construct a water treatment plant at the Public Works Site is shown on Figure 3 in Appendix I. The watermain costs are included in Table 13. Because a new Public Works building is being constructed on the Public Work Site, it is assumed that a new garage is not needed with the water treatment plant.

Table 13 – Public Works Site Costs

Item	Unit	Est. Quantity	Unit Price	Cost[1]
24" Raw Watermain	LF	7300	$230	$1,679,000
24" Road Crossing (Ramsey Blvd and Bunker Lake Blvd) - Jacked Casing	LF	400	$525	$210,000
24" Finished Watermain	LF	3800	$230	$874,000
20" Raw Watermain	LF	1300	$185	$240,500
16" Raw Watermain	LF	1750	$165	$288,750
16" Raw Watermain (Armstrong Blvd) - Jacked Casing	LF	100	$425	$42,500
Well 8 Meter Vault	LS	1	$90,000	$90,000
			Total	**$3,424,750**

[1] Costs are for comparison of alternatives and are not meant to represent the full project costs.

10.3 Water Shop Site

The Water Shop Site for the water treatment plant is City-owned property on the west side of Jasper Street, across the street from the new Public Works Facility. The water treatment plant would require approximately 3.5 acres of land. The current City water operations shop is located on this site. Construction of the water treatment plant on the Water Shop Site would require demolition of the existing water operations shop and abandonment of 142nd Ave NW. A water treatment plant layout for the Water Shop Site is shown on Figure 6 in Appendix I.

10.3.1 Raw and Finished Watermain Costs – Water Shop Site

The raw and finished watermain required to construct a water treatment plant at the Water Shop Site is shown on Figure 3 in Appendix I. The water main costs are included in Table 14. Because a new Public Works building is being constructed across the street from the Water Shop Site, it is assumed that a new garage is not needed with the water treatment plant. Costs to demolish the existing water operations shop are not included in Table 14.

Table 14 – Water Shop Site Costs

Item	Unit	Est. Quantity	Unit Price	Cost[1]
24" Raw Watermain	LF	8627	$230	$1,984,210
24" Road Crossing (Ramsey Blvd and Bunker Lake Blvd) - Jacked Casing	LF	400	$525	$210,000
24" Finished Watermain	LF	3800	$230	$874,000
20" Raw Watermain	LF	1300	$185	$240,500
16" Raw Watermain	LF	1750	$165	$288,750
16" Raw Watermain (Armstrong Blvd) - Jacked Casing	LF	100	$425	$42,500
Well 8 Meter Vault	LS	1	$90,000	$90,000
			Total	**$3,729,960**

[1] Costs are for comparison of alternatives and are not meant to represent the full project costs.

10.4 Vacant City Property Site

The City owns a vacant 4.1-acre parcel located on the east side of Ramsey Blvd NW, west of the Public Works Site shown on Figure 1 in Appendix I. The 4.1-acre parcel would be sufficient to construct Ramsey's water treatment plant. A water treatment plant layout for the Vacant City Property Site is shown on Figure 7 in Appendix I.

10.4.1 Raw and Finished Watermain Costs – Vacant City Property Site

The raw and finished watermain required to construct a water treatment plant at the Vacant City Property Site is shown on Figure 3 in Appendix I. The water main and garage costs are included in Table 15. Because the Vacant City Property Site is not on or adjacent to the new Public Works Site, it is assumed that a garage is needed.

Table 15 – Vacant City Property Site Costs

Item	Unit	Est. Quantity	Unit Price	Cost[1]
24" Raw Watermain	LF	9288	$230	$2,136,240
24" Road Crossing (Ramsey Blvd and Bunker Lake Blvd) - Jacked Casing	LF	400	$525	$210,000
24" Finished Watermain	LF	3800	$230	$874,000
20" Raw Watermain	LF	1300	$185	$240,500
16" Raw Watermain	LF	1750	$165	$288,750
16" Raw Watermain (Armstrong Blvd) - Jacked Casing	LF	100	$425	$42,500
Well 8 Meter Vault	LS	1	$90,000	$90,000
Garage	LS	1	$1,450,000	$1,450,000
			Total	**$5,331,990**

[1] Costs are for comparison of alternatives and are not meant to represent the full project costs.

10.5 Water Treatment Plant Site Evaluation and Recommendation

The City had previously planned to locate a surface water treatment plant at the Fire Station site. Some of the raw watermain is in place and it is convenient for metering Well 8. However, the Fire Station site is remote from other Public Works facilities, would have operational inefficiencies, and would require building a garage. The Fire Station site would also require the City to purchase land. Due to the construction of the garage and purchasing land, the Fire Station site is more expensive than the Public Works site.

The Public Works site requires more new raw and finished watermain than the Fire Station site, but because it is on the site of the Public Works Facility that is currently under construction it would not require a garage and could share an emergency generator and security infrastructure with the Public Works Facility. Having multiple public works facilities on the same site also increases operational efficiencies. The Public Works Site is already owned by the City and doesn't require the purchase of private property. If a garage is not included with the water treatment plant, the Public Works Site is the least expensive option.

The Water Shop site requires more new raw and finished watermain than the Fire Station or Public Works sites. It also requires that the existing water operations shop be demolished and 142nd Ave NW be removed and abandoned. Because it is adjacent to the Public Works Site, a garage would not be necessary at the Water Shop Site. Due to the additional watermain and a reduced ability to share an emergency generator and security infrastructure, the Water Shop site is more expensive than the Public Works Site.

The Vacant City Property Site requires more new finished and raw watermain than the Water Shop Site, and more yet than the Public Works Site. In addition, the Vacant Property Site doesn't offer the ability to share an emergency generator or security infrastructure as the Public Works Site does, and doesn't offer operational efficiencies. A garage would also be necessary. The Vacant City Property Site is the most expensive of the four sites evaluated.

Table 16 – Alternate Site Cost Comparison

Alternate WTP Sites Considered	Cost[1]
Fire Station Site	$3,592,250
Public Works Site	$3,424,750
Water Shop Site	$3,729,960
Vacant Property Site	$5,331,990

[1] Costs are for comparison of alternatives and are not meant to represent full project costs.

In January of 2020, the City of Ramsey's Planning Commission, Economic Development Authority, and Public Works Committee all voted unanimously to recommend City Council approval to construct the water treatment plant on the Public Works site. Stall also recommends the Public Works Site because it offers the least expensive overall construction cost, and also offers the greatest operational efficiencies, which in turn will reduce future operational costs.

11 Impacts to Nearby Properties

The water treatment plant is proposed to be constructed on the new Public Works Site as shown on Figure 5 in Appendix I. The Public Works site is in an industrial area of Ramsey and will already be used for a municipal public works building. Opposition from the neighboring properties to a new water treatment plant is not anticipated.

Water treatment plants are quiet neighbors with relatively little traffic. A standby generator will be part of the water treatment plant project, but it is proposed to be located inside the building and will have sound attenuation. Sound complaints from neighbors are not anticipated.

The operators will visit the plant daily and chemical deliveries will likely be made approximately once per week. Construction complaints are not expected since the water treatment plant is in an industrial neighborhood.

12 Capital Cost Opinions

Feasibility level opinions of probable cost (OPC) broken down by construction category were prepared for the gravity and pressure filtration alternatives. A breakdown of these costs by

division are included in Appendix J. Tables 17 and 18 present the capital costs for the gravity and pressure filter treatment plants.

Table 17 – Capital Cost Opinion Summary
Gravity Filter Water Treatment Plant

Item	Cost
Water Treatment Plant:	$26,060,000
Construction Contingency (10%):	$2,606,000
Preliminary Construction Cost:	**$28,670,000**
Engineering/Construction Admin (12%)	$3,440,000
Legal/Admin (1%)	$287,000
Total Estimated Project Cost:	**$32,400,000**

Table 18 – Capital Cost Opinion Summary
Pressure Filter Water Treatment Plant

Item	Cost
Water Treatment Plant:	$24,766,000
Construction Contingency (10%):	$2,477,000
Preliminary Construction Cost:	**$27,240,000**
Engineering/Construction Admin (12%)	$3,268,800
Legal/Admin (1%)	$272,000
Total Estimated Project Cost:	**$30,780,000**

An optional 8,000 square foot garage could be added to either water treatment plant alternative for a project cost of approximately $1.64 million.

13 Life Cycle Cost Opinions

Life cycle costs represent the total cost of owning the treatment plants for 50 years and include capital cost, equipment replacement, labor, gas, chemicals, insurance, electricity, and annual equipment repair. Detailed life cycle cost tables are included in Appendix K.

The life cycle costs presented in Table 19 and Table 20 assume a 20-year financing period on the capital costs with 2% interest rates and 2.75% inflation.

Operating the water treatment plant is not anticipated to require additional Staff. While Staff will need to visit the plant on a daily basis to operate and maintain it, this time will generally be offset by the time Staff currently spends operating and maintaining the six municipal wells and three pump houses within The COR.

Table 19 – 50-Year Life Cycle Cost Summary
Gravity Filter Water Treatment Plant

Item	50-Year Life Cycle Cost	Annual Cost
Capital Project Costs	$32,400,000	$1,981,478
Equipment Replacement	$9,694,858	$308,522
Labor	$6,488,398	$110,000
Gas	$1,179,709	$20,000
Chemicals	$6,488,398	$110,000
Insurance	$1,769,563	$30,000
Electricity	$6,783,325	$115,000
Equipment Repair	$7,078,253	$120,000
Total 50 Year Life Cycle Cost	**$71,880,000**	

Table 20 – 50-Year Life Cycle Cost Summary
Pressure Filter Water Treatment Plant

Item	50-Year Life Cycle Cost	Annual Cost
Capital Project Costs	$30,780,000	$1,882,404
Equipment Replacement	$13,985,687	$445,069
Labor	$6,488,398	$110,000
Gas	$1,179,709	$20,000
Chemicals	$6,488,398	$110,000
Insurance	$589,854	$10,000
Electricity	$6,193,471	$105,000
Equipment Repair	$9,732,597	$165,000
Total 50 Year Life Cycle Cost	**$75,440,000**	

14 Alternative Evaluation & Recommendation

The two options for removing manganese from Ramsey's drinking water that have been evaluated include gravity filters and pressure filters.

The capital cost of the pressure filter treatment plant is slightly less than the gravity filter treatment plant ($30.8 million versus $32.4 million). However, the life cycle cost of the pressure filter treatment plant is more than the gravity filter treatment plant ($75.4 million versus $71.9 million). The pressure filter treatment plant has a higher life cycle cost due to the expense of painting and maintaining the steel filters; whereas concrete gravity filters require very little maintenance.

In addition to having lower life cycle costs, gravity filters have other advantages over pressure filters including:

- Gravity filters provide for more treatment options including aeration and detention without requiring another pumping step. If regulations change or the water becomes contaminated, additional treatment steps can more easily be added to gravity filters.
- Water from the gravity filters does not go immediately into the distribution system. If problems with the filters occur or if sodium permanganate is overfed (causing pink water), operators have time to react and correct the problem.
- Gravity filters are open to view and access. This enhances the observation, operation and maintenance of the filter functions and components.
- Gravity filtration systems have a greater amount of flexibility with less disruption during normal maintenance procedures.
- Gravity filters could potentially be converted from groundwater to surface water in the future if it became necessary.

A gravity filter treatment plant is the recommended alternative due to the advantages it offers at a comparable construction cost and reduced life-cycle cost.

15 Funding

Water treatment plant projects are commonly funded using general obligation bonds or loans and paid for using water rates. The following sections describe a low interest loan program and example grants opportunities. Another option would be to request bonding through the State.

15.1 Drinking Water Revolving Fund Loan

The Minnesota Drinking Water Revolving Fund (DWRF) loan program provides low interest loans to communities that qualify. DWRF loans typically have interest rates that are lower than other loans or bonds available to communities.

To qualify for a drinking water revolving fund loan, a proposal is written to place the project on the Project Priority List (PPL). The PPL ranks projects by factors including the type of project, a community's financial need, and primary contaminant exceedances. Once a City has a project on the PPL and intends to proceed with construction, the project is placed on the Intended Use Plan (IUP). Projects on the IUP are funded based upon their ranking. Not all projects on the IUP are funded.

Based upon Ramsey's financial status discussed in Section 16, the DWRF program may not be desirable based upon the fact that the City could likely receive a lower interest rate on its own, and due to the administrative requirements and loan restrictions.

15.2 Grants

Grants are available for some water projects but are most commonly given to communities that have a financial hardship. The City of Ramsey would likely not qualify.

One potential grant program that is not tied to financial need is the Clean Water Fund Grant administered through the Minnesota Board of Water and Soil Resources. Clean Water funds may only be spent to protect, enhance, and restore water quality in lakes, rivers, and streams and to protect groundwater from degradation. A total of $2,158,000 in grants was

awarded in FY2020 for 10 projects related to source water protection. All of the recipient organizations were counties, watershed districts, or conservation districts.

A smaller grant opportunity through the Clean Water Fund is a Source Water Protection grant that is administered through the Minnesota Department of Health. A Source Water Protection Grant is typically tied to a goal in a Community's Wellhead Protection Plan. A Source Water Protection Grant has a maximum value of $10,000.

16 Effect on Water Rates

The City of Ramsey currently has a minimum quarterly water rate of $42.15. This rate covers the first 15,000 gallons of water used per quarter. After the first 15,000, the cost per 1,000 of water used gets progressively more expensive. This is referred to as a conservation water rate because it discourages the use of more water.

According to the Ramsey Finance Director, the City of Ramsey has approximately $25 million set aside for a water treatment plant project, which was collected from Municipal water users for this specific purpose. The City of Ramsey currently raises its water rates 2.5% per year. If the City were to bond for the remainder of the water treatment plant project costs, the City would need to explore water rate impacts. For instance, if water rates were raised at a rate of 5% per year for 4 years, the resulting minimum quarterly rate in 2025 would be $51.23. This could also pay for additional operation and maintenance costs.

17 Public Involvement

Having informed and engaged residents is important to the success of a major municipal project. To engage residents, the following public involvement activities are recommended:

- Publish information describing the water issues and proposed water treatment plant project on the City's website in March 2020, and in the March-April edition of the Ramsey Resident.
- Send information mailers to residents in March 2020 describing the water issues and proposed water treatment plant project. Consider including discussion about municipal scale water softening, the respective costs to the public, and the fact that many people already own in-home water softeners.

18 Schedule

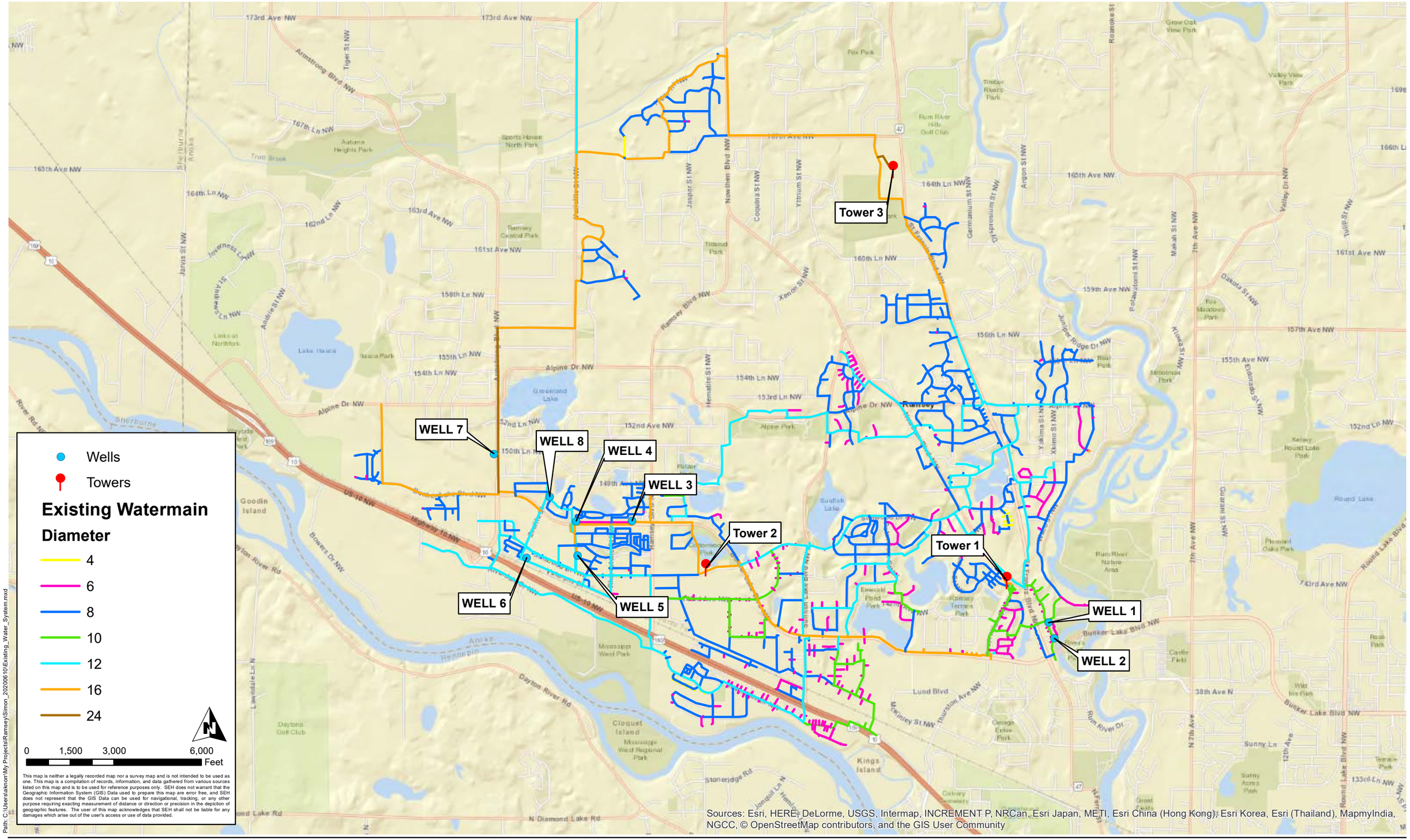
If the City elects to proceed with a water treatment plant project, the proposed project schedule could be as follows:

Item	Completion Date
Public Involvement	March 2021 – April 2021
Preparation of Plans	May 2021 – September 2021
Ad for Bid	October 2021
Bid Opening	November 2021
Construction Start	December 2021
Construction Complete	June 2023

However, Anoka County is planning “interim” improvements to Bunker Lake Boulevard between Armstrong Boulevard and Sunfish Lake Boulevard in 2021 to improve operations and safety in anticipation of traffic volumes doubling while planned improvements to Highway 10 are constructed between 2022 and 2025. Therefore, to construct the raw and finished watermain associated with the water treatment plant project as cost-effectively as possible, plans and specifications for the raw and finished watermain improvements are recommended to be prepared and bid in conjunction with Anoka County’s proposed improvements to Bunker Lake Boulevard.

Appendix A

Existing Water System Map



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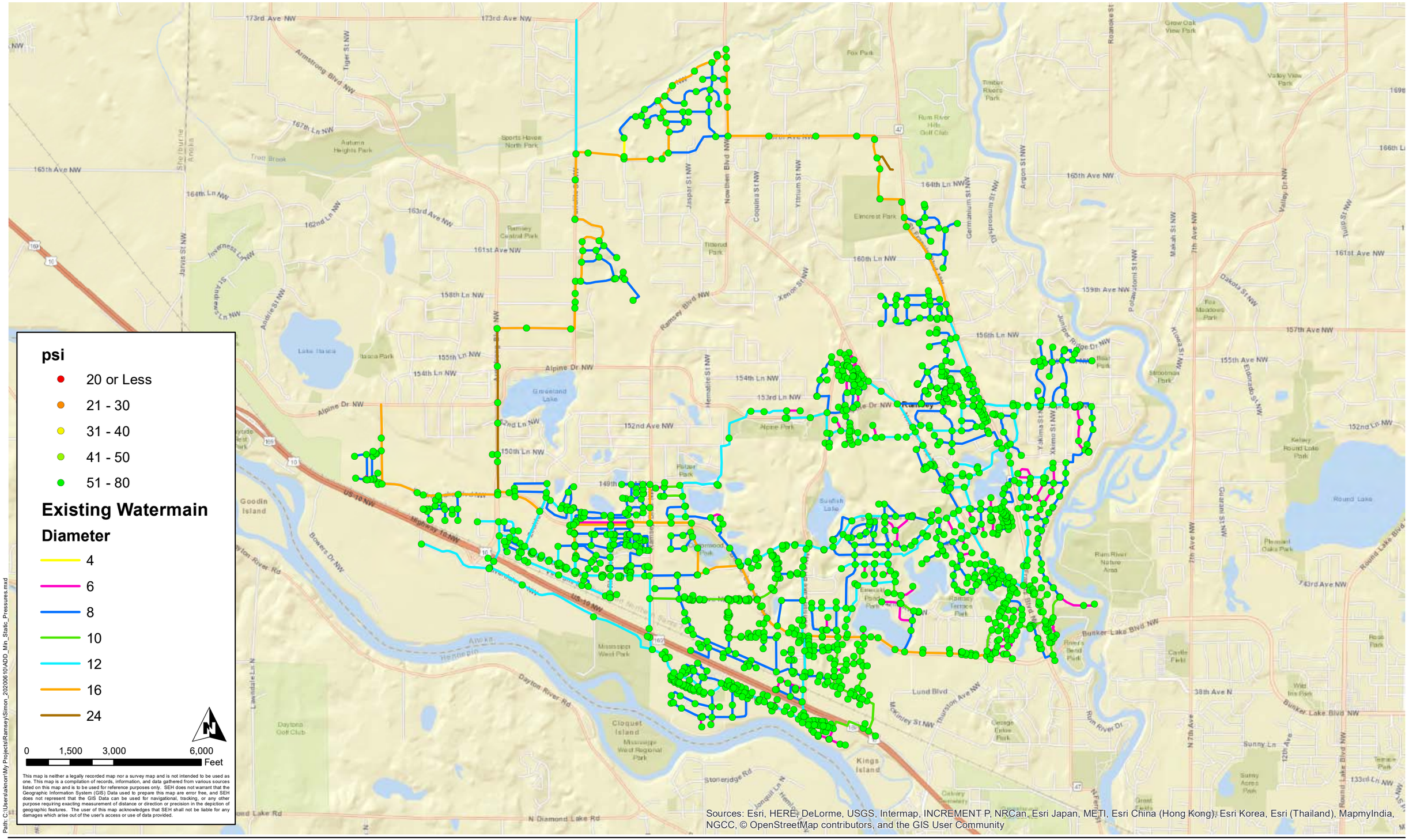
Project Number: RAMSY 154354
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EXISTING WATER SYSTEM
Ramsey, Minnesota

FIGURE 1
Existing Water System

Appendix B

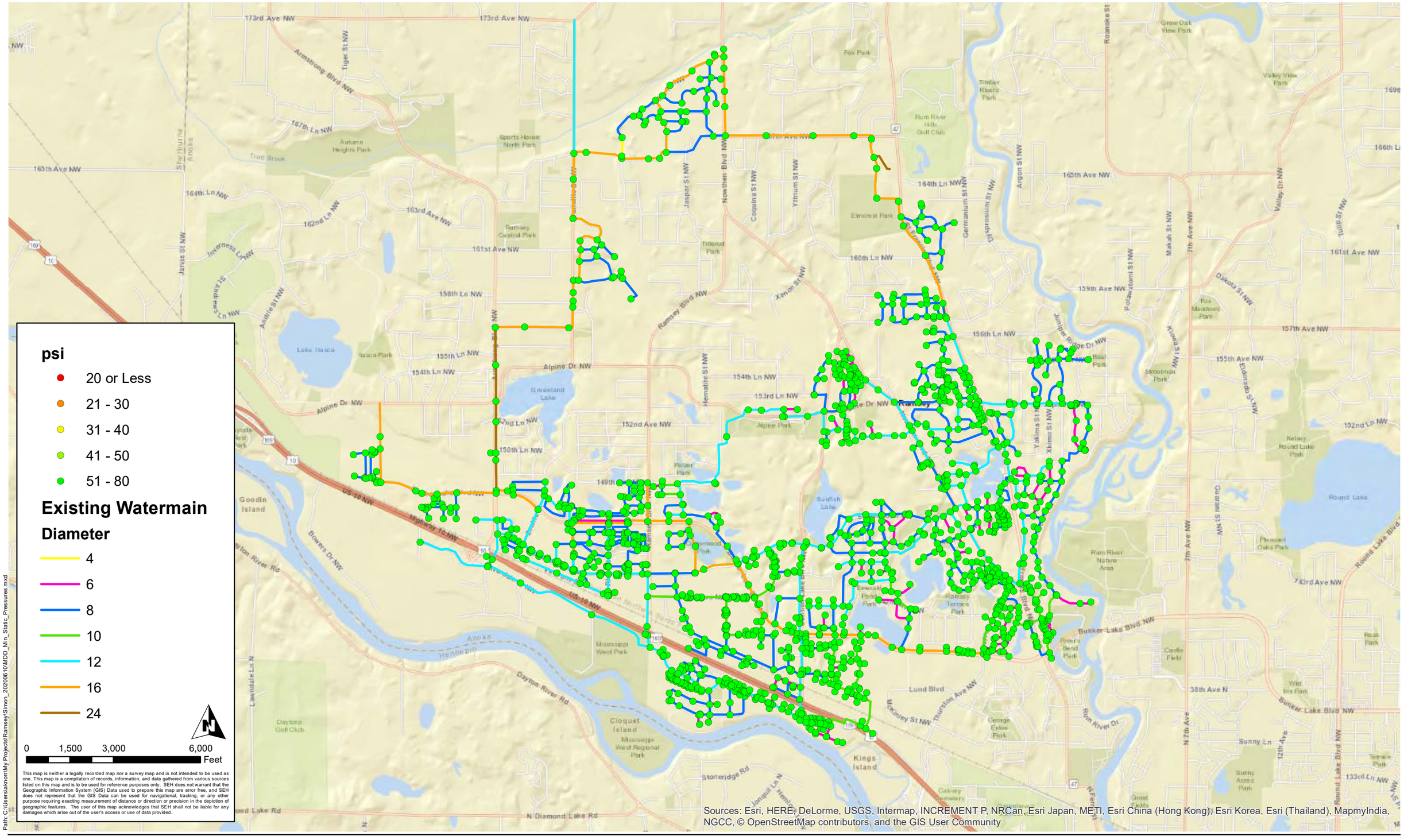
Modeling



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Print Date: Print Date: 3/4/2021

EXISTING ADD STATIC PRESSURE
Ramsey, Minnesota

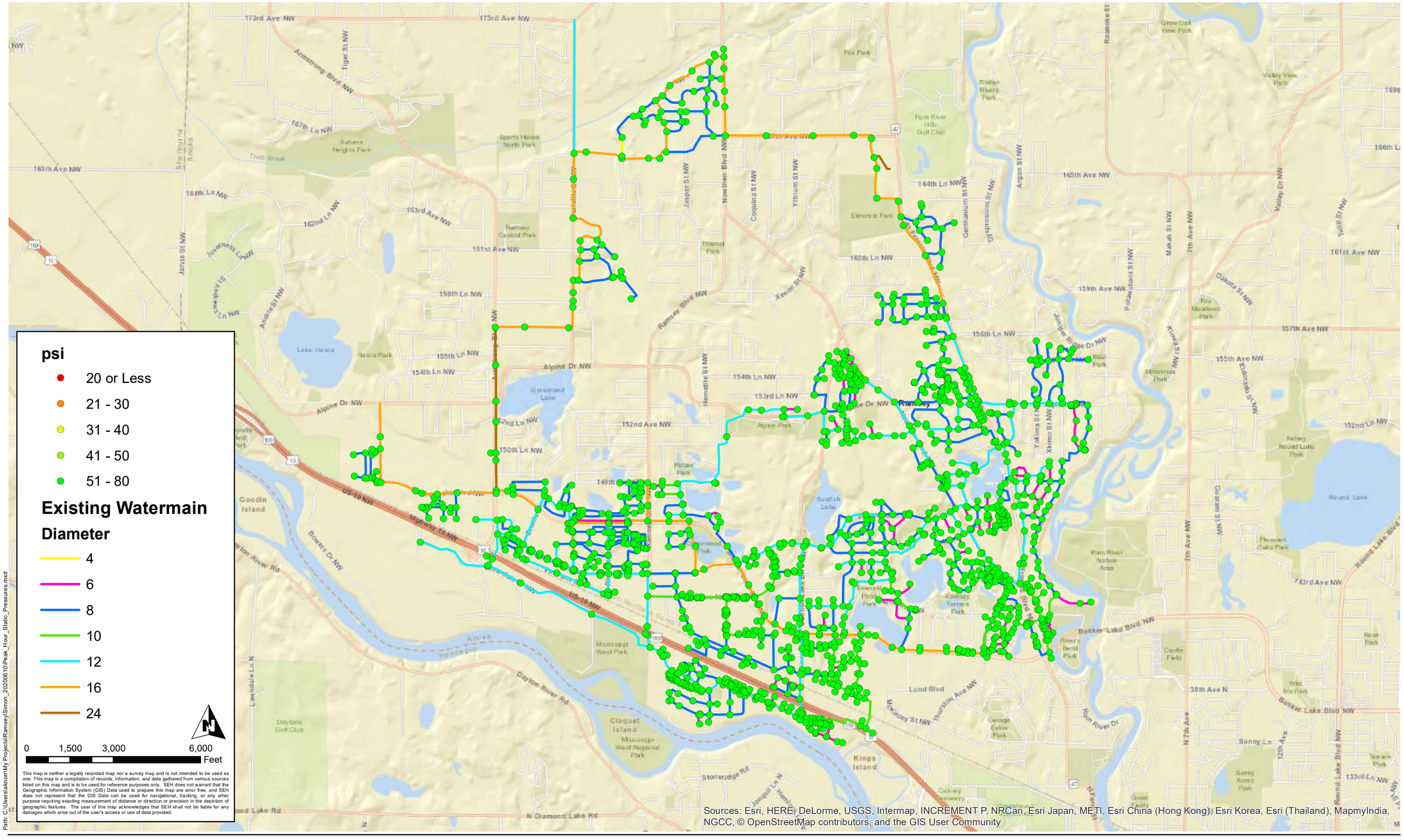
FIGURE 1
Minimum Pressures



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EXISTING MDD STATIC PRESSURE
Ramsey, Minnesota

FIGURE 2
Minimum Pressures



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EXISTING PEAK HOUR STATIC PRESSURE
Ramsey, Minnesota

FIGURE 3
Minimum Pressures

FIGURE 4

Existing System ADD 24-Hour Simulation

Well and Tower Operation

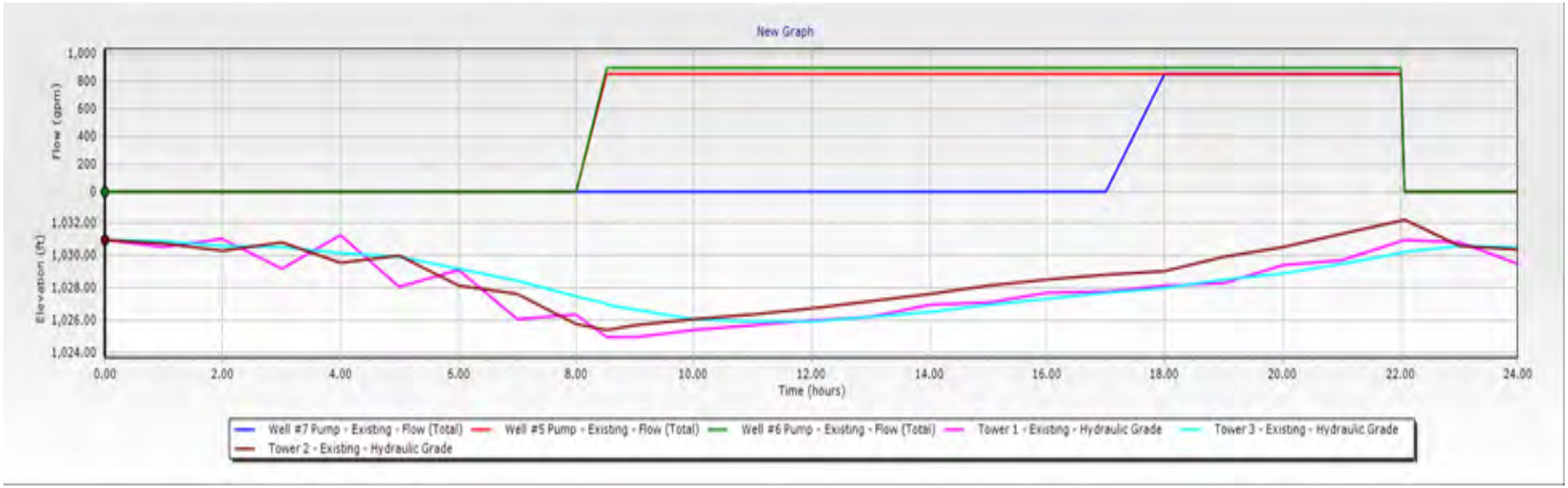
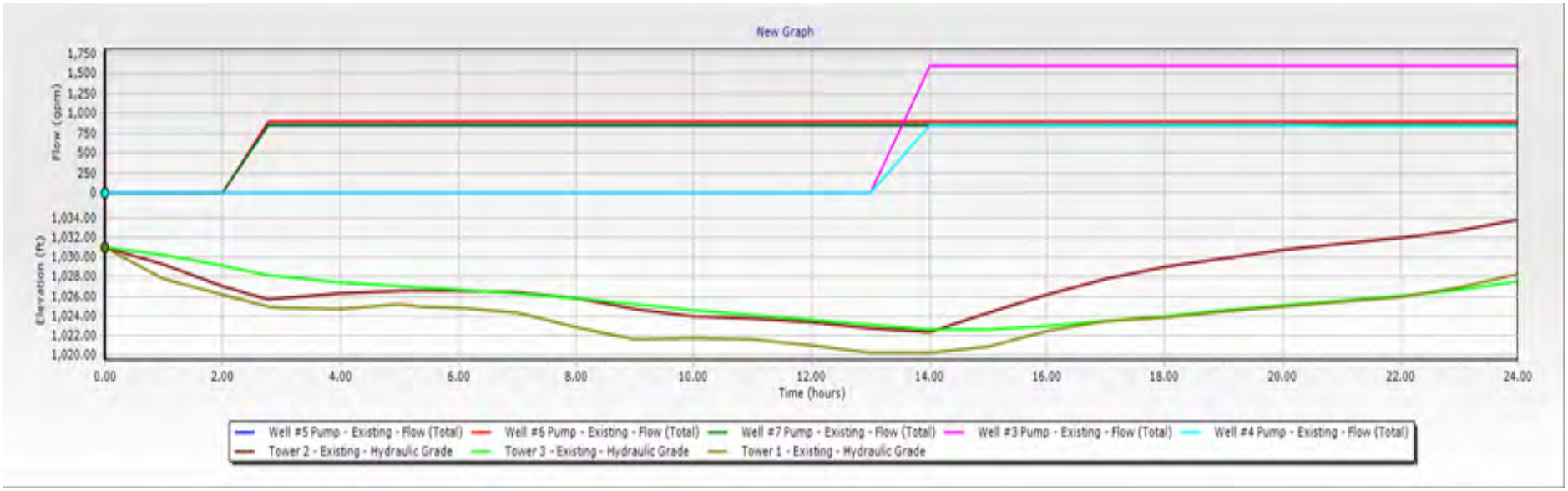


FIGURE 5

Existing System MDD 24-Hour Simulation

Well and Tower Operation



psi

54 - 75

Existing Watermain

Diameter

- 4
- 6
- 8
- 10
- 12
- 16
- 24

0 1,500 3,000 6,000 Feet

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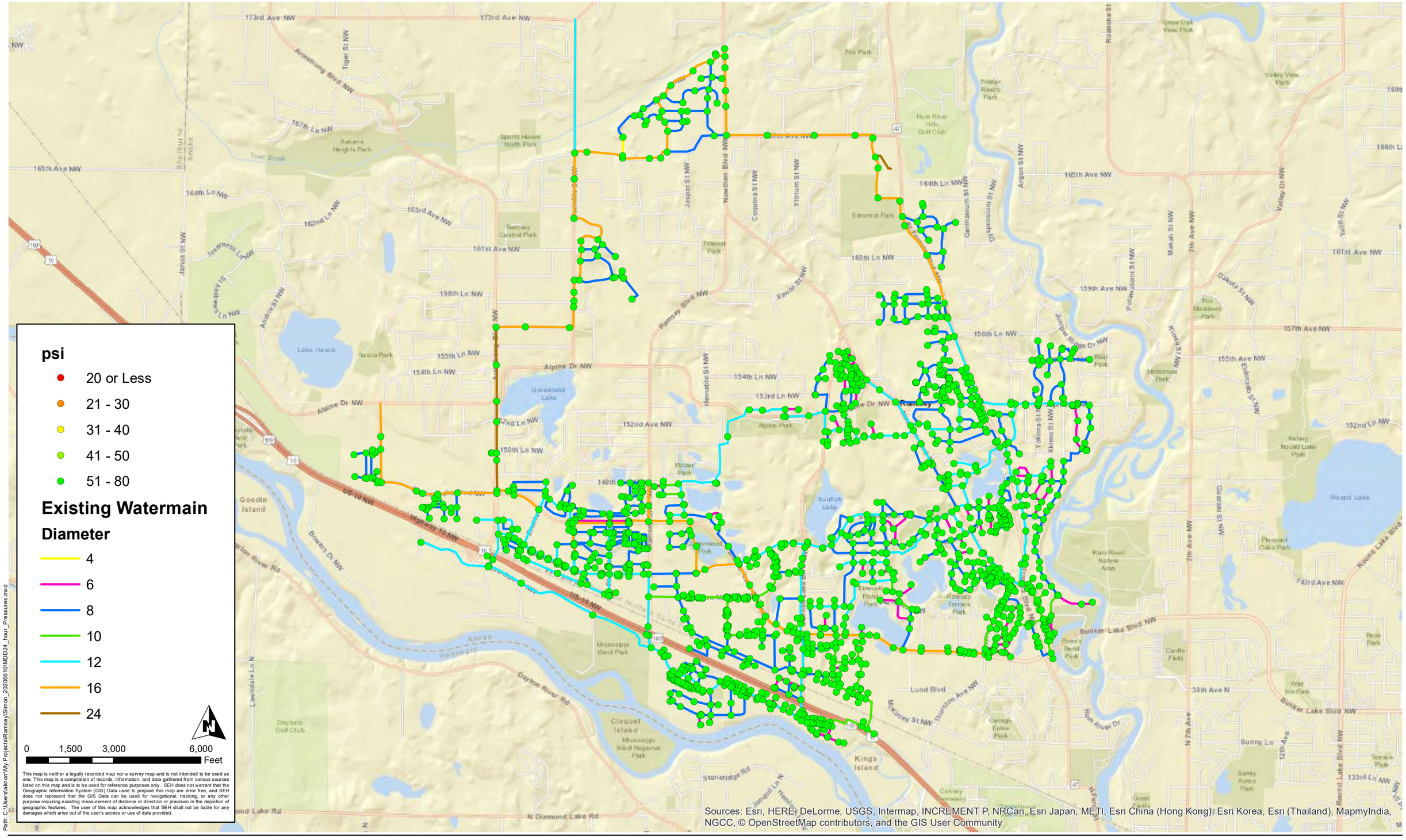
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EXISTING ADD 24 HOUR EPS MINIMUM PRESSURES
Ramsey, Minnesota

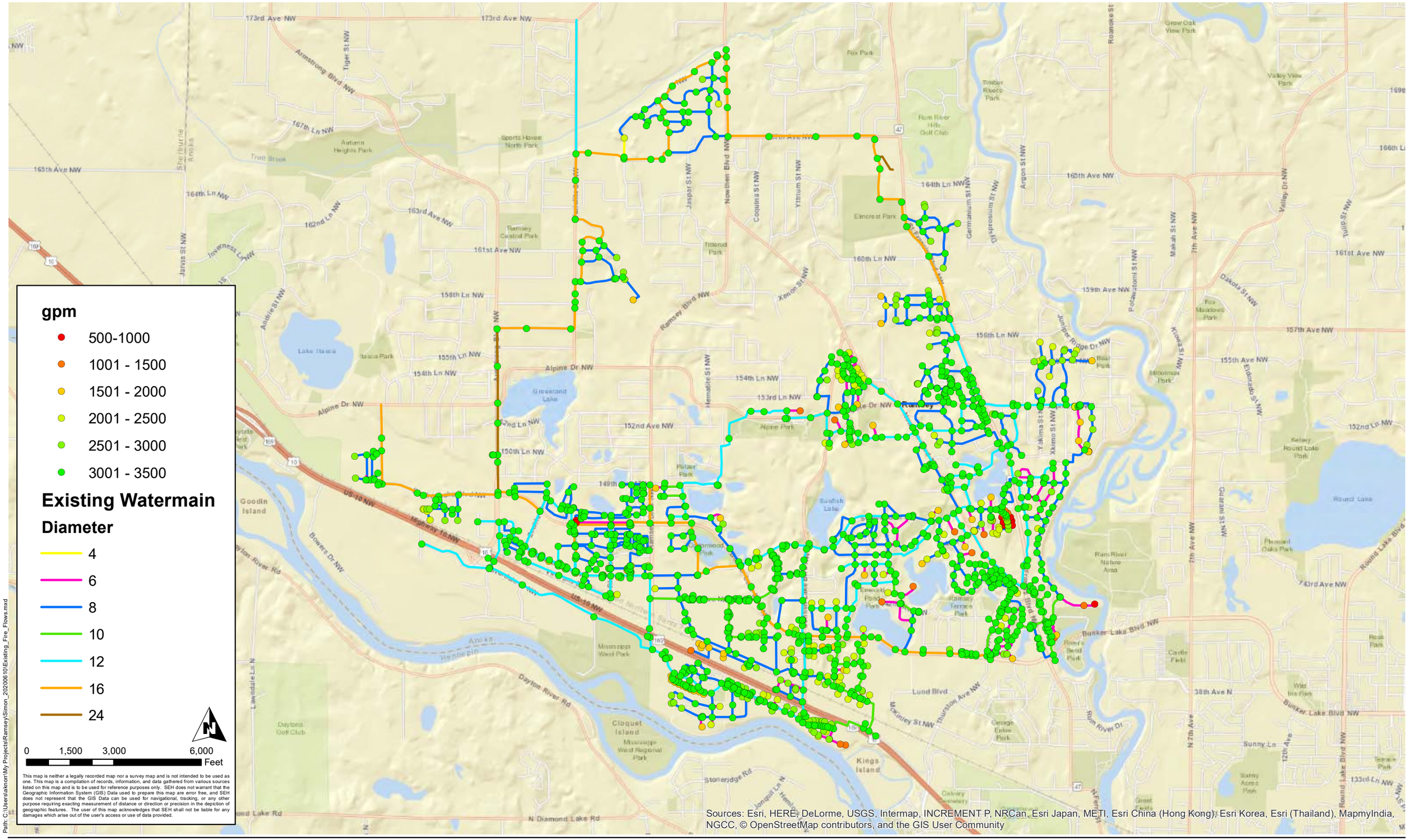
FIGURE 6
Minimum Pressures



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EXISTING MDD 24 HOUR EPS MINIMUM PRESSURES
Ramsey, Minnesota

FIGURE 7
Minimum Pressures



Project Number: RAMSY 154354
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EXISTING AVAILABLE FIRE FLOWS
Ramsey, Minnesota

FIGURE 8
Available Fire Flows

FIGURE 9

Existing System with Treatment Plant ADD 24-Hour Simulation

High Service Pump and Tower Operation

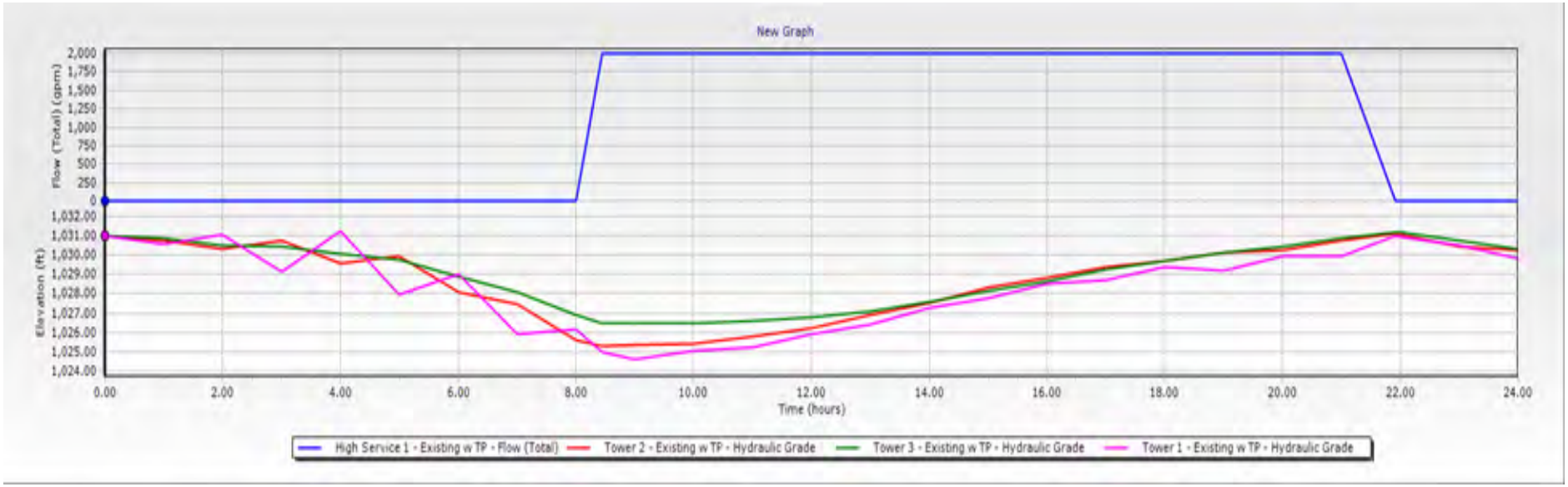
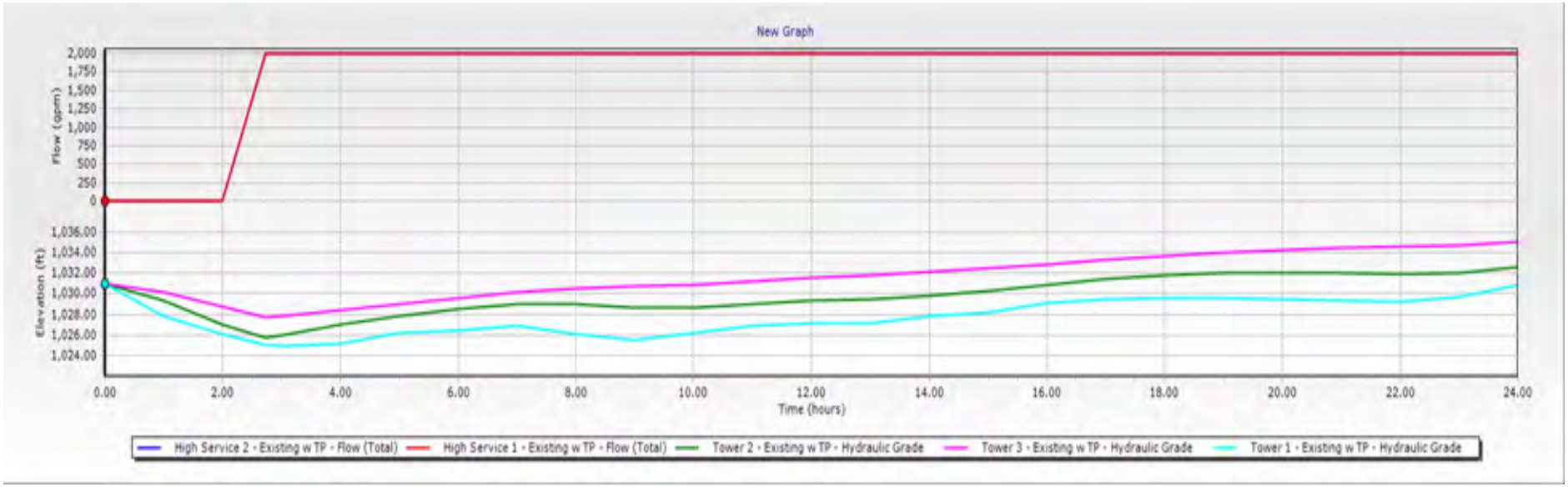
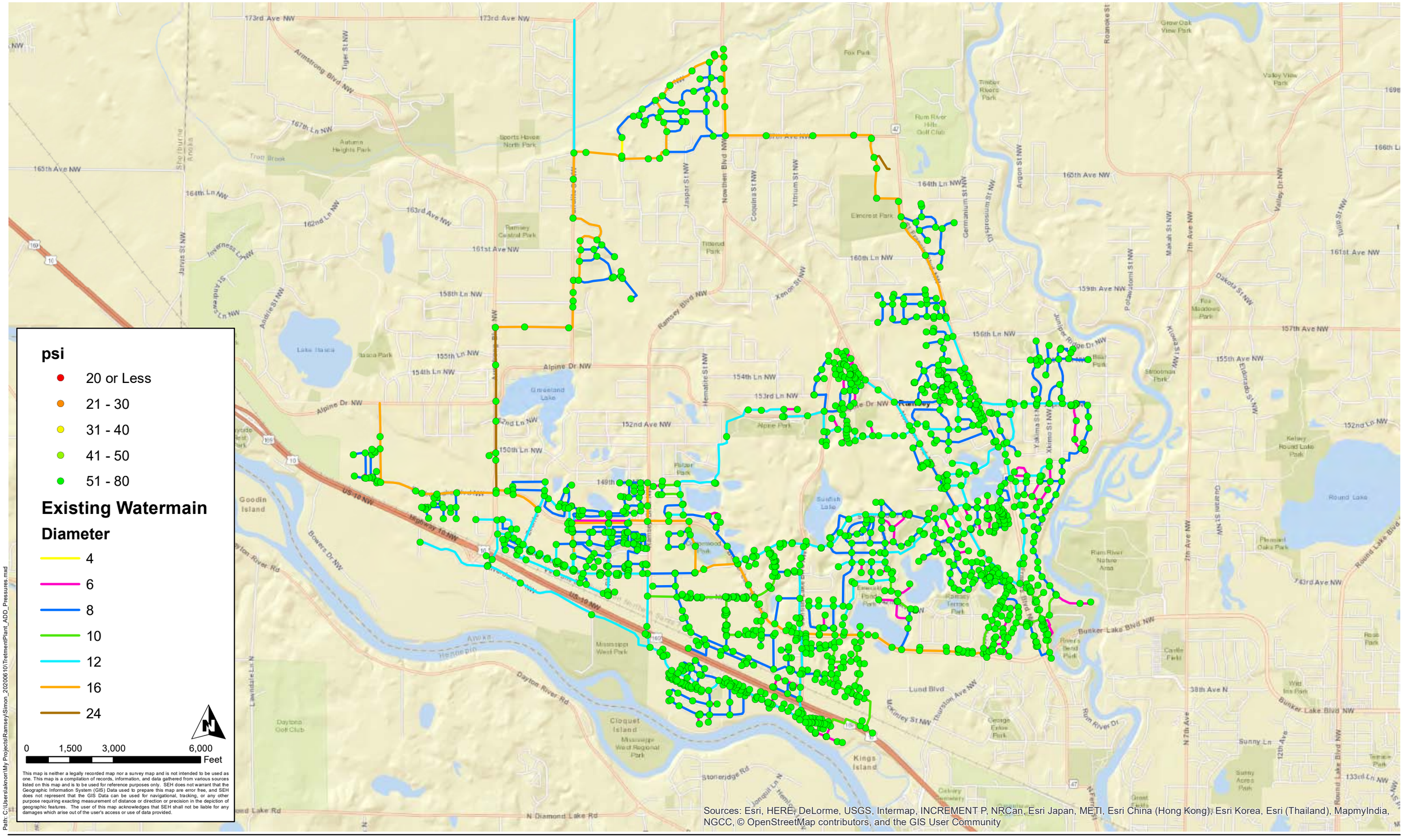


FIGURE 10

Existing System with Treatment Plan MDD 24-Hour Simulation

High Service Pump and Tower Operation

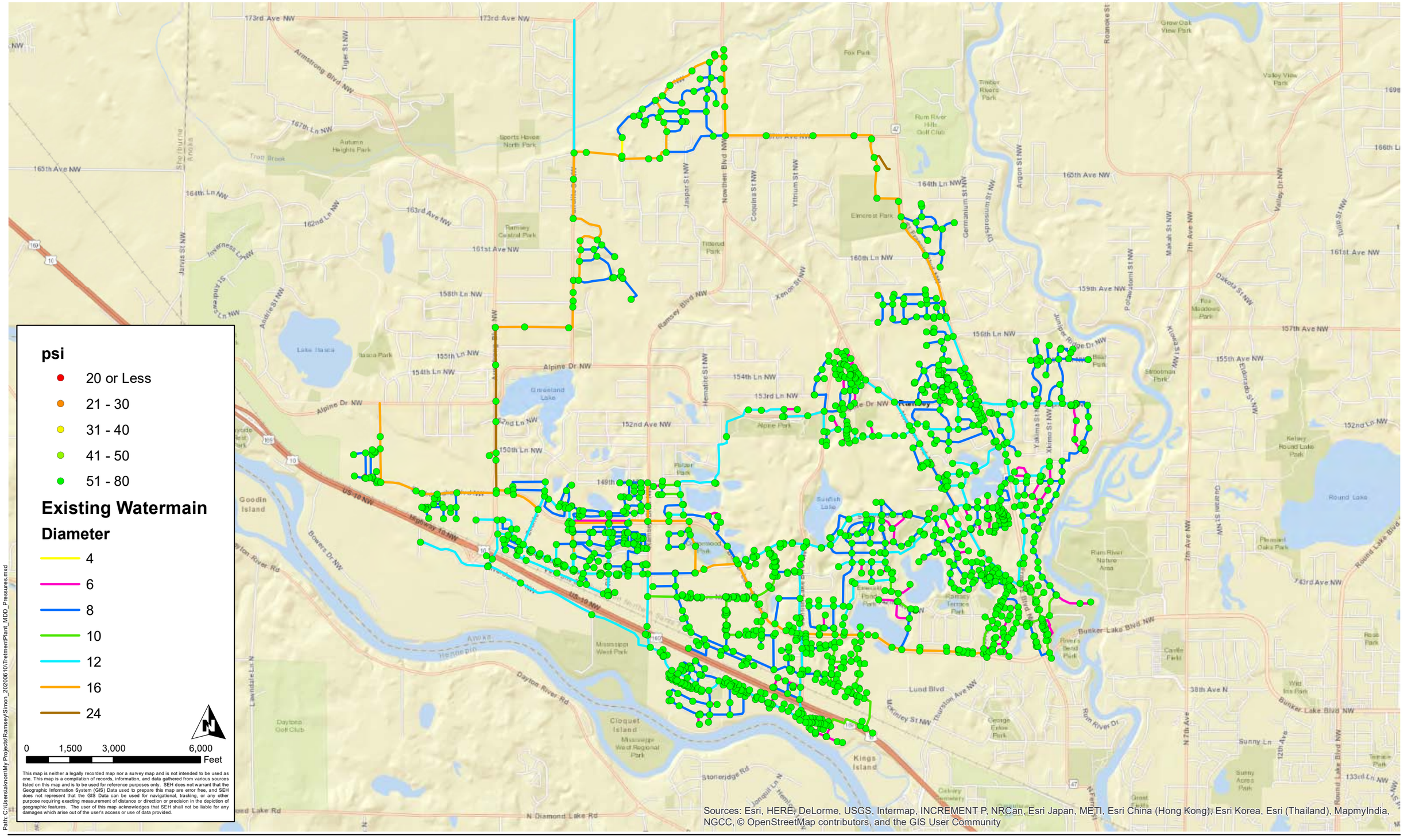




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TREATMENT PLANT WITH EXISTING ADD 24 HOUR EPS MINIMUM PRESSURES
Ramsey, Minnesota

FIGURE 11
Minimum Pressures



Project Number: RAMSY 154354
Print Date: Print Date: 3/4/2021

TREATMENT PLANT WITH EXISTING MDD 24 HOUR EPS MINIMUM PRESSURES
Ramsey, Minnesota

FIGURE 12
Minimum Pressures

FIGURE 13

2040 System ADD 24-Hour Simulation

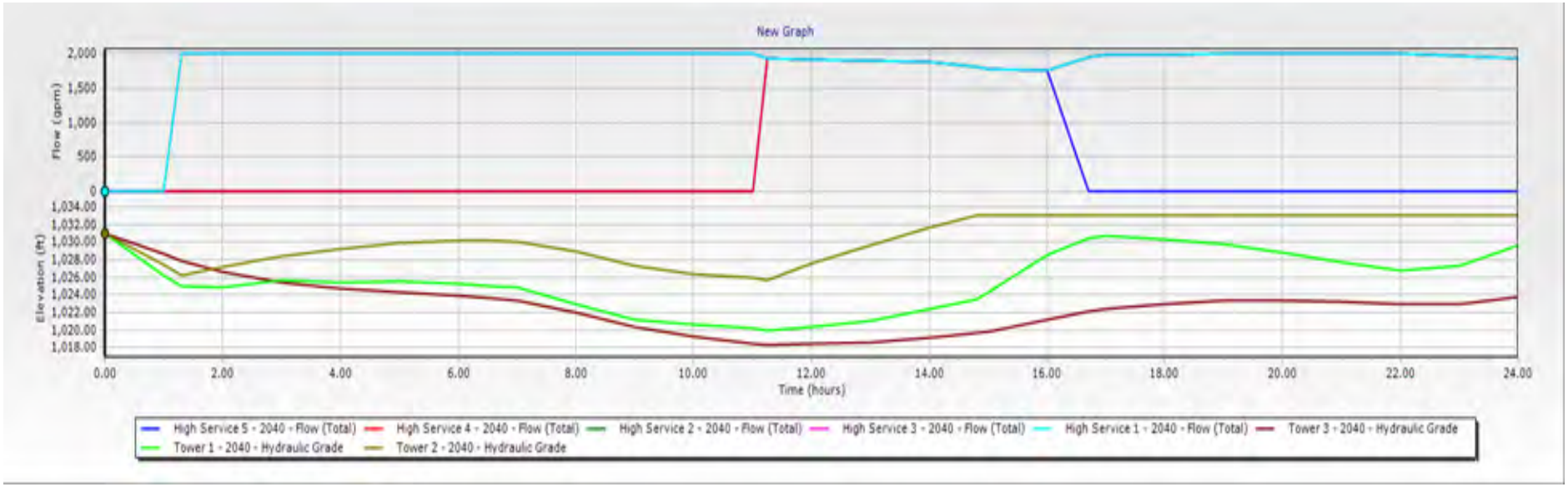
High Service Pump and Tower Operation



FIGURE 14

2040 System MDD 24-Hour Simulation

High Service Pump and Tower Operation



psi

- 20 or Less
- 21 - 30
- 31 - 40
- 41 - 50
- 51 - 80

2040 Watermain

Diameter

- 4
- 6
- 8
- 10
- 12
- 16
- 24

0 1,500 3,000 6,000 Feet

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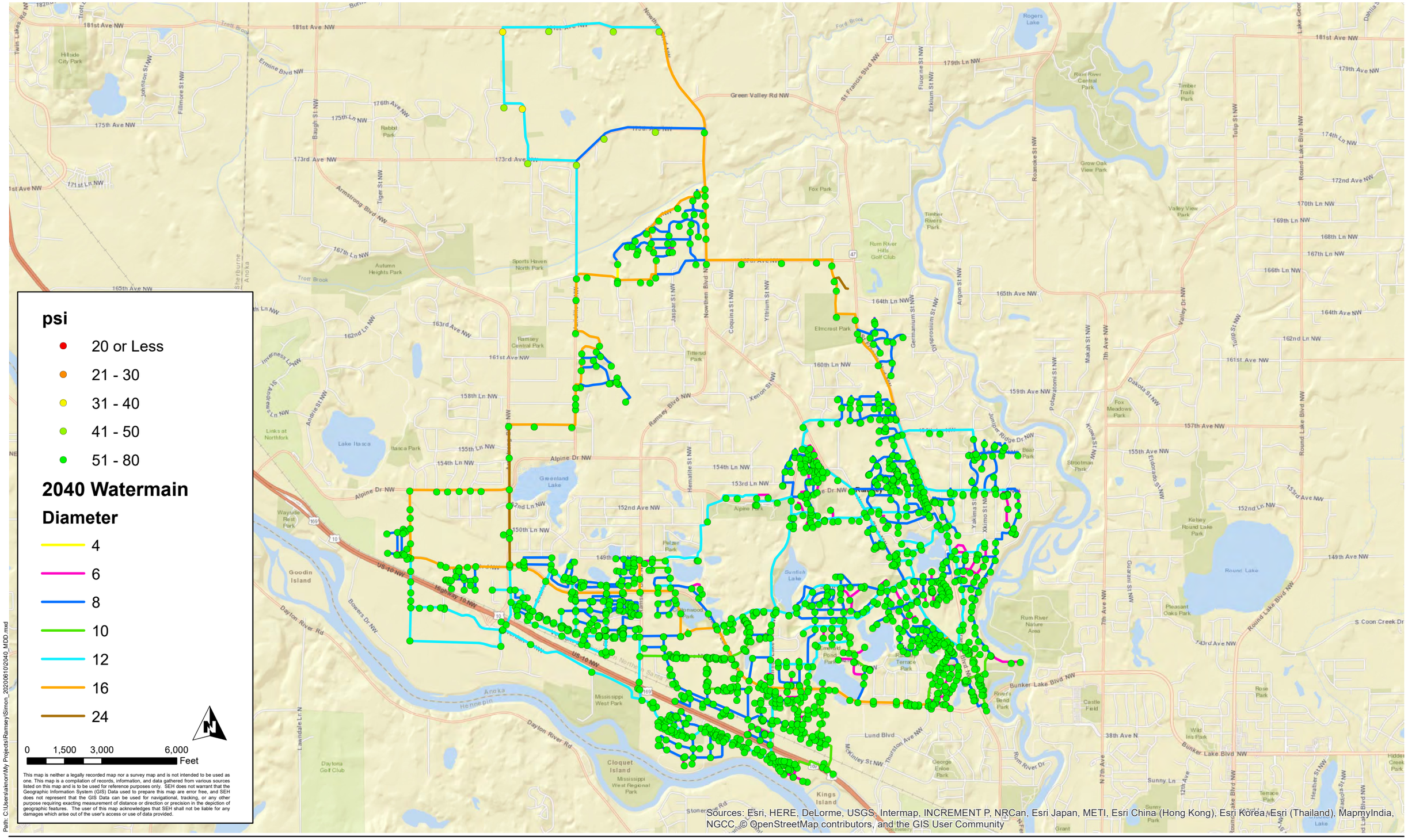
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2040 ADD 24 HOUR EPS MINIMUM PRESSURES
Ramsey, Minnesota

FIGURE 15
Minimum Pressures



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Project Number: RAMSY 154354
Print Date: Print Date: 6/15/2020

2040 MDD 24 HOUR EPS MINIMUM PRESSURES
Ramsey, Minnesota

FIGURE 16
Minimum Pressures

Appendix C

CCL

CCL 4

Contaminant	Contaminant Type
Adenovirus	Virus
Caliciviruses	Virus (includes Norovirus)
Campylobacter jejuni	Bacteria
Enterovirus	Viruses including polioviruses, coxsackieviruses and echoviruses
Escherichia coli (0157)	Bacteria
Helicobacter pylori	Bacteria
Hepatitis A virus	Virus
Legionella pneumophila	Bacteria
Mycobacterium avium	Bacteria
Naegleria fowleri	Protozoan
Salmonella enterica	Bacteria
Shigella sonnei	Bacteria
1,1-Dichloroethane	It is an industrial solvent and an intermediate in the synthesis of other compounds.
1,1,1,2-Tetrachloroethane	It is an industrial solvent and used in the synthesis of other chlorinated compounds.
1,2,3-Trichloropropane	It is an industrial solvent, cleaning and degreasing agent as well as an intermediate in the synthesis of the other
1,3-Butadiene	It is used in the production of rubber and plastics.
1,4-Dioxane	It is used as a solvent for cellulose formulations, resins, oils, waxes and other organic substances. It is also used in wood pulping, textile processing, degreasing, in lacquers, paints, varnishes, and stains; and in paint and varnish removers.
17alpha-estradiol	It is an estrogenic hormone found in some pharmaceuticals.
1-Butanol	It is a solvent and used in production of other chemicals. compounds. It is present in a number of commercial products such as perfumes.
2-Methoxyethanol	It is used in a number of consumer products, such as synthetic cosmetics, perfumes, fragrances, hair preparations, and skin lotions.
2-Propen-1-ol	It is used in the production of other chemicals.
3-Hydroxycarbofuran	It is a pesticide degradate, the parent, carbofuran, is used as an insecticide.
4,4'-Methylenedianiline	It is used in the production of polyurethanes foams, glues, rubber and spandex fiber.
Acephate	It is an insecticide.
Acetaldehyde	It is a disinfection byproduct from ozonation; it is used in the production of other chemicals.
Acetamide	It is used as a solvent and plasticizer.
Acetochlor	It is an herbicide for weed control on agricultural crops.
Acetochlor ethanesulfonic acid (ESA)	Acetochlor ESA is an environmental degradate of acetochlor.
Acetochlor oxanilic acid (OA)	Acetochlor OA is an environmental degradate of acetochlor.

Acrolein	It is used as an aquatic herbicide, rodenticide and industrial chemical.
Alachlor ethanesulfonic acid (ESA)	Alachlor ESA is an environmental degradate of the pesticide alachlor (an herbicide for weed control on agricultural crops).
Alachlor oxanilic acid (OA)	Alachlor OA is an environmental degradate of alachlor.
alpha-Hexachlorocyclohexane	It is a component of benzene hexachloride (BHC) and was formerly used as an insecticide.
Aniline	It is used as an industrial chemical, as a solvent, in the synthesis of explosives, rubber products and in isocyanates.
Bensulide	It is an herbicide.
Benzyl chloride	It is used in the production of other substances, such as plastics, dyes, lubricants, gasoline and pharmaceuticals.
Butylated hydroxyanisole	It is used as a food additive (antioxidant).
Captan	It is a fungicide.
Chlorate	Chlorate compounds are used in agriculture as defoliants or desiccants and may occur in drinking water because of use of disinfectants such as chlorine dioxide and hypochlorites.
Chloromethane (Methyl chloride)	It is used as a foaming agent and in the production of other substances.
Clethodim	It is an herbicide.
Cobalt	It is a naturally-occurring element and was formerly used as cobaltous chloride in medicines and as a germicide. It is a part of the vitamin B12 molecule
Cumene hydroperoxide	It is used as a catalyst is used in the production of other substances.
Cyanotoxins	Toxins naturally produced and released by cyanobacteria ("blue-green algae"). The group of cyanotoxins includes, but is not limited to: anatoxin-a, cylindrospermopsin, microcystins, and saxitoxin.
Dicrotophos	It is an insecticide.
Dimethipin	It is an herbicide and plant growth regulator.
Diuron	It is an herbicide.
Equilenin	It is an estrogenic hormone used in hormone replacement therapy.
Equilin	It is an estrogenic hormone and is used in hormone replacement therapy.
Erythromycin	It is used an antibiotic.
Estradiol (17-beta estradiol)	It is an isomer of estradiol found in some pharmaceuticals.
Estriol	It is a weak estrogenic hormone used in veterinary pharmaceuticals.
Estrone	It is a precursor of estradiol used in veterinary and human pharmaceuticals.
Ethinyl estradiol (17-alpha ethynyl estradiol)	It is an estrogenic hormone and is used in veterinary and human oral contraceptives.
Ethoprop	It is an insecticide.
Ethylene glycol	It is used as antifreeze, in textile manufacturing and is a cancelled pesticide.

Ethylene oxide	It is a fungicidal and insecticidal fumigant.
Ethylene thiourea	It is used in the production of other substances, such as for vulcanizing polychloroprene (neoprene) and polyacrylate rubbers and is a metabolite of some fungicides.
Formaldehyde	It is an ozoneation disinfection byproduct, can occur naturally and has been used as a fungicide.
Germanium	It is a naturally-occurring element and is commonly found as germanium dioxide in phosphors, transistors and diodes, and in electroplating. In some cases it has been sold as a dietary supplement.
HCFC-22	It is used as a refrigerant, as a low-temperature solvent, and in fluorocarbon resins, especially in tetrafluoroethylene polymers.
Halon 1011 (bromochloromethane)	It is used as a fire-extinguishing fluid and to suppress explosions, as well as a solvent in the manufacturing of some pesticides. May also occur as a disinfection by-product in drinking water.
Hexane	It is a component of gasoline and used as a solvent.
Hydrazine	It is used as an ingredient in the production of other substances, such as rocket propellants. It is also used in the production of plastics.
Manganese	It is a naturally-occurring element used in a variety of applications including use in steel production to improve hardness, stiffness and strength. It is an essential nutrient found in vitamin/mineral supplement and in fortified foods.
Mestranol	It is a precursor to ethinylestradiol used in veterinary and human pharmaceuticals.
Methamidophos	It is an insecticide.
Methanol	It is used as an industrial solvent, a gasoline additive and as an anti-freeze ingredient.
Methyl bromide (bromomethane)	It has been used as a fumigant and fungicide.
Methyl tert-butyl ether (MTBE)	It is used as an octane booster in gasoline, in the manufacturing of isobutene and as an extraction solvent.
Metolachlor	It is an herbicide for weed control on agricultural crops.
Metolachlor ethanesulfonic acid (ESA)	Metolachlor ESA is an environmental degradate of metolachlor.
Metolachlor oxanilic acid (OA)	Metolachlor OA is an environmental degradate of
Molybdenum	It is a naturally-occurring element and is commonly found as molybdenum trioxide. It is used as a steel alloy. It is an essential dietary nutrient found in foods and nutritional supplements.
Nitrobenzene	It is used in the production of aniline, and also as a solvent in the manufacturing of paints, shoe polishes, floor polishes, metal polishes, explosives, dyes, pesticides and drugs (such as acetaminophen).,

Nitroglycerin	It is used in the production of explosives, and in rocket propellants. It is also a pharmaceutical for the treatment of angina.
N-Methyl-2-pyrrolidone	It is a solvent in the chemical industry, and is used in the formulation of pharmaceuticals for oral and dermal delivery.
N-nitrosodiethylamine (NDEA)	It is a nitrosamine used as an additive in gasoline and in lubricants, as an antioxidant and as a stabilizer in plastics. It is formed in cured foods and during high temperature cooking of meats and fish, and may be a disinfection byproduct.
N-nitrosodimethylamine (NDMA)	It was formerly used in the production of rocket fuels, anti-oxidants and softeners for copolymers. It is formed in cured foods and during high temperature cooking. It may be a leachate from rubber gaskets and fittings and may form as a disinfection byproduct.
N-nitroso-di-n-propylamine (NDPA)	It is formed in cured foods and during high temperature cooking of meats and fish and may be a disinfection byproduct. It is a contaminant in dinitrofluralin herbicides.
N-Nitrosodiphenylamine	It is used in the vulcanization of rubber and as an inhibitor of polymerization in the production of polystyrene. It may be a disinfection byproduct.
N-nitrosopyrrolidine (NPYR)	It is used in rubber production. It is formed in cured foods and during high temperature cooking of meats and fish and may be a disinfection byproduct.
Nonylphenol2	The main use of nonylphenol is in the manufacture of nonylphenol ethoxylates, which have been used in a wide range of industrial applications and consumer products including laundry detergents, cleaners, degreasers, paints and coatings and other uses. Several other CASRNs are associated with nonyphenol due to varying chemical structures including: 104-40-5, 84852-15-3, 91672-41-2, and 139-84-4.
Norethindrone (19-Norethisterone)	Norethindrone is a synthetic hormone used in oral contraceptives and for hormone replacement therapy.
n-Propylbenzene	It is a constituent of asphalt and naptha and used in the manufacture of methyl styrene. It is a solvent for printing and dying of textiles.
o-Toluidine	It is used in the production of dyes, rubber, pharmaceuticals and pesticides.
Oxirane, methyl	It is an industrial chemical used in the production of other substances. It is a registered pesticide.
Oxydemeton-methyl	It is an insecticide.
Oxyfluorfen	It is an herbicide.
Perfluorooctanesulfonic acid (PFOS)	PFOS has been used to make carpets, leathers, textiles, fabrics for furniture, paper packaging, and other materials that are resistant to water, grease, or stains. It is also used in firefighting foams at airfields. Many of these uses have been phased out by its primary U.S. manufacturer; however, there are still some ongoing uses.

Perfluorooctanoic acid (PFOA)	PFOA has been used to make carpets, leathers, textiles, fabrics for furniture, paper packaging, and other materials that are resistant to water, grease, or stains. It is also used in firefighting foams at airfields. Many of these uses are being phased out by U.S. manufacturers; however, there are still some ongoing uses.
Permethrin	It is an insecticide.
Profenofos	It is an insecticide and an acaricide.
Quinoline	It is a component of coal tars and used in the production of other substances, and as a pharmaceutical (anti-malarial).
RDX (Hexahydro-1,3,5-trinitro-1,3,5-triazine)	It is an explosive.
sec-Butylbenzene	It is used as a solvent for coatings in organic synthesis, as a plasticizer and in surfactants.
Tebuconazole	It is a fungicide.
Tebufenozide	It is insecticide.
Tellurium	It is a naturally-occurring element and is commonly used as sodium tellurite in bacteriology and medicine.
Thiodicarb	It is an insecticide.
Thiophanate-methyl	It is a fungicide.
Toluene diisocyanate	It is used in the manufacturing of plastics.
Tribufos	It is an insecticide and used as a cotton defoliant.
Triethylamine	It is used in the production of other substances, as a stabilizer in herbicides and pesticides, in consumer products, in photographic chemicals and in carpet cleaners.
Triphenyltin hydroxide (TPTH)	It is a pesticide.
Urethane	It is a paint and coating ingredient (polyurethanes).
Vanadium	It is a naturally-occurring element. Vanadium pentoxide is a catalyst for the production of other substances catalyst. It is sometimes an ingredient in mineral supplements but is not classified as an essential nutrient
Vinclozolin	It is a fungicide.
Ziram	It is a fungicide.

Appendix D

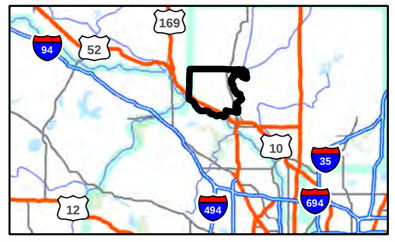
Groundwater Modeling Memo

Legend

- Municipal Well
- Municipal Watermain
- Municipality Boundary

0 1,500 3,000 6,000

Feet



Distribution System

Source Water Analysis
City of Ramsey
Minnesota

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SEH

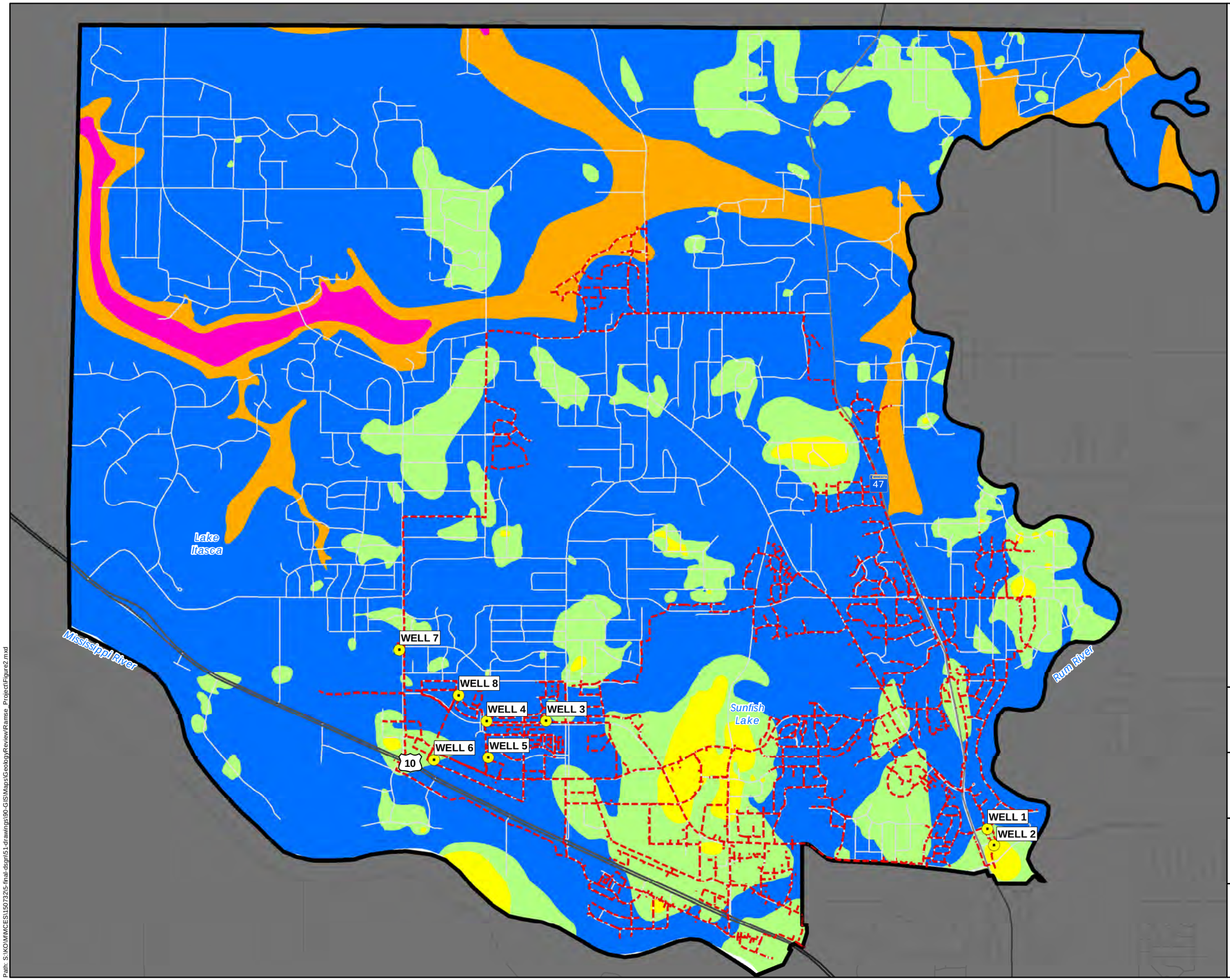
Project: MCES 150732

Print Date: 11/7/2019

Map by: Msherrill
Projection: UTM Zone 15N
Source: ESRI, SEH Digi MnDOT, Minnesota Geologic Survey (MGS)

Figure 1

Path: S:\KO\MMCES\150732\5-final-dsgn\51-drawings\90-GIS\Maps\Geobyb\Review\Ramsey_Project\Figure1.mxd



Legend

- Municipal Well
- Municipal Watermain
- Municipality Boundary

Anoka County Bedrock Geology

- Jordan Sandstone, Up. Camb.
- St. Lawrence Formation, Up. Camb.
- Tunnel City group,Up. Camb.
- Wonewoc Sandstone, Up. Camb.
- Eau Claire Formation, Mid. to Up. Camb.

0 1,500 3,000 6,000 Feet

Bedrock Geology

Source Water Analysis
City of Ramsey
Minnesota

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SEH

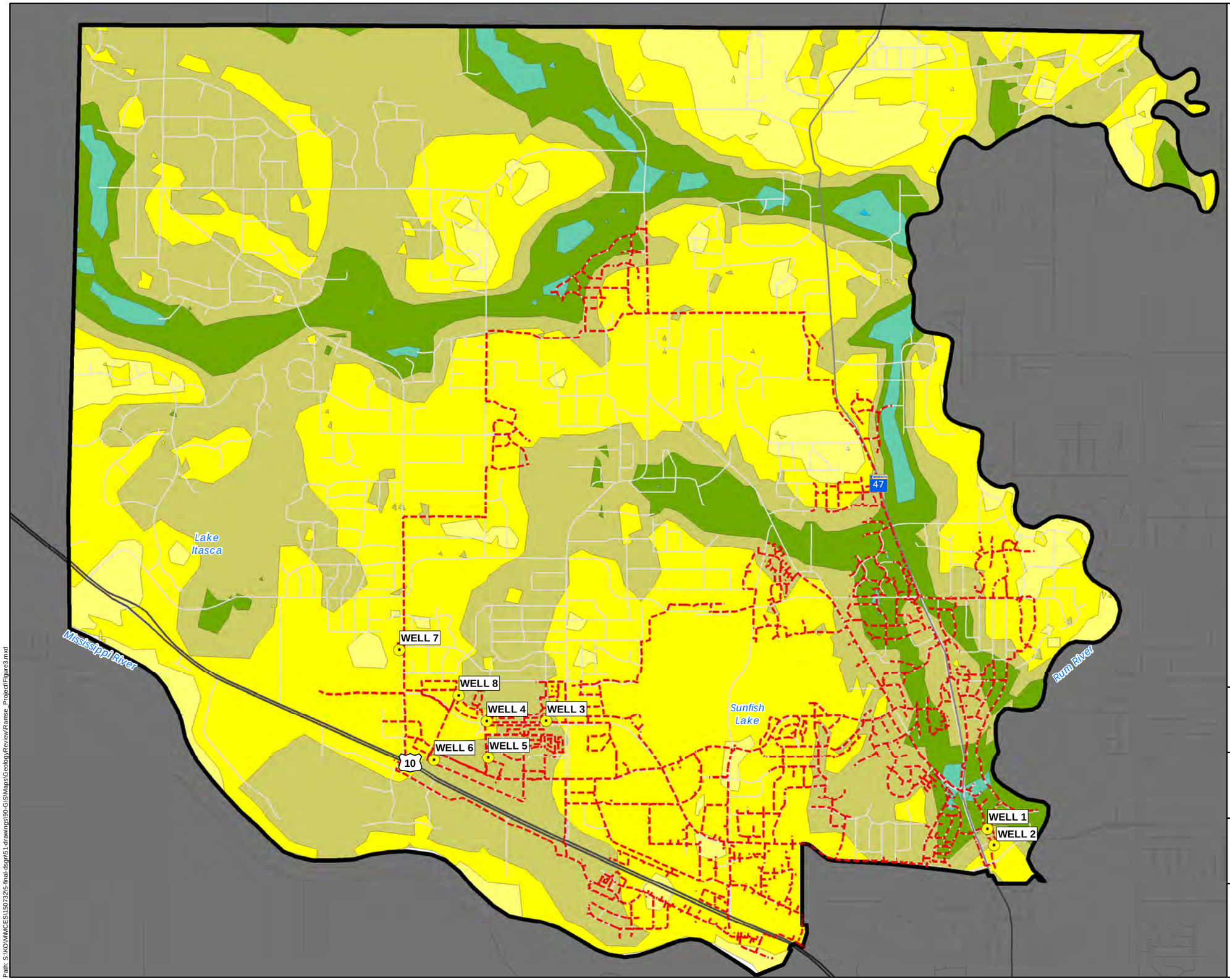
Project: MCES 150732

Print Date: 11/7/2019

Map by: Msherrill
Projection: UTM Zone 15N
Source: ESRI, SEH Digi MnDOT, Minnesota Geologic Survey (MGS)

Figure 2

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Legend

- Municipal Well
- Municipal Watermain
- Municipality Boundary

Anoka County Depth to Bedrock (ft)

Depth to bedrock (ft.)

- 1-50
- 51-100
- 101-150
- 151-200
- 201-250
- 251-300
- 301-350
- 351-400
- 401-450
- 451-500

0 1,500 3,000 6,000 Feet



Depth to Bedrock

Source Water Analysis
City of Ramsey
Minnesota

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SEH

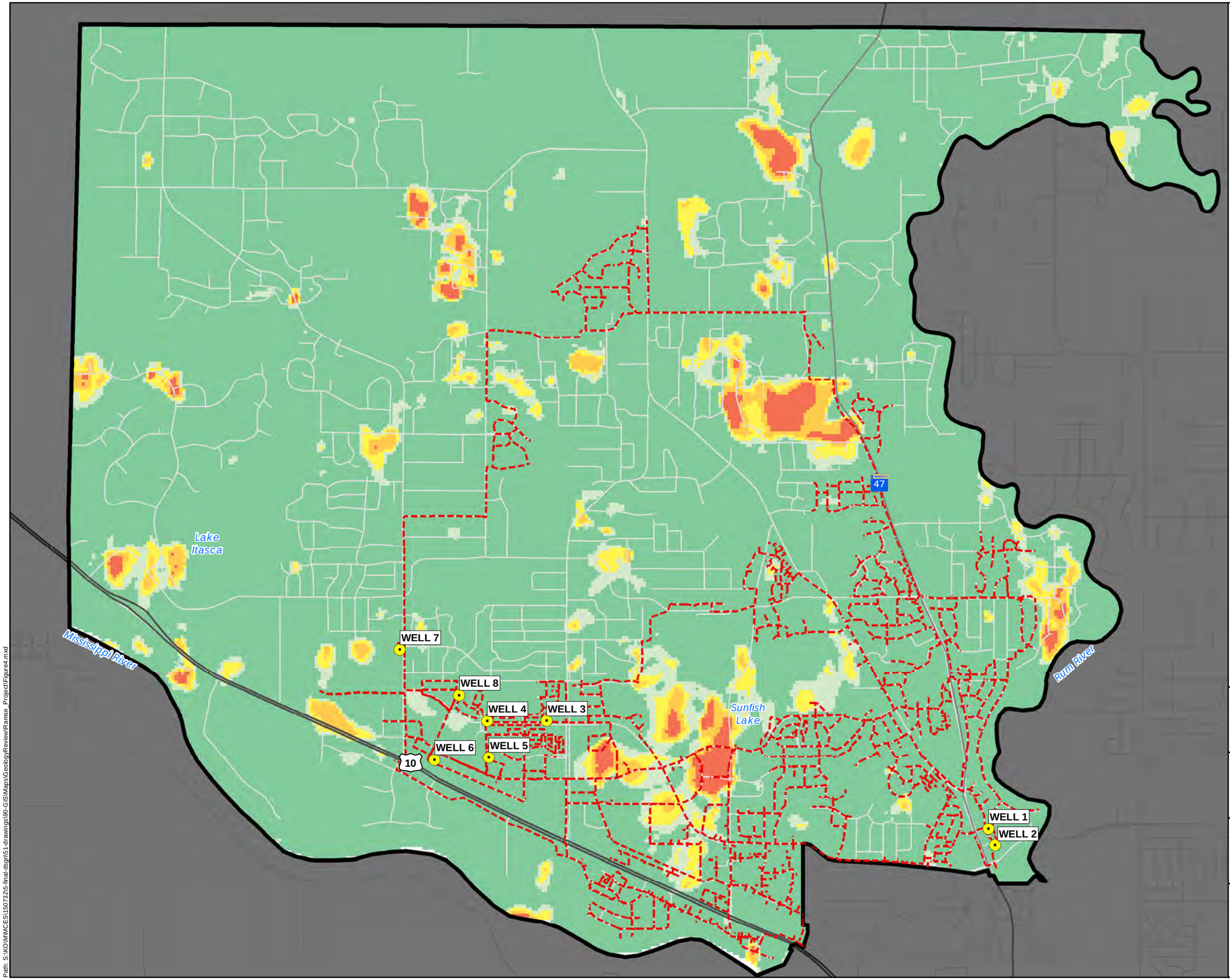
Project: MCES 150732

Print Date: 11/7/2019

Map by: Msherrill
Projection: UTM Zone 15N
Source: ESRI, SEH Digi MnDOT, Minnesota Geologic Survey (MGS)

Figure 3

Path: S:\KOM\MCES\150732\5-final-dsgn\51-drawings\90-GIS\Maps\GeobyReview\Ramse_Project\Figure3.mxd

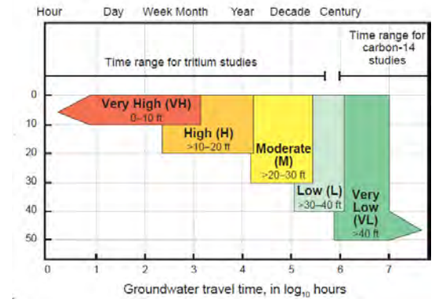


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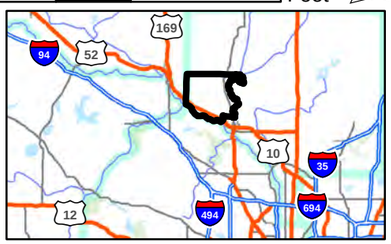
- Municipal Well
- Municipal Watermain
- Municipality Boundary

Pollution Sensitivity (Top of Bedrock)

- Very High
- High
- Moderate
- Low
- Very Low



0 1,500 3,000 6,000 Feet



Pollution Sensitivity

Source Water Analysis
City of Ramsey
Minnesota

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SEH

Project: MCES 150732

Print Date: 11/7/2019

Map by: Msherrill
Projection: UTM Zone 15N
Source: ESRI, SEH Digi MnDOT, Minnesota Geologic Survey (MGS)

Figure 4

Path: S:\KOI\MMCES\150732\5-final-dsgn\51-drawings\90-GIS\Maps\Geology\Review\Ramsey_Project\Figure4.mxd

CTCG
CSLT
CTCG
CTCG
CTCG
CTCG
CTCG
47
Lake Itasca
Mississippi River
WELL 7
CTCG
WELL 8
WELL 4
WELL 3
WELL 6
WELL 5
10
Sunfish Lake
CTCG
Rum River
WELL 1
WELL 2

Legend

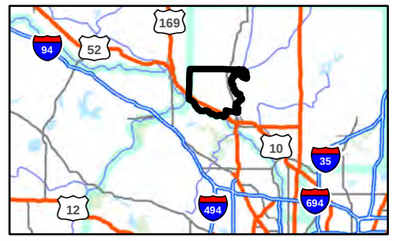
- Municipal Well
- Municipal Watermain
- Municipality Boundary

Tritium

Bedrock Water Age Dating Method

- recent
- mixed
- vintage
- not sampled

0 1,500 3,000 6,000
Feet



Tritium Data

Source Water Analysis
City of Ramsey
Minnesota

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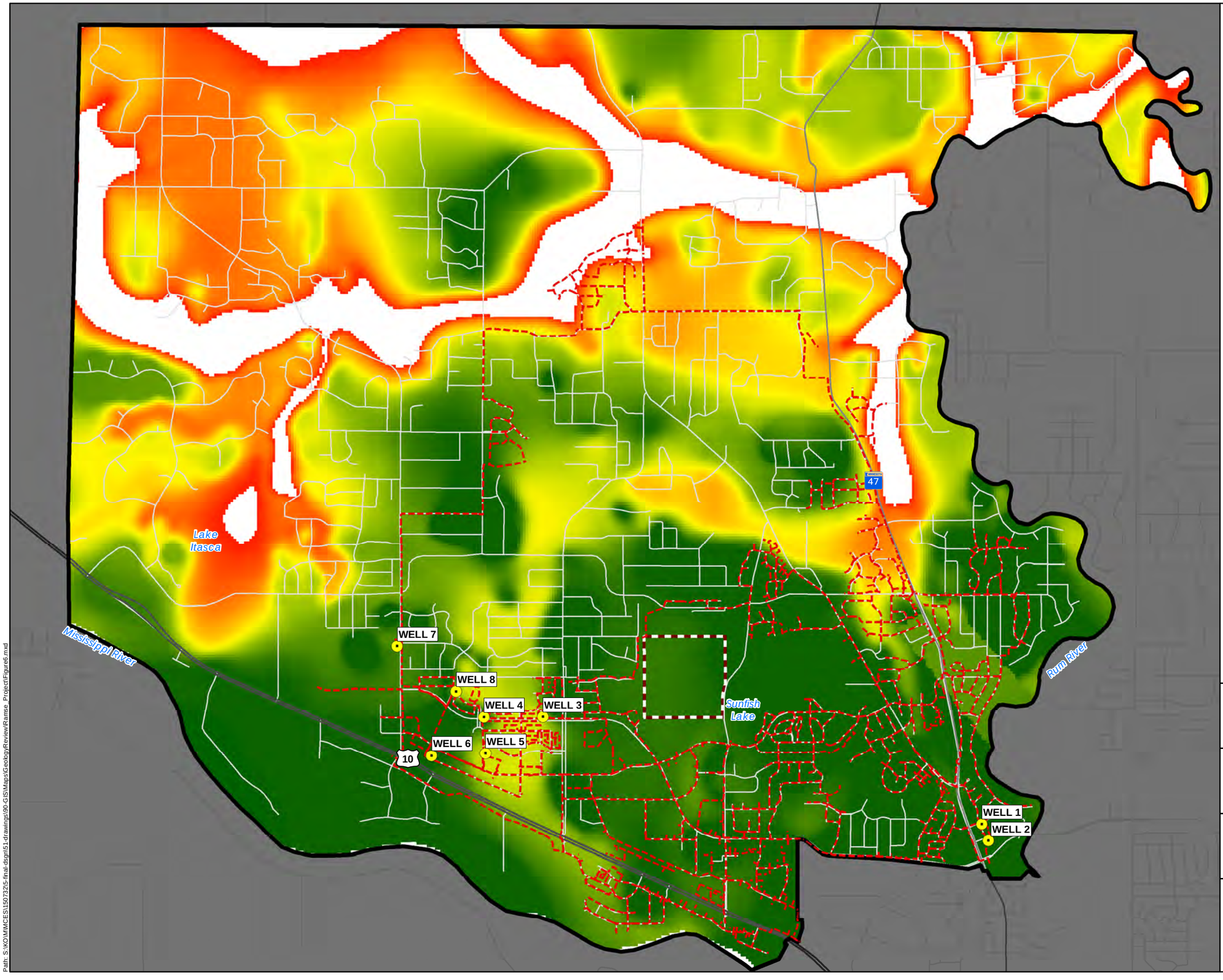
SEH

Project: MCES 150732
Print Date: 11/7/2019

Map by: Msherrill
Projection: UTM Zone 15N
Source: ESRI, SEH Digi MnDOT, Minnesota Geologic Survey (MGS)

Figure 5

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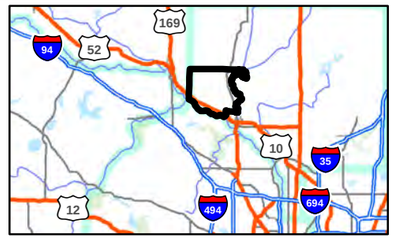
- Municipal Well
- Municipal Watermain
- Municipality Boundary
- Landfill Boundary

Tunnel City Thickness (Feet)

Value

- 158.106
- 142.296
- 126.486
- 110.676
- 94.866
- 79.0561
- 63.2461
- 47.4361
- 31.6261
- 15.8161
- 0.00610352

0 1,500 3,000 6,000 Feet



Tunnel City Thickness

Source Water Analysis
City of Ramsey
Minnesota

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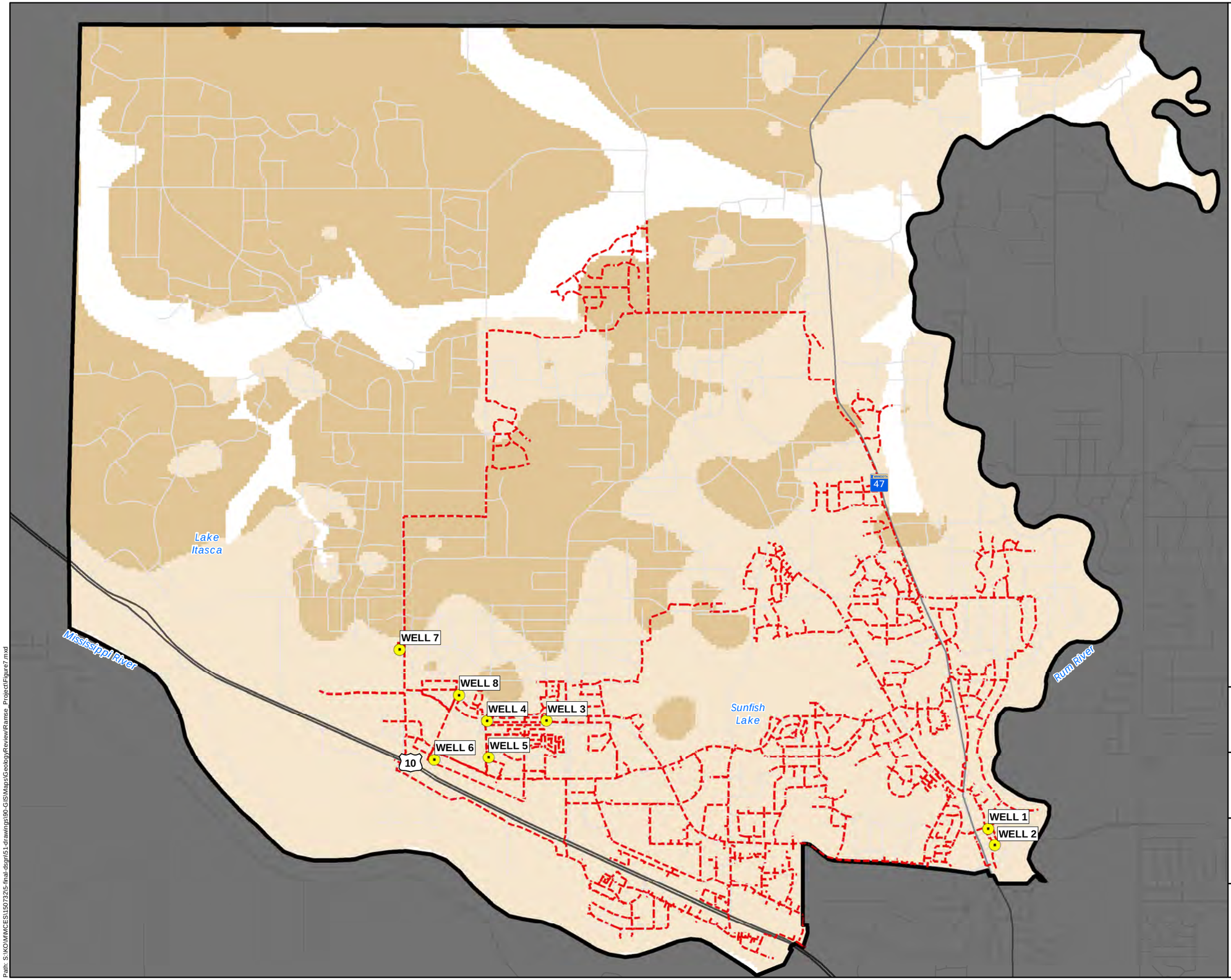
SEH

Project: MCES 150732
Print Date: 11/7/2019

Map by: Msherrill
Projection: UTM Zone 15N
Source: ESRI, SEH Digi MnDOT, Minnesota Geologic Survey (MGS)

Figure 6

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Legend

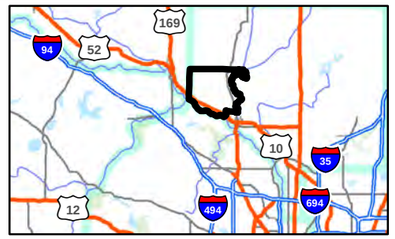
- Municipal Well
- Municipal Watermain
- Municipality Boundary

Potentiometric surface elevation

ELEVATION

- >820 to 860
- >860 to 900
- >900 to 940

0 1,500 3,000 6,000 Feet



Tunnel City Potentiometric Water Elevation

Source Water Analysis
City of Ramsey
Minnesota

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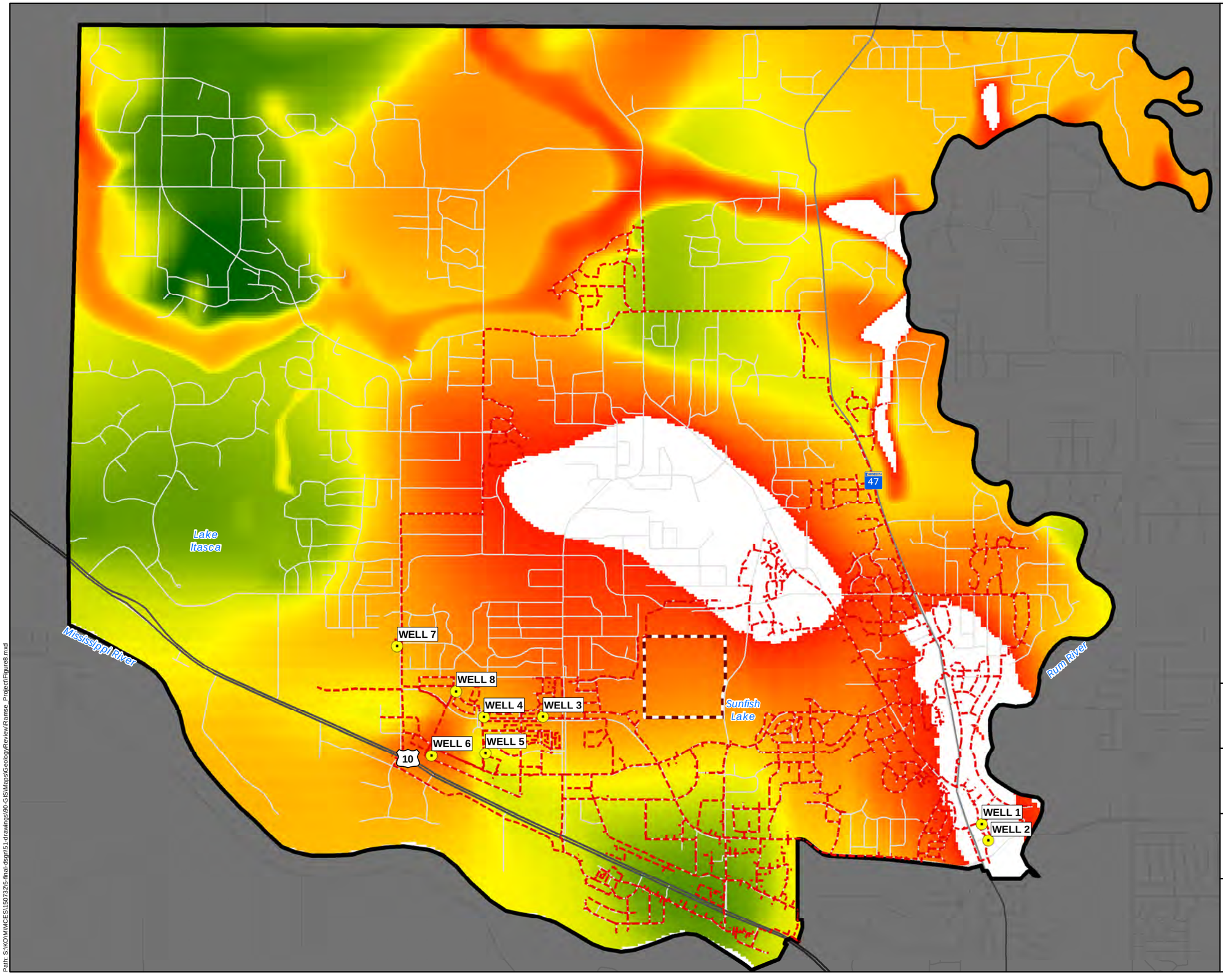
SEH

Project: MCES 150732
Print Date: 11/7/2019

Map by: Msherrill
Projection: UTM Zone 15N
Source: ESRI, SEH Digi MnDOT, Minnesota Geologic Survey (MGS)

Figure 7

Path: S:\KOM\MCES\150732\5-final-dsgn\51-drawings\90-GIS\Maps\GeobyrReview\Ramse - Project\Figure7.mxd



Legend

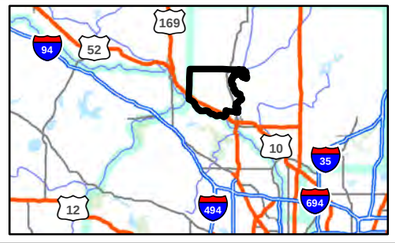
- Municipal Well
- Municipal Watermain
- Municipality Boundary
- Landfill Boundary

Wonewoc Thickness (feet)

Value

- 133.674
- 120.307
- 106.939
- 93.5718
- 80.2044
- 66.837
- 53.4696
- 40.1022
- 26.7348
- 13.3675
- 6.10352e-05

0 1,500 3,000 6,000 Feet



Wonewoc Thickness

Source Water Analysis
City of Ramsey
Minnesota

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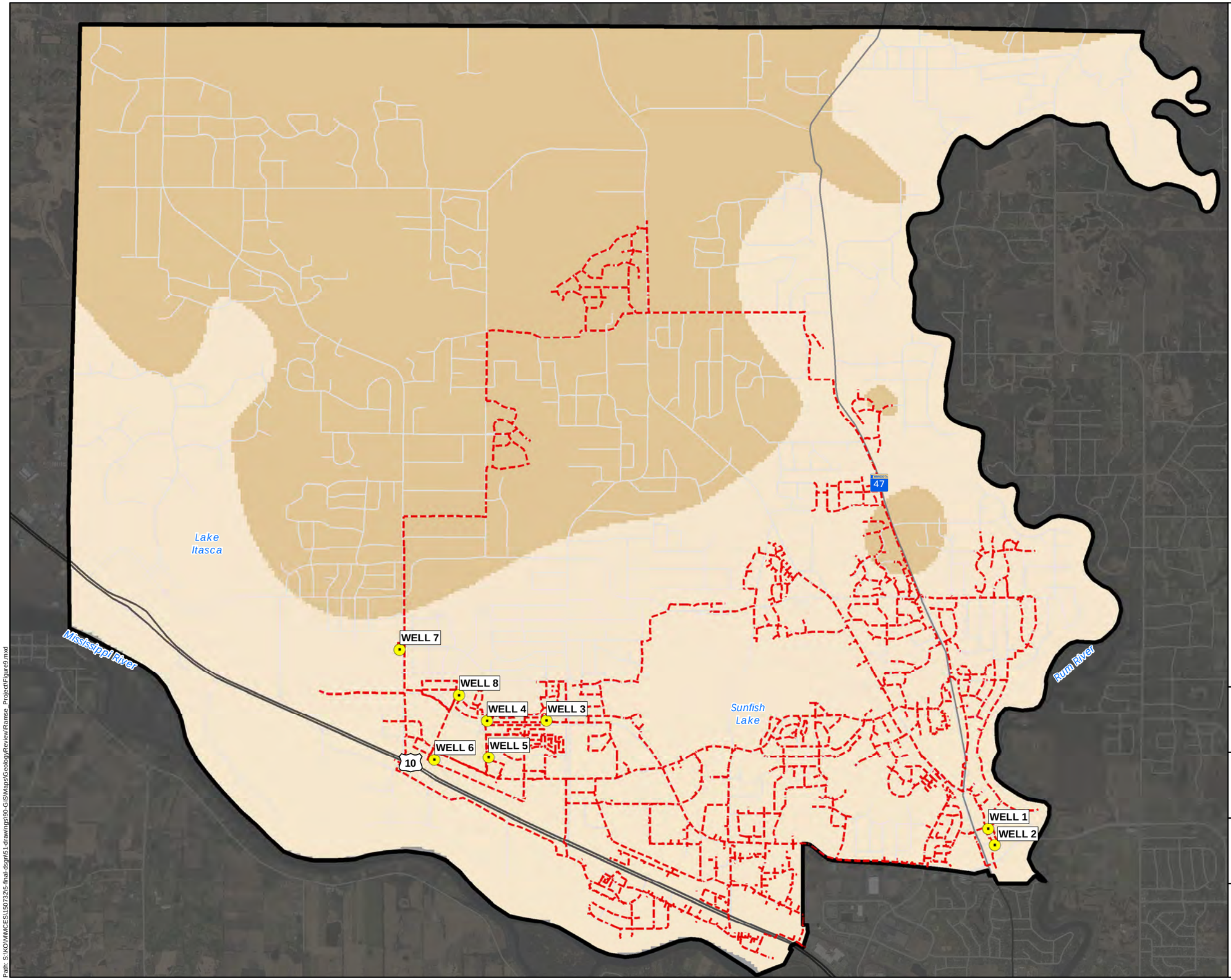
SEH

Project: MCES 150732
Print Date: 11/7/2019

Map by: Msherrill
Projection: UTM Zone 15N
Source: ESRI, SEH Digi MnDOT, Minnesota Geologic Survey (MGS)

Figure 8

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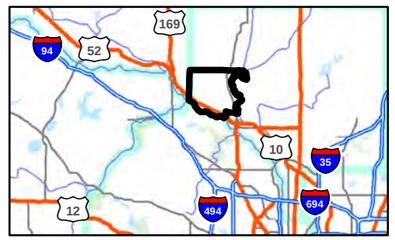
- Municipal Well
- Municipal Watermain
- Municipality Boundary

Potentiometric surface elevation

ELEVATION

- >820 to 860
- >860 to 900
- City of Ramsey Owned Parcel
- Anoka County Parcel Dataset

0 1,500 3,000 6,000 Feet



Wonewoc Potentiometric Surface Elevation

Source Water Analysis
City of Ramsey
Minnesota

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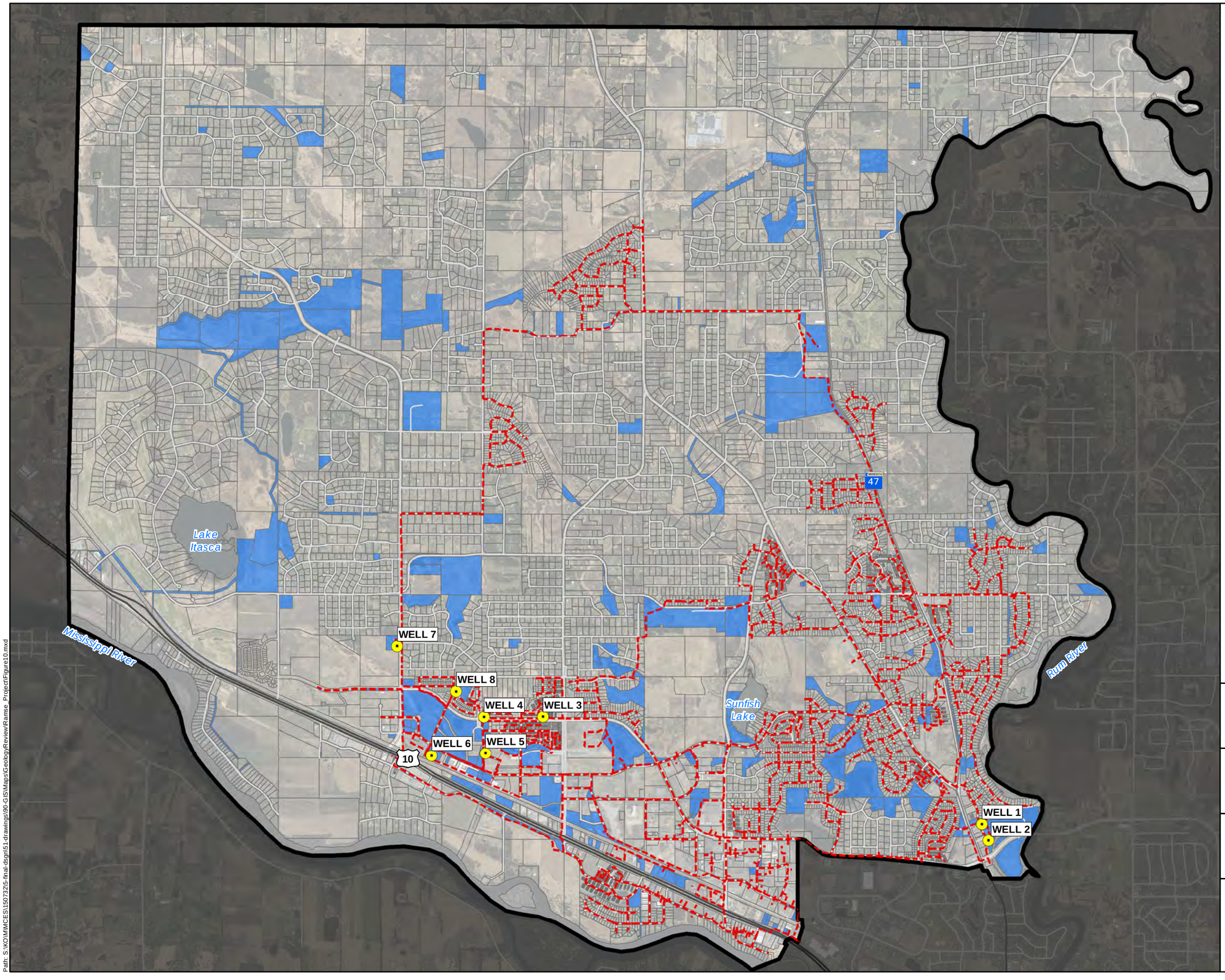
SEH

Project: MCES 150732
Print Date: 11/7/2019

Map by: Msherrill
Projection: UTM Zone 15N
Source: ESRI, SEH Digi MnDOT, Minnesota Geologic Survey (MGS)

Figure 9

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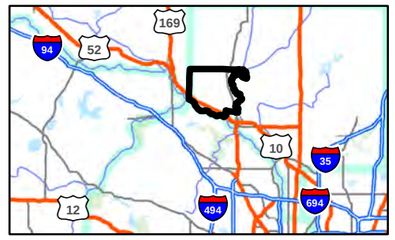


Legend

- Municipal Well
- Municipal Watermain
- Municipality Boundary
- City of Ramsey Owned Parcel
- Anoka County Parcel Dataset

0 1,500 3,000 6,000

Feet



Parcel Data

Source Water Analysis
City of Ramsey
Minnesota

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SEH

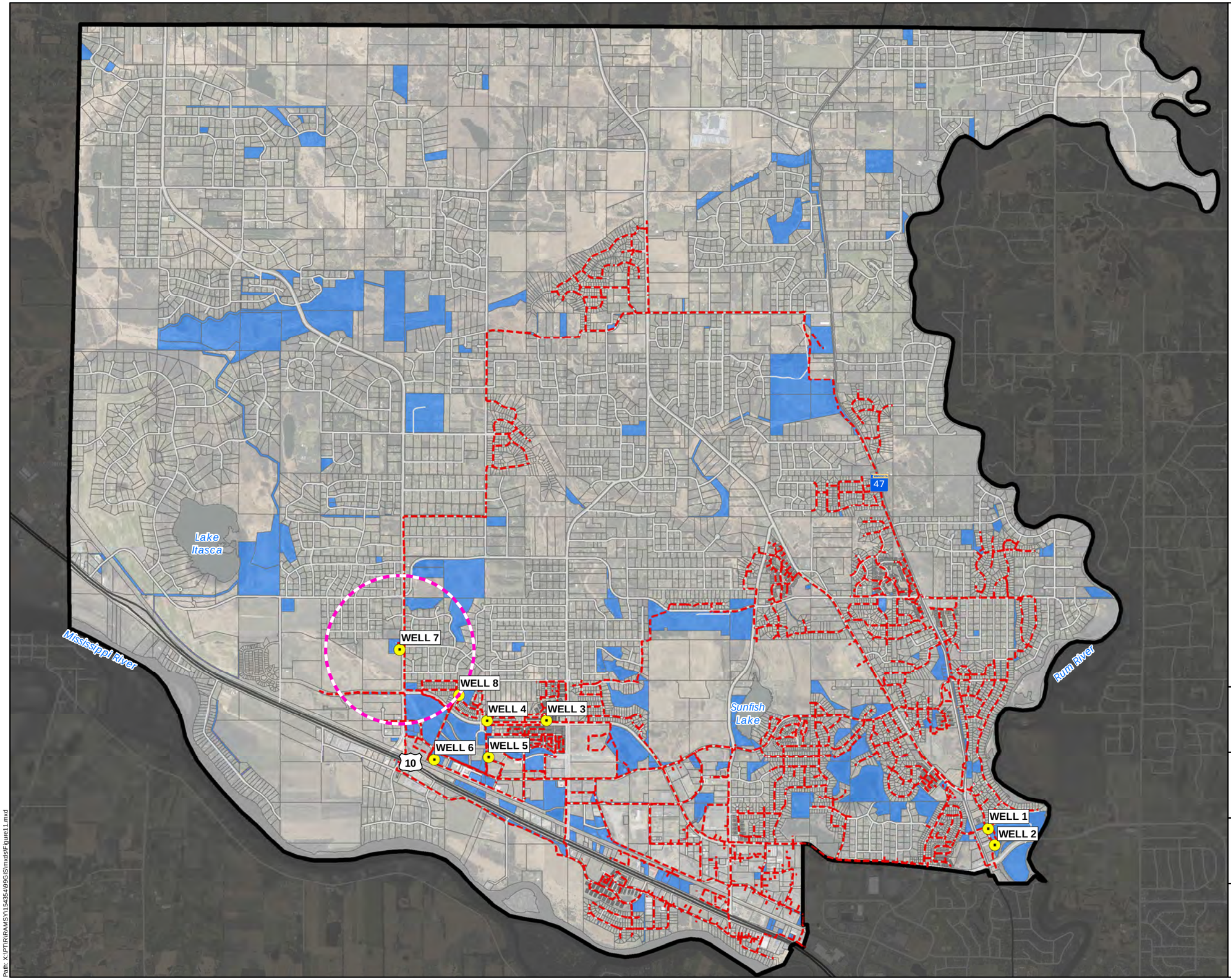
Project: MCES 150732

Print Date: 11/7/2019

Map by: Msherrill
Projection: UTM Zone 15N
Source: ESRI, SEH Digi MnDOT, Minnesota Geologic Survey (MGS)

Figure 10

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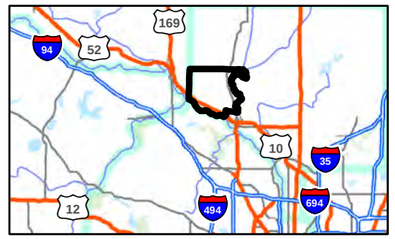


Legend

- Municipal Well
- Municipal Watermain
- Municipality Boundary
- City of Ramsey Owned Parcel
- Anoka County Parcel Dataset
- 2400 ft Radius of Influence for 3 feet of Drawdown.

Note:
Radius of Influence calculation was based upon "Methods for Determining the Proper Spacing of Wells" (USGS, 1961) for a single pumping well.

0 1,500 3,000 6,000
Feet



Radius of Influence and Parcel Data

Source Water Analysis
City of Ramsey
Minnesota

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SEH

Project: MCES 150732
Print Date: 5/19/2020

Map by: Msherrill
Projection: UTM Zone 15N
Source: ESRI, SEH Digi MnDOT, Minnesota Geologic Survey (MGS)

Figure 11

Path: X:\PTW\RAMSY\115435499\GIS\mxd\sFigure11.mxd

906.7151

886.4228

866.1305

Lake Itasca

Mississippi River

WELL 7

WELL 8

WELL 4

WELL 3

WELL 6

WELL 5

10

47

Sunfish Lake

Rum River

WELL 1

WELL 2

866.1305

845.8382

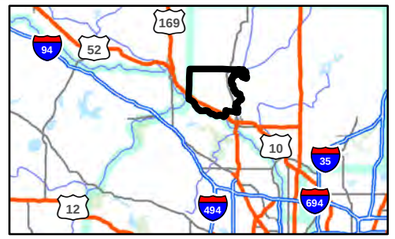
Path: X:\PTW\RAMSY\115435499\GIS\mxds\Figure12.mxd

Legend

- Municipal Well
- Municipal Watermain
- Municipality Boundary
- City of Ramsey Owned Parcel
- Anoka County Parcel Dataset
- Modeled Steady State Source Water Aquifer Water Level with no City Wells Pumping

Note:
-Source Water Aquifer referes to the Tunnel City and Wonewoc Aquifers.
-Contours were modeled utilizing the Twin Cities Area Groundwater Flow Model (Metro Model 3, Metropolitan Council and Barr Engineering.)

0 1,500 3,000 6,000
Feet



Present Day - No Pumping Wells Aquifer Water Level Contours

Source Water Analysis
City of Ramsey
Minnesota

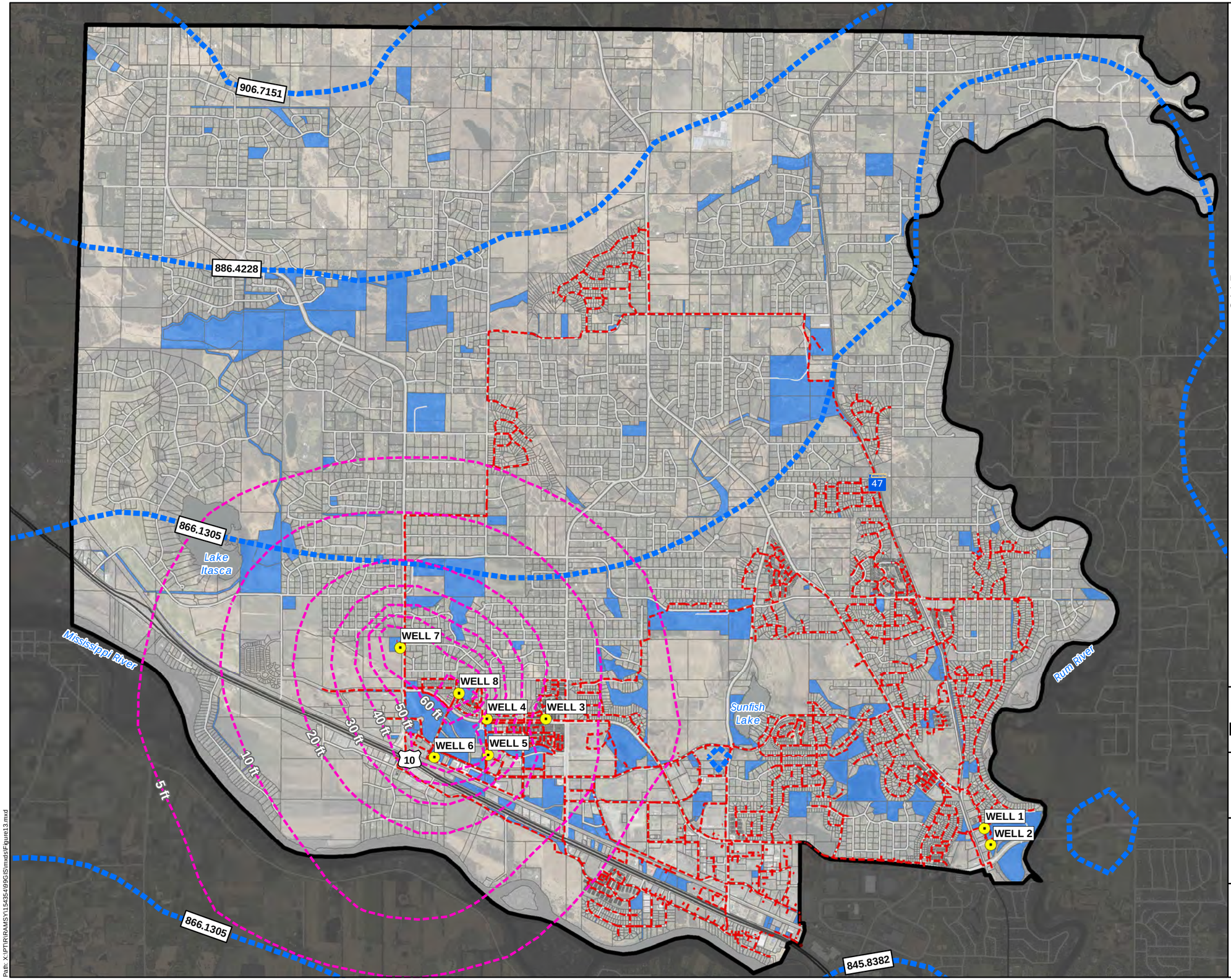
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SEH

Project: MCES 150732
Print Date: 5/19/2020

Map by: Msherrill
Projection: UTM Zone 15N
Source: ESRI, SEH Digi MnDOT, Minnesota Geologic Survey (MGS)

Figure 12

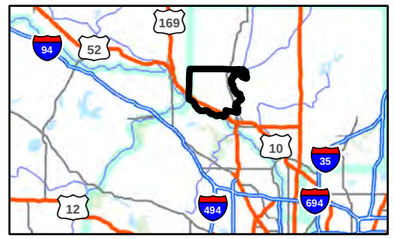


Legend

- Municipal Well
- Municipal Watermain
- Municipality Boundary
- City of Ramsey Owned Parcel
- Anoka County Parcel Dataset
- Modeled Steady State Source Water Aquifer Water Level with no City Wells Pumping
- Feet of Modeled Drawdown from June 13, 2019 Well Pumping

Note:
-Source Water Aquifer referes to the Tunnel City and Wonewoc Aquifers.
-Contours were modeled utilizing the Twin Cities Area Groundwater Flow Model (Metro Model 3, Metropolitan Council and Barr Engineering.)

0 1,500 3,000 6,000 Feet



Modeled Drawdown of June 13th Pumping on Aquifer Water Levels

Source Water Analysis
City of Ramsey
Minnesota

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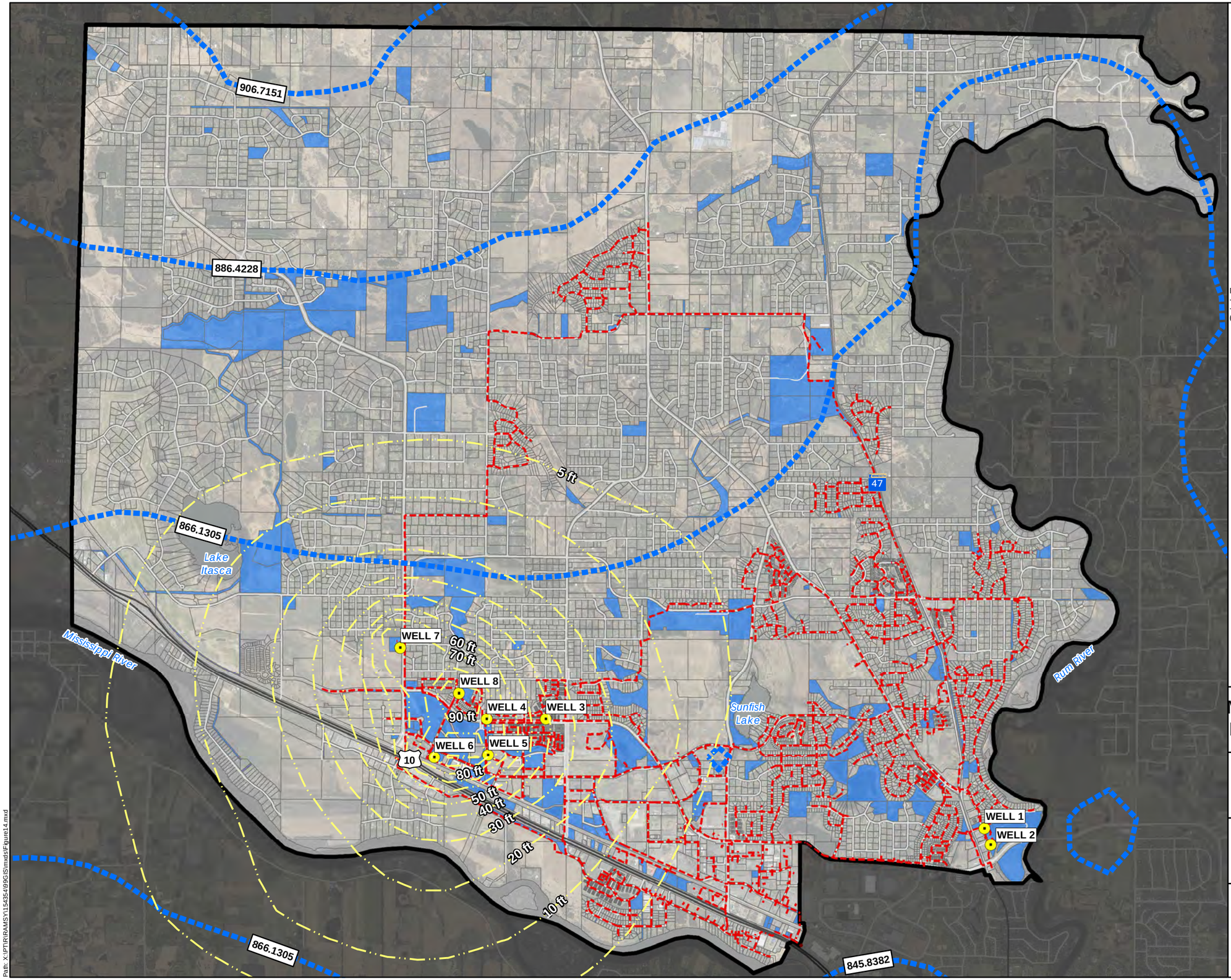
SEH

Project: MCES 150732
Print Date: 5/19/2020

Map by: Msherrill
Projection: UTM Zone 15N
Source: ESRI, SEH Digi MnDOT, Minnesota Geologic Survey (MGS)

Figure 13

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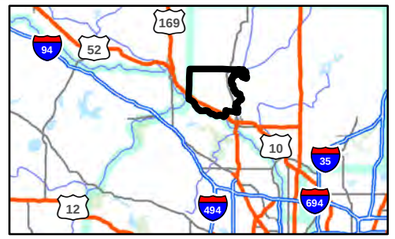


Legend

- Municipal Well
- Municipal Watermain
- Municipality Boundary
- City of Ramsey Owned Parcel
- Anoka County Parcel Dataset
- Modeled Steady State Source Water Aquifer Water Level with no City Wells Pumping
- Feet of Modeled Drawdown from Project 2040 Daily Demand Well Pumping of 10.25 Million Gallons

Note:
-Source Water Aquifer referes to the Tunnel City and Wonewoc Aquifers.
-Contours were modeled utilizing the Twin Cities Area Groundwater Flow Model (Metro Model 3, Metropolitan Council and Barr Engineering.)

0 1,500 3,000 6,000 Feet



Modeled Drawdown of 2040 Daily Demand on Aquifer Water Levels

Source Water Analysis
City of Ramsey
Minnesota

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Print Date: 5/19/2020

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Projection: UTM Zone 15N
Source: ESRI, SEH Digi MnDOT, Minnesota Geologic Survey (MGS)

Figure 14

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Armstrong Blvd NW

Potential Well Siting Area B

Potential Well Siting Area C

Potential Well Siting Area A

Lake Itasca

Mississippi River

Sunfish Lake

Rum River

WELL 1

WELL 2

WELL 3

WELL 4

WELL 5

WELL 6

WELL 7

WELL 8

47

10

Legend

- Municipal Well
- Municipal Watermain
- Municipality Boundary
- City of Ramsey Owned Parcel
- Anoka County Parcel Dataset

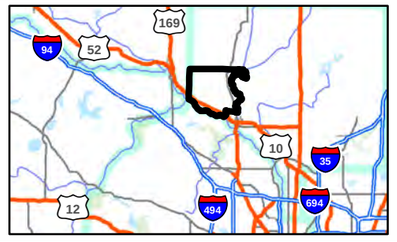
Potential Well Sites

- Potential Well Siting Area A
- Potential Well Siting Area B
- Potential Well Siting Area C

0 1,500 3,000 6,000

Feet

N



Potential Well Sites

Source Water Analysis City of Ramsey Minnesota

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SEH

Project: MCES 150732

Print Date: 6/5/2020

Map by: Msherrill
Projection: UTM Zone 15N
Source: ESRI, SEH Digi MnDOT, Minnesota Geologic Survey (MGS)

Figure 15

Path: X:\PTR\RAMS\115435499\GIS\mxds\Figure15.mxd

Appendix E

Pilot Study

Pilot Study Report

Water Treatment Plant

City of Ramsey, Minnesota

RAMSY 154354 | June 18, 2020

SEH

Building a Better World for All of Us®

Engineers | Architects | Planners | Scientists

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Certification Page
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Pilot Study Report

Water Treatment Plant

Prepared for the City of Ramsey, Minnesota

1 Introduction

1.1 Background

SEH was contracted by the City of Ramsey to conduct a centralized water treatment plant feasibility study. As part of the study, SEH conducted a pilot study to consider options for the removal of iron and manganese from their water supply. The water quality in Ramsey is high in both iron and manganese with levels exceeding the United States Environmental Protection Agency (US EPA) secondary standards of 0.3 mg/L and 0.05 mg/L respectively. Along with the manganese secondary standard, Ramsey's average manganese levels exceed Minnesota Department of Health's (MDH's) Health Based Value (HBV) of 0.1 mg/L for bottle-fed infants less than one year of age.

1.2 Objectives

The objectives of the study were to evaluate the effectiveness of various treatment methods for removing iron and manganese, and then to select treatment methods for the design of a Water Treatment Plant for the City of Ramsey.

The study included the following objectives:

- Evaluate the effectiveness of chlorine and permanganate for the removal of iron and manganese;
- Establish filter run lengths;
- Evaluate filter loading rates;
- Select the filter media type that provides the best removal of iron and manganese, and;
- Evaluate the use of aeration and detention as part of the treatment process.

2 Existing Facilities

2.1 Wells

The City of Ramsey has eight wells all located in the southern part of town north of U.S. Highway 10. The City's original two wells, Wells No. 1 and 2, are located in the southeast part of town, while the other wells are all located in the southwest part of town. The wells are capable of producing approximately 11 million gallons per day, although the treatment plant would be located within the southwest well field and thus would not be fed by Wells No. 1 or 2, making the potential treatment capacity 9.5 million gallons per day.

Current treatment at the wells consists of chemical treatment including polyphosphate for iron and manganese sequestration, gas chlorine for disinfection, and fluoride for dental health.

3 Pilot Study

The pilot study was conducted in the SEH pilot water plant trailer. Equipment used for the pilot study included chemical feed systems, an aerator, detention tank, and filter columns (filters). Train 1 of the study utilized direct filtration where the well water was treated with chemical injections of chlorine (sodium hypochlorite) and potassium permanganate, and then filtered through filters with two different media types. Train 2 of the study utilized the chemical injections and two different filter media types, but included aeration prior to the chemical injections, and detention prior to filtration. Sampling as part of the pilot study were conducted and analyzed by SEH's pilot plant operator.

3.1 Pilot Testing Processes

The pilot study was conducted for Ramsey's Wells No. 3 and 4 to establish the efficiency and reliability of the two treatment processes and filter media types to remove iron and manganese. Processes for the pilot study were selected based on the concentrations of iron and manganese, and on prior experience. The figures below show the processes for Train 1 and Train 2.

Figure 1 – Pilot Sudy Train 1

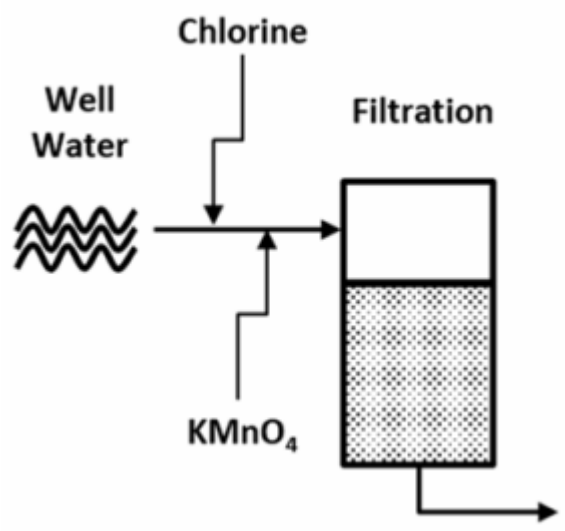
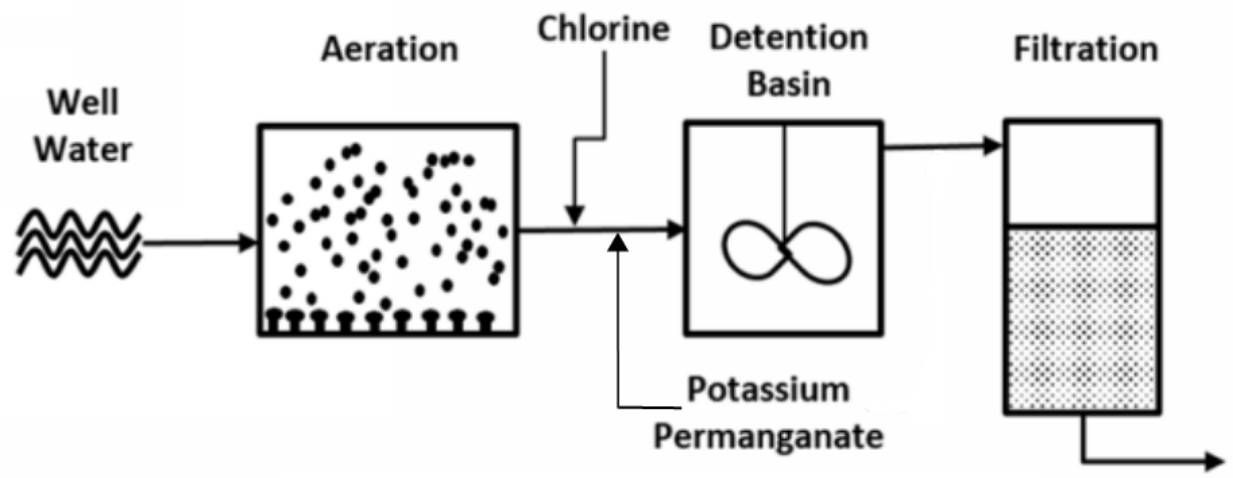


Figure 2 – Pilot Study Train 2



3.1.1 Forced Draft Aerator

The SEH pilot water plant utilized a forced draft aerator, which consists of an aerator column, packing material, and a blower. During treatment of the water for Train 2, water was pumped from the well into the pilot water plant aerator, and then percolated down through the packing material in the aerator column as air was blown up through the packing material. Aeration of water is done to oxidize the iron into solids so that they can be filtered out. Aeration of water can also remove dissolved gases in water such as hydrogen sulfide.

3.1.2 Detention Tank

After aeration during Train 2, a detention tank in the pilot water plant was used to provide additional reaction time for chlorine to oxidize iron and potassium permanganate to oxidize manganese in the water. For this study, the system was set up to provide 30 minutes of detention before filtration.

3.1.3 Chemical Feed System

The chemicals used for the pilot study included chlorine, in the form of sodium hypochlorite, and potassium permanganate ($KMnO_4$). While chlorine is used for oxidizing iron, potassium permanganate is used for the oxidation of manganese. Both chemicals are commonly used in treatment systems for the removal of iron and manganese. The sodium hypochlorite solution was fed at a strength of 15 grams per liter (gpl). Potassium permanganate was fed at a strength of 4 gpl.

The chemical feed systems used in the pilot study included Qdos peristaltic metering pumps capable of feeding a maximum of 31 gallons per hour (gph).

Chemical addition was measured using calibration columns for each chemical feed pump. The volume (in milliliters) of each chemical pumped was measured per unit of time and the dosage was calculated based on the flow to the individual treatment trains.

3.1.4 Filters

The SEH Pilot Water Plant contains four filter columns (filters) that each measure 8 inches in diameter and 72 inches tall. The resulting surface area for filtration of each filter is 0.35 ft^2. The filters each have a 0.75 inch inlet, 1.5 inch backwash waste outlets, underdrains, air release system, rate of flow meters, sample taps, and filter media. Pressure taps are located on the inlet and outlet of each filter to obtain filter head loss by comparing the two pressures. For the Ramsey pilot study, Filters 1 and 2 (Train 1) were operated without aeration and detention. Filters 3 and 4 (Train 2) were operated with aeration and detention. Each filter was supplied 1.05 gpm to achieve a target filtration rate of 3.0 gpm/ft^2 for this study. Each type of filter media used in the study was new and had not been used in other studies. The filters were backwashed with a combination of air and water between filter runs.

Table 1 – Pilot Study Filter Characteristics

Filter	Media	Filtration Rate (gpm/ft^2)	Effective Size (mm)	Media Depth (in)
1	Greensand	3	0.30-0.35	18
	Anthracite		0.9-1.0	12
2	Silica Sand	3	0.45-0.55	18
	Anthracite		0.9-1.0	12
3	Greensand	3	0.30-0.35	18
	Anthracite		0.9-1.0	12
4	Silica Sand	3	0.45-0.55	18
	Anthracite		0.9-1.0	12

3.2 Sampling and Analysis

Sampling and analysis was completed by the onsite SEH pilot plant operator. Field testing for iron and manganese was conducted using a Hach DR/890 Portable Colorimeter, and was done for the raw water and from the effluent of each filter. Testing for iron was conducted using the Hach Method 8147 (DR800 FerroZine Solution Pillow), which has a range of 0-1.3 mg/L iron (Fe), and an estimated detection limit of 0.011 mg/L Fe. Testing for manganese was conducted using the Hach Method 8149 (DR800 PAN), which has a range of 0-0.70 mg/L manganese (Mn), and an estimated detection limit of 0.020 mg/L Mn. Temperature and pH analyses were conducted using a Hach HQ 40 pH meter, and was done for the raw water. Samples for the analysis of chlorine were collected from the effluent of each filter and analyzed using the Hach DR/890 Portable Colorimeter. The chlorine demand was calculated by subtracting the residual chlorine after filtration from the dose of chlorine added to the raw water to oxidize iron. The results of the sampling and subsequent analysis are presented in the remainder of this report.

4 Pilot Study Results

As discussed, the pilot study was conducted for Ramsey's Wells No. 3 and 4 to establish the efficiency and reliability of the two treatment processes, as well as the two filter media types, to remove iron and manganese. Identical pilot studies were conducted at both wells. The purpose of this was to determine how well the treatment processes would do with more than one source

water. The finished water quality met the EPA secondary standards for iron and manganese, as well as MDH's HBV for manganese, for both treatment processes and filter media types.

4.1 Well No. 3 Results

4.1.1 Raw Water Quality

The pilot study for Well No. 3 was completed between January 21, 2020 and January 22, 2020. Well No. 3 currently pumps approximately 1,450 gpm directly into the distribution system with polyphosphate, chlorine, and fluoride added in a shared pump house with Well No. 4. Table 2 below summarizes the raw water results collected from Well No. 3 during the pilot study.

Table 2 – Well No. 3 Raw Water Quality

Iron (mg/L)			Manganese (mg/L)			pH		
Min.	Avg.	Max	Min.	Avg.	Max.	Min.	Avg.	Max.
0.500	0.640	0.850	0.160	0.200	0.240	7.46	7.72	7.85

Results from the raw water sampling show that Well No. 3 exceeds EPA's secondary standards for iron and manganese, which can cause aesthetic water quality issues related to color, taste, sediment, and staining. Well No. 3 also exceeds MDH's HBV 0.1 mg/L for manganese for bottle-fed infants less than one year of age. Infants who drink water with manganese above 0.1 mg/L may develop learning and behavior problems.

4.1.2 Water Treatment

Water from Well No. 3 went through both treatment trains provided by the SEH pilot water treatment plant. Train 1 utilized direct filtration through Filters 1 and 2 after chlorine and potassium permanganate injection, while Train 2 utilized aeration and detention prior to filtration through Filters 3 and 4. With Train 2, aeration was provided prior to chemical injection to help oxidize iron, followed by chlorine and potassium permanganate injection, and then 30 minutes of detention time to allow for adequate chemical reaction time before filtration. The chemical doses to treat water from Well No. 3 are provided in Table 3. All four filters in the pilot water plant were operated at a rate of 3.0 gpm/ft^2.

Table 3 – Well No. 3 Chemical Dosages

Train 1 – Filters 1 and 2 (Direct Filtration)					
Chlorine (mg/L as Cl_2)			$KMnO_4$ (mg/L)		
Min.	Avg.	Max.	Min.	Avg.	Max.
2.15	2.92	3.58	0.49	0.49	0.49
Train 2 – Filters 3 and 4 (Aeration and Detention)					
Chlorine (mg/L as Cl_2)			$KMnO_4$ (mg/L)		
Min.	Avg.	Max.	Min.	Avg.	Max.
1.95	3.24	4.53	0.10	0.10	0.10

The chlorine dosages for the two treatment trains were similar, although the chlorine dosage with Train 2 may be able to be reduced as aeration provides significant iron oxidation, and 30 minutes

of detention allows for additional chemical reaction time to increase iron oxidation. The potassium permanganate dosage in Train 2 was able to be lowered to about a fifth of that in Train 1, as the added chemical reaction time with 30 minutes of detention increases manganese oxidation.

4.1.3 Finished Water Quality

The SEH pilot water plant was able to treat water from Well No. 3 to levels that meet the EPA secondary standards, as well as MDH's HBV for manganese. In fact, no sample result exceeded the EPA secondary standards, and both treatment trains were able to remove both iron and manganese on average below the method detection limits of 0.011 mg/L and 0.020 mg/L respectively.

The finished water quality for Well No. 3 during the pilot study is summarized in Table 4 below.

Table 4 – Well No. 3 Finished Water Quality

Filter	Iron (mg/L)			Manganese (mg/L)		
	Min.	Avg.	Max.	Min.	Avg.	Max.
1	nd	nd	0.040	nd	nd	0.043
2	nd	nd	0.020	nd	nd	nd
3	nd	nd	0.020	nd	nd	0.048
4	nd	nd	nd	nd	nd	nd
Notes: nd = below method detection limit						

The use of detention in Train 2 did not provide a significant treatment advantage over Train 1 in removing iron and manganese, although the use of aeration in Train 2 provided slightly better results in the removal of iron. There also wasn't a significant difference in treatment effectiveness between the two filter media types, although Filters 1 and 3 each had at least one spiked result for manganese that approached the secondary standard.

4.2 Well No. 4 Results

4.2.1 Raw Water Quality

The pilot study for Well No. 4 was completed between January 20, 2020 and January 21, 2020. Well No. 4 currently pumps approximately 850 gpm directly into the distribution system with polyphosphate, chlorine, and fluoride added in a shared pump house with Well No. 3. Table 5 below summarizes the raw water results collected from Well No. 4 during the pilot study.

Table 5 – Well No. 4 Raw Water Quality

Iron (mg/L)			Manganese (mg/L)			pH		
Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.
0.180	0.240	0.360	0.035	0.392	0.360	7.51	7.61	7.71

Results from the raw water sampling show that Well No. 4 exceeds EPA's secondary standards for iron and manganese, which can cause aesthetic water quality issues related to color, taste,

sediment, and staining. Well No. 4 also exceeds MDH's HBV 0.1 mg/L for manganese for bottle-fed infants less than one year of age. Infants who drink water with manganese above 0.1 mg/L may develop learning and behavior problems.

4.2.2 Water Treatment

Like Well No. 3, water from Well No. 4 went through both treatment trains provided by the SEH pilot water treatment plant. The chemical doses to treat water from Well No. 4 are provided in Table 3. All four filters in the pilot water plant were operated at a rate of 3.0 gpm/ft^2.

Table 6 – Well No. 4 Chemical Dosages

Train 1 – Filters 1 and 2 (Direct Filtration)					
Chlorine (mg/L as Cl_2)			$KMnO_4$ (mg/L)		
Min.	Avg.	Max.	Min.	Avg.	Max.
1.43	2.57	3.43	0.49	0.49	0.52
Train 2 – Filters 3 and 4 (Aeration and Detention)					
Chlorine (mg/L as Cl_2)			$KMnO_4$ (mg/L)		
Min.	Avg.	Max.	Min.	Avg.	Max.
1.95	2.66	2.72	0.21	0.21	0.21

The chlorine dosages for the two treatment trains were similar, although the chlorine dosage with Train 2 may be able to be reduced as aeration provides significant iron oxidation, and 30 minutes of detention allows for additional chemical reaction time to increase iron oxidation. The potassium permanganate dosage in Train 2 was able to be lowered to less than half of that in Train 1, as the added chemical reaction time with 30 minutes of detention increases manganese oxidation.

4.2.3 Finished Water Quality

The SEH pilot water plant was able to treat water from Well No. 4, on average, to levels that meet the EPA secondary standards, as well as MDH's HBV for manganese. Although the average iron and manganese levels were below those standards, the pilot water plant was not able to remove iron below the method detection limit on average like it did with Well No. 3. Filter 4 also saw a spike in manganese at the beginning of the filter run, which was above the MDH HBV, but quickly reduced manganese below the secondary standard and MDH HBV thereafter.

The finished water quality for Well No. 4 during the pilot study is summarized in Table 7 below.

Table 7 – Well No. 4 Finished Water Quality

Filter	Iron (mg/L)			Manganese (mg/L)		
	Min.	Avg.	Max.	Min.	Avg.	Max.
1	nd	0.018	0.080	nd	nd	0.044
2	nd	0.014	0.080	nd	nd	0.028
3	nd	0.014	0.080	nd	nd	0.031
4	nd	0.015	0.090	nd	nd	0.128

Notes: nd = below method detection limit

The use of detention and aeration in Train 2 did not provide a significant treatment advantage over Train 1 in removing iron and manganese. There also wasn't a significant difference in treatment effectiveness between the two filter media types, although Filter 4 saw the spike in manganese that was above the secondary standard and MDH HBV.

5 Conclusions and Recommendations

The SEH pilot water plant was able to treat water from Well No. 3 and Well No. 4 to concentrations below the EPA secondary standards for iron and manganese, as well as the MDH HBV for manganese. Implementing either treatment trains at full-scale would allow the City of Ramsey to provide aesthetically pleasing as it relates to iron and manganese, as well as provide safe drinking water to the residents as it relates to manganese.

5.1 Aeration

Aeration of the water provided better results in terms of iron removal for Well No. 3, which had much higher raw water iron levels than Well No. 4, but provided similar results in terms of iron removal for Well No. 4. It is expected that the benefits of aeration will be more pronounced in water quality similar to that of Well No. 3. Based on the results and on previous experience, the use of an aerator may be preferred as it provides an additional layer in the removal or iron, and may also provide additional treatment benefits such as the removal of dissolved gases like hydrogen sulfide.

5.2 Detention

The addition of a detention tank did not provide a significant difference in treatment effectiveness for iron and manganese removal, but it did allow for the potassium permanganate dosage to be lowered. Although 30 minutes of detention was suitable for the removal of iron and manganese, and allowed for the reduction in the potassium permanganate dosage, it is not needed to provide quality water for the City of Ramsey. If a water treatment plant is pursued, the City should compare the cost savings of reducing the potassium permanganate dosage with the construction cost of a detention tank.

5.3 Chemical Feed

The pilot study evaluated the use of chlorine and potassium permanganate as oxidants. Feed rates are within normal ranges for the type of water treated. It is recommended to use these chemicals for a full-scale design, although chlorine may be fed as sodium hypochlorite solution or gas chlorine, and potassium permanganate may be fed as sodium permanganate instead.

5.4 Filtration

Both filter media types were effective in removing iron and manganese and successfully operated at a loading rate of 3.0 gpm/ft^2, but there wasn't a significant difference in effectiveness. Although there wasn't a significant difference between the two filter media types, SEH recommends the use of 12 inches of anthracite over 18 inches of Greensand Plus™, rather than 12 inches of anthracite over 18 inches of silica sand for full-scale filters. This is because Greensand Plus™ is a filter media that is coated with manganese dioxides that further aid in the removal of manganese.

Figure 3 – Well #3 Manganese Results

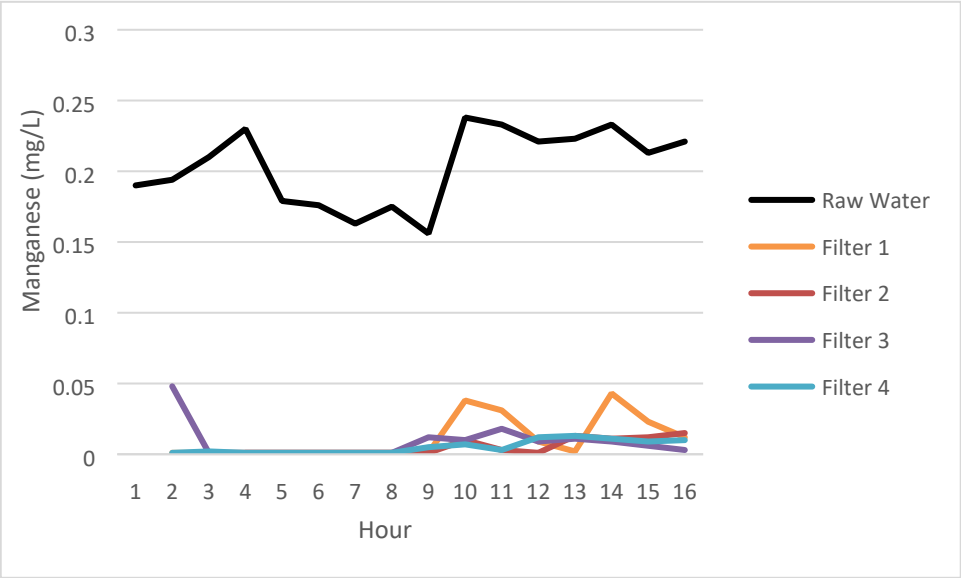


Figure 4 – Well #3 Iron Results

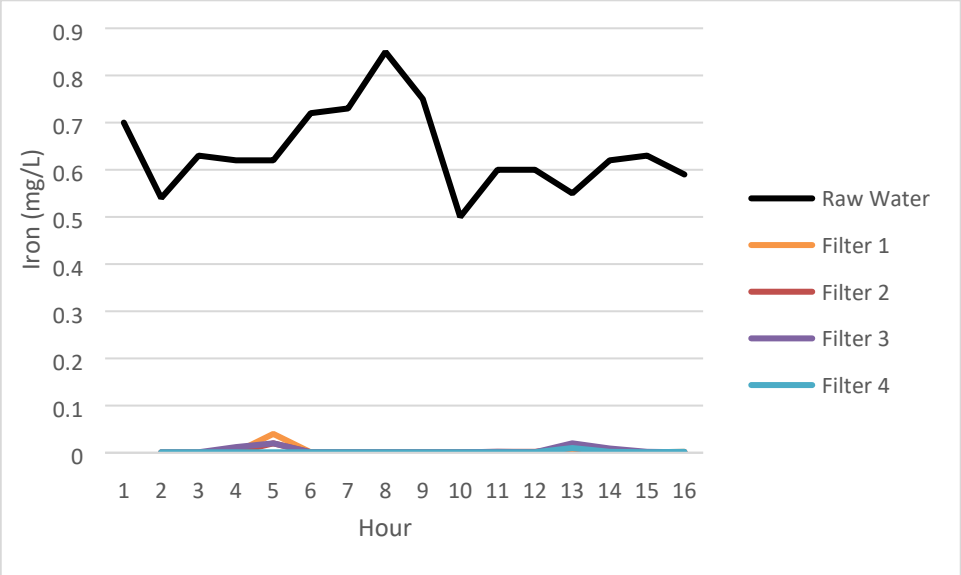


Figure 5 – Well #4 Manganese Results

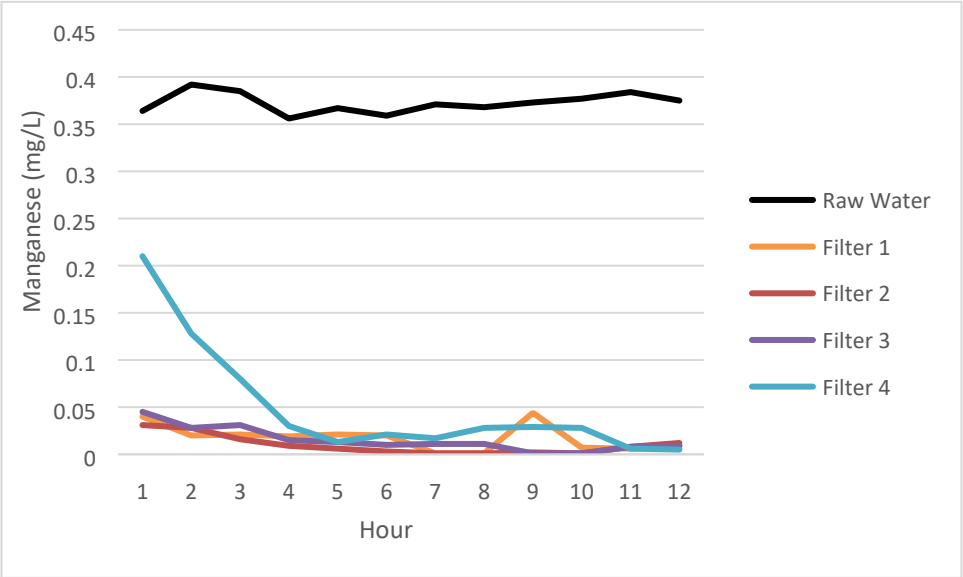
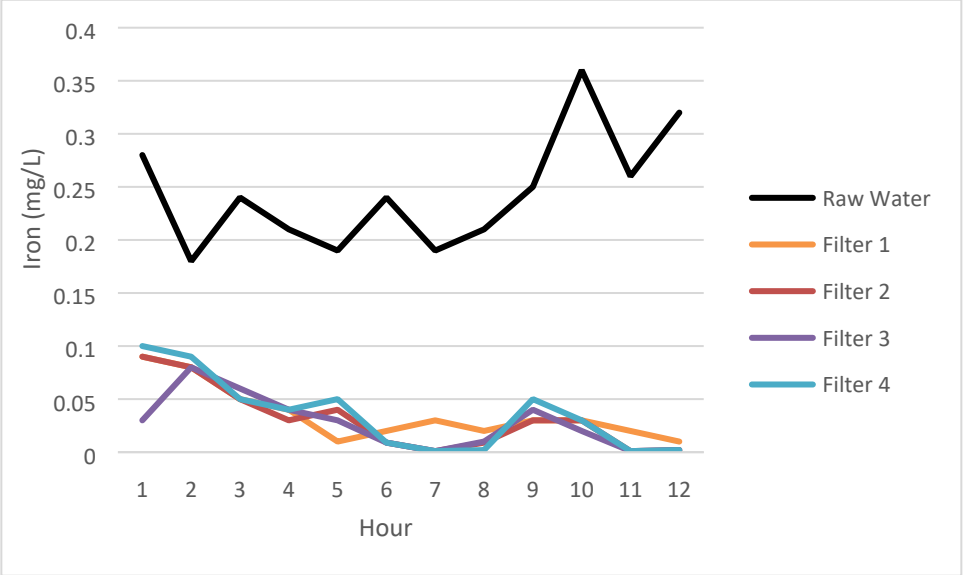


Figure 6 – Well #4 Iron Results



dmk



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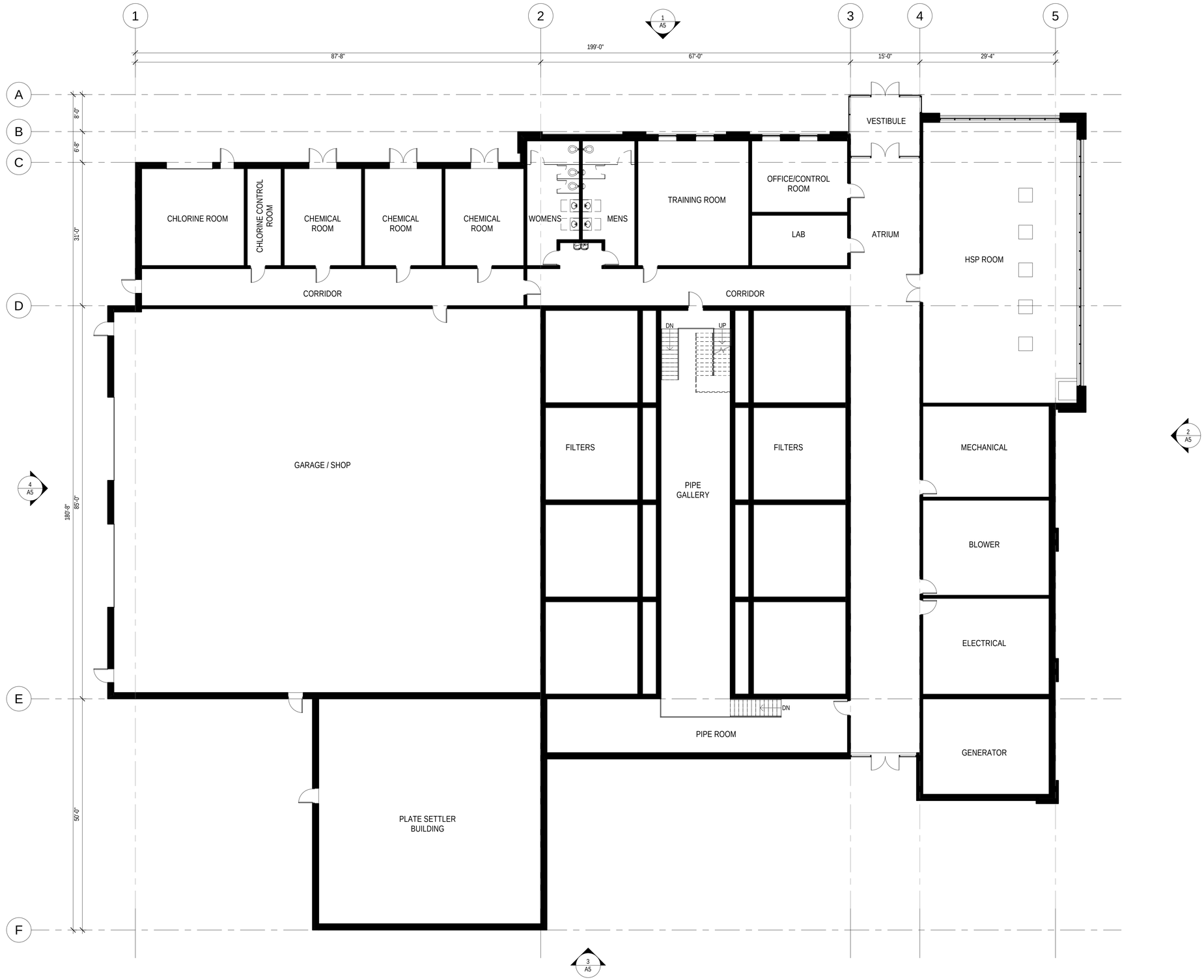
Sustainable buildings, sound infrastructure, safe transportation systems, clean water, renewable energy and a balanced environment. Building a Better World for All of Us communicates a company-wide commitment to act in the best interests of our clients and the world around us.

We're confident in our ability to balance these requirements.

Join Our Social Communities

Appendix F

Gravity Filter Layouts



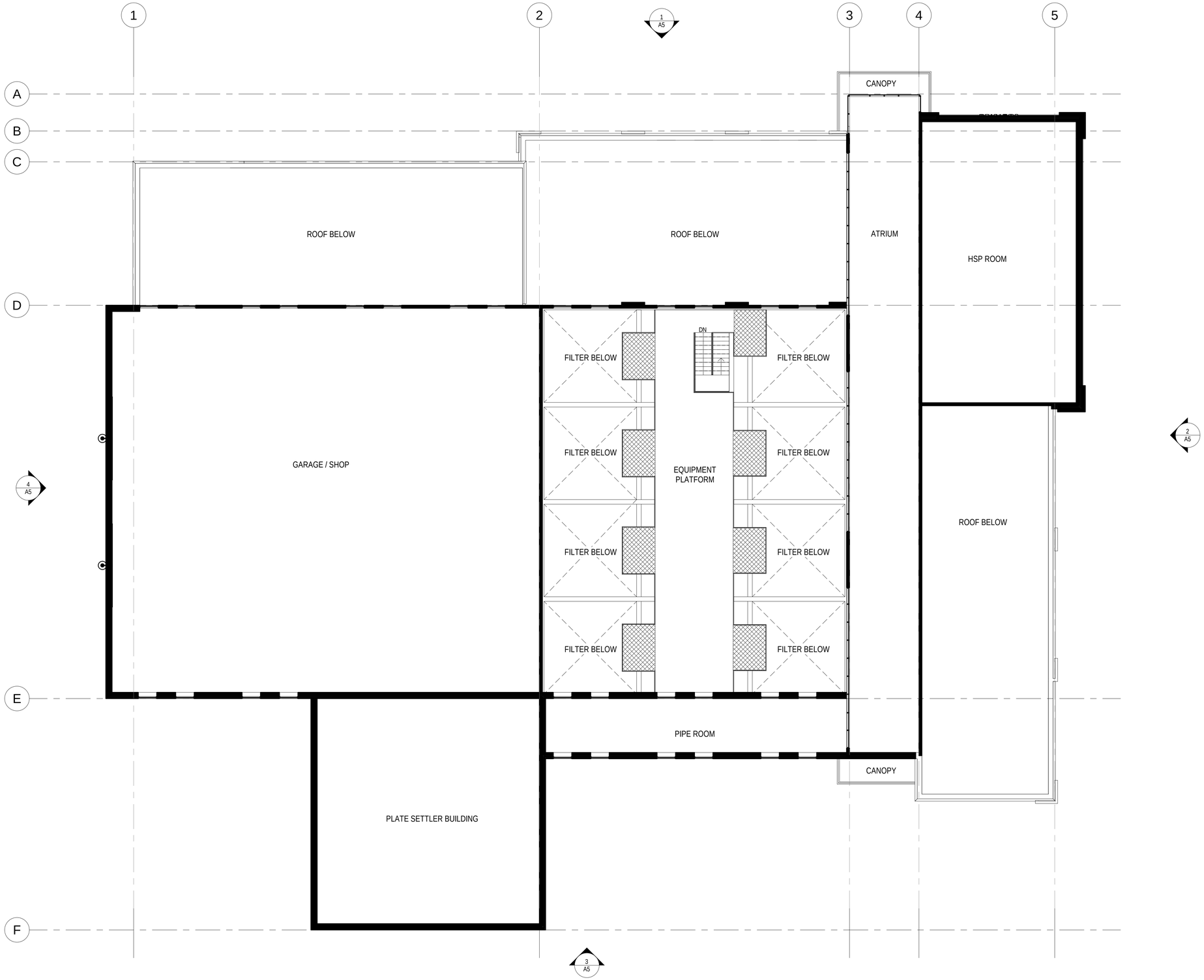
1 A3 MAIN LEVEL FLOOR PLAN - ALTERNATIVE 1 - WITH GARAGE

3/32" = 1'-0"

SEH

WTP FEASIBILITY REPORT FOR RAMSEY, MINNESOTA - ALTERNATIVE 1 - GRAVITY FILTER WATER TREATMENT PLANT

| MAIN LEVEL FLOOR PLAN | RAMSEY, MN | 06/2020 |



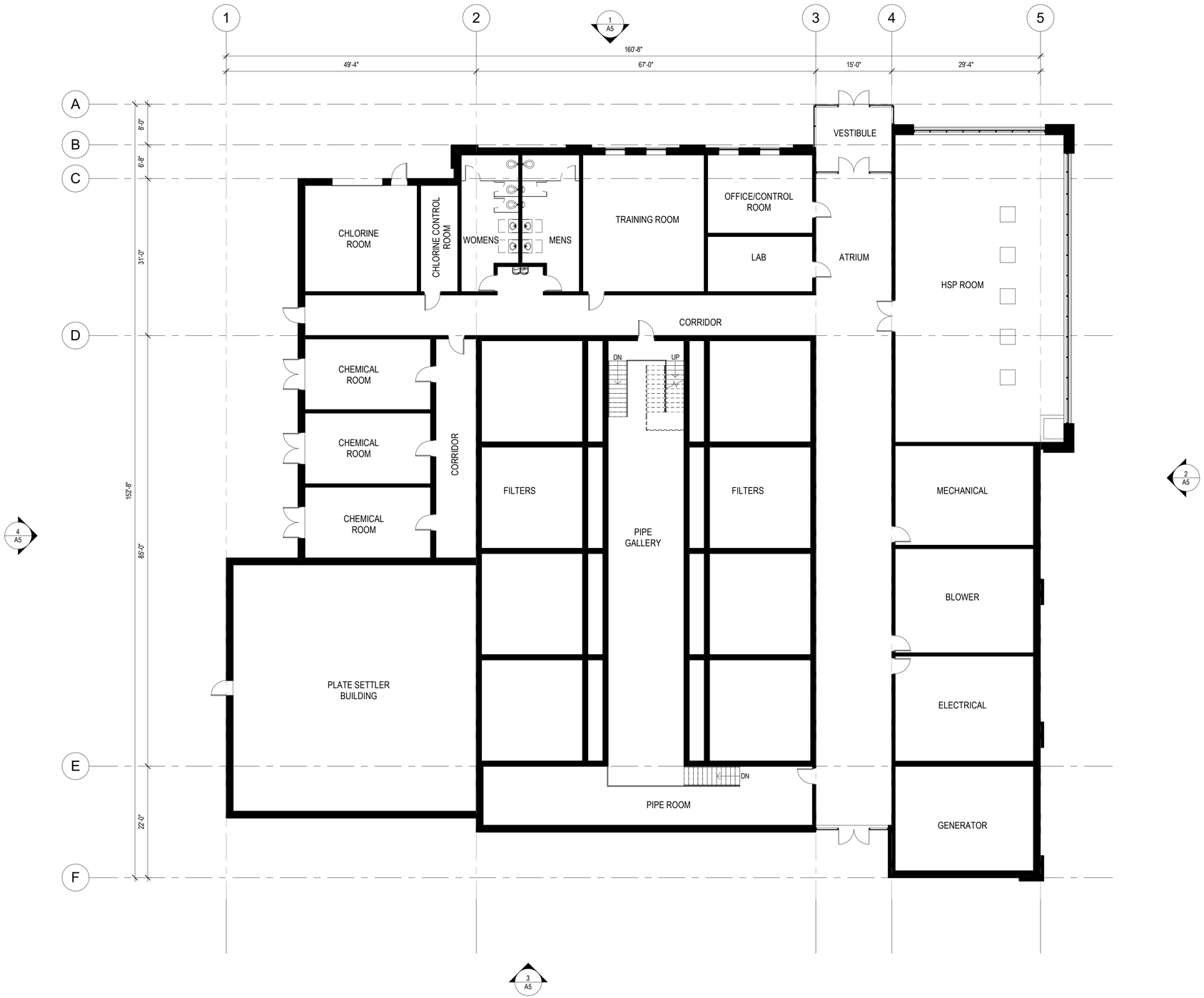
1 A4 UPPER LEVEL FLOOR PLAN - ALTERNATIVE 1 - WITH GARAGE

3/32" = 1'-0"

SEH

WTP FEASIBILITY REPORT FOR RAMSEY, MINNESOTA - ALTERNATIVE 1 - GRAVITY FILTER WATER TREATMENT PLANT

| UPPER LEVEL FLOOR PLAN | RAMSEY, MN | 06/2020 |



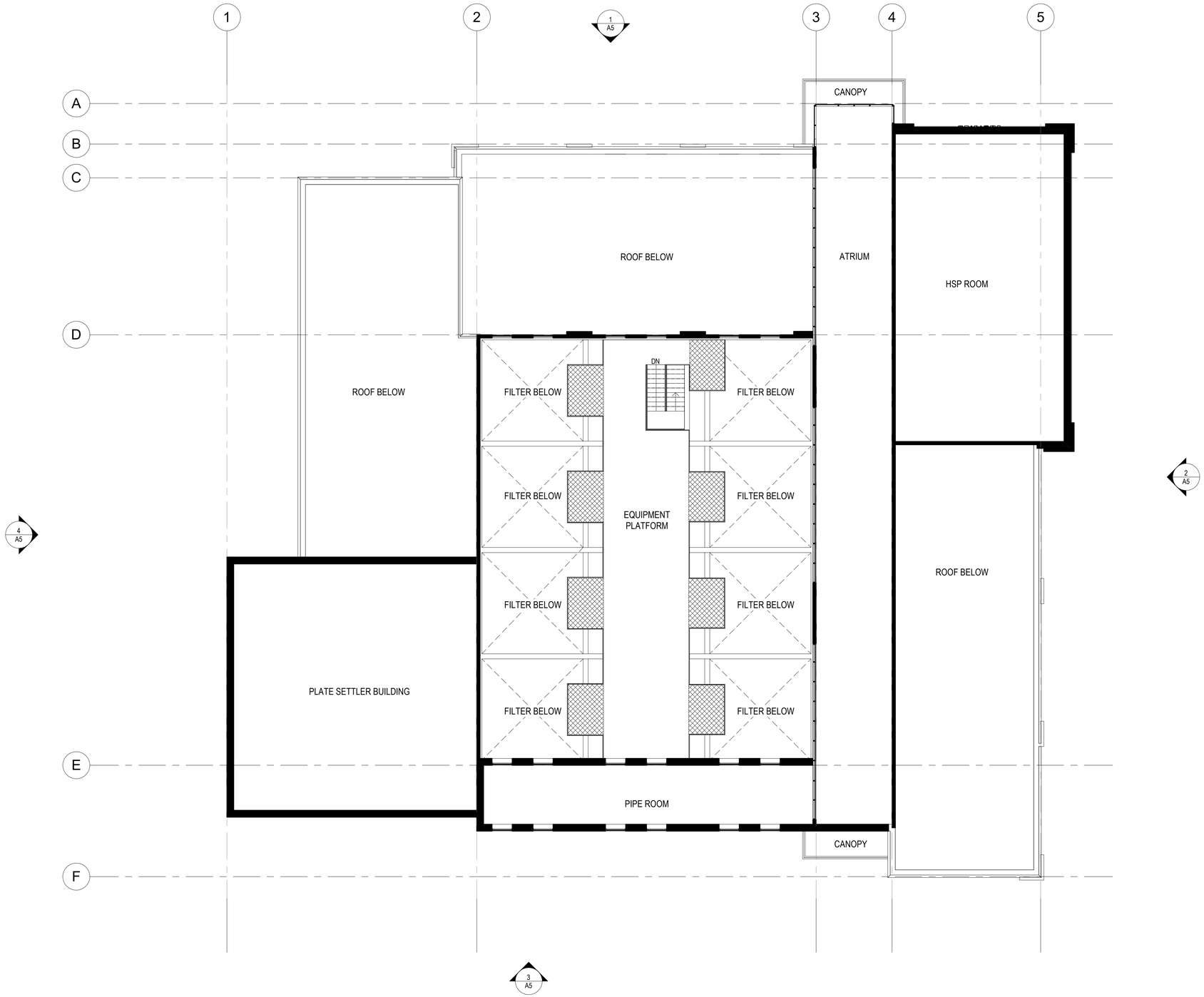
1 A3 MAIN LEVEL FLOOR PLAN - ALTERNATIVE 1 - NO GARAGE

3/32" = 1'-0"

SEH

WTP FEASIBILITY REPORT FOR RAMSEY, MINNESOTA - ALTERNATIVE 1 - GRAVITY FILTER WATER TREATMENT PLANT

| MAIN LEVEL FLOOR PLAN | RAMSEY, MN | 11/2020 |



1 A4 UPPER LEVEL FLOOR PLAN - ALTERNATIVE 1 - NO GARAGE

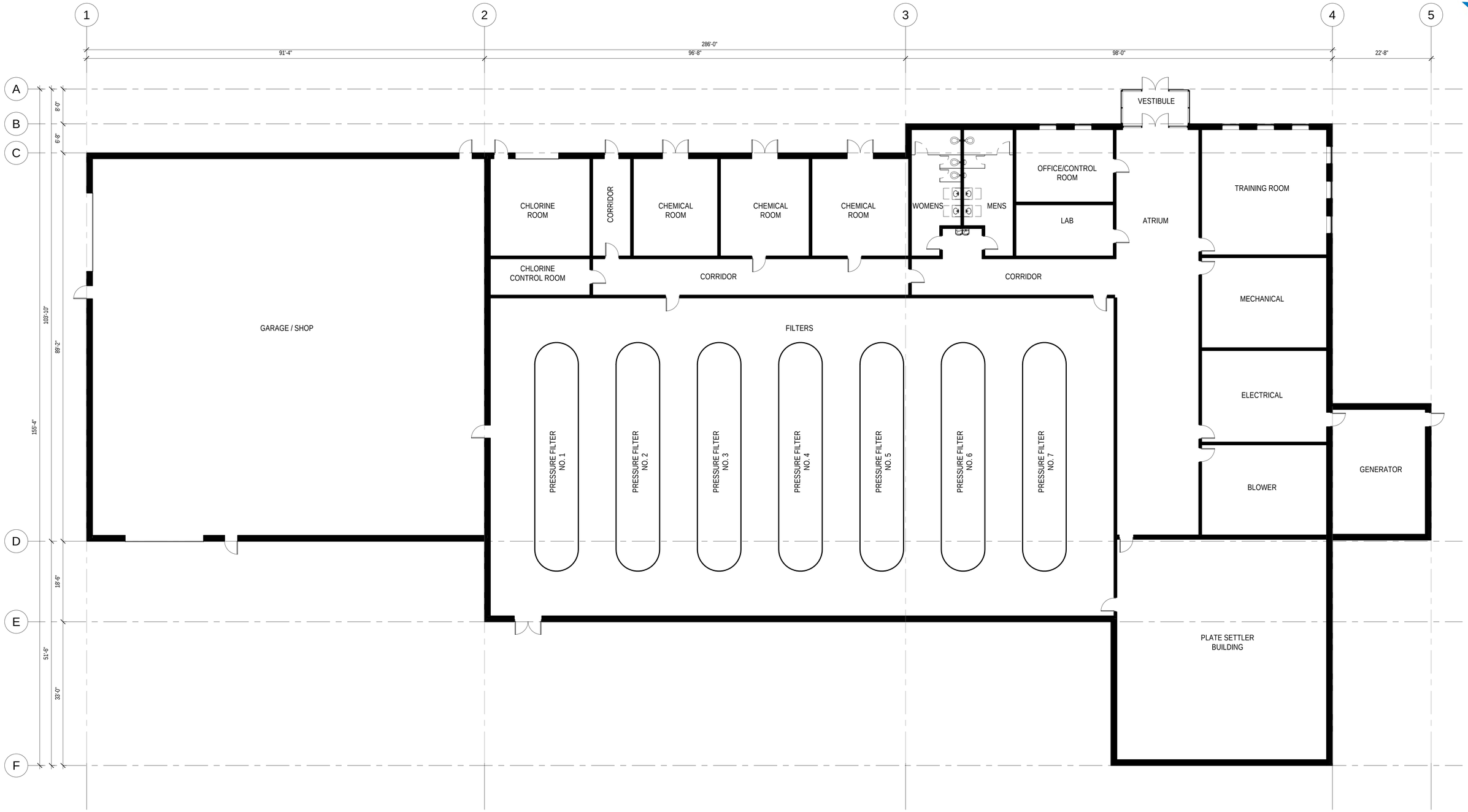
3/32" = 1'-0"

SEH

WTP FEASIBILITY REPORT FOR RAMSEY, MINNESOTA - ALTERNATIVE 1 - GRAVITY FILTER WATER TREATMENT PLANT

Appendix G

Pressure Filter Layouts



1 / A2 MAIN LEVEL FLOOR PLAN - ALTERNATIVE 2

3/32" = 1'-0"

WTP FEASIBILITY REPORT FOR RAMSEY, MINNESOTA - ALTERNATIVE 2 - PRESSURE FILTER WATER TREATMENT PLANT

| MAIN LEVEL FLOOR PLAN | RAMSEY, MN | 06/2020 |

Appendix H

Architectural Renderings

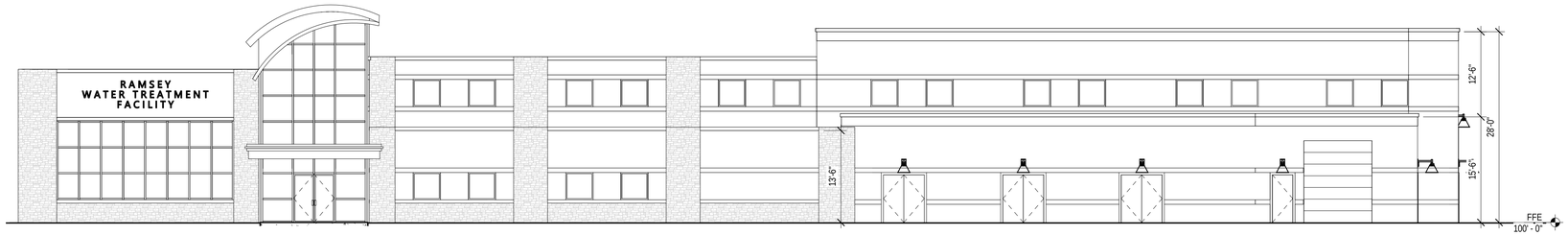


1
A1 EXTERIOR RENDERING - ALTERNATIVE 1

1
A2 EXTERIOR RENDERING - ALTERNATIVE 1

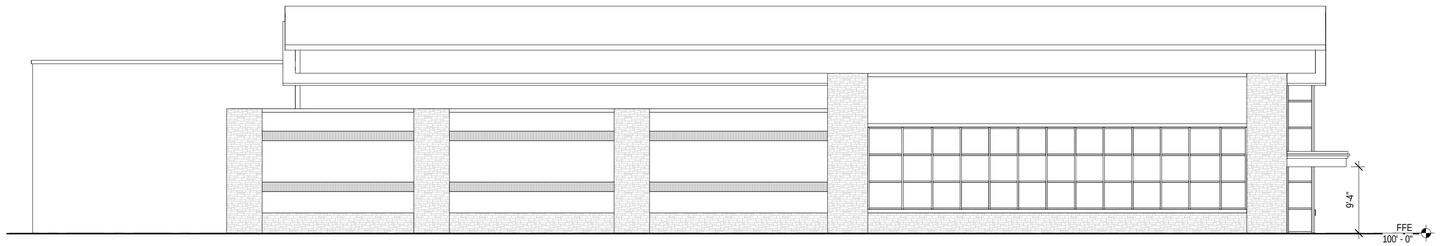
WTP FEASIBILITY REPORT FOR RAMSEY, MINNESOTA - ALTERNATIVE 1 - GRAVITY FILTER WATER TREATMENT PLANT

| EXTERIOR RENDERING | RAMSEY, MN | 06/2020 |



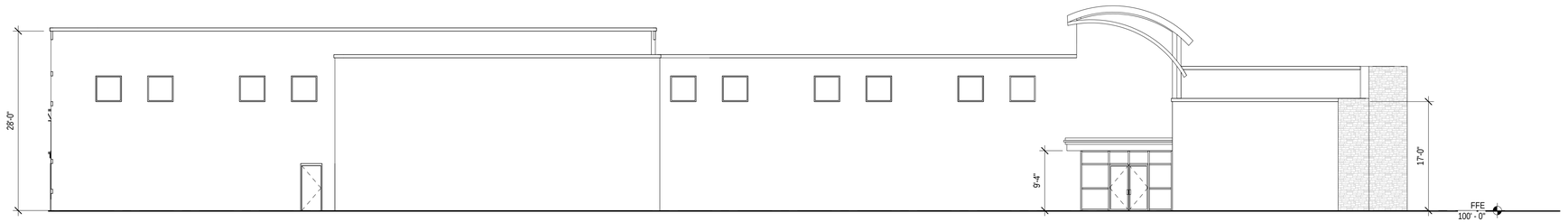
1 / A5 EXTERIOR ELEVATION - FRONT - ALTERNATIVE 1

3/32" = 1'-0"



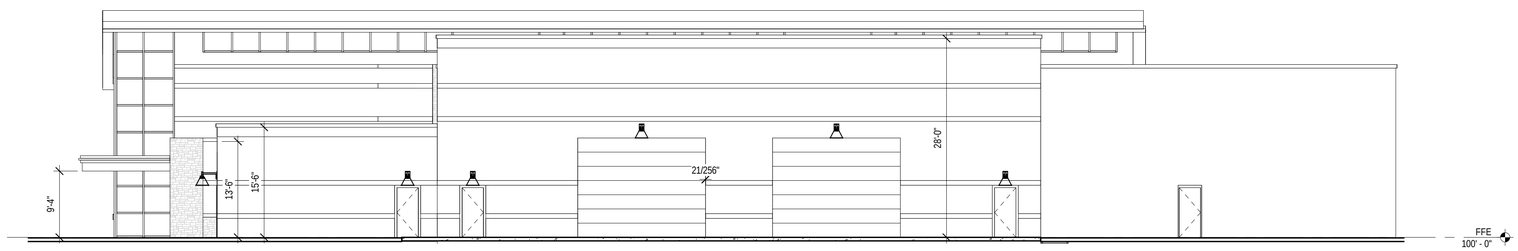
2 / A5 EXTERIOR ELEVATION - LEFT - ALTERNATIVE 1

3/32" = 1'-0"



3 / A5 EXTERIOR ELEVATION - BACK - ALTERNATIVE 1

3/32" = 1'-0"



4 / A5 EXTERIOR ELEVATION - RIGHT - ALTERNATIVE 1

3/32" = 1'-0"

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WTP FEASIBILITY REPORT FOR RAMSEY, MINNESOTA - ALTERNATIVE 1 - GRAVITY FILTER WATER TREATMENT PLANT

| EXTERIOR ELEVATIONS | RAMSEY, MN | 06/2020 |

Appendix I

Treatment Plant Sites and Raw Watermain

Fire Station Site
3.2 Acres

Water Shop Site
3.5 Acres

Vacant City Property Site
4.1 Acres

Public Works Site
3.5 Acres

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

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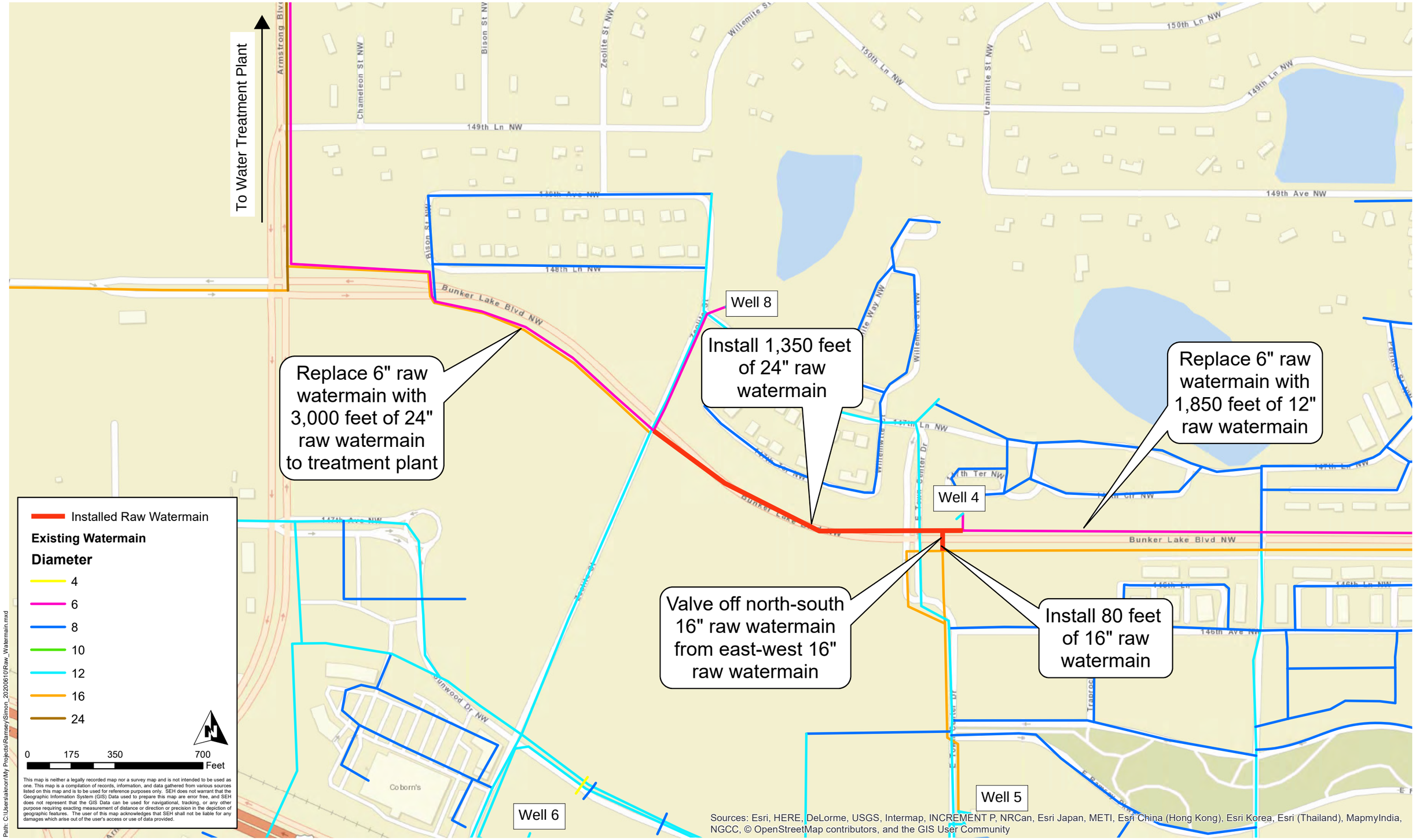
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WTP SITE ALTERNATIVES

Ramey, Minnesota

Figure
1

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Project Number: RAMSY 154354
Print Date: Print Date: 6/16/2020

RAW WATERMAIN - FIRE STATION SITE

Ramsey, Minnesota

Figure 2
Raw Watermain

Well 7

Existing 6" Raw Watermain

Install 150 Feet of 16" Raw Watermain for Future Wells

Install 1,700 Feet of 16" Raw Watermain

Well 8

Existing 6" Raw Watermain

Existing 6" Raw Watermain

Install 7,700 Feet of 24" Raw Watermain for Future Public Works Site

Install 1,300 Feet of 20" Raw Watermain

Well 4

Well 3

Existing 16" Raw Watermain

Replace 3,800 feet (entire 143rd Ave NW stretch) of Existing 10" Finished Watermain with 24" Finished Watermain

Well 5

Well 6

Existing 12" Raw Watermain

Water Shop Site

Vacant Property Site

Public Works Site

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WATERMAIN - PUBLIC WORKS, WATER SHOP, OR VACANT PROPERTY SITES

Ramsey, Minnesota

Figure 3

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WTP Alternatives - Fire Station Site

Ramsey, Minneota

Figure
4



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WTP Alternatives - Public Works Site

Ramsey, Minneota

Figure 5



SEH

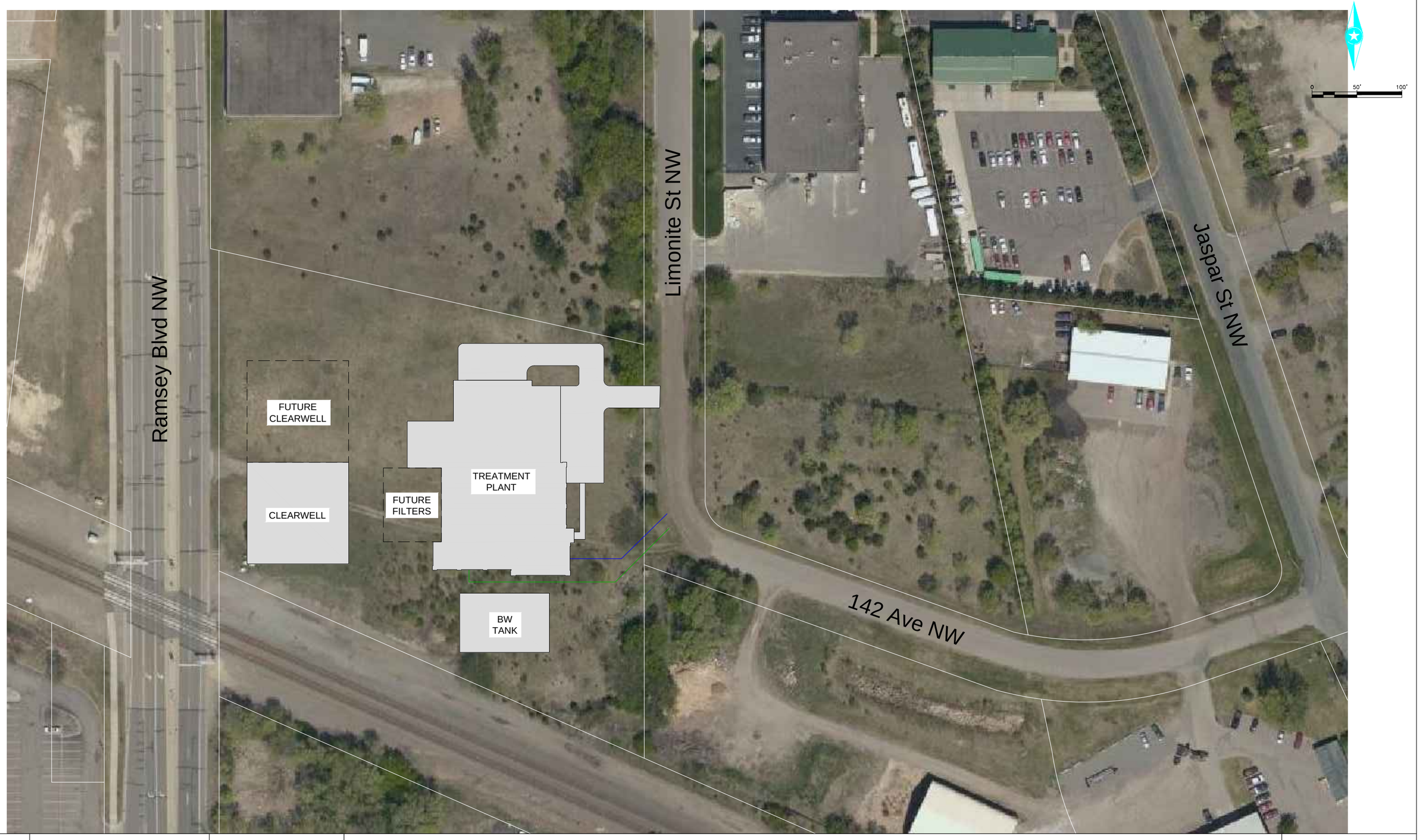
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WTP Alternatives - Water Shop Site

Ramsey, Minneota

Figure 6



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WTP Alternatives - Vacant City Property Site

Ramsey, Minneota

Figure
7

Appendix J

Capital Cost Opinions

Project Name:	**Ramsey WTP Feasibility Study**
SEH Project No:	**154354**
Date:	**March 3, 2021**
Estimator:	**MBJ**
Description:	**Alternative 1 - Concrete Gravity WTP**

DIVISION 1 - GENERAL REQUIREMENTS	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
GENERAL CONDITIONS	LUMP SUM	1	$ 2,368,955.00	$ 2,368,955.00
SUBTOTAL DIVISION 0 AND 01				*$ 2,368,955.00*
DIVISION 3 - CONCRETE	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
CAST IN PLACE CONCRETE - BACKWASH TANKS	CU YD	950	$ 1,100.00	$ 1,045,000.00
CAST IN PLACE CONCRETE - CLEARWELL	CU YD	1500	$ 1,100.00	$ 1,650,000.00
CAST IN PLACE CONCRETE - FILTERS	CU YD	1050	$ 1,100.00	$ 1,155,000.00
CAST IN PLACE CONCRETE - SLAB ON GRADE/FOOTINGS	CU YD	600	$ 900.00	$ 540,000.00
PRECAST STRUCTURAL CONCRETE - 8" PLANK	SQ FT	9800	$ 25.00	$ 245,000.00
PRECAST STRUCTURAL CONCRETE - 12" PLANK	SQ FT	12700	$ 35.00	$ 444,500.00
SUBTOTAL DIVISION 3				*$ 5,079,500.00*
DIVISION 4 - MASONRY	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
BRICK/STONE VENEER	SF	14600	$ 40.00	$ 584,000.00
CONCRETE UNIT MASONRY	SQ FT	34000	$ 35.00	$ 1,190,000.00
SUBTOTAL DIVISION 4				*$ 1,774,000.00*
DIVISION 5 - METALS	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
RAILING, ALUMINUM - WTP	LIN FT	1000	$ 115.00	$ 115,000.00
MISCELLANEOUS METALS - WTP	LUMP SUM	1	$ 200,000.00	$ 200,000.00
SUBTOTAL DIVISION 5				*$ 315,000.00*
DIVISION 6 - WOOD, PLASTICS & COMPOSITES	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
PLASTIC FABRICATIONS - FRP LADDERS	EACH	14	$ 3,000.00	$ 42,000.00
ROUGH CARPENTRY	LUMP SUM	1	$ 40,000.00	$ 40,000.00
GYPSUM DRYWALL	SF	8000	$ 4.00	$ 32,000.00
SUBTOTAL DIVISION 6				*$ 114,000.00*
DIVISION 7 - THERMAL & MOISTURE PROTECTION	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
JOINT SEALANTS	LUMP SUM	1	$ 40,000.00	$ 40,000.00
WATERPROOFING/AIR BARRIER	LUMP SUM	1	$ 200,000.00	$ 200,000.00
MEMBRANE ROOFING AND INSULATION	SF	21600	$ 25.00	$ 540,000.00
SUBTOTAL DIVISION 7				*$ 780,000.00*
DIVISION 8 - OPENINGS	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
FRP DOORS (SINGLE LEAF)	EACH	30	$ 3,300.00	$ 99,000.00
FRP DOORS (DOUBLE LEAF)	EACH	3	$ 6,600.00	$ 19,800.00
OVERHEAD DOOR - CHLORINE ROOM	EACH	1	$ 17,500.00	$ 17,500.00
ALUMINUM STOREFRONT	LUMP SUM	1	$ 260,000.00	$ 260,000.00
WINDOWS	EACH	28	$ 3,000.00	$ 84,000.00
FIRE RATED ALUM. FRAME AND GLASS	LUMP SUM	1	$ 5,000.00	$ 5,000.00
TANK HATCHES	UNIT	10	$ 3,000.00	$ 30,000.00
LOUVERS	LUMP SUM	1	$ 20,000.00	$ 20,000.00
SUBTOTAL DIVISION 8				*$ 535,300.00*
DIVISION 9 - FINISHES	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
ACOUSTICAL CEILING	SF	2000	$ 6.00	$ 12,000.00
FLOORING - TILE AND CARPET	LUMP SUM	1	$ 170,000.00	$ 170,000.00
WALL & CEILING PAINTING	SF	69000	$ 3.00	$ 207,000.00
EQUIPMENT/PROCESS PIPING PAINTING	LUMP SUM	1	$ 150,000.00	$ 150,000.00
SUBTOTAL DIVISION 9				*$ 539,000.00*
DIVISION 10 - SPECIALTIES	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
TOILET ACCESSORIES	LUMP SUM	2	$ 2,500.00	$ 5,000.00
FIRE EXTINGUISHERS	EACH	10	$ 250.00	$ 2,500.00
INTERIOR PANEL SIGNAGE	LUMP SUM	1	$ 3,000.00	$ 3,000.00
SUBTOTAL DIVISON 10				*$ 10,500.00*
DIVISION 12 - FURNISHINGS	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
METAL CASEWORK - BASE AND UPPERS	LUMP SUM	1	$ 35,000.00	$ 35,000.00

FURNITURE	LUMP SUM	1	$ 30,000.00	$ 30,000.00
SUBTOTAL DIVISION 12				*$ 65,000.00*
DIVISION 21 - FIRE SUPPRESSION	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
FIRE PROTECTION SYSTEM (WET)	LUMP SUM	1	$ 75,000.00	$ 75,000.00
SUBTOTAL DIVISION 21				*$ 75,000.00*
DIVISION 22 - PLUMBING	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
PLUMBING	LUMP SUM	1	$ 430,000.00	$ 430,000.00
SUBTOTAL DIVISION 22				*$ 430,000.00*
DIVISION 23 - HVAC	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
HVAC	LUMP SUM	1	$ 910,000.00	$ 910,000.00
SUBTOTAL DIVISION 23				*$ 910,000.00*
DIVISION 26 - ELECTRICAL	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
ELECTRICAL	LUMP SUM	1	$ 2,900,000.00	$ 2,900,000.00
SUBTOTAL DIVISION 26				*$ 2,900,000.00*
DIVISION 31 - EARTHWORK	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
CLEAR AND GRUB	ACRE	2.00	$ 10,000.00	$ 20,000.00
BUILDING EXCAVATION	CU YD	8500	$ 15.00	$ 127,500.00
CLEARWELL EXCAVATION	CU YD	8000	$ 15.00	$ 120,000.00
BACKWASH TANK	CU YD	7500	$ 15.00	$ 112,500.00
HAULING EARTH	CU YD	12000	$ 8.00	$ 96,000.00
BACKFILLING & COMPACTING	CU YD	15000	$ 25.00	$ 375,000.00
EROSION CONTROL	EACH	1	$ 30,000.00	$ 30,000.00
SUBTOTAL DIVISION 31				*$ 881,000.00*
DIVISION 32 - EXTERIOR IMPROVEMENTS	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
AGGREGATE BASE (CL 5)	CU YD	1500	$ 40.00	$ 60,000.00
BITUMINOUS PAVEMENT	TON	1300	$ 100.00	$ 130,000.00
4" CONCRETE SIDEWALK	SQ FT	4000	$ 10.00	$ 40,000.00
TOPSOIL BORROW (3" DEPTH)	CU YD	500	$ 25.00	$ 12,500.00
LANDSCAPING	LUMP SUM	1.0	$ 40,000.00	$ 40,000.00
CHAIN LIKE FENCE	LIN FT	1200	$ 90.00	$ 108,000.00
SUBTOTAL DIVISION 32				*$ 390,500.00*
DIVISION 33 - UTILITIES	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
24" RAW WATERMAIN	LIN FT	7300	$ 230	$ 1,679,000.00
24" ROAD CROSSING (RAMSEY BLVD and BUNKER LAKE BLVD) - JACKED CASING	LIN FT	400	$ 525	$ 210,000.00
24" FINISHED WATERMAIN	LIN FT	3800	$ 230	$ 874,000.00
20" RAW WATERMAIN	LIN FT	1300	$ 185	$ 240,500.00
16" RAW WATERMAIN	LIN FT	1750	$ 165	$ 288,750.00
16" RAW WATERMAIN (ARMSTRONG BLVD) - JACKED CASING	LIN FT	100	$ 425	$ 42,500.00
WELL 8 METER VAULT	LUMP SUM	1	$ 90,000	$ 90,000.00
HYDRANTS	EACH	4	$ 10,000	$ 40,000.00
SITE PROCESS PIPING	LUMP SUM	1	$ 450,000	$ 450,000.00
SANITARY SEWER	LUMP SUM	1	$ 50,000.00	$ 50,000.00
STORM SEWER	LUMP SUM	1	$ 40,000.00	$ 40,000.00
SUBTOTAL DIVISION 33				*$ 4,004,750.00*
DIVISION 40 - PROCESS INTERCONNECTIONS	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
PROCESS PIPING AND VALVES	LUMP SUM	1	$ 2,700,000.00	$ 2,700,000.00
SUBTOTAL DIVISION 40				*$ 2,700,000.00*
DIVISION 43 - PROCESS GAS & LIQUID HANDLING, PURIFICATION & STORAGE EQUI	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
HIGH SERVICE VERTICAL TURBINE PUMPS	EACH	5	$ 50,000.00	$ 250,000.00
BACKWASH VERTICAL TURBINE PUMP	EACH	1	$ 50,000.00	$ 50,000.00
MAGNETIC FLOW METERS	LUMP SUM	1	$ 80,000.00	$ 80,000.00
SUBTOTAL DIVISION 43				*$ 380,000.00*
DIVISION 44 - POLLUTION & CONTROL EQUIPMENT	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
COMPRESSED AIR SYSTEM	LUMP SUM	1	$ 16,000.00	$ 16,000.00
AIR SCOUR BLOWER	EACH	1	$ 25,000.00	$ 25,000.00
GRAVITY FILTER EQUIPMENT	LUMP SUM	1	$ 900,000.00	$ 900,000.00
LAMELLA PLATE SETTLERS	EACH	2	$ 350,000.00	$ 700,000.00
GAS CHLORINATION SYSTEM	LUMP SUM	1	$ 50,000.00	$ 50,000.00
POLYPHOSPHATE FEED EQUIPMENT	LUMP SUM	1	$ 25,000.00	$ 25,000.00

SODIUM PERMANGANATE FEED EQUIPMENT	LUMP SUM	1	$ 40,000.00	$ 40,000.00
CHEMICAL FEED PIPING	LUMP SUM	1	$ 50,000.00	$ 50,000.00
				$ 1,806,000.00
SUBTOTAL CONSTRUCTION				**$ 26,060,000.00**
CONTINGENCY			10%	$ 2,606,000.00
TOTAL CONSTRUCTION				**$ 28,670,000.00**

Project Name:	**Ramsey WTP Feasibility Study**
SEH Project No:	**154354**
Date:	**March 4, 2021**
Estimator:	**MBJ**
Description:	**Alternative 2 - Pressure Filter WTP**

DIVISION 1 - GENERAL REQUIREMENTS	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
GENERAL CONDITIONS	LUMP SUM	1	$ 2,251,435.00	$ 2,251,435.00
SUBTOTAL DIVISION 0 AND 01				*$ 2,251,435.00*
DIVISION 3 - CONCRETE	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
CAST IN PLACE CONCRETE - BACKWASH TANKS	CU YD	950	$ 1,100.00	$ 1,045,000.00
CAST IN PLACE CONCRETE - SLAB ON GRADE/FOOTINGS	CU YD	1600	$ 1,100.00	$ 1,760,000.00
PRECAST STRUCTURAL CONCRETE - 8" PLANK	SQ FT	8500	$ 25.00	$ 212,500.00
PRECAST STRUCTURAL CONCRETE - 12" PLANK	SQ FT	10300	$ 35.00	$ 360,500.00
SUBTOTAL DIVISION 3				*$ 3,378,000.00*
DIVISION 4 - MASONRY	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
BRICK/STONE VENEER	SF	12600	$ 40.00	$ 504,000.00
CONCRETE UNIT MASONRY	SQ FT	27000	$ 35.00	$ 945,000.00
SUBTOTAL DIVISION 4				*$ 1,449,000.00*
DIVISION 5 - METALS	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
MISCELLANEOUS METALS - WTP	LUMP SUM	1	$ 150,000.00	$ 150,000.00
SUBTOTAL DIVISION 5				*$ 150,000.00*
DIVISION 6 - WOOD, PLASTICS & COMPOSITES	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
PLASTIC FABRICATIONS - FRP LADDERS	EACH	6	$ 3,000.00	$ 18,000.00
ROUGH CARPENTRY	LUMP SUM	1	$ 30,000.00	$ 30,000.00
GYPSUM DRYWALL	SF	8000	$ 4.00	$ 32,000.00
SUBTOTAL DIVISION 6				*$ 80,000.00*
DIVISION 7 - THERMAL & MOISTURE PROTECTION	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
JOINT SEALANTS	LUMP SUM	1	$ 40,000.00	$ 40,000.00
WATERPROOFING/AIR BARRIER	LUMP SUM	1	$ 200,000.00	$ 200,000.00
MEMBRANE ROOFING AND INSULATION	SF	22200	$ 25.00	$ 555,000.00
SUBTOTAL DIVISION 7				*$ 795,000.00*
DIVISION 8 - OPENINGS	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
FRP DOORS (SINGLE LEAF)	EACH	26	$ 3,300.00	$ 85,800.00
FRP DOORS (DOUBLE LEAF)	EACH	3	$ 6,600.00	$ 19,800.00
OVERHEAD DOOR - CHLORINE ROOM	EACH	1	$ 17,500.00	$ 17,500.00
ALUMINUM STOREFRONT	LUMP SUM	1	$ 200,000.00	$ 200,000.00
WINDOWS	EACH	28	$ 3,000.00	$ 84,000.00
FIRE RATED ALUM. FRAME AND GLASS	LUMP SUM	1	$ 5,000.00	$ 5,000.00
TANK HATCHES	UNIT	6	$ 3,000.00	$ 18,000.00
LOUVERS	LUMP SUM	1	$ 20,000.00	$ 20,000.00
SUBTOTAL DIVISION 8				*$ 450,100.00*
DIVISION 9 - FINISHES	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
ACOUSTICAL CEILING	SF	2000	$ 6.00	$ 12,000.00
FLOORING - TILE AND CARPET	LUMP SUM	1	$ 150,000.00	$ 150,000.00
WALL & CEILING PAINTING	SF	48000	$ 3.00	$ 144,000.00
EQUIPMENT/PROCESS PIPING PAINTING	LUMP SUM	1	$ 275,000.00	$ 275,000.00
SUBTOTAL DIVISION 9				*$ 581,000.00*
DIVISION 10 - SPECIALTIES	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
TOILET ACCESSORIES	LUMP SUM	2	$ 2,500.00	$ 5,000.00
FIRE EXTINGUISHERS	EACH	10	$ 250.00	$ 2,500.00
INTERIOR PANEL SIGNAGE	LUMP SUM	1	$ 3,000.00	$ 3,000.00
SUBTOTAL DIVISON 10				*$ 10,500.00*
DIVISION 12 - FURNISHINGS	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
METAL CASEWORK - BASE AND UPPERS	LUMP SUM	1	$ 35,000.00	$ 35,000.00
FURNITURE	LUMP SUM	1	$ 30,000.00	$ 30,000.00
SUBTOTAL DIVISION 12				*$ 65,000.00*
DIVISION 21 - FIRE SUPPRESSION	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**

FIRE PROTECTION SYSTEM (WET)	LUMP SUM	1	$ 75,000.00	$ 75,000.00
SUBTOTAL DIVISION 21				*$ 75,000.00*
DIVISION 22 - PLUMBING	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
PLUMBING	LUMP SUM	1	$ 430,000.00	$ 430,000.00
SUBTOTAL DIVISION 22				*$ 430,000.00*
DIVISION 23 - HVAC	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
HVAC	LUMP SUM	1	$ 835,000.00	$ 835,000.00
SUBTOTAL DIVISION 23				*$ 835,000.00*
DIVISION 26 - ELECTRICAL	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
ELECTRICAL	LUMP SUM	1	$ 2,200,000.00	$ 2,200,000.00
SUBTOTAL DIVISION 26				*$ 2,200,000.00*
DIVISION 31 - EARTHWORK	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
CLEAR AND GRUB	ACRE	2.00	$ 10,000.00	$ 20,000.00
BUILDING EXCAVATION	CU YD	4000	$ 15.00	$ 60,000.00
BACKWASH TANK	CU YD	7500	$ 15.00	$ 112,500.00
HAULING EARTH	CU YD	4000	$ 8.00	$ 32,000.00
BACKFILLING & COMPACTING	CU YD	4000	$ 25.00	$ 100,000.00
EROSION CONTROL	EACH	1	$ 30,000.00	$ 30,000.00
SUBTOTAL DIVISION 31				*$ 354,500.00*
DIVISION 32 - EXTERIOR IMPROVEMENTS	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
AGGREGATE BASE (CL 5)	CU YD	1500	$ 40.00	$ 60,000.00
BITUMINOUS PAVEMENT	TON	1300	$ 100.00	$ 130,000.00
4" CONCRETE SIDEWALK	SQ FT	4000	$ 10.00	$ 40,000.00
TOPSOIL BORROW (3" DEPTH)	CU YD	500	$ 25.00	$ 12,500.00
LANDSCAPING	LUMP SUM	1.0	$ 40,000.00	$ 40,000.00
CHAIN LIKE FENCE	LIN FT	1200	$ 90.00	$ 108,000.00
SUBTOTAL DIVISION 32				*$ 390,500.00*
DIVISION 33 - UTILITIES	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
24" RAW WATERMAIN	LIN FT	7300	$ 230	$ 1,679,000.00
24" ROAD CROSSING (RAMSEY BLVD and BUNKER LAKE BLVD) - JACKED CASING	LIN FT	400	$ 525	$ 210,000.00
24" FINISHED WATERMAIN	LIN FT	3800	$ 230	$ 874,000.00
20" RAW WATERMAIN	LIN FT	1300	$ 185	$ 240,500.00
16" RAW WATERMAIN	LIN FT	1750	$ 165	$ 288,750.00
16" RAW WATERMAIN (ARMSTRONG BLVD) - JACKED CASING	LIN FT	100	$ 425	$ 42,500.00
WELL 8 METER VAULT	LUMP SUM	1	$ 90,000	$ 90,000.00
HYDRANTS	EACH	4	$ 10,000.00	$ 40,000.00
SITE PROCESS PIPING	LUMP SUM	1	$ 250,000.00	$ 250,000.00
SANITARY SEWER	LUMP SUM	1	$ 50,000.00	$ 50,000.00
STORM SEWER	LUMP SUM	1	$ 40,000.00	$ 40,000.00
SUBTOTAL DIVISION 33				*$ 3,804,750.00*
DIVISION 40 - PROCESS INTERCONNECTIONS	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
PROCESS PIPING AND VALVES	LUMP SUM	1	$ 2,950,000.00	$ 2,950,000.00
SUBTOTAL DIVISION 40				*$ 2,950,000.00*
DIVISION 43 - PROCESS GAS & LIQUID HANDLING, PURIFICATION & STORAGE EQUI	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
MAGNETIC FLOW METERS	LUMP SUM	1	$ 110,000.00	$ 110,000.00
SUBTOTAL DIVISION 43				*$ 110,000.00*
DIVISION 44 - POLLUTION & CONTROL EQUIPMENT	**UNIT**	**EST. QUANTITY**	**UNIT PRICE**	**AMOUNT**
COMPRESSED AIR SYSTEM	LUMP SUM	1	$ 16,000.00	$ 16,000.00
AIR SCOUR BLOWER	EACH	1	$ 25,000.00	$ 25,000.00
PRESSURE FILTER EQUIPMENT	LUMP SUM	1	$ 3,500,000.00	$ 3,500,000.00
LAMELLA PLATE SETTLERS	EACH	2	$ 350,000.00	$ 700,000.00
GAS CHLORINATION SYSTEM	LUMP SUM	1	$ 50,000.00	$ 50,000.00
POLYPHOSPHATE FEED EQUIPMENT	LUMP SUM	1	$ 25,000.00	$ 25,000.00
SODIUM PERMANGANATE FEED EQUIPMENT	LUMP SUM	1	$ 40,000.00	$ 40,000.00
CHEMICAL FEED PIPING	LUMP SUM	1	$ 50,000.00	$ 50,000.00
				$ 4,406,000.00
TOTAL CONSTRUCTION				**$ 24,766,000.00**
CONTINGENCY			10%	$ 2,477,000.00
TOTAL PROJECT				**$ 27,240,000.00**

Appendix K

Life Cycle Cost Opinions

Updated: 3-Mar-21

50 Year Life Cycle Cost Estimate
Altenative 1
Concrete Gravity Filter Water Treatment Plant, Ramsey, Minnesota

Division	Item	Capital Cost		Annual Repair Costs	Capital Cost plus Admin, Eng, etc.	Useful Life	First Replacement PW	Second Replacement PW	Third Replacement PW	Salvage Value	Salvage Value PW	Total Materials & Equipment Replacement PW
1	General	$2,368,955	9.09%	$0	$2,944,962	50	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3	Concrete	$5,079,500	19.49%	$0	$6,314,570	75	$0.00	$0.00	$0.00	$2,104,856.76	($2,104,856.76)	($2,104,856.76)
4	Masonry	$1,774,000	6.81%	$0	$2,205,345	50	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
5	Metals	$315,000	1.21%	$0	$391,592	50	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
6	Wood & Plastics	$114,000	0.44%	$0	$141,719	50	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
7	Thermal & Moisture	$780,000	2.99%	$5,000	$969,655	30	$969,655.44	$0.00	$0.00	$323,218.48	($323,218.48)	$646,436.96
8	Doors &Windows	$535,300	2.05%	$10,000	$665,457	25	$665,457.12	$0.00	$0.00	$0.00	$0.00	$665,457.12
9	Finishes	$539,000	2.07%	$5,000	$670,057	25	$670,056.77	$0.00	$0.00	$0.00	$0.00	$670,056.77
10	Specialties	$10,500	0.04%	$0	$13,053	30	$13,053.05	$0.00	$0.00	$4,351.02	($4,351.02)	$8,702.04
12	Furnishings	$65,000	0.25%	$0	$80,805	25	$80,804.62	$0.00	$0.00	$0.00	$0.00	$80,804.62
21	Fire Suppression	$75,000	0.29%	$0	$93,236	25	$93,236.10	$0.00	$0.00	$0.00	$0.00	$93,236.10
22	Plumbing	$430,000	1.65%	$0	$534,554	40	$534,553.64	$0.00	$0.00	$400,915.23	($400,915.23)	$133,638.41
23	HVAC	$910,000	3.49%	$20,000	$1,131,265	25	$1,131,264.68	$0.00	$0.00	$0.00	$0.00	$1,131,264.68
26	Electrical	$2,900,000	11.13%	$30,000	$3,605,129	25	$3,605,129.20	$0.00	$0.00	$0.00	$0.00	$3,605,129.20
31	Earthwork	$881,000	3.38%	$0	$1,095,213	50	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
32	Exterior Improvements	$390,500	1.50%	$0	$485,449	40	$485,449.29	$0.00	$0.00	$364,086.97	($364,086.97)	$121,362.32
33	Utilities	$4,004,750	15.37%	$0	$4,978,497	50	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
40	Process Piping	$2,700,000	10.36%	$10,000	$3,366,500	25	$3,366,499.60	$0.00	$0.00	$0.00	$0.00	$3,366,499.60
43	Process Pumps/Meters	$380,000	1.46%	$20,000	$472,396	30	$472,396.24	$0.00	$0.00	$157,465.41	($157,465.41)	$314,930.83
44	Process Equipment	$1,806,000	6.93%	$20,000	$2,245,125	35	$2,245,125.29	$0.00	$0.00	$1,282,928.74	($1,282,928.74)	$962,196.55
	TOTALS	$26,060,000	99.99%	$120,000	$32,400,000							$9,694,858

Inflation = 2.75%
Interest = 2.00%
Financing Years= 20

50 Year Life Cycle (Present Worth)

Capital Project Costs	$32,400,000
Equipment Replacement	$9,694,858
Labor	$6,488,398
Gas	$1,179,709
Chemicals	$6,488,398
Insurance	$1,769,563
Electricity	$6,783,325
Equip. Repair	$7,078,253
TOTAL PW	$71,880,000

20 year Annual Costs

Loan Payment Annual Equipment	$1,981,478	
Replacement	$308,522	
Labor	$110,000	
Gas	$20,000	
Chemicals	$110,000	3 mgd, 2 mg/L Cl @ $1/lb, 1 mg/L NaMnO4 @ $10/gal, 2 mg/L phosphate @ $5/gal
Insurance	$30,000	
Electricity	$115,000	Assumes 120kW 24/7 at $0.10 per kWh
Equip. Repair	$120,000	
TOTAL ANNUAL COST:	$2,795,000	

Updated: 3-Mar-21

50 Year Life Cycle Cost Estimate
Altenative 2
Pressure Filter Water Treatment Plant, Ramsey, Minnesota

Division	Item	Capital Cost		Annual Repair Costs	Capital Cost plus Contingency, Admin, Eng, etc.	Useful Life	First Replacement PW	Second Replacement PW	Third Replacement PW	Salvage Value	Salvage Value PW	Total Materials & Equipment Replacement PW
1	General	$2,251,435	9.09%	$0	$2,798,534	50	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3	Concrete	$3,378,000	13.64%	$0	$4,198,854	75	$0.00	$0.00	$0.00	$1,399,618.00	($1,399,618.00)	($1,399,618.00)
4	Masonry	$1,449,000	5.85%	$0	$1,801,107	50	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
5	Metals	$150,000	0.61%	$0	$186,450	50	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
6	Wood & Plastics	$80,000	0.32%	$0	$99,440	50	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
7	Thermal & Moisture	$795,000	3.21%	$5,000	$988,185	30	$988,185.00	$0.00	$0.00	$329,395.00	($329,395.00)	$658,790.00
8	Doors &Windows	$450,100	1.82%	$10,000	$559,474	25	$559,474.30	$0.00	$0.00	$0.00	$0.00	$559,474.30
9	Finishes	$581,000	2.35%	$10,000	$722,183	25	$722,183.00	$0.00	$0.00	$0.00	$0.00	$722,183.00
10	Specialties	$10,500	0.04%	$0	$13,052	30	$13,051.50	$0.00	$0.00	$4,350.50	($4,350.50)	$8,701.00
12	Furnishings	$65,000	0.26%	$0	$80,795	25	$80,795.00	$0.00	$0.00	$0.00	$0.00	$80,795.00
21	Fire Suppression	$75,000	0.30%	$0	$93,225	25	$93,225.00	$0.00	$0.00	$0.00	$0.00	$93,225.00
22	Plumbing	$430,000	1.74%	$0	$534,490	40	$534,490.00	$0.00	$0.00	$400,867.50	($400,867.50)	$133,622.50
23	HVAC	$835,000	3.37%	$20,000	$1,037,905	25	$1,037,905.00	$0.00	$0.00	$0.00	$0.00	$1,037,905.00
26	Electrical	$2,200,000	8.88%	$30,000	$2,734,600	25	$2,734,600.00	$0.00	$0.00	$0.00	$0.00	$2,734,600.00
31	Earthwork	$354,500	1.43%	$0	$440,644	50	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
32	Exterior Improvements	$390,500	1.58%	$0	$485,392	40	$485,391.50	$0.00	$0.00	$364,043.63	($364,043.63)	$121,347.88
33	Utilities	$3,804,750	15.36%	$0	$4,729,304	50	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
40	Process Piping	$2,950,000	11.91%	$10,000	$3,666,850	25	$3,666,850.00	$0.00	$0.00	$0.00	$0.00	$3,666,850.00
43	Process Pumps/Meters	$110,000	0.44%	$5,000	$136,730	30	$136,730.00	$0.00	$0.00	$45,576.67	($45,576.67)	$91,153.33
44	Process Equipment	$4,406,000	17.79%	$75,000	$5,476,658	25	$5,476,658.00	$0.00	$0.00	$0.00	$0.00	$5,476,658.00
	TOTALS	$24,766,000	100.00%	$165,000	$30,780,000							$13,985,687

Inflation = 2.75%
Interest = 2.00%
Financing Years= 20

50 Year Life Cycle (Present Worth)

Capital Project Costs	$30,780,000	
Equipment Replacement	$13,985,687	
Labor	$6,488,398	
Gas	$1,179,709	
Chemicals	$6,488,398	
Insurance	$589,854	
Electricity	$6,193,471	
Equip. Repair	$9,732,597	
TOTAL PW	$75,440,000	

20 year Annual Costs

Loan Payment Annual Equipment	$1,882,404	
Replacement	$445,069	
Labor	$110,000	
Gas	$20,000	
Chemicals	$110,000	3 mgd, 2 mg/L Cl @ $1/lb, 1 mg/L NaMnO4 @ $10/gal, 2 mg/L phosphate @ $5/gal
Insurance	$10,000	
Electricity	$105,000	Assumes 120kW 24/7 at $0.10 per kWh
Equip. Repair	$165,000	
TOTAL ANNUAL COST:	$2,847,000	

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CC Work Session **3. 1.**

Meeting Date: 09/13/2022

Information

Title:

Review Future Topics/Calendar

Purpose/Background:

Attached is the current list of future topics for work session discussion. Items are drawn from Council requests at meetings, or are related to topics that have been identified in the City's strategic plan. Tentative dates have been assigned.

Timeframe:

Funding Source:

Responsible Party(ies):

Outcome:

For Council review - no formal action necessary.

Attachments

Future Topics List

Form Review

Inbox	Reviewed By	Date
Brian Hagen	Brian Hagen	09/07/2022 08:32 PM
Form Started By: Katie Schmidt		Started On: 09/07/2022 09:49 AM
Final Approval Date: 09/07/2022		

Mayor/Council/Staff Input

Row #		***Tentative City Council Future Work Session Topics***	
	Proposed Date	Topic	Minutes (Estimate)
	2022		
	Sept 27	Discuss Future Options for Happy Days – Staff	15
	Sept 27	Presbyterian Homes Presentation	30
	October 25	Rates and Charges/Capital Improvement	30
	October 25	Draft Trail Maintenance Policy – Westby	30
	October 25	Draft Stormwater Pond Maintenance Policy – Westby	30
	Nov 7	Continuation Budget/Levy	45
	Nov 22	Communication's Update Q2 – Staff	15
	TBD	Review Ordinance Requirements for Trash and Recycling Container Screening - TBD	TBD
	TBD	Recycling Report (trends, costs, programs)	10
	TBD	Highway 10 Ramsey Contribution Costs - Hagen	TBD
	TBD	Rental Property Ordinance - Hagen	30
	TBD	Review procedure/policy/best practice for introduction of resolutions/proclamations – Staff	20
	TBD	Review Charter Commission Recommendations on Election Chapter 4 - Staff	
	TBD	Discuss Council and B/C Remote Meetings Policy - Staff	15
	TBD	Discuss Updating the Employee Telecommuting Policy- Staff	20