

Public Utility Board Agenda Rochester Boards & Commissions - Public Utility Board August 29, 2023 4:00 p.m.

Attending and Viewing the Meeting

Attend in-person at 4000 E River Rd NE, RPU Community Room, Rochester, MN or via MS Teams. Call in audio only number: 347-352-4853 Conference ID: 929 254 416# A recording is made available after the meeting at the City's website.

Call to Order/Roll Call

- 1. Approval of Agenda
- 2. Safety Moment
- 3. Consent Agenda
 - **3.A.** Minutes of the Rochester Public Utility Board Meeting of July 25, 2023 Approve the minutes and video of the July 25, 2023 meeting of the Rochester Public Utility (RPU) Board.

3.B. Review of Accounts Payable

Review the list of consolidated and summarized transactions for 07/13/2023 to 08/09/2023 in the total amount of \$14,141,074.94.

Open Public Comment Period

This agenda section is for the purpose of allowing citizens to address the Utility Board. Comments are limited to 4 minutes, total comment period limited to 15 minutes. Any speakers not having the opportunity to be heard will be the first to present at the next Board meeting.

4. Regular Agenda

4.A. Adoption of RPU's DNR Water Supply Plan

Adopt RPU's approved DNR Water Supply Plan.

5. Board Policy Review

5.A. RPU Index of Board Policies

Review the Index of Board Policies to summarize progress on policy updates and determine future policy review items.

- **5.B. Board Policy 2. Responsibilities and Functions** Review and receive comments on the revised policy.
- 6. General Managers Report
- 7. Division Reports & Metrics

7.A. Division Reports & Metrics - August 2023 Review the reports from each of RPU's five divisions: Core Services, Compliance and Public Affairs, Power Resources, Customer Relations and Corporate Services.

- 8. Other Business
- 9. Adjournment



REQUEST FOR ACTION

Minutes of the Rochester Public Utility Board Meeting of July 25, 2023

MEETING DATE: August 29, 2023 ORIGINATING DEPT: Rochester Public Utilities

AGENDA SECTION: Consent Agenda PRESENTER: Tim McCollough

Action Requested:

Approve the minutes and video of the July 25, 2023 meeting of the Rochester Public Utility (RPU) Board.

Report Narrative:

Official minutes of the RPU Board are published in accordance with Open Meeting Law, capturing the official record of the RPU Board.

Policy Considerations & DEI Impact:

Minutes and video of the appointed boards of the City provide access and transparency to RPU systems, processes, and decision making conversations. This promotes the City's values and comports with State law.

Prior Legislative Actions & Community Engagement:

Minutes of the previous RPU Board meeting are generated monthly.

Fiscal & Resource Impact:

No fiscal impact of publishing minutes.

Prepared By:

Christina Bailey

Attachments:

20230725 Minutes.pdf



CITY OF ROCHESTER, MINNESOTA Public Utility Board MINUTES

Attending and Viewing the Meeting

Call to Order/Roll Call

Attendee Name	Status
Melissa Graner Johnson	Present
Brian Morgan	Present
Tim Haskin	Present
Brett Gorden	Present
Patrick Keane	Present

1) <u>Approval of Agenda</u>

Motion to approve the agenda

MOVER:	Brian Morgan
SECONDER:	Tim Haskin
AYES:	Melissa Graner Johnson, Brian Morgan, Tim Haskin, Brett
	Gorden, Patrick Keane
RESULT:	APPROVED [UNANIMOUS]

2) <u>Recognition: Mark Kotschevar</u>

2.A) Recognition of Mark Kotschevar

Official Act: The Board and staff of Rochester Public Utilities wishes to recognize General Manager Mark Kotschevar for his 42 years of service to the utility upon his retirement.

Cover Page 🦘

20230725 Resolution - Recognition of Mark Kotschevar.docx

President Johnson, Peter Hogan and Alison Zelms gave short presentations to the Board.

Motion to officially recognize Mark Kotschevar

MOVER:	Patrick Keane Brett Gorden
AYES:	Melissa Graner Johnson, Brian Morgan, Tim Haskin, Brett
	Gorden, Patrick Keane
RESULT:	APPROVED [UNANIMOUS]

3) <u>Safety Moment</u>

Manager of Portfolio Optimization Dirk Bierbaum gave a presentation to the Board.

4) <u>Consent Agenda</u>

4.A) Minutes of the Rochester Public Utility Board Meeting of June 27, 2023

Official Act: Approve the minutes and video of the June 27, 2023 meeting of the Rochester Public Utility (RPU) Board.

Cover Page 🦠

20230627 Minutes.pdf 🦘

4.B) Review of Accounts Payable

Official Act: Review the list of consolidated and summarized transactions for 06/09/2023 to 07/12/2023 in the total amount of \$14,700,041.28.

Cover Page Sol

AP Board List Current Month.pdf 🤝

4.C) Truck Purchases

Official Act: Approve a resolution to spend up to \$620,000 for budgeted replacement pick-up trucks in 2023.

Cover Page 🤝

20230725 Resolution - Truck Purchases.docx

4.D) Contract Award: Water Main and Street Reconstruction - Project #2023-09

Official Act: Adopting a Resolution authorizing an agreement with SL Contracting Inc. in the amount of \$449,927.94 for the Water Main and Street Reconstruction along 16 1/2 St NW, plus 10% contingency, for a total of \$494,920.73. Approval of this action also authorizes the RPU Project Manager to perform the acts to execute the project.

<u>Cover Page</u> S

Draft Agreement - Water Main Reconstruction (16 1/2 St NW)

Bid Tab Water Main Reconstruction (16 1/2 ST NW)

20230725 Resolution - Contract Award - Water Main and Street Reconstruction.docx S

4.E) Member representative appointment to the Southern Minnesota Municipal Power Agency

Official Act: Adopt the resolution appointing Tim McCollough as the Member Representative.

<u>Cover Page</u> S

Change of Member Rep 🦘

Resolution - Member Rep Solution

4.F) Authorized delegated representative for Minnesota Municipal Utilities Association

Official Act: Adopt a resolution delegating Tim McCollough as the authorized representative for voting matters that come before the membership of the Minnesota Municipal Utilities Association (MMUA).

<u>Cover Page</u> S

MMUA Delegate Appointment Solution

Resolution - MMUA Delegated Representative Solution

Motion to approve the consent items in block 4.A.-4.F.

MOVER:	Patrick Keane
SECONDER:	Tim Haskin
AYES:	Melissa Graner Johnson, Brian Morgan, Tim Haskin, Brett
	Gorden, Patrick Keane
RESULT:	APPROVED [UNANIMOUS]

Open Public Comment Period

The open comment period was opened. Having no persons wishing to speak, the open comment period was closed.

5) Regular Agenda

5.A) 2023-2025 IBEW, Outside Group, Collective Bargaining Agreement

Official Act: Approve the 2023-2025 IBEW, Outside Group, Collective Bargaining Agreement.

<u>Cover Page</u> Solution

Summary of Contract Changes.docx

20230725 RESOLUTION - 2023-2025 IBEW Outside Group Collective Bargaining Agreement.docx

Motion to approve the 2023-2025 IBEW, Outside Group, Collective Bargaining Agreement

MOVER:	Brian Morgan
SECONDER:	Patrick Keane
AYES:	Melissa Graner Johnson, Brian Morgan, Tim Haskin, Brett
	Gorden, Patrick Keane
RESULT:	APPROVED [UNANIMOUS]

Labor Relations Manager Tim Comstock gave a presentation to the Board.

6) Informational

6.A) <u>2022 Water Engineering, Operations and Environmental Report</u>

Official Act: Staff will present the 2022 Engineering, Operations and Environmental Report highlighting the major accomplishments and performance statistics that reflect the work of the water utility for the last year. No action requested, informational only.

Cover Page S

Senior Water Civil Engineer Luke Payne and Environmental and Regulatory Affairs Coordinator Todd Osweiler gave presentations to the Board.

7) <u>Board Policy Review</u>

7.A) RPU Index of Board Policies

Official Act: Review the Index of Board Policies to summarize progress on policy updates and determine future policy review items.

Cover Page Sol

Index of Board Policies-revised.xlsx 🦘

8) <u>General Managers Report</u>

General Manager Mark Kotschevar gave a presentation to the Board.

9) <u>Division Reports & Metrics</u>

9.A) Division Reports & Metrics

Official Act: Review the reports from each of RPU's five divisions: Core Services, Compliance and Public Affairs, Power Resources, Customer Relations and Corporate Services.

<u>Cover Page</u> S

Division Reports July 2023.pdf Solution

10) <u>Other Business</u>

11) <u>Adjournment</u>

Motion to adjourn

MOVER: SECONDER:	Patrick Keane Brian Morgan
AYES:	Melissa Graner Johnson, Brian Morgan, Tim Haskin, Brett
	Gorden, Patrick Keane
RESULT:	APPROVED [UNANIMOUS]



REQUEST FOR ACTION

Review of Accounts Payable

MEETING DATE: August 29, 2023

AGENDA SECTION:

Consent Agenda

ORIGINATING DEPT: Rochester Public Utilities

PRESENTER: Tim McCollough

Action Requested:

Review the list of consolidated and summarized transactions for 07/13/2023 to 08/09/2023 in the total amount of \$14,141,074.94.

Report Narrative:

Reference the detailed Rochester Public Utilities A/P Board Listing by Dollar Range Report (attached).

Policy Considerations & DEI Impact:

This item is in compliance with Minnesota statute 412.271 requiring all claims to be reviewed by boards and councils.

Fiscal & Resource Impact:

This is for payment of previously approved amounts, through budget or other Board action.

Prepared By:

Christina Bailey

Attachments:

AP Board List Current Month.pdf

A/P Board Listing By Dollar Range

For 07/13/2023 To 08/09/2023

Consolidated & Summarized Below 1,000

Greater than 50,000 :

1	SOUTHERN MN MUNICIPAL POWER A	July SMMPA Bill	9,329,373.65
2	MN DEPT OF REVENUE	June Sales & Use Tax	905,507.90
3	CONSTELLATION NEWENERGY-GAS D	June Gas - Cascade Creek	296,451.32
4	CONSTELLATION NEWENERGY-GAS D	July Gas - Cascade Creek	269,075.86
5	CONSTELLATION NEWENERGY-GAS D	July Gas - WES	242,298.36
6	THE ENERGY AUTHORITY INC	July Transmission	223,000.54
7	KEY BUILDERS INC	A-Wing Renovation	186,876.20
8	CONSTELLATION NEWENERGY-GAS D	June Gas - SLP	181,633.57
9	ECHO SOLAR 2022 HOLDCO LLC	July Solar Services	161,123.21
10	TSE INTERNATIONAL INC	1EA-Trailer Mounted Underground Puller	149,981.00
11	CARL BOLANDER & SONS LLC	Marion Rd Sub Grading, Excavation, Fence	147.212.00
12	IRBY UTILITIES dba	1280EA-Cutout, 15KV, 100A, NLB, Poly	141.056.00
13	POWELL ELECTRICAL SYSTEMS INC	RPL Breaker Proj: 20%Ord 30%Draw 30%Rel Manu	132,523,20
14	CROWN TECHNICAL SYSTEMS	Switchgear	88,585,50
15	ADAMSON MOTORS INC	2023 Dodge 5500 Reg Cab Chassis (V740)	72,843,43
16	KEY BUILDERS INC	Construction of Well House #42	65 757 10
17	ASPLUNDH TREE EXPERTING	2023 Hourly Tree Trimming	62 863 56
18		10000FT-Wire AL 600V 350-4/0 NELLYS T	62,000.00
10		16397ET-Wire, AL, 15kV, 1/0 Solid, 1/C	57 077 96
20	PAYMENTUS CORPORATION	lune Electronic Bill Payment Services	55 251 84
20		2022-23 Directional Boring	53 655 75
21		2022-20 Directional Bonnig	00,000.70
22		Prico Pango Total:	12 884 377 05
23		The Range Total.	12,004,077.00
24			
25	<u>5,000 to 50,000 .</u>		
20	RESCO	2EA Switch BM Air 3ph 3 600SW/1 200E	13 536 09
21		SLS Pomovo PR Tracks and Grading Project	40,000,00
20		SLS Remove RR Hacks and Grading Floject	40,900.00
29			21 025 60
30	PEOPLES ENERGY COOPERATIVE (P	July Compensable	31,025.09
31	DADGER METER INC (P)	SAD Support 7/1 12/21/2022	24,075.04
32		AP Support 7/1-12/31/2023	24,500.00
33		1EQT-Communication Cables	23,747.82
34		TEA-TTANS, PM, 3pn, 300KVA, 13.8/8, 208	23,568.00
35		JUIY FUEL	23,264.57
36			21,320.88
37		6000FT-Conduit, HDPE, 4", SDR 13.5, Empt	21,240.00
38		12EA-Metal Sec. Encl,3ph,30" x 67" x 22"	19,680.00
39	MOODYS INVESTORS SERVICE INC	Annual Bond Rating Agency Fee	19,500.00
40		CIP-Lighting (C&I)-Incentives/Rebates	17,977.00
41	USIC HOLDINGS INC	July 2023 Locating Services	17,647.85
42	KANTOLA CONSULTING	AMI MDM; AMI Implem Srvs; RPU Prog Chgs	17,270.00
43	DAKOTA SUPPLY GROUP-ACH	3000FT-Wire, 12 ga, 600V 12/C Control C	15,774.08
44	VISION COMPANIES LLC (P)	Employee Development	15,750.00
45	MN MUNICIPAL UTILITIES ASSN C	MMUA Legal & Legislative Contribution	15,000.00
46	CENTURYLINK (P)	2023 Monthly Telecommunications	14,120.58
47	EPLUS TECHNOLOGY INC	10EA-10GBASE-LR SFP MODULE,#ENTERPRISE-C	13,891.90
48	CRESCENT ELECTRIC SUPPLY CO	3000FT-Wire, 6 ga, 600V 3/C Control CB	13,825.35
49	ROCHESTER MUNICIPAL PARKING	CIP-Lighting (C&I)-Incentives/Rebates	12,492.47
50	RESCO	1EA-Transformer-Rated Site Tester	12,275.00

A/P Board Listing By Dollar Range

For 07/13/2023 To 08/09/2023

Consolidated & Summarized Below 1,000

51	IRBY UTILITIES dba	1EA-Trans, PM, 3ph, 150kVA, 13.8/8, 208	12,198.00
52	CRESCENT ELECTRIC SUPPLY CO	5000FT-Wire, 10 ga, 600V 4/C Control CB	11,730.60
53	CRESCENT ELECTRIC SUPPLY CO	4000FT-Wire, 12 ga, 600V 7/C Control CB	11,500.18
54	SOLID WASTE OLMSTED COUNTY	June - Electricity Purchased by RPU	11,426.86
55	ADVANTAGE DIST LLC (P)	5214GAL-Urea 32, WES	11,210.10
56	VIRTUAL PEAKER INC	Distributed Energy Platform Services	10,602.00
57	KIMLEY HORN AND ASSOCIATES IN	Professional Services-Wetland Delineation	10,500.00
58	RDO EQUIPMENT COMPANY (P)	1EA-Towmaster Trailer 2023 T739	10,326.50
59	CHS ROCHESTER	3201GAL-Fuel Oil, IBM Gen-Set	10,147.17
60	PEACE UNITED CHURCH OF CHRIST	CIP-Lighting (C&I)-Incentives/Rebates	10,051.90
61	IRBY UTILITIES dba	1EA-Trans, PM, 3ph, 75kVA, 13.8/8, 208	9,953.00
62	AUGER RACK LLC	1EA-Digger Derrick Auger Rack w/Platform	8,983.00
63	ELEMENTAL AIR LLC	RATA and Emissions Testing 2023	8,626.00
64	EPLUS TECHNOLOGY INC	2EA-CATALYST 9200L 48-PORT POE+	8,536.68
65	VERIZON WIRELESS	2023 Cell & IPad Monthly Service	8.375.39
66	TRAUT COMPANIES	Redevelopment of Monitoring Wells	8.070.00
67	RSP ARCHITECTS LTD.	Office Artwork Consultant	7,872.00
68	HAWKINS INC	2023 Chlorine Gas	7.843.50
69	CRESCENT ELECTRIC SUPPLY CO	5000FT-Wire, 12 ga, 600V 4/C Control CB	7.829.13
70	BORDER STATES ELECTRIC SUPPLY	12EA-Junction, NLB, 600A, 4-Position, w/	7.696.32
71	RESCO	1EA-Portable Wireless Wh Meter Tester	7.595.00
72	EXPRESS SERVICES INC	2023 Temp Staff Marketing (2)	7.144.22
73	MITSUBISHI ELECTRIC POWER PRO	Installation and Removal of Batteries	6,783.02
74	KATS EXCAVATING LLC	SA Water, Lead Service Replacement	6.750.00
75	SCHEELS	CIP-Lighting (C&I)-Incentives/Rebates	6.448.00
76	SHI INTERNATIONAL CORP (P)	23-24 KACE Systems Management	6.424.42
77	CITY OF ROCHESTER	MN Dept Labor & Industry-2023-1st 1/2 SCF	6.361.81
78	SANS INSTITUTE dba	Annual CIP User Training	6,350,00
79	SCHMIDT GOODMAN OFFICE PRODUC	1LOT-Tables/Chairs Ottertail Conf Rm	6.338.82
80	IDEXX DISTRIBUTION CORP	4CAS-Chem. Colilert. 100ml	6.321.33
81	HATHAWAY TREE SERVICE INC	Brush Dump	6.300.00
82	HAWKINS INC	496GAL-2023 Carus 8500	5,999,42
83	MINNESOTA ENERGY RESOURCES CO	June Gas - Cascade Creek	5.890.40
84	PILLAI SOPHIA	Customer Refunds 19471	5.850.28
85	TWIN CITY SECURITY INC	2023 Security Services	5,509,64
86	BORDER STATES ELECTRIC SUPPLY	20EA-Fault Indicator, Underground, Small	5.133.40
87	HAWKINS INC	10048.5LB-2023 Hydrofluosilicic Acid	5.129.76
88	CITY OF ROCHESTER	Workers Compensation Payments	5.056.97
89			0,000101
90		Price Range Total:	821,608,03
91			0_1,000100
02	1 000 to 5 000 ·		
92 02	1,000 10 0,000 .		
93		BI Training for IS Team	1 816 13
94 05		Di Training foi io reant Duller Pope	4,810.43
90 90		Workers Compensation Payments	4,779.00
30 07		Concrete Street Renair for Water Main Break	4,070.10
91 02	PAADE ENERGY SEDVICE INC	BAS Software Undate	4,040.00
90 90		36FA-Batteries 000 002 503	4,027.09
JJ 100		11 OT-Shon Supply Pipe Fittings	4,000.00
100		Claim Settlement	4,002.44
102	WHITE SPACE LLC NEIGHBORI Y CR	2023 Plugged In Design	4 500 00
102			-,000.00

11

A/P Board Listing By Dollar Range

For 07/13/2023 To 08/09/2023

Consolidated & Summarized Below 1,000

103	PREMIER ELECTRICAL CORP dba	Dryer Installation - Materials & Labor	4,369.05
104	EPLUS TECHNOLOGY INC	2EA-1KW AC CONFIG 5 POWER SUPPLY -	4,233.20
105	MASTEC NORTH AMERICA INC	2023 Joint Trench Directional Boring	4,125.50
106	ELEVATE MARKETING SOLUTIONS L	July 2023 Advertising	4,105.00
107	MAYO FOUNDATION	CIP-Custom (C&I)-Incentives/Rebates	4,058.51
108	KEY BUILDERS INC	Wall Repair-Replaced Damaged Masonry Wall	4,039.88
109	MITSUBISHI ELECTRIC POWER PRO	48EA-Batteries 900.002.592	4.032.00
110	KAAL TV LLC	July "Water Shut Off" Communication Spot	4.000.00
111	INSPEC INC.	2022-27 Electric Pavement Assessment	4.000.00
112	KROC FM/AM	July Ads-Water Shut Off Tips from Tony	3 999 00
113	IHEART MEDIA dba	July Advertising-Partnering Energy Solutions	3 998 00
114	DAKOTA SUPPLY GROUP-ACH	15FA-Filter Mini-Pleat 20 x 20 x 4 AH	3 949 78
115	IRBY UTILITIES dba	2023 Rubber Goods Testing & Replacement	3 948 76
116	CONSOLIDATED COMMUNICATIONS d	July 2023 Network and Co-Location Services	3 895 96
117		Water Main Break Repair	3 850 00
110		12EA-Elbow /" Rigid Steel 36 Radius	3 822 00
110	MINNESOTA ENERGY RESOURCES CO	lune Gas - SLP	3 761 96
120		6500ET Wire 18 ga 600V 7/C Control CB	3,642,25
120		Bomoval Disposal of Ashastas Insulators	3,042.25
121		12EA Fault Indicator, Overhead	3,000.00
122		Welesme Cuide Beeklete	3,499.32
123		2022 Technical Support Services	3,449.93
124		2023 Technical Support Services	3,217.50
125		2500FT-Wire, 10 ga, 600V 2/C Chtri CB E	3,142.13
126		CIP-Cooling Eq. (C&I)-Incentives/Rebates	3,071.80
127	MN DEPT OF PUBLIC SAFETY ERC	Chlorine Storage Fees 2023	3,000.00
128	METROPOLITAN MECHANCIAL CONTR	Replace Water Softner	2,970.06
129	VIKING ELECTRIC SUPPLY (P)	600EA-Conn, CRP SL, #4-2/0 CU Only	2,955.00
130	SCHMIDT GOODMAN OFFICE PRODUC	Task Lighting	2,946.84
131	RESCO	50EA-Arrester, 10kV, Dist, OH MOV	2,891.50
132	US BANK PURCHASING CARD	Microsoft Server Management	2,838.28
133	BORDER STATES ELECTRIC SUPPLY	5000EA-Meter Seal, Yellow Padlock	2,778.75
134	LRS OF MINNESOTA LLC	2023 Waste Removal SC	2,747.91
135	WESCO DISTRIBUTION INC	15EA-Bushing, Feed-Thru, 15kV, 200A, LB	2,740.50
136	KFI ENGINEERS	Engineering Services UPS	2,730.50
137	ROCHESTER DEVELOPMENT INC	CIP-Lighting (C&I)-Incentives/Rebates	2,497.50
138	MAVO SYSTEMS INC (P)	Asbestos Removal U2 Building Heat Statio	2,427.60
139	TSE INTERNATIONAL INC	P710 - 2022 Underground Wire Puller	2,412.23
140	FORBROOK LANDSCAPING SERVICES	Watermain Break Repair Site Restoration	2,287.94
141	RESCO	10EA-Pedestal Cover, Old Style, FG	2,272.20
142	ONLINE INFORMATION SERVICES I	2023 Utility Exchange Report	2,261.44
143	CRESCENT ELECTRIC SUPPLY CO	7EA-Elbow, 4", Rigid Steel, 36 Radius, 9	2,229.50
144	THE PROW COMPANY	CIP-Lighting (C&I)-Incentives/Rebates	2,209.00
145	EPLUS TECHNOLOGY INC	3EA-CATALYST 1000 8PORT GE, FULL POE,	2,169.51
146	CREDIT MANAGEMENT LP	June 2023 Third Party Collections	2,115.76
147	FRANKLIN HEATING STATION	CIP-Lighting (C&I)-Incentives/Rebates	2,070.50
148	CDW GOVERNMENT INC	2EA-Desktop Scanner	2,068.01
149	BOWMANS DOOR SOLUTIONS	Automatic Door Openers	2,006.26
150	BADGER METER INC (P)	6EA-HRE T-2000 LCD 4-20 Encoder (RET)	1.979.22
151	CITY OF ROCHESTER	Relocation Expenses - Tim McCollough	1.957.12
152	SHORT ELLIOTT HENDRICKSON INC	Foundation Design - Prefab Com Building	1.860.00
153	VERIZON CONNECT NWF INC	June 2023 - GPS Fleet Tracking	1.855.89
154	MOTION INDUSTRIES INC	2EA-Filter, Desiccant, Lube Oil Breather	1,654.38
			1,001.00

A/P Board Listing By Dollar Range

For 07/13/2023 To 08/09/2023

Consolidated & Summarized Below 1,000

155	FLEETPRIDE INC	Air Compressor	1.667.95
156	SOMA CONSTRUCTION INC	Rock for Water Main Break Repairs	1,637.95
157	CRESCENT ELECTRIC SUPPLY CO	3150FT-Wire, Copper, #6 SD Solid, Bare	1,620.67
158	HENRY DANIEL G	CIP-AirSrc Heat Pumps-Incentives/Rebates	1,613.00
159	EPLUS TECHNOLOGY INC	2EA-CISCO CATALYST 9200L STACK MODULE	1,604.66
160	KEY BUILDERS INC	Contract Retention - Well #42 PO# 11905	1,604.25
161	AUGER RACK LLC	Alloc - T&D Equipment Upgr/Repl - 2023	1,603.13
162	LANGUAGE LINE SERVICES INC	June 2023 Phone Interpretation Services	1,590.99
163	BARR ENGINEERING COMPANY (P)	Water Quality Database Project	1,583.50
164	WESCO DISTRIBUTION INC	110EA-Conn, Lug, #1-1/0 Solid CU/AL For	1,551.00
165	CORPORATE WEB SERVICES INC	2023 Website Services	1,532.04
166	BORDER STATES ELECTRIC SUPPLY	17EA-Arrester, 10kV, Dist, Elbow MOV	1,457.07
167	US BANK PURCHASING CARD	PMI Conference, Registration-Steve Monson	1,350.00
168	MIDCONTINENT ISO INC	July MISO Fees	1,346.23
169	THE PROW COMPANY INC	Customer Refunds 19553	1,324.06
170	RESCO	1EA-Flexible Rogowski Coil Cable	1,315.00
171	U S A SAFETY SUPPLY	8EA-Raincoat, Large, Lime, Flame Retardant	1,302.32
172	CLARK CONCRETE INC	Replace Sidewalk	1,300.00
173	TRIPWIRE INC FORTRA	Professional Services Travel & Expense	1,294.44
174	CITY OF ROCHESTER	Workers Compensation Fees - May 2023	1,282.00
175	CITY OF ROCHESTER	Workers Comp Admin Fees - June 2023	1,282.00
176	SCHEELS	CIP-HVAC Tune-up Progrm-Incntivs/Rebates	1,280.00
177	U S A SAFETY SUPPLY	24PR-Gloves, Leather Work, Lite Duty, Large	1,274.55
178	AUTOMATIONDIRECT.COM	3EA-PLC,205 Data Comm. Unit Enclosure	1,269.00
179	FIRST CLASS PLUMBING & HEATIN	SA Water, Repaired Leaking Copper Pipe Fitting	1,253.50
180	STRUVES PAINT & DECORATING (P	16EA-Paint, Orange Hydrant, 1 Gallon	1,248.00
181	WSB & ASSOCIATES	Surveying Services	1,231.50
182	CRESCENT ELECTRIC SUPPLY CO	10EA-Elbow, Steel, 36deg Radius, 2"	1,225.01
183	NATIONWIDE DI WATER SOLUTIONS	4EA-DI Vessels, Mixed Bed, CC	1,200.00
184	US BANK PURCHASING CARD	PMA Utility Finance Online Training-Abe Luhman	1,195.00
185	OPEN ACCESS TECHNOLOGY	August 2023 Tag Agent, webSmart	1,169.79
186	BORDER STATES ELECTRIC SUPPLY	9BOX-Washer, Flat, 4" x 4", 13/16" Hole	1,130.20
187	MOORE RYAN	Travel,ESRI Conf,San Diego,CA-Lodging	1,124.64
188	WESCO DISTRIBUTION INC	15EA-Terminator, Stress Cone, 1/0-4/0, C	1,114.05
189	WESCO DISTRIBUTION INC	300EA-Conn, CRP SL, #4-2/0 CU Only	1,104.00
190	ROCHESTER ARMORED CAR CO INC	July 2023 Pick Up Services	1,087.43
191	HOGAN PETER	Travel, APPA Conference, Seattle WA-Lodging	1,070.67
192	US BANK PURCHASING CARD	K.Boston,Travel, APPA, Seattle WA-Lodging	1,070.67
193	CRESCENT ELECTRIC SUPPLY CO	12EA-Splice, 15kV, #2 - 1/0 Str	1,058.40
194	CORE & MAIN LP (P)	2EA-Coupling, 6" Romac Alpha Trans Restr	1,039.46
195	BORDER STATES ELECTRIC SUPPLY	91EA-Conn, Lug, #1-1/0 Solid CU/AL For E	1,024.66
196			
197		Price Range Total:	254,494.98
198			
199	<u>0 to 1,000 :</u>		
200			
201	REBATES	Summarized transactions: 97	29,117.75
202	Customer Refunds (CIS)	Summarized transactions: 105	12,391.72
203	US BANK PURCHASING CARD	Summarized transactions: 53	10,089.80
204	FIRST CLASS PLUMBING & HEATIN	Summarized transactions: 23	9,409.01
205	VIKING ELECTRIC SUPPLY (P)	Summarized transactions: 84	8,623.72
206	CITY LAUNDERING COMPANY	Summarized transactions: 36	7.146.47

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A/P Board Listing By Dollar Range

For 07/13/2023 To 08/09/2023

Consolidated & Summarized Below 1,000

207	RESCO	Summarized transactions: 24	6,650.19
208	BORDER STATES ELECTRIC SUPPLY	Summarized transactions: 32	5,349.07
209	CRESCENT ELECTRIC SUPPLY CO	Summarized transactions: 39	4,126.65
210	EPLUS TECHNOLOGY INC	Summarized transactions: 8	3,510.65
211	ALLEGRA OF ROCHESTER LLC	Summarized transactions: 15	3,497.37
212	LAWSON PRODUCTS INC (P)	Summarized transactions: 9	3,195.48
213	U S A SAFETY SUPPLY	Summarized transactions: 21	2,801.29
214	WESCO DISTRIBUTION INC	Summarized transactions: 8	2,547.36
215	IRBY UTILITIES dba	Summarized transactions: 9	2,490.18
216	CENTURYLINK (P)	Summarized transactions: 6	2,255.38
217	ARCHKEY TECHNOLOGIES dba	Summarized transactions: 5	2,061.27
218	CORE & MAIN LP (P)	Summarized transactions: 5	1,712.71
219	HOGAN PETER	Summarized transactions: 11	1,704.63
220	BADGER METER INC (P)	Summarized transactions: 6	1,587.61
221	FORBROOK LANDSCAPING SERVICES	Summarized transactions: 2	1,510.00
222	HAWKINS INC	Summarized transactions: 4	1.487.95
223	CHOSEN VALLEY TESTING	Summarized transactions: 3	1.362.50
224	MITSUBISHI ELECTRIC POWER PRO	Summarized transactions: 3	1,245,94
225	FASTENAL COMPANY	Summarized transactions: 13	1,234,44
226	DAKOTA SUPPLY GROUP-ACH	Summarized transactions: 10	1 230 25
227	FIRST SUPPLY (P)	Summarized transactions: 7	1 211 46
228	ROCHESTER DRAIN RITE	Summarized transactions: 2	1 155 00
229	ROCHESTER CHEVROLET CADILLAC	Summarized transactions: 4	1 148 79
230	NOVASPECT INC	Summarized transactions: 6	1 123 49
231	CENTRAL STATES GROUP	Summarized transactions: 3	1 082 57
232	ERC WIPING PRODUCTS INC	Summarized transactions: 3	1 049 80
232	MENARDS ROCHESTER NORTH	Summarized transactions: 15	1,014.80
234	GRAINGER INC	Summarized transactions: 8	1,004.00
234		Summarized transactions: 6	968.41
200		Summarized transactions: 2	061.88
230		Summarized transactions: 2	901.00
231		Summarized transactions: 2	902.00
230		Summarized transactions: 5	972.44
239		Summarized transactions: 5	952.37
240		Summarized transactions. 1	002.07
241		Summarized transactions: 0	850.00
242		Summarized transactions: 5	848.00
243		Summarized transactions: 5	040.00
244		Summarized transactions: 2	030.30
245		Summarized transactions: 3	829.33
246		Summarized transactions: 2	800.00
247		Summarized transactions: 1	786.40
248		Summarized transactions: 3	777.71
249	LRS OF MINNESOTA LLC	Summarized transactions: 2	762.50
250	WARNING LITES OF MN INC (P)	Summarized transactions: 1	754.00
251	G A ERNST & ASSOCIATES INC	Summarized transactions: 4	750.84
252	MISSISSIPPI WELDERS SUPPLY CO	Summarized transactions: 12	747.15
253		Summarized transactions: 1	736.03
254	GRAYBAR ELECTRIC COMPANY INC	Summarized transactions: 2	716.95
255	HACH COMPANY	Summarized transactions: 2	714.57
256	ROCHESTER ELECTRIC VEHICLES	Summarized transactions: 1	700.00
257	CITY OF ROCHESTER	Summarized transactions: 5	650.06
258	MOORE RYAN	Summarized transactions: 3	647.80

A/P Board Listing By Dollar Range

For 07/13/2023 To 08/09/2023

Consolidated & Summarized Below 1,000

259	DIGI-KEY CORPORATION	Summarized transactions: 2	630.77
260	INGERSOLL RAND COMPANY	Summarized transactions: 2	619.57
261	AUGER RACK LLC	Summarized transactions: 1	617.58
262	RSP ARCHITECTS LTD.	Summarized transactions: 1	610.00
263	ADVANCE AUTO PARTS	Summarized transactions: 16	582.70
264	AMARIL UNIFORM COMPANY	Summarized transactions: 6	551.10
265	EMEDCO INC	Summarized transactions: 8	527.54
266	SUMMIT FIRE PROTECTION INC	Summarized transactions: 1	523.69
267	RONCO ENGINEERING SALES INC	Summarized transactions: 6	522.39
268	T E C INDUSTRIAL INC	Summarized transactions: 4	496.64
269	MCMASTER CARR SUPPLY COMPANY	Summarized transactions: 20	478.48
270	NORTHERN / BLUETARP FINANCIAL	Summarized transactions: 6	462.00
271	NORTH CENTRAL INTERNATIONAL L	Summarized transactions: 4	455.68
272	WARTSILA NORTH AMERICA	Summarized transactions: 4	441.46
273	HARRIS ROCHESTER INC (HIMEC)	Summarized transactions: 3	434.48
274	ZIEGLER INC	Summarized transactions: 1	431.85
275	NUVERA	Summarized transactions: 2	429.92
276	HDR ENGINEERING INC	Summarized transactions: 1	424.76
277	AUTOMATIONDIRECT.COM	Summarized transactions: 1	423.00
278	ALTEC INDUSTRIES INC	Summarized transactions: 4	418.38
279	TERRACON CONSULTANTS, INC.	Summarized transactions: 1	415.00
280	LUHMANN ABE	Summarized transactions: 1	405.77
281	PREMIER ELECTRICAL CORP dba	Summarized transactions: 1	405.06
282	ARNOLDS A KLEEN-TECH COMPANY	Summarized transactions: 12	380.07
283	REINDERS INC	Summarized transactions: 1	368.57
284	KOTSCHEVAR MARK	Summarized transactions: 2	361.66
285	FEDEX FREIGHT INC	Summarized transactions: 2	354.00
286	EAGLE EYE POWER SOLUTIONS LLC	Summarized transactions: 4	348.63
287	MOTION INDUSTRIES INC	Summarized transactions: 4	338.75
288	FARRELL EQUIPMENT (P)	Summarized transactions: 4	336.11
289	DUNLAP & SEEGER LAW OFFICES	Summarized transactions: 1	331.25
290	ENPRO INC	Summarized transactions: 2	330.37
291	ATLAS COPCO COMPRESSORS LLC	Summarized transactions: 3	328.38
292	McGRANN SHEA CARNIVAL STRAUGH	Summarized transactions: 1	327.25
293	AMERICAN FENCE COMPANY	Summarized transactions: 5	325.49
294	DITCH WITCH OF MINNESOTA INC	Summarized transactions: 3	315.42
295	EVOQUA WATER TECHNOLOGIES LLC	Summarized transactions: 3	312.28
296	METROPOLITAN MECHANCIAL CONTR	Summarized transactions: 2	295.24
297	SUTTON JEREMY	Summarized transactions: 2	291.01
298	BOLTON AND MENK (P)	Summarized transactions: 1	289.50
299	J HARLEN CO INC	Summarized transactions: 3	277.67
300	DELMAR COMPANY	Summarized transactions: 4	274.80
301	BRIMAR INDUSTRIES	Summarized transactions: 5	263.74
302	OLSEN CHAIN & CABLE CO INC	Summarized transactions: 4	263.09
303	CLAREY'S SAFETY EQUIPMENT dba	Summarized transactions: 2	254.44
304	WATER SYSTEMS COMPANY	Summarized transactions: 3	252.00
305	GOODIN COMPANY	Summarized transactions: 3	243.98
306	THE FENCE PROS LLC (P)	Summarized transactions: 1	240.47
307	NETWORK SERVICES COMPANY	Summarized transactions: 3	235.22
308	KAUTZ TRAILER SALES INC	Summarized transactions: 3	234.64
309	NAPA AUTO PARTS dba	Summarized transactions: 10	231.15
310	VANCO SERVICES LLC	Summarized transactions: 1	227.88

A/P Board Listing By Dollar Range

For 07/13/2023 To 08/09/2023

Consolidated & Summarized Below 1,000

		Grand Total:	14,141,074.94
		Price Range Total:	180,593.98
349	U S BANK	Summarized transactions: 1	9.00
348	PETERSON CHAD	Summarized transactions: 1	19.00
347	RAIN RICHARD	Summarized transactions: 1	23.00
346	BOWMANS DOOR SOLUTIONS	Summarized transactions: 1	23.46
345	ROCH RESTAURANT SUPPLY	Summarized transactions: 2	27.85
344	SOMA CONSTRUCTION INC	Summarized transactions: 3	37.27
343	TOTAL RESTAURANT SUPPLY	Summarized transactions: 1	41.33
342	TRUCKIN' AMERICA	Summarized transactions: 1	44.03
341	ON SITE SANITATION INC	Summarized transactions: 1	48.09
340	MIDWEST RENEWABLE ENERGY TRAC	Summarized transactions: 1	55.59
339	DONAHUE DEBRA	Summarized transactions: 1	56.00
338	BARRY SCREEN PRINT CO dba	Summarized transactions: 2	58.25
337	FERGUSON ENTERPRISES	Summarized transactions: 2	63.25
336	STAR ENERGY SERVICES LLC	Summarized transactions: 1	80.00
335	PDS	Summarized transactions: 2	80.00
334	NATIONWIDE DI WATER SOLUTIONS	Summarized transactions: 1	82.50
333	ELECTRICAL TRAINING ALLIANCE	Summarized transactions: 1	83.40
332	SLEEPY EYE TELEPHONE CO	Summarized transactions: 1	84.76
331	NORTH STAR ALUM/ROCHESTER WEL	Summarized transactions: 1	87.21
330	KENNEDY & GRAVEN CHARTERED	Summarized transactions: 1	92.50
329	STRUVES PAINT & DECORATING (P	Summarized transactions: 3	104.31
328	BOB THE BUG MAN LLC	Summarized transactions: 2	108.13
327	VERIZON WIRELESS	Summarized transactions: 1	113.09
326		Summarized transactions: 1	117.90
325	WHITEWATER CDJR OF ST CHARLES	Summarized transactions: 2	126.19
324	SCHEEL LAWRENCE	Summarized transactions: 1	139.30
323	DAVE SYVERSON TRUCK CENTER IN	Summarized transactions: 3	140.59
322	CHARTER COMMUNICATIONS	Summarized transactions: 1	154.60
321	BOSTON KRISTA	Summarized transactions: 3	169.37
320	FEDEX SHIPPING	Summarized transactions: 7	177.29
319	VAN METER INC dba	Summarized transactions: 4	183.55
318	NALCO COMPANY LLC	Summarized transactions: 7	183.77
317	ROBERTSON ASSET GROUP	Summarized transactions: 2	186.65
316	MENARDS ROCHESTER SOUTH	Summarized transactions: 3	193.15
315	WASHINGTON ENERGY LAW LLP	Summarized transactions: 1	206.50
314	SHERWIN WILLIAMS CO #3526	Summarized transactions: 8	210.53
313	CHS ROCHESTER	Summarized transactions: 3	223.66
312	GARCIA GRAPHICS INC	Summarized transactions: 2	225.00
311	DEVTRA INC	Summarized transactions: 2	227.75

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REQUEST FOR ACTION

Adoption of RPU's DNR Water Supply Plan

MEETING DATE: August 29, 2023

AGENDA SECTION: Regular Agenda ORIGINATING DEPT: Rochester Public Utilities

PRESENTER: Todd Osweiler

Action Requested:

Adopt RPU's approved DNR Water Supply Plan.

Report Narrative:

All public water suppliers in Minnesota that operate a public water distribution system that serves more than 1,000 people must have a Water Supply Plan (WSP) approved by the Department of Natural Resources (DNR). Water supply plans are updated every ten years. RPU submitted our WSP to the DNR in October 2018 and was recently approved by the DNR on June 26, 2023.

Benefits of completing a Water Supply Plan:

- Help prepare for droughts and water emergencies.
- Create eligibility for funding requests to the Minnesota Department of Health for the Drinking Water Revolving Fund.
- Allow water suppliers to submit requests for new wells or expanded capacity of existing wells.
- Simplify the development of county comprehensive water plans and watershed plans.
- Fulfill the contingency plan provisions required in the MDH wellhead protection and surface water protection plans.
- Fulfill the demand reduction requirements of Minnesota Statues, section 103G.291 subd. 3 and 4.
- Upon implementation, contribute to maintaining aquifer levels, reducing potential well interference and water use conflicts, and reducing the need to drill new wells or expand system capacity.

Prepared By:

Todd Osweiler

Attachments:

RPU's DNR Water Supply Plan approved by DNR 6_26_2023.pdf Master PDF Appendices 1-12.pdf 20230829 Resolution - DNR Water Supply Plan.docx



Local Water Supply Plan



Prepared for Rochester Public Utilities September 2018

Approved by the DNR on June 26, 2023

4300 MarketPointe Drive, Suite 200 Minneapolis, MN 55435 952.832.2600 www.barr.com

Local Water Supply Plan Template Third Generation for 2016-2018

Revised April 10, 2017

Formerly called Water Emergency & Water Conservation Plan





Cover photo by Molly Shodeen





For more information on this Water Supply Plan Template, please contact the DNR Division of Ecological and Water Resources at (651) 259-5034 or (651) 259-5100.

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This information is available in an alternative format upon request.

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DEPARTMENT OF NATURAL RESOURCES – DIVISION OF ECOLOGICAL AND WATER RESOURCES AND METROPOLITAN COUNCIL

INTRODUCTION TO WATER SUPPLY PLANS (WSP)

Who needs to complete a Water Supply Plan

Public water suppliers serving more than 1,000 people, large private water suppliers in designated Groundwater Management Areas, and all water suppliers in the Twin Cities metropolitan area are required to prepare and submit a water supply plan.

The goal of the WSP is to help water suppliers: 1) implement long term water sustainability and conservation measures; and 2) develop critical emergency preparedness measures. Your community needs to know what measures will be implemented in case of a water crisis. A lot of emergencies can be avoided or mitigated if long term sustainability measures are implemented.

Groundwater Management Areas (GWMA)

The DNR has designated three areas of the state as Groundwater Management Areas (GWMAs) to focus groundwater management efforts in specific geographies where there is an added risk of overuse or water quality degradation. A plan directing the DNRs actions within each GWMA has been prepared. Although there are no specific additional requirements with respect to the water supply planning for communities within designated GWMAs, communities should be aware of the issues and actions planned if they are within the boundary of one of the GWMAs. The three GWMAs are the North and East Metro GWMA (Twin Cities Metro), the Bonanza Valley GWMA and the Straight River GWMA (near Park Rapids). Additional information and maps are included in the <u>DNR Groundwater Management</u> <u>Areas webpage</u>.

Benefits of completing a WSP

Completing a WSP using this template, fulfills a water supplier's statutory obligations under M.S. <u>M.S.103G.291</u> to complete a water supply plan. For water suppliers in the metropolitan area, the WSP will help local governmental units to fulfill their requirements under M.S. 473.859 to complete a local comprehensive plan. Additional benefits of completing WSP template:

- The standardized format allows for quicker and easier review and approval
- Help water suppliers prepare for droughts and water emergencies.
- Create eligibility for funding requests to the Minnesota Department of Health (MDH) for the Drinking Water Revolving Fund.
- Allow water suppliers to submit requests for new wells or expanded capacity of existing wells.
- Simplify the development of county comprehensive water plans and watershed plans.
- Fulfill the contingency plan provisions required in the MDH wellhead protection and surface water protection plans.
- Fulfill the demand reduction requirements of Minnesota Statutes, section 103G.291 subd 3 and 4.

- Upon implementation, contribute to maintaining aquifer levels, reducing potential well interference and water use conflicts, and reducing the need to drill new wells or expand system capacity.
- Enable DNR to compile and analyze water use and conservation data to help guide decisions.
- Conserve Minnesota's water resources

If your community needs assistance completing the Water Supply Plan, assistance is available from your area hydrologist or groundwater specialist, the MN Rural Waters Association circuit rider program, or in the metropolitan area from Metropolitan Council staff. Many private consultants are also available.

WSP Approval Process

10 Basic Steps for completing a 10-Year Water Supply Plan

- 1. Download the DNR/Metropolitan Council Water Supply Plan Template from the <u>DNR Water</u> <u>Supply Plan webpage</u>.
- Save the document with a file name with this naming convention: WSP_cityname_permitnumber_date.doc.
- 3. The template is a form that should be completed electronically.
- 4. Compile the required water use data (Part 1) and emergency procedures information (Part 2)
- 5. The Water Conservation section (Part 3) may need discussion with the water department, council, or planning commission, if your community does not already have an active water conservation program.
- Communities in the seven-county Twin Cities metropolitan area should complete all the information discussed in Part 4. The Metropolitan Council has additional guidance information on their <u>Water Supply webpage</u>. All out-state water suppliers *do not* need to complete the content addressed in Part 4.
- Use the Plan instructions and Checklist document from the <u>DNR Water Supply Plan webpage</u> to insure all data is complete and attachments are included. This will allow for a quicker approval process.
- Plans should be submitted electronically using the <u>MPARS website</u> no paper documents are required.
- 9. DNR hydrologist will review plans (in cooperation with Metropolitan Council in Metro area) and approve the plan or make recommendations.
- 10. Once approved, communities should complete a Certification of Adoption form, and send a copy to the DNR.

Complete Table 1 with information about the public water supply system covered by this WSP.

Table 1. General information regarding this WSP

Requested Information	Description
DNR Water Appropriation Permit Number(s)	1979-5076
Ownership	🛛 Public or 🗌 Private
Metropolitan Council Area	Yes or X No (and county name) Olmsted County
Street Address	4000 East River Road NE
City, State, Zip	Rochester, MN 55906
Contact Person Name	Todd Osweiler
Title	Environmental & Regulatory Affairs Coordinator
Phone Number	Office (507) 280-1589
MDH Supplier Classification	Municipal

PART 1. WATER SUPPLY SYSTEM DESCRIPTION AND EVALUATION

The first step in any water supply analysis is to assess the current status of demand and availability. Information summarized in Part 1 can be used to develop Emergency Preparedness Procedures (Part 2) and the Water Conservation Plan (Part 3). This data is also needed to track progress for water efficiency measures.

A. Analysis of Water Demand

Complete Table 2 showing the past 10 years of water demand data.

- Some of this information may be in your Wellhead Protection Plan.
- If you do not have this information, do your best, call your engineer for assistance or if necessary leave blank.

If your customer categories are different than the ones listed in Table 2, please describe the differences below:

Commercial use category includes high density residential customers.

Year	Pop. Served	Total Connections	Residential Water Delivered	C/I/I Water Delivered	Water used for Non-	Wholesale Deliveries (MG)	Total Water Delivered (MG)	Total Water Pumped (MG)	Water Supplier Services	Percent Unmetered/ Unaccounted	Average Daily Demand (MGD)	Max. Daily Demand (MGD)	Date of Max. Demand	Residential Per Capita Demand	Total per capita Demand
			(MG)	(MG)	essential									(GPCD)	(GPCD)
2005	97,191	34,875	2,246	2,178	0	0	4,424	4,709	N/A	6.1	12.9	29.8	7/15/2005	63.3	124.7
2006	98,649	35,650	2,375	2,304	0	0	4,679	5,073	N/A	7.8	13.9	29.4	7/2/2006	66.0	129.9
2007	100,845	36,267	2,387	2,362	0	0	4,749	5,110	N/A	7.1	14.0	30.2	8/1/2007	64.8	129.0
2008	102,437	36,753	2,297	2,240	0	0	4,537	4,775	N/A	5.0	13.1	28.0	7/30/2008	61.4	121.3
2009	103,937	37,088	2,250	2,152	0	0	4,402	4,677	N/A	5.9	12.8	21.8	7/15/2009	59.3	116.0
2010	106,769	37,376	2,107	2,095	0	0	4,202	4,466	N/A	5.9	12.2	20.6	8/30/2010	54.1	107.8
2011	107,837	37,613	2,125	2,103	0	0	4,228	4,455	N/A	5.1	12.2	21.5	6/8/2011	54.0	107.4
2012	108,992	37,919	2,371	2,206	0	0	4,577	4,825	N/A	5.1	13.2	26.9	7/11/2012	59.6	115.1
2013	110,393	38,261	2,142	2,093	0	0	4,235	4,476	N/A	5.4	12.2	23.1	7/17/2013	53.2	105.1
2014	111,007	38,578	2,083	2,018	0	0	4,101	4,426	N/A	7.3	12.1	22.6	7/23/2014	51.4	101.2
2015	111,907	39,066	2,009	2,059	0	0	4,068	4,263	N/A	4.6	11.7	22.1	8/14/2015	49.2	99.6
2016	113,180	39,505	1,986	2,279	0	0	4,265	4,489	N/A	5.0	12.3	19.8	8/3/2016	48.1	103.2
2017	114,726	39,535	2,031	2,296	0	0	4,327	4,550	N/A	4.9	12.5	23.7	6/9/2017	48.5	103.3
Avg. 2013- 2017	112,243	38,989	2,050	2,149	0	0	4,199	4,441	N/A	5.4	12.2	22.3	N/A	50.1	102.5

Table 2. Historic water demand (see definitions in the glossary after Part 4 of this template)

MG – Million Gallons MGD – Million Gallons per Day GPCD – Gallons per Capita per Day

See <u>Glossary</u> for definitions. A list of <u>Acronyms and Initialisms</u> can be found after the Glossary.

Complete Table 3 by listing the top 10 water users by volume, from largest to smallest. For each user, include information about the category of use (residential, commercial, industrial, institutional, or wholesale), the amount of water used in gallons per year, the percent of total water delivered, and the status of water conservation measures.

Table 3. La	arge vol	ume	users
-------------	----------	-----	-------

Customer	Use Category (Residential, Industrial, Commercial, Institutional, Wholesale)	Amount Used (Gallons per Year)	Percent of Total Annual Water Delivered	Implementing Water Conservation Measures? (Yes/No/Unknown)
1. MAYO FOUNDATION	COMMERCIAL	441,694,748	10.4%	YES
2. CITY OF ROCHESTER	COMMERCIAL	112,292,004	2.6%	YES
3. SENECA FOODS CORP	INDUSTRIAL	90,855,072	2.1%	UNKNOWN ¹
4. KERRY BIO-SCIENCE	INDUSTRIAL	83,011,544	1.9%	YES
5. KAHLER HOSPITALITY	COMMERCIAL	81,871,592	1.9%	YES
6. OLMSTED CNTY PUBLIC WORKS	COMMERCIAL	60,418,952	1.4%	YES
7. KEMPS LLC	INDUSTRIAL	44,999,680	1.1%	UNKNOWN
8. ROCH METHODIST HOSPITAL	COMMERCIAL	37,248,904	0.9%	YES
9. ST MARYS HOSPITAL	COMMERCIAL	33,793,144	0.8%	YES
10. ROCHESTER PUBLIC SCHOOLS	COMMERCIAL	32,630,004	0.8%	YES

¹As of November 2018 Seneca Foods will no longer operate in Rochester

B. Treatment and Storage Capacity

Complete Table 4 with a description of where water is treated, the year treatment facilities were constructed, water treatment capacity, the treatment methods (i.e. chemical addition, reverse osmosis, coagulation, sedimentation, etc.) and treatment types used (i.e. fluoridation, softening, chlorination, Fe/MN removal, coagulation, etc.). Also describe the annual amount and method of disposal of treatment residuals. Add rows to the table as needed.

Table 4. Water treatment capacity and treatment processe	Table 4. Water	treatment	capacity and	treatment	processes
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Treatment Site ID (Plant Name or Well ID)	Year Constructed	Treatment Capacity (GPM)	Treatment Method	Treatment Type	Annual Volume of Residuals	Disposal Process for Residuals	Do You Reclaim Filter Backwash Water?
Well 11	1948	700	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 12	1950	500	Chemical addition	Fluoridation, chlorination, & polyphosphate	NA	NA	NA

Treatment Site ID (Plant Name or Well ID)	Year Constructed	Treatment Capacity (GPM)	Treatment Method	Treatment Type	Annual Volume of Residuals	Disposal Process for Residuals	Do You Reclaim Filter Backwash Water?
				addition.			
Well 13	1954	700	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 15	1957	850	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 17	1960	700	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 18	1963	500	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 19	1963	1,000	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 20	1964	1,000	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 21	1965	600	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 22	1966	750	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 23	1966	1,000	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 24	1968	900	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 25	1969	1,200	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 26	1979	1,200	Chemical addition	Fluoridation, chlorination, &	NA	NA	NA

Treatment Site ID (Plant Name or Well ID)	Year Constructed	Treatment Capacity (GPM)	Treatment Method	Treatment Type	Annual Volume of Residuals	Disposal Process for Residuals	Do You Reclaim Filter Backwash Water?
				polyphosphate addition.			
Well 27	1979	1,200	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 28	1983	1,200	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 29	1984	1,300	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 30	1984	1,200	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 31	1987	1,200	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 32	1989	800	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 33	1958	420	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 34	1991	800	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 35	1999	1,500	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 36	2001	1,500	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 37	2004	1,275	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 38	2005	1,000	Chemical	Fluoridation,	NA	NA	NA

Treatment Site ID (Plant Name or Well ID)	Year Constructed	Treatment Capacity (GPM)	Treatment Method	Treatment Type	Annual Volume of Residuals	Disposal Process for Residuals	Do You Reclaim Filter Backwash Water?
			addition	chlorination, & polyphosphate addition.			
Well 39	2006	1,500	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 40	2010	1,000	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 41	2014	1,500	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 72	1968	138	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 73	1965	140	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Well 77	1964	170	Chemical addition	Fluoridation, chlorination, & polyphosphate addition.	NA	NA	NA
Total	NA	29,443	NA	NA	NA	NA	NA

Complete Table 5 with information about storage structures. Describe the type (i.e. elevated, ground, etc.), the storage capacity of each type of structure, the year each structure was constructed, and the primary material for each structure. Add rows to the table as needed.

Table 5. Storage capacity, as of the end of the last calendar year

Structure Name	Type of Storage Structure	Year Constructed	Primary Material	Storage Capacity (Gallons)
John Adams Tower #83	Tower	1958	Welded Steel	500,000
CCM Standpipe #84	Standpipe	1959	Welded Steel	1,000,000
Northern Heights High Level #85	Standpipe	1959	Welded Steel	1,000,000
SE Tower #86	Tower	1962	Welded Steel	500,000
Apache Tower #87	Tower	1969	Welded Steel	500,000
Arnolds High Level #88	Tower	1973	Welded Steel	100,000
CCM High Level #89	Tower	1978	Welded Steel	300,000
Bandel Reservoir #90	Reservoir	1979	Welded Steel	2,250,000
Golden Hill High Level #91	Tower	1983	Welded Steel	400,000
Baihly High Level #92	Tower	1985	Welded Steel	300,000
Willow Heights High Level #94	Tower	1987	Welded Steel	300,000
Willow Heights Reservoir #95	Reservoir	1987	Bolted Steel/Glass Lined	1,000,000
Airport High Level #96	Tower	1994	Welded Steel	500,000
North Park High Level #97	Tower	1995	Welded Steel	500,000
Viola High Level #98	Tower	1997	Welded Steel	500,000
Rose Harbor High Level #99	Tower	2001	Welded Steel	500,000
Morris Hills #100	Reservoir	2008	Welded Steel	1,000,000
50th Ave NW Hydropillar #101	Hydropillar	2011	Welded Steel	2,000,000
St. Mary's Reservoir #102	Reservoir	2013	Prestressed Concrete	3,300,000
St. Bridget Intermediate Level #103	Tower	2015	Welded Steel	500,000
Total	NA	NA	NA	16,950,000

Treatment and storage capacity versus demand

It is recommended that total storage equal or exceed the average daily demand.

Discuss the difference between current storage and treatment capacity versus the water supplier's projected average water demand over the next 10 years (see Table 7 for projected water demand):

Chemical addition is done at the wellhead so treatment capacity will keep pace with projected future demands. Current storage capacity is approximately 50% of the projected 2030 maximum day demand.

C. Water Sources

Complete Table 6 by listing all types of water sources that supply water to the system, including groundwater, surface water, interconnections with other water suppliers, or others. Provide the name of each source (aquifer name, river or lake name, name of interconnecting water supplier) and the Minnesota unique well number or intake ID, as appropriate. Report the year the source was installed or established and the current capacity. Provide information about the depth of all wells. Describe the status of the source (active, inactive, emergency only, retail/wholesale interconnection) and if the source facilities have a dedicated emergency power source. Add rows to the table as needed for each installation.

Include copies of well records and maintenance summary for each well that has occurred since your last approved plan in **Appendix 1**.

Table 6. Water sources and status

Resource Type (Groundwater, Surface water, Interconnection)	Resource Name	MN Unique Well # or Intake ID	Year Well Installed	Capacity (Gallons per Minute)	Well Depth (Feet)	Status of Normal and Emergency Operations (active, inactive, emergency only, retail/wholesale interconnection))	Does this Source have a Dedicated Emergency Power Source? (Yes or No)
Groundwater	Well 11	220666	1948	700	455	Normal Operations	No
Groundwater	Well 12	220833	1950	500	752	Normal Operations	No
Groundwater	Well 13	222525	1954	700	442	Normal Operations	No
Groundwater	Well 15	222528	1957	850	432	Normal Operations	No
Groundwater	Well 17	220822	1960	700	904	Normal Operations	No
Groundwater	Well 18	222527	1963	500	806	Normal Operations	No
Groundwater	Well 19	220681	1963	1,000	881	Normal Operations	No
Groundwater	Well 20	220662	1964	1,000	912	Normal Operations	No
Groundwater	Well 21	220625	1965	600	981	Normal Operations	No
Groundwater	Well 22	220818	1966	750	730	Normal Operations	No
Groundwater	Well 23	220660	1966	1,000	436	Normal Operations	No
Groundwater	Well 24	220819	1968	900	688	Normal Operations	No
Groundwater	Well 25	220675	1969	1,200	848	Normal Operations	No
Groundwater	Well 26	147451	1979	1,200	624	Normal Operations	No
Groundwater	Well 27	224212	1979	1,200	450	Normal Operations	No
Groundwater	Well 28	180567	1983	1,200	395	Normal Operations	No
Groundwater	Well 29	161425	1984	1,300	519	Normal Operations	No
Groundwater	Well 30	239761	1984	1,200	402	Normal Operations	No
Groundwater	Well 31	434041	1987	1,200	530	Normal Operations	No
Groundwater	Well 32	506819	1989	800	540	Normal Operations	No
Groundwater	Well 33	220627	1958	420	605	Normal Operations	No
Groundwater	Well 34	463536	1991	800	465	Normal Operations	No
Groundwater	Well 35	601335	1999	1,500	457	Normal Operations	No
Groundwater	Well 36	601336	2001	1,500	478	Normal Operations	No
Groundwater	Well 37	676687	2004	1,275	506	Normal Operations	No
Groundwater	Well 38	698933	2005	1,000	467	Normal Operations	No
Groundwater	Well 39	733087	2006	1,500	461	Normal Operations	No
Groundwater	Well 40	773386	2010	1,000	640	Normal Operations	No
Groundwater	Well 41	796431	2014	1,500	470	Normal Operations	No
Groundwater	Well 72	220628	1968	138	460	Normal Operations	No
Groundwater	Well 73	228168	1965	140	675	Normal Operations	No
Groundwater	Well 77	220629	1964	170	450	Normal Operations	No

Note: RPU has 2 portable emergency diesel generators that can be used to power individual wells

Limits on Emergency Interconnections

Discuss any limitations on the use of the water sources (e.g. not to be operated simultaneously, limitations due to blending, aquifer recovery issues etc.) and the use of interconnections, including capacity limits or timing constraints (e.g. only 200 gallons per minute are available from the City of Prior Lake, and it is estimated to take 6 hours to establish the emergency connection). If there are no limitations, list none.

RPU does not have any emergency interconnections.

D. Future Demand Projections - Key Metropolitan Council Benchmark

Water Use Trends

Use the data in Table 2 to describe trends in 1) population served; 2) total per capita water demand; 3) average daily demand; 4) maximum daily demand. Then explain the causes for upward or downward trends. For example, over the ten years has the average daily demand trended up or down? Why is this occurring?

1) Total population increased by 18% from 2005 to 2017.

2) Total per capita demand decreased 17.2% from 2005 to 2017.

3) Average daily demand decreased 3.1% from 2005 to 2017.

4) Maximum daily demand decreased by 20.5% from 2005 to 2017. Reductions in demand even though the population has increased are partially the result of RPU's focus on water conservation.

Use the water use trend information discussed above to complete Table 7 with projected annual demand for the next ten years. Communities in the seven-county Twin Cities metropolitan area must also include projections for 2030 and 2040 as part of their local comprehensive planning.

Projected demand should be consistent with trends evident in the historical data in Table 2, as discussed above. Projected demand should also reflect state demographer population projections and/or other planning projections.
Table 7. Projected annual water demand

Year	Projected Total Population	Projected Population Served	Projected Total Per Capita Water Demand (GPCD)	Projected Average Daily Demand (MGD)	Projected Maximum Daily Demand (MGD)
2016 ¹	113,180	113,180	103.4	12.3	19.8
2017 ¹	114,726	114,726	103.3	12.5	23.7
2018	117,200	117,200	110	12.9	27.7
2019	119,100	119,100	110	13.1	28.2
2020	121,000	121,000	110	13.3	28.6
2021	123,200	123,200	110	13.6	29.1
2022	125,400	125,400	110	13.8	29.7
2023	127,600	127,600	110	14.0	30.2
2024	129,800	129,800	110	14.3	30.7
2025	132,000	132,000	110	14.5	31.2
2030	143,000	143,000	110	15.7	33.8
2040	165,000	165,000	110	18.1	39.0

GPCD – Gallons per Capita per Day **MGD** – Million Gallons per Day

¹ 2016 and 2017 data are actual population and water demand data rather than projections

Projection Method

Describe the method used to project water demand, including assumptions for population and business growth and how water conservation and efficiency programs affect projected water demand:

Future demand projections were done using the average gallons per capita per day for the past five years, City of Rochester population projections, and maximum day peaking factor of 2.15. As identified in the footnote Table 7

E. Resource Sustainability

Monitoring – *Key DNR Benchmark*

Complete Table 8 by inserting information about source water quality and quantity monitoring efforts. The list should include all production wells, observation wells, and source water intakes or reservoirs. Groundwater level data for DNR's statewide network of observation wells are available online through the <u>DNR's Cooperative Groundwater Monitoring (CGM) webpage</u>.

MN Unique Well #	Type of monitoring	Monitoring program	Frequency of	Monitoring Method
or Surface Water ID	point		monitoring	
220666	oxtimes production well	oxtimes routine MDH	🛛 continuous	🖾 SCADA
Well 11	\Box observation well	sampling	hourly	🛛 grab sampling
	source water	\Box routine water	🗆 daily	🖾 steel tape
	intake	utility sampling	oxtimes monthly	🗆 stream gauge
	source water	\Box other	quarterly	
	reservoir		oxtimes annually	

MN Unique Well #	Type of monitoring	Monitoring program	Frequency of	Monitoring Method	
or Surface Water ID	point		monitoring		
220833	\boxtimes production well	⊠ routine MDH	⊠ continuous		
Well 12	□ observation well	sampling	□ hourly	⊠ grab sampling	
	☐ source water	□ routine water	∐ daily	⊠ steel tape	
	intake	utility sampling	\boxtimes monthly	□ stream gauge	
	\Box source water	□ other	\Box quarterly		
	reservoir		\boxtimes annually		
222525	\boxtimes production well	🖾 routine MDH	\boxtimes continuous	🖾 SCADA	
Well 13	observation well	sampling	□ hourly	⊠ grab sampling	
	□ source water	\Box routine water	🗆 daily	⊠ steel tape	
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge	
	□ source water	□ other	quarterly		
	reservoir		oxtimes annually		
222528	oxtimes production well	oxtimes routine MDH	\boxtimes continuous	🖾 SCADA	
Well 15	observation well	sampling	□ hourly	⊠ grab sampling	
	□ source water	\Box routine water	🗆 daily	🖾 steel tape	
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge	
	□ source water	🗆 other	\Box quarterly		
	reservoir		\boxtimes annually		
220827	\Box production well	\Box routine MDH	\boxtimes continuous	🖾 SCADA	
Well 16	oxtimes observation well	sampling	hourly	grab sampling	
	\Box source water	\Box routine water	🗆 daily	🖾 steel tape	
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge	
	□ source water	🗆 other	\Box quarterly		
	reservoir		\Box annually		
220822	oxtimes production well	oxtimes routine MDH	\boxtimes continuous	🖾 SCADA	
Well 17	\Box observation well	sampling	□ hourly	⊠ grab sampling	
	□ source water	\Box routine water	🗆 daily	🖾 steel tape	
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge	
	□ source water	□ other	\Box quarterly		
	reservoir		oxtimes annually		
222527	oxtimes production well	🛛 routine MDH	\boxtimes continuous	🖾 SCADA	
Well 18	observation well	sampling	□ hourly	⊠ grab sampling	
	□ source water	\Box routine water	🗆 daily	⊠ steel tape	
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge	
	□ source water	\Box other	\Box quarterly		
	reservoir		oxtimes annually		
220681	\boxtimes production well	⊠ routine MDH	⊠ continuous	🖾 SCADA	
Well 19	\Box observation well	sampling	\Box hourly	🛛 grab sampling	
	□ source water	\Box routine water	🗆 daily	🖾 steel tape	
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge	
	□ source water	\Box other	quarterly		
	reservoir		oxtimes annually		

MN Unique Well # or Surface Water ID	Type of monitoring	Monitoring program	Frequency of monitoring	Monitoring Method	
220662	⊠ production well	⊠ routine MDH	⊠ continuous		
Well 20	□ observation well	sampling	□ hourly	🛛 grab sampling	
	□ source water	□ routine water	□ daily	\boxtimes steel tape	
	intake	utility sampling	\boxtimes monthly	□ stream gauge	
	□ source water	□ other	□ quarterly	0.00	
	reservoir		\boxtimes annually		
220625	⊠ production well	⊠ routine MDH	⊠ continuous	🖾 SCADA	
Well 21	□ observation well	sampling	□ hourly	⊠ grab sampling	
	□ source water	□ routine water	daily	⊠ steel tape	
	intake	utility sampling	\boxtimes monthly	□ stream gauge	
	□ source water	\Box other	□ quarterly		
	reservoir		\boxtimes annually		
220818	⊠ production well	⊠ routine MDH	⊠ continuous	SCADA	
Well 22	□ observation well	sampling	□ hourly	⊠ grab sampling	
	□ source water	□ routine water	☐ daily	🛛 steel tape	
	intake	utility sampling	\boxtimes monthly	□ stream gauge	
	□ source water	\Box other	□ quarterly		
	reservoir		\boxtimes annually		
220660	⊠ production well	🛛 routine MDH	⊠ continuous	SCADA	
Well 23	□ observation well	sampling	□ hourly	⊠ grab sampling	
	□ source water	\Box routine water	□ daily	⊠ steel tape	
	intake	utility sampling	\boxtimes monthly	□ stream gauge	
	□ source water	\Box other	□ quarterly		
	reservoir		oxtimes annually		
220819	oxtimes production well	⊠ routine MDH	🛛 continuous	🖾 SCADA	
Well 24	observation well	sampling	□ hourly	⊠ grab sampling	
	□ source water	\Box routine water	🗆 daily	⊠ steel tape	
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge	
	□ source water	\Box other	\Box quarterly		
	reservoir		oxtimes annually		
220675	oxtimes production well	🛛 routine MDH	\boxtimes continuous	SCADA	
Well 25	□ observation well	sampling	\Box hourly	⊠ grab sampling	
	\Box source water	\Box routine water	🗆 daily	⊠ steel tape	
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge	
	□ source water	🗆 other	\Box quarterly		
	reservoir		oxtimes annually		
147451	\boxtimes production well	⊠ routine MDH	\boxtimes continuous	🖾 SCADA	
Well 26	\Box observation well	sampling	🗆 hourly	🛛 grab sampling	
	□ source water	\Box routine water	🗆 daily	🖾 steel tape	
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge	
	□ source water	🗆 other	\Box quarterly		
	reservoir		oxtimes annually		

MN Unique Well #	Type of monitoring	Monitoring program	Frequency of	Monitoring Method	
or Surface Water ID	point		monitoring		
224212	\boxtimes production well	I routine MDH	⊠ continuous		
Well 27	□ observation well	sampling	∐ hourly	⊠ grab sampling	
	□ source water	□ routine water	☐ daily	Steel tape	
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge	
	□ source water	□ other	\Box quarterly		
	reservoir		oxtimes annually		
180567	oxtimes production well	oxtimes routine MDH	\boxtimes continuous	🖾 SCADA	
Well 28	observation well	sampling	hourly	⊠ grab sampling	
	□ source water	\Box routine water	🗆 daily	🖾 steel tape	
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge	
	□ source water	🗆 other	\Box quarterly		
	reservoir		oxtimes annually		
161425	oxtimes production well	oxtimes routine MDH	\boxtimes continuous	🖾 SCADA	
Well 29	\Box observation well	sampling	□ hourly	🛛 grab sampling	
	\Box source water	\Box routine water	🗆 daily	🖾 steel tape	
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge	
	□ source water	□ other	\Box quarterly		
	reservoir		oxtimes annually		
239761	oxtimes production well	🛛 routine MDH	\boxtimes continuous	🖾 SCADA	
Well 30	\Box observation well	sampling	□ hourly	⊠ grab sampling	
	□ source water	\Box routine water	🗆 daily	🖾 steel tape	
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge	
	\Box source water	🗆 other	quarterly		
	reservoir		oxtimes annually		
434041	oxtimes production well	oxtimes routine MDH	\boxtimes continuous	🖾 SCADA	
Well 31	\Box observation well	sampling	□ hourly	⊠ grab sampling	
	□ source water	\Box routine water	🗆 daily	🖾 steel tape	
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge	
	□ source water	🗆 other	\Box quarterly		
	reservoir		oxtimes annually		
506819	oxtimes production well	🛛 routine MDH	oxtimes continuous	🖾 SCADA	
Well 32	\Box observation well	sampling	□ hourly	🛛 grab sampling	
	\Box source water	\Box routine water	🗆 daily	🖾 steel tape	
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge	
	□ source water	🗆 other	\Box quarterly		
	reservoir		oxtimes annually		
220627	oxtimes production well	oxtimes routine MDH	oxtimes continuous	🖾 SCADA	
Well 33	□ observation well	sampling	□ hourly	🛛 grab sampling	
	□ source water	\Box routine water	🗆 daily	🖾 steel tape	
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge	
	□ source water	🗆 other	\Box quarterly		
	reservoir		oxtimes annually		

MN Unique Well #	Type of monitoring	Monitoring program	Frequency of	Monitoring Method
or Surface Water ID	point		monitoring	
463536	\boxtimes production well	🖾 routine MDH	\boxtimes continuous	🖾 SCADA
Well 34	observation well	sampling	□ hourly	⊠ grab sampling
	□ source water	\Box routine water	🗆 daily	🖾 steel tape
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge
	□ source water	🗆 other	quarterly	
	reservoir		oxtimes annually	
601335	oxtimes production well	🛛 routine MDH	\boxtimes continuous	🖾 SCADA
Well 35	observation well	sampling	□ hourly	⊠ grab sampling
	□ source water	\Box routine water	□ daily	⊠ steel tape
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge
	\Box source water	\Box other	□ quarterly	
	reservoir		oxtimes annually	
601336	oxtimes production well	⊠ routine MDH	\boxtimes continuous	🖾 SCADA
Well 36	observation well	sampling	□ hourly	⊠ grab sampling
	□ source water	\Box routine water	🗆 daily	🗵 steel tape
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge
	□ source water	\Box other	quarterly	
	reservoir		oxtimes annually	
676687	☑ production well	⊠ routine MDH	🛛 continuous	🖾 SCADA
Well 37	observation well	sampling	□ hourly	⊠ grab sampling
	□ source water	\Box routine water	□ daily	⊠ steel tape
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge
	□ source water	\Box other	□ quarterly	
	reservoir		oxtimes annually	
698933	⊠ production well	⊠ routine MDH	🛛 continuous	🖾 SCADA
Well 38	observation well	sampling	□ hourly	⊠ grab sampling
	□ source water	\Box routine water	🗆 daily	🗵 steel tape
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge
	□ source water	\Box other	□ quarterly	
	reservoir		oxtimes annually	
733087	☑ production well	⊠ routine MDH	🛛 continuous	SCADA
Well 39	observation well	sampling	□ hourly	⊠ grab sampling
	□ source water	□ routine water	□ daily	⊠ steel tape
	intake	utility sampling	\boxtimes monthly	□ stream gauge
	□ source water	\Box other	□ quarterly	
	reservoir		\boxtimes annually	
773386	oxtimes production well	🛛 routine MDH	🛛 continuous	🖾 SCADA
Well 40	□ observation well	sampling	□ hourly	🖂 grab sampling
	□ source water	\Box routine water	🗆 daily	⊠ steel tape
	intake	utility sampling	\boxtimes monthly	□ stream gauge
	□ source water	\Box other	\Box quarterly	
	reservoir		\boxtimes annually	

MN Unique Well #	Type of monitoring	Monitoring program	Frequency of	Monitoring Method	
or Surface Water ID	point		monitoring		
796431	oxtimes production well	🛿 production well 🛛 🖾 routine MDH		🖾 SCADA	
Well 41	\Box observation well	sampling	\Box hourly	🛛 grab sampling	
	□ source water	\Box routine water	🗆 daily	🖾 steel tape	
	intake	utility sampling	\boxtimes monthly	🗆 stream gauge	
	□ source water	\Box other	quarterly		
	reservoir		oxtimes annually		
220628	oxtimes production well	🛛 routine MDH	🛛 continuous	🖾 SCADA	
Well 72	\Box observation well	sampling	\Box hourly	🛛 grab sampling	
	□ source water	\Box routine water	🗆 daily	🖾 steel tape	
	intake	utility sampling	oxtimes monthly	🗆 stream gauge	
	□ source water	\Box other	quarterly		
	reservoir		oxtimes annually		
228168	oxtimes production well	🛛 routine MDH	⊠ continuous	🖾 SCADA	
Well 73	\Box observation well	sampling	\Box hourly	🛛 grab sampling	
	□ source water	\Box routine water	🗆 daily	🖂 steel tape	
	intake	utility sampling	oxtimes monthly	🗆 stream gauge	
	□ source water	\Box other	quarterly		
	reservoir		oxtimes annually		
220629	oxtimes production well	🖾 routine MDH	🛛 continuous	🖾 SCADA	
Well 77	\Box observation well	sampling	\Box hourly	🛛 grab sampling	
	□ source water	\Box routine water	🗆 daily	🖂 steel tape	
	intake	utility sampling	oxtimes monthly	🗆 stream gauge	
	□ source water	\Box other	\Box quarterly		
	reservoir		oxtimes annually		

NOTE: Routine MDH sampling done annually via grab samples from individual wells. Water level in each well recorded every 5 minutes by the RPU SCADA system and monthly manual measurements

Water Level Data

A water level monitoring plan that includes monitoring locations and a schedule for water level readings must be submitted as **Appendix 2**. If one does not already exist, it needs to be prepared and submitted with the WSP. Ideally, all production and observation wells are monitored at least monthly.

Complete Table 9 to summarize water level data for each well being monitored. Provide the name of the aquifer and a brief description of how much water levels vary over the season (the difference between the highest and lowest water levels measured during the year) and the long-term trends for each well. If water levels are not measured and recorded on a routine basis, then provide the static water level when each well was constructed and the most recent water level measured during the same season the well was constructed. Also include all water level data taken during any well and pump maintenance. Add rows to the table as needed.

Groundwater hydrographs illustrate the historical record of aquifer water levels measured within a well and can indicate water level trends over time. For each well in your system, provide a hydrograph for the life of the well, or for as many years as water levels have been measured. Include the hydrographs in **Appendix 3**. An example of a hydrograph can be found on the <u>DNR's Groundwater Hydrograph</u> <u>webpage</u>. Hydrographs for DNR Observation wells can be found in the <u>CGM</u> discussed above.

Table 9. Water level data

Unique Well	Aquifer Name	Seasonal Variation	Long-term Trend	Water level
Number or Well ID		(Feet)	in water level data	measured during
				well/pumping maintenance
220666	Shakopee-Jordan	(1)	□ Falling	See Appendix 3
Well 11			□ Stable	
			⊠ Rising	
220833	Jordan-Tunnel City-		□ Falling	See Appendix 3
Well 12	Wonewoc		□ Stable	
			🛛 Rising	
222525	Shakopee-Jordan		Falling	See Appendix 3
Well 13			Stable	
			🛛 Rising	
222528	Shakopee-Jordan		Falling	See Appendix 3
Well 15			🖾 Stable	
			🗆 Rising	
220822	Jordan-Tunnel City-		Falling	See Appendix 3
Well 17	Wonewoc		Stable	
			🛛 Rising	
222527	Jordan-Tunnel City-		Falling	See Appendix 3
Well 18	Wonewoc		Stable	
			🛛 Rising	
220681	Jordan-Tunnel City-		Falling	See Appendix 3
Well 19	Wonewoc		□ Stable	
			🛛 Rising	
220662	Jordan-Tunnel City-		Falling	See Appendix 3
Well 20	Wonewoc-Mt.		Stable	
	Simon		🛛 Rising	
220625	Jordan-Tunnel City-		⊠ Falling	See Appendix 3
Well 21	Wonewoc		□ Stable	
			🗌 Rising	
220818	Jordan-Tunnel City-		Falling	See Appendix 3
Well 22	Wonewoc		🗆 Stable	
			🛛 Rising	
220660	Shakopee-Jordan		Falling	See Appendix 3
Well 23			🗆 Stable	
			🛛 Rising	
220819	Jordan-Tunnel City-		Falling	See Appendix 3
Well 24	Wonewoc		□ Stable	
			🛛 Rising	
220675	Jordan-Tunnel City-		Falling	See Appendix 3
Well 25	Wonewoc		□ Stable	
			🛛 Rising	
147451	Shakopee-Jordan		Falling	See Appendix 3
Well 26			□ Stable	
			🛛 Rising	

Unique Well Number or Well ID	Aquifer Name	Seasonal Variation (Feet)	Long-term Trend in water level data	Water level measured during well/pumping
				maintenance
224212	Jordan		Falling	See Appendix 3
Well 27			Stable	
			🛛 Rising	
180567	Jordan		⊠ Falling	See Appendix 3
Well 28			Stable	
			🗆 Rising	
161425	Jordan		Falling	See Appendix 3
Well 29			□ Stable	
			🛛 Rising	
239761	Jordan		Falling	See Appendix 3
Well 30			□ Stable	
			🛛 Rising	
434041	Jordan		⊠ Falling	See Appendix 3
Well 31			□ Stable	
			🗆 Rising	
506819	Jordan		□ Falling	See Appendix 3
Well 32			□ Stable	
			🛛 Rising	
220627	Jordan		⊠ Falling	See Appendix 3
Well 33			□ Stable	
			□ Rising	
463536	Jordan		⊠ Falling	See Appendix 3
Well 34			☐ Stable	
			Rising	
601335	Jordan		☐ Falling	See Appendix 3
Well 35			⊠ Stable	
			☐ Rising	
601336	Jordan		☐ Falling	See Appendix 3
Well 36			☐ Stable	
			⊠ Rising	
676687	Jordan		☐ Falling	See Appendix 3
weil 37			☐ Stable	
			⊠ Rising	
698933	Jordan		☐ Falling	See Appendix 3
Well 38			☐ Stable	
			⊠ Rising	
733087	Jordan		⊠ Falling	See Appendix 3
vvell 39			☐ Stable	
			☐ Rising	
7/3386	Shakopee-Jordan		☐ Falling	See Appendix 3
vvell 40			☐ Stable	
705424				
/96431	Jordan		☐ Falling	See Appendix 3
vven 41			⊠ Stable	
			🗆 Rising	

Unique Well Number or Well ID	Aquifer Name	Seasonal Variation (Feet)	Long-term Trend in water level data	Water level measured during well/pumping maintenance
220628	Jordan	(2)	Falling	
Well 72			\Box Stable	
			Rising	
228168	Jordan	(2)	Falling	
Well 73			\Box Stable	
			Rising	
220629	Jordan	(2)	□ Falling	
Well 77			\Box Stable	
			Rising	

- (1) RPU staff reviewed the data and determined it was inconclusive to determine seasonal variations.
- (2) No water level data was available.

Potential Water Supply Issues & Natural Resource Impacts – *Key DNR & Metropolitan Council Benchmark*

Complete Table 10 by listing the types of natural resources that are or could potentially be impacted by permitted water withdrawals in the future. You do not need to identify every single water resource in your entire community. The goal is to help you triage the most important water resources and/or the water resources that may be impacted by your water supply system – perhaps during a drought or when the population has grown significantly in ten years. This is emerging science, so do the best you can with available data. For identified resources, provide the name of specific resources that may be impacted. Identify what the greatest risks to the resource are and how the risks are being assessed. Identify any resource protection thresholds – formal or informal – that have been established to identify when actions should be taken to mitigate impacts. Provide information about the potential mitigation actions that may be taken, if a resource protection threshold is crossed. Add additional rows to the table as needed. See the glossary at the end of the template for definitions.

Some of this baseline data should have been in your earlier water supply plans or county comprehensive water plans. When filling out this table, think of what are the water supply risks, identify the resources, determine the threshold and then determine what your community will do to mitigate the impacts.

Your DNR area hydrologist is available to assist with this table.

For communities in the seven-county Twin Cities metropolitan area, the <u>Master Water Supply Plan</u> Appendix 1 (Water Supply Profiles), provides information about potential water supply issues and natural resource impacts for your community.

Steps for completing Table 10

1. Identify the potential for natural resource impacts/issues within the community

First, review available information to identify resources that may be impacted by the operation of your water supply system (such as pumping).

Potential Sources of Information:

- County Geologic Atlas
- Local studies
- Metropolitan Council System Statement (for metro communities)
- Metropolitan Council Master Water Supply Plan (for metro communities)

ACTION: Check the resource type(s) that may be impacted in the column "Resource Type"

2. Identify where your water supply system is most likely to impact those resources (and vice versa).

Potential Sources of Information:

- Drinking Water Supply Management Areas
- Geologic Atlas Sensitivity
- If no WHPA or other information exists, consider rivers, lakes, wetlands and significant within 1.5 miles of wells; and calcareous fens and trout streams within 5 miles of wells

ACTION: Focus the rest of your work in these areas.

3. Within focus areas, identify specific features of value to the community

You know your community best. What resources are important to pay attention to? It may be useful to check in with your community's planning and zoning staff and others.

Potential Sources of Information:

- Park plans
- Local studies
- Natural resource inventories
- Tourist attractions/recreational areas/valued community resource

ACTION: Identify specific features that the community prioritizes in the "Resource Name" column (for example: North Lake, Long River, Brook Trout Stream, or Green Fen). If, based on a review of available information, no features are likely to be at risk, note "None".

4. Identify what impact(s) the resource is at risk for

Potential Sources of Information:

- Wellhead Protection Plan
- Water Appropriation Permit
- County Geologic Atlas
- MDH or PCA reports of the area
- Metropolitan Council System Statement (for metro communities)
- Metropolitan Council Master Water Supply Plan (for metro communities)

ACTION: Check the risk type in the column "Risk". If, based on a review of available information, no risk is identified, note "None anticipated".

5. Describe how the risk was assessed

Potential Sources of Information:

- Local studies
- Monitoring data (community, WMO, DNR, etc.)
- Aquifer testing
- County Geologic Atlas or other hydrogeologic studies
- Regional or state studies, such as DNR's report 'Definitions and Thresholds for Negative Impacts to Surface Waters'
- Well boring logs

ACTION: Identify the method(s) used to identify the risk to the resource in the "Risk Assessed Through" column

6. Describe protection threshold/goals

What is the goal, if any, for protecting these resources? For example, is there a lower limit on acceptable flow in a river or stream? Water quality outside of an accepted range? A lower limit on acceptable aquifer level decline at one or more monitoring wells? Withdrawals that exceed some percent of the total amount available from a source? Or a lower limit on acceptable changes to a protected habitat?

Potential Sources of Information:

- County Comprehensive Water Plans
- Watershed Plans or One Watershed/One Plan
- Groundwater or Aquifer Plans
- Metropolitan Master Plans
- DNR Thresholds study
- Community parks, open space, and natural resource plans

ACTION: Describe resource protection goals in the "Describe Resource Protection Threshold" column or reference an existing plan/document/webpage

7. If a goal/threshold should trigger action, describe the plan that will be implemented. Identify specific action, mitigation measures or management plan that the water supplier will implement, or refer to a partner's plan that includes actions to be taken.

Potential Sources of Information:

- County Comprehensive Water Plans
- Watershed Plans or One Watershed/One Plan
- Groundwater or Aquifer Plans
- Metropolitan Master Plans
- Studies such as DNR Thresholds study

ACTION: Describe the mitigation measure or management plan in the "Mitigation Measure or Management Plan" column.

8. Describe work to evaluate these risks going forward.

For example, what is the plan to regularly check in to stay current on plans or new data?

Identify specific action that the water supplier will take to identify the creation of or change to goals/thresholds, or refer to a partner's plan that includes actions to be taken.

Potential Sources of Information:

- County Comprehensive Water Plans
- Watershed Plans or One Watershed/One Plan
- Groundwater or Aquifer Plans
- Metropolitan Master Plans
- Studies such as DNR Thresholds study

ACTION: Describe what will be done to evaluate risks going forward, including any changes to goals or protection thresholds in the "Describe how Changes to Goals are monitored" column.

Resource Type	Resource Name	Risk	Risk Assessed Through *	Describe Resource Protection Threshold or Goal *	Mitigation Measures or Management Plan	Describe How Thresholds or Goals are Monitored
🛛 River or	Bear Creek	🗆 None	🗆 Geologic	🗆 Not	□Not	□Not
stream		anticipated	atlas or other	applicable	applicable	applicable
	South Fork	\boxtimes	mapping	🛛 Additional	Change	Newly
	Zumbro River	Flow/water	⊠ Modeling	data is	groundwater	collected data
		level decline	Modeling	needed to	pumping	will be
	Cascade Creek	Degrading	□ Monitoring	establish	Increase	analyzed
		water quality	🗆 Aquifer	See report:	conservation	🗆 Regular
	Badger Run	trends	testing		🖾 Other: <u>TBD</u>	check-in with
		Impacts on	\Box WRAPS or	🗆 No data		these
	Willow Creek	endangered,	other	available		partners:
		threatened,	watershed	Other:		
		or special	report			\boxtimes Other:
		concern	□ Proximity			TBD
		species	(<1.5			
		habitat	miles)			
		□ Other:	\Box Other:			

Table 10. Natural resource impacts (*List specific resources in Appendix 12)

Resource Type	Resource Name	Risk	Risk Assessed Through *	Describe Resource Protection Threshold or Goal *	Mitigation Measures or Management Plan	Describe How Thresholds or Goals are Monitored
⊠ Calcareous fen	Rochester 23 Haverhill 19 Joyce Park Fen Marion 8	 ☑ None anticipated □ Flow/water level decline □ Degrading water quality trends □ Impacts on endangered, threatened, or special concern species habitat □ Other: 	 □ Geologic atlas or other mapping Modeling □ Modeling □ Monitoring □ Aquifer testing □ WRAPS or other watershed Report □ Proximity (<5 miles) □ Other: 	 Not applicable Additional data is needed to establish See report: Other: 	 □ Not applicable □ Change groundwater pumping □ Increase conservation □ Other: 	 □ Not applicable □ Newly collected data will be analyzed □ Regular check-in with these partners: □ Other:
⊠ Lake	Silver Lake Cascade Lake Manorwoods Lake Interlachen Lake Lake Maroo Lake George Bamber Lake Willow Creek Reservoir	 ☑ None anticipated □ Flow/water level decline □ Degrading water quality trends □ Impacts on endangered, threatened, or special concern species habitat □ Other: 	 Geologic atlas or other mapping Modeling Modeling Monitoring Aquifer testing WRAPS or other watershed report Proximity (<1.5 miles) Other: Other: 	 Not applicable Additional data is needed to establish See report: Other: 	 □ Not applicable □ Change groundwater pumping □ Increase conservation □ Other: 	 □ Not applicable □ Newly collected data will be analyzed □ Regular check-in with these partners: □ Other:

Resource Type	Resource Name	Risk	Risk Assessed Through *	Describe Resource Protection Threshold or Goal *	Mitigation Measures or Management Plan	Describe How Thresholds or Goals are Monitored
⊠ Wetland	2-3% of ground cover in Rochester is Wetland. Names and locations not specified.	 ☑ None anticipated ☑ Flow/water level decline ☑ Degrading water quality trends ☑ Impacts on endangered, threatened, or special concern species habitat ☑ Other: 	 Geologic atlas or other mapping Modeling Modeling Monitoring Aquifer testing WRAPS or other watershed report Proximity (<1.5 miles) Other: 	 Not applicable Additional data is needed to establish See report: Other: 	 Not applicable Change groundwater pumping Increase conservation Other: 	 □ Not applicable □ Newly collected data will be analyzed □ Regular check-in with these partners:
☐ Trout stream	No trout streams in Rochester	 None anticipated Flow/water level decline Degrading water quality trends Impacts on endangered, threatened, or special concern species habitat Other: 	 Geologic atlas or other mapping Modeling Monitoring Aquifer testing WRAPS or other watershed report Proximity (< 5 miles) Other: 	 □ Not applicable □ Additional data is needed to establish □ See report: □ Other: 	 □ Not applicable □ Change groundwater pumping □ Increase conservation □ Other: 	 □ Not applicable □ Newly collected data will be analyzed □ Regular check-in with these partners: □ Other: □ Other: □ □ Other: □ □ ■<

Resource Type	Resource Name	Risk	Risk Assessed Through *	Describe Resource Protection Threshold or Goal *	Mitigation Measures or Management Plan	Describe How Thresholds or Goals are Monitored
⊠ Aquifer	Shakopee Jordan Tunnel City Wonewoc Mt. Simon	 None anticipated Flow/water level decline Degrading water quality trends Impacts on endangered, 	 □ Geologic atlas or other mapping □ Modeling ○ Monitoring □ Aquifer testing □ Proximity (obwell < 5 miles) 	 Not applicable Additional data is needed to establish See report: Other: 	 Not applicable Change groundwater pumping Increase conservation Other: 	 □ Not applicable □ Newly collected data will be analyzed □ Regular check-in with these partners:
		threatened, or special concern species habitat Other:	□ Other: 			Other:

Wellhead Protection (WHP) and Source Water Protection (SWP) Plans

Complete Table 11 to provide status information about WHP and SWP plans.

The emergency procedures in this plan are intended to comply with the contingency plan provisions required in the Minnesota Department of Health's (MDH) Wellhead Protection (WHP) Plan and Surface Water Protection (SWP) Plan.

Table 11. Status of Wellhead Protection and Source Water Protection Plans

Plan Type	Status	Date Adopted	Date for Update
WHP	🛛 In Process	Part I amendment	Part II amendment will be
	Completed	approved 9/19/2017	submitted to MDH in 2019.
	Not Applicable	Part II approved 10/17/07	Next update will be due in
		(Part II amendment in	2029.
		preparation)	
SWP	🗆 In Process		
	\Box Completed		
	🖾 Not Applicable		

WHP – Wellhead Protection Plan SWP – Source Water Protection Plan

F. Capital Improvement Plan (CIP)

Please note that any wells that received approval under a ten-year permit, but that were not built, are now expired and must submit a water appropriations permit.

Adequacy of Water Supply System

Complete Table 12 with information about the adequacy of wells and/or intakes, storage facilities, treatment facilities, and distribution systems to sustain current and projected demands. List planned capital improvements for any system components, in chronological order. Communities in the seven-county Twin Cities metropolitan area should also include information about plans through 2040.

The assessment can be the general status by category; it is not necessary to identify every single well, storage facility, treatment facility, lift station, and mile of pipe.

Please attach your latest Capital Improvement Plan as Appendix 4.

Table 12. Adequacy	of Water	r Supply System	

System Component	Planned action	Anticipated Construction Year	Notes
Wells/Intakes	 No action planned - adequate Repair/replacement Expansion/addition 	2019-2028	New well approximately every 3 years
Water Storage Facilities	 No action planned - adequate Repair/replacement Expansion/addition 	2020, 2022	
Water Treatment Facilities	 No action planned - adequate Repair/replacement Expansion/addition 		
Distribution Systems (Pipes, valves, etc.)	 No action planned - adequate Repair/replacement Expansion/addition 	2018-2022	Upgrades in outdated watermains for maintenance and expansion purposes

System Component	Planned action	Anticipated Construction Year	Notes
Pressure Zones	 No action planned - adequate Repair/replacement Expansion/addition 	2020	
Other:	 No action planned - adequate Repair/replacement Expansion/addition 		

Proposed Future Water Sources

Complete Table 13 to identify new water source installation planned over the next ten years. Add rows to the table as needed.

Source	Installation Location (approximate)	Resource Name	Proposed Pumping Capacity (gpm)	Planned Installation Year	Planned Partnerships
Groundwater	Wells 42 thru 45; locations to be determined	Jordan	To be determined	Approximately every 3 years	None
Surface Water	N/A	N/A	N/A	N/A	N/A
Interconnection to another supplier	N/A	N/A	N/A	N/A	N/A

Table 13. Proposed future installations/sources

Water Source Alternatives - Key Metropolitan Council Benchmark

Do you anticipate the need for alternative water sources in the next 10 years? Yes \Box No \boxtimes

For metro communities, will you need alternative water sources by the year 2040? Yes \Box No \Box NA \boxtimes

If you answered yes for either question, then complete table 14. If no, insert NA.

Complete Table 14 by checking the box next to alternative approaches that your community is considering, including approximate locations (if known), the estimated amount of future demand that could be met through the approach, the estimated timeframe to implement the approach, potential partnerships, and the major benefits and challenges of the approach. Add rows to the table as needed.

For communities in the seven-county Twin Cities metropolitan area, these alternatives should include approaches the community is considering to meet projected 2040 water demand.

Table 14. Alternative water sources

Alternative Source Considered	Source and/or Installation Location (approximate)	Estimated Amount of Future Demand (%)	Timeframe to Implement (YYYY)	Potential Partners	Benefits	Challenges
Groundwater	NA	NA	NA	NA	NA	NA
Surface Water	NA	NA	NA	NA	NA	NA
Reclaimed stormwater	NA	NA	NA	NA	NA	NA
Reclaimed wastewater	NA	NA	NA	NA	NA	NA
Interconnection to another supplier	NA	NA	NA	NA	NA	NA

NOTE: Preliminary evaluation of alternative water supply options completed in 2017

PART 2. EMERGENCY PREPAREDNESS PROCEDURES

The emergency preparedness procedures outlined in this plan are intended to comply with the contingency plan provisions required by MDH in the WHP and SWP. Water emergencies can occur as a result of vandalism, sabotage, accidental contamination, mechanical problems, power failings, drought, flooding, and other natural disasters. The purpose of emergency planning is to develop emergency response procedures and to identify actions needed to improve emergency preparedness. In the case of a municipality, these procedures should be in support of, and part of, an all-hazard emergency operations plan. Municipalities that already have written procedures dealing with water emergencies should review the following information and update existing procedures to address these water supply protection measures.

A. Emergency Response Plan

Section 1433(b) of the Safe Drinking Water Act, (Public Law 107-188, Title IV- Drinking Water Security and Safety) requires community water suppliers serving over 3,300 people to prepare an Emergency Response Plan. MDH recommends that Emergency Response Plans are updated annually.

Do you have an Emergency Response Plan? Yes ⊠ No □

Have you updated the Emergency Response Plan in the last year? Yes \Box No \boxtimes

When did you last update your Emergency Response Plan? July 2004 Note: RPU staff currently reviewing the Water Emergency Operations Plan and will update if necessary.

Complete Table 15 by inserting the noted information regarding your completed Emergency Response Plan.

Table 15. Emergency Response Plan contact information

Emergency Response Plan Role	Contact Person	Contact Phone Number	Alternate Telephone
Emergency Response Lead	CARY JOHNSON	507-280-1507	507-273-1200
Alternate Emergency Response Lead	STEVE	507-280-1527	507-273-5038
	JOHNSON		

B. Operational Contingency Plan

All utilities should have a written operational contingency plan that describes measures to be taken for water supply mainline breaks and other common system failures as well as routine maintenance.

Do you have a written operational contingency plan? Yes ⊠ No □

Note: RPU staff currently reviewing the Water Emergency Operations Plan and will update if necessary.

At a minimum, a water supplier should prepare and maintain an emergency contact list of contractors and suppliers.

C. Emergency Response Procedures

Water suppliers must meet the requirements of MN Rules 4720.5280. Accordingly, the Minnesota Department of Natural Resources (DNR) requires public water suppliers serving more than 1,000 people to submit Emergency and Conservation Plans. Water emergency and conservation plans that have been approved by the DNR, under provisions of Minnesota Statute 186 and Minnesota Rules, part 6115.0770, will be considered equivalent to an approved WHP contingency plan.

Emergency Telephone List

Prepare and attach a list of emergency contacts, including the MN Duty Officer (1-800-422-0798), as **Appendix 5**. An <u>Emergency Contact List template</u> is available at the <u>MnDNR Water Supply Plans</u> <u>webpage</u>.

The list should include key utility and community personnel, contacts in adjacent water suppliers, and appropriate local, state and federal emergency contacts. Please be sure to verify and update the contacts on the emergency telephone list and date it. Thereafter, update on a regular basis (once a year is recommended). In the case of a municipality, this information should be contained in a notification and warning standard operating procedure maintained by the Emergency Manager for that community. Responsibilities and services for each contact should be defined.

Current Water Sources and Service Area

Quick access to concise and detailed information on water sources, water treatment, and the distribution system may be needed in an emergency. System operation and maintenance records should be maintained in secured central and back-up locations so that the records are accessible for emergency purposes. A detailed map of the system showing the treatment plants, water sources, storage facilities, supply lines, interconnections, and other information that would be useful in an emergency should also be readily available. It is critical that public water supplier representatives and emergency response personnel communicate about the response procedures and be able to easily obtain this kind of information both in electronic and hard copy formats (in case of a power outage).

Do records and maps exist? Yes \boxtimes No \square

Can staff access records and maps from a central secured location in the event of an emergency?

Yes 🛛 🛛 No 🗆

Does the appropriate staff know where the materials are located?

Yes \boxtimes No \square

Procedure for Augmenting Water Supplies

Complete Tables 16 - 17 by listing all available sources of water that can be used to augment or replace existing sources in an emergency. Add rows to the tables as needed.

In the case of a municipality, this information should be contained in a notification and warning standard operating procedure maintained by the warning point for that community. Municipalities are encouraged to execute cooperative agreements for potential emergency water services and copies should be included in **Appendix 6**. Outstate Communities may consider using nearby high capacity wells (industry, golf course) as emergency water sources.

WSP should include information on any physical or chemical problems that may limit interconnections to other sources of water. Approvals from the MDH are required for interconnections or the reuse of water.

Other Water	Capacity (GPM	Note Any Limitations On	List of services, equipment, supplies
Supply System	& MGD)	Use	available to respond
Owner			
Insert name of	NA	NA	NA
water supplier here			
Add rows as	NA	NA	NA
needed			

Table 16. Interconnections with other water supply systems to supply water in an emergency

GPM – Gallons per minute MGD – million gallons per day

Table 17. Utilizing surface water as an alternative source

Surface Water	Capacity	Capacity	Treatment Needs	Note Any Limitations
Source Name	(GPM)	(MGD)		On Use
Insert name of surface water source here	NA	NA	NA	NA
Add rows as needed	NA	NA	NA	NA

If not covered above, describe additional emergency measures for providing water (obtaining bottled water, or steps to obtain National Guard services, etc.)

Allocation and Demand Reduction Procedures

Complete Table 18 by adding information about how decisions will be made to allocate water and reduce demand during an emergency. Provide information for each customer category, including its priority ranking, average day demand, and demand reduction potential for each customer category. Modify the customer categories as needed, and add additional lines if necessary.

Water use categories should be prioritized in a way that is consistent with Minnesota Statutes 103G.261 (#1 is highest priority) as follows:

- Water use for human needs such as cooking, cleaning, drinking, washing and waste disposal; use for on-farm livestock watering; and use for power production that meets contingency requirements.
- 2. Water use involving consumption of less than 10,000 gallons per day (usually from private wells or surface water intakes)
- Water use for agricultural irrigation and processing of agricultural products involving consumption of more than 10,000 gallons per day (usually from private high-capacity wells or surface water intakes)
- 4. Water use for power production above the use provided for in the contingency plan.
- 5. All other water use involving consumption of more than 10,000 gallons per day.
- 6. Nonessential uses car washes, golf courses, etc.

Water used for human needs at hospitals, nursing homes and similar types of facilities should be designated as a high priority to be maintained in an emergency. Lower priority uses will need to address water used for human needs at other types of facilities such as hotels, office buildings, and manufacturing plants. The volume of water and other types of water uses at these facilities must be carefully considered. After reviewing the data, common sense should dictate local allocation priorities to protect domestic requirements over certain types of economic needs. Water use for lawn sprinkling, vehicle washing, golf courses, and recreation are legislatively considered non-essential.

Table 18. Water use priorities

Customer Category	Allocation Priority	Average Daily Demand (GDP)	Short-Term Emergency Demand Reduction Potential (GPD)
Residential	1	5,617,000(1)	1,815,941
Institutional	NA		
Commercial	2	5,363,378(2)	
Industrial	2		
Irrigation (Commercial)	3	524,322(3)	524,322
Wholesale	NA		
Non-Essential	NA		
TOTAL	NA	11,504,700	2,340,263

GPD – Gallons per Day

NOTES: (1) Average day demand is for the years 2013-2017. (2) Average day demand is average C/I/I demand for the years 2013-2017. (3) Commercial irrigation use is metered separately and average shown is for the years 2013-2017

Tip: Calculating Emergency Demand Reduction Potential

The emergency demand reduction potential for all uses will typically equal the difference between maximum use (summer demand) and base use (winter demand). In extreme emergency situations, lower priority water uses must be restricted or eliminated to protect priority domestic water requirements. Emergency demand reduction potential should be based on average day demands for customer categories within each priority class. Use the tables in Part 3 on water conservation to help you determine strategies.

Complete Table 19 by selecting the triggers and actions during water supply disruption conditions.

Table 19. Emergency demand reduction conditions, triggers and actions (Select all that may apply and describe)

Emergency Triggers	Short-term Actions	Long-term Actions
☑ Contamination	Supply augmentation through	Supply augmentation through
 Loss of production Infrastructure failure Executive order by Governor Other: Water Demand 	 Adopt (if not already) and enforce a critical water deficiency ordinance to penalize lawn watering, vehicle washing, golf course and park irrigation & other nonessential uses. Water allocation according to Section 205 of the RPU Water Rules and Regulations Meet with large water users to discuss their contingency plan. 	 Adopt (if not already) and enforce a critical water deficiency ordinance to penalize lawn watering, vehicle washing, golf course and park irrigation & other nonessential uses. Water allocation according to Section 205 of the RPU Water Rules and Regulations Meet with large water users to discuss their contingency plan.

Notification Procedures

Complete Table 20 by selecting trigger for informing customers regarding conservation requests, water use restrictions, and suspensions; notification frequencies; and partners that may assist in the notification process. Add rows to the table as needed.

Table 20. Plan to inform customers regarding conservation requests, water use restrictions, and suspensions

Notification	Methods (select all that apply)	Update	Partners
Trigger(s)		Frequency	
Short-term	🖾 Website – internet	🛛 Daily	Local news/radio station
demand reduction	communications	🗆 Weekly	
declared (< 1	Email list serve	Monthly	
year)	🖾 Social media (e.g. Twitter,	Annually	
	Facebook)	🛛 As needed	
	Direct customer mailing,		
	🗵 Press release (TV, radio,		

Notification	Methods (select all that apply)	Update	Partners
Trigger(s)		Frequency	
	newspaper),		
	Meeting with large water users		
	(> 10% of total city use)		
	□ Other:		
🛛 Long-term	🖾 Website	🗆 Daily	Local news/radio station
Ongoing demand	Email list serve	Weekly	
reduction	🖾 Social media (e.g. Twitter,	Monthly	
declared	Facebook)	Annually	
	☑ Direct customer mailing,	🖾 As needed	
	🖾 Press release (TV, radio,		
	newspaper),		
	Meeting with large water users		
	(> 10% of total city use)		
	□ Other:		
🖾 Governor's critical	🖾 Website	🖾 Daily	Local news/radio station
water deficiency	Email list serve	Weekly	
declared	Social media (e.g. Twitter,	Monthly	
	Facebook)	Annually	
	☑ Direct customer mailing,	oxtimes As needed	
	🛛 Press release (TV, radio,		
	newspaper),		
	Meeting with large water users		
	(> 10% of total city use)		
	□ Other:		

Enforcement

Prior to a water emergency, municipal water suppliers must adopt regulations that restrict water use and outline the enforcement response plan. The enforcement response plan must outline how conditions will be monitored to know when enforcement actions are triggered, what enforcement tools will be used, who will be responsible for enforcement, and what timelines for corrective actions will be expected.

Affected operations, communications, and enforcement staff must then be trained to rapidly implement those provisions during emergency conditions.

Important Note:

Disregard of critical water deficiency orders, even though total appropriation remains less than permitted, is adequate grounds for immediate modification of a public water supply authority's water use permit (2013 MN Statutes 103G.291)

Does the city have a critical water deficiency restriction/official control in place that includes provisions to restrict water use and enforce the restrictions? (This restriction may be an ordinance, rule, regulation, policy under a council directive, or other official control) Yes \boxtimes No \square

If yes, attach the official control document to this WSP as **Appendix 7**.

If no, the municipality must adopt such an official control within 6 months of submitting this WSP and submit it to the DNR as an amendment to this WSP.

Irrespective of whether a critical water deficiency control is in place, does the public water supply utility, city manager, mayor, or emergency manager have standing authority to implement water restrictions? Yes \boxtimes No \square

If yes, cite the regulatory authority reference: Utility General Manager and City Mayor have authority.

If no, who has authority to implement water use restrictions in an emergency?

NA

PART 3. WATER CONSERVATION PLAN

Minnesotans have historically benefited from the state's abundant water supplies, reducing the need for conservation. There are however, limits to the available supplies of water and increasing threats to the quality of our drinking water. Causes of water supply limitation may include: population increases, economic trends, uneven statewide availability of groundwater, climatic changes, and degraded water quality. Examples of threats to drinking water quality include: the presence of contaminant plumes from past land use activities, exceedances of water quality standards from natural and human sources, contaminants of emerging concern, and increasing pollutant trends from nonpoint sources.



There are many incentives for conserving water; conservation:

- reduces the potential for pumping-induced transfer of contaminants into the deeper aquifers, which can add treatment costs
- reduces the need for capital projects to expand system capacity
- reduces the likelihood of water use conflicts, like well interference, aquatic habitat loss, and declining lake levels
- conserves energy, because less energy is needed to extract, treat and distribute water (and less energy production also conserves water since water is used to produce energy)
- maintains water supplies that can then be available during times of drought

It is therefore imperative that water suppliers implement water conservation plans. The first step in water conservation is identifying opportunities for behavioral or engineering changes that could be made to reduce water use by conducting a thorough analysis of:

- Water use by customer
- Extraction, treatment, distribution and irrigation system efficiencies
- Industrial processing system efficiencies
- Regulatory and barriers to conservation
- Cultural barriers to conservation
- Water reuse opportunities

Once accurate data is compiled, water suppliers can set achievable goals for reducing water use. A successful water conservation plan follows a logical sequence of events. The plan should address both conservation on the supply side (leak detection and repairs, metering), as well as on the demand side (reductions in usage). Implementation should be conducted in phases, starting with the most obvious and lowest-cost options. In some cases, one of the early steps will be reviewing regulatory constraints to water conservation, such as lawn irrigation requirements. Outside funding and grants may be available for implementation of projects. Engage water system operators and maintenance staff and customers in brainstorming opportunities to reduce water use. Ask the question: "How can I help save water?"

Progress since 2006

Is this your community's first Water Supply Plan? Yes \Box No \boxtimes

If yes, describe conservation practices that you are already implementing, such as: pricing, system improvements, education, regulation, appliance retrofitting, enforcement, etc.

NA

If no, complete Table 21 to summarize conservation actions taken since the adoption of the 2006 water supply plan.

Table 21. Implementation of previous ten-year Conservation Plan

2006 Plan Commitments	Action Taken?
Change water rates structure to provide conservation pricing	🖾 Yes
	🗆 No
Water supply system improvements (e.g. leak repairs, valve replacements, etc.)	🛛 Yes
	🗆 No
Educational efforts	🛛 Yes
	🗆 No
New water conservation ordinances	🗆 Yes
	🖾 No
Rebate or retrofitting Program (e.g. for toilet, faucets, appliances, showerheads, dish	🖾 Yes
washers, washing machines, irrigation systems, rain barrels, water softeners, etc.	🗆 No
Enforcement	□ Yes
	🛛 No
Describe other	□ Yes
	🖾 No

What are the results you have seen from the actions in Table 21 and how were results measured?

Average water demand in gallons per capita per day, estimated gallons saved from rebate installations, water accountability, and leak detection survey rates are used to measure results of water conservation efforts. Since the initiation of Rochester Public Utilities' conservation efforts, reductions in average water demand per capita have been made from 128 GPCD to 109 GPCD. Water accountability has remained above 90%. The rebate program has saved an average of 6.5 MG annually, and leak detection efforts have been increasing.

A. Triggers for Allocation and Demand Reduction Actions

Complete table 22 by checking each trigger below, as appropriate, and the actions to be taken at various levels or stages of severity. Add in additional rows to the table as needed.

Table 22. Short and long-term demand reduction conditions, triggers and actions

Objective	Triggers	Actions
Protect surface water flows	□ Low stream flow conditions	☑ Increase promotion of conservation
	□ Reports of declining wetland	measures
	and lake levels	Other: <u>Assess moving planned well to</u>
	☑ Other: Predicted potential	alternate location or into a different source
	reductions in stream flow	water aquifer
	identified during new well	
	planning exceed targets set by	
	DNR	
Short-term demand reduction	Extremely high seasonal	\Box Adopt (if not already) and enforce the
(less than 1 year	water demand (more than	critical water deficiency ordinance to
	double winter demand)	restrict or prohibit lawn watering, vehicle
	Loss of treatment capacity	washing, golf course and park irrigation &
	☑ Lack of water in storage	other nonessential uses.
	⊠ State drought plan	Supply augmentation through
	Well interference	Water allocation through <u>tiered water</u>
	□ Other:	allocation priorities
		☐ Meet with large water users to discuss
	_	user's contingency plan.
Long-term demand reduction	🛛 Per capita demand	Develop a critical water deficiency
(>1 year)	increasing	ordinance that is or can be quickly
	☐ Total demand increase	adopted to penalize lawn watering,
	(higher population or more	vehicle washing, golf course and park
	industry). Water level in	irrigation & other nonessential uses.
	well(s) below elevation of	□ Enact a water waste ordinance that
		targets overwatering (causing water to
	□ Other:	flow off the landscape into streets,
		parking lots, or similar), watering
		impervious surfaces (streets, driveways
		of other hardscape areas), and negligence
		Most with large water users to discuss
		User's contingency plan.
		audits meters billing etc
Governor's "Critical Water	X Per canita demand	Meet with large water users to discuss
Deficiency Order" declared		user's contingency plan
		X Enhanced monitoring and reporting
		audits, meters, billing, etc.

B. Conservation Objectives and Strategies – Key benchmark for DNR

This section establishes water conservation objectives and strategies for eight major areas of water use.

Objective 1: Reduce Unaccounted (Non-Revenue) Water loss to Less than 10%

The Minnesota Rural Water Association, the Metropolitan Council and the Department of Natural Resources recommend that all water uses be metered. Metering can help identify high use locations and times, along with leaks within buildings that have multiple meters.

It is difficult to quantify specific unmetered water use such as that associated with firefighting and system flushing or system leaks. Typically, water suppliers subtract metered water use from total water pumped to calculate unaccounted or non-revenue water loss.

Is your five-year average (2005-2014) unaccounted Water Use in Table 2 higher than 10%?

Yes 🗆 🛛 No 🖾

What is your leak detection monitoring schedule? (e.g. Monitor 1/3rd of the city lines per year)

At a minimum, monitor at least 50% of the total water mains in the distribution system each year.

Water Audits - are designed to help quantify and track water losses associated with water distribution systems and identify areas for improved efficiency and cost recovery. The American Water Works Association (AWWA) has a recommended water audit methodology which is presented in <u>AWWA's M36</u> <u>Manual of Water Supply Practices: Water Audits and Loss Control Programs</u>. AWWA also provides a free spreadsheet-based water audit tool that water suppliers can use to conduct their own water audits. This free water audit tool can be found on AWWA's <u>Water Loss Control webpage</u>. Another resource for water audit and water loss control information is <u>Minnesota Rural Water Association</u>.

What is the date of your most recent water audit? <u>RPU calculates unaccounted water per service area</u> on monthly basis. Annual unaccounted water for the system averaged 5.4% over the last five years.

Frequency of water audits:	🗆 yearly	other (specify freque	ency) _monthly_	
Leak detection and survey:	🛛 every year	\Box every other year	⊠ periodic as needed	
Year last leak detection survey completed: By June of each year				

If Table 2 shows annual water losses over 10% or an increasing trend over time, describe what actions will be taken to reach the <10% loss objective and within what timeframe

N/A, water loss is <6%

Metering -AWWA recommends that every water supplier install meters to account for all water taken into its system, along with all water distributed from its system at each customer's point of service. An effective metering program relies upon periodic performance testing, repair, maintenance or replacement of all meters. Drinking Water Revolving Loan Funds are available for purchase of new meters when new plants are built. AWWA also recommends that water suppliers conduct regular water audits to account for unmetered unbilled consumption, metered unbilled consumption and source water and customer metering inaccuracies. Some cities install separate meters for interior and exterior water use, but some research suggests that this may not result in water conservation.

Complete Table 23 by adding the requested information regarding the number, types, testing and maintenance of customer meters.

Table 23. Information about customer meters

Customer Category	Number of Customers	Number of Metered Connections	Number of Automated Meter Readers	Meter testing intervals (years)	Average age/meter replacement schedule (years
Residential	36,155	36,155	36,155	As needed	20 / Based on throughput
Irrigation meters	NA	NA	NA	NA	NA
Institutional	NA	NA	NA	NA	NA
Commercial	3,748	3,748	3,748	As needed	10 / Based on throughput
Industrial	32	32	32	As needed	5 / Based on throughput
Public facilities	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA
TOTALS	39,935	39,935		NA	NA

For unmetered systems, describe any plans to install meters or replace current meters with advanced technology meters. Provide an estimate of the cost to implement the plan and the projected water savings from implementing the plan.

RPU does not have any unmetered systems.

Table 24. Water source meters

	Number of Meters	Meter testing schedule (years)	Number of Automated Meter Readers	Average age/meter replacement schedule (years
Water source (wells/intakes)	32	1	32	5 / As needed
Treatment plant	NA	NA	NA	NA

Objective 2: Achieve Less than 75 Residential Gallons per Capita Demand (GPCD)

The 2002 average residential per capita demand in the Twin Cities Metropolitan area was 75 gallons per capita per day.

Is your average 2010-2015 residential per capita water demand in Table 2 more than 75? Yes 🗆 No 🖂

What was your 2010 – 2015 five-year average residential per capita water demand? 52 g/person/day

Describe the water use trend over that timeframe:

The average residential per capita water demand decreased from 63.3 gal/person/day to 48.5 gal/person/day between 2005 and 2017. Note that high density residential use is not included in residential per capita demand data.

Complete Table 25 by checking which strategies you will use to continue reducing residential per capita demand and project a likely timeframe for completing each checked strategy (Select all that apply and add rows for additional strategies):

Strategy to reduce residential per capita demand	Timeframe for completing work
□ Revise city ordinances/codes to encourage or require water	
efficient landscaping.	
□ Revise city ordinance/codes to permit water reuse options,	
especially for non-potable purposes like irrigation,	
groundwater recharge, and industrial use. Check with	
plumbing authority to see if internal buildings reuse is	
permitted	
□ Revise ordinances to limit irrigation. Describe the restricted	
irrigation plan:	
□ Revise outdoor irrigation installations codes to require high	
efficiency systems (e.g. those with soil moisture sensors or	
programmable watering areas) in new installations or system	
replacements.	
☑ Make water system infrastructure improvements	Ongoing water main replacement program to
	reduce breaks/leaks
☑ Offer free or reduced cost water use audits) for residential	As requested by customer
customers.	
☐ Implement a notification system to inform customers when	System to notify customers via social media,
water availability conditions change.	news release, and traditional media (radio/tv)
	is in place
☑ Provide rebates or incentives for installing water efficient	Rebate program for water-efficient appliances
appliances and/or fixtures indoors (e.g., low flow toilets, high	and rain barrels already in existence and will
efficiency dish washers and washing machines, showerhead	continue
and faucet aerators, water softeners, etc.)	
☑ Provide rebates or incentives to reduce outdoor water use	Program already in existence and will continue
(e.g., turf replacement/reduction, rain gardens, rain barrels,	
smart irrigation, outdoor water use meters, etc.)	
Identify supplemental Water Resources	Review of alternative water supply options
	completed in October 2017
Conduct audience-appropriate water conservation education	Program already in existence and will continue
and outreach.	
Describe other plans	

Objective 3: Achieve at least 1.5% annual reduction in non-residential per capita water use

(For each of the next ten years, or a 15% total reduction over ten years.) This includes commercial, institutional, industrial and agricultural water users.

Complete Table 26 by checking which strategies you will used to continue reducing non-residential customer use demand and project a likely timeframe for completing each checked strategy (add rows for additional strategies).

Where possible, substitute recycled water used in one process for reuse in another. (For example, spent rinse water can often be reused in a cooling tower.) Keep in mind the true cost of water is the amount

on the water bill PLUS the expenses to heat, cool, treat, pump, and dispose of/discharge the water. Don't just calculate the initial investment. Many conservation retrofits that appear to be prohibitively expensive are actually very cost-effective when amortized over the life of the equipment. Often reducing water use also saves electrical and other utility costs. Note: as of 2015, water reuse, and is not allowed by the state plumbing code, M.R. 4715 (a variance is needed). However, several state agencies are addressing this issue.

Table 26. Strategies and timeframe to reduce institutional, commercial industrial, and agricultural and non-revenue	use
demand	

Strategy to reduce total business, industry, agricultural demand	Timeframe for completing work
□ Conduct a facility water use audit for both indoor and outdoor	
use, including system components	
☑ Install enhanced meters capable of automated readings to	Within 5 years
detect spikes in consumption	
\Box Compare facility water use to related industry benchmarks, if	
available (e.g., meat processing, dairy, fruit and vegetable,	
beverage, textiles, paper/pulp, metals, technology, petroleum	
refining etc.)	
□ Install water conservation fixtures and appliances or change	
processes to conserve water	
☐ ☐ Repair leaking system components (e.g., pipes, valves)	
☑ Investigate the reuse of reclaimed water (e.g., stormwater,	Preliminary assessment completed in 2017 as
wastewater effluent, process wastewater, etc.)	part of alternative water supply options
	evaluation
Reduce outdoor water use (e.g., turf replacement/reduction,	Rebate program for water-efficient equipment
rain gardens, rain barrels, smart irrigation, outdoor water use	and rain barrels already in existence and will
meters, etc.)	continue
□ Train employees how to conserve water	
☑ Implement a notification system to inform non-residential	Notification system already in place
customers when water availability conditions change.	
Nonpotable rainwater catchment systems intended to supply	
uses such as water closets, urinals, trap primers for floor	
drains and floor sinks, industrial processes, water features,	
vehicle washing facilities, cooling tower makeup, and similar	
uses shall be approved by the commissioner. <u>Plumbing code</u>	
4714.1702, Published October 31, 2016	
Describe other plans:	

Objective 4: Achieve a Decreasing Trend in Total Per Capita Demand

Include as **Appendix 8** one graph showing total per capita water demand for each customer category (i.e., residential, institutional, commercial, industrial) from 2005-2014 and add the calculated/estimated linear trend for the next 10 years.

Describe the trend for each customer category; explain the reason(s) for the trends, and where trends are increasing.

<u>Residential use</u>: The per capita demand has followed a generally declining trend from 2005 to 2015. Since 2015 the per capita demand trend has been nearly flat. The declining trend from 2005-2015 resulted from changes in the plumbing code to improve water efficiency, RPU's rebate program for water efficient appliances and rain barrels, and RPU efforts related to water conservation education. Annual variations in demand during the period appears to be related mainly to variations in precipitation. Future implementation of water saving approaches in the plumbing code likely will not produce additional significant per capita demand improvements. Some modest gains may be possible through continued water conservation education and continuation of the rebate program.

<u>Commercial use</u>: The per capita demand has followed a nearly flat to slowly increasing trend since 2005. The number of business users in this category has remained nearly the same over this period. This category also includes high density residential water use. Demand increases may be related to increases in high density residential water use.

<u>Industrial use</u>: The per capita demand followed a nearly flat trend from 2005 to 2015. The demand in this category was somewhat higher in 2016 and 2017. The increase in 2016 and 2017 over previous years was due to one industrial user shutting down a well in 2016 and purchasing water from RPU to replace the water previously obtained from their well.

Objective 5: Reduce Ratio of Maximum day (peak day) to the Average Day Demand to Less Than 2.6

Is the ratio of average 2005-2014 maximum day demand to average 2005-2014 average day demand reported in Table 2 more than 2.6? Yes □ No ⊠

Calculate a ten-year average (2005 – 2014) of the ratio of maximum day demand to average day demand: 1.9

The position of the DNR has been that a peak day/average day ratio that is above 2.6 for in summer indicates that the water being used for irrigation by the residents in a community is too large and that efforts should be made to reduce the peak day use by the community.

It should be noted that by reducing the peak day use, communities can also reduce the amount of infrastructure that is required to meet the peak day use. This infrastructure includes new wells, new water towers which can be costly items.

Objective 6: Implement Demand Reduction Measures

Water Conservation Program

Municipal water suppliers serving over 1,000 people are required to adopt demand reduction measures that include a conservation rate structure, or a uniform rate structure with a conservation program that achieves demand reduction. These measures must achieve demand reduction in ways that reduce water demand, water losses, peak water demands, and nonessential water uses. These measures must be approved before a community may request well construction approval from the Department of Health or before requesting an increase in water appropriations permit volume (Minnesota Statutes,

<u>section 103G.291, subd. 3 and 4</u>). Rates should be adjusted on a regular basis to ensure that revenue of the system is adequate under reduced demand scenarios. If a municipal water supplier intends to use a Uniform Rate Structure, a community-wide Water Conservation Program that will achieve demand reduction must be provided.

Current Water Rates

Include a copy of the actual rate structure in **Appendix 9** or list current water rates including base/service fees and volume charges below.

Volume included in bas	e rate or service	e charge:	gallons or <u>100 c</u>	<u>ubic feet</u> o	or other	
Frequency of billing:	oxtimes Monthly	Bimonthly	Quarterly	🗆 Othe	er:	
Water Rate Evaluation	Frequency: 🗆 e	every year	⊠ every <u>3</u> y	vears	no schedule	
Date of last rate change: January 1, <u>2018</u>						

Table 27. Rate structures for each customer category (Select all that apply and add additional rows as needed)

Customer	Conservation Billing Strategies	Conservation Neutral	Non-Conserving Billing
Category	in Use *	Billing Strategies in Use **	Strategies in Use ***
Residential	🛛 Monthly billing	🗌 Uniform	\square Service charge based on water
	Increasing block rates	\Box Odd/even day watering	volume
	(volume tiered rates)		Declining block
	Seasonal rates		🗆 Flat
	Time of use rates		🗆 Other (describe)
	\Box Water bills reported in		
	gallons		
	Individualized goal rates		
	Excess use rates		
	Drought surcharge		
	\Box Use water bill to provide		
	comparisons		
	Service charge not based on		
	water volume		
	Other (Monthly charge		
	based on size of water meter)		
Commercial/	🛛 Monthly billing	🛛 Uniform	\square Service charge based on water
Industrial/	Increasing block rates		volume
Institutional	(volume tiered rates)		Declining block
	Seasonal rates		🗆 Flat
	Time of use rates		🗆 Other (describe)
	\Box Water bills reported in		
	gallons		
	Individualized goal rates		
	Excess use rates		
	Drought surcharge		

Customer	Conservation Billing Strategies	Conservation Neutral	Non-Conserving Billing
Category	in Use *	Billing Strategies in Use **	Strategies in Use ***
	\Box Use water bill to provide		
	comparisons		
	Service charge not based on		
	water volume		
	⊠ Other (Monthly charge		
	based on size of water meter)		
⊠ Other:	☑ Monthly billing	🛛 Uniform	Service charge based on water
Inter-	Increasing block rates		volume
departmental	(volume tiered rates)		Declining block
	Seasonal rates		🗆 Flat
	Time of use rates		\Box Other (describe)
	\Box Water bills reported in		
	gallons		
	Individualized goal rates		
	Excess use rates		
	Drought surcharge		
	\Box Use water bill to provide		
	comparisons		
	oxtimes Service charge not based on		
	water volume		
	🛛 Other (Monthly charge		
	based on size of water meter)		
⊠ Other:	🖾 Monthly billing	🛛 Uniform	\Box Service charge based on water
Irrigation	Increasing block rates		volume
	(volume tiered rates)		Declining block
	Seasonal rates		🗆 Flat
	\Box Time of use rates		🗆 Other (describe)
	\Box Water bills reported in		
	gallons		
	Individualized goal rates		
	Excess use rates		
	Drought surcharge		
	\Box Use water bill to provide		
	comparisons		
	⊠ Service charge not based on		
	water volume		
	🛛 Other (Monthly charge		
	based on size of water meter)		

* Rate Structures components that may promote water conservation:

- **Monthly billing:** is encouraged to help people see their water usage so they can consider changing behavior.
- Increasing block rates (also known as a tiered residential rate structure): Typically, these have at least three tiers: should have at least three tiers.
 - The first tier is for the winter average water use.
 - The second tier is the year-round average use, which is lower than typical summer use. This rate should be set to cover the full cost of service.

- The third tier should be above the average annual use and should be priced high enough to encourage conservation, as should any higher tiers. For this to be effective, the difference in block rates should be significant.
- Seasonal rate: higher rates in summer to reduce peak demands
- Time of Use rates: lower rates for off peak water use
- Bill water use in gallons: this allows customers to compare their use to average rates
- Individualized goal rates: typically used for industry, business or other large water users to promote water conservation if they keep within agreed upon goals. Excess Use rates: if water use goes above an agreed upon amount this higher rate is charged
- Drought surcharge: an extra fee is charged for guaranteed water use during drought
- Use water bill to provide comparisons: simple graphics comparing individual use over time or compare individual use to others.
- Service charge or base fee that does not include a water volume a base charge or fee to cover universal city expenses that are not customer dependent and/or to provide minimal water at a lower rate (e.g., an amount less than the average residential per capita demand for the water supplier for the last 5 years)
- **Emergency rates** -A community may have a separate conservation rate that only goes into effect when the community or governor declares a drought emergency. These higher rates can help to protect the city budgets during times of significantly less water usage.

Conservation Neutral

- Uniform rate: rate per unit used is the same regardless of the volume used
- Odd/even day watering This approach reduces peak demand on a daily basis for system operation, but it does not reduce overall water use.

*** Non-Conserving ***

- Service charge or base fee with water volume: an amount of water larger than the average residential per capita demand for the water supplier for the last 5 years
- **Declining block rate:** the rate per unit used decreases as water use increases.
- Flat rate: one fee regardless of how much water is used (usually unmetered).

Provide justification for any conservation neutral or non-conserving rate structures. If intending to adopt a conservation rate structure, include the timeframe to do so:

Metered irrigation is charged a uniform rate, however it is consistent with the rate used for the 3rd, and highest, residential tier.

Objective 7: Additional strategies to Reduce Water Use and Support Wellhead Protection Planning

Development and redevelopment projects can provide additional water conservation opportunities, such as the actions listed below. If a Uniform Rate Structure is in place, the water supplier must provide a Water Conservation Program that includes at <u>least two</u> of the actions listed below. Check those actions that you intent to implement within the next 10 years.

Table 28. Additional strategies to Reduce Water Use & Support Wellhead Protection

	Participate in the GreenStep Cities Program, including implementation of at least one of the 20
	"Best Practices" for water
\boxtimes	Prepare a master plan for smart growth (compact urban growth that avoids sprawl)
\boxtimes	Prepare a comprehensive open space plan (areas for parks, green spaces, natural areas)

	Adopt a water use restriction ordinance (lawn irrigation, car washing, pools, etc.)
	Adopt an outdoor lawn irrigation ordinance
	Adopt a private well ordinance (private wells in a city must comply with water restrictions)
\boxtimes	Implement a stormwater management program
	Adopt non-zoning wetlands ordinance (can further protect wetlands beyond state/federal laws-
	for vernal pools, buffer areas, restrictions on filling or alterations)
	Adopt a water offset program (primarily for new development or expansion)
\boxtimes	Implement a water conservation outreach program (This work already part of RPU staff
	responsibilities)
\boxtimes	Hire a water conservation coordinator (This work already part of RPU staff responsibilities)
\boxtimes	Implement a rebate program for water efficient appliances, fixtures, or outdoor water
	management (Rebate program already exists
\boxtimes	Other

Objective 8: Tracking Success: How will you track or measure success through the next ten years?

- 1) Measure success based on water billing records over the next ten years.
- 2) RPU tracks participation rate in rebate program for water efficient fixtures, appliances, and irrigation systesm and for rain barrels.
- 3) RPU tracks annual unaccounted for water.

Tip: The process to monitor demand reduction and/or a rate structure includes:

- a) The DNR Hydrologist will call or visit the community the first 1-3 years after the water supply plan is completed.
- b) They will discuss what activities the community is doing to conserve water and if they feel their actions are successful. The Water Supply Plan, Part 3 tables and responses will guide the discussion. For example, they will discuss efforts to reduce unaccounted for water loss if that is a problem, or go through Tables 33, 34 and 35 to discuss new initiatives.
- c) The city representative and the hydrologist will discuss total per capita water use, residential per capita water use, and business/industry use. They will note trends.
- d) They will also discuss options for improvement and/or collect case studies of success stories to share with other communities. One option may be to change the rate structure, but there are many other paths to successful water conservation.
- e) If appropriate, they will cooperatively develop a simple work plan for the next few years, targeting a couple areas where the city might focus efforts.

C. Regulation

Complete Table 29 by selecting which regulations are used to reduce demand and improve water efficiencies. Add additional rows as needed.

Copies of adopted regulations or proposed restrictions or should be included in **Appendix 10** (a list with hyperlinks is acceptable).
Table 29. Regulations for short-term reductions in demand and long-term improvements in water efficiencies

Regulations Utilized	When is it applied (in effect)?
□ Rainfall sensors required on landscape irrigation systems	Ongoing
	Seasonal
	Only during declared Emergencies
☑ Water efficient plumbing fixtures required	🗆 New development
	Replacement
	🖂 Rebate Programs
⊠ Critical/Emergency Water Deficiency ordinance (covered under RPU's water rules and regulations)	☑ Only during declared Emergencies
☑ Watering restriction requirements (time of day, allowable days, etc.)	🗆 Odd/even
	🗆 2 days/week
	Only during declared Emergencies
□ Water waste prohibited (for example, having a fine for irrigators	
spraying on the street)	Seasonal
	Only during declared Emergencies
□ Limitations on turf areas (requiring lots to have 10% - 25% of the	New development
space in natural areas)	□ Shoreland/zoning
	🗆 Other
□ Soil preparation requirement s (after construction, requiring topsoil	🗆 New Development
to be applied to promote good root growth)	Construction Projects
	□ Other
☑ Tree ratios (requiring a certain number of trees per square foot of	☑ New development (commercial only)
lawn) (City of Rochester ordinance)	Shoreland/zoning
	□ Other
□ Permit to fill swimming pool and/or requiring pools to be covered (to	Ongoing
prevent evaporation)	Seasonal
	Only during declared Emergencies
□ Ordinances that permit stormwater irrigation, reuse of water, or	Describe
other alternative water use (Note: be sure to check current plumbing codes for updates)	

D. Retrofitting Programs

Education and incentive programs aimed at replacing inefficient plumbing fixtures and appliances can help reduce per capita water use, as well as energy costs. It is recommended that municipal water suppliers develop a long-term plan to retrofit public buildings with water efficient plumbing fixtures and appliances. Some water suppliers have developed partnerships with organizations having similar conservation goals, such as electric or gas suppliers, to develop cooperative rebate and retrofit programs. A study by the AWWA Research Foundation (Residential End Uses of Water, 1999) found that the average indoor water use for a non-conserving home is 69.3 gallons per capita per day (gpcd). The average indoor water use in a conserving home is 45.2 gpcd and most of the decrease in water use is related to water efficient plumbing fixtures and appliances that can reduce water, sewer and energy costs. In Minnesota, certain electric and gas providers are required (Minnesota Statute 216B.241) to fund programs that will conserve energy resources and some utilities have distributed water efficient showerheads to customers to help reduce energy demands required to supply hot water.

Retrofitting Programs

Complete Table 30 by checking which water uses are targeted, the outreach methods used, the measures used to identify success, and any participating partners.

Water Use Targets	Outreach Methods	Partners
🛛 Low flush toilets,	Education about	Gas company
\Box Toilet leak tablets,	\Box Free distribution of	Electric company
\Box Low flow showerheads,	🖾 Rebate for	□ Watershed organization
□ Faucet aerators;	🗆 Other	
☑ Water conserving washing machines,	Education about	🗆 Gas company
\boxtimes Dish washers,	□Free distribution of	🛛 Electric company
□ Water softeners;	🛛 Rebate for	□ Watershed organization
	□Other	
🗆 Rain gardens,	🗵 Education about	Gas company
🖂 Rain barrels,	□Free distribution of	Electric company
□ Native/drought tolerant landscaping, etc.	⊠ Rebate for	□ Watershed organization
	□Other	

Table 30. Retrofitting programs (Select all that apply)

Briefly discuss measures of success from the above table (e.g. number of items distributed, dollar value of rebates, gallons of water conserved, etc.):

In 2017, there was 2,300 rebates processed, which resulted in 4.2 MG of water saved.

E. Education and Information Programs

Customer education should take place in three different circumstances. First, customers should be provided information on how to conserve water and improve water use efficiencies. Second, information should be provided at appropriate times to address peak demands. Third, emergency notices and educational materials about how to reduce water use should be available for quick distribution during an emergency.

Proposed Education Programs

Complete Table 31 by selecting which methods are used to provide water conservation and information, including the frequency of program components. Select all that apply and add additional lines as needed.

Table 31. Current and Proposed Education Programs

Education Methods	General summary of topics	#/Year	Frequency
Billing inserts or tips printed on the actual bill	Water use and conservation	12	 ☑ Ongoing □ Seasonal □ Only during declared emergencies
Consumer Confidence Reports Press releases to traditional local news outlets (e.g., newspapers, radio and TV)	Water quality sampling results from MDH	1 Δs	 Ongoing Seasonal Only during declared emergencies Ongoing
Carial mandia distribution (a successib		needed	□Seasonal □Only during declared emergencies
Social media distribution (e.g., emails, Facebook, Twitter)			□Ongoing □Seasonal ☑ Only during declared emergencies
Paid advertisements (e.g., billboards, print media, TV, radio, web sites, etc.)	Water use and conservation		 Ongoing Seasonal Only during declared emergencies
Presentations to community groups	Water use and conservation		 Ongoing Seasonal Only during declared emergencies
Staff training	Annual training is conducted with all customer service representatives discussing water conservation & quality to help educate our customers.	1	 ☑ Ongoing ☑ Seasonal ☑ Only during declared emergencies
Facility tours	RPU staff assists many schools on water tours and always highlights RPU's water conservation program and encourages students to implement water conservation in their home or school.		 ☑ Ongoing ☑ Seasonal ☑ Only during declared emergencies

Education Methods	General summary of	#/Year	Frequency
Dianlaus and auhibits	topics		
Displays and exhibits	displays that are at various		
	locations in Rochester.		
	One display is dedicated to		□Only during
	water conservation and is		declared emergencies
	currently at Olmsted		
	County Oxbow Park &		
Marketing rebate programs (e.g., indoor	201111111 200.		🛛 Ongoing
fixtures & appliances and outdoor practices)			□ Seasonal
Community news letters	The RPU Plugged In is a	12	
	monthly newsletter that		
	goes out to all our		
	customers. Every month		□Only during
	there is a "Water		declared emergencies
	Conservation Tip of the		
Direct mailings (water audit/retrofit kits,			🛛 Ongoing
showerheads, brochures)			□ Seasonal
Information kiosk at utility and public			\boxtimes Ongoing
buildings			□ Seasonal
			□Only during
			declared emergencies
Public service announcements	Water use and		⊠ Ongoing
	conservation		□Seasonal
			□Only during
			declared emergencies
Cable TV Programs	Water use and		🛛 Ongoing
	conservation		□Seasonal
			□Only during
			declared emergencies
Demonstration projects (landscaping or	Rochester Public Works		🛛 Ongoing
plumbing)	demonstration education		□Seasonal
			□Only during
			declared emergencies
K-12 education programs (Project Wet,	KPU hosts and participates		⊠ Ongoing —
Difficing water institute, presentations)	Institute approximately		□Seasonal
	every 5 years.		□Only during
			declared emergencies

Education Methods	General summary of	#/Year	Frequency
	topics		
Community events (children's water festivals,			⊠ Ongoing
environmental fairs)			□Seasonal
			□Only during
			declared emergencies
Community education classes			
			□Seasonal
			□Only during
			declared emergencies
Water week promotions	RPU celebrates Water		🖾 Ongoing
	Week annually by		□Seasonal
	conservation with our		□Only during
	customers.		declared emergencies
Website (include address): www.rpu.org	Water conservation tips		🛛 Ongoing
	and a link to RPU's water		□Seasonal
	be found online.		□Only during
			declared emergencies
Targeted efforts (large volume users, users			⊠ Ongoing
with large increases)			□Seasonal
			□Only during
			declared emergencies
Notices of ordinances			
			□Seasonal
			□Only during
			declared emergencies
Emergency conservation notices			
			□Seasonal
			⊠ Only during
			declared emergencies
Other:			
			□Seasonal
			Only during
			declared emergencies

Briefly discuss what future education and information activities your community is considering in the future:

RPU has always been proactive to further our education efforts in the community to promote water conservation. RPU recently developed a water brochure for kids that has a focus on water conservation.

PART 4. ITEMS FOR METROPOLITAN AREA COMMUNITIES

Minnesota Statute 473.859 requires WSPs to be completed for all local units of government in the seven-county Metropolitan Area as part of the local comprehensive planning process.



Much of the information in Parts 1-3 addresses water demand for the next 10 years. However, additional information is needed to address water demand

through 2040, which will make the WSP consistent with the Metropolitan Land Use Planning Act, upon which the local comprehensive plans are based.

This Part 4 provides guidance to complete the WSP in a way that addresses plans for water supply through 2040.

A. Water Demand Projections through 2040

Complete Table 7 in Part 1D by filling in information about long-term water demand projections through 2040. Total Community Population projections should be consistent with the community's system statement, which can be found on the Metropolitan Council's website and which was sent to the community in September 2015.

Projected Average Day, Maximum Day, and Annual Water Demands may either be calculated using the method outlined in *Appendix 2* of the *2015 Master Water Supply Plan* or by a method developed by the individual water supplier.

B. Potential Water Supply Issues

Complete Table 10 in Part 1E by providing information about the potential water supply issues in your community, including those that might occur due to 2040 projected water use.

The <u>Master Water Supply Plan</u> provides information about potential issues for your community in *Appendix 1 (Water Supply Profiles).* This resource may be useful in completing Table 10.

You may document results of local work done to evaluate impact of planned uses by attaching a feasibility assessment or providing a citation and link to where the plan is available electronically.

C. Proposed Alternative Approaches to Meet Extended Water Demand Projections

Complete Table 12 in Part 1F with information about potential water supply infrastructure impacts (such as replacements, expansions or additions to wells/intakes, water storage and treatment capacity, distribution systems, and emergency interconnections) of extended plans for development and redevelopment, in 10-year increments through 2040. It may be useful to refer to information in the community's local Land Use Plan, if available.

Complete Table 14 in Part 1F by checking each approach your community is considering to meet future demand. For each approach your community is considering, provide information about the amount of

future water demand to be met using that approach, the timeframe to implement the approach, potential partners, and current understanding of the key benefits and challenges of the approach.

As challenges are being discussed, consider the need for: evaluation of geologic conditions (mapping, aquifer tests, modeling), identification of areas where domestic wells could be impacted, measurement and analysis of water levels & pumping rates, triggers & associated actions to protect water levels, etc.

D. Value-Added Water Supply Planning Efforts (Optional)

The following information is not required to be completed as part of the local water supply plan, but completing this can help strengthen source water protection throughout the region and help Metropolitan Council and partners in the region to better support local efforts.

Source Water Protection Strategies

Does a Drinking Water Supply Management Area for a neighboring public water supplier overlap your community? Yes □ No □

If you answered no, skip this section. If you answered yes, please complete Table 32 with information about new water demand or land use planning-related local controls that are being considered to provide additional protection in this area.

Local Control	Schedule to Implement	Potential Partners
□ None at this time		
Comprehensive planning that guides development in vulnerable drinking water supply management areas		
□ Zoning overlay		
□ Other:		

Table 32. Local controls and schedule to protect Drinking Water Supply Management Areas

Technical assistance

From your community's perspective, what are the most important topics for the Metropolitan Council to address, guided by the region's Metropolitan Area Water Supply Advisory Committee and Technical Advisory Committee, as part of its ongoing water supply planning role?

- $\hfill\square$ Coordination of state, regional and local water supply planning roles
- □ Regional water use goals
- $\hfill\square$ Water use reporting standards
- $\hfill\square$ Regional and sub-regional partnership opportunities
- \Box Identifying and prioritizing data gaps and input for regional and sub-regional analyses
- Others: ____

GLOSSARY

Agricultural/Irrigation Water Use - Water used for crop and non-crop irrigation, livestock watering, chemigation, golf course irrigation, landscape and athletic field irrigation.

Average Daily Demand - The total water pumped during the year divided by 365 days.

Calcareous Fen - Calcareous fens are rare and distinctive wetlands dependent on a constant supply of cold groundwater. Because they are dependent on groundwater and are one of the rarest natural communities in the United States, they are a protected resource in MN. Approximately 200 have been located in Minnesota. They may not be filled, drained or otherwise degraded.

Commercial/Institutional Water Use - Water used by motels, hotels, restaurants, office buildings, commercial facilities and institutions (both civilian and military). Consider maintaining separate institutional water use records for emergency planning and allocation purposes. Water used by multi-family dwellings, apartment buildings, senior housing complexes, and mobile home parks should be reported as Residential Water Use.

Commercial/Institutional/Industrial (C/I/I) Water Sold - The sum of water delivered for commercial/institutional or industrial purposes.

Conservation Rate Structure - A rate structure that encourages conservation and may include increasing block rates, seasonal rates, time of use rates, individualized goal rates, or excess use rates. If a conservation rate is applied to multifamily dwellings, the rate structure must consider each residential unit as an individual user. A community may have a separate conservation rate that only goes into effect when the community or governor declares a drought emergency. These higher rates can help to protect the city budgets during times of significantly less water usage.

Date of Maximum Daily Demand - The date of the maximum (highest) water demand. Typically this is a day in July or August.

Declining Rate Structure - Under a declining block rate structure, a consumer pays less per additional unit of water as usage increases. This rate structure does not promote water conservation.

Distribution System - Water distribution systems consist of an interconnected series of pipes, valves, storage facilities (water tanks, water towers, reservoirs), water purification facilities, pumping stations, flushing hydrants, and components that convey drinking water and meeting fire protection needs for cities, homes, schools, hospitals, businesses, industries and other facilities.

Flat Rate Structure - Flat fee rates do not vary by customer characteristics or water usage. This rate structure does not promote water conservation.

Industrial Water Use - Water used for thermonuclear power (electric utility generation) and other industrial use such as steel, chemical and allied products, paper and allied products, mining, and petroleum refining.

Low Flow Fixtures/Appliances - Plumbing fixtures and appliances that significantly reduce the amount of water released per use are labeled "low flow". These fixtures and appliances use just enough water to be effective, saving excess, clean drinking water that usually goes down the drain.

Maximum Daily Demand - The maximum (highest) amount of water used in one day.

Metered Residential Connections - The number of residential connections to the water system that have meters. For multifamily dwellings, report each residential unit as an individual user.

Percent Unmetered/Unaccounted For - Unaccounted for water use is the volume of water withdrawn from all sources minus the volume of water delivered. This value represents water "lost" by miscalculated water use due to inaccurate meters, water lost through leaks, or water that is used but unmetered or otherwise undocumented. Water used for public services such as hydrant flushing, ice skating rinks, and public swimming pools should be reported under the category "Water Supplier Services".

Population Served - The number of people who are served by the community's public water supply system. This includes the number of people in the community who are connected to the public water supply system, as well as people in neighboring communities who use water supplied by the community's public water supply system. It should not include residents in the community who have private wells or get their water from neighboring water supply.

Residential Connections - The total number of residential connections to the water system. For multifamily dwellings, report each residential unit as an individual user.

Residential Per Capita Demand - The total residential water delivered during the year divided by the population served divided by 365 days.

Residential Water Use - Water used for normal household purposes such as drinking, food preparation, bathing, washing clothes and dishes, flushing toilets, and watering lawns and gardens. Should include all water delivered to single family private residences, multi-family dwellings, apartment buildings, senior housing complexes, mobile home parks, etc.

Smart Meter - Smart meters can be used by municipalities or by individual homeowners. Smart metering generally indicates the presence of one or more of the following:

- Smart irrigation water meters are controllers that look at factors such as weather, soil, slope, etc. and adjust watering time up or down based on data. Smart controllers in a typical summer will reduce water use by 30%-50%. Just changing the spray nozzle to new efficient models can reduce water use by 40%.
- Smart Meters on customer premises that measure consumption during specific time periods and communicate it to the utility, often on a daily basis.
- A communication channel that permits the utility, at a minimum, to obtain meter reads on demand, to ascertain whether water has recently been flowing through the meter and onto the premises, and to issue commands to the meter to perform specific tasks such as disconnecting or restricting water flow.

Total Connections - The number of connections to the public water supply system.

Total Per Capita Demand - The total amount of water withdrawn from all water supply sources during the year divided by the population served divided by 365 days.

Total Water Pumped - The cumulative amount of water withdrawn from all water supply sources during the year. **Total Water Delivered** - The sum of residential, commercial, industrial, institutional, water supplier services, wholesale and other water delivered.

Ultimate (Full Build-Out) - Time period representing the community's estimated total amount and location of potential development, or when the community is fully built out at the final planned density.

Unaccounted (Non-revenue) Loss - See definitions for "percent unmetered/unaccounted for loss".

Uniform Rate Structure - A uniform rate structure charges the same price-per-unit for water usage beyond the fixed customer charge, which covers some fixed costs. The rate sends a price signal to the customer because the water bill will vary by usage. Uniform rates by class charge the same price-per-unit for all customers within a customer class (e.g. residential or non-residential). This price structure is generally considered less effective in encouraging water conservation.

Water Supplier Services - Water used for public services such as hydrant flushing, ice skating rinks, public swimming pools, city park irrigation, back-flushing at water treatment facilities, and/or other uses.

Water Used for Nonessential Purposes - Water used for lawn irrigation, golf course and park irrigation, car washes, ornamental fountains, and other non-essential uses.

Wholesale Deliveries - The amount of water delivered in bulk to other public water suppliers.

Acronyms and Initialisms

AWWA – American Water Works Association
C/I/I – Commercial/Institutional/Industrial
CIP – Capital Improvement Plan
GIS – Geographic Information System
GPCD – Gallons per capita per day
GWMA – Groundwater Management Area – North and East Metro, Straight River, Bonanza,
MDH – Minnesota Department of Health
MGD – Million gallons per day

MG – Million gallons MGL – Maximum Contaminant Level MnTAP – Minnesota Technical Assistance Program (University of Minnesota) MPARS – MN/DNR Permitting and Reporting System (new electronic permitting system) MRWA – Minnesota Rural Waters Association SWP – Source Water Protection WHP – Wellhead Protection

APPENDICES TO BE SUBMITTED BY THE WATER SUPPLIER

Appendix 1: Well records and maintenance summaries

Go to Part 1C for information on what to include in appendix

Appendix 2: Water level monitoring plan

Go to Part 1E for information on what to include in appendix

Appendix 3: Water level graphs for each water supply well Go to Part 1E for information on what to include in appendix

Appendix 4: Capital Improvement Plan

Go to Part 1E for information on what to include in appendix

Appendix 5: Emergency Telephone List

Go to Part 2C for information on what to include in appendix

Appendix 6: Cooperative Agreements for Emergency Services

Go to Part 2C for information on what to include in appendix

Appendix 7: Municipal Critical Water Deficiency Ordinance

Go to Part 2C for information on what to include in appendix

Appendix 8: Graph of Ten Years of Annual Per Capita Water Demand for Each Customer Category

Go to Objective 4 in Part 3B for information on what to include in appendix

Appendix 9: Water Rate Structure

Go to Objective 6 in Part 3B for information on what to include in appendix

Appendix 10: Ordinances or Regulations Related to Water Use

Go to Objective 7 in Part 3B for information on what to include in appendix

Appendix 11: Implementation Checklist

Provide a table that summarizes all the actions that the public water supplier is doing, or proposes to do, with estimated implementation dates.

Appendix 12: Sources of Information for Table 10

Provide links or references to the information used to complete Table 10. If the file size is reasonable, provide source information as attachments to the plan.

Appendix 1: Well records and maintenance summaries

<u>2005</u>

• No major maintenance activities in 2005.

<u>2006</u>

- The pumping unit at Wells #12 was replaced during 2006. Pumps are scheduled for replacement when operating efficiency declines.
- Well #38 was brought online in May of 2006.

<u>2007</u>

- Pumping units at Wells #18, #26 & #28 were replaced during 2007. Pumps are scheduled for replacement when operating efficiency declines.
- Well #39 was brought online in April of 2007.

<u>2008</u>

- The pumping unit at Wells #31 was replaced during 2008. Pumps are scheduled for replacement when operating efficiency declines.
- Well #26 & #37 was redeveloped (blasted, air developed and bailed) to increase yield and remove excess sand from the formation.

<u>2009</u>

- The pumping unit at Wells #36 was replaced during 2009. Pumps are scheduled for replacement when operating efficiency declines.
- Well #30 was redeveloped during 2009.

<u>2010</u>

• Pumping units at Wells #24 & #30 were replaced during 2010. Pumps are scheduled for replacement when operating efficiency declines.

<u>2011</u>

- Pumping units at Wells #13 & #17 were replaced during 2011. Pumps are scheduled for replacement when operating efficiency declines.
- Well #40 was brought online in July.

<u>2012</u>

• Pumping units at Wells #21, #25 & #27 were replaced during 2012. Pumps are scheduled for replacement when operating efficiency declines.

<u>2013</u>

• Pumping units at Wells #22 & #34 were replaced during 2013. Pumps are scheduled for replacement when operating efficiency declines.

<u>2014</u>

• Pumping units at Wells #11, #15 & #35 were replaced during 2014. Pumps are scheduled for replacement when operating efficiency declines.

<u>2015</u>

• Pumping units at Wells #19 & #28 were replaced during 2015. Pumps are scheduled for replacement when operating efficiency declines.

<u>2016</u>

- Well #41 was completed and officially put online on August 15, 2016.
- Pumping units at Wells #29 & #31 were replaced during 2016. Pumps are scheduled for replacement when operating efficiency declines.

<u>2017</u>

- Well #38 was redeveloped to remove excess sand from the bottom of the well. The pump was also refurbished and rebuilt and column pipe was replaced during this redevelopment.
- Pumping units at Wells #18 & #36 were replaced. Pumps are scheduled for replacement when operating efficiency declines.

Wells in Service									
Well	Address	Unique Well Number	Year Drilled	Diameter	Well Depth	Geologic Formation	Pump Base Elevation	Casing Depth	Static Water Pressure
11	450 Soldiers Field Dr SW	220666	1948	20"	455'	S-O-J ¹	1,003	140'	71
12	198 7 th Street NE	220833	1950	14"	752'	Jordan-Franc 4	990	308'	76
13	1650 2 nd Avenue NE	222525	1954	20"	442'	S-O-J	1,015	141'	65
15	1941 26 th Street NW	222528	1957	24"	432'	S-O-J	1,047	154'	52
16 ⁵	3815 2 nd Street NW	220827	1958	16"	1,045'	F-D ³	1,049	487'	51
17	445 Northern Heights Dr NE	220822	1960	16"	904'	Jordan-Franc 4	1,105	429'	27
18	1910 1 st Street SW	222527	1963	30"x24"	806'	Jordan-Franc	1,013	343'	66
19	1656 3 rd Avenue SE	220681	1963	30"x24"	881'	Jordan-Franc	1,022	343'	62
20	323 4 th Street SE	220662	1964	30"x24"	912'	Jordan-Franc	993	306'	75
21	3460 Towne Club Pkwy SE	220625	1965	30"x24"	981'	Jordan-Franc	1,140	458'	69
22	3840 21 st Avenue NW	220818	1966	30"x24"	730'	Jordan-Franc	1,046	344'	52
23	1301 10 th Street SE	220660	1966	30"x24"	436'	Jordan ²	1,007	326'	69
24	306 Zumbro Dr NW	220819	1968	30"x24"	688'	Jordan-Franc	997	309'	73
25	Apache Mall SW	220675	1969	30"x24"	848'	Jordan-Franc	1,012	345'	67
26	4401 Meadow Lakes Dr NW	147451	1979	30"x24"	624'	S-O-J	1,169	364'	46
27	1940 9 th Street NE	224212	1979	30"x24"	450'	Jordan	1,018	345'	64
28	1505 50 th Street NW	180567	1983	30"x24"	395'	Jordan	987	305'	78
29	2029 5 th Avenue SW	161425	1984	30"x24"	519'	Jordan	1,092	422'	32
30	1002 11 th Avenue NE	239761	1984	30"x24"	402'	Jordan	1,006	319'	69
31	1051 40 th Street SW	434041	1987	30"x24"	530'	Jordan	1,071	461'	41
32	2172 Parkwood Hills Dr NE	506819	1989	30"x24"	540'	Jordan	1,132	453'	73
33	3124 Harbor Dr SE	220627	1958	16"	605'	Jordan	1,185	507'	50
34	4705 West Circle Dr NW	463536	1991	30"x24"	465'	Jordan	1,054	369'	49
35	3955 41 st Street NW	601335	1999	30"x24"	457'	Jordan	1,057	369'	47
36	1155 West Circle Dr. SW	601336	2001	30"x24"	478'	Jordan	1,047	397'	52
37	3980 Cameo Place NE	676687	2004	30"x24"	506'	Jordan	1,089	393'	114
38	5377 55 th St NW	698933	2005	30"x24"	467'	Jordan	1,061	368'	106
39	2910 20 th St SE	733087	2006	30"x24"	461'	Jordan	1,032	364'	58
40	1355 Lone Pine Dr SW	773386	2010	30"x24"	640'	O-J ⁶	1,149	460'	107
41	3303 Ridgeline Dr SE	796431	2014	30"x 24"	470'	Jordan	1,055	360'	52
70	4911 Tee Court SW			Well no longe	r used. Returne	d to owner during 200	06. Was sealed		
71	Rochester International Airport	220628		Removed	from service 1	0/2012 - Sealed and	abandoned in 1	2/2012	
72	1905 Badger Court SE	220628	1968	6"	460'	Jordan	1,065	375'	60
73	2828 Merrihills Dr SW	228168	1965	16"x10"	675'	Jordan	1,211	575'	60
74	4019 Windsor Ln SW				Sealed and	d Abandoned on June	7, 2006.		
75	1445 Windsor Chase Dr SW				Sealed and	Abandoned on Octob	er 3, 2006.		
76	Osjor Estates	220776		Removed from	n service 9/200	8 - to be used as DNI	R obersavation	well in 2009	
77	5023 15 Street SE	220629	1964	12"x 8"	450'	Jordan	1,064	369'	60
78	2220 Lenwood Dr SW			Removed	d from service 1	2/2012 - Sealed and	abandoned in C	06/2013	
 ¹ Shakopee-Or ³ Franconia-Dr 	neota-Jordan multi-formation well. esbach multi-formation well.				 ² Jordan formati ⁴ Jordan formation 	ion only. on extending into the Fra	anconia formation		

⁵ Pumping unit removed in 2001 – Well no longer in service. Well planned to be converted into a DNR Observation Well.

⁶ Oneota-Jordan multi-formation well.

Minnesota Unique Well No. 2206666	County Quad Quad ID	Olmsted Rocheste 49C	r			MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING Er D Re hapter 1031	ntry Date odate Date eceived Date	12/28/1989 02/06/2012
Well Name ROCHESTER 11						Well Depth	Depth Complete	d Date	Well Completed
Township Range Dir Section Subsec	ctions Eleva	ation	999	ft.	n	455 ft.	455 ft.		05/00/1948
106 14 W 2 CAADO	CD Eleva	ation Method	FOC		Ζ- TY	Drilling Method			
Well Address						Drilling Fluid	Well Hydrofracture	ed? 🔲 Yes	No
ROCHESTER MN 55901							From Ft. to Ft.		
On all a site of Material		0.1			- -	Use Community Supply	PWS ID 1550010 \$	Source S01	
CLAY		YELLOW	 Hardnes	0 7	10 7	Casing Type Steel (black	or low carbon) Join	t No Information	Drive Shoe?
SAND & GRAVEL		WHITE		7 7	15 23	Yes No Above/Below	w ft.		
LIME		PINK	M.HARD	23	108	Casing Diameter	Weight	Hole Diame	eter
SAND & ROCK			SOFT	108 ⁻ 119 ⁻	119 130	20 in. to 140 ft.	lbs./ft.	19.25 in. t	o 455 ft.
LIME			SOFT	130	170	Open Hole from 140 ft.	to 455 ft.		
LIME, BROKEN AND NOT VE	RY HARD		V.NARD	176 2	290		ype		
LIME SAND ROCK		BLUE	HARD SOFT	290 3 318 3	318 380	Diameter Slo	ot/Gauze L	Length Se	et Between
SAND ROCK			HARD	380 3	385				
SAND ROCK ALT. LAYERS OF SAND, LIME	E & SHALE	E	HARD	385 3 395 3	395 397				
ALT. LAYERS OF SAND, LIME	& SHALE	Ξ		397 4	455	Static Water Level			
						19 ft. from Land surface	Date Measured 05	5/00/1948	
						PUMPING LEVEL (below la	and surface)		
						Too II. alter o Tils. pullip	ing 1052 g.p.m.		
						Well Head Completion	vr Model		
								rada	
								aue	
REMARKS						At-grade (Environmen	ital Wells and Borings	s ONLY)	
GAMMA LOGGED BY MGS 12-23-19	87.					Grouting Information We	ell Grouted?	Yes 📃 No	
		Method: G	PS Differen	tially					
Located by: Minnesota Department of	of Health	Corrected	IFS Dillelen	ually					
Unique Number Verification: Inform	ation from	Input Date	07/28/2004	4					
owner System: UTM Nad83 Zono15 Mot	ore	X. 512521	V • 18731	10		feet direction type	Contamination		
Cystem. O Hin - Mauos, 2011e 13, Mieli	510	A. J42024	1. 40/34	10		Well disinfected upon comp	oletion?	No	
							ed Date Installed		
						Manufacturer's name	Model number	HP 125 Volts	
						Length of drop Pipe 190 ft	. Capacity g.p.m	Type Turbine	a Material
						Abandoned Wells Does pr	operty have any not	in use and not se	aled well(s)?
						Yes 🔲 No			
						Variance Was a variance of	ranted from the MDH	I for this well?	Yes No
Borehole Geophysics Yes						Well Contractor Certificati	on		
First Bedrock Prairie Du Chien Grou	p Aq	juifer Prairie	Du Chien-J	ordan		Thein Well Co.		<u>55079</u>	<u>THEIN, P.</u>
Last Strat St.Lawrence Formation	De	pth to Bedro	ck 15 ft.			License Business Nan	ne Lic.	Or Reg. No.	Name of Driller
County Well Index	c Onlir	ne Rep	ort			220666			Printed 7/30/2012 HE-01205-07

Minnesota Unique Well No. 220833	County Quad Quad ID	Olmsted Rochester 49C			MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING D Chapter 1031	Entry Date Update Date Received Date	01/25/1988 02/12/2009
Well Name ROCHESTER 12					Well Depth	Depth Comp	leted Da	te Well Completed
Township Range Dir Section Subs	ections Elevat	ion 984	ft.		752 ft .	752 ft .		00/00/1960
107 14 W 35 ADDA	UB Elevat	ion method Surv	/eyea		Drilling Method			
Well Address ROCHESTER MN					Drilling Fluid Use Community Supply	Well Hydrofrad From Ft. to Ft PWS ID 155001	ctured? 🔲 Yes t. 10 Source S02	No
Geological Material SAND FILL SAND & GRAVEL LIMEROCK SAND & LIME LIMESTONE LIMESTONE LIMESTONE LIMESTONE SANDSTONE LIMEROCK LIMEROCK & SANDSTONE LIMEROCK LIMESTONE & SHALE SHALE LIMESTONE & SHALE LIMESTONE SHALE LIMESTONE SHALE SHALE SHALE & SANDROCK SHALE SHALE & SANDSTONE SHALE SHALE & SANDSTONE SHALE	Color YELLC BLUE BLUE BLUE	Hardness DW HARD HARD HARD HARD HARD HARD HARD	From 0 20 51 72 80 91 93 260 288 391 401 464 495 495 565 565 565 580 590 650 680 680 680 705 715 725 735	To 20 51 72 80 91 93 260 288 391 401 404 495 565 580 550 650 680 680 705 715 725 735 752	Casing Type Steel (black Yes No Above/Belor Casing Diameter 14 in. to 307 ft. Open Hole from 307 ft. Screen NO Make T Diameter Sla Static Water Level 42 ft. from Land surface PUMPING LEVEL (below I 214 ft. after hrs. pumpin Well Head Completion Pitless adapter manufacture Casing Protection At-grade (Environmer Grouting Information Wo	or low carbon) w ft. Weig It to 752 ft. Type ot/Gauze Date Measured and surface) ng 700 g.p.m. er Model 12 in. abov ntal Wells and Bo ell Grouted?	Joint No Information ght Holl bs./ft. Length S 00/00/1969 00/00/1969	on Drive Shoe?
Located by: Minnesota Department	t of Health	Method: GPS Differ Corrected	rentially					
Unique Number Verification: Infor	mation from	Input Date: 07/28/2	004					
Onlique Number Verification: Information from owner Input Date: 07/28/2004 System: UTM - Nad83, Zone15, Meters X: 543326 Y: 4875360					Nearest Known Source of Contamination _feet _direction _type Well disinfected upon completion? Yes No Pump Not Installed Date Installed Manufacturer's name Model number HP Volts Length of drop Pine_ft Capacity, or nm TypeMaterial			
					Abandoned Wells Does p Yes No	roperty have any	not in use and not	sealed well(s)?
					Variance Was a variance g	granted from the I	MDH for this well?	Yes No
First Bedrock Prairie Du Chien Gro Last Strat Eau Claire Formation	up	Aquifer Multiple Depth to Bedrock	51 ft.		Well Contractor Certification Thein Well Co. License Business National	ion ne l	<u>34050</u> Lic. Or Reg. No.	Name of Driller
County Well Inde	x Onlin	e Report			220833			Printed 7/30/2012 HE-01205-07

Minnesota Unique Well No.	County Quad Quad ID	Olmsted Rochester 49C			MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING D Entry Da Update Chapter 1031	ate 08/24/1991 Date 02/12/2009 d Date
Well Name ROCHESTER 13					Well Depth	Depth Completed	Date Well Completed
Township Range Dir Section Subsec	tions Eleva	ition	1013.1 ft.		442 ft .	442 ft .	03/04/1954
107 14 W 26 DADAA	C Eleva	ition Method	Surveyed		Drilling Method Cable Too	bl	
Well Address					Drilling Fluid 	Well Hydrofractured? From Ft. to Ft.	Yes No
					Use Community Supply	PWS ID 1550010 Source	e S03
Geological Material DIRT CLAY	Color BLACK	Hardness	From 0 1	To 1 6	Casing Type Steel (black Yes No Above/Belo	or low carbon) Joint No I w 2 ft.	nformation Drive Shoe?
LIMEROCK			6	100	Casing Diamotor	Weight	Hole Diameter
SANDROCK			100 110	110 124		lbs /ft	
SANDROCK			124	130	24 111. 10 19 11.	lbs./ft	
SANDSTONE			320	320 346	20 in. to 141 ft.	to 112 ft	
SANDSTONE			346	410	Screen NO Make 1	vpe	
LIMEROCK			430	430 442	Diameter Slo	ot/Gauze Lengt	th Set Between
					Static Water Level 40 ft. from Land surface PUMPING LEVEL (below I 90 ft. after hrs. pumping Well Head Completion Pitless adapter manufacture	Date Measured 03/04/19 and surface) g 600 g.p.m. er Model	54
					Casing Protection	📝 12 in. above grade	
					At-grade (Environmer	ntal Wells and Borings ONL	Y)
R E M A R K S GAMMA LOGGED 3-19-1984. M.G.S. GWQ NO. 119.	NO. 6.				Grouting Information W	ell Grouted? 🔲 Yes	No No
Located by: Minnesota Department c	of Health	Method: GPS Corrected	Differentially				
Unique Number Verification: Information	ation from	Input Date: 07	7/28/2004		Nearest Known Source of	Contamination	
System: UTM - Nad83, Zone15, Mete	ers	X : 543327 Y	: 4876593		ieeiairectiontype Well disinfected upon com	bletion?	No
					Pump Not Install Manufacturer's name	ed Date Installed Model number HP Capacity on m Type	Volts Material
						s g.p.m rype	
					Abandoned Wells Does p Yes 🔲 No	roperty have any not in use	and not sealed well(s)?
					Variance Was a variance g	granted from the MDH for th	is well? 🔲 Yes 🔲 No
Cuttings Yes Borehole Geophys	sics Yes				Well Contractor Certificat	ion	
First Bedrock Prairie Du Chien Group	D	Aquifer Prairi	e Du Chien-J	ordan	Keys Well Co.	<u>62012</u>	2
Last Strat St.Lawrence Formation		Depth to Bedro	ock 6 ft.		License Business Nar	me Lic. Or Reg	g. No. Name of Driller
County Well Index	Onlir	ne Repor	t		222525		Printed 7/30/2012 HE-01205-07

Minnesota Unique Well No. 222528	County Quad Quad ID	Olmsted Rochester 49C		MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING D Received Chapter 1031	te 12/28/1989 Pate 02/12/2009 I Date
Well Name ROCHESTER 15				Well Depth	Depth Completed	Date Well Completed
Township Range Dir Section Subse	ctions Elevati	on 1044.5	ft.	432 ft .	432 ft .	00/00/1957
107 14 W 27 BABBA	B Elevati	on Method Survey	ed	Drilling Method Cable Too	bl	
Well Address				Drilling Fluid	Well Hydrofractured?	Yes No
ROCHESTER MN				Use Community Supply	PWS ID 1550010 Source	S04
Geological Material DRIFT DRIFT LIMESTONE LIMESTONE JUMESTONE & SANDSTONE		Color Hardness	From To 0 36 36 40 40 78 78 90 90 105	Casing Type Steel (black Yes No Above/Below Casing Diameter	or low carbon) Joint No In <u>w ft.</u> Weight	formation Drive Shoe?
LIMESTONE & SANDSTONE			105 140	30 in. to 41 ft.	IDS./IL.	
LIMESTONE & SANDSTONE		HARD	140 155	24 in. to 154 ft.	lbs./ft.	
LIMESTONE		HARD	185 185	Open Hole from 154 ft.	to 432 ft.	
LIMESTONE LIMESTONE LIMESTONE LIMESTONE & SHALE & SAN SANDSTONE LIMESTONE	DSTONE	GRAY HARD BLUE HARD HARD BLUE HARD	192 235 235 300 300 318 318 340 360 430 430 432	Diameter Slo	ot/Gauze Lengti	h Set Between
				Static Water Level		
				ft. from Date Measure	d and curface)	
				ft. after hrs. pumping	g.p.m.	
				Well Head Completion Pitless adapter manufacture Casing Protection At-grade (Environmer	er Model 12 in. above grade atal Wells and Borings ONLY)
				Grouting Information We	ell Grouted?	No
Located by: Minnesota Department Health Unique Number Verification: Information from owner System: UTM - Nad83, Zone15, Met	of Method: (Digitizing Input Date ers X: 54061	Digitized - scale 1:24,0 g Table) te: 07/28/2004 2 Y: 4877614	Nearest Known Source of _feet _direction _type	Contamination	No	
				Pump Not Installe Manufacturer's name Length of drop Pipe ft.	ed Date Installed Model number HP` Capacity _g.p.m	Volts Material
				Abandoned Wells Does pr	roperty have any not in use a	and not sealed well(s)?
				Variance Was a variance g	ranted from the MDH for this	s well? 🔲 Yes 🔲 No
Borehole Geophysics Yes First Bedrock Prairie Du Chien Grou	p Aqui	i fer Prairie Du Chien-	lordan	Well Contractor Certificati	on <u>27010</u>	
Last Strat St.Lawrence Formation	Dept	h to Bedrock 36 ft.		License Business Nar	me Lic. Or Reg	. No. Name of Driller
County Well Index	c Online	e Report		222528		Printed 7/30/2012 HE-01205-07

Viel Langerh Depth Depth	Minnesota Unique Well No. 220827 County Quad Quad Quad ID 50D		MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING D Received Chapter 1031	te 12/28/1989 Pate 02/12/2009 I Date
Well Address Dutiling Fluid Well Hydrofractured? Yes No Geological Material Color HardnessFrom To Form FL 6 FL Yes No WeATHERD INMESTONE 12 Form FL 6 FL Yes No Yes No ST. PETER SANDSTONE 25 Form FL 6 FL Casing Diameter Welght Hole Diameter Tit Tit No AboveBelow ft Tot No AboveBelow ft ft In No AboveBelow ft	Well Name ROCHESTER 16 Township Range Dir Section Subsections Elevation 1 107 14 W 32 DADCDC Elevation Method S	044 ft. Surveyed	Well Depth 1060 ft. Drilling Method Cable Too	Depth Completed 1060 ft.	Date Well Completed 04/14/1958
Onique Number Verification: Input Date: 02/12/2009 from owner System: UTM - Nad83, Zone15, Meters X: 538439 Y: 4874803 System: UTM - Nad83, Zone15, Meters X: 538439 Y: 4874803 Pump Not Installed Date Installed Manufacturer's name Model number HP Volts Length of drop Pipeft. Capacity _g.p.m Type Material Abandoned Wells Does property have any not in use and not sealed well(s)? Yes No Variance Well Contractor Certification Yes No First Bedrock St.Peter Sandstone Aquifer Multiple Last Strat Mt.Simon Sandstone 27010 Last Strat Depth to Bedrock 6 ft. Events of strates No No	Well Address ROCHESTER MN Geological Material Color Har WEATHERED LIMESTONE ST. PETER SANDSTONE ST. PETER SANDSTONE ST. PETER SANDSTONE ST. PETER SANDSTONE ST. PETER SANDSTONE ST. PETER, HARD TURNING TO SHALE HAF LIMESTONE HAF JORDAN SANDSTONE JORDAN SANDSTONE JORDAN SANDSTONE JORDAN SANDSTONE JORDAN SANDSTONE ST. LAWRENCE SHALE BLUE HAF ST. LAWRENCE SHALE STICKY BLUE HAF ST. LAWRENCE SHALE STICKY BLUE HAF ST. LAWRENCE SHALE STICKY BLUE HAF SHALE & SANDSTONE SHALE & SANDSTONE SHALE SHALE STICKY GREEN HAF SHALE & SANDSTONE GREEN HAF SANDSTONE GRAY SANDSTONE SANDSTONE GRY/GRN SANDSTONE SANDSTONE SANDSTONE GRY/GRN SANDSTONE <td>dnessFromTo 0 6 6 12 12 25 25 58 58 75 8D 75 76 8D 76 375 375 377 377 430 430 484 485 486 8D 484 485 8D 484 485 8D 484 485 8D 484 485 8D 502 593 725 733 733 762 8D 502 593 RD 593 725 725 733 733 762 8D 794 796 796 798 798 940 940 945 945 955 955 1022 1022 1037 1037 1060 (Screen) - Map</td> <td>Drilling Fluid Use Community Supply Casing Type Steel (black Yes No Above/Below Casing Diameter 16 in. to 487 ft. Open Hole from 487 ft. Stratic Water Level T Diameter Static Water Level Static Water Level T 71 ft. from Land surface PUMPING LEVEL (below later thrs. pumping) Well Head Completion Pitless adapter manufacture Casing Protection Casing Information Water Completion Grouting Information Water</td> <td>Well Hydrofractured? From Ft. to Ft. PWS ID 1550010 Source or low carbon) Joint No In w ft. Weight Ibs./ft. to 1060 ft. ype bt/Gauze Lengtl Date Measured 04/14/195 and surface) g.p.m. er Model 12 in. above grade atal Wells and Borings ONLY ell Grouted? Yes Cement from 0</td> <td>Yes No So5 formation Drive Shoe? Hole Diameter h Set Between No No to 487 ft. 27 yrds.</td>	dnessFromTo 0 6 6 12 12 25 25 58 58 75 8D 75 76 8D 76 375 375 377 377 430 430 484 485 486 8D 484 485 8D 484 485 8D 484 485 8D 484 485 8D 502 593 725 733 733 762 8D 502 593 RD 593 725 725 733 733 762 8D 794 796 796 798 798 940 940 945 945 955 955 1022 1022 1037 1037 1060 (Screen) - Map	Drilling Fluid Use Community Supply Casing Type Steel (black Yes No Above/Below Casing Diameter 16 in. to 487 ft. Open Hole from 487 ft. Stratic Water Level T Diameter Static Water Level Static Water Level T 71 ft. from Land surface PUMPING LEVEL (below later thrs. pumping) Well Head Completion Pitless adapter manufacture Casing Protection Casing Information Water Completion Grouting Information Water	Well Hydrofractured? From Ft. to Ft. PWS ID 1550010 Source or low carbon) Joint No In w ft. Weight Ibs./ft. to 1060 ft. ype bt/Gauze Lengtl Date Measured 04/14/195 and surface) g.p.m. er Model 12 in. above grade atal Wells and Borings ONLY ell Grouted? Yes Cement from 0	Yes No So5 formation Drive Shoe? Hole Diameter h Set Between No No to 487 ft. 27 yrds.
Yes No Variance Was a variance granted from the MDH for this well? Yes No Borehole Geophysics Yes Well Contractor Certification Yes No First Bedrock St.Peter Sandstone Aquifer Multiple Layne Well Co. 27010 Last Strat Mt.Simon Sandstone Depth to Bedrock 6 ft. License Business Name Lic. Or Reg. No. Name of Driller	from owner Input Date: 02/12/20 System: UTM - Nad83, Zone15, Meters X: 538439 Y: 4874	1803	Nearest Known Source of _feet _direction _type Well disinfected upon comp Pump Not Installe Manufacturer's name Length of drop Pipe _ft. (Abandoned Wells Does pr	Contamination Deletion? Yes Deletion? Yes Deletion? HP Deletion De	No Volts Material and not sealed well(s)?
County Well Index Online Report 200827 Printed 7/30/2012	Borehole Geophysics Yes First Bedrock St.Peter Sandstone Last Strat Mt.Simon Sandstone Depth to Bedro County Well Index Online Report	e ck 6 ft.	Yes No Variance Was a variance g Well Contractor Certificati Layne Well Co. License Business Nar 220827	granted from the MDH for this ion <u>27010</u> ne Lic. Or Reg	s well? Yes No . No. Name of Driller Printed 7/30/2012

Minnesota Unique Well No. 220822 Quad Quad ID	Olmsted Rochester 49C		MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING D Received hapter 1031	te 12/28/1989 Date 02/06/2012 d Date
Well Name ROCHESTER 17			Well Depth	Depth Completed	Date Well Completed
Township Range Dir Section Subsections Eleva	ation 1102.7	ft.	904 ft .	904 ft.	02/01/1960
107 14 W 25 BBDDCC Eleva	ation Method Survey	ed	Drilling Method Cable Too		
Well Address			Drilling Fluid 	Well Hydrofractured?	Yes No
ROCHESTER MN			Use Community Supply	PWS ID 1550010 Source	e S06
Geological Material SANDSTONE SANDSTONE & LIMEROCK LIMEROCK LIMEROCK & SANDROCK LIMEROCK & SANDROCK LIMEROCK & SANDROCK & SHALE SANDROCK LIMEROCK SANDROCK LIMEROCK SHALE LIMEROCK SHALE LIMEROCK & SHALE & SANDROCK LIMEROCK & SHALE SHALE & SANDROCK LIMEROCK & SHALE SHALE & SANDROCK LIMEROCK & SHALE SHALE & SANDROCK	Color Hardness HARD HARD	From To 0 106 100 109 100 160 160 167 167 197 203 209 209 218 263 435 504 520 524 554 595 628 648 652 652 852 871 904	Casing Type Steel (black Yes No Above/Belov Casing Diameter 24 in. to 102 ft. 16 in. to 429 ft. Open Hole from 429 ft. Screen NO Make T Diameter Slov Static Water Level 136 ft. from Land surface PUMPING LEVEL (below la 292 ft. after 29.25 hrs. p Well Head Completion Pitless adapter manufacture Casing Protection	or low carbon) Joint No Ir v ft. Weight Ibs./ft. Ibs./ft. to 904 ft. ype ot/Gauze Lengt Date Measured 01/22/19 and surface) umping 1000 g.p.m. r Model 12 in above grade	hformation Drive Shoe?
			At-grade (Environmen	tal Wells and Borings ONLY	Y)
NO REMAR	KS		Grouting Information We	ell Grouted? Yes	No
Located by: Minnesota Department of Health Unique Number Verification: Information from owner	Method: GPS SA ((averaged) Input Date: 07/28/2	Dff 2004 77246	Nearest Known Source of _feet _direction _type	Contamination	
			Well disinfected upon comp Pump Not Installe Manufacturer's name Length of drop Pipe_ft.	iletion? Yes ed Date Installed Model number HP Capacity _g.p.m Type	No Volts Material
			Abandoned Wells Does pr Yes No Variance Was a variance g	operty have any not in use	and not sealed well(s)?
First Bedrock St Peter Sandstone			Well Contractor Certificati	on 07050	
Last Strat Eau Claire Formation Depth	Prairie Du Chien-Gale to Bedrock 0 ft.	sville	License Business Nar	27058 ne Lic. Or Reg	<u>.</u> g. No. Name of Driller
County Well Index Onlin	ne Report		220822		Printed 7/30/2012 HE-01205-07

Minnesota Unique Well No.	County (Quad F Quad ID	Olmsted Rochester 49C			MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING D Entry D Update Receive	Date 12/28/1989 Date 02/06/2012 ed Date		
Well Name ROCHESTER 18					Well Depth	Depth Completed	Date Well Completed		
Township Range Dir Section Subsecti	ons Elevation	101	0.6 ft.		806 ft .	806 ft.	03/05/1963		
107 14 W 34 CDCCAD	Elevation	Method Sur	veyed		Drilling Method Cable Too	bl			
Well Address					Drilling Fluid 	Well Hydrofractured?	Yes No		
ROOHESTERIMIN					Use Community Supply	PWS ID 1550010 Source	ce S07		
Geological Material	Color BLACK	Hardness	From 0	To 4	Casing Type Steel (black	or low carbon) Joint No	Information Drive Shoe?		
LIMEROCK & SANDROCK			4 30	30 35		W П.	Hala Diamatan		
			35	40 40	Casing Diameter	weight			
LIMEROCK		SOFT	40 49	49 72	30 in. to 31 ft.	Ibs./π.	30 in. to 312 ft.		
LIMEROCK & SANDROCK		нарр	72 100	100 166	24 in. to 343 ft.	Ibs./ft.	24 in. to 806 ft.		
LIMEROCK & SANDROCK		HAND	166	199	Open Hole from 343 ft.	to 806 ft.			
LIMEROCK			199 315	315 326		уре			
SANDROCK			326	408	Diameter Slo	ot/Gauze Leng	oth Set Between		
LIMEROCK & SANDROCK			408 441	441 576					
SHALE			576	690					
SHALE & SANDROCK SANDROCK			690 705	705 725					
SHALE & SANDROCK			725	735	16 ft. from Land surface	Date Measured 03/05/1	963		
SHALE			735	806	PUMPING LEVEL (below la	and surface)			
					225 ft. after hrs. pumpir	ng 2000 g.p.m.			
					Well Head Completion				
					Pitless adapter manufacture	er Model			
					Casing Protection	12 in. above grade			
					At-grade (Environmer	ntal Wells and Borings ONI	LY)		
NO F	REMARKS				Grouting Information Well Grouted? Yes No				
Located by: Minnesota Department of	Health Co	ethod: GPS Diffe	erentially						
Unique Number Verification: Informat	ion from		2004		Nearest Known Source of	Contamination			
owner	urk	540057 V//20/			_feet _direction _type	Unitamination			
System: UTM - Nad83, Zone15, Meters	s X:	540657 Y : 48	74473		Well disinfected upon comp	oletion? 🔲 Yes	No		
					Pump Not Installe	ed Date Installed			
					Manufacturer's name	Model number HP _	Volts		
					Length of drop Pipe ft.	Capacity <u>g</u> .p.m Type	Material		
					Abandoned Wells Does pr	roperty have any not in use	e and not sealed well(s)?		
					Yes 📃 No				
					Variance Was a variance g	granted from the MDH for t	his well? Yes No		
First Datasets Of D. (1.0)					Well Contractor Certificati	on			
FIRST BEGROCK ST.Peter Sandstone	Aqui	ifer Jordan-Gale	sville		Bergerson-Caswell	2705	58		
Last Strat Eau Claire Formation	Dept	th to Bedrock 4	tt.		License Business Nar	me Lic. Or Re	eg. No. Name of Driller		
County Well Index	Online	Report			222527		Printed 7/30/2012 HE-01205-07		

Minnesota Unique Well No. 220681	County Quad Quad ID	Olmsted Simpson 28B				MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING D Chapter 1031	Entry Date Update Da Received I	e 12/28/1989 te 02/10/2009 Date
Well Name ROCHESTER 19						Well Depth	Depth Compl	eted	Date Well Completed
Township Range Dir Section Subse	ctions Eleva	ation tion Mothod	1020.6	ft.		881 ft.	881 ft.		09/14/1962
			Survey	eu		Drilling Method Cable Too			
Well Address 17TH ST SE ROCHESTER MN						Drilling Fluid 	Well Hydrofrac From Ft. to Ft	tured?	Yes No
Geological Material		Color	Hardnes	s Fror	n To	Use Community Supply	PWS ID 155001	0 Source	S08
SANDSTONE SANDSTONE LIMEROCK SHAKOPEE< SANDROCK LITE BROWN LIME & SANDROCK LIMEROCK LIMEROCK			HARD V.HARD V.HARD	0 10 13 26 52 57 63 103	10 13 26 52 57 63 103 129	Casing Type Steel (black Yes No Above/Belov Casing Diameter	or low carbon) J w ft. Weight	loint No Info	ormation Drive Shoe?
SANDROCK LIMEROCK LIMEROCK SOME SAND ROCK LIMEROCK LIMEROCK		WHITE	M.HARD HARD MEDIUM M.HARD M.HARD	129 139 162 190 195 205	139 162 190 195 205 245	30 in. to 27 ft. 24 in. to 343 ft.	lbs./ lbs./	ft. 3 ft. 2	0 in. to 27 ft. 4 in. to 881 ft.
			M.HARD	245 295	295 321	Open Hole from 343 ft.	to 881 ft.		
SANDROCK & SHALE JORDA	N<		WI. III WILLE	321	338	Screen NO Make T	уре		
SANDROCK & SHALE SANDROCK SANDROCK SANDROCK & SHALE LIMEROCK & SHALE LIMEROCK & SHALE LIMEROCK & SHALE LIMEROCK & SHALE & SAND LIMEROCK & SHALE & SAND SHALE & SANDROCK MINOR	ROCK			338 345 354 420 425 435 450 493 520 538	345 354 420 425 435 450 493 520 538 576	Diameter Slo	ot/Gauze	Length	Set Between
SHALE & SANDROCK-MINOF STICKY SHALE & SANDROCI STICKY SHALE & SANDROCI SANDROCK DRESBACK	k K-minor K-mino		HARD	597 620 630 685	620 630 685 705	Static Water Level 27 ft. from Land surface	Date Measured	09/14/1962	
SANDROCK SOME SHALE SANDROCK SOME SHALE			HARD HARD	705 720	720 754	189.42 ft. after hrs. pur	nping 2000 g.p.	m.	
SHALE, LAYERS OF SANDRO SHALE, LAYERS OF SANDRO STICKY SHALE STICKY SHALE STICKY SHALE, LITTLE SAND STICKY SHALE & SANDROCH STICKY SHALE & SANDROCH STICKY SHALE & SANDROCH STICKY SHALE & SANDROCH	DCK DCK DROCK K K K K K K	GREEN GREEN PNK/BRN PNK/BRN	1	754 765 780 785 808 813 824 830 839 855	765 780 785 808 813 824 830 839 855 881	Well Head Completion Pitless adapter manufacture Casing Protection At-grade (Environmer	er Model	e grade rings ONLY)	
NO	REMAR	KS				Grouting Information We	ell Grouted?	🖊 Yes 📃	No
Located by: Minnesota Department	of Health	Method: G Corrected	SPS Differen	tially		Grout Material:	fron	n to 348	5 ft.
Unique Number Verification: Inform	nation from	Input Date	: 07/28/2004	4		Nearest Known Source of	Contamination		
System: UTM - Nad83, Zone15, Met	ers	X: 543430	Y : 48718	11		_feet _direction _type Well disinfected upon comp	bletion?	Yes	No
						Pump Not Installe Manufacturer's name Length of drop Pipe _ft.	ed Date Installed Model number Capacity _g.p.m	d HPV TypeI	olts Material
						Abandoned Wells Does pr Yes No	roperty have any	not in use ar	nd not sealed well(s)?
1									

		Variance Was a variance grant	ted from the MDH for this well?	Yes	No No
		Well Contractor Certification			
First Bedrock St.Peter Sandstone	Aquifer Jordan-Galesville	Bergerson-Caswell	<u>27058</u>		
Last Strat Eau Claire Formation	Depth to Bedrock 0 ft.	License Business Name	Lic. Or Reg. No.	Name	of Driller
County Well Index O	nline Report	220681		Printed 7 HE	/30/2012

Minnesota Unique Well No.	County	Olmsted					12/28/1989
220662	Quad Quad ID	Rochester 49C			RECOR	D Receive	Date 02/06/2012 d Date
Well Name POCHESTER 20					Minnesota Statutes C	hapter 103l	Deta Well Occurrente d
Township Range Dir Section Subse	ctions Elevatio	n	989 ft .			012 ft	
106 1/ W/ 1 BBBC/		n Method	CALC FR	OM 2-	912 π.	512 n.	03/20/1904
		in method	DEM		Drining Method Cable Too	1	
Well Address					Drilling Fluid	Well Hydrofractured?	Yes No
RUCHESTER MIN					Use Community Supply	PWS ID 1550010 Source	e S09
Geological Material	Color	Hardness	From	То	Casing Type Steel (black	or low carbon) Joint No li	nformation Drive Shoe?
DRIFT			0 7	7 70	Yes 🔲 No Above/Below	w ft.	
LIMESTONE			70 296	296 366	Casing Diameter	Weight	Hole Diameter
LIMESTONE			366	367	30 in to 70 ft	118.65 lbs./ft.	23.25 in. to 912 ft.
JORDAN SANDSTONE			367 387	387 412	24 in to 306 ft	94.62 lbs./ft.	
JORDAN SANDSTONE			412	424	Open Hole from 306 ft.	to 912 ft.	
SHALE & LIMESTONE SHALE & LIMESTONE			424 487	487 658	Screen NO Make T	уре	
SANDSTONE			658	684	Diameter Slo	ot/Gauze Lengt	h Set Between
SAND & SHALE			686	717		-	
DARK STICKY CLAY		HARD	717 726	726 734			
CLAY		TH ALL	734	740			
CLAY SHALE	GREEN		740 786	786 826	Static Water Level		
SAND & CLAY			826	838	48 ft. from Land surface	Date Measured 00/00/19	69
SHALE SANDROCK			838 869	869 912	252 ft. after hrs. pumpir	ng 848 g.p.m.	
					Well Head Completion		
					Pitless adapter manufacture	er Model	
					Casing Protection	🚺 12 in. above grade	
					At-grade (Environmer	ntal Wells and Borings ONL	Y)
R E M A R K S GAMMA LOGGED 8-1-1995.					Grouting Information We	ell Grouted? 🚺 Yes	No
	Ν	lethod: GPS Di	fforontially				
Located by: Minnesota Department	of Health C	Corrected	nerendany				
Unique Number Verification: Inform owner	nation from	nput Date: 06/0	8/1995		Nearest Known Source of	Contamination	
System: UTM - Nad83, Zone15, Met	ers X	(: 543456 Y: 4	1874267		_feet _direction _type	Containingtion	
					Well disinfected upon comp	oletion? 🔲 Yes 📃	No
					Pump Vot Install	ed Date Installed	
					Manufacturer's name Length of drop Pipe 280 ff	Model number HP <u>15</u> Capacity 1000 g n m	0_Volts Type Turbine Material
					Abandoned Welle Does n	roperty have any not in use	and not sealed well(s)?
					Yes No		
					Variance Was a variance of	ranted from the MDH for th	is well? 🔲 Yes 🔲 No
Borehole Geophysics Yes					Well Contractor Certificati	on	
First Bedrock Prairie Du Chien Grou	p Aquife	r Prairie Du Chi	en-Mt.Simo	on	Mueller Well Co.	<u>96460</u>	<u>)</u>
Last Strat Mt.Simon Sandstone	Depth	to Bedrock 70	ft.		License Business Nar	ne Lic. Or Reg	g. No. Name of Driller
County Well Index	(Online	Report			220662		Printed 7/30/2012 HE-01205-07

Minnesota Unique Well No.	ວounty Quad Quad ID	Olmsted Rocheste 49C	er			MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALT ORING D Chapter 1031	H Entry Date Update Date Received Date	01/25/1988 02/09/2009
Well Name ROCHESTER 21						Well Depth	Depth Com	pleted	Date Well Completed
Township Range Dir Section Subsect	ions Elev	vation	1136.5	ft.		981 ft.	981 f i	t.	10/04/1965
106 13 W 5 CDDDBL) Elev	vation Method	Surveye	ed		Drilling Method			
Well Address ROCHESTER MN 55901						Drilling Fluid 	Well Hydrofr From Ft. to	actured? I Y Ft.	es 🔲 No
Caslagiaal Material		Color	Llandnaaa		т.	Use Community Supply	PWS ID 1550	010 Source S10	
SHALE LIMESTONE ST. PETER SANDSTONE LIMESTONE SANDSTONE (ROOT VALLEY) LIMESTONE SANDSTONE SANDSTONE		GREEN BLUE YELLOW BLUE YELLOW BROWN BLUE YELLOW		0 18 46 144 163 174 184 188	18 46 144 163 174 184 188 196	Casing Type Steel (black Yes No Above/Below Casing Diameter 30 in. to 152 ft.	or low carbon) w ft. We	Joint No Information	ation Drive Shoe?
LIMESTONE LIMESTONE LIMESTONE		YELLOW GRAY BROWN	HARD	196 250 345	250 345 350	24 in. to 458 ft.		IDS./π.	
LIMESTONE		YELLOW		350	392	Open Hole from 458 ft.	to 981 ft.		
LIMESTONE SANDSTONE SANDSTONE & LIMESTONE SANDSTONE (FINE) LIGHT GRAY TO DARK LIMEST SANDY SHALE SHALE & LIMESTONE SHALE & SANDSTONE STICKY SHALE STICKY SHALE & SANDSTONE		WHITE WHITE GRAY GREEN GREEN BLU/GRY GRAY GRAY	HARD HARD	392 445 455 480 548 634 653 698 710 728	445 455 480 548 634 653 698 710 728 760	Screen NO Make T Diameter Sic	ype ot/Gauze	Length	Set Between
STICKY SHALE & SANDSTONE SHALE & SANDSTONE SHALE & SANDSTONE	<u>:</u>	GREEN GRAY GREEN	HARD	760 798 842	798 842 858	Static Water Level 163 ft. from Land surface	Date Measu	red 10/04/1965	
STICKY SHALE & SANDSTONE SHALE SANDSTONE	-	GREEN GRAY		858 876 885	876 885 888	PUMPING LEVEL (below la 227 ft. after hrs. pumpir	and surface) ng 380 g.p.m.		
SHALE & SANDSTONE CLAY & LIMEROCK SHALE CLAY SHALE CLAY STICKY SHALE STICKY CLAY		GRAY GRAY GREEN BROWN GRAY BROWN GREEN GRAY		888 902 910 925 934 936 943 981	902 910 925 934 936 943 981 981	Well Head Completion Pitless adapter manufacture Casing Protection At-grade (Environmer	er Model 12 in. ab ntal Wells and E	ove grade Borings ONLY)	
NO	REMA	RKS		001	001	Grouting Information We	ell Grouted?	🚺 Yes 🔲 N	lo
Located by: Minnesota Department of Health	Meth (Digiti	od: Digitized - zing Table)	scale 1:24,0	00 or larç	ger				
Verification: Information from owner System: UTM - Nad83, Zona 15, Meter	Input	Date: 07/28/2	2004			Nearest Known Source offeetdirectiontype	Contaminatio	n	
oysiem. O Hvi - Ivauos, Zulie IS, Meler	5 🐴 34	HJUZ I: 401	2011			Well disinfected upon comp	oletion?	Yes 📃 No	1
						Pump Not Installe Manufacturer's name Length of drop Pipe 250 ft	ed Date Instal Model numbe t. Capacity <u>10</u>	led <u>00/00/1965</u> r HP <u>75</u> Vo <u>100g.p.m</u> Typ	lts e <u>Submersible</u> Material
						Abandoned Wells Does pr Yes 🔲 No	roperty have ar	ny not in use and n	ot sealed well(s)?
First Bedrock Decorah Shale		Aquifer Jord	dan-Galesvill	е		Variance Was a variance g Well Contractor Certificati Thein Well Co.	granted from the	e MDH for this well <u>55079</u>	? Yes No
		Depth to Bed	Irock ∪ ft.					LIC. OF KEG. NO.	
County Well Index	Onli	ne Rep	ort			220625			Printed 7/30/2012 HE-01205-07

Minnesota Unique Well No. 220818	County Quad Quad ID	Olmsted Rochester 49C				MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	INT OF HEALTH SORING D Chapter 1031	Entry Date Update Date Received Date	01/25/1988 09/19/2011
Well Name ROCHESTER 22						Well Depth	Depth Comple	eted Da	te Well Completed
Township Range Dir Section Subse	actions Elevati	ion	1042 ft	t.		730 ft .	730 ft .		07/21/1966
107 14 W 22 BBDA/	AC Elevati	ion Method	Surveye	ed		Drilling Method Cable Toc	ol		
Well Address						Drilling Fluid	Well Hydrofract	tured? 🔲 Yes	; 🔲 No
						Use Community Supply	PWS ID 1550010	Source S11	
Geological Material DRIFT LIMESTONE LIMESTONE & SEAMS OF S/	ANDSTONE	Color	Hardnes	3 sFron 0 32 135	n To 32 135 140	Casing Type Steel (black Yes No Above/Belo	or low carbon) Jc	pint No Information	on Drive Shoe?
LIMESTONE LIMESTONE & SOME SANDS LAYERS	STONE			140 172	172 205	Casing Diameter	Weig	ht Hol	e Diameter
LIMESTONE LIMESTONE & SHALE SANDSTONE		WHITE		205 327 337	327 337 355	30 in. to 34 ft. 24 in. to 344 ft.	lbs	s./ft. s./ft.	
SHALEY SANDSTONE			HARD	355 360	360 395	Onen Hole from 344 ft.	to 730 ft.		
SANDSTONE			SOFT	395	400	Screen NO Make T	Гуре		
SANDSTONE SHALEY SANDSTONE LIMESTONE				400 412 435	412 435 511	Diameter Slo	ot/Gauze	Length	Set Between
SHALE & LIMESTONE LIMESTONE SHALE & LIMESTONE SHALE LIMESTONE & GREEN SHAL	.E	GREEN	HARD I	511 515 523 532 535	515 523 532 535 564				
SANDROCK STICKY SHALE LIMESTONE SHALF			HARD	504 570 581 583	570 581 583 585	Static Water Level 65.5 ft. from Land surface	e Date Measured	07/21/1966	
SHALE & FINE SAND SEAMS SANDSTONE STICKY SHALE & SANDSTO	; NE	BROW	٧	585 601 608	601 608 617	PUMPING LEVEL (below la 286 ft. after hrs. pumpir	a nd surface) ng 1336 g.p.m.		
SHALE & SANDSTONE & LIM SHALE SHALE & LIMESTONE	IESTONE	GREEN	I	617 624 626	624 626 662	Well Head Completion Pitless adapter manufacture	er Model		
SANDSTONE & SHALE SHALE SANDSTONE				662 710 711 726	710 711 726	At-grade (Environmer	ntal Wells and Bori	ngs ONLY)	
SHALE R E M A R K S M.G.S. NO. 330. OLD P.A. 66-1056.				/20	/ 30	Grouting Information We	ell Grouted?	Yes 🔲 No	
Located by: Minnesota Department	t of Health	Method: Gf Corrected	⊃S Different	tially					
Unique Number Verification: Inform owner Svstem: UTM - Nad83, Zone15, Me	nation from	Input Date: X: 540499	07/28/2004 Y : 48790 ⁻	↓ 18		Nearest Known Source of feetdirectiontype	Contamination	/co 🔲 No	
						Pump Vot Installe Manufacturer's name Length of drop Pipe_ft.	led Date Installed Model number Capacityg.p.m	HP <u>150</u> Volt	s Material
	_	_	_			Abandoned Wells Does pr	roperty have any n	iot in use and not	sealed well(s)?
Cuttings Yes First Bedrock Prairie Du Chien Grou Last Strat Eau Claire Formation	Cuttings Yes First Bedrock Prairie Du Chien Group Last Strat Fau Claire Formation Date to Bedrock 32 ft					Variance Was a variance g Well Contractor Certificati Tri-state Well Co. License Business Nar	granted from the Mi ion me Lic	DH for this well? <u>27118</u> c. Or Reg. No.	Yes No BRADFORD, A. Name of Driller
County Well Inde:	County Well Index Online Report					220818			Printed 7/30/2012 HE-01205-07

Minnesota Unique Well No. 220660 Quad Quad ID	Olmsted Rochester 49C		MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING DUpdate Chapter 1031	ate 12/28/1989 Date 02/01/2012 ed Date
Well Name ROCHESTER 23 Township Range Dir Section Subsections Eleva 106 14 W 1 DBDCCB Eleva	tion 1006.8 tion Method Survey	ft. ed	Well Depth 806 ft.	Depth Completed 436 ft.	Date Well Completed 02/10/1967
		54	Drilling Method Cable Too	bl	
Well Address ROCHESTER MN			Drilling Fluid 	Well Hydrofractured? From Ft. to Ft.	Yes No
			Use Community Supply	PWS ID 1550010 Sourc	e S12
Geological Material DRIFT SHAKOPEE	Color Hardness	From To 0 20 20 47	Casing Type Steel (black	orlow.carbon) Joint Nol w ft	Information Drive Shoe?
SANDSTONE & SHALE	SOFT	47 58		Woight	Holo Diamotor
SHAKOPEE-ONEOTA	CREEN	58 312	Casing Diameter	weight	
SANDSTONE	ORLEN	325 398	30 in. to 24 ft.	IDS./IL.	30 In. to 24 It.
SANDSTONE		398 436	24 in. to 326 ft.	lbs./ft.	24 in. to 806 ft.
SHALEY LIMESTONE		436 440 440 512	Open Hole from 326 ft.	to 436 ft.	
SHALE	GREEN	512 532	Screen NO Make	уре	
SANDSTONE, SHALE LAYERS SHALF		532 640 640 644	Diameter Slo	ot/Gauze Leng	th Set Between
SANDSTONE		644 662			
SHALE SANDSTONE		662 672 672 677			
SHALE		677 682			
SANDSTONE & SHALE LAYERS		682 707 707 730	Static Water Level		
SHALE FROM SANDSTONE LENSES		730 751	16 ft. from Land surface	Date Measured 02/10/19	967
SHALE		751 806	217 ft after brs pumpir	and surface)	
			Well Head Completion Pitless adapter manufacture Casing Protection At-grade (Environmer	er Model 12 in. above grade ntal Wells and Borings ONL	Y)
REMARKS			Grouting Information W	all Grouted?	No
GROUT PLACED 806' - 707', SAND 707' - 512', A GAMMA LOGGED 3-19-1984 & 7-25-1995. THE L DATA	ND GROUT FROM 512' - OG HAS EXTENSIVE PL	436' JMP TEST			
RECONSTRUCTED 1984 BY BERGERSON CAS BAILED	WELL, JORDAN SS BLA	STED AND			
Located by: Minnesota Department of Health	Method: GPS Differen	tially	Nearest Known Source of _feet _direction _type	Contamination	
Unique Number Verification: Information from	CONCORD		Well disinfected upon comp	oletion? 🔲 Yes	No
owner	Input Date: 07/28/2004	4	Pump Viat Install	ed. Date Installed	
System: UTM - Nad83, Zone15, Meters	X : 544404 Y : 48732	46	Manufacturer's name Length of drop Pipe 220_ft	Model number HP <u>15</u> t. Capacity <u>1000_g</u> .p.m	5 <u>0</u> Volts Type <u>Turbine</u> Material
			Abandoned Wells Does p	roperty have any not in use	and not sealed well(s)?
			Yes No	. , ,	
			Variance Was a variance g	granted from the MDH for th	nis well? Yes No
Borehole Geophysics Yes			Well Contractor Certificat	ion	
First Bedrock Prairie Du Chien Group Aq	uifer Prairie Du Chien-J	lordan	Tri-state Well Co.	<u>27118</u>	BRADFORD, A.
Last Strat Eau Claire Formation De	pth to Bedrock 20 ft.		License Business Nar	ne Lic. Or Reg	g. No. Name of Driller
County Well Index Onlin	ne Report		220660		Printed 7/30/2012 HE-01205-07

Minnesota Unique Well No.	ounty uad uad ID	Olmsted Rochest 49C	l ter			MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING D hapter 1031	Entry Date Update Date Received Date	12/28/1989 02/06/2012
Well Name ROCHESTER 24 Township Range Dir Section Subsection 107 14 W 23 CDADAC	ons Elevat Elevat	ion ion Metho [,]	997 ft. d Survey	ved		Well Depth 685 ft. Drilling Method Cable Too	Depth Comp 685 ft.	leted Da	ate Well Completed 05/07/1968
Well Address ROCHESTER MN						Drilling Fluid	Well Hydrofrad From Ft. to Ft	ctured? Yes	s 🔲 No
Geological Material DRIFT LIMEROCK LIMEROCK W/CREVICES LIMEROCK & SANDSTONE LIMEROCK & SANDSTONE LIMEROCK CREVICES LIMEROCK CREVICES LIMEROCK & SANDROCK LIMEROCK CREVICES LIMEROCK & SANDROCK LIMEROCK & SHALE LIMEROCK & SHALE LIMEROCK & SHALE LIMEROCK & SHALE SANDROCK SHALE SANDROCK & SHALE SANDROCK & SHALE SHALE LIMEROCK & SANDROCK STICKY SHALE SHALE SHALE & LIMEROCK & SH LIMEROCK & SHALE SHALE & LIMEROCK & SH LIMEROCK & SHALE SHALE & LIMEROCK & SH LIMEROCK & SHALE SHALE & LIMEROCK SANDROCK & SHALE SHALE & LIMEROCK SANDROCK & SHALE SHALE & LIMEROCK SANDROCK & SHALE SANDROCK & SHALE SANDROCK & SHALE SHALE & LIMEROCK SANDROCK & SHALE SANDROCK & SHALE	ALE	BROWN GREEN	Hardness HARD HARD	From 0 4 28 44 75 80 87 92 103 108 122 145 211 248 280 300 390 395 484 499 503 505 548 563 568 574 588 563 568 574 588 563 568 574 588 563 568 574 588 568 574 588 568 574 588 568 574 567 567 574 568 574 568 574 567 574 568 574 568 574 568 574 568 574 568 574 578 567 578 568 578 578 568 578 578 568 578 578 568 578 578 568 578 578 578 578 578 578 578 57	4 4 28 44 54 75 80 87 103 122 145 211 2480 300 395 484 499 503 568 574 588 563 603 618 642 678 685	Use Community Supply Casing Type Steel (black of Yes No Above/Below Casing Diameter 24 in. to 309 ft. Open Hole from 309 ft. Screen NO Make T Diameter Sloc Static Water Level 36 ft. from Land surface PUMPING LEVEL (below la 242 ft. after 24 hrs. pumple Well Head Completion Pitless adapter manufacture Casing Protection At-grade (Environment Grouting Information Weel	PWS ID 155001 or low carbon) w ft. Weig It to 685 ft. ype ot/Gauze Date Measured and surface) ping 1200 g.p.r er Model I 12 in. abov ital Wells and Bo	0 Source S13 Joint No Informati ght Ho os./ft. Length 05/07/1968 n. re grade rings ONLY) Yes Yes	on Drive Shoe?
Located by: Minnesota Department of Health Unique Number Verification: Information from owner System: UTM - Nad83, Zone15, Meters	Meti (1:1: ^{on} Inpւ X: է	hod: Digiti 2,000) ut Date: 07 542532 Y	ization (Scree 7/28/2004 ': 4877905	∍n) - Ma	p	Nearest Known Source offeetdirectiontype Well disinfected upon comp Pump Image: Not Installe Manufacturer's name	Contamination oletion?	Yes No d HP 200 Vol	
First Bedrock Prairie Du Chien Group Last Strat Eau Claire Formation	Aquif Deptł	ier Prairie h to Bedro	Du Chien-Ga ck 4 ft .	alesville		Variance Was a variance g Well Contractor Certificati <u>Mueller Well Co.</u> License Business Nan	capacity _g.p.m operty have any rranted from the l on	MDH for this well? <u>96460</u> Lic. Or Reg. No.	Material sealed well(s)?
County Well Index	Onlin	e Rep	ort			220819			Printed 7/30/2012 HE-01205-07

Minnesota Unique Well No.	unty Olmsted ad Rochester ad ID 49C			MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING D D hapter 1031	ate 12/28/1989 Date 02/10/2009 d Date
Well Name ROCHESTER 25				Well Depth	Depth Completed	Date Well Completed
Township Range Dir Section Subsection	ns Elevation 100	9.6 ft.		850 ft.	850 ft .	01/10/1969
106 14 W 10 AAABDB	Elevation Method Sur	veyed		Drilling Method Cable Too		
Well Address ROCHESTER MN				Drilling Fluid 	Well Hydrofractured? From Ft. to Ft.	Yes No
				Use Community Supply	PWS ID 1550010 Sourc	e S14
Geological Material DRIFT LIMEROCK	Color Hardness	From 10 0 65 65 12	o 5 29	Casing Type Steel (black Yes No Above/Below	or low carbon) Joint No I w ft.	nformation Drive Shoe?
ROOT VALLEY SANDROCK		129 13	35 39	Casing Diameter	Weight	Hole Diameter
SANDROCK (JORDAN)		339 4	10	30 in. to 65.5 ft.	lbs./ft.	29 in. to 281 ft.
SANDROCK (JORDAN) SANDROCK (JORDAN)		410 42 425 44	25 49	24 in. to 345 ft.	lbs./ft.	23 in. to 850 ft.
SHALE (ST. LAWRENCE)		449 69	90	Open Hole from 345 ft.	to 850 ft.	
SANDROCK & SHALE		765 7	65 70	Screen NO Make T	уре	
SHALE SANDROCK & SHALE		770 79	93 03	Diameter Slo	ot/Gauze Leng	th Set Between
SHALE		803 8	50			
			ŀ	Static Water Level		
				14 ft. from Land surface	Date Measured 01/10/19	69
			ſ	PUMPING LEVEL (below la	and surface)	
			ŀ	75 it. alter 2 hrs. pumpir	ig 600 g.p.m.	
				Well Head Completion	- Madal	
				Pitiess adapter manufacture		
				Casing Protection	12 in. above grade	
				At-grade (Environmer	tal Wells and Borings ONL	Y)
M.G.S. NO. 652. OLD P.A. NO. 69-0031.				Grouting Information We	ell Grouted? 🚺 Yes	No
				Grout Material: Neat (Cement from 0	to 345 ft. 800 bags
Located by: Minnesota Geological Surve	Method: Digitization (So	creen) - Map				C C
Unique Number Verification: Informatio	n (1.24,000)					
from owner	Input Date: 02/10/2009		ľ	Nearest Known Source of	Contamination	
System: UTM - Nad83, Zone15, Meters	X: 541662 Y: 487272	4		_feet _direction _type		No
			ŀ			
				Pump IV Not Installe	ed Date Installed	50 Volte
				Length of drop Pipe ft. (Capacity g.p.m Type	Turbine Material
				Abandoned Wells Does p	operty have any not in use	and not sealed well(s)?
				Yes 🔲 No		
				Variance Was a variance g	ranted from the MDH for th	is well? 🚺 Yes 🔲 No
Cuttings Yes First Bedrock Prairie Du Chien Group				Well Contractor Certificati	on 60041	
Last Strat Eau Claire Formation	Aquifer Prairie Du Chien Depth to Bedrock 65 ft	-Galesville		License Business Nar	ne Lic. Or Re	g. No. Name of Driller
				220675		Printed 7/30/2012
	nine keport			2200/3		HE-01205-07

Veil Name ROCHSTER 25 Weil Depth Depth Completed Data Weil Completed Data Weil Completed Data Weil Completed Data Weil Completed East Weil Schwarz 107 H W 32 DCBBBA Elseation Method Surveyed Drilling Method Cable Tod Method Cable Tod Weil Address No From FL to FL Method Cable Tod Weil Hydrofractured? Yes No BROKEN PLATTEVILLE ROCK & SHALE 0 Tod Status Tod Status Method Cable Tod No From FL to FL Method Cable Tod No From FL to FL No From FL to FL Method Cable Tod No From FL to FL Scatus FL From FL to FL	Minnesota Unique Well No. County Olmsted 147451 Quad Douglas Quad ID 50D		MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	INT OF HEALTH ORING DRING Chapter 1031	te 12/28/1989 Date 02/06/2012 I Date
Well Address Diming Find Well Hydrofractured? Yes No Goological Material Color Hardness From To 0 13 14 From FL to FL No BROKEN PLATTEVILLE ROCK & SHALE 0 13 73 8 No Above/Below 2 ft. Hole Diameter BROKEN PLATTEVILLE ROCK & SHALE 10 35 118.65 lbs./ft. 30 in. to 83 ft. 118.65 lbs./ft. 30 in. to 364 ft. PLATTEVILLE ROCK & SHALE 10 99 194 Open Hole from 364 ft. 106 Diameter PLATTEVILLE ROCK 96 92 24 in. to 364 ft. 118.65 lbs./ft. 30 in. to 624 ft. ST. PETER SANDSTONE 99 194 Open Hole from 364 ft. 106 Diameter 406 20 lbs./ft. 24 in. to 624 ft. ST. PETER SANDSTONE 194 200 Stein Water Lovel 106 do and sufface) 30 in. to 83 ft. 118.65 lbs./ft. 30 in. to 624 ft. Stein Water Lovel 106 do and sufface) 100 do and sufface) 30 lb .00 do and sufface) 30 lb .00 do and sufface) ST. LAWRENCE 200 620 620 620 620 620 Unique Number Verification: <	Well Name ROCHESTER 26 Township Range Dir Section Subsections Elevation 107 14 W 32 DCBBBA Elevation Method	1166 ft. Surveyed	Well Depth 624 ft.	Depth Completed 624 ft.	Date Well Completed 04/28/1978
REMARKS GAMMA LOGGED 12-23-1987. M.G.S. NO. 1361. Grouting Information Well Grouted? Yes No Located by: Minnesota Department of Health owner Method: GPS Differentially Corrected Grout Material: Neat Cement from 0 to 364 ft. 1140 bag System: UTM - NadB3, Zone15, Meters X: 537821 Y: 4874775 Nearest Known Source of Contamination feetdirectiontype Well disinfected upon completion? Yes No Pump Not Installed Date Installed Manufacturer's name Model numberHP Volts Length of drop Pipe_ft. Capacity_g.p.m Yes No Cuttings Yes Borehole Geophysics Yes First Bedrock Decorah-Platteville Last Strat StLawrence Formation Aquifer Prairie Du Chien-Jordan Depth to Bedrock 13 ft. Abandoned Wells Does property have any not in use and not sealed well(s)? Yes No	Well Address ROCHESTER MN Geological Material Color Har DRIFT BROKEN PLATTEVILLE ROCK & SHALE BROKEN PLATTEVILLE ROCK & SHALE PLATTEVILLE ROCK PLATTEVILLE ROCK PLATTEVILLE ROCK ST. PETER SANDSTONE ST. PETER SANDSTONE SHAKOPEE ROCK ONEOTA JORDAN SANDSTONE ST. LAWRENCE	rdness From To 0 13 13 20 20 73 73 82 82 90 90 96 96 99 99 194 194 200 200 402 402 530 530 613 613 620 620 624	Drilling Method Cable For Drilling Fluid Use Community Supply Casing Type Steel (black Yes No Above/Belor Casing Diameter 30 in. to 83 ft. 24 in. to 364 ft. Open Hole from 364 ft. Screen NO Make T Diameter Steel Static Water Level 155 ft. from Land surface PUMPING LEVEL (below I 327 ft. after 4 hrs. pump Well Head Completion Pitless adapter manufacture Casing Protection At-orade (Environmer	Well Hydrofractured? From Ft. to Ft. PWS ID 1550010 Source or low carbon) Joint Weld w 2 ft. Weight 118.65 lbs./ft. 94.62 lbs./ft. to 624 ft. Type ot/Gauze Lengt and surface) ing 2000 g.p.m. er Model I2 in. above grade ntal Wells and Borings ONL	Yes No S15 Add Drive Shoe? Hole Diameter 30 in. to 364 ft. 24 in. to 624 ft.
owner Input Date: 04/24/1995 System: UTM - Nad83, Zone15, Meters X: 537821 Y: 4874775 Vell disinfected upon completion? Yes No Pump Not Installed Date installed Manufacturer's name Model numberHPVolts Length of drop Pipe_ft. Capacity _g.p.m Cuttings Yes Borehole Geophysics Yes First Bedrock Perime Du Chien-Jordan Variance Was a variance granted from the MDH for this well? Yes First St.Lawrence Formation Aquifer Prairie Du Chien-Jordan Lavne Well Co. 27010 HOLLEN, G. License Business Name Lic. Or Reg. No. Name of Drillen	R E M A R K S GAMMA LOGGED 12-23-1987. M.G.S. NO. 1361. Located by: Minnesota Department of Health Unique Number Verification: Information from	Differentially	Grouting Information W	ell Grouted?	No No 364 ft. 1140 bags
Cuttings Yes Borehole Geophysics Yes First Bedrock Aquifer Prairie Du Chien-Jordan Last Strat St.Lawrence Formation Depth to Bedrock 13 ft.	owner Input Date: 04, System: UTM - Nad83, Zone15, Meters X: 537821 Y:	'24/1995 4874775	Nearest Known Source of _feet _direction _type Well disinfected upon comp Pump Not Install Manufacturer's name Length of drop Pipe_ft.	Contamination Deletion? Yes dual dual dual dual capacity _g.p.m Type	No Volts Material
County Woll Index Online Bonest 147767 Printed 7/30/20	Cuttings Yes Borehole Geophysics Yes First Bedrock Decorah-Platteville Last Strat St.Lawrence Formation Depth to Bedro County Woll Ladox	Du Chien-Jordan ck 13 ft.	Abandoned Wells Does p Yes No Variance Was a variance of Well Contractor Certificati Lavne Well Co. License Business Nai	roperty have any not in use a granted from the MDH for thi ion 27010 me Lic. Or Reg	and not sealed well(s)?

Minnesota Unique Well No. 224212 Quad Quad ID	Olmsted Rochester 49C		MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING D Receive Chapter 1031	ate 01/25/1988 Date 02/06/2012 d Date
Well Name ROCHESTER 27 Township Range Dir Section Subsections Elev 107 13 W 31 BCCCCB Elev	ation 1016 ation Method Surv	f t. eyed	Well Depth 448 ft. Drilling Method Cable Too	Depth Completed 448 ft.	Date Well Completed 12/14/1979
Well Address ROCHESTER MN Geological Material GLACIAL DRIFT SHAKOPEE DOLOMITE ROOT VALLEY SANDSTONE SHAKOPEE DOLOMITE ONEOTA DOLOMITE SHALE JORDAN SANDSTONE JORDAN SANDSTONE ST. LAWRENCE	Color Hardness BLUE	From To 0 32 32 135 135 153 153 247 247 320 320 331 395 428 428 448	Drilling Fluid Use Community Supply Casing Type Steel (black Yes No Above/Below Casing Diameter 30 in. to 32 ft. 24 in. to 345 ft. Open Hole from 345 ft. Screen NO Make T Diameter Static State 25 ft. from Land surface PUMPING LEVEL (below I ft. after ft. after hrs. pumping	Well Hydrofractured? From Ft. to Ft. PWS ID 1550010 Source or low carbon) Joint No li w ft. Weight Ibs./ft. Ibs./ft. to 448 ft. Type pt/Gauze Lengt Date Measured 12/14/19 and surface) g.p.m.	Yes No Yes No Solution Drive Shoe? Hole Diameter
			Well Head Completion Pitless adapter manufacture Casing Protection At-grade (Environmer	er Model 12 in. above grade ntal Wells and Borings ONL	Y)
GAMMA LOGGED 3-7-1997. M.G.S. NO. 1546.	Method: GPS Differe Corrected	entially	Grouting Information We	ell Grouted? 🔽 Yes Cement from 0	No to 345 ft. 42 yrds.
owner System: UTM - Nad83, Zone15, Meters	X: 544996 Y: 4875	5255	Nearest Known Source of _feet _direction _type Well disinfected upon comp Pump Not Install Manufacturer's name Length of drop Pipe	Contamination Deletion? Yes ed Date Installed Model number HP Capacity o.p.m Type	No Volts Material
Cuttings Yes Borehole Geophysics Yes First Bedrock Prairie Du Chien Group Last Strat St.Lawrence Formation	Aquifer Prairie Du C Depth to Bedrock 3	Chien-Jordan 2 ft.	Abandoned Wells Does pr Yes No Variance Was a variance of Well Contractor Certificati Lavne Well Co. License Business Nar	roperty have any not in use granted from the MDH for th ion <u>27010</u> me Lic. Or Reg	and not sealed well(s)?
County Well Index Onlin	ne Report		224212		Printed 7/30/2012 HE-01205-07

Minnesota Unique Well No. 180567	County Quad Quad ID	Olmsted Rochester 49C			MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING Entry Dat Update D Received	e 08/17/1992 ate 02/06/2012 Date	
Well Name ROCHESTER 28					Well Depth	Depth Completed	Date Well Completed	
Township Range Dir Section Subs	ections Eleva	tion Star Mathed	984 ft.		389 ft.	389 ft .	08/04/1981	
107 14 W 15 ADBDBB Elevation Method Surveyed				Drilling Method Cable Tool				
Well Address ROCHESTER MN					Drilling Fluid 	Well Hydrofractured?	Yes No	
					Use Community Supply	PWS ID 1550010 Source	S17	
Geological Material MUD SANDSTONE	Color TAN	Hardness	From 0 24	To 24 28	Casing Type Steel (black Yes No Above/Belov	or low carbon) Joint Welde v ft.	ed Drive Shoe?	
LIMESTONE	TAN		28	48	Casing Diamotor	Weight	Hole Diameter	
LIMESTONE	BROWN	HARD	48 52	52 60	30 in to 30 ft	lbs /ft		
LIMESTONE	TAN	MEDIUM	60	115		lbs /ft		
LIMESTONE	BROWN	HARD	175	175	24 IN. to 305 ft.	to 389 ft		
LIMESTONE	TAN		187	191	Screen NO Make T	vpe		
LIMESTONE	GRAY TAN GRAY	HARD	211 257	211 257 285	Diameter Slo	ot/Gauze Length	Set Between	
SANDSTONE	GRAY		285	351				
LIMESTONE	GRAY GRAY		351 360	360 385				
ST. LAWRENCE	GRAY		385	389				
					Static Water Level			
					15 ft. from Land surface Date Measured 07/27/1981			
				181 ft. after 8 hrs. pumping 1375 g.p.m.				
					Well Head Completion Pitless adapter manufacture Casing Protection At-grade (Environmer	er Model 12 in. above grade atal Wells and Borings ONLY)	
NO REMARKS				Grouting Information Well Grouted? Ves No				
Located by: Minnesota Departmen	t of Health	Method: GPS D Corrected	Differentially		Grout Material: Neat (Cement from	to ft. 38 yrds.	
Unique Number Verification: Infor	mation from	Input Date: 07/2	28/2004		Nearest Known Source of	Contamination		
System: UTM - Nad83, Zone15 Me	eters	X: 541451 Y :	4880348		_feet _direction _type			
- ,					Well disinfected upon comp	oletion? 🔄 Yes	No	
					Pump Not Installe Manufacturer's name Length of drop Pipe _ft.	ed Date Installed Model number HP \ Capacityg.p.m Type	/olts Material	
					Abandoned Wells Does pr	roperty have any not in use a	nd not sealed well(s)?	
					Yes 🔲 No	· · ·	.,	
					Variance Was a variance g	ranted from the MDH for this	well? Yes No	
					Well Contractor Certificati	on		
First Bedrock Prairie Du Chien Gro	oup	Aquifer Jorda	an		Thein Well Co.	<u>55079</u>	<u>THEIN, D.</u>	
Last Strat St.Lawrence Formation		Depth to Bedr	ock 24 ft.		License Business Nar	ne Lic. Or Reg.	No. Name of Driller	
County Well Index Online Report			180567		Printed 7/30/2012 HE-01205-07			

Minnesota Unique Well No. 161425	County Quad Quad ID	Olmsted Simpson 28B			MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING D Chapter 1031	Entry Date Update Date Received Date	08/17/1992 02/06/2012	2
Well Name ROCHESTER 29					Well Depth	Depth Comple	eted Dat	e Well Completed	
Township Range Dir Section Subsec	tions Elevations	on	1087 ft .	014.0	519 ft.	519 ft.		10/25/1982	
106 14 W 14 BAADA	B Elevation	Elevation Method FOOT COUNTY DEM			Drilling Method Cable Tool				
Well Address					Drilling Fluid 	Well Hydrofrac From Ft. to Ft.	tured? 🔲 Yes	No No	
				Use Community Supply PWS ID 1550010 Source S18					
Geological Material DRIFT ST. PETER SANDROCK SHAKOPEE-ONEOTA JORDAN SANDROCK JORDAN SANDROCK ST. LAWRENCE	Color	Hardness	From 0 18 106 408 425 514	To 18 106 408 425 514 519	Casing Type Steel (black Yes No Above/Below Casing Diameter 30 in. to 106 ft. 24 in. to 422 ft. Open Hole from 422 ft. Screen NO Make T Diameter Slow	or low carbon) J w ft. Weight 118.65 lk 94.62 lbs to 519 ft. ype bt/Gauze	oint No Informatio Hole os./ft. 29 s./ft. 24 Length S	n Drive Shoe? Diameter in. to 422 ft in. to 519 ft Get Between	 t.
					Static Water Level 89 ft. from Land surface PUMPING LEVEL (below II 159 ft. after 10 hrs. pum Well Head Completion Pitless adapter manufacture Casing Protection At-grade (Environmer	Date Measured and surface) ping 1500 g.p.m er Model I2 in. above ntal Wells and Bor	10/18/1982 n. e grade ings ONLY)		
REMARKS 72 YARDS OF GROUT WERE USED GAMMA LOGGED 8-24-1995. M.G.S.	in grouting No. 2014.	G IN THE CASING	GS.		Grouting Information We	ell Grouted?	Yes No		
					Grout Material: Neat (Cement	from 0 to	422 ft.	
Located by: Minnesota Department of Health Method: GPS Differentially Corrected				Grout Material: Neat Cement from 0 to 106 ft. 0				0	
Unique Number Verification: Information from Input Date: 07/28/2004 owner				Nearest Known Source of Contamination _feet _direction _type					
System: UTM - Nad83, Zone15, Mete	ers	X: 542579 Y: 4	\$871100		Well disinfected upon completion? Ves No				
					Pump Not Install Manufacturer's name Length of drop Pipe _ft.	ed Date Installec Model number _ Capacity _g.p.m	d HP Volts Type Materia	I	
					Abandoned Wells Does pr Yes No	roperty have any r	not in use and not s	ealed well(s)?	
Cuttings Yes Borehole Geophy First Bedrock St.Peter Sandstone Last Strat St.Lawrence Formation	sics Yes	Aquifer Jo Depth to Be	ordan e drock 18	ft.	Variance Was a variance of Well Contractor Certificati Bergerson-Caswell License Business Nar	granted from the M ion ne L	IDH for this well? <u>27058</u> .ic. Or Reg. No.	Yes Name of Drill	No
County Well Index Online Report				161425			Printed 7/30/2 HE-0120	2012	

Minnesota Unique Well No. 239761	ounty Olmsted ad Rocheste ad ID 49C	r		MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING D Update hapter 1031	ate 04/03/1992 Date 02/06/2012 ed Date 02/06/2012		
Well Name ROCHESTER 30				Well Depth	Depth Completed	Date Well Completed		
Township Range Dir Section Subsection	ns Elevation	1006 ft .		402 ft .	402 ft .	03/26/1984		
107 14 W 36 ABBCCD Elevation Method Surveyed				Drilling Method Cable Tool				
Well Address				Drilling Fluid 	Well Hydrofractured?	Yes No		
NOOTESTER MIN 33903				Use Community Supply	PWS ID 1550010 Sourc	e S19		
Geological Material C DRIFT SAND & SHALE	olor Hardness	5 From 0 5	To 5 48	Casing Type Steel (black) Yes No Above/Belov	or low carbon) Joint Wel v ft.	lded Drive Shoe?		
SAND & SHALE LIMEROCK SANDSTONE		48 58 91	58 91 108 205	Casing Diameter 36 in. to 64 ft.	Weight Ibs./ft.	Hole Diameter 30 in. to 319 ft.		
SANDROCK		305	360	24 in. to 319 ft.	lbs./ft.	23 in. to 402 ft.		
SANDROCK		360	400	Open Hole from 319 ft.	to 402 ft.			
		400	402	Screen NO Make T	уре			
				Diameter Slo	ot/Gauze Leng	th Set Between		
				Static Water Level				
				30 ft. from Land surface Date Measured 03/26/1984				
				PUMPING LEVEL (below la 120 ft after 8 hrs pump	and surface) ing 1300 g n m			
				Well Head Completion Pitless adapter manufacture Casing Protection At-grade (Environmen	r Model 12 in. above grade tal Wells and Borings ONL	-Y)		
REMARKS	0.170			Grouting Information We	ell Grouted? 📝 Yes	No		
GAMMA LOGGED 6-8-1994. M.G.S. NO. Located by: Minnesota Department of Hi Unique Number Verification: Informatio	ealth Method: G Corrected	PS Differentially	ŗ	Grout Material: Neat (Cement from 0	to 319 ft. 1019 bags		
owner	input Date:	01/20/2004		Nearest Known Source of Contamination				
System: UTM - Nad83, Zone15, Meters	X: 544197	Y: 4875846		Well disinfected upon comp	letion?	No		
		Pump Not Installed Manufacturer's name Model number HP Volts Length of drop Pipe _ft. Capacityg.p.m Type						
				Abandoned Wells Does pr	operty have any not in use	e and not sealed well(s)?		
				Yes 🔲 No				
				Variance Was a variance g	ranted from the MDH for th	his well? 🚺 Yes 🔲 No		
Cuttings Yes Borehole Geophysics	s Yes			Well Contractor Certificati	on			
FIRST BEGROCK Prairie Du Chien Group	Aquif	er Jordan		Keys Well Co.	<u>6201</u>	<u>2</u> <u>HANSON, D.</u>		
Last Strat St. Lawrence Formation	Depth	1 to Bedrock 4	5 ft.	License Business Nan	LIC. UF RE	eg. INO. INAME OF DRIHER		
County Well Index Online Report				239761		Printed 7/30/2012 HE-01205-07		

Minnesota Unique Well No. County Olmsted 434041 Quad Simpson Quad ID 28B	MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING D D hapter 1031	te 08/17/1992 Pate 02/06/2012						
Well Name ROCHESTER 31	Well Depth	Depth Completed	Date Well Completed						
Township Range Dir Section Subsections Elevation 1068.5 ft.	555 ft.	530 ft .	10/13/1987						
106 14 W 23 CCCCCB Elevation Method Surveyed	Drilling Method Cable Too								
Well Address 40TH ST ROCHESTER MN 55903	Drilling Fluid Use Community Supply	Well Hydrofractured? From Ft. to Ft. PWS ID 1550010 Source	Yes No						
Geological MaterialColorHardnessFromToSAND, GRAVEL & COBBLESBROWNSOFT027SANDSTONEBROWNSOFT2754	Casing Type Steel (black) Yes No Above/Below	or low carbon) Joint No In v 4 ft.	formation Drive Shoe?						
SANDSTONE GRAY SOFT 54 125	Casing Diameter	Weight	Hole Diameter						
SANDSTONE GRAT HARD 125 435 WHITE SOFT 435 490	36 in to 54 ft	142.68 lbs./ft.	35 in. to 126 ft.						
SANDSTONE WHITE SOFT 490 550 SANDSTONE WHITE SOFT 550 555	24 in to 461.5 ft	94.62 lbs./ft.	29 in. to 461.5 ft.						
	Open Hole from 462 ft.	to 530 ft.							
	Screen NO Make T	уре							
	Diameter Slo	ot/Gauze Lengtl	h Set Between						
	Static Water Level 38 ft. from Land surface	Date Measured 10/06/198	37						
	PUMPING LEVEL (below la 100.5 ft. after 8 hrs. pur	and surface) pping 1500 g.p.m.							
	Well Head Completion Pitless adapter manufacture Casing Protection At-grade (Environmen	r Model 12 in. above grade tal Wells and Borings ONLY)						
REMARKS	Grouting Information Well Grouted? Ves No Grout Material: Neat Cement from 0 to 461.5 ft. 54 yrds.								
GAMMA LOGGED 5-13-1999. M.G.S. NO. 2829. Located by: Minnesota Department of Health Unique Number Verification: Information from Input Date: 07/28/2004									
Uwiter ,	Nearest known Source of Contamination 225 feet S direction Body of water type								
youni o ni - naudo, zono io, motoro A. 04 1007 T. 4000020	Well disinfected upon comp	letion? 🚺 Yes 🕅	No						
	Pump Not Installe Manufacturer's name Length of drop Pipe _ft.	ed Date Installed Model number HP _ ` Capacity _g.p.m Type	Volts Material						
	Abandoned Wells Does pr Yes 📝 No	operty have any not in use a	and not sealed well(s)?						
	Variance Was a variance of	ranted from the MDH for this	s well? Yes No						
Cuttings Yes Borehole Geophysics Yes	Well Contractor Certificati	on							
First Bedrock St.Peter Sandstone Aquifer Jordan	Bergerson-Caswell	<u>27058</u>							
Last Strat St.Lawrence Formation Depth to Bedrock 27 ft.	License Business Nan	ne Lic. Or Reg	. No. Name of Driller						
County Well Index Online Report	434041		Printed 7/30/2012 HE-01205-07						
Minnesota Unique Well No. 506819	County Quad Quad ID	Olmsted Rochester 49C			MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING D Receive Chapter 1031	ate 08/17/1992 Date 02/06/2012 d Date		
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Well Name ROCHESTER 32 Township Range Dir Section Subs 107 13 W 30 CAC	sections Elevat	tion 1 tion Method S	129.4 ft. Surveyed		Well Depth 540 ft.	Depth Completed 540 ft.	Date Well Completed 12/15/1989		
			.,		Drilling Method Non-specified Rotary				
Well Address ROCHESTER MN 55904					Drilling Fluid Other Well Hydrofractured? Yes No From Ft. to Ft. From Ft. to Ft. Second S				
			_	_	Use Community Supply	PWS ID 1550010 Source	e 521		
DRIFT	Color	Hardness	0 0	10 5	Casing Type Steel (black	or low carbon) Joint Weld	ded Drive Shoe?		
PLATTEVILLE GLENWOOD ST. PETER SHAKOPEE ROOT VALLEY ONFOTA	GREEN GRAY BLUE BROWN BROWN GRAY	MEDIUM MEDIUM MEDIUM MEDIUM MEDIUM	5 10 28 33 135 235	10 28 33 135 235 240	Casing Diameter 36 in. to 11 ft. 24 in. to 453 ft.	Weight I Ibs./ft. Ibs./ft.	Hole Diameter 29 in. to 453 ft. 23 in. to 540 ft.		
JORDAN	GRAY	MEDIUM	240 433	433 470	Open Hole from 453 ft.	to 540 ft.			
JORDAN	GRAY	MEDIUM	470	540	Diameter Slo	ype ot/Gauze Lengt	th Set Between		
					Static Water Level				
					141 ft. from Land surface	Date Measured 12/11/1	989		
					PUMPING LEVEL (below la 334.75 ft. after 24 hrs.p	and surface) jumping 1015 g.p.m.			
					Well Head Completion Pitless adapter manufacture Casing Protection At-grade (Environmer	er Model Image: Image	Y)		
CORNER OF PARKWOOD HILLS I GAMMA LOGGED BY B.A. LEISCH	DR. AND 22ND 1 & ASSOC.	AVE.			Grouting Information Well Grouted? Ves No				
					Grout Material: Neat Cement from 1 to 453 ft. 59 yrds.				
Located by: Minnesota Department	nt of Health	Method: GPS D Corrected	ifferentially						
Unique Number Verification: Info	ormation from	Input Date: 08/2	24/1995		Nearest Known Source of Contamination				
System: UTM - Nad83, Zone15, M	leters	X : 545506 Y :	4876480		Well disinfected upon completion? V Yes No				
					Pump Not Install Manufacturer's name Length of drop Pipe _ft.	ed Date Installed Model number HP _ Capacity _g.p.m Type	Volts Material		
			_		Abandoned Wells Does p	roperty have any not in use	and not sealed well(s)?		
					Variance Was suprimes	ranted from the MDL for the			
Borehole Geophysics Yes					Well Contractor Certificati	ion			
First Bedrock Decorah Shale	A	Aquifer Jordan			Thein Well Co.	<u>55079</u>	VANHOUTEN, D.		
Last Strat Jordan Sandstone	C	Depth to Bedrock	5 ft .		License Business Nam	Lic. Or Reg.	No. Name of Driller		
County Well Inde	ex Onlin	e Report			506819		Printed 7/30/2012 HE-01205-07		

Minnesota Unique Well No. 220627 Quad Quad	y Olmsted Rochester ID 49C			MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING Entry Dat Update D D Received	e 01/25/1988 ate 02/06/2012 Date	
Well Name ROCHESTER 33				Well Depth	Depth Completed	Date Well Completed	
Township Range Dir Section Subsections B	Elevation 119	92 ft.		605 ft.	605 ft .	00/00/1958	
106 13 W 8 BBDDBD E	Elevation Method Sur	rveyed		Drilling Method			
Well Address				Drilling Fluid 	Well Hydrofractured?	Yes No	
ROCHESTER MIN				Use Community Supply	PWS ID 1550010 Source	S22	
Geological Material DRIFT	Color Hardness	From 0	To 2	Casing Type Steel (black	or low carbon) Joint No Inf	ormation Drive Shoe?	
PLATTVILLE FORMATIONS		2 60	101	Casing Dismotor	Weight	Hole Diameter	
ST. PETER SAND SHAKOPEE DOLOMITE		101 203	203 325	Casing Diameter	lbs /ft		
ROOT VALLEY SAND		325 340	340 ⊿00	24 III. 10 54 II.	lbs /ft		
JORDAN SAND		499	499 605	Open Hole from 509 ft.	to 605 ft.		
				Screen NO Make T	уре		
				Diameter Slo	ot/Gauze Length	Set Between	
				Static Water Level	Data Maggurad 1058		
				PUMPING LEVEL (below l	and surface)		
				186 ft. after hrs. pumpir	ng 210 g.p.m.		
				Well Head Completion Pitless adapter manufacture	er Model		
				Casing Protection	12 in. above grade		
				At-grade (Environmer	tal Wells and Borings ONLY		
R E M A R K S CO-OP POWER ASSN. DRILLED BY THEIN ROSE HARBOR WELL.	WELL CO.			Grouting Information Well Grouted? Ves No			
				Grout Material:	from 0 to 50	9 ft.	
Located by: Minnesota Department of Healt	n Method: GPS Diffe Corrected	erentially					
Unique Number Verification: Information fro owner	Input Date: 09/06/	1995		Nearest Known Source of feet direction type	Contamination		
System: UTM - Nad83, Zone15, Meters	X: 546910 Y: 48	72492		Well disinfected upon comp	oletion? Yes	No	
				Pump Manufacturer's name Length of drop Pipe _ft.	ed Date Installed <u>00/00/195</u> Model number HP \ Capacity <u>210_g.p.m</u> ye	<u>8</u> /olts e <u>Turbine</u> Material	
				Abandoned Wells Does p	roperty have any not in use a	nd not sealed well(s)?	
				Yes 🔲 No			
				Variance Was a variance g	ranted from the MDH for this	well? Yes No	
First Bedrock, Decorah Shale				Well Contractor Certificati	on		
Last Strat Jordan Sandstone	Aquifer Jordan Depth to Bedrock 2	ft.		License Business Nar	ne Lic. Or Rea.	No. Name of Driller	
County Well Index Or	line Report	-		220627		Printed 7/30/2012 HE-01205-07	

Minnesota Unique Well No. 463536	County Quad Quad ID	Olmsted Douglas 50D			MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING D D Chapter 1031	ate 08/17/1992 Date 02/06/2012 d Date		
Well Name ROCHESTER 34					Well Depth	Depth Completed	Date Well Completed		
Township Range Dir Section Subs	ections Elevat	ion Ion Method	1053.2 ft.		465 ft .	465 ft.	05/22/1991		
	JAD Eleval		Sulveyeu		Drilling Method Cable Too	bl			
Well Address ROCHESTER MN 55902					Drilling Fluid Well Hydrofractured? Yes No From Ft. to Ft. Ft.				
					Use Community Supply	PWS ID 1550010 Source	e S25		
Geological Material DRIFT DRIFT	Color GRAY GRAY	Hardness SOFT SOFT	From 0 75	To 75 86	Casing Type Steel (black Yes No Above/Below	or low carbon) Joint Wel- w 2 ft.	ded Drive Shoe? 🚺		
ST. PETER SHAKOPEE	BROWN	MEDIUM HARD	86 125	125 177	Casing Diameter	Weight	Hole Diameter		
ROOT VALLEY	BROWN	MEDIUM	177	180	36 in. to 86 ft.	142.6 lbs./ft.	35 in. to 197 ft.		
JORDAN	GRAY	HARD MEDIUM	180 350	350 420	24 in. to 369 ft.	94.6 lbs./ft.	29 in. to 369 ft.		
JORDAN	GRAY	SOFT	420	460	Open Hole from 369 ft.	to 465 ft.			
JORDAN	GIVAT		400	400	Screen NO Make T	уре			
					Diameter Sid	ot/Gauze Leng	th Set Between		
					Static Water Level				
					50 ft. from Land surface	Date Measured 05/16/19	91		
					308.17 ft. after 7 hrs. pu	mping 1160 g.p.m.			
					Well Head Completion Pitless adapter manufacture Casing Protection	er Model 12 in. above grade atal Wells and Borings ONL	Y)		
REMARKS GAMMA LOGGED BY B.A. LEISCH GOLF COURSE ON 41ST AND 55T	& ASSOC. M.C H ST.	G.S. NO. 3365.			Grouting Information Well Grouted? Ves No				
					Grout Material: Neat Cement from 0 to 369 ft. 56 yrds.				
Located by: Minnesota Departmen	t of Health	Method: GP (averaged)	S SA Off						
Unique Number Verification: Infor owner	mation from	Input Date:	05/05/2003		Nearest Known Source of feet direction type	Contamination			
System: UTM - Nad83, Zone15, Me	eters	X: 538115	Y: 4880108	В	Well disinfected upon completion? Ves No				
					Pump Not Install Manufacturer's name Length of drop Pipe _ft.	ed Date Installed Model number HP _ Capacity _g.p.m Type	Volts Material		
					Abandoned Wells Does p	roperty have any not in use	and not sealed well(s)?		
					Yes 💽 No				
Cuttingo Voo Barabala Oranit	weige Ver				Variance Was a variance g	ranted from the MDH for th	is well? Yes No		
First Bedrock Prairie Du Chien Gro	iysics res				Well Contractor Certificati	on 6004			
Last Strat St.Lawrence Formation	~~ r	Aquifer Depth to E	lordan 3edrock 75	ft.	License Business Nar	ne Lic. Or Re	g. No. Name of Driller		
County Well Inde	x Onlin	e Report			463536		Printed 7/30/2012 HE-01205-07		

Minnesota Unique Well No. 601335	County Quad Quad ID	Olmsted Douglas 50D			MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING D Chapter 1031	Date 08/20/1999 te Date 02/06/2012 ved Date 02/06/2012	
Well Name ROCHESTER 35 Township Range Dir Section Subse 107 14 W 20 AAAD0	ctions Elevati	on on Method	1054.5 ft. Surveved		Well Depth 457 ft.	Depth Completed 457 ft.	Date Well Completed 06/29/1999	
			earreyea		Drilling Method Non-speci	ified Rotary		
Well Address ROCHESTER MN 55906					Drilling Fluid 	Well Hydrofractured? From Ft. to Ft.	Yes No	
					Use Community Supply	PWS ID 1550010 Sour	rce S30	
Geological Material DRIFT SAND & GRAVEL	Color BROWN BROWN	Hardness SOFT SOFT	From 0 15	To 15 24	Casing Type Steel (black Yes No Above/Belov	or low carbon) Joint W w ft.	elded Drive Shoe?	
SHALE & GRAVEL SHALE & GRAVEL	GRAY GRAY	SOFT SOFT	24 27	27 40 251	Casing Diameter	Weight	Hole Diameter	
JORDAN JORDAN	GRAY GRAY	MEDIUM	40 351 362	362 443	36 in. to 39 ft. 30 in. to 65 ft.	142.7 lbs./ft. 118.6 lbs./ft.	42 in. to 40 ft. 36 in. to 65 ft.	
JORDAN	GRAY	MEDIUM	443	457	24 in. to 369 ft.	94.62 lbs./ft.	30 in. to 369 ft.	
					Open Holefrom 369 ft.Screen NOMakeT	to 457 ft. Jype		
					Diameter Slo	ot/Gauze Len	gth Set Between	
					Static Water Level		1000	
					53 ft. from Land surface PUMPING LEVEL (below la 154.5 ft. after 28 hrs. pu	Date Measured 06/29/ and surface) Imping 2000 g.p.m.	1999	
					Well Head Completion Pitless adapter manufacture Casing Protection	er Model		
					At-grade (Environmer	ntal Wells and Borings ON	ILY)	
REMARKS GAMMA LOGGED 4-13-1999.					Grouting Information We	ell Grouted? 🚺 Yes	No	
Located by: Minnesota Department	of Health	Method: GP (averaged)	PS SA Off		Grout Material: Neat Cement from 0 to 369 ft. 31 yrds.			
owner System: UTM - Nad83, Zone15, Met	ers	Input Date: X: 538478	05/05/2003 Y: 4879073	3				
• • •					Well disinfected upon comp	oletion? 🔽 Yes	No	
					Pump Not Installe Manufacturer's name Length of drop Pipe_ft.	ed Date Installed Model number HP Capacity _g.p.m Typ	_ Volts e Material	
					Abandoned Wells Does pr	roperty have any not in us	se and not sealed well(s)?	
					Variance Was a variance of	aranted from the MDH for	this well? Yes Vo	
Borehole Geophysics Yes					Well Contractor Certificati	ion		
First Bedrock Prairie Du Chien Grou	ıp	Aquifer Jord	an		Thein Well Co.	<u>55079</u>	<u>VAN HOUTEN, D</u>	
Last Strat St.Lawrence Formation		Depth to Bed	rock 27 ft.		License Business Nam	Lic. Or Reg	g. No. Name of Driller	
County Well Index Online Report					601335		Printed 7/30/2012 HE-01205-07	

Well Name ROCHESTER 36 Township Range Dir Section Subsections Elevation 1044.4 ft.	Well Depth Depth Completed Date Well Completed 478 ft. 478 ft. 08/07/2000			
106 14 W 4 CDDDDB Elevation Method Surveyed				
Well Address WEST CIRCLE DR ROCHESTER MN 55902 Geological Material DRIFT Color GRAY Hardness MEDIUM From 0 To 52 LIMESTONE BROWN MEDIUM 77 373 LIMESTONE GRAY MEDIUM 373 384 SANDSTONE GRAY MEDIUM 384 475 LIMESTONE BLUE MEDIUM 475 478	Drilling Nethod Non-specified Rotary Drilling Fluid Foam Well Hydrofractured? Yes No Image: Specified Rotary Well Hydrofractured? Yes No Use Community Supply PWS ID 1550010 Source S31 Casing Type Steel (black or low carbon) Joint Welded Drive Shoe? Image: Specified Rotary Yes No Above/Below ft. Email Casing Diameter Weight Hole Diameter 30 in. to 79 ft. Ibs./ft. 36 in. to 79 ft. 24 in. to 397 ft. Ibs./ft. 30 in. to 397 ft. Open Hole from 397 ft. to 478 ft. Screen NO Make Type Diameter Slot/Gauze Length Set Between			
	Static Water Level 38 ft. from Land surface Date Measured 08/04/2000 PUMPING LEVEL (below land surface) 106 ft. after 20 hrs. pumping 2030 g.p.m. Well Head Completion Pittess adapter manufacturer Model Casing Protection 12 in. above grade At-grade (Environmental Wells and Borings ONLY)			
NO REMARKS Located by: Minnesota Department of Method: Digitization (Screen) - Map Health (1:24,000)	Grouting InformationWell Grouted?VesNoGrout Material:Pearockfrom0 to397 ft.5 yrds.Grout Material:Neat Cementfrom0 to397 ft.37 yrds.			
Unique Number Verification:Informationfrom ownerInput Date:01/08/2004System:UTM - Nad83, Zone15, MetersX: 539345Y: 4872825	Nearest Known Source of Contamination 50_feet _direction _type Well disinfected upon completion? Image: Second Secon			
First Bedrock Prairie Du Chien Group Aquifer Jordan Last Strat St.Lawrence Formation Depth to Bedrock 77 ft. County Well Index Online Report	Abandoned Wells Does property have any not in use and not sealed well(s)? Yes No Variance Was a variance granted from the MDH for this well? Yes Well Contractor Certification Thein Well Co. 55079 License Business Name Lic. Or Reg. No. Name of Driller 601336 Printed 7/30/2012			

Well Near ROCHESTER 37 Depth Completed Data Price 107 13 W 19 BABCAA Elevation 1084.9 ft. 107 13 W 19 BABCAA Elevation 1084.9 ft. ROCHESTER MN Color Hardness From To To To 02/25/2003 Goological Matorial Color Hardness From To To To To To To 02/25/2003 SAND BROWN MEDUUM 0 5 Sand Sand Distribution To	Minnesota Unique Well No. 676687	County Quad Quad ID	Olmsted Rochester 49C			MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING Entry D D Update Chapter 1031	ate 0 Date 02/11/2009 ed Date 12/08/2003	
Well Address ROCHESTER MN Geological Material Color Hardness From To BLACK DIRT BLACK DIRT BLACK MEDUIM 0 5 SAND BROWN MEDUIM 0 5 SAND BROWN MEDUIM 5 15 SAND BROWN BROWN MEDUIM 23 24 SANDSTONE BROWN MEDUIM 24 No. Above/Below 1 ft. Casing Diameter Weight. Hole Diameter LIMESTONE BROWN MEDUIM 360 360 370 24 In. to 393 ft. 10s. ft. 29 in. to 393 ft. SANDSTONE GRAY MEDUIM 360 360 360 511 567een NO Mate Type Diameter Stot/Gauze Length Set Between SANDSTONE GRAY MEDUIM 401 501 561 567 Gause Media Material No. 567een NO Mate Type Diameter Stot/Gauze Length Set Between SANDSTONE GRAY MEDUIM 401 501 <	Well Name ROCHESTER 37 Township Range Dir Section Subs 107 13 W 19 BAB0	ections Elevat CAA Elevat	tion tion Method	1084.9 ft. Surveyed		Well Depth 501 ft.	Depth Completed 501 ft.	Date Well Completed 09/25/2003	
Static Water Level 96 ft. from Land surface Date Measured 09/11/2003 PUMPING LEVEL (below land surface) 266 ft. after 24 hrs.pumping 2000 g.p.m. Well Head Completion Provident Surface 266 ft. after 24 hrs.pumping 2000 g.p.m. Well Head Completion Provident Surface 266 ft. after 24 hrs.pumping 2000 g.p.m. Well Head Completion Provident Surface 266 ft. after 24 hrs.pumping 2000 g.p.m. Well Head Completion Provident Surface Model Image: Surface Surface A-grade (Environmental Wells and Borings ONLY) Grouting Information Well Grouted? Yes No Grout Material: Neat Cement from 0 to 393 ft. 47 yrds. Grout Material: Neat Cement from 0 to 27 ft. 3 yrds. Unique Number Verification: Information input Date: 02/11/2009 X: 545446 Y: 4879107 Yes X: 545446 Y: 4879107 Yes Well disinfected upon completion? Yes Pump Not Installed Manufacturer's name Model number _ HP_ Volts Length of drop Pipe_ If: Capacity_ap.m. Thein Well Co. Suffer Prairie Du Chien-Jordan Yes No <th>Well Address ROCHESTER MN Geological Material BLACK DIRT CLAY & SAND SAND SAND SANDSTONE LIMESTONE LIMESTONE LIMESTONE SANDSTONE SANDSTONE</th> <th>Color BLACK BROWN BROWN BROWN BROWN BROWN GRAY GRAY GRAY</th> <th>Hardness MEDIUM MEDIUM MEDIUM MEDIUM MEDIUM MEDIUM MEDIUM MEDIUM</th> <th>From 0 5 15 23 24 90 92 350 380 401</th> <th>To 5 15 23 24 90 92 350 380 401 501</th> <th>Drilling Method Non-speci Drilling Fluid Foam Use Community Supply Casing Type Steel (black of the second seco</th> <th>Well Hydrofractured? From Ft. to Ft. PWS ID Source or low carbon) Joint Well w 1 ft. Weight Ibs./ft. Ibs./ft. to 501 ft. Sype pot/Gauze Leng</th> <th>Yes No ded Drive Shoe? Image: Comparison of the set of</th>	Well Address ROCHESTER MN Geological Material BLACK DIRT CLAY & SAND SAND SAND SANDSTONE LIMESTONE LIMESTONE LIMESTONE SANDSTONE SANDSTONE	Color BLACK BROWN BROWN BROWN BROWN BROWN GRAY GRAY GRAY	Hardness MEDIUM MEDIUM MEDIUM MEDIUM MEDIUM MEDIUM MEDIUM MEDIUM	From 0 5 15 23 24 90 92 350 380 401	To 5 15 23 24 90 92 350 380 401 501	Drilling Method Non-speci Drilling Fluid Foam Use Community Supply Casing Type Steel (black of the second seco	Well Hydrofractured? From Ft. to Ft. PWS ID Source or low carbon) Joint Well w 1 ft. Weight Ibs./ft. Ibs./ft. to 501 ft. Sype pot/Gauze Leng	Yes No ded Drive Shoe? Image: Comparison of the set of	
REMARKS GAMMA LOGGED 9-11-2003. Grouting Information Well Grouted? Yes No Located by: Minnesota Geological Survey Method: Digitization (Screen) - Map (1:24,000) Grout Material: Neat Cement from 0 to 393 ft. 47 yrds. Unique Number Verification: Information from owner Input Date: 02/11/2009 No System: UTM - Nad83, Zone15, Meters X: 545446 Y: 4879107 Nearest Known Source of Contamination 50_feet _ direction _ type Well disinfected upon completion? Yes No Pump Not Installed Date Installed Manufacturer's name Model number _ HP_ Volts Length of drop Pipe _ft. Capacity _g.p.m Type Material Abandoned Wells Does property have any not in use and not sealed well(s)? Yes No Yes No Variance Was a variance granted from the MDH for this well? Yes No Borehole Geophysics Yes First Bedrock St.Peter Sandstone Aquifer Prairie Du Chien-Jordan Depth to Bedrock 23 ft. Yes 100 No Last Strat Jordan Sandstone Apuifer Prairie Du Chien-Jordan Depth to Bedrock 23 ft. Yes 100 Name of Driller						Static Water Level 96 ft. from Land surface PUMPING LEVEL (below la 266 ft. after 24 hrs.pum Well Head Completion Pitless adapter manufacture Casing Protection Y At-grade (Environmen	Date Measured 09/11/20 and surface) ping 2000 g.p.m. er Model I2 in. above grade ntal Wells and Borings ONL)03 	
Borehole Geophysics Yes Aguifer Prairie Du Chien-Jordan First Bedrock St.Peter Sandstone Aquifer Prairie Du Chien-Jordan Last Strat Jordan Sandstone Depth to Bedrock 23 ft.	R E M A R K S GAMMA LOGGED 9-11-2003. Located by: Minnesota Geological Survey Unique Number Verification: Information from owner System: UTM - Nad83, Zone15, Meters X: 545446 Y: 4879107					Grouting Information Well Grouted? Yes No Grout Material: Neat Cement from 0 to 393 ft. 47 yrds. Grout Material: Neat Cement from 0 to 27 ft. 3 yrds. Nearest Known Source of Contamination 50 feet _direction _type Well disinfected upon completion? Yes No Pump Not Installed Date Installed Manufacturer's name Model number HP Volts Length of drop Pine ft Canacity o.p.m Type			
County Woll Index Online Penert 676607 Printed 7/30/2012	Borehole Geophysics Yes First Bedrock St.Peter Sandstone Last Strat Jordan Sandstone	Aquif Depti	er Prairie Du Ch to Bedrock 23	ien-Jordan ft.		Abandoned Wells Does pr Yes No Variance Was a variance g Well Contractor Certificati <u>Thein Well Co.</u> License Business Nam	roperty have any not in use granted from the MDH for the ion <u>55079</u> ne Lic. Or Reg.	e and not sealed well(s)?	

Minnesota Unique Well No. 698933	County Quad Quad ID	Olmsted Douglas 50D			MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING Entry D Receiv Chapter 1031	Date07/te Date02/ved Date06/	05/2005 11/2009 14/2005
Well Name ROCHESTER 38 Township Range Dir Section Subs 107 14 W 7 CAA	sections Elevati AAA Elevati	on 10 on Method Si)56.3 ft. urveyed		Well Depth 467 ft.	Depth Completed 467 ft.	Date Well Cor 10/18/20	npleted 04
Well Address ROCHESTER MN 55906					Drilling Fluid FoamWell Hydrofractured?YesNoFrom Ft. to Ft.From Ft. to Ft.			
Geological Material DIRT CLAY SAND GRAVEL CLAY & GRAVEL SAND & GRAVEL SHALE & GRAVEL SHALE & GRAVEL LIMESTONE SANDSTONE SANDSTONE SANDSTONE SANDSTONE SANDSTONE	Color BLACK BROWN BROWN BLUE BLUE GREEN BLUE BRN/GRY GRAY BROWN BROWN BROWN BROWN GRAY	Hardness MEDIUM MEDIUM MEDIUM HARD MEDIUM MEDIUM MEDIUM SOFT MEDIUM HARD	From 0 3 10 20 25 32 40 47 55 360 370 380 390 455	To 3 10 20 25 32 40 47 55 360 370 380 390 455 467	Use Community Supply Casing Type Steel (black of Yes No Above/Below Casing Diameter 30 in. to 55 ft. 24 in. to 374 ft. Open Hole from 374 ft. Screen NO Make T Diameter Stor Static Water Level	PWS ID Source or low carbon) Joint W w 1 ft. Weight Ibs./ft. Ibs./ft. to 467 ft. Type Dt/Gauze Len	felded Drive Shoe? Hole Diameter 36 in. to 55 30 in. to 374 agth Set Betwee	ft. ft.
					42 ft. from Land surface PUMPING LEVEL (below la 331 ft. after 24 hrs. pum Well Head Completion Pitless adapter manufacture Casing Protection At-grade (Environment	Date Measured 03/24/2 and surface) ping 1000 g.p.m. er Model I 2 in. above grade antal Wells and Borings ON	2005 NLY)	
REMARKS GAMMA LOGGED 3-25-2004 BY TI GAMMA LOGGED 4-17-2007. GAMMA & MULTI TOOL LOGGED WELL WAS BLASTED WITH 150 L ABOUT 150 YARDS OF MATERIAL	HEIN WELL CO. 5-4-2007. BS. OF EXPLOS _ WAS AIR LIFTE	SIVES AT 400, 410 ED OUT OF THE V), AND 420 WELL.	FEET.	Grouting Information We Grout Material: Neat 0 Grout Material: Neat 0 Grout Material: Pearo	ell Grouted? Yes Cement from (Cement from (Cement from (ck from 5	No 0 to 55 ft. 0 to 374 ft. 55 to 360 ft.	5 yrds. 28 yrds. 14 yrds.
Located by: Minnesota Geological SurveyMethod: Digitization (Screen) - Map (1:24,000)Unique Number Verification: Information from ownerInput Date: 07/05/2005System: UTM - Nad83, Zone15, MetersX: 536134Y: 4881569					Nearest Known Source of Contamination 50 feet _direction _type Well disinfected upon completion? Yes No Pump Not Installed Date Installed Manufacturer's name Model numberHPVolts Length of drop Pipe Ft. Capacity g.o.m Type			
Borehole Geophysics Yes First Bedrock Prairie Du Chien Group Aquifer Jordan Last Strat St.Lawrence Formation Depth to Bedrock 55 ft.					Abandoned Wells Does property have any not in use and not sealed well(s)? Yes Image: No Variance Was a variance granted from the MDH for this well? Yes Image: No Well Contractor Certification Thein Well Co. Thein Well Co. 55079 License Business Name Lic. Or Reg. No.			
County Well Inde	ex Online	e Report			698933		Printed F	7/30/2012 IE-01205-07

Minnesota Unique Well No. 733087	County Quad Quad ID	Olmsted Simpson 28B			MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	INT OF HEALTH CORING D Rece Chapter 1031	/ Date ate Date ived Date	12/20/2005 02/09/2009 09/19/2006	
Well Name ROCHESTER 39					Well Depth	Depth Completed	Date W	ell Completed	
Township Range Dir Section Subs	sections Elevation	on 1 on Mothod 9	026 ft.		458 ft .	458 ft.	80	8/21/2006	
100 13 W 16 AAAI	DAA Elevatio	on wethod S	surveyed		Drilling Method Air Rotary				
Well Address ROCHESTER MN 55904					Drilling FluidWell Hydrofractured?YesNoFoamFrom Ft. to Ft.				
					Use Community Supply	PWS ID Source			
Geological Material SAND & GRAVEL SAND & GRAVEL	Color BROWN TAN	Hardness MEDIUM SFT-MED	From 0 35	To 35 46	Casing Type Steel (black Yes No Above/Below	or low carbon) Joint V w 1 ft.	Velded Drive SI	noe? 🔽	
LIMESTONE & CLAY	BROWN		46 49	49 57	Casing Diameter	Weight	Hole Diame	eter	
LIMESTONE	BROWN	MEDIUM	57	228	30 in. to 50 ft.	lbs./ft.	36 in. to	49 ft.	
LIMESTONE	GRAY BROWN	MEDIUM	228 326	326 330	24 in to 365 ft.	lbs./ft.	30 in. to	363 ft.	
	GRAY	MEDIUM	330	353	Open Hole from 363 ft.	to 458 ft.			
SANDSTONE	GRAY	MEDIUM	353 363	363 452	Screen NO Make T	Туре			
LIMESTONE	GRAY	MEDIUM	452	455	Diameter Slo	ot/Gauze Lei	ngth Set I	Between	
					Static Water Level 6.8 ft. from Land surface PUMPING LEVEL (below la 136.5 ft. after 24 hrs. pu Well Head Completion Pitless adapter manufacture Casing Protection At-grade (Environmer	Date Measured 06/00 and surface) mping 2000 g.p.m. er Model I 12 in. above grade ntal Wells and Borings O	6/2006 e		
R E M A R K S GAMMA LOGGED 10-12-2006. LOO DRILLERS DON VANHOUTEN, RC	gged by Jim TF)ger Kurth, Ai	RAEN. ND DAVID DOWI	ELL.		Grouting Information Well Grouted? Ves No				
					Grout Material: Neat (Cement from	to 365 ft.	21 yrds.	
Located by: Minnesota Departmer	nt of Health	Method: GP (averaged)	S SA Off		Grout Material: Neat Cement from to 50 ft. 9.5 yrds.				
Unique Number Verification: Info	/GPS from data	Input Date:	12/20/2005		Nearest Known Source of	Contamination			
System: UTM - Nad83, Zone15, M	leters	X : 546576	Y: 487111	6	50 teet _direction _type Well disinfected upon completion? Ves No				
					Pump Not Installe Manufacturer's name Length of drop Pipe _ft.	ed Date Installed Model number HF Capacityg.p.my	2_ Volts pe Material		
					Abandoned Wells Does pr	roperty have any not in ι	use and not seale	ed well(s)?	
					Yes 🔽 No				
					Variance Was a variance g	granted from the MDH fo	r this well?	Yes 📝 No	
Borehole Geophysics Yes	Borehole Geophysics Yes					ion			
Last Strat. St Lawronge Formation	oup	Aquifer Jorda	n nek 40 #		Ihein Well Co.	55 ne Lie Or	<u>NU/9</u> Reg No	<u>DON/ROGER</u> Name of Drillor	
Last Grat GLLawrence FUIIId(1011		Deptil to Bedro	JUN 49 II.				1.09.110.		
County Well Inde	ex Online	e Report			733087		Pi	rinted 7/30/2012 HE-01205-07	

Minnesota Unique Well No. 773386	County Quad	Olmsted Simpson				MINNESOTA DEPARTME WELL AND B	ORING Entry D Update	tate 12/04/2009 Date 09/19/2011 1 Date 10/04/2010	
	Quad ID	28B				Minnesota Statutes C	hapter 103l	3d Date 12/01/2010	
Well Name ROCHESTER 40						Well Depth	Depth Completed	Date Well Completed	
Township Range Dir Section Subse	ctions Eleva	ation	1146.5	ft.		640 ft.	640 ft .	09/30/2010	
106 14 W 34 ACDDI	BC Eleva	ation Method	Surveye	ed	ŀ	Drilling Method Cable Tool			
Well Address 1355 LONE PINE DR SW ROCHESTER MN						Drilling Fluid Additive (+ Bentonite) Use Community Supply	Well Hydrofractured? From Ft. to Ft. PWS ID Source	Ves 🚺 No	
Geological Material BLACK DIRT GALENA BUFF		Color BLACK	Hardnes SOFT V HARD	5 From T 0 3 3 2	o 3	Casing Type Steel (black	orlow carbon) Joint Wei w ft.	Ided Drive Shoe?	
GALENA		LT. GRY	HARD	28 3	9	Casing Dismotor	Weight	Hole Diameter	
GALENA BUFF		BLU/GRN	HARD M HARD	39 6 62 1	62 05	Casing Diameter		20 in to 560 ft	
PLATTEVILLE		GRAY	M.HARD	105 1	07	30 in. to 31 ft.			
		GRAY		107 1	27	24 in. to 460 ft.	94.62 lbs./ft.	24 in. to 640 ft.	
ST. PETER SANDSTONE		LT. GRY		135 2	233	Open Hole from 460 ft.	to 640 tt.		
PRAIRIE DU CHIEN PRAIRIE DU CHIEN NEW RIC ONEOTA	HMOND	GRAY WHT/TAN TAN/GRY	HARD HARD HARD	233 2 263 2 269 2	263 269 271	Diameter Slo	ot/Gauze Leng	th Set Between	
NEW RICHMOND ONEOTA BUFF ONEOTA/SHAKOPEE BUFF JORDON		GRAY	HARD HARD HARD MEDIUM	271 3 315 5 505 5 541 6	515 505 541 534				
ST. LAWRENCE OFF WHITE			HARD	634 6	640	Static Water Level			
						116.9 ft. from Land surface	ce Date Measured 09/12	2/2010	
						154.25 ft after 5 hrs pu	and surface) Imping 1850 g n m		
						Well Head Completion Pitless adapter manufacture Casing Protection Y	er Model Image: Image	Y)	
REMARKS								, 	
CASING PROTECTION=PUMPHOUS PUMP CAPACITY=1,500@419TDH GAMMA LOGGED 6-1-2010. M.G.S. ELEVATION: 1,146.5 FT, SIMPSON (DOUG ROVANG, P.E. (507) 280-160 ROGER E. RENNER, MGWC	SE NO. 5000. L QUAD 28-B 5	OGGED BY J	IM TRAEN.			Grout Material: Neat 0 Grout Material: Neat 0	ell Grouted? Ves Cement from 24 Cement from t	5 to 460 ft. 65 yrds. to 25 ft. 60 bags	
					Î	Nearest Known Source of	Contamination		
Located by: Minnesota Department	of Health	Method (average	I: GPS SA (Off		75 feet South West direction Sewer type			
Unique Number Verification: Info/G	SPS from dat		ate: 12/02/	2009	ŀ			011	
source System: UTM - Nad83. Zone15 Met	ters	X : 541	390 Y: 48	65648		Manufacturer's name <u>GOUI</u>	LDS Model number	<u>12CHC-8</u> HP <u>250</u> Volts <u>460</u>	
,,	-				┥	Lengui or drop Pipe <u>200</u> ft	. Capacity g.p.m I	ype <u>ruibine</u> material	
					ľ	Abandoned Wells Does pr Yes Vo	roperty have any not in use	and not sealed well(s)?	
						Variance Was a variance g	granted from the MDH for th	his well? 🔲 Yes 📝 No	
Cuttings Yes Borehole Geophy	sics Yes				ľ	Well Contractor Certificati	ion		
First Bedrock Galena/Cummingsville Fm Aquifer Prairie Du Chien-Jordan					EH Renner and Sons.	<u>Inc.</u> <u>143</u>	<u>31</u> <u>COLBURN, S.</u>		
Last Strat St.Lawrence Formation		Depth to B	edrock 3 ft			License Business Na	ime Lic. Or R	leg. No. Name of Driller	
County Well Index	x Onlir	ne Rep	ort			773386		Printed 7/30/2012 HE-01205-07	

		1 ·	MIN	INESOTA	DEPARTMENT OF HEALTH		MINNESOTA AND BO	UNIQUE WELL DRING NO.
	D		WEL	L ANI Minnesot	D BORING RECORD		796431	
Townshin Name Township N	No. Range No.	Section No. Fra	action De	عرين	WELL/BORING DEPTH (completed)		ORK COMPLETED	
LOCATION: Latitude A de Longitude A de	egrees 44 min egrees 92 min	nutes 01.167se nutes 24.85	conds		DRILLING METHOD	Driven Rolary		
louse number, onser Name, ony, and z			e number			WELL HY	DROFRACTURED?	Ves X No
Show exact location of well/boring in sec	tion grid with "X."	Sketch map o Sh	f well/boring lowing prop	g location. erty lines,	water	From	ft. To_	ft.
		roads, du	ildings, and	direction.	USE Domestic	Monitoring DEnviron. Bore Irrigation Dewatering	Hole Heating Hole Heating Hole Heating Remed	g/Cooling y/Commercial ial
	ile				CASING MATERIAL	Drive Shoe?	Yes No	HOLE DIAM.
S 					<u>30</u> in. To <u>58° ft.</u> <u>2</u> in. To <u>366</u> ft.	<u>16</u> lbs./ft	API-SL AS3-B	
Rochester	7.52.	ے عل	Q,+		in. To ft	lbs./ft		in. Tof
Property owner's mailing address if diffe	irent than well locatio	n address indicated	above.	7	SCREEN Make Type	OPE۱ From	tt.	
7.0.	en u	L			Siol/Gauze	Le	ength	
		55	100	0	STATIC WATER LEVEL		Measured from	
/ELL OWNER'S NAME/COMPANY NA	ME				ft. Selow A	bove land surface	Date measured	
					ft. afterft.	1	nrs. pumping	a.p.n
when the second se	ifferent than property	owner's address inc	licated abov	/e.	WELLHEAD COMPLETION		Model	
					Casing protection	ind Pump	2 in. abo	ve grade
					GROUTING INFORMATION (specify be	entonite, cement-sar	nd neat-cement/con	crete, cuttings, or other
					Material From From	To	_ft <u> </u>	_ Yds. Bags
GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	то	MaterialFrom Driven casing seal From	To To	_ftBags	Yds. Bags
DRIFT	BEN	S	0	8	NEAREST KNOWN SOURCE OF COM	ITAMINATION	direction	type
SANDSTONE la	Brai	5	8	25	Well disinfected upon completion?	Yes No		· · · · · · · · · · · · · · · · · · ·
SAND STONE	off white	_5	25	58	Not installed Date installed Manufacturer's name			
lime STONE	Gray	Hard	58	68	Model Number Length of drop pipe	HP ft.	Volts Capacity	g.р.п
li me Stone	Tan	Hand	68	201	Type: Submersible L.S. Turbine	Reciprocating	Jet	
Delomite	GRAY	Hard	201	252	Does property have any not in use and VARIANCE	not sealed well(s)?	🗌 Yes 🕅 No	
Dolomite	TAN	Hard	252	303	Was a variance granted from the MDH WELL CONTRACTOR CERTIFICATION	for this well?	Yes X No TN#	
SHALC USE A SECO	MH:TC nd sheet, if needed. DATA, etc.	Hard	303	326	The information contained in this report	t is true to the best of	ice with Minnesota R of my knowledge.	ules, Chapter 4725.
	pe	a 1 of	F	·	Licensee Business Name	>0	Lic. or Reg. N	- 143(
-					Certified Representative Signature		Certified Rep. No.	Date
MINN DEPT OF H	EALTH COPY	7	961	21	Shim 1	neh	<u> </u>	an a
140-0020		1	504	<u> </u>	Name of Driller			HE 01205 12 /D-+ 11//

مينيني ()

WELL OR BORING LOCATION	MINNESOT	A DEPARTMENT OF HEAL AND BORING NO.
County Name	WELL AN	D BORING RECUD
OMSTER	Minnesc	ota Statutes, Chapter 103
Township Name Township No. Range N Reriesgeet 106.13	5 Fraction No. Fraction	WELL/BORING DEPTH (completed) DATE WORK COMPLETED
Latitude N degrees 44	minutes 0 1 seconds	DRILLING METHOD
Longitude L degrees 22° House Number, Street Name, City, and ZIP Code of Well	minutes 24 . Stonds	Cable Tool Driven
Show exact location of well/boring in section grid with "X."	Sketch map of well/boring location, Showing property lines.	
N N	roads, buildings, and direction.	USE Domestic
┝╍╃╍┽╍┿╍┽╍┿╍┝╍┥╵		Noncommunity PWS Environ. Bore Hole Industry/Commercial
		K Community PWS I Irrigation Remedial
W		
┝╍╍╏╍╍┠╼╍╬╍┅┨╾╍┠┅╼┠╍╼┠╧╍┨	•	M Stool
½ Mīle		
	· · ·	CASING 138
s		Diameter Weight Specifications
1 Mile	· ·	<u>SU</u> in. To <u>SU</u> ft <u>1185</u> lbs./ft <u>14DI-SL</u> <u>30</u> in. To
PROPERTY OWNER'S NAME/COMPANY NAME		in. To ft lbs./ft in. To
Radiocomon P. L.L.	1. +- 1:	in. Toitibs./ftin. Toin. To
Property owner's mailing address if different than well loca	tion address indicated above	SCREENOPEN HOLE
	$\sim - \overline{D}$	Make From ft_ To
400U E 1	L'Ver les	Type Diam
72 0-2	N MA	Slot/Gauze Length
(Lockesn		Set betweenft_ andft_ FITTINGS
· · · ·	55906	STATIC WATER LEVEL Measured from
		ft. 🕅 Below 🗌 Above land surface Date measured
CALCONTRACT INAME		PUMPING LEVEL (below land surface)
Whoring owned malling address 4 - 10-		ft_afterhrs. pumpingc
	ity owners address indicated above.	WELLHEAD COMPLETION.
<u>``</u> .		Casing protection XI 12 in. above grade
<i>5</i> 1		At-grade Well House Hand Pump
·	· .	GROUTING INFORMATION (specify bentonite, cement-sand neat-cement, boncrete, cuttings, or o
•	,	Material Net From 360 To () ft. 37 Kyds. B
· · · · · · · · · · · · · · · · · · ·		MaterialFromToft Yds. 🗋 Bi
GEOLOGICAL MATERIALS COLOR	HARDNESS OF FROM TO	MaterialFromToft Yds. Ba
	MATERIAL	Driven casing seal FromToBags
	1 1	NEAREST KNOWN SOURCE OF CONTAMINATION
DOBMITE GURL	H202 326 331	feet direction
WOLOMITE GROUNT	The is a second	Well disinfected upon completion?
Izyers SHale, wHite	E (TOTA) 337 357	PUMP
(Jordaw)		Not installed Date installed
SHNONTONE KTRE	.357	Manufacturer's name
D.H. (Tal		
Nelloc to Nollos	1363	
Sal (1. 1 / / . 1		the construction of the co
Bottom of Hok (7 into	St. Lawrend \$70	Type: Submersible L.S. Turbine Reciprocating Jet
200-5/7/2014		
	4	Does property have any not in use and not sealed well(s)? Yes K No
		Was a variance granted from the MDH for this well? Yes No TN#
· · · ·		WELL CONTRACTOR CERTIFICATION
· Use a second sheet if need	ed.	The information contained in this report is true to the best of my knowledge.
REMARKS, ELEVATION, SOURCE OF DATA, etc.	762262	
f i li l	IG GUTE .	E H Kenenler i Sons 1431
· · · ·		Licensee Business Name P Lic. or Reg. No.
۰,		
	· .	Certified Representative Signature Certified Rep. No. Date
	· · · · ·	al Ali
TTIONTZ CONT		The Calle
WORK COPY	ļ	Name of Driller
2 140-0020		HE-01205-14 (Rev.

Minnesota Unique Well No. 220628 County Quad Quad ID	Olmsted Simpson 28B	MINNESOTA DEPARTME WELL AND B RECOR Minnesota Statutes C	NT OF HEALTH ORING D Received	e 01/25/1988 ate 02/09/2009 Date
Well Name SANDY SLOPES		Well Depth	Depth Completed	Date Well Completed
Township Range Dir Section Subsections Elevat	tion 1062 ft.	460 ft.	460 ft .	03/14/1968
106 13 W 9 DDABCA Elevat	tion Method Surveyed	Drilling Method Non-speci	fied Rotary	
Well Address		Drilling Fluid 	Well Hydrofractured?	Yes No
ROCHESTER MIN 55901		Use Community Supply	PWS ID 1550010 Source	S27
Geological Material C DRIFT & SAND ST. PETER Y	Color Hardness From To 0 20 (ELLOW SOFT 20 52	Casing Type Steel (black Yes No Above/Belov	or low carbon) Joint No Inf w ft.	formation Drive Shoe?
SHAKOPEE-ONEOTA LIMESTONE	MED-HRD 52 360	Casing Diamotor	Weight Ho	ole Diameter
JORDAN I	AN SFI-MED 360 460	10 in to 52 ft	lbs/ft 6	S in to 460 ft
			lbs./ft	
		Open Hole from 375 ft.	to 460 ft.	
		Screen NO Make T	уре	
		Diameter Slo	ot/Gauze Length	Set Between
		Static Water Level		
		100 ft. from Land surface	Date Measured 03/14/19	68
		PUMPING LEVEL (below la	and surface)	
		Well Head Completion Pitless adapter manufacture	er Model	
		Casing Protection	12 in. above grade	
		At-grade (Environmer	ntal Wells and Borings ONLY)
NO REMARI	KS	Grouting Information Well Grouted? Ves No		
Located by: Minnesota Geological Survey	Method: GPS Differentially	Grout Material: Neat (Cement from 0 t	to 375 ft. 13 yrds.
Unique Number Verification: Information from		Neerest Known Source of	Contomination	
owner		_feet _direction _type	Containination	
System: UTM - Nad83, Zone15, Meters	X: 549644 Y: 4871555	Well disinfected upon comp	oletion? 🔲 Yes 📃	No
		Pump Manufacturer's name Length of drop Pipe _ft.	ed Date Installed <u>00/00/196</u> Model number <u>HP 15</u> Capacity <u>g.p.m</u> Type <u>S</u>	<u>8</u> Volts <u>ubmersible</u> Material
		Abandoned Wells Does p	roperty have any not in use a	nd not sealed well(s)?
		Yes 🔲 No		
		Variance Was a variance g	pranted from the MDH for this	swell? Yes No
First Badrock St Pater Sandstone		Well Contractor Certificati	on	
Last Strat Jordan Sandstone	Aquifer Jordan	<u>Unristenson Well</u> License Rusiness Nar	20065 ne Lic Or Reg	No Name of Driller
County Well Index Onlin	e Report	220628		Printed 7/30/2012 HF-01205-07

Minnesota Unique Well No.	O sure that a second		MINNESOTA DEPARTME	INT OF HEALTH	04/05/4000		
228168	Quad Simpson		WELL AND B	Update Date	02/06/2012		
	Quad ID 28B		RECOR Minnesota Statutes C	D Received Da	ite		
Well Name MERRIHILLS 1			Well Depth	Depth Completed	Date Well Completed		
Township Range Dir Section Subsec	tions Elevation	1209 ft.	675 ft.	675 ft .	01/00/1965		
106 14 W 15 CDCDC	B Elevation Method	FOOT COUNTY	Drilling Method				
Well Address			Drilling Fluid	Well Hydrofractured?	Yes 🔲 No		
ROCHESTER MN			Use Community Supply	Prom Ft. to Ft. PWS ID 1550010 Source S2	29		
Geological Material NO RECORD	Color Hardness	From To 0 40	Casing Type Joint No No Above/Below ft.	Information Drive Shoe?	Yes		
		100 175	Casing Diameter	Weight	Hole Diameter		
ST PETER PRAIRIE DU CHIEN		175 275 275 575	10 in. to 575 ft.	lbs./ft.			
JORDAN		575 675	16 in. to ft.	lbs./ft.			
			Open Hole from 575 ft.	to 675 ft.			
			Screen NO Make	уре			
			Diameter Slo	ot/Gauze Length	Set Between		
			Static Water Level				
			192 ft. from Land surface	Date Measured 00/00/1965			
			275 ft. after hrs. pumpir	and surface) ng 300 g.p.m.			
			Well Head Completion				
			Pitless adapter manufacture	er Model			
			Casing Protection	12 in. above grade			
			At-grade (Environmer	ntal Wells and Borings ONLY)			
NO	REMARKS		Grouting Information Well Grouted? Yes No				
Located by: Minnesota Department o	of Health (averaged)	GPS SA Off					
Unique Number Verification: Other,	note in Input Date	: 07/28/2004	Nearest Known Source of	Contamination			
Svstem: UTM - Nad83 Zone15 Mete	ers X: 540752	Y: 4869628	_feet _direction _type				
			Well disinfected upon comp	oletion? 🛄 Yes 🛄 N	10		
			Pump Vot Install	ed Date Installed			
			Manutacturer's name Length of drop Pipe _ft.	Nodel number HP Volt Capacity _q.p.m Type Turb	s <u>ine</u> Material		
			Abandoned Wells Does p	roperty have any not in use and	not sealed well(s)?		
			Yes 🔲 No	, , ,			
			Variance Was a variance g	granted from the MDH for this we	ell? Yes No		
First Padroak Calana Cra			Well Contractor Certificati	ion			
Last Strat Jordan Sandstone	Aquifer Jordan	•k ∕10 ff	<u>Rowland Well Co.</u>	<u>23124</u> ne Lic Or Reg No	Name of Driller		
County Well Index	Online Repo	rt	228168		HE-01205-07		

Well Log Report - 00220629

Minnesota Unique Well No. 220629	County Quad Quad ID	Olmsted Rochester 49C			W	MINNESOTA DEPAR ELL AND BO Minnesota Statut	RTMENT OF H RING RE tes Chapter 1	IEALTH ECORD	Entry Date Update Date Received Date	01/25/1988 05/20/2008
Well Name MEADOWBROOK ADD.1 Township Range Dir Section Subse	ctions Elevatio	n Mathad	1063 ft. CALC FRO	M 2-FOOT		Well Depth 450 ft.	h	Depth Completed 450 ft.	Date	Well Completed 10/21/1964
	AA Elevatio	n Methoa	COUNTY D	DEM		Drilling Method Ca	able Tool			
						Drilling Fluid Use Community S	Supply PWS	Well Hydrofractured? From Ft. to Ft. ID 1550021 Source S	Yes N	
						Casing Type Steel No Above/Below	ft.	v carbon) Joint vveideo	Drive Shoe?	Yes 🔄
Well Address						Casing Diamete 12 in. to 60 8 in. to 369	er)ft.)ft.	Weight Ibs./ft. Ibs./ft.	Hole Diameter 12 in. to	er 450 ft.
ROCHESTER MN 55901						Open Hole from 3 Screen NO Mal	369 ft. to 4	450 ft.		
Geological Material DRIFT LIMESTONE ROOT VALLEY SANDSTONE LIMESTONE JORDAN SANDSTONE		Color H	lardness	From 0 60 74 80 350	To 60 74 80 350 450	Diameter	Slot	/Gauze Le	ength Set	Between
	чй.					Static Water Level 17 ft. from Land st PUMPING LEVEL (I 133 ft. after 24 h	surface Date below land sons. pumping	Measured 10/09/1964 urface) 325 g.p.m.		
						Well Head Complet Pitless adapter manu Casing Protect	tion hufacturer tion	Model 12 in. above grade ells and Borings ONLY)		
				5		Grouting Informatio	on Well Gro	nuted? Ves	No	
Located Minnesota Geological Surve Unique Number Verification Inform	NOREM ey ation from owne	ARKS Met er Dat/	hod GPS SA (e N/A	On (average	ed)	Grout Material:		from	to ft.	
System UTM - Nad83, Zone15, Mete	ŧrs	X: (549889 Y: 48	372200		Nearest Known Sou _feetdirection	urce of Conta type	amination	A)	
						Well disinfected upo	on completion	i? Yes	No	
ş						Pump No Manufacturer's nam Length of drop Pipe	ot Installed Dane Mode eft. Capac	ate Installed el number HP Vo ity _g.p.m Type M	olts Material	
						Abandoned Wells	Does property	y have any not in use an	d not sealed well(s	s)? Yes
						Variance Was a va	ariance grante	d from the MDH for this	well? Yes	No
First Bedrock Prairie Du Chien Grou	ıp	Aquif	er Jordan	0.4		Well Contractor Ce <u>Mueller V</u>	ertification Well Co.	<u>964</u>	<u>60</u>	MUELLER BROS.
		Depth	to Bedrock	0 π.		License Busi	aness Name	LIC. OF R	eg. No.	
County Well Index	k Online	Repor	t			22062	29			Printed 1/16/2009 HE-01205-07

Appendix 2: Water Level Monitoring Plan

SCADA Monitoring

Continuous monitoring occurs on all of Rochester Public Utilities (RPU) main system wells. Water levels are recorded at 5 minute intervals.

Manual Measurements

RPU's Water Operation staff collects at least one monthly manual pumping and static water level measurements using an electronic tape to collect measurements. This data is also used to confirm the SCADA measurements and determine the need to re-calibrate.

Monitoring Well Network

RPU currently has a Groundwater Level Monitoring Agreement with MN DNR to monitor 10 wells. RPU is the owner of 6 and the DNR owns the other 4 monitoring wells. RPU staff visits the monitoring wells every other month to perform a manual measurement using an electronic tape and also downloading the hourly water level measurements from the data loggers. All measurements are uploaded to the MN DNR Water Level Monitoring database. This data is extremely valuable to calibrate and update RPU's groundwater model. The most recent contract with the MN DNR has been included for reference.

Professional and Technical Services Contract

SWIFT Contract No.:

State of Minnesota

143004

This Contract is between the State of Minnesota, acting through its Commissioner of Natural Resources ("State") and **Rochester Public Utilities** whose designated business address is 4000 East River Road NE, Rochester, MN 55906 ("Contractor").

Recitals

- 1. Under Minn. Stat. § 15.061 and 471.59, the State is empowered to engage such assistance as deemed necessary.
- 2. The state is in need of groundwater level monitoring of five (5) observation wells located within Olmsted County.
- 3. The Contractor represents that it is duly qualified and agrees to perform all services described in this Contract to the satisfaction of the state.

Contract

1. Term of Contract

- **1.1 Effective date:** *July 1, 2018*, or the date the State obtains all required signatures under Minn. Stat. § 16C.05, subd. 2, whichever is later. The Contractor must not begin work under this Contract until this Contract is fully executed and the Contractor has been notified by the State's Authorized Representative to begin the work.
- **1.2 Expiration date:** June 30, 2019, or until all obligations have been satisfactorily fulfilled, whichever occurs first.
- 1.3 Survival of terms: The following clauses survive the expiration or cancellation of this Contract: 9. Indemnification; 10. State audits; 11. Government data practices and intellectual property; 12. Publicity endorsement; and 13. Governing law, jurisdiction, and venue.

2. State's duties

The State will provide monitoring protocol training and monitoring equipment which will include: an electric water level measuring device, a pressure transducer data connection cable, and a device for the downloading of pressure transducer data (to be purchased under separate requisition).

Field measurement recording sheets will be provided by the State and are to be filled out during each site visit and submitted on-line at the time of data uploading. An invoice form for this work will also be provided by the State.

3. Contractor's duties

Perform four (4) field visits at equally spaced time intervals over the year to the loggered observation wells as described in Attachment A, which is attached and incorporated into this contract. During these field visits the contractor will measure and record on the enclosed field measurement sheets the water level in the observation wells to an accuracy of one hundredth of a foot and the time of measurement to the **nearest minute always in local time** as well as download the data from the instrumented observation wells as described in Attachment A. **DO NOT PERFORM MEASUREMENTS PRIOR TO THE EXECUTION OF THE CONTRACT.**

During all field visits the contractor will:

- Measure and record the water level in the observation wells to an accuracy of one hundredth of a foot.
- Record the time of measurement to the nearest minute always in local time, from the wells as described in Attachment A.
- Submit measured data to Minnesota Department of Natural Resources Observation Well Database within 60 days of measurement date.
 - NOTE: Data not conforming to these instructions may be deemed invalid and not eligible for compensation.

It is the responsibility of the Contractor to use and care for all equipment provided by the State for this work in a manner that assures its continued functionality as described in this contract or the Contractor shall provide alternative equipment that would allow the completion of this work to the same specification as the State provided equipment. If the Contractor or the State ends the relationship described within this contract all equipment will be returned to the State within 30 days.

Contractor's duties are complete when downloaded logger data, measured water levels and scanned field sheets are successfully submitted on-line via the DNR observation well database. Guidance on such submission will be provided by the State.

Schedule for contractor's completion of duties. All data must be submitted as defined above, twice a year. Fall measurements must be submitted prior to December 31, and spring measurements must be submitted prior to June 30. If they are not submitted on this schedule then a notification will be sent to the contractor requesting completion. If duties are not complete by specified deadlines, payment will be withheld.

4. Time

The Contractor must comply with all the time requirements described in this Contract. In the performance of this Contract, time is very important.

5. Consideration and payment

- **5.1 Consideration.** The State will pay for all services performed by the Contractor under this Contract as follows:
 - (a) Compensation: The Contractor will be paid \$30.00 for each successful on-line submittal of data, not to exceed \$360.00. Payment will be for each authorized observation well or a single payment for a nest of wells as

indicated in Attachment A.

If it is determined that additional monitoring well(s) will be required, then the cost for the additional well(s) will not exceed \$720.00. The Contractor must get approval via email from the Authorized Representative prior to any additonal work commencing.

- (b) Travel expenses. Reimbursement for travel and subsistence expenses actually and necessarily incurred by the Contractor as a result of this Contract will not exceed \$0.00; provided that the Contractor will be reimbursed for travel and subsistence expenses in the same manner and in no greater amount than provided in the current "Commissioner's Plan" established by the Commissioner of Minnesota Management and Budget which is incorporated into this Contract by reference. The Contractor will not be reimbursed for travel and subsistence expenses incurred outside Minnesota unless it has received the State's prior written approval for out-of-state travel. Minnesota will be considered the home state for determining whether travel is out of state.
- (C) Total obligation. The total obligation of the State for all compensation and reimbursements to the Contractor under this Contract will not exceed \$1080.00.

5.2 Payment.

(a) Invoices. The State will promptly pay the Contractor after the Contractor presents an itemized invoice for the services actually performed and the State's Authorized Representative accepts the invoiced services. Invoices will be submitted to:

Tim Quan DNR Ecological and Water Resources 325 Randolph Ave. S., Suite 500 St. Paul, MN 55102

OR electronically by email to: Tim.Quan@state.mn.us

Invoices must be submitted timely and according to the following schedule: Upon completion of services and no later than July 12, 2019

- (b) Retainage. Under Minn. Stat. § 16C.08, subd. 5(b), no more than 90 percent of the amount due under this Contract may be paid until the final product of this Contract has been reviewed by the State's agency head. The balance due will be paid when the State's agency head determines that the Contractor has satisfactorily fulfilled all the terms of this Contract.
- (c) Federal funds. N/A

6. Conditions of payment

All services provided by the Contractor under this Contract must be performed to the State's satisfaction, as determined at the sole discretion of the State's Authorized Representative and in accordance with all applicable federal, state, and local laws, ordinances, rules, and regulations including business registration requirements of the Office of the Secretary of State. The Contractor will not receive payment for work found by the State to be unsatisfactory or performed in violation of federal, state, or local law.

7. Authorized Representative

The State's Authorized Representative is Greg Kruse, Supervisor Water Monitoring and Surveys Unit, 500 Lafayette Road, Box 25, St. Paul, MN, 55155-4025, 651-539-2108, or his/her successor, and has the responsibility to monitor the Contractor's performance and the authority to accept the services provided under this Contract. If the services are satisfactory, the State's Authorized Representative will certify acceptance on each invoice submitted for payment.

The Contractor's Authorized Representative is Todd Osweiler, Appropriation Permit Contact, at the following business address and telephone number: 4000 East River Road NE, Rochester, MN 55906 507-280-1589 or his/her successor. If the Contractor's Authorized Representative changes at any time during this Contract, the Contractor must immediately notify the State.

8. Assignment, amendments, waiver, and contract complete

- **8.1 Assignment.** The Contractor may neither assign nor transfer any rights or obligations under this Contract without the prior consent of the State and a fully executed assignment agreement, executed and approved by the same parties who executed and approved this Contract, or their successors in office.
- **8.2 Amendments.** Any amendment to this Contract must be in writing and will not be effective until it has been executed and approved by the same parties who executed and approved the original Contract, or their successors in office.
- **8.3 Waiver.** If the State fails to enforce any provision of this Contract, that failure does not waive the provision or its right to enforce it.
- **8.4 Contract complete.** This Contract contains all negotiations and agreements between the State and the Contractor. No other understanding regarding this Contract, whether written or oral, may be used to bind either party.

9. Indemnification

Each party will be solely responsible for its own acts and omissions and the results thereof to the extent authorized by law. The State's liability is governed by Minnesota Statutes section 3.736 and other applicable law. Liability of the County and the City is governed by Minnesota Statutes chapter 466.

10. State audits

Under Minn. Stat. § 16C.05, subd. 5, the Contractor's books, records, documents, and accounting procedures and practices relevant to this Contract are subject to examination by the State and/or the State Auditor or Legislative Auditor, as appropriate, for a minimum of six years from the end of this Contract.

11. Government data practices and intellectual property

11.1 Government data practices. The Contractor and State must comply with the Minnesota Government Data Practices Act, Minn. Stat. ch. 13, (or, if the State contracting party is part of the Judicial Branch, with the Rules of Public Access to Records of the Judicial Branch promulgated by the Minnesota Supreme Court as the same may be amended from time to time) as it applies to all data provided by the State under this Contract, and as it applies to all data created, collected, received, stored, used, maintained, or disseminated by the Contractor under this Contract. The civil remedies of Minn. Stat. § 13.08 apply to the release of the data governed by the Minnesota Government Practices Act, Minn. Stat. ch. 13, by either the Contractor or the State.

If the Contractor receives a request to release the data referred to in this clause, the Contractor must immediately notify and consult with the State's Authorized Representative as to how the Contractor should respond to the request. The Contractor's response to the request shall comply with applicable law.

11.2 Intellectual property rights.

(a)

- Intellectual property rights. The State owns all rights, title, and interest in all of the intellectual property rights, including copyrights, patents, trade secrets, trademarks, and service marks in the works and documents created and paid for under this Contract. The "works" means all inventions, improvements, discoveries (whether or not patentable), databases, computer programs, reports, notes, studies, photographs, negatives, designs, drawings, specifications, materials, tapes, and disks conceived, reduced to practice, created or originated by the Contractor, its employees, agents, and subcontractors, either individually or jointly with others in the performance of this Contract. "Works" includes documents. The "documents" are the originals of any databases, computer programs, reports, notes, studies, photographs, negatives, designs, drawings, specifications, materials, tapes, disks, or other materials, whether in tangible or electronic forms, prepared by the Contractor, its employees, agents, or subcontractors, in the performance of this Contract. The documents will be the exclusive property of the State and all such
- documents must be immediately returned to the State by the Contractor upon completion or cancellation of this Contract. To the extent possible, those works eligible for copyright protection under the United States Copyright Act will be deemed to be "works made for hire." The Contractor assigns all right, title, and interest it may have in the works and the documents to the State. The Contractor must, at the request of the State, execute all papers and perform all other acts necessary to transfer or record the State's ownership interest
- Obligations (b)
 - (1) Notifications. Whenever any invention, improvement, or discovery (whether or not patentable) is made or conceived for the first time or actually or constructively reduced to practice by the Contractor, including its employees and subcontractors, in the performance of this Contract, the Contractor will immediately give the State's Authorized Representative written notice thereof, and must promptly furnish the State's Authorized Representative with complete information and/or disclosure thereon.
 - (2) Representations. The Contractor must perform all acts, and take all steps necessary to ensure that all intellectual property rights in the works and documents are the sole property of the State, and that neither Contractor nor its employees, agents, or subcontractors retain any interest in and to the works and documents. The Contractor represents and warrants that the works and documents do not and will not infringe upon any intellectual property rights of other persons or entities. Notwithstanding Clause 8, the Contractor will indemnify; defend, to the extent permitted by the Attorney General; and hold harmless the State, at the Contractor's expense, from any action or claim brought against the State to the extent that it is based on a claim that all or part of the works or documents infringe upon the intellectual property rights of others. The Contractor will be responsible for payment of any and all such claims, demands, obligations, liabilities, costs, and damages, including but not limited to, attorney fees. If such a claim or action arises, or in the Contractor's or the State's opinion is likely to arise, the Contractor must, at the State's discretion, either procure for the State the right or license to use the intellectual property rights at issue or replace or modify the allegedly infringing works or documents as necessary and appropriate to obviate the infringement claim. This remedy of the State will be in addition to and not exclusive of other remedies provided by law.

12. Publicity and endorsement

- 12.1 Publicity. Any publicity regarding the subject matter of this Contract must identify the State as the sponsoring agency and must not be released without prior written approval from the State's Authorized Representative. For purposes of this provision, publicity includes notices, informational pamphlets, press releases, research, reports, signs, and similar public notices prepared by or for the Contractor individually or jointly with others, or any subcontractors, with respect to the program, publications, or services provided resulting from this Contract.
- 12.2 Endorsement. The Contractor must not claim that the State endorses its products or services.

13. Governing law, jurisdiction, and venue

Minnesota law, without regard to its choice-of-law provisions, governs this Contract. Venue for all legal proceedings out of this Contract, or its breach, must be in the appropriate state or federal court with competent jurisdiction in Ramsey County, Minnesota.

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14. Termination

- **14.1** Termination by the State. The State or Commissioner of Administration may cancel this Contract at any time, with or without cause, upon 30 days' written notice to the Contractor. Upon termination, the Contractor will be entitled to payment, determined on a pro rata basis, for services satisfactorily performed.
- 14.2 Termination for insufficient funding. The State may immediately terminate this Contract if it does not obtain funding from the Minnesota Legislature or other funding source, or if funding cannot be continued at a level sufficient to allow for the payment of the services covered here. Termination must be written or fax notice to the Contractor. The State is not obligated to pay for any services that are provided after notice and effective date of termination. However, the Contractor will be entitled to payment, determined on a pro rata basis, for services satisfactorily performed to the extent that funds are available. The State will not be assessed any penalty if the Contract is terminated because of the decision of the Minnesota Legislature, or other funding source, not to appropriate funds. The State must provide the Contractor notice of the lack of funding within a reasonable time of the State's receiving that notice.

15. Non-discrimination in (accordance with Minn. Stat. § 181.59)

The Contractor will comply with the provisions of Minn. Stat. § 181.59 which require: "Every contract for or on behalf of the state of Minnesota, or any county, city, town, township, school, school district, or any other district in the state, for materials, supplies, or construction shall contain provisions by which the contractor agrees

- (1) that, in the hiring of common or skilled labor for the performance of any work under any contract, or any subcontract, no contractor, material supplier, or vendor, shall, by reason of race, creed, or color, discriminate against the person or persons who are citizens of the United States or resident aliens who are qualified and available to perform the work to which the employment relates;
- (2) that no contractor, material supplier, or vendor, shall, in any manner, discriminate against, or intimidate, or prevent the employment of any person or persons identified in clause (1) of this section, or on being hired, prevent or conspire to prevent, the person or persons from the performance of work under any contract on account of race, creed, or color;
- (3) that a violation of this section is a misdemeanor; and
- (4) that this contract may be canceled or terminated by the state, county, city, town, school board, or any other person authorized to grant the contracts for employment, and all money due, or to become due under the contract, may be forfeited for a second or any subsequent violation of the terms or conditions of this contract."

1. STATE ENCUMBRANCE VERIFICATION Individual certifies that funds have been encumbered as required by Minnesota Statute §§ 16A.15 and 16C.05.	3. STATE AGENCY (With delegated authority)
Signed:	Signed:
Date:	Title: Director, Division of Ecological and Water Resources
SWIFT PO ID:	Date:
. CONTRACTOR	4. COMMISSIONER OF ADMINISTRATION
The Contractor certifies that the appropriate person(s) have executed the contract on behalf of the Contractor as required by applicable articles, bylaws, resolutions, or ordinances.	As delegated to Materials Management Division
Signed <u>Mark totschuvar</u>	Signed:
Title: <u>General Manager</u>	Title:
Date: 7/24/2018 7:26:07 CDT	Date:
Signed: ASON (BOS	
Title: <u>City Attorney</u>	Signed:
Date: 7/22/2018 10:26:39 CDT	Title:
DocuSigned by:	Date:
4D2591593C55461	
Title: <u>Mayor</u> $7/24/2018 + 7.42.36$ CDT	
Date:DocuSigned by:	
Signed <u>emsiffblezetu</u> 4064D4E3304C412	
Title:City Clerk	
7/24/2018 4:29:07 CDT	

18-31

	Observation Wells to be monitored by the Rochester Public Utilities during FY2019 (July 1, 2018 through June 30, 2019)						
MDH Unique #	OBWEL ID #	L Well Location	Name	Nested Well	Data Logger		
658967	55007	TN105 - R13W - S17 - CAAA Measured four times per year, or	OPCJ nr Rochester, MGS #3 Fugles Mill nce each in March, June, September, December.	-	-		
485610	55006	TN106 - R14W - S24 - AD Measured four times per year, or	OPDC nr Rochester, PCI WELL nce each in March, June, September, December.	-	-		
695883		Measured four times per year, or	OGCM nr Rochester; Up Gradient Galena Well nce each in March, June, September, December.	-	-		
220776		Measured four times per year, or	OGCM nr Rochester/Osjor Estates 1 nce each in March, June, September, December.	-	-		
695881		Measured four times per year, or	OSTP nr Rochester/St. Peter NW nce each in March, June, September, December.	-	-		
698913		Measured four times per year, or	OPVL nr Rochester Monitor Well nce each in March, June, September, December.	-	-		
698912		Measured four times per year, or	OSTP; Rochester Monitor Well nce each in March, June, September, December.	-	-		
817784	55010	Measured four times per year, or	OGAL nr Marion; Marion Rest Area nce each in March, June, September, December.	N1	Y		
817783	55009	Measured four times per year, or	OSTP nr Marion; Marion Rest Area nce each in March, June, September, December.	N1	Y		
817782	55008	Measured four times per year, or	OPDC nr Marion; Marion Rest Area nce each in March, June, September, December.	N1	Y		

ATTACHMENT -A-

Total number of wells monitored = 10

N# in Nested Well column indicates nest of wells; same # form one nest.

Appendix 3: Water level graphs for each water supply well

Appendix 4: Capital Improvement Plan

5 Year Capital Improvement Plan

	2018	2019	2020	2021	2022
Well 42	\$ 410,000				
Well House 42		\$ 775,000			
New 1.0 MG Baihly Elevated Water Storage Tower			\$ 4,171,000		
Well 43			\$ 482,000		
Well House 43				\$ 685,000	
New 1.0 MG Marion Intermediate Level Reservoir					\$ 1,496,000

Appendix 5: Emergency Telephone List

Emergency Telephone List

Emergency Response Team	Name	Work Telephone	Alternate Telephone
Emergency Response Lead	Cary Johnson	507-280-1507	507-273-1200
Alternate Emergency	Steve Johnson	507-280-1527	507-273-5038
Response Lead			
Water Operator	Duane Bjelland	507-280-1506	507-216-1834
Alternate Water Operator	Craig Langbehn	507-292-1248	507-272-9057
Public Communications	Tony Benson	507-280-1534	507-398-9305

State and Local Emergency	Name	Work Telephone	Alternate Telephone
Response Contacts			
State Incident Duty Officer	Minnesota Duty Officer	800/422-0798 Out State	651-649-5451 Metro
City Emergency Director	Ken Jones	507-206-0974	507-923-1016
National Guard	Minnesota Duty Officer	800/422-0798 Out State	651-649-5451 Metro
Mayor/Board Chair	Ardell Brede	507-328-2700	
Fire Chief	Eric Kerska	507-328-2800	
Sheriff	Kevin Torgerson	507-328-6800	
Police Chief	Jim Franklin	507-328-6900	
Ambulance	Gold Cross	507-288-2407	
Hospital	St. Mary's Hospital	507-255-5123	
Doctor or Medical Facility	Mayo Clinic	507-284-2511	

State and Local Agencies	Name	Work Telephone	Alternate Telephone
MDH District Engineer	Paul Halvorson	507-206-2724	507-259-2221
MDH	Drinking Water Protection	651-201-4700	
State Testing Laboratory	Minnesota Duty Officer	800/422-0798 Out State	651-649-5451 Metro
MPCA	Justin Watkins	507-206-2621	
DNR Area Hydrologist	Nicole Lehman	507-206-2854	
County Water Planner	Caitlin Brady	507-328-6396	

Utilities	Name	Work Telephone	Alternate Telephone
Electric Company	Rochester Public Utilities	507-280-1500	
Gas Company	Minnesota Energy Services	800-889-4970	
Telephone Company	Rochester Telecom Systems	507-287-6370	
Gopher State One Call	Utility Locations	800-252-1166	651-454-0002
Highway Department	Olmsted County Public Works	507-328-7060	

Mutual Aid Agreements	Name	Work Telephone	Alternate Telephone
Neighboring Water System	NA		
Emergency Water Connection	NA		
Materials	NA		

Technical/Contracted	Name	Work Telephone	Alternate Telephone
Services/Supplies			
MRWA Technical Services	MN Rural Water Association	800-367-6792	
Well Driller/Repair	Bergerson Caswell	763-479-2183	763-479-3121
Pump Repair	Keys Well	651-646-7871	
Electrician	Benning Electric	507-358-6912	
Plumber	First Class Plumbing	507-280-5883	
Backhoe	SL Construction	507-281-5333	
Chemical Feed	RPU		
Meter Repair	RPU		
Generator	RPU		

Valves	RPU		
Pipe & Fittings	RPU		
Water Storage	RPU		
Laboratory	SE MN Water Analysis	507-328-7495	
	Laboratory		
Engineering firm	RPU		

Communications	Name	Work Telephone	Alternate Telephone
News Paper	Post Bulletin	507-285-7676	800-562-1758
Radio Station	KROC	507-286-1010	
School Superintendent	Michael Munoz	507-328-3000	
Property & Casualty Insurance	AEGIS	855-790-0550	

Critical Water Users	Name	Work Telephone	Alternate Telephone
Hospital			
Critical Use:			
St. Mary's Hospital	Jody Larson	507-266-4708	
Rochester Methodist Hospital	Jody Larson	507-266-4708	
Olmsted Medical Center		507-529-6600	
Hospital			
Nursing Home			
Critical Use:			
Madonna Towers		507-288-3911	
Edenborook of Rochester		507-282-9449	
Rochester East Health		507-288-6514	
Services			
Samaritan Bethany Inc.		507-289-4031	
The Homestead at Rochester		507-535-2000	
Home Instead Senior Care		507-285-1700	
Meadow Lakes Senior Living		507-252-5069	
Maple Manor Nursing &		507-282-9449	
Rehab			
Rochester West Health		507-288-1818	
Services			
Public Shelter			
Critical Use:			
Dorothy Day Hospitality		507-282-5172	
House			
Large Water Users:			
Mayo Foundation	Jody Larson	507-266-4708	
City of Rochester	Todd Osweiler	507-280-1589	507-421-3028
Kerry Bio-Science	Brian Morgan	507-285-3400	
Kahler	Pat Kluth	507-285-4051	
Kemps		507-287-7309	
Rochester Methodist Hospital	Jody Larson	507-266-4708	
St. Mary's Hospital	Jody Larson	507-266-4708	
Rochester Public Schools	Jerry Ernst	507-328-4402	507-259-6649

Appendix 6: Cooperative Agreements for Emergency Services

The City of Rochester does not have any interconnections or cooperative agreements for emergency services.

Appendix 7: Municipal Critical Water Deficiency Ordinance

From RPU Water Service Rules and Regulations

(Complete text of Rules and Regulations can be found at https://www.rpu.org/documents/water_rules_regs.pdf)

SECTION 200

GENERAL INFORMATION

201 Scope and Applicability

201.1 The requirements of this section shall govern the furnishing of water by RPU from the public water main to premises inside and outside the City of Rochester.

201.2 Every customer applying for water service or receiving water from the public water main, and/or owner of property for which such application is made or water is received, shall be deemed by such application or use, to consent to abide by all the rules and regulations established and to all material/construction requirements and modifications described herein.

202 Temporary Interruption of Service

RPU reserves the right to interrupt the flow of water within the distribution system to any premises at any time to facilitate system improvements, repairs, testing and connections, to ensure adequate fire flows or for any other good cause. RPU will attempt to furnish an uninterrupted supply of water to all customers. RPU, or a designated representative, will attempt to notify customers in advance by telephone, letter or doorknocker of any planned (non-emergency) interruption in their water service.

203 Termination of Service

203.1 Water service provided to a premises may be terminated, upon the giving of written notice, for the following reasons:

- (1) The customer or owner of the premises served, or any person working on any pipes or equipment thereon which are connected with the public water main, has violated any of these rules relative to the water supply system or connections with it.
- (2) The customer or owner of the premises served has threatened to violate or cause to be violated any of the provisions of these rules including, but not limited to, installation of backflow preventers where required at meters and/or elsewhere.
- (3) Any unpaid water service charge or other financial obligation imposed by the provisions of these rules.
- (4) Fraud or misrepresentation by the owner or customer in connection with an application for service.

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- (5) Unauthorized use of water during a declared water shortage. (See Section 205.)
- (6) Unauthorized use of fire hydrants or fire protection systems. (See Sections 604 and 705.)
- (7) Denial of access to a water service line, backflow preventer or water meter. (See Sections 403, 503 and 903.)

203.2 Form of Notice

A notice of intent to terminate water service for a reason set forth in Section 203.1 above will be mailed to the person in whose name the service has been provided, at the address of record maintained for billing purposes. Service of the notice will be considered complete on depositing the same in the United States mail, properly addressed, with first class postage prepaid.

204 Emergency Interruption of Service

In the event an immediate interruption of water service to a premises is required to protect the public health, safety or welfare, public property or the property of others, or to protect the water distribution system or any of its parts from destruction or damage, RPU may do so without prior notice and without a hearing as provided by Section 206 below.

205 Water Supply Shortages

Whenever RPU determines a water supply shortage exists, RPU will take necessary actions to alleviate the situation. Customers will be notified of a declared shortage and of any actions required of them through the use of the news media or other appropriate methods.

206 Appeal

An appeal procedure has been established to hear disputes regarding interpretations of these Rules. Appeals will be heard by the Utility Board which has the final authority in disputes.

207 Revisions of Requirements

All requirements stated or implied herein are subject to change at any time without prior notice. Any such revisions will be available at the RPU Service Center.

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Appendix 8: Graph of Ten Years of Annual Per Capita Water Demand for Each Customer Category

Graphs showing annual per capita water demand for each customer category during the last ten years and projection for the next ten years.



Figure 1 – Annual Per Capita Water Demand for Residential Water Use During the Last Ten Years


Figure 2 – Annual Per Capita Water Demand for Commercial and Industrial Water Use During the Last Ten Years



Figure 3 – Projected Annual Per Capita Water Demand for Residential Water Use



Figure 4 – Projected Annual Per Capita Water Demand for Commercial and Industrial Water Use

Appendix 9: Water Rate Structure

ROCHESTER PUBLIC UTILITIES (**RPU**)

RATE SCHEDULE WTR-C SHEET 1 OF 1

WATER SERVICE

AVAILABILITY:

At all locations within the Rochester City limits and at locations external to the City limits, that have been authorized by the Rochester Common Council.

MONTHLY RATE:

Customer Charge:	Size of Meter	<u>2016</u>	<u>2017</u>	<u>2018</u>
	5/8"	\$ 6.26	\$ 6.84	\$ 7.50
	3/4"	\$ 8.89	\$ 9.72	\$ 10.66
	1"	\$ 14.29	\$ 15.62	\$ 17.14
1-1/2"		\$ 27.58	\$ 30.14	\$ 33.07
	2"	\$ 43.54	\$ 47.59	\$ 52.21
	3"	\$ 81.00	\$ 88.53	\$ 97.13
	4"	\$ 134.39	\$ 146.88	\$ 161.15
6"		\$ 267.86	\$ 292.76	\$ 321.20
	8"	\$ 479.03	\$ 523.56	\$ 574.42
Commodity Charge Rate/CCF:		<u>2016</u>	<u>2017</u>	<u>2018</u>
Residential 0	- 7 CCF	75.5¢	78.5¢	81.3¢
7.	.01 - 12 CCF	82.7¢	85.7¢	88.5¢
12	.01 and over CCF	94.7¢	97.7¢	100.5¢
Commercial:		75.5¢	78.5¢	81.3¢
Industrial:		75.5¢	78.5¢	81.3¢
Interdepartmental:		75.5¢	78.5¢	81.3¢
Irrigation Meter (All Classes):		94.7¢	97.7¢	100.5¢

NOTE: Customers whose service is taken outside the Rochester city limits with individual water systems not connected to the City water system shall have a rate of 2.0 times the customer and commodity charges.

MINIMUM BILL:

Applicable monthly customer charge according to size of meter provided.

PAYMENT:

Payments are due on or before the due date.

CONDITIONS OF DELIVERY:

- 1. Service furnished under this rate schedule is subject to connection policies of the Rochester City Council.
- 2. Service furnished under this rate schedule is subject to provisions of RPU's Water Service Rules and Regulations.
- 3. RPU shall not be liable for damage or loss sustained by customer in conjunction with taking service under this rate.
- 4. Water furnished under this rate shall not be resold.

Approved by Rochester Public Utility Board:	
Effective Date:	

November 10, 2015 January 1, 2016 Appendix 10: Ordinances or Regulations Related to Water Use

ROCHESTER PUBLIC UTILITIES WATER SERVICE RULES AND REGULATIONS

Revised May, 2014 (Effective June 1, 2014)

INTRODUCTION

Rochester Public Utilities (hereafter referred to as RPU) has assembled this booklet to assist its customers, prospective customers and their architects, engineers or plumbing contractors in planning for, making arrangements for, obtaining and maintaining municipal water service.

The information presented here is intended to supplement the requirements of the Minnesota Plumbing Code Chapter 4715 and all other applicable federal, or state, and municipal codes, regulations, laws and ordinances. It is always necessary to refer to and comply with such other codes, regulations, laws, and ordinances when planning, designing, and installing a new water service. Specific requirements of RPU do not intentionally conflict with any other requirements known to be in effect as of the publication date of this booklet. Any apparent conflicts of this nature should be brought to the attention of RPU for interpretation.

RPU wishes to serve its customers promptly and satisfactorily. It will endeavor to cooperate with customers and their authorized representatives to the fullest extent in completing service connections with as little delay and inconvenience as possible, and will gladly give special attention to any particularly difficult situation confronting a customer.

RPU will be happy to confer with those customers desiring information concerning rates, services, fees, charges, etc., upon request by telephone or otherwise. Such requests should be directed to an RPU Customer Service Representative (at the RPU Service Center, 4000 East River Road NE, phone 507.280.1500, 1.800.778.3421 or fax 507.280.1642 or online fax 507 .280.1643).

The current Water Service Rules and Regulations are also available at: http://www.rpu.org/builders/water_rules_and_regulations/

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DEFINITIONS

Accessory Building: A structure, on a parcel of property, whose maintenance and use is not the primary purpose of the parcel.

Air Gap: The unobstructed vertical distance through the free atmosphere from the lowest opening of any device discharging to the flood rim of the receiving device.

Backflow Preventer: A device or means to prevent backflow into the potable water system.

Board of Health: The Olmsted County Health Board, or the Olmsted County Health Officer acting pursuant to its authority.

City: The City of Rochester, Minnesota.

Combined Domestic/Fire Service: A single water service line providing both domestic water service and fire protection service to a building or premises.

Common Service: A water service line which serves more than one metered premises.

Commodity Charge: That portion of a customer's water bill which is directly related to the quantity of water used during the billing period.

Corporation Stop: A device designed to connect a water service sized 2" or smaller to a water main.

Cross-connection: Any connection or arrangement, physical or otherwise, between a potable water supply system and any plumbing fixture, or tank, receptacle, equipment, or device through which it may be possible for nonpotable, used, unclean, polluted, or contaminated water or other substance to enter any part of such potable water system under any condition.

Curb Box: A device designed to provide access to a curb valve.

Curb Valve: A device designed to control the flow of water within a service line from a water main (located outside a customer's building or premises).

Curb Wrench: A device designed to operate a curb valve.

Customer: Any individual, partnership, corporation, or other legal entity now being served or to be served, using the water service of RPU at any specified location.

Customer Charge: That portion of a customer's water bill intended to recover the fixed cost of providing water service.

Deduct Meter: A device designed and used to measure water used in a process where the water used becomes a product or is lost to evaporation. The deduct meter usage is subtracted from the normal water meter reading for the purpose of determining the sewer billing.

ERT: A wireless <u>Encoder Receiver Transmitter fitted on a water meter to permit automatic meter reading (AMR). A handheld or vehicle-mounted radio transceiver broadcasts a wake-up signal to the ERT, and the ERT then sends the present water meter reading back to the transceiver.</u>

Fire Service: A single water service line providing water to fire protection devices (such as sprinklers or fire hose connections) within a building or premises.

House Piping: A series of pipes for the conveyance of water extending from the water meter to points of consumption within a building.

Irrigation Meter: A water meter installed for the express purpose of metering water used for irrigation. Water measured by irrigation meters is not to enter the sanitary sewer system.

Premises: A defined area of a property parcel or building contained thereon, where water consumption occurs.

Readily accessible: Capable of being reached safely and quickly for installation, operation, repair, replacement or inspection without requiring those to whom ready access is requisite to remove obstacles, panels or similar obstructions.

Remote Register: A device located on the outside of a customer's premises which is designed to permit the reading of a water meter contained within the premises. (Remote registers are being replaced by ERTs.)

RPU: Rochester Public Utilities.

Service AssuredSM: RPU's underground service repair insurance program offered to qualifying electric and/or water customers.

Stop Valve: A device designed to control the flow of water within a water service or the water distribution system of a building, unit or customer application served.

Tapping Sleeve and Valve: A device designed to connect a water service sized 4" or larger to a water main without removing the water main from service.

Water Main: A pipe, or system of pipes and fittings, used to distribute water from water supply wells to the water service of any customer. Water mains are owned by the City of Rochester and maintained by RPU.

Water Meter: A device designed and used to measure the quantity of water supplied to a customer.

Water Service: The pipe, fittings and devices needed to convey water from a water main (typically underground in a street) to the water distribution system of the building, unit or customer application served (to the water meter). (See Exhibits A, B, C, D and E).

Utility Board: The Rochester Public Utilities Board created by the Home Rule Charter of the City of Rochester, Chapter XV (Utility Board) with authority to operate the municipal water utility owned by the City of Rochester.

GENERAL INFORMATION

201 Scope and Applicability

201.1 The requirements of this section shall govern the furnishing of water by RPU from the public water main to premises inside and outside the City of Rochester.

201.2 Every customer applying for water service or receiving water from the public water main, and/or owner of property for which such application is made or water is received, shall be deemed by such application or use, to consent to abide by all the rules and regulations established and to all material/construction requirements and modifications described herein.

202 Temporary Interruption of Service

RPU reserves the right to interrupt the flow of water within the distribution system to any premises at any time to facilitate system improvements, repairs, testing and connections, to ensure adequate fire flows or for any other good cause. RPU will attempt to furnish an uninterrupted supply of water to all customers. RPU, or a designated representative, will attempt to notify customers in advance by telephone, letter or doorknocker of any planned (non-emergency) interruption in their water service.

203 Termination of Service

203.1 Water service provided to a premises may be terminated, upon the giving of written notice, for the following reasons:

- (1) The customer or owner of the premises served, or any person working on any pipes or equipment thereon which are connected with the public water main, has violated any of these rules relative to the water supply system or connections with it.
- (2) The customer or owner of the premises served has threatened to violate or cause to be violated any of the provisions of these rules including, but not limited to, installation of backflow preventers where required at meters and/or elsewhere.
- (3) Any unpaid water service charge or other financial obligation imposed by the provisions of these rules.
- (4) Fraud or misrepresentation by the owner or customer in connection with an application for service.

- (5) Unauthorized use of water during a declared water shortage. (See Section 205.)
- (6) Unauthorized use of fire hydrants or fire protection systems. (See Sections 604 and 705.)
- (7) Denial of access to a water service line, backflow preventer or water meter. (See Sections 403, 503 and 903.)

203.2 Form of Notice

A notice of intent to terminate water service for a reason set forth in Section 203.1 above will be mailed to the person in whose name the service has been provided, at the address of record maintained for billing purposes. Service of the notice will be considered complete on depositing the same in the United States mail, properly addressed, with first class postage prepaid.

204 Emergency Interruption of Service

In the event an immediate interruption of water service to a premises is required to protect the public health, safety or welfare, public property or the property of others, or to protect the water distribution system or any of its parts from destruction or damage, RPU may do so without prior notice and without a hearing as provided by Section 206 below.

205 Water Supply Shortages

Whenever RPU determines a water supply shortage exists, RPU will take necessary actions to alleviate the situation. Customers will be notified of a declared shortage and of any actions required of them through the use of the news media or other appropriate methods.

206 Appeal

An appeal procedure has been established to hear disputes regarding interpretations of these Rules. Appeals will be heard by the Utility Board which has the final authority in disputes.

207 Revisions of Requirements

All requirements stated or implied herein are subject to change at any time without prior notice. Any such revisions will be available at the RPU Service Center.

RATES, FEES AND CHARGES

301 Rates

Copies of the current Water Rate Schedule (Rate Schedule WTR) and Fire Hydrant Facilities Charge Schedule (Rate Schedule FHFC) established by the Utility Board and approved by the Common Council are available at the RPU Service Center and on the RPU web site (www.rpu.org).

302 Miscellaneous Fees and Charges

302.1 Equipment and labor furnished by RPU and determined to be a customer's responsibility will be invoiced in accordance with the current RPU fee schedule. Material furnished by RPU and determined to be a customer's responsibility will be invoiced at inventory cost plus the current overhead rate.

302.2 The RPU Miscellaneous Fee Schedule has been established for commonly provided services (such as water main tapping, frozen meter replacement, and hydrant meter rental), and for unauthorized water use. A copy of this schedule is available at the RPU Service Center.

WATER SERVICE

401 Responsibility

The property owner is responsible for the cost of installing a water service. The property owner owns the water service, and is responsible for its repair, maintenance or replacement. Repair, replacement or abandonment of a water service shall be done by a licensed plumber or water and sewer contractor licensed by the City of Rochester.

402 Installation

Water service installations shall conform to the current version of the Minnesota Plumbing Code Chapter 4715 as adopted by the City and the requirements of these Rules.

403 Access

RPU and the Building and Safety Department shall have the right to access the served premises at all reasonable times for inspection, maintenance and operation of any water service component.

404 Single Family Residences

Each single family residence shall have a properly sized, individual water service line with a readily accessible curb valve located exterior to the building. (See Exhibit A.) No part of an individual water service shall cross another lot line or pass under or through another dwelling unit.

405 Residential Multiple-Unit Buildings

Whenever a building with two or more units is constructed, and the individual units and underlying property are to be under individual ownership, each unit shall have a separate, properly sized, individual water service line with a readily accessible curb valve located exterior to the building. No part of the individual water service shall pass under or through another unit or lot. However, multiple residential units having common ownership of the property around the units may be served by a properly sized, master water service line extending from the water main to the individual water services and curb valves. (See Exhibit G.) In such cases, a homeowners' association shall be responsible for maintenance and repair of the common service line.

406 Commercial, Industrial and Other Non-Residential Multiple-Unit Buildings

406.1 Commercial, industrial and other multiple-unit buildings not included in Section 405 above shall have a properly sized, single domestic water service line extending from the water main to a single, common metering area within the building readily accessible to RPU without entering an individual unit. (See Exhibit C.) In certain situations where providing a single common metering area is not practical due to building layout, a separate service shall be brought into each unit.

406.2 A combined domestic water service/fire protection service line may be installed only if RPU determines that domestic water consumption is sufficient to prevent water from becoming stale in the combined service line.

407 Manufactured Home Developments

407.1 A separate and individual water service shall be provided for each lot within a manufactured home development constructed hereafter. (See Exhibit B.) The curb valve shall be readily accessible to RPU.

407.2 A separate and individual water service shall be provided for each accessory building within a manufactured home development.

408 Additional Buildings Under Same Ownership

408.1 If an additional building under the same ownership is placed or constructed on a parcel of land with an existing building or buildings and requires water service, a common water service will be permitted if RPU determines the existing service has sufficient hydraulic capacity. The water service extension to the additional building shall:

(1) Connect to the existing service outside the existing building and before the existing water meter;

(2) Not extend through the existing building;

(3) Be separately metered.

408.2 If, at some time in the future, separate ownership of the buildings occurs, either separate water services or a recorded joint maintenance agreement will be required.

409 Service Materials and Sizing

New water services shall be 1" diameter minimum. Existing 3/4" diameter services may be replaced with 3/4" services of acceptable service materials. Water services for large homes, multi-unit residential buildings, unusually long services, low pressure areas or commercial/industrial uses shall be sized in accordance with the current Minnesota Plumbing Code. (See Exhibit I for acceptable water service materials.)

410 Service Failures and Repairs

410.1 Repair of only copper, cast iron or ductile iron water service lines is permitted.

410.2 Failed services determined to be all or in part lead or galvanized iron shall be replaced with acceptable materials. If any portion of a water service fails, all lead and galvanized portions of the entire service shall be replaced with an acceptable service material.

410.3 In the event a water service leak is not repaired after notification or the owner refuses to make the repairs, and RPU determines damage to public property is imminent or there is danger to traffic on the adjacent street, RPU may repair the service leak and charge the owner for the costs incurred and an additional amount to cover the estimated water loss occasioned by the leak. The loss will be estimated from the date the leak is repaired.

411 Frozen Water Services

411.1 The thawing of a frozen water service is the responsibility of the owner of the premises served. The owner shall be responsible for obtaining the services of a thawing contractor. RPU personnel will assist the thawing contractor in the location of curb stop valves and in the location of any freeze-up. RPU may require reimbursement of any expenses incurred as a result of services provided by RPU at the request of the thawing contractor.

411.2 When a service has been thawed, the owner may allow water to flow from a tap at the approximate rate of 1/4 GPM to prevent freezing. The water consumed will be billed at the normal rate.

412 Abandoned Water Services

412.1 An unused or abandoned water service shall be cut off and disconnected at the water main, and the curb box removed by a licensed plumber or licensed sewer and water contractor at the expense of the property owner.

412.2 In order to guarantee disconnection in accordance with this specification, a deposit may be required at RPU discretion before RPU will sign a City Demolition Permit. The deposit will be returned when the water service disconnection and curb box removal have been completed in a manner satisfactory to RPU. In the event the abandoned service is not satisfactorily disconnected or the service owner requests RPU to assume responsibility for accomplishing the service abandonment, the deposit will be used by RPU to defray the cost of properly abandoning the service.

412.3 If a water service is no longer used and there is doubt about the future use of the service, one year may elapse before the service must be disconnected and the curb box removed. Unless RPU is provided with definite plans for future use, the deposit will remain with RPU until the disconnection or reconnection is completed.

412.4 No new connection to a water main will be permitted until arrangements have been made for properly abandoning all unused water services on a site.

413 Service Replacements Prior to Street Paving

413.1 The portion of any water service of lead or galvanized iron extending from the curb box to the corporation tap, and any inoperative curb valve, shall be replaced during a street construction or reconstruction project. The cost of replacing this portion of the water service and the curb valve will be invoiced directly to the service owner, or will be incorporated into the street project cost and assessed by the City to the service owner.

413.2 Any single water service connecting to multiple services at the front lot line shall be replaced in such manner as to provide each premises with an individual water service, unless the multiple services are owned by a single property owner association. The cost of replacing this portion of the water service and the curb valves will be invoiced in equal shares directly to the individual water service owners, or will be incorporated into the street project cost and assessed by the City to the individual water service owners.

414 Locations

RPU will mark the approximate location of City-owned water system facilities when requested to do so. RPU will also mark the approximate location of privately owned water services, but assumes no responsibility for the accuracy of, or liability for any outcome resulting from, such locations. However, the owner of the privately owned water service must execute a release and indemnification agreement with the City prior to RPU marking the location of the water services. In accordance with State statute, customers, contractors and others shall use the Gopher State One-Call System for requesting location services (1.800.252.1166). RPU will provide locations within 48 hours from the time of notification by Gopher State One-Call, except in emergency situations.

WATER METERS AND METERING

501 Multiple Unit Installations

Whenever a multiple unit residential, commercial or industrial building is to be constructed and served by the City water system, the owner shall submit to RPU for approval a set of drawings showing the proposed water service(s) and a plumbing schematic for the building and a tabulation of the plumbing fixture units to be installed.

502 Meter Ownership

All water meters and metering-related equipment used for water and sewer billing will be furnished, owned and maintained by RPU. Meters used only for sewer billing will be furnished and maintained by RPU.

503 Meter Access

503.1 RPU shall have the right to access the served premises at all reasonable times to install, read, inspect, maintain or remove any water meter or metering-related equipment. If a customer denies RPU reasonable access to a water meter or metering-related equipment, water service may be terminated until access is gained. (See Section 203.1(7).)

503.2 If a customer does not furnish a protected, suitable location for a meter, RPU may refuse connection of the premises to the City water system.

504 Meter Installation

504.1 Location and Number

- (1) In a single-family residence and residential multiple-unit buildings where the individual units and underlying property are to be under individual ownership, the meter shall be installed in the residence/unit being served.
- (2) Water meters installed to serve manufactured homes with an unheated crawlspace, or structures of a temporary nature shall be installed as shown in Exhibit B.

- (3) In all other buildings not listed in (1) and (2) above, water meter(s) shall be located in a single common area readily accessible to RPU without entering an individual unit.
- (4) Existing meter installations are grandfathered in.

504.2 Installation Requirements

- (1) Only the following may be connected to a water service ahead of the meter (See Sections 408, 704 and 801.1.):
 - a) An approved separately metered water service to an additional building under the same ownership;
 - b) A private fire protection system (See Section 704 for an exception);
 - c) A metered irrigation service.
- (2) Water meter(s) shall be installed at the point of entry of the water service into the building. All water meter installations shall have a full flow stop valve on each side of, and adjacent to, the water meter.
- (3) For 1" and smaller meter installations, the water service line shall be brought vertically through the floor of the premises and shall have a readily accessible meter stop valve installed immediately before, and on the street side of, the meter between 12" and 48" above the finished floor. (See Exhibit A.) The pipe and meter shall be rigidly supported in order to prevent vibration when the meter operates.
- (4) A bypass (the same size as the meter) shall be installed for all meters 1-1/2" in size or larger.
- (5) The water meter shall be readily accessible. An unobstructed area extending not less than 12" above the meter, and on all sides and the front of the meter shall be provided to permit RPU to easily read and maintain the meter and operate the meter stop valves. Meter stop valves shall be maintained in operable condition.
- (6) In newly constructed buildings, the water meter(s) shall be installed immediately after the water service is flushed.

505 Remote Registers

RPU is phasing out remote registers. However, a remote register shall be maintained for each water meter at a premises until RPU furnishes a meter with an ERT for automatic water meter reading. The remote register shall be maintained adjacent to the electric meter. If an existing electric meter is relocated, RPU will install an ERT and remove the remote register.

506 Maintenance, Repairs and Replacements

RPU maintains all water meters used to determine City water and sewer billings. Any repair expense caused by actions, neglect or carelessness of the owner or occupant of a premises will be charged to either the customer or the owner of the premises.

507 Meter Testing

507.1 Any customer who believes that a meter is failing to properly register the use of water, may request a meter check by contacting the Customer Service Representative. RPU will test the meter using standard calibration equipment and generally accepted test procedures within a reasonable period of time. Customers who request additional meter tests may be charged for the additional tests at a standard fee. (See Section 1003 related to billing adjustments for defective meters.)

507.2 Customers who request additional testing of a water meter within a twelve month period will be charged for the meter test in accordance with the RPU Miscellaneous Fee Schedule in effect at the time of the test. This schedule is available at the RPU Service Center.

508 Frozen Meters

Customers shall be responsible for protecting water meters from freezing. If a meter freezes, the customer may be required to relocate the meter to a location approved by RPU. For manufactured homes, the meter shall be relocated to the interior of the home. If a meter is damaged by freezing and is replaced, the Frozen Meter Replacement Fee will be charged.

509 Meter and Bypass Seals

All water meters, remote registers and bypasses will be sealed. Unauthorized connection to, bypassing of, or tampering with a water meter, associated equipment or meter seals, or indications or evidence thereof subjects the customer to immediate discontinuance of service, prosecution under the laws of Minnesota, adjustment of prior bills for services rendered and reimbursement to RPU for all extra expense incurred on the account.

510 Meter Identification

In multiple meter installations, the owner shall provide permanent, easy to read markings to identify the premises served.

511 Irrigation Meter Installations

(See Exhibits D, E and F.)

FIRE HYDRANTS

601 Materials, Locations and Relocations

- **601.1** Public and private fire hydrant materials and locations shall be as specified in the City of Rochester "Standards for Street and Utility Construction". Fire hydrant locations will be approved by the Rochester Fire Prevention Bureau.
- **601.2** Fire hydrants may be relocated at the owner's expense and only if approved by RPU. Payment shall be made in advance if RPU relocates the hydrant. The new hydrant location shall be on the property frontage of the owner requesting the relocation. Hydrant relocations shall be in accordance with the City of Rochester "Standards for Street and Utility Construction".

602 Permits for Private Use

- **602.1** A temporary hydrant use permit will be issued when, in the opinion of RPU, the private use of a fire hydrant will not unduly jeopardize the rights of the public and when water cannot be conveniently provided from another source. (See Exhibits J and K.)
- **602.2** A permit will be issued for each hydrant location. Only RPU employees may install or remove temporary hydrant valves and meters. The permit holder or their representatives shall not operate the main hydrant valve.
- **602.3** A deposit may be required at RPU discretion to guarantee payment for water used and to cover any breakage or damage to the fire hydrant, flush valve or meter. Upon expiration of the permit, the deposit will be refunded less any resulting charges.

603 Charges for Hydrant Meter Rental

603.1 A Hydrant Meter Installation Fee and Hydrant Meter Rental Fee will be charged for each permit issued. Expenses resulting from actions, neglect or carelessness will also be charged to the permit holder.

603.2 In addition to the meter installation and rental fees, and charges for damages, a charge will also be made for all water used in accordance with the standard water rate schedule.

604 Unauthorized Fire Hydrant Use

An identified unauthorized user of water from a City fire hydrant will be charged the Unauthorized Use of Water Fee in accordance with the RPU Miscellaneous Fee Schedule. A copy of this schedule may be obtained at the RPU Service Center.

PRIVATE FIRE PROTECTION SYSTEMS

701 Connection to City Water Mains

701.1 Connection of any private exterior or building interior fire protection or extinguishing system to a City water main requires City approval.

701.2 Complete plans and specifications for private fire protection systems to be connected to a City water main shall be submitted to the City Building and Safety Department and the Rochester Fire Department for review and approval. All such systems shall conform to the latest Minnesota and City plumbing and fire protection codes.

701.3 Private fire hydrants shall be of the same make, model and color as those installed by the Water Utility. Private fire hydrant use is governed by the conditions for fire protection systems set forth in these Rules. A release indemnity agreement will be required for any private fire hydrant not maintained by RPU.

702 Modifications

Complete plans and specifications for any modifications or additions to an existing private fire protection or fire extinguishing system connected to a City water main shall be submitted to the City Building and Safety Department and the Rochester Fire Department for review and approval. No modification or addition to or alteration of the systems shall be made without written permission from the City. Any such changes shall conform to the latest State and City plumbing and fire protection codes.

703 Release and Indemnification

A release indemnity agreement in the form prescribed by the RPU shall be provided at the time of construction for any building where an **unmonitored** private fire protection or extinguishing system is to be connected to a City water main, or at the time an **unmonitored** fire protection or extinguishing system is added to such a building. The indemnity agreement shall indemnify and hold the City harmless from any and all actions, causes of action, costs, damages, claims and demands to which the City may be subjected by reason of the connection to or utilization of City water mains. The release indemnity agreement shall be filed with RPU and recorded before permission may be granted hereunder to connect the **unmonitored** fire protection or fire extinguishing system to a City water main.

704 Metering of Fire Service

The owner of a premises protected by a private fire protection system connected to a public water main shall, if directed to do so by RPU, install a meter (furnished by RPU) on the fire service at the property owner's expense.

705 Unauthorized Fire Service Use

If water from a fire service is being wasted or used for purposes other than fire protection, the owner or occupant will be notified and a charge may be made for the estimated amount of water so used. If such improper conditions are not corrected within ten (10) days, the water service may be terminated until proper corrections are made.

IRRIGATION SYSTEMS

801 Metering and Backflow Prevention

801.1 Service and Meter

Customers have the option of taking the water supply for an irrigation system from the water service before the customer's main water meter and separately metering irrigation water usage. The meter installation shall comply with Section 500. (See Exhibits D, E and F.)

801.2 Backflow Prevention

At a minimum, a Pressure Vacuum Breaker (PVC), or a Spill-resistant Vacuum Breaker (SVB) shall be installed immediately upstream of the irrigation system on all new and existing irrigation systems as required by the Minnesota Plumbing Code. (See Exhibits D, E and F.).

802 Yard Hydrant Installations

Yard hydrants shall be metered and provided with an appropriate backflow preventer. A yard hydrant installation shall be similar to Exhibit E in order to provide a means of removing water subject to freezing from the service line. Installation of freeze-proof hydrants with bottom drains is not permitted. Yard hydrants are expected to be seasonal in use, and the meter and backflow preventer shall be removed and the curb valve shut off at the end of each watering season.

CROSS CONNECTIONS

901 Rules/Codes

The RPU Public Water System Cross Connection and Backflow Prevention Program, and the Section of the Minnesota Plumbing Code Chapter 4715 dealing with "Protection of Potable Water Supply" are adopted for these Rules. If any requirement of the Minnesota Plumbing Code is more restrictive than these Rules, the Minnesota Plumbing Code shall take precedence.

902 Backflow/Cross Connection Prevention

902.1 No private well shall be connected to any RPU residential or commercial customer house piping. Wells located within buildings to be connected to the City water system must be sealed and abandoned within 90 days of connection to the City water system hereafter.

902.2 Any industrial premises/facility also served by a private well shall install a Reduced Pressure Zone (RPZ) backflow preventer at the owner's cost immediately downstream from the RPU water meter, and shall provide written proof to RPU of the installation.

902.3 Any customer whose operations are determined by RPU to constitute a potential for the occurrence of a cross connection or backflow shall install and maintain an appropriate backflow preventer, and shall provide written proof to RPU of the installation.

902.4 When private use of a fire hydrant is authorized by RPU, the Hydrant Use Permit holder shall have their tank truck, street sweeper, or other water using equipment inspected by RPU prior to issuance of the permit. In most cases, RPU will install a suitable backflow preventer to protect the municipal water distribution system. (See Exhibits J and K.)

903 Access

RPU, or a designated representative of RPU, shall have the right to access the served premises at all reasonable times for inspection of backflow preventer devices.

METER READING

1001 Meter Reading Frequency

RPU will attempt to read all water meters on a monthly basis.

1002 Final Readings

For the purpose of issuing a final bill, RPU will make a final reading of the customer's meter or outside remote register. Where a remote register is in use, RPU will use the remote register reading if it has been verified within the past year.

1003 Billing Adjustments for Defective Meters

If a water meter is determined to be stopped or not accurately measuring water use, the amount billed will be corrected based on RPU Board Policy Statement "Adjustment of Electric and Water Bills" which is available at the RPU Service Center. (See Section 507 for meter testing rules.)

1004 Defective Remote Registers

In the event of failure or malfunctioning of an automatic reading device, a customer's bill will be adjusted based on the inside meter reading.

LIST OF EXHIBITS

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EXHIDILA	and Meter Installation
Exhibit B	Typical Manufactured Home Water Service and Meter Installation32
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Exhibit D	Irrigation System Indoor Metering Detail
Exhibit E	Small Irrigation System Outdoor Metering Detail34
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Exhibit G	Alternate Service Layout for a Townhouses
Exhibit H	Curb Box Cover
Exhibit I	Allowable Water Service Pipe Materials
Exhibit J	Use of Water from Fire Hydrants in the City of Rochester39
Exhibit K	Backflow Prevention for Water Tankers40
	Utility Board Resolution41

Note: Exhibits shown (except Exhibits I and J) are Detail Plates from the City of Rochester "Standards for Street and Utility Construction". The Exhibits are provided for general information, and may not be current. Copies of current Detail Plates may be obtained from the City of Rochester Department of Public Works, and are also available on the City of Rochester web site at:

http://www.rochestermn.gov/departments/publicworks/specsandstandards/index.asp

EXHIBITS A and B



EXHIBIT C



EXHIBITS D and E



EXHIBIT F


EXHIBIT G



EXHIBIT H



EXHIBIT I

ALLOWABLE WATER SERVICE PIPE MATERIALS

Diameter	Material
3/4" 1" 1-1/4"	Type K Copper Type K Copper ^(See Note 1) Type K Copper ^(See Note 1)
1-1/2" 2" 4"	Type K Copper (See Note 1) Type K Copper (See Note 1) Type K Copper (See Note 1) Ductile Iron
6" 8"	 "
10" 12"	"

- Note 1 Polyethylene water service pipe meeting the following specifications will be permitted as a substitute for copper water service pipe only for the below-stated applications and only with written Water Utility approval prior to installation. Required polyethylene pipe diameter for each such service will be determined by the Water Utility. (Upsizing from copper will be likely due to the increased polyethylene pipe wall thickness.)
- <u>Materials</u>. Pipe shall be new, meeting requirements of the latest revision of AWWA C901 "Standard for Polyethylene Pressure Pipe and Tubing, ½" Through 3" for Water Service", PE3408 material conforming to ASTM D3350, 200 psi pressure rating, copper tube OD-sized with DR 9 outside diameter ratio, meeting potability requirements of NSF 61, and factory supplied in blue-color. Contractor shall provide affidavit of compliance with these specifications to include name of pipe manufacturer.
- <u>Allowable Polyethylene Water Service Pipe Applications</u>. (<u>All 2" and smaller water service lines within the street right-of-way shall to be Type K copper</u>.)
 - *i.* That portion of a new water service line extending as one-piece from the curb stop or the end of the inplace copper water service stub-out to the inside of the building served, <u>only if the service extends more</u> <u>than 100' from the curb stop to the building served</u>.
 - ii. portion of a replacement water service line extending one-piece from the existing curb stop to the building being served, <u>only if the service extends more than 100' from the curb stop to the building being</u> served.
 - iii. That Installation of polyethylene pipe will not be permitted where volatile organic materials are determined to be present in or near the water service line trench materials.
- 2) <u>Fitting and Sleeving Requirements</u> Standard brass fittings as specified in the City of Rochester Standards for Street and Utility Construction, C150 "Service Connection Specifications", shall be used at the termination points of polyethylene water service pipe. A standard stainless steel stiffener shall be installed inside the polyethylene pipe at such joints. Polyethylene pipe is to be installed inside a Schedule 40 PVC sleeve where passing through a building wall or floor.
- 3) <u>Service Tracer Wire Requirement</u>. A continuous solid core #10 (blue colored) THHN insulated tracer wire shall be installed immediately above the entire length of the service to the curb stop (and into the building served), and permanently attached to the copper portion of the service line on the street end. The brass coupling nut is to be provided with a tapped bossed projection suitable for connection of the tracer wire.
- 4) <u>Water Service Grounding Requirement</u>. The water service within the building served shall be properly grounded as required by the National Electric Code.

EXHIBIT J

USE OF WATER FROM FIRE HYDRANTS IN THE CITY OF ROCHESTER

See Section 600 (Fire Hydrants) of these Rules for appropriate non-fire fighting use of fire hydrants. Temporary hydrant use permits will be issued for authorized use.

Prior to the issuance of Hydrant Use Permits, all tank trucks, street sweepers and other water using equipment may be inspected by RPU for compliance with the Section of the Minnesota Plumbing Code Chapter 4715 dealing with "Potable Water Protection".

The Permit holder shall install a permanently attached fill pipe with an air gap between it and the tank at least twice the diameter of the fill pipe. As an alternative, an approved reduced pressure backflow preventer may be installed on the fill pipe. See Exhibit L.

If you have any questions, please contact RPU.

EXHIBIT K



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RESOLUTION

BE IT RESOLVED by the Public Utility Board of the City of Rochester, Minnesota, to approve a Purchase Agreement and supplemental Letter of Understanding with Olmsted County, and request that the Mayor and City Clerk execute the Purchase Agreement for

Purchase of Olmsted County Campus Water System

The amount of the Purchase Agreement to be ONE DOLLAR (\$1) and other valuable consideration, including those obligations set forth separately by contract or agreement.

Passed by the Public Utility Board of the City of Rochester, Minnesota, this 24th day of June, 2014.

Stery William President Min Sellmar er;

Appendix 11: Implementation Checklist - Summary of All the Actions that a Community is doing, or Proposes to do, Including Estimated Implementation Dates.

Implementation Checklist - Summary of All the Actions that a Community is doing, or Proposes to do, Including Estimated Implementation Dates.

Rochester is a growing city with anticipated above normal growth to continue for several decades due to the expansion of the Mayo Clinic – Destination Medical Center. Rochester Public Utilities (RPU) plans to continue to focus on water conservation education and community outreach activities. Listed below is a table that summarizes actions RPU will continue to implement.

Continued/Proposed Actions	Implementation
	Date
Continue with current education efforts with a focus on water education.	Ongoing
RPU staff provides water tours to students and a variety of groups in the	
community on as call basis.	
RPU plans to budget for school busing expenses to provide tours for all the	2022
4 th graders in Rochester. Typically the private schools can afford this cost	
opposed to public schools.	
Continue to include a monthly water conservation tip in RPU's newsletter	Ongoing
that is sent out to all RPU customers, which is currently 50,000.	
Continue to do leak detection on ½ of RPU water mains to identify leaks and	Ongoing
needed repairs.	
Continue with RPU's Water Rebate Program.	Ongoing
Continue to provide ongoing education information via RPU's website,	Ongoing
brochures & newsletters. RPU has developed a Water Conservation	
brochure and also a brochure for student education purposes that has a	
focus on water conservation.	

Appendix 12: Sources of Information for Table 10

Sources of Information for Table 10

Barr Engineering Co., 2018. Rochester Groundwater Model V2.0, report prepared for Rochester Public Utilities, September 2018.

Rochester Public Utilities Hydrographs for Water Supply Wells (see Appendix 3).



RESOLUTION

BE IT RESOLVED by the Public Utility Board of the City of Rochester to adopt RPU's approved DNR Water Supply Plan.

PASSED AND ADOPTED BY THE PUBLIC UTILITY BOARD OF THE CITY OF

ROCHESTER, MINNESOTA, THIS 29th DAY OF August, 2023.

PRESIDENT

SECRETARY



REQUEST FOR ACTION

RPU Index of Board Policies

MEETING DATE: August 29, 2023

AGENDA SECTION: Board Policy Review ORIGINATING DEPT: Rochester Public Utilities

PRESENTER: Tim McCollough

Action Requested:

Review the Index of Board Policies to summarize progress on policy updates and determine future policy review items.

Report Narrative:

RPU Board policies are updated throughout the year as needed.

Prepared By: Christina Bailey

Attachments:

Index of Board Policies-revised.xlsx

ROCHESTER PUBLIC UTILITIES		
INDEX OF BOARD POLICIES		
	REVISION DATE	FOCUS AREA / STAFF LIAISON
BOARD		
1. Mission Statement	4/25/2023	Policy / Mark Kotschevar
2. Responsibilities and Functions	3/27/2012	Policy / Mark Kotschevar
3. Relationship with the Common Council	2/28/2012	Policy / Mark Kotschevar
4. Board Organization	3/27/2018	Policy / Mark Kotschevar
5. Board Procedures	9/27/2022	Policy / Mark Kotschevar
6. Delegation of Authority/Relationship with Management	7/24/2018	Policy / Mark Kotschevar
7. Member Attendance at Conferences and Meetings	12/18/2018	Policy / Mark Kotschevar
8. Board Member Expenses	12/18/2018	Policy / Mark Kotschevar
9. Conflict of Interest	DELETED	N/A
10. Alcohol and Illegal Drugs	DELETED	N/A
11. Worker Safety	3/27/2012	Policy / Mark Kotschevar
		*
CUSTOMER		
12. Customer Relations	4/30/2019	Ops & Admin / Krista Boston
13. Public Information and Outreach	4/30/2019	Communications / Steven Nyhus
14. Application for Service	7/1/2016	Ops & Admin / Scott Nickels
15. Electric Utility Line Extension Policy	3/28/2017	Finance / Peter Hogan
16. Billing, Credit and Collections Policy	4/26/2022	Finance / Peter Hogan
17. Electric Service Availability	10/29/2019	Ops & Admin / Scott Nickels
18. Water and Electric Metering	6/26/2018	Ops & Admin / Scott Nickels
19. Adjustment of Utility Services Billed	6/29/2021	Finance / Peter Hogan
20. Rates	7/25/2017	Finance / Peter Hogan
21. Involuntary Disconnection	9/28/2021	Communications / Steven Nyhus
		ž
ADMINISTRATIVE		
22. Acquisition and Disposal of Interest in Real Property	12/19/2017	Ops & Admin / Scott Nickels
23. Electric Utility Cash Reserve Policy	1/28/2020	Finance / Peter Hogan
24. Water Utility Cash Reserve Policy	1/28/2020	Finance / Peter Hogan
25. Charitable Contributions	6/25/2019	Communications / Steven Nyhus
26. Utility Compliance	10/24/2017	Communications / Steven Nyhus
27. Contribution in Lieu of Taxes	6/29/1999	Finance / Peter Hogan
28. Joint-Use of Infrastructure and Land Rights	3/30/2021	Ops & Admin / Scott Nickels
29. Customer Data Management Policy	3/22/2022	Communications / Steven Nyhus
30. Life Support	9/24/2019	Communications / Steven Nyhus
31. Electric Utility Undergrounding Policy	9/29/2020	Ops & Admin / Scott Nickels
Red - Currently being worked on		
Yellow - Will be scheduled for revision		
Marked for deletion		



REQUEST FOR ACTION

Board Policy 2. Responsibilities and Functions

MEETING DATE: August 29, 2023 ORIGINATING DEPT: Rochester Public Utilities

AGENDA SECTION: Board Policy Review PRESENTER: Tim McCollough

Action Requested:

Review and receive comments on the revised policy.

Report Narrative:

Attached are redlined and clean versions of the Responsibilities and Functions Policy the Board Chair and Vice Chair reviewed last month with staff. It contains the suggested edits from that meeting in early August.

Prepared By:

Tim MC

Attachments:

02 Board Responsibilities and Functions redlined 8-4-23.pdf

02 Board Responsibilities and Functions clean copy 8-29-23.docx

Board # 2

ROCHESTER PUBLIC UTILITIES BOARD POLICY STATEMENT

POLICY SUBJECT: Board Responsibilities and Functions

POLICY OBJECTIVE:

The Board intends to clearly state its responsibilities and the functions that it must perform to properly direct the affairs of the City utility systems which it controls.

POLICY STATEMENT:

- 1. The Board's principal role is to provide <u>governance and</u> policy direction, to the RPU management and staff.
- In providing policy direction, tThe Board will represent the interests of its customer owners and will make timely policy decisions.
- 3. The Board will carry out its responsibilities by exercising the following functions:
 - a. Appoint a General Manager who is directly responsible for management of the RPU organization.
 - b. Adopt and maintain a mission statement or similar document which identifies the fundamental philosophy by which the Board intends to carry out its responsibilities.
 - c. With assistance from the General Manager<u>and/or staff</u>, establish strategic goals which support the RPU mission, vision and core values and provide the direction needed by management to prepare operational plans.

- d. Ensure that the RPU has a long-range operational plan and review and approve, each year, a plan which is presented by the General Manager <u>and/or staff</u>.
- e. With assistance from the General Manager<u>and/or staff</u>, make broad policy decisions and prepare written policy statements to guide future Board decisions and provide the direction needed by management to prepare <u>management</u>_policies and procedures.
- f. Review, modify, and approve the capital and operating budgets presented each year by the General Manager <u>and/or staff</u>.
- g. Review, modify, and approve all rates and other published charges for services provided.
- h. Review, modify, and approve all financing programs, including the borrowing of money, if necessary.
- i. Ensure that an independent <u>financial</u> audit of the RPU's financial statements is performed annually is conducted annually in compliance with auditing standards generally accepted in the United States of America.
- j. Upon advice of the General Manager, review, modify, and approve organizational structure and, consistent with Section 15.05 of the Home Rule Charter, staffing levels, personnel policies, labor agreements, salary administration and fringe benefit programs.
- k. Monitor and evaluate the performance of management, <u>and through</u> management, the performance of all employees. F<u>f</u>ormally evaluate the performance of the General Manager at least annually.
- 1. Ensure that the RPU operates in accordance with the City Charter, specific directives of the Common Council, and all other applicable legal requirements.
- m. Serve as the body of appeal for persons and groups who desire to be heard on matters under consideration by the Board or on questions arising from the RPU's policies, operations, rates, or the actions of employees.

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Commented [MT1]: this language was suggested by Peter Hogan to cover the scope of a typical financial audit.

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n. Keep informed about matters which affect decisions facing the Board.

<u>mo.</u> Maintain a willingness to acquire the knowledge necessary through ongoing education and training in order to understand cope with the issues of a modern utility.

o. Ensure the long term usefulness of the RPU to the City of Rochester and its customer owners by providing training for Board, management, and staff.

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Commented [TM2]: Remove from this policy and move to GM delegations.

RELEVANT LEGAL AUTHORITY:City of Rochester Home Rule Charter Chapter XVEFFECTIVE DATE OF POLICY:December 27, 1984DATE OF POLICY REVIEW:April 25, 2023 August 29, 2023POLICY APPROVAL:

Board President

Date

ROCHESTER PUBLIC UTILITIES BOARD POLICY STATEMENT

POLICY SUBJECT: Board Responsibilities and Functions

POLICY OBJECTIVE:

The Board intends to clearly state its responsibilities and the functions that it must perform to properly direct the affairs of the City utility systems which it controls.

POLICY STATEMENT:

- 1. The Board's principal role is to provide governance and policy direction to RPU management and staff.
- 2. The Board will represent the interests of its customer owners and will make timely decisions.
- 3. The Board will carry out its responsibilities by exercising the following functions:
 - a. Appoint a General Manager who is directly responsible for management of the RPU organization.
 - b. Adopt and maintain a mission statement or similar document which identifies the fundamental philosophy by which the Board intends to carry out its responsibilities.
 - c. With assistance from the General Manager and/or staff, establish strategic goals which support the RPU mission, vision and core values and provide the direction needed by management to prepare operational plans.

- d. Ensure that RPU has a long-range operational plan and review and approve, each year, a plan which is presented by the General Manager and/or staff.
- e. With assistance from the General Manager and/or staff, make broad policy decisions and prepare written policy statements to guide future Board decisions and provide the direction needed by management to prepare policies and procedures.
- f. Review, modify, and approve the capital and operating budgets presented each year by the General Manager and/or staff.
- g. Review, modify, and approve all rates and other published charges for services provided.
- h. Review, modify, and approve all financing programs, including the borrowing of money, if necessary.
- i. Ensure that an independent financial audit of RPU is conducted annually in compliance with auditing standards generally accepted in the United States of America.
- j. Upon advice of the General Manager, review, modify, and approve organizational structure and, consistent with Section 15.05 of the Home Rule Charter, staffing levels, personnel policies, labor agreements, salary administration and fringe benefit programs.
- k. Monitor and evaluate the performance of management; formally evaluate the performance of the General Manager at least annually.
- 1. Ensure that RPU operates in accordance with the City Charter, specific directives of the Common Council, and all other applicable legal requirements.
- m. Serve as the body of appeal for persons and groups who desire to be heard on matters under consideration by the Board or on questions arising from RPU's policies, operations, rates, or the actions of employees.
- n. Keep informed about matters which affect decisions facing the Board.

o. Maintain a willingness to acquire the knowledge necessary through ongoing education and training in order to understand the issues of a modern utility.

RELEVANT LEGAL AUTHORITY: City of Rochester Home Rule Charter Chapter XV
EFFECTIVE DATE OF POLICY: December 27, 1984
DATE OF POLICY REVIEW: August 29, 2023
POLICY APPROVAL: August 29, 2023

Board President

Date



REQUEST FOR ACTION

Division Reports & Metrics - August 2023

MEETING DATE: August 29, 2023 ORIGINATING DEPT: Rochester Public Utilities

AGENDA SECTION: Division Reports & Metrics PRESENTER: Tim McCollough

Action Requested:

Review the reports from each of RPU's five divisions: Core Services, Compliance and Public Affairs, Power Resources, Customer Relations and Corporate Services.

Report Narrative:

Each division of RPU reports monthly on its metrics and activities to the Board.

Prepared By: Christina Bailey

Attachments:

Division Reports August 2023.pdf

Division Reports & Metrics August 2023

CORE SERVICES SAFETY, COMPLIANCE & PUBLIC AFFAIRS POWER RESOURCES CUSTOMER RELATIONS CORPORATE SERVICES FINANCIAL REPORTS

Division Reports & Metrics August 2023

CORE SERVICES

Electric Utility:

1. Electric Outage Calculations for the month and year to date (July 2023 Data)

- a. Reliability = 99.97623%
- b. 9,538 Customers affected by Outages
- c. SAIDI = 10.61 min
- d. CAIDI = 60.69 min

Year-to-date Reliability = 99.99405% Year-to-date Customers affected by Outages = 17,184 Year-to-date SAIDI = 2.62 min Year-to-date CAIDI = 59.01 min

2. Electric Utility Operations – T&D, Engineering, System Ops, GIS, Tech Services:

- Construction through the Park's properties for the Marion Road duct has kicked off with preconstruction meetings. Construction on 9th St. portion of the duct project is currently on-going.
- RPU's Electric System Operations group hosted MISO training, open to all utilities in the MISO footprint, covering real-time event simulation, MISO operating procedures, and event analysis.
- Reliability statistics were negatively impacted by severe weather in July.



Summary of individual electrical outages (gre	eater than 200 customers – July 2023 data)
---	--

# Customers	Date	Duration	Cause
2,099	7/28/2023	1h 4m	Vegetation
1,784	7/10/2023	40m	Animals – Squirrel
1,548	7/26/2023	24m	Overhead Equipment
976	7/26/2023	1h 13m	Overhead Equipment
956	7/3/2023	1h 1m	Overhead Equipment
627	7/24/2023	41m	Vegetation
329	7/182023	3h 9m	Human Cause

Summary of aggregated incident types (greater than 200 customers – July 2023 data)

# Customers	Total # of Incidents	Cause
3,718	8	Overhead Equipment
3,071	13	Vegetation
2,157	29	Animals – Squirrel
329	1	Human Cause

Water Utility:

1. Water Outage Calculations for the month and year to date (July 2023 data):

- a. Reliability = 99.99751071%
- b. 219 Customers Affected by Outages
- c. 764.0 Customer Outage Hours

e. CAIDI = 209.3

Year-to-date Reliability = 99.99844550% Year-to-date Customers Affected by Outages = 1,211 Year-to-date Customer Outage Hours = 3,306.9 Year-to-date SAIDI = 4.7 Year-to-date CAIDI = 163.8

- Performed 1,449 Gopher State water utility locates during the month for a total of 8,204 for the year.
- Repaired water distribution system failures or maintenance at the following locations during the month. :
 - > 505 18th St SE (Water Main Break) 7/5
 - > 800 Blk of 15th Ave SE (Leak) 7/6

> 525 13th St NE - (Water Main Break) - 7/7

- > 300 17th Ave NW (Water Main Break) 7/13
- > 3244 Lake St PR NW (Water Main Break) 7/17









GIS/Property Rights

• Hydro line LIDAR flight completed utilizing drone technology. Deliverables will include a 3D point cloud of the corridor and also identify vegetation and other clearance issues that need to be addressed.

SAFETY / COMPLIANCE & PUBLIC AFFAIRS August 2023

1. <u>Safety</u>

TRAINING	Total Required Enrollments	Completions as of 7/31/2023	Percent Complete
July 2023	364	362	99.5%
Calendar Year to 7/31/2023	3112	3110	99.9%

SAFETY TEAMS	Total Members	Members Attending	Percent Attending
July 2023	26	22	84.6%
Calendar Year to 7/31/2023	178	141	79.2%

INCIDENTS	Reports Submitted	OSHA Cases ¹	RPU RIR²	BLS RIR ³
July 2023	1	0		
Calendar Year to 7/31/2023	18	2	1.81	1.5

¹ Deemed to meet OSHA criteria as a recordable case by RPU Safety Manager, subject to change

² Recordable Incident Rate – Number of OSHA Recordable Cases per 100 employees.

³ Bureau of Labor Statistics nonfatal illnesses and injuries in the utility sector



23 of RPU's 24 departments are recordable injury free in 2023 228 of RPU's 230 employees are recordable injury free in 2023



2023 OSHA Recordable Case Detail				
Work Area	Incident Date	Description	Primary Reason it's a Recordable	Corrective Action
T&D	3/13/2023	Slipped and fell onto shovel causing torso (L) pain	Restricted Duty	N/A
T&D	4/1/2023	Slipped off ladder, fell to ground causing pain to back, elbow (L) and neck.	Restricted Duty	Reviewed work practices with those involved

SAFETY INITIATIVES

- 1. Completed assembly of 17th edition of the APPA Safety Manuals, distribution is pending.
- 2. Working with the MMUA safety coordinator, new respirators are being provided to water operators along with required fit testing.
- 3. Responsibility for restocking First Aid kits has been assumed by RPU due to ongoing issues with contracted services.

2. Environmental & Regulatory Affairs

- On July 18th Nitrate sampling was conducted on all RPU's municipal wells. Nitrates are tested annually for drinking water compliance. RPU's wells range from 0.0 to 0.65 ppm for Nitrates. EPA's drinking water standard for Nitrates is 10 ppm.
- On July 17th & 19th RPU staff performed water tours for the Harriet Bishop Summer of Discovery with ages ranging from Kindergarten to 5th grade.
- On August 1st & 2nd the MN Dept. of Health (MDH) was on-site to conduct a sanitary survey and to collect PFAS samples from all RPU's wells. Sanitary Surveys are performed by MDH at least every 18 months required by the Safe Drinking Water Act. The survey reviews: Source of Water, Treatment, Distribution, Water Storage, Pumps & Controls, Monitoring & Reporting, System Mgmt. & Operations, Operator Compliance and Wellhead Protection. To date, RPU complies with EPA's proposed regulations for PFAS. Results of this current round of testing will be available in 2 months.

3. <u>Communications</u>

- Tony and Jacob Hansen (summer Compliance Assistant) attended a city PIO active shooter tabletop exercise on July 18 at the City Emergency Operations Center.
- Tony spoke with the Rochester Post Bulletin about RPU and PFAS in water supplies.
- Jacob Hansen participated in a recruitment video series that the City is developing. Jacob was able to speak about what brought him to RPU and what he has been doing during his internship.



Tweet impressions 4,672 ↑34.2%

1,233 4-2

RPU Environmental Stewardship Metric

Tons CO₂ Saved

(12 Month Rolling Sum)



POWER RESOURCES MANAGEMENT

AUGUST 2023

Portfolio Optimization

- 1. In July, RPU continued to bid GT1, GT2 and WES into the MISO day-ahead and realtime markets. GT2 and WES are also capable of participating in the ancillary services market.
 - a. Ancillary Service Market Supplemental Reserves
 - i. Cleared DA
 - 1. GT2 15 days
 - 2. WES 23 days
 - ii. Deployment YTD
 - 1. GT2 0
 - 2. WES-0
 - b. Dispatched by MISO

i.	GT1 – 3 times	YTD	13 times
ii.	GT2 – 26 times	YTD	89 times
iii.	WES – 29 times	YTD	103 times

c. Hours of Operation

	or opere			
i.	GT1 –	26 hours	YTD	131 hours
ii.	GT2 –	231 hours	YTD	732 hours
iii.	WES –	298 hours	YTD	872 hours

d. Electricity Generated

i.	GT1 –	558 MWh	YTD 2,811 MWh
ii.	GT2 –	8,108 MWh	YTD 25,187 MWh
iii.	WES-	10,018 MWh	YTD 27,907 MWh

e. Forced Outage

i.	GT1 –	0 hours	YTD	255 hours
ii.	GT2 –	2 hours	YTD	221 hours
iii.	WES –	0 hours	YTD	6 hours

2. MISO market Real Time Price averaged \$33.85/MWh and Day Ahead Price averaged \$35.48/MWh.

CUSTOMER RELATIONS (Contact Center, Utility Programs and Services, Commercial and Residential)

Events/Opportunities for Customers

- 1. Utility Programs and Services sponsored a hole at the annual ASHRAE golf outing at Willow Creek Golf Course on August 3. The group handed out program information and had the opportunity to meet with many of RPU's customers and trade allies.
- 2. Utility Programs and Services participated in the Rochester Police Department's Safe City Nights event on August 8 at Longfellow Elementary. Utility Programs and Services staff were there with electric information, as well as staff from the T&D department, with a line truck on site to show attendees.
- 3. Utility Programs and Services participated in the Rochester Police Department's Safe City Nights event on August 22 at Watson Field. Utility Programs and Services staff were there with water information, as well as staff from the water department, with a water truck on site to show attendees.
- 4. Utility Programs and Services sponsored a booth at the Electrify Rochester Expo on Saturday, August 26. It was a great opportunity to share RPU's rebate programs specific to electrification and the launching of the new EV Time of Use rebate program.
- 5. Customer Care continues to work closely with the Collections Team in Corporate Services to make outreach calls to customers with past due balances on their accounts. The intent is to be proactive and connect these customers with outside resources for financial assistance. During the month of July, 737 customers were called.



- **↓** YTD Savings: 9,396,491 kWh
- ♣ Percent to kWh Goal: 53.3%



- 4 Total Customers Enrolled: 75
 - 2021 = 1
 - 2021 = 60
 - 2022 = 8
 - 2023 = 6



- SolarChoice = 6
- Solar = 27

- Electric Vehicle = 25
- Regular Residential (Other) = 17



4 Total Customers Enrolled: 77

- 2021 = 70
- 2022 = 9
- 2023 = -2



- **4** Total Customers Enrolled: 77
 - Round Up = 40
 - Fixed Amount = 37


- \rm **Totals**:
 - Devices = 796
 - Customers = 696
 - Unenrolled Customer = 12



Total Number of Calls: 5,767 (graphed above)



4 Total Number of Transactions Processed by Representatives: 4,058 (graphed above)

4 Total Number in Dollars Processed by Representatives: \$1517,237





- **4** Total Number of Transactions: 63 (graphed above)
- Total Number of Transactions by Payment Method: 30 cash, 10 check, and 23 credit card payments

CORPORATE SERVICES

1. Business Services:

- Payroll/HR Coordinated the onboarding of the new General Manager.
- Completing payroll system updates and calculation of back pay and benefits to the beginning of 2023 based on the new IBEW Outside labor contract.
- Completed design and graphic work for the Welcome Booklet.
- Document Storage complete the statement of work for the software upgrade.
- Reviewed photo archives, scanned and restored photos to be used for artwork in the Service Center.



Purchasing and Materials Management:

- Have a current posting for a Warehouse Operations Attendant.
- Currently open request for quote for foundation, prefab building at Marion Rd substation.
- Currently open request for quote for Lake Zumbro hydroelectric generation plant controls upgrades.



Note: Increase in September 2022 Invoiced amount was due to wire annual order.

Decrease in Invoice activity in March 2023 is due to one less week of check runs within the reporting period.



2. Finance and Accounting:

General

• Budget: The Finance and Accounting team completed the 2024 and 2025 recommended budget, prepared presentations for the August 8, 2023 Special Board meeting and provided budget information to the City Finance team for inclusion into

the August 21 and August 28, 2023 Council study sessions. The RPU recommended budget will be reviewed at the August 28th Council study session. The RPU Board will be requested to approve the recommended 2024 – 2025 budget at the October 24, 2023 Board meeting.

- The Electric Utility cost of service study (COS) includes three phases. The first is updating the financial information based on 2022 actual results and our 5 year budget projections. The second phase, which is collecting the specific historical unit information by customer class to arrive at revenue requirements by customer class is complete. The final phase is the rate design to bring each customer class into alignment with the revenue requirement by class over the following years. We are currently updating the rate recommendations based on the results of phase 2 and the overall general adjustment recommendation during the budget presentation on August 8, 2023. The COS results will be presented to the Board during the regular September, 2023 Board meeting.
- The Lead Collections Technician position, which will be open in December due to a retirement, has been filled.
- The accounting team is working on evaluating a replacement to the current COGNOS budgeting software which has been out of support for a number of years. An implementation, which was approved in the 2023 budget, is planned for Q4 of 2023.
- In coordination with City Finance team, the Finance team is working to establish a contract with a third party to act as our paying agent for all bond payments.

• Information Services:

• During July, the last piece of the late fees project was completed to enable the ability to charge a late fee for a customer that no longer has service with RPU.

3. Financial Results:

Note: Budget numbers are compared to the Board approved 2023 budget which is adjusted for 2022 approved projects not completed in 2022 and carried over to 2023. The majority of the variance in the Change in Net Position – Electric is due to a weather driven increase in sales and gross margin for both retail sales and wholesale sales (\$1.049M). Water sales volume and gross margin are over budget by \$185K.

	Current Month				Year to Date						
(In Thousands)	Actual		Budget Variance		Actual		Budget		Variance		
Revenue - Electric	\$ 19,160	\$	17,768	\$	1,392	\$	101,662	\$	95,594	\$	6,068
Revenue - Water	1,404		1,153		251		7,279		6,729		550
Change in Net Position - Electric	4,620		2,916		1,704		12,763		15,612		(2,849)
Change in Net Position - Water	547		162		385		1,880		978		902



TO: Jeremy Sutton, Director of Power Resources

FROM: Tina Livingston, Senior Financial Analyst

SUBJECT: LOAD FORECAST SUMMARY FOR 2023

	SYS	STEM ENERGY		PEAK SYSTEM DATA				
MONTH	ACTUAL	FORECAST	% DIFF	ACTUAL	FORECAST	% DIFF		
	MWH	MWH		MW	MW			
JAN	98,317	101,577	-3.2%	166.2	174.5	-4.8%		
FEB	88,358	91,538	-3.5%	162.7	170.2	-4.4%		
MAR	94,140	90,382	4.2%	150.1	152.4	-1.5%		
APR	86,360	84,706	2.0%	174.5	150.9	15.7%		
MAY	93,889	87,677	7.1%	210.6	207.1	1.7%		
JUN	110,690	102,733	7.7%	239.5	248.2	-3.5%		
JUL	115,177	118,792	-3.0%	262.6	269.6	-2.6%		
AUG					243.8			
SEP					246.1			
OCT					167.8			
NOV					148.9			
DEC					167.6			

YTD 686,930 677,405 1.4

HISTORICAL SYSTEM PEAK 292.1 MW 07/20/2011

% DIFF = (ACTUAL / FORECAST X 100) - 100 MWH = MEGAWATT HOUR = 1000 KILOWATT HOURS MW = MEGAWATT = 1000 KILOWATTS

2023 YTD SYSTEM REQUIREMENTS



Energy Required for the Month (MWH)





















ROCHESTER PUBLIC UTILITIES

	INDEX							
<i>K:</i> \	RPU\GA\FINANCIAL REPORTS\ FI	NANCIALS CRMO.pdf						
DATE:	July	2023						
TO:								
From:	Judith Anderson Controller	(507) 292-1217						
SUBJ:	RPU - Financial St	atements						

RPU - ELECTRIC UTILITY Financial Reports

Page # REPORT TITLE:

- 1 Statement of Net Position Condensed
- 2 Statement of Revenues, Expenses & Changes in Net Position YTD
- 3 Statement of Cash Flows YTD
- 4 5 Production and Sales Statistics YTD
- **6** GRAPH Capital Expenditures
- 7 GRAPH Major Maintenance Expenditures
- 8 GRAPH Cash & Temporary Investments
- 9 GRAPH Changes in Net Position
- 10 GRAPH Bonds

RPU - WATER UTILITY Financial Reports

Page # REPORT TITLE:

- 11 Statement of Net Position Condensed
- 12 Statement of Revenues, Expenses & Changes in Net Position YTD
- **13** Statement of Cash Flows YTD
- 14 Production and Sales Statistics YTD
- **15** GRAPH Capital Expenditures
- 16 GRAPH Major Maintenance Expenditures
- 17 GRAPH Cash & Temporary Investments
- 18 GRAPH Changes in Net Position

END OF BOARD PACKET FINANCIALS

ROCHESTER PUBLIC UTILITIES <u>STATEMENT OF NET POSITION</u> ELECTRIC UTILITY

1

2

3

4

5 6 July 31, 2023

7		July 2023	July 2022	Difference	<u>% Diff.</u>	June 2023
8	ASSETS					
9	CURRENT ASSETS					
10	CASH & INVESTMENTS					
11	Unreserved Cash & Investments	51,637,363	46,140,297	5,497,066	11.9	50,904,200
12	BOARD RESERVED CASH & INVESTMENTS	E 222 022	E 049 601	(616 570)	(10.4)	E 222 022
13 14	Vorking Funds Reserve	5,332,022 20,545,000	20 867 000	(816,579)	(10.4)	5,332,022 20 545 000
15	Special Capital & Major Maintnce Reserve	3,800,638	3,300,638	500,000	15.1	3,800,638
16	Contingency Reserve	11,970,000	11,251,000	719,000	6.4	11,970,000
17	General Capital & Major Maintnce Reserve	15,922,085	18,446,263	(2,524,178)	(13.7)	15,975,951
18	Total Reserved Cash & Investments	57,569,745	59,813,503	(2,243,757)	(3.8)	57,623,611
19 20	I Otal Cash & Investments Receivables & Accrued Litility Revenues	109,207,109	105,953,800	3,253,309	3.1	108,527,812
21	Inventory	10.268.680	8.202.230	2.066.450	25.2	10.061.534
22	Other Current Assets	2,318,499	1,687,613	630,886	37.4	2,517,958
23	RESTRICTED ASSETS					
24	Restricted Cash and Equivalents	5,979,145	5,824,820	154,325	2.6	4,838,322
25	Total Current Assets	163,447,023	158,491,492	4,955,531	3.1	158,764,455
26	NON-CURRENT ASSETS					
27						
28	RESTRICTED CASH & INVESTMENTS	12 212 200	12 070 452	122 7/7	1 1	12 212 510
29	Europe Held in Truet	12,213,200	12,079,455	133,747	0.0	12,212,510
31	Total Restricted Cash & Investments	12 213 248	12 079 453	133 795	1 1	12 212 559
32	Total Restricted Assets	12,213,248	12,079,453	133,795	1.1	12,212,559
33	CAPITAL ASSETS					
34	NON-DEPRECIABLE ASSETS					
35	Land and Land Rights	11,351,222	11,264,662	86,559	0.8	11,351,222
36	Construction Work in Progress	37,162,033	22,513,253	14,648,780	65.1	35,928,080
37	Total Non-depreciable Assets	48,513,255	33,777,916	14,735,339	43.6	47,279,302
38	DEPRECIABLE ASSETS					
39	Utility Plant in Service, Net	238,703,238	243,416,212	(4,712,974)	(1.9)	239,717,982
40 11	Total Depreciable Assets	239 415 084	244 422 616	(5 007 532)	(29.3)	240 454 375
42	Net Capital Assets	287.928.339	278,200,532	9.727.808	3.5	287.733.677
43	Other Non-Current Assets	11,534,266	11,588,364	(54,099)	(0.5)	11,549,478
44	Total Non-Current Assets	311.675.853	301.868.349	9.807.504	3.2	311,495,714
45		475 122 876	460 359 841	14 763 035	3.2	470 260 169
45	DEFERRED OUTELOWS OF RESOURCES	475,122,075	400,000,041	14,700,000	0.2	470,200,100
47	DEFERRED OUTFLOWS OF RESOURCES	6,032,709	7,596,770	(1,564,061)	(20.6)	6,217,291
48	TOTAL ASSETS + DEFERRED OUTFLOW RESOURCE	481,155,585	467,956,611	13,198,974	2.8	476,477,460
49	LIABILITIES					
50	CURRENT LIABILITIES					
51	Accounts Payable	14,383,944	15,643,576	(1,259,631)	(8.1)	14,812,247
52	Due to other funds	3,814,097	3,737,373	76,724	2.1	3,667,792
53	Customer Deposits	2,453,714	2,145,988	307,726	14.3	2,430,947
54 55	Compensated absences	2,196,248	2,100,103	96,145	4.6 10.7	2,264,719
55 56	Interest Pavable	1,000,333	1.101.486	(52.342)	(4.8)	524.572
57	Current Portion of Long Term Debt	7,395,000	7,085,000	310,000	4.4	7,395,000
58	Misc Other Current Liabilities	6,152	3,246	2,906	89.5	5,895
59		32,298,654	32,720,523	(421,870)	(1.3)	32,015,729
6U 61	Compensated absences	1 705 188	1 669 267	35 021	22	1 692 046
62	Other Non-Current Liabilities	19,020,462	10,112,060	8,908,402	88.1	19,020,462
63	Unearned Revenues	1,728,349	1,691,115	37,234	2.2	1,688,490
64	Long-Term Debt	157,907,249	166,657,878	(8,750,628)	(5.3)	158,015,791
65 66		212 650 002	212 850 844	(100 041)	0.1	212 432 510
67	DEFERRED INFLOWS OF RESOURCES	212,000,002	212,000,044	(130,341)	(0.1)	212,402,019
68	DEFERRED INFLOWS OF RESOURCES	10.892.650	19.535.930	(8.643.279)	(44.2)	11.062.133
69	NET POSITION	-,,9		(-,;/	(··-/	,,,,
70	Net Investment in Capital Assets	135,294,241	117,155,661	18,138,579	15.5	135,532,393
71	Total Restricted Net Position	4,930,048	4,723,333	206,715	4.4	4,313,798
72	Unrestricted Net Position	117,378,743	113,690,843	3,687,901	3.2	113,136,617
73		257,603,032	235,569,838	22,033,195	9.4	252,982,808
74	TOTAL LIAB, DEFERRED INFLOWS, NET POSITION	481,155,585	467,956,611	13,198,974	2.8	476,477,460

ROCHESTER PUBLIC UTILITIES <u>Statement of Revenues, Expenses & Changes in Net Position</u>

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July, 2023 YEAR TO DATE

7		<u>Actual YTD</u>	<u>Original</u> <u>Budget YTD</u>	<u>Actual to</u> Original Budget	<u>% Var.</u>	Last Yr <u>Actual YTD</u>
8	SALES REVENUE					
9	Retail Revenue					
10	Electric - Residential Service	36,398,352	34,180,427	2,217,925	6.5	34,316,263
11	Electric - General & Industrial Service	53,758,434	49,136,516	4,621,918	9.4	49,360,821
12	Electric - Public Street & Highway Light	027,024 115 371	981,308	(103,044) (6,530)	(15.0)	810,208 112,637
14	Electric - Interdepartmentl Service	740 228	565 838	174,390	30.8	603 038
15	Electric - Power Cost Adjustment	561.906	1.698.320	(1.136.415)	(66.9)	(605,290)
16	Electric - Clean Air Rider	1,196,941	1,186,418	10.523	0.9	1.251.152
17	Electric - Total Retail Revenue	93.599.055	87.870.797	5.728.258	6.5	85.848.888
18	Wholesale Electric Revenue		- ,, -	-, -,		
19	Energy & Fuel Reimbursement	3,297,044	2,280,349	1,016,695	44.6	3,578,205
20	Capacity & Demand	1.622.795	1.597.973	24.822	1.6	973.651
21	Total Wholesale Electric Revenue	4.919.839	3.878.322	1.041.517	26.9	4.551.856
22	Steam Sales Revenue	3 143 089	3 845 006	(701 917)	(18.3)	4 344 790
		0,140,000	0,040,000	(101,017)	(10.0)	4,044,700
23	TOTAL SALES REVENUE	101,661,984	95,594,125	6,067,859	6.3	94,745,535
24	COST OF REVENUE					
25	Purchased Power	57,226,613	51,596,370	5,630,243	10.9	51,147,343
26	Generation Fuel, Chemicals & Utilities	3,703,692	4,664,621	(960,929)	(20.6)	5,593,921
27	TOTAL COST OF REVENUE	60,930,305	56,260,991	4,669,314	8.3	56,741,264
28	GROSS MARGIN					
29	Retail	36,372,443	36,274,428	98,015	0.3	34,701,545
30	Wholesale	4,359,236	3,058,707	1,300,530	42.5	3,302,725
31	TOTAL GROSS MARGIN	40,731,679	39,333,134	1,398,545	3.6	38,004,271
~~						
32	Litilities Expense	202 200	204 245	(11 955)	(4.0)	200 617
33 24	Depreciation & Amortization	202,390	294,243	(11,000)	(4.0)	290,017
35	Salaries & Benefits	14 524 772	13 199 502	1 325 270	10.0	12 508 200
36	Materials. Supplies & Services	6.541.271	8.392.314	(1.851.043)	(22.1)	9.265.651
		(1, 122, 820)	(4.450.750)	22,020	0.4	(1.110.201)
31		(1,132,030)	(1,150,750)	(400,760)	2.1	(1,110,391)
30		29,152,501	29,000,001	(400,769)	(1.4)	29,571,557
39	Other Operating Revenue	6,071,277	5,879,193	192,084	3.3	4,154,599
40	NET OPERATING INCOME (LOSS)	17,650,394	15,658,996	1,991,399	12.7	12,587,332
41	NON-OPERATING REVENUE / (EXPENSE)					
42	Investment Income (Loss)	1,567,926	610,463	957,463	156.8	690,361
43	Interest Expense	(3,044,756)	(3,041,455)	(3,301)	(0.1)	(3,134,519)
44	Amortization of Debt Issue Costs	(58,387)	(58,387)	0	0.0	(61,600)
45	Miscellaneous - Net	(55,363)	(22,850)	(32,513)	(142.3)	(58,994)
		//			.	/
46	IOTAL NON-OPERATING REV (EXP)	(1,590,580)	(2,512,229)	921,649	36.7	(2,564,752)
47	INCOME (LOSS) BEFORE TRANSFERS / CAPITAL	16 050 914	42 446 767	2 042 049	22.2	40.000 594
47		16,059,814	(5,545,004)	2,913,048	(0, 4)	10,022,561
48	Transfers Out	(5,567,682)	(5,545,864)	(21,818)	(0.4)	(5,121,201)
49	Capital Contributions	2,270,414	8,011,554	(5,741,141)	(71.7)	2,274,306
50	CHANGE IN NET POSITION	12,762,545	15,612,457	(2,849,911)	(18.3)	7,175,685
51	Net Position, Beginning	244,840,487				228,394,152
52	NET POSITION, ENDING	257,603,032				235,569,838
53						
54			Rolling 12 Months	Planned for Curr Year		
55	Debt Coverage Ratio	•	3.14	3.08		
	-	۷ ک			8/15/2023	9:04 AM

1	ROCHESTER PUBLIC UTILITIES
2	STATEMENT OF CASH FLOWS
3	ELECTRIC UTILITY
4	FOR
5	JULY, 2023
6	YEAR-TO-DATE

7		Actual YTD	Last Yr Actual YTD
8	CASH FLOWS FROM OPERATING ACTIVITIES	6	
9	Cash Received From Customers	100,961,479	88,407,654
10	Cash Received From Other Revenue Sources	0	2,548,890
11 12	Cash Received From Wholesale & Steam Customer Cash Paid for:	8,150,214	7,730,065
13	Purchased Power	(55,475,535)	(49,437,946)
14	Operations and Maintenance	(20,509,706)	(20,468,876)
15	Fuel	(3,347,568)	(4,976,094)
16	Payment in Lieu of Taxes	(5,358,590)	(4,923,459)
17	Net Cash Provided by(Used in) Utility		
18	Operating Activities	24,420,294	18,880,234
19	Sewer, Storm Water, Sales Tax & MN Water Fee Collect	tions	
20	Receipts from Customers	26,414,664	26,103,060
21	Remittances to Government Agencies	(25,801,798)	(25,346,595)
22	Net Cash Provided by(Used in) Non-Utility		
23	Operating Activities	612,866	756,465
24 25	NET CASH PROVIDED BY(USED IN) OPERATING ACTIVITIES	25,033,160	19,636,699
26 27	CASH FLOWS FROM CAPITAL & RELATED FINANCING ACTIVITIES		
28	Additions to Utility Plant & Other Assets	(12.372.250)	(9.714.341)
29	Payments related to Service Territory Acquisition	(103,803)	(86,428)
30	Payment on Long-Term Debt	0	0
31	Net Bond/Loan Receipts	0	0
32	Cash Paid for Interest & Commissions	(3,147,434)	(3,304,459)
33 34	NET CASH PROVIDED BY(USED IN) CAPITAL & RELATED ACTIVITIES	(15,623,487)	(13,105,228)
35	CASH FLOWS FROM INVESTING ACTIVITIES		
36	Interest Earnings on Investments	921.684	339.574
37	Construction Fund (Deposits)Draws	0	0
38	Bond Reserve Account	(4,980,432)	(4,690,123)
39	Escrow/Trust Account Activity	0	0
40	NET CASH PROVIDED BY(USED IN)		
41	INVESTING ACTIVITIES	(4,058,748)	(4,350,549)
42	Net Increase(Decrease) in Cash & Investments	5,350,925	2,180,922
43	Cash & Investments, Beginning of Period	103,856,182	103,772,874
44	CASH & INVESTMENTS, END OF PERIOD	109,207,107	105,953,796
45	Externally Restricted Funds	18,192,393	17,904,272
46	Grand Total	127,399,500	123,858,068

ROCHESTER PUBLIC UTILITIES PRODUCTION & SALES STATISTICS ELECTRIC UTILITY

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July, 2023

YEAR-TO-DATE

6							Last Yr
7			Actual YTD	Budget YTD	Variance	<u>% Var.</u>	Actual YTD
8							
9	ENERGY SUPPLY (kWh)	(primarily calend	ar month)				
10	Net Generation						
11	IBM Diesel Generators		20,856	0	20,856	-	24,595
12	Lake Zumbro Hydro		8,023,148	7,349,592	673,556	9.2	7,816,335
13	Cascade Creek Gas Turbine		27,997,476	13,710,000	14,287,476	104.2	8,187,216
14	Westside Energy Station		27,906,750	18,251,000	9,655,750	52.9	29,657,550
15	Total Net Generation		63,948,230	39,310,592	24,637,638	62.7	45,685,696
16	Other Power Supply						
17	Firm Purchases		677,603,206	667,797,231	9,805,975	1.5	674,971,461
18	Non-Firm Purchases		2,349,457	2,258,084	91,373	4.0	1,913,792
19	LRP Received		0	0	0	-	0
20	Total Other Power Supply		679,952,663	670,055,315	9,897,348	1.5	676,885,253
21	TOTAL ENERGY SUPPLY		743,900,893	709,365,907	34,534,986	4.9	722,570,949
22	ENERGY USES (kWh)	(primarily billing	period)				
23	Retail Sales	# Custs					
24	Electric - Residential Service	54,031	218,395,314	215,960,802	2,434,512	1.1	223,975,552
25	Electric - General Service & Industrial	5,152	437,489,939	436,543,043	946,896	0.2	428,232,016
26	Electric - Street & Highway Lighting	3	1,956,886	2,085,909	(129,023)	(6.2)	2,010,961
27	Electric - Rental Lights	n/a	428,932	457,600	(28,668)	(6.3)	451,453
28	Electric - Interdptmntl Service	1	5,338,279	4,073,978	1,264,301	31.0	4,429,277

28	Electric - Interdptmntl Service	1	5,338,279	4,073,978	1,264,301	31.0	4,429,277
29	Total Customers	59,187					
30	Total Retail Sales		663,609,350	659,121,332	4,488,018	0.7	659,099,258
31	Wholesale Sales		55,995,021	31,961,000	24,034,021	75.2	37,937,251
32	Company Use		3,694,607	1,761,702	1,932,905	109.7	2,732,373
33	TOTAL ENERGY USES		723,298,978	692,844,034	30,454,944	4.4	699,768,882
34	Lost & Unaccntd For Last 12 Months		35,090,353	2.8%			
35	STEAM SALES (mlbs)	(primarily billing p	eriod)				

35	STEAM SALLS (IIIDS)	(primarily builing period)				
36	Steam Sales in Mlbs	246,908	254,400	(7,492)	(2.9)	257,049

ROCHESTER PUBLIC UTILITIES PRODUCTION & SALES STATISTICS (continued) ELECTRIC UTILITY

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July, 2023

YEAR-TO-DATE

6								Last Yr	
7 8		<u>Actual YTD</u>		<u>Budget YTD</u>		<u>Variance</u>	<u>% Var.</u>	<u>Actual YTD</u>	
9	FUEL USAGE	(calendar month))						
10	Gas Burned								
11	SLP	331,749	MCF	368,880	MCF	(37,131)	(10.1)	343,301	MCF
12	Cascade	281,649	MCF	163,607	MCF	118,042	72.1	81,767	MCF
13	Westside	219,066	MCF	144,184	MCF	74,882	51.9	236,570	MCF
14	Total Gas Burned	832,464	MCF	676,671	MCF	155,793	23.0	661,638	MCF
15	Oil Burned								
16	Cascade	45,867	GAL	0	GAL	45,867	-	14,415	GAL
17	IBM	1,590	GAL	0	GAL	1,590	-	1,916	GAL
18	Total Oil Burned	47,457	GAL	0	GAL	47,457	-	16,331	GAL

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CAPITAL EXPENDITURES ELECTRIC

Current Year		July, 2023	Prior Years Ending Dec 31st		
			<u>2022</u>	<u>2021</u>	<u>2020</u>
ANNUAL BUDGET	36,676,650		24,799,405	15,246,736	15,059,888
ACTUAL YTD	6,671,978		10,976,457	7,041,030	10,078,628
% OF BUDGET	18.2%		44.3%	46.2%	66.9%



MAJOR MAINTENANCE EXPENDITURES ELECTRIC

Current Year		July, 2023	Prior 1	ears Ending Dec	31st
			<u>2022</u>	<u>2021</u>	<u>2020</u>
ANNUAL BUDGET	4,849,716		8,589,452	3,815,243	4,010,088
ACTUAL YTD	1,694,909		6,479,286	3,680,535	3,111,620
% OF BUDGET	34.9%		75.4%	96.5%	77.6%



CASH AND TEMPORARY INVESTMENTS ELECTRIC



CHANGE IN NET POSITION ELECTRIC





7/31/2023



7/31/2023



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ROCHESTER PUBLIC UTILITIES <u>STATEMENT OF NET POSITION</u> WATER UTILITY

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July 31, 2023

6						
7		July 2023	July 2022	Difference	% Diff.	June 2023
8	ASSETS	<u> </u>	<u> </u>		<u> </u>	<u></u>
9	CURRENT ASSETS					
10	CASH & INVESTMENTS					
11	Unreserved Cash & Investments	7,533,618	6,414,021	1,119,598	17.5	7,502,624
12	BOARD RESERVED CASH & INVESTMENTS					
13	Working Funds Reserve	1,190,000	1,175,000	15,000	1.3	1,190,000
14	Capital & Major Maintenance Reserve	4,445,000	3,635,000	810,000	22.3	4,445,000
15	Contingency Reserve	1,732,000	1,664,000	68,000	4.1	1,732,000
16	Total Reserved Cash & Investments	7,367,000	6,474,000	893,000	13.8	7,367,000
17		14,900,010	12,000,021	2,012,596	10.0	14,009,024
18	Receivables & Accrued Utility Revenues	1,208,701	1,120,258	148,444	13.3	999,423 314 554
20	Other Current Assets	48 200	55 584	(7 384)	(13.3)	50 332
20	Tetel Current Accete	40,200	44.040.477	0.004.005		40.040.004
21		16,521,172	14,319,177	2,201,995	15.4	16,242,934
22						
23	NON-DEPRECIABLE ASSETS					
24	Land and Land Rights	742,667	677,486	65,180	9.6	742,667
25	Construction Work in Progress	7,293,738	6,198,121	1,095,617	17.7	7,187,369
26	I otal Non-depreciable Assets	8,036,405	6,875,608	1,160,797	16.9	7,930,035
27	DEPRECIABLE ASSETS					
28	Utility Plant in Service, Net	99,799,700	97,629,940	2,169,760	2.2	99,979,334
29	Net Capital Assets	107,836,105	104,505,548	3,330,557	3.2	107,909,369
30	Other Non-Current Assets	19,534,381	0	19,534,381	0.0	19,534,381
31	Total Non-Current Assets	127,370,486	104,505,548	22,864,938	21.9	127,443,751
32	TOTAL ASSETS	143,891,658	118,824,725	25,066,933	21.1	143,686,685
33	DEFERRED OUTFLOWS OF RESOURCES					
34	DEFERRED OUTFLOWS OF RESOURCES	551,901	773,472	(221,571)	(28.6)	572,844
35	TOTAL ASSETS + DEFERRED OUTLFOW RESOURCE	144,443,559	119,598,197	24,845,362	20.8	144,259,528
36	LIABILITIES					
37	CURRENT LIABILITIES					
38	Accounts Payable	377,241	380,093	(2,852)	(0.8)	628,361
39	Due to Other Funds	0	0	0	0.0	0
40	Customer Deposits	129,902	112,404	17,498	15.6	129,121
41	Compensated Absences	285,101	302,503	(17,401)	(5.8)	297,047
42	Accrued Salaries & Wages	122,069	109,731	12,338	11.2	113,907
43		914,312	904,731	9,582	1.1	1,168,436
44	NON-CURRENT LIABILITIES	160 900	167 010	(6.400)	(2.0)	159,060
45	Other Non-Current Liabilities	2 400 013	1 335 994	(0,409) 1 064 020	(3.0) 79.6	2 400 013
40	Total Non-Current Liabilities	2,400,013	1,503,994	1,004,020	79.0	2,400,013
		2,000,022	1,000,211	1,007,011		2,300,210
48		3,475,135	2,407,942	1,067,193	44.3	3,726,711
49		10 100 1	. === ===			10 0 10
50		19,108,435	1,558,637	17,549,798	1,126.0	19,219,974
51		107 000 107	101 505 510	0 000 555		407 000 000
52 52	Net Investment in Capital Assets	107,836,105	104,505,548	3,330,557	3.2	107,909,369
53 54	TOTAL NET POSITION	121 859 989	115.631.618	6.228.372	5.4	121 312 843
55	TOTAL LIAB DEFERRED INFLOWS NET POSITION	144.443.559	119,598,197	24.845.362	20.8	144,259,528

ROCHESTER PUBLIC UTILITIES <u>Statement of Revenues, Expenses & Changes in Net Position</u> WATER UTILITY July, 2023 YEAR TO DATE

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			<u>Original</u>	Actual to		Last Yr
7		<u>Actual YTD</u>	Budget YTD	<u>Original Budget</u>	<u>% Var.</u>	<u>Actual YTD</u>
8						
9	Water - Residential Service	4,375,965	3,992,381	383,584	9.6	3,790,209
10	Water - Commercial Service	2,093,814	1,969,393	124,421	6.3	1,827,659
11	Water - Industrial Service	428,602	366,701	61,902	16.9	358,243
12	Water - Public Fire Protection	308,844	386,070	(27,220)	(7.1)	349,975
		21,970	14,007	7,000		14,924
14		7,279,195	6,728,632	550,563	8.2	6,341,010
15	COST OF REVENUE					
16	Utilities Expense	746,890	615,682	131,208	21.3	614,727
17	Water Treatment Chemicals/Demin Water	155,634	84,739	70,895	83.7	94,470
18	Billing Fees	448,254	452,558	(4,304)	(1.0)	489,010
19	TOTAL COST OF REVENUE	1,350,777	1,152,979	197,798	17.2	1,198,207
20	GROSS MARGIN	5,928,418	5,575,653	352,765	6.3	5,142,803
21	FIXED EXPENSES					
22	Depreciation & Amortization	1,687,115	1,791,600	(104,485)	(5.8)	1,646,747
23	Salaries & Benefits	1,902,513	1,954,833	(52,320)	(2.7)	1,611,946
24	Materials, Supplies & Services	615,762	711,300	(95,538)	(13.4)	799,420
25	Inter-Utility Allocations	1,132,830	1,156,750	(23,920)	(2.1)	1,110,391
26	TOTAL FIXED EXPENSES	5,338,220	5,614,483	(276,263)	(4.9)	5,168,504
27	Other Operating Revenue	1,206,546	1,159,189	47,357	4.1	1,116,076
28	NET OPERATING INCOME (LOSS)	1,796,744	1,120,359	676,385	60.4	1,090,375
29	NON-OPERATING REVENUE / (EXPENSE)					
30	Investment Income (Loss)	420 047	74 718	345 330	462.2	103 679
31	Interest Expense	(79)	0	(79)	0.0	(4)
32	Miscellaneous - Net	(48,662)	0	(48,662)	0.0	(4,580)
33	TOTAL NON-OPERATING REV (EXP)	371,306	74,718	296,589	396.9	99,094
	INCOME (LOSS) BEFORE TRANSFERS / CAPITAL					
34	CONTRIBUTIONS	2,168,050	1,195,076	972,973	81.4	1,189,469
35	Transfers Out	(288,024)	(246,914)	(41,110)	(16.6)	(227,288)
36	Capital Contributions	0	30,000	(30,000)	(100.0)	46,208
27	CHANGE IN NET POSITION	1 990 036	079 460	001 963	02.2	1 009 290
31		1,000,020	9/8,162	301,803	92.2	1,008,389
38	Net Position, Beginning	119,979,964				114,623,228
39	NET POSITION, ENDING	121,859,989				115,631,618

1	ROCHESTER PUBLIC UTILITIES
2	STATEMENT OF CASH FLOWS
3	WATER UTILITY
4	FOR
5	JULY, 2023
6	YEAR-TO-DATE

7		<u>Actual YTD</u>	<u>Last Yr Actual YTD</u>
8	CASH FLOWS FROM OPERATING ACTIVITIES		
9 10	Cash Received From Customers Cash Paid for:	8,826,952	7,786,567
11 12	Operations and Maintenance Payment in Lieu of Taxes	(5,648,062) (250,819)	(4,628,265) (207,625)
13 14	Net Cash Provided by(Used in) Utility Operating Activities	2,928,071	2,950,677
15	Sales Tax & MN Water Fee Collections		
16 17	Receipts from Customers Remittances to Government Agencies	358,001 (317,474)	339,487 (309,420)
18 19	Net Cash Provided by(Used in) Non-Utility Operating Activities	40.527	30.067
20	NET CASH PROVIDED BY(USED IN)		
21	OPERATING ACTIVITIES	2,968,598	2,980,744
22 23	CASH FLOWS FROM CAPITAL & RELATED FINANCING ACTIVITIES		
24	Additions to Utility Plant & Other Assets	(2,635,196)	(3,099,382)
25 26	Net Loan Receipts	0	0
27	Cash Paid for Interest & Commissions	0	0
28	NET CASH PROVIDED BY(USED IN)		
29	CAPITAL & RELATED ACTIVITIES	(2,635,196)	(3,099,382)
30	CASH FLOWS FROM INVESTING ACTIVITIES		
31	Interest Earnings on Investments	419,968	103,674
32	NET CASH PROVIDED BY(USED IN)		
33	INVESTING ACTIVITIES	419,968	103,674
34	Net Increase(Decrease) in Cash & Investments	753,370	(14,964)
35	Cash & Investments, Beginning of Period	14,147,248	12,902,983
36	CASH & INVESTMENTS, END OF PERIOD	14,900,618	12,888,019

ROCHESTER PUBLIC UTILITIES 1 **PRODUCTION & SALES STATISTICS** 2 WATER UTILITY 3 July, 2023 4 YEAR-TO-DATE 5 6 Last Yr 7 % Var. Actual YTD Actual YTD **Budget YTD** Variance 8 (ccf) (ccf) (ccf) PUMPAGE 9 (primarily calendar month) TOTAL PUMPAGE 3,890,252 10 3,328,394 561,858 16.9 3,341,556 **RETAIL SALES** (primarily billing period) 11 # Custs 12 Water - Residential Service 37,747 1,882,957 1,676,575 206,382 12.3 1,566,188 13 Water - Commercial Service 3,962 1,384,463 1,281,315 103,148 8.1 1,239,613 14 Water - Industrial Service 22 419,714 356,983 62,731 17.6 366,190 Water - Interdptmntl Service 18,310 11,055 7,255 65.6 11,906 15 1 16 **Total Customers** 41,732 TOTAL RETAIL SALES 3,705,444 3,325,928 379,516 3,183,897 17 11.4 Lost & Unaccntd For Last 12 Months 282,262 18 4.4%

CAPITAL EXPENDITURES WATER

Current Year	
ANNUAL BUDGET	6,508,342
ACTUAL YTD	960,195
% OF BUDGET	14.8%



MAJOR MAINTENANCE EXPENDITURES WATER



CASH AND TEMPORARY INVESTMENTS WATER



July, 2023

CHANGE IN NET POSITION WATER





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