AGENDA
SHAKOPEE PUBLIC UTILITIES COMMISSION
REGULAR MEETING
July 20, 2020

Following the March 13, 2020 Declaration of Peacetime Emergency by Governor Walz (as amended), the Commission is holding its regular meeting on July 20, 2020 at 5:00pm by telephone or other electronic means (WebEx) according to MN Statutes, Section 13D.021. The Commission President has concluded that an in-person meeting is not practical or prudent because of the health pandemic declared under the Emergency Order and according to current guidance from the MN Department of Health and the CDC. The Commission President will be at the regular meeting location for the Commission. The public may monitor the meeting:

Call-In Phone Number 1-408-418-9388
Enter Access Code 126 083 9836
When Prompted for Password, enter #

1. **Call to Order** at 5:00pm in the SPUC Service Center, 255 Sarazin Street.
2. **Approval of Minutes**
3. **Communications**
4. **Approve the Agenda**
5. **Approval of Consent Business**
6. **Bills: Approve Warrant List**
7. **Liaison Report**
8. **Reports: Water Items**
   - 8a) Water System Operations Report – Verbal
   - 8b) Resn. #1274 – Setting the Amount of the Trunk Water Charge, Approving Of Its Collection and Authorizing Water Service to Certain Property Known As: Windermere South 3rd Addition with the Exception of Lot 17, Block 1 and Out Lot A
   - 8c) Resn. #1276 - Setting the Amount of the Trunk Water Charge, Approving of Its Collection and Authorizing Water Service to Certain Property Known as: Lot 17, Block 1, Windermere South 3rd Addition Friendship Church Property
   - 8d) Resn. #1277 – Vacation of Temporary Electric Utility Easement Within a Portion of Lot 1, Block 1, Lot 1, Block 2 and Out Lots B and E Canterbury Park Seventh Addition, Shakopee, Scott County, Minnesota
   - 8e) Resn. #1278 – Vacation of Temporary Electric Utility Easement Within a Portion of Lot 1, Block 2 and Out Lot D Canterbury Park Seventh Addition, Shakopee, Scott County, Minnesota

8f) Resn. #1279 – Vacation of Temporary Electric Utility Easement Within a Portion of Out Lots D and F Canterbury Park Seventh Addition, Shakopee, Scott County, Minnesota
8g) Utility Facilities Easement Agreement – Water Tower #8
8h) Hansen Avenue Watermain Replacement Report
8i) Water Connection Fund and Trunk Water Fund Analysis – Ehlers, Inc.

9. **Reports: Electric Items**
9a) Electric System Operations Report – Verbal
9b) Cooper Eaton Pad Mount Switchgear Testing Program - Update

10. **Reports: Human Resources**

11. **Reports: General**
11a) SPU Website – Update and Rollout Date
11b) SPU / City of Shakopee Shared Services – Update
11c) Insurance Liability Coverage - Waiver
C=> 11d) Financial Results – June 2020
C=> 11e) COVID Financial Dashboard – June 2020
11f) Water Treatment Plant Feasibility Consultant Study Review

12. **New Business**

13. **Tentative Dates for Upcoming Meetings**

- Regular Meeting	--	August 3
- Special Meeting	--	August 13 (Closed Meeting)
- Mid Month Meeting	--	August 17
- Regular Meeting	--	September 8 (Tuesday)

14. **Adjourn** to 8/3/20 at the SPUC Service Center, 255 Sarazin Street

MINUTES

OF THE

SHAKOPEE PUBLIC UTILITIES COMMISSION
(Regular Meeting)

President Amundson called the regular session of the Shakopee Public Utilities Commission to order at the Shakopee Public Utilities meeting room at 5:00 P.M., July 6, 2020.

MEMBERS PRESENT: Commissioners Amundson, Meyer, Mocol, Brennan and Fox. Utilities Manager Crooks, Planning and Engineering Director Adams, Electric Superintendent Drent, Marketing/Customer Relations Director Walsh, as well as Commissioners Meyer, Mocol, Brennan and Fox attended via WebEx.

Commissioner Brennan stated the motion to investigate shared services with the City of Shakopee should have stated July 6, instead of the end of July.

Motion by Mocol, seconded by Brennan to approve the amended minutes of the June 15, 2020 Commission meetings. Motion carried.

SPU Legal Counsel, Kaela Brennan with McGrann Shea, requested the minutes for the Special meeting held on July 24 should state that both attorneys recommended against making any pension changes prior to the results of the investigation.

Motion by Meyer, seconded by Mocol to approve the amended minutes as requested. Motion carried.

Under Communications, Resolution #1272 – In Appreciation of Renee Schmid was requested to be tabled until the investigation finding are presented.

Motion by Brennan, seconded by Mocol to table Resolution #1272 – In Appreciation of Renee Schmid until the conclusion of the investigation. Motion carried, with Commissioners Amundson and Meyer dissenting.

President Amundson offered the agenda for approval. It was requested by President Amundson to move Agenda Item 11a: Investigation Attorneys – Recommendations Discussion be moved forward in the agenda and follow the Liaison Report.

Motion by Meyer, seconded by Brennan to approve the amended agenda as described. Motion carried.

There were four items on Consent Business for the agenda; Item 8f: Quarterly Nitrate Results, Item 11c: Financial Results – May 2020, Item 11d: COVID Financial Dashboard and Item 11f: Website Analytics – Quarterly Review.

Commissioner Brennan requested Item 11c: Financial Results – May 2020 be taken off of Consent Business.

Motion by Meyer, seconded by Fox to approve the Consent Business as requested. Motion carried.

The warrant listing for bills paid July 6, 2020 was presented.

Motion by Meyer, seconded by Mocol to approve the warrant listing dated July 6, 2020 as presented. Motion carried.

Commissioner Brennan presented the Liaison Report. The City is beginning their budget season and anticipate a deficit of $1,500,000. The deficit is mainly due to the impact of COVID 19. The City of Shakopee also completed equity training for their staff. SPU will look into providing similar training at a future date.

Korine Land with LeVander, Gillen and Miller requested direction from the SPU Commission in regards to providing recommendations pending the results of the investigation. Ms. Land stated the investigation should be wrapping up at the end of July. Potential dates to present the findings to the Commission were discussed.

Motion by Brennan, seconded by Mocol to have the investigating attorney, Korine Land, provide recommendations and the results of the investigation to the Commission in a Special Closed Meeting on Thursday, August 13, 2020. Motion carried.

Utilities Manager Crooks provided a report of current water operations. Water pumpage averaged 7.3 million gallons per day for the month of June. Crews continue their progress on the 2020 hydrant flushing program. Mr. Crooks also discussed an issue with a contractor using a hydrant that the City requested they not use.

Motion by Meyer, seconded by Fox to offer Resolution #1273. A Resolution Setting the Amount of the Trunk Water Charge, Approving of Its Collection and Authorizing Water Service to Certain Property Described as: Powers 2nd Addition. Ayes: Fox, Brennan, Mocol, Meyer and Amundson. Nayes: None. Motion carried. Resolution passed.

Motion by Meyer, seconded by Brennan to table Resolution #1274. A Resolution Setting the Amount, Approving of Its Collection and Authorizing Water Service to Certain Property Described as: Windermere South 3rd Addition with the Exception of Lot 17, Block 1 and Out Lot A. Motion carried.

Motion by Meyer, seconded by Mocol to offer Resolution #1275. A Resolution Setting the Amount of the Trunk Water Charge, Approving of Its Collection and Authorizing Water Service

to Certain Property Described as: River Bluff Addition. Ayes: Fox, Brennan, Mocol, Meyer and Amundson. Nayes: None. Motion carried. Resolution passed.

Planning and Engineering Director Adams reviewed a Utility Facilities Easement Agreement required by the City of Shakopee with all new developments. This agreement is needed for the Windermere Booster Station.

Motion by Meyer, seconded by Brennan to approve the Utility Facilities Easement Agreement and authorize its execution by the Commission President and Utilities Manager. Motion carried.

Item 8f: Quarterly Nitrate Results was received under Consent Business.

Electric Operations were reviewed by Electric Superintendent Drent. Twelve electric outages were reported and discussed. Most of outages were a result of two large storms affecting the area. One was caused by a squirrel. An electric system peak was reached last week at 96MW. Construction project updates were provided. There was follow up discussion on SPU's squirrel guard program, storm response times and a communications failure with a radio.

Mr. Crooks read the MMPA Board Meeting Public Summary for June 2020.

Shared Services between the SPU Utilities and the City of Shakopee was discussed. Mr. Crooks provided an overview of the initial meeting with Assistant City Administrator Nate Burkett that took place June 25, 2020.

Financial results for May 2020 were taken off of Consent Business by Commission Brennan. Clarification was requested regarding the terms, Water Connection Charge and Water Capacity Charge. The SPU Water Policy Manual will be amended to clarify the terminology.

Item 11b: COVID Financial Dashboard was received under Consent Business.

Marketing/Customer Relations Director Walsh presented an update on the COVID impact on SPU customer accounts. Collection service orders, collection letters, convenience fees and penalties were discussed. Past due amounts are increasing with a small segment of our residential customer base.

Motion by Meyer, seconded by Fox to direct staff to provide a feasibility study to determine how SPU reserves could be used to fund a program in providing financial relief to residential customers affected by COVID 19. Staff should provide a criteria that would be used to determine who would qualify and bring the information back to a Commission meeting as soon as it is developed. Motion carried.

Item 11f: Website Analytics – Quarterly Review was received under Consent Business.

Motion by Mocol, seconded by Meyer to adjourn to the Regular Meeting to take place on July 20, 2020. Motion carried.

Commission Secretary: John R. Crooks

SHAKOPEE PUBLIC UTILITIES COMMISSION

WARRANT LISTING

July 20, 2020

By direction of the Shakopee Public Utilities Commission, the Secretary does hereby authorize the following warrants drawn upon the Treasury of Shakopee Public Utilities Commission:

56129	American Messaging	1,547.39
56130	Allen's Service Inc.	300.00
56131	Alternative Technologies Inc.	600.00
56132	Apple Ford of Shakopee	317.85
56133	Arrow Ace Hardware	54.70
56134	Astleford International & Isuzu	156.42
56135	Beisswenger's DO IT BEST	4,985.00
56136	Robert Berndtson	228.28
56137	City of Prior Lake	3,493.50
56138	City of Shakopee	446,376.29
56139	Comcast	2.25
56140	Daffron & Associates Inc.	700.00
56141	DSI/LSI	238.56
56142	Diversified Inspections/Independent Testing Labs, Inc.	2,901.90
56143	Flyte HCM LLC	40.00
56144	Further	1,131.34
56145	Harris St. Paul	24,796.00
56146	Hawkins Inc.	2,739.21
56147	Innovative Office Solutions LLC	669.68
56148	Loffler	772.37
56149	Master Mechanical Inc.	970.00
56150	McGrann Shea Carnival	4,040.00
56151	Midwest Safety Counselors, Inc.	167.56
56152	Minn Valley Testing Labs Inc.	182.00
56153	MMPA c/o Avant Energy	3,282,976.45
56154	MMUA	17,420.00
56155	Minnesota UI	474.69
56156	MN Dept. of Revenue	149,934.00
56157	MRA-The Management Association	62.00
56158	Nagel Companies LLC	19,369.00
56159	Gerry Neville	113.86
56160	Cindy Nickolay	192.63
56161	Northern States Power Co.	5,639.94
56162	Priority 1 Outdoors Inc.	95.57
56163	R.W. Beck Group, Inc.	12,559.75
56164	Samabtek	10,288.36
56165	Sherwin Williams	486.70
56166	Short Elliott Hendrickson Inc.	9,991.45
56167	Southwest News Media	610.31
56168	Gregory Triplett	143.75
56169	Verizon Connect NWF Inc.	339.99
56170	Verizon Wireless	1,249.08
56171	Water Conservation Service Inc.	723.84
56172	Ziegler Inc.	1,144.44
	Gopher State One-Call	
	TOTAL	4,011,226.11

COMM. MTG. JUL 2020 DATE

Commission Secretary

Commission President

Director of Finance & Administration

SHAKOPEE PUBLIC UTILITIES COMMISSION

WARRANT LISTING

July 8, 2020

By direction of the Shakopee Public Utilities Commission, the Secretary does hereby authorize the following warrants drawn upon the Treasury of Shakopee Public Utilities

56042	Raida F Albantova	45.38
56043	Istar Ali	68.28
56044	Korin Barta	10.58
56045	Tiffany Baumgartner	3.78
56046	Biffs Inc.	786.24
56047	Bikhot Both	23.75
56048	Ryan Campion	65.11
56049	CAP Agency	210.80
56050	Rachel Carman & Kyle Dube	25.11
56051	Alvon Carter	7.59
56052	Chhourng Y Chao	80.00
56053	Chateau Custom Homes	14.62
56054	Sumon & Sanhita Chatterjee	82.58
56055	Collin Cornman	80.28
56056	Andrew J Craig	5.33
56057	Treynor Crooks-Flom	72.33
56058	Matthew & Danielle Daniels	1,000.00
56059	Charie Devolites	41.59
56060	Alexander Pedroso Diaz & Youdanka Pazo Hernandez	45.64
56061	Doran Canterbury I LLC	18.19
56062	Erin & Dallas Dupey	76.06
56063	Lois Dwyer & Carol Dunn	48.35
56064	Edina Realty c/o John Fortney	1,163.28
56065	Tamara S Florez	521.37
56066	Ransford Frimpong	3.15
56067	Jeanette & Edward Gilles	5.14
56068	Natalya Gnid	28.06
56069	Joseph Gould	100.00
56070	Jesse Graham	42.64
56071	Grace Greenwood & Austin S Pagel	153.85
56072	Brent F Grossman	5.30
56073	Alexander Guenther & Kathryn Klein	85.04
56074	Greg Hammer	48.37
56075	Nicholas M Hanscom	40.95
56076	ISD #720-High School	60.23
56077	Bernard Jeurssen	1,045.70
56078	Johnson-Anderson & Assoc.	379.22
56079	Rajasekhar Kanuri	75.00
56080	Melanie Klinepier	26.39
56081	Joseph Kostelny	42.47
56082	Vitaliy Kuleshov	68.38
56083	Shanoah R & Jeremy Lapatka	24.50
56084	Jacqueline Larin	33.96
56085	Bryan & Rachel Lindner	75.78
56086	Christopher Link	59.08
56087	Jason Mareck	57.04
56088	Peter & Alyssa Meier	36.29
56089	Kyle Mellott & Kiana Santiago	36.77
56090	Macayla & Mike Meyer	63.50
56091	Linzey Mischke & Joshua Stocker	88.76
56092	Abdikarim Mohamed	57.36
56093	Kathleen Murphy	38.93
56094	Northridge Court Apt.'s	13.05
56095	Opendoor Labs Inc.	31.99
56096	Doug & Kristi Picken	21.01
56097	George Reisdorff	52.79
56098	Paul B Robischon Jr.	1.86
56099	Amie Root	49.76
56100	Tanya Root	44.81
56101	Martin L Schiltz	45.00
56102	Ryan Schonberg	8.44
56103	Don & Carol Schroeder	21.18
56104	Jessica Schultz	32.44
56105	Eric J Shaffer	44.24
56106	Rashid Husein Sheriff & Abdilfatah Sharif Abdi	39.30
56107	Samantha M Sitzmann	35.98
56108	SMSC - Water Trtmnt	108.39
56109	Allison Snider	69.36
56110	Karmen P Sorenson	28.26
56111	Luann Tauer	47.00
56112	Estela Tavares Saenz	37.32
56113	Jennifer Thayer	58.19
56114	Gini Thomas	28.37
56115	Christina L Timmons	57.81
56116	Jack Toeller	21.86
56117	Nury Yojana Torres Lopez Thomas	52.47
56118	Zachary Unke	20.34
56119	Mark M Weindenhaft	204.87
56120	Karen M Wing	23.16
56121	Darren J Wood	73.25
	TOTAL	8,550.60

COMM. MTG. JUL 2020 DATE

Utilities Manager

Director of Finance & Administration

Commission President

SHAKOPEE PUBLIC UTILITIES COMMISSION

WARRANT LISTING

July 20, 2020

By direction of the Shakopee Public Utilities Commission, the Secretary does hereby authorize the following warrants drawn upon the Treasury of Shakopee Public Utilities Commission:

			Smart switch for July
56129	American Messaging	1,547.39	
56130	Allen's Service Inc.	300.00	Towed off-road boom lift from 1109 Stage Coach to Prior Lake
56131	Alternative Technologies Inc.	600.00	Oil test
56132	Apple Ford of Shakopee	317.85	Oil Change/work check up on water truck#626
56133	Arrow Ace Hardware	54.70	Wire connector - water dept / paint tape/bulbs - electric dept
56134	Astleford International & Isuzu	156.42	Electric truck #612 gauge, fuel sender 19"
56135	Beisswenger's DO IT BEST	4,985.00	WO#2403 Brush mower for Honda
56136	Robert Berndtson	228.28	Reimburse mileage
56137	City of Prior Lake	3,493.50	2nd Quarter 2020 Franchise fee
56138	City of Shakopee	446,376.29	June Sewer $336,174.84 / Storm Drainage $110,201.45
56139	Comcast	2.25	Cables for break rooms
56140	Daffron & Associates Inc.	700.00	Paystub check state required changes
56141	DSI/LSI	238.56	July trash service
56142	Diversified Inspections/Independent Testing Labs, Inc.	2,901.90	Annual Safety Inspection for SPUC equipment
56143	Flyte HCM LLC	40.00	COBRA billing for June
56144	Further	1,131.34	Claim reimbursements
56145	Harris St. Paul	24,796.00	WO#2368 HVAC Upgrade Hardware
56146	Hawkins Inc.	2,739.21	Chlorine cylinder & Hydrofluosilicic acid
56147	Innovative Office Solutions LLC	669.68	Toner, Ink cartridges, stapler
56148	Loffler	772.37	Canon copier lease
56149	Master Mechanical Inc.	970.00	Service on AC @ SPU & service @ south substation
56150	McGrann Shea Carnival	4,040.00	Municipal & Regulatory Matters
56151	Midwest Safety Counselors, Inc.	167.56	Latex gloves for water dept.
56152	Minn Valley Testing Labs Inc.	182.00	Coliform / Monthly Chlorine report
56153	MMPA c/o Avant Energy	3,282,976.45	June power bill
			3rd Quarter 2020 Electric Utility Member due $8257.50/ Safety Mgmt. Program $7412.50/Four Year Apprentice Program
56154	MMUA	17,420.00	$1750.00
56155	Minnesota UI	474.69	2nd Qtr. 2020 Unemployment Benefits for R.Larson
56156	MN Dept. of Revenue	149,934.00	June Sales & Use Tax
56157	MRA-The Management Association	62.00	Background check for Katie Adams
			WO#2325 SS-83 Feeder Extension (Underground ONLY) 2020 10" bore, Vac
56158	Nagel Companies LLC	19,369.00	locate, pit for potholing
56159	Gerry Neville	113.86	Reimburse mileage
56160	Cindy Nickolay	192.63	Reimburse mileage
56161	Northern States Power Co.	5,639.94	June power bill
56162	Priority 1 Outdoors Inc.	95.57	Service call for Electric
			WO#2387 Summer Operating Study $7,720 / WO#2376 East Shakopee
56163	R.W. Beck Group, Inc.	12,559.75	Substation Site $4839.75
56164	Samabtek	10,288.36	WO#2259 Tank 8 - HES South of Windermere - Design
56165	Sherwin Williams	486.70	Paint for electric dept.
			WO#2356 Hanson BlvdWM Rehab Study $5672.83/WO#2357 Stone Meadow WM Ext $3317.54/Water Engineering services
56166	Short Elliott Hendrickson Inc.	9,991.45	$1001.08 GL 923 03 03 08
56167	Southwest News Media	610.31	June legals
56168	Gregory Triplett	143.75	Reimburse mileage
56169	Verizon Connect NWF Inc.	339.99	June monthly service Engineering $32.38/Electric $307.61
56170	Verizon Wireless	1,249.08	Cell bill 5/24-6/23 2020
56171	Water Conservation Service Inc.	723.84	Leak locates @ 3200 4th Ave E & 2147 Murphy Ave
56172	Ziegler Inc.	1,144.44	Brush kits, plates - electric
	Gopher State One-Call		
	TOTAL	4,011,226.11	

Commission Secretary

Commission President

Director of Finance & Administration

RESOLUTION #1274

A RESOLUTION SETTING THE AMOUNT
OF THE TRUNK WATER CHARGE, APPROVING OF ITS COLLECTION
AND AUTHORIZING WATER SERVICE TO CERTAIN PROPERTY
DESCRIBED AS:

WINDERMERE SOUTH 3RD ADDITION
WITH THE EXCEPTION OF LOT 17, BLOCK 1 AND OUT LOT A

WHEREAS, a request has been received for City water service to be made available to certain property, and

WHEREAS, the collection of the Trunk Water Charge is one of the standard requirements before City water service is newly made available to an area, and

WHEREAS, the standard rate to be applied for the Trunk Water Charge has been set by separate Resolution,

NOW THEREFORE, BE IT RESOLVED, that the amount of the Trunk Water Charge is determined to be $50,696.89 based on 11.39 net acres, and that collection of the Trunk Water Charge is one of the requirements to be completed prior to City water service being made available to that certain property described as:

Lots 1-16 and Lots 18-26, Block 1 and Lots 1-8, Block 2
WINDERMERE SOUTH 3RD ADDITION

BE IT FURTHER RESOLVED, that all things necessary to carry out the terms and purpose of this Resolution are hereby authorized and performed.

Passed in regular session of the Shakopee Public Utilities Commission, this 6th day of July, 2020.

_____
Commission President: Debra Amundson

ATTEST:

_____
Commission Secretary: John R. Crooks

RESOLUTION #1276

A RESOLUTION SETTING THE AMOUNT
OF THE TRUNK WATER CHARGE, APPROVING OF ITS COLLECTION
AND AUTHORIZING WATER SERVICE TO CERTAIN PROPERTY
DESCRIBED AS:

LOT 17, BLOCK 1 WINDERMERE SOUTH 3rd ADDITION
(FRIENDSHIP CHURCH PROPERTY)

WHEREAS, a request has been received for City water service to be made available to certain property, and

WHEREAS, the collection of the Trunk Water Charge is one of the standard requirements before City water service is newly made available to an area, and

WHEREAS, the standard rate to be applied for the Trunk Water Charge has been set by separate Resolution,

NOW THEREFORE, BE IT RESOLVED, that the amount of the Trunk Water Charge is determined to be $48,782.96 based on 10.96 net acres, and that collection of the Trunk Water Charge is one of the requirements to be completed prior to City water service being made available to that certain property described as:

Lot 17, Block 1; WINDERMERE SOUTH 3rd ADDITION

BE IT FURTHER RESOLVED, that the property owner, Friendship Church, shall be given three (3) years from the date of this resolution to commence water service at which time the associated Trunk Water Charge, if not yet fully paid, shall be due and payable at the rate in effect at that future date, OR at the property owners option the Trunk Water Charge in the amount of $48,782.96 may be paid in three (3) equal installments of $16,260.99 due on August 31, 2020, August 31, 2021 and August 31, 2022 in addition to all other charges associated with receiving water service.

BE IT FURTHER RESOLVED, that all things necessary to carry out the terms and purpose of this Resolution are hereby authorized and performed.

Passed in regular session of the Shakopee Public Utilities Commission, this 20th day of July, 2020.

_____
Commission President: Debra Amundson

ATTEST:

_____
Commission Secretary: John R. Crooks

RESOLUTION #1277

A RESOLUTION FOR VACATION OF TEMPORARY ELECTRIC UTILITY EASEMENT WITHIN A PORTION OF LOT 1, BLOCK 1, LOT 1, BLOCK 2 AND OUT LOTS B & E, CANTERBURY PARK SEVENTH ADDITION SHAKOPEE, SCOTT COUNTY, MINNESOTA

WHEREAS, Canterbury Park Entertainment LLC, a Minnesota limited liability company is the owner of property, described as Lot 1, Block 1, Canterbury Park Seventh Addition and Doran Canterbury I LLC, a Minnesota limited liability company is the owner of property, described as Lot 1, Block 2, Canterbury Park Seventh Addition and Canterbury Development LLC, a Minnesota limited liability company is the owner of property, described as Out Lots B and E Canterbury Park Seventh Addition, Shakopee, Scott County, Minnesota (collectively, the "Property") and

WHEREAS, There presently exists a Temporary Electric Utility Easement across a portion of the Property granted to the Shakopee Public Utilities Commission (SPUC), filed as Document No. T238335 in the Office of the Registrar of Titles Scott County, Minnesota (the "Existing Electric Utility Easement"), and

WHEREAS, the duration of the Existing Electric Utility Easement was only intended to remain in full force and effect until an underground feeder capacity set of cables were able to be installed along the extension of Shenandoah Drive from Eastway Avenue to Eagle Creek Boulevard in Shakopee, MN, and

WHEREAS, said underground electric cables have since been installed by SPUC concurrent with the construction of said extension of Shenandoah Drive, and

WHEREAS, SPUC has removed all of its facilities that were occupying the Existing Electric Utility Easement, and

WHEREAS, Canterbury Park Entertainment LLC, Doran Canterbury I LLC and Canterbury Development LLC desire that the Existing Electric Utility Easement be vacated, and

WHEREAS, SPUC is willing to agree to the vacation of the Existing Electric Utility Easement.

NOW THEREFORE, BE IT RESOLVED, SPUC hereby vacates the Existing Electric Utility Easement, filed as Document No. T238335.

Passed in regular session of the Shakopee Public Utilities Commission, this 20th day of July, 2020.

_____

Commission President: Debra Amundson

ATTEST:

_____

Commission Secretary: John R. Crooks

Receipt:# 544922 T238335

EAS $46.00 Cert # 27759

Return to:
SHAKOPEE PUBLIC
UTILITIES COMM
255 SARAZIN ST
PO BOX 470
SHAKOPEE MN 55379-470

Certified Filed and/or recorded on:
2/19/2016 12:30 PM
Office of the Registrar of Titles
Scott County, Minnesota
James L. Hentges, Registrar of Titles

TEMPORARY ELECTRIC UTILITY EASEMENT AGREEMENT

This TEMPORARY ELECTRIC UTILITY EASEMENT AGREEMENT is given this 17 day of January, 2016 by CANTERBURY PARK HOLDING CORPORATION, a Minnesota corporation ("Owner") to the SHAKOPEE PUBLIC UTILITIES COMMISSION, a municipal utility commission organized under Minnesota law ("SPUC").

Recitals

A. Owner is the fee owner of certain real estate (the "Property") in Scott County, Minnesota described as follows:

> See Exhibit "A" for property description. Scott County, Minnesota
> PID#279050010

B. In furtherance of a public utility project, the SPUC desires to obtain from Owner, and Owner desires to convey to SPUC, a certain easement over a portion of the Property.

Easement

1. Grant of Easement. For good and valuable consideration, receipt of which is acknowledged by Owner, the Owner hereby grants and conveys to SPUC, its successors, assigns and licensees, the following temporary easement for electrical utility purposes over the area described below (the "Easement Area"):

> See Exhibit "A" for easement description and sketch.

2. Scope of Easement Rights. The temporary electrical utility easement includes the right to inspect, locate, erect, improve, construct, relocate, remove, operate, maintain, alter and repair an overhead electric distribution line or system, underground conduit and/or cable lines for distributing electrical power, including all wires, cables, hand holes, manholes, transformers, transformer enclosures, concrete pads, connection boxes, ground connection attachments, equipment and related accessories and appurtenances within the Easement Area. The easement includes the right to improve and make such changes, alterations, substitutions and additions in and to SPUC's facilities within the Easement Area as SPUC may from time to time deem advisable or expedient. This easement includes the right to cut, trim or remove from the Easement Area trees, shrubs, roots, or other vegetation, and any buildings, fences or temporary structures within the Easement Area that in SPUC's judgment

unreasonably interfere with SPUC's facilities. SPUC shall have the right to permit the use of the easement by other utilities, subject to and in accordance with this instrument.

3. Right of Access. Owner also grants to SPUC a right of ingress to and egress from the Easement Area over those portions of the above-described Property as reasonably necessary for SPUC to gain access to the Easement Area for purposes of inspecting, maintaining, altering and repairing SPUC's facilities. SPUC agrees to exercise its right of ingress and egress so as to minimize damage and inconvenience to the Owner.

4. Owner's Use. Owner hereby reserves to itself the right to use the land included within the Easement Area (including without limitation, parking of vehicles on the surface thereof), subject to all governmental rules and regulations, and provided that such use will not unreasonably disturb or interfere with SPUC's electrical utility facilities or prevent reasonable ingress and egress thereto for the purposes of operation, use, maintenance and repair (including reconstruction) thereof. It is also understood and agreed between the parties hereto that no permanent building or structure shall be placed by Owner, its successors or assigns within the temporary electrical utility easement area. Owner specifically agrees that, subject to all governmental rules and regulations, Owner retains the right to cross and recross the easement area with other utility lines, pipes, wires and easements, parking and access easements and that Owner may install paving, curb and gutter, and landscaping on the easement area which are not inconsistent with the grant of the permanent electrical utility easement herein. (Grantor's right to replacement or repair of such installations is subject, however, to the limitations in paragraph 5 of this Agreement.)

5. Restoration. SPUC will, at its sole cost and expense and promptly after completion of its work, replace the surface and subsurface of the soil as may be disturbed in the use, operation, maintenance and repair (including reconstruction) of SPUC's electrical facilities in substantially the same condition that existed prior to the improvement or repair, and repair all driveways and other paved areas and replace sod which may be damaged by construction on the Easement Area or which is a direct result of the exercise of the rights herein granted. Owner specifically agrees that SPUC shall have no obligation to replace or repair surface improvements installed by Owner within the Easement Area, other than paved areas or sod.

6. Compliance with Laws. SPUC shall comply with all applicable laws and regulations in connection with its use of this easement.

7. Environmental Matters. SPUC shall not be responsible for any costs, expenses, damages, demands, obligations or losses, including penalties and reasonable attorney's fees, resulting from any claims, actions, suits, or proceedings based upon a release or threat of release of any hazardous substances, pollutants, or contaminants which may have existed on, or which relate to, the easement area or Property prior to the date of this instrument.

8. Duration of Easement. The temporary easement granted herein shall remain in full force and effect until after an underground feeder capacity set of cables is installed along the future extension of Shenandoah Drive from Eastway Avenue to Eagle Creek Boulevard in Shakopee, MN. Said underground electric cables shall be installed by SPUC concurrent with the construction of said extension of Shenandoah Drive. Upon expiration of this Temporary Electric Utility Easement Agreement, SPUC agrees to execute such reasonable documents as necessary to evidence the expiration of this Temporary Electric Utility Easement.

9. Warranty of Owner. The Owner warrants that it is the owner of a fee simple interest in the Property, that it has the right and authority to grant the easement conveyed by this instrument, and that the Property is free and clear of any lien, encumbrance, easement, restriction, covenant or condition, except for those filed of record with the County Recorder in and for Scott County, Minnesota.

10. Easement to Run with the Land. The easement granted herein shall run with the land and is binding upon the Owner, its heirs, successors and assigns.

CANTERBURY PARK HOLDING CORPORATION

By: _____
Randall D. Sampson
Its: President

STATE OF MINNESOTA)
) ss.
COUNTY OF Scott)

The foregoing instrument was acknowledged before me this 27th day of January, 2016 by Randall D. Sampson, the President of Canterbury Park Holding Corporation, a Minnesota corporation, on behalf of said corporation.

NANCY J LUEGGE
NOTARY PUBLIC - MINNESOTA
MY COMMISSION EXPIRES 01/31/2020

_____
Notary Public

SHAKOPEE PUBLIC UTILITIES COMMISSION

By: _____
Its: Utilities Manager

STATE OF MINNESOTA)
) ss.
COUNTY OF SCOTT)

The foregoing instrument was acknowledged before me this 27 day of January, 2016 by John R. Crooks the Utilities manager of the Shakopee Public Utilities Commission, a municipal utility commission under the laws of Minnesota, by and on behalf of said utility commission.

CYNTHIA RAE MENKE
NOTARY PUBLIC - MINNESOTA
MY COMMISSION EXPIRES 01/31/20

_____
Notary Public

THIS INSTRUMENT WAS DRAFTED BY:
Kennedy & Graven, Chartered
200 South Sixth Street, Suite 470
Minneapolis, MN 55402
(612) 337-9300

EXHIBIT "A"

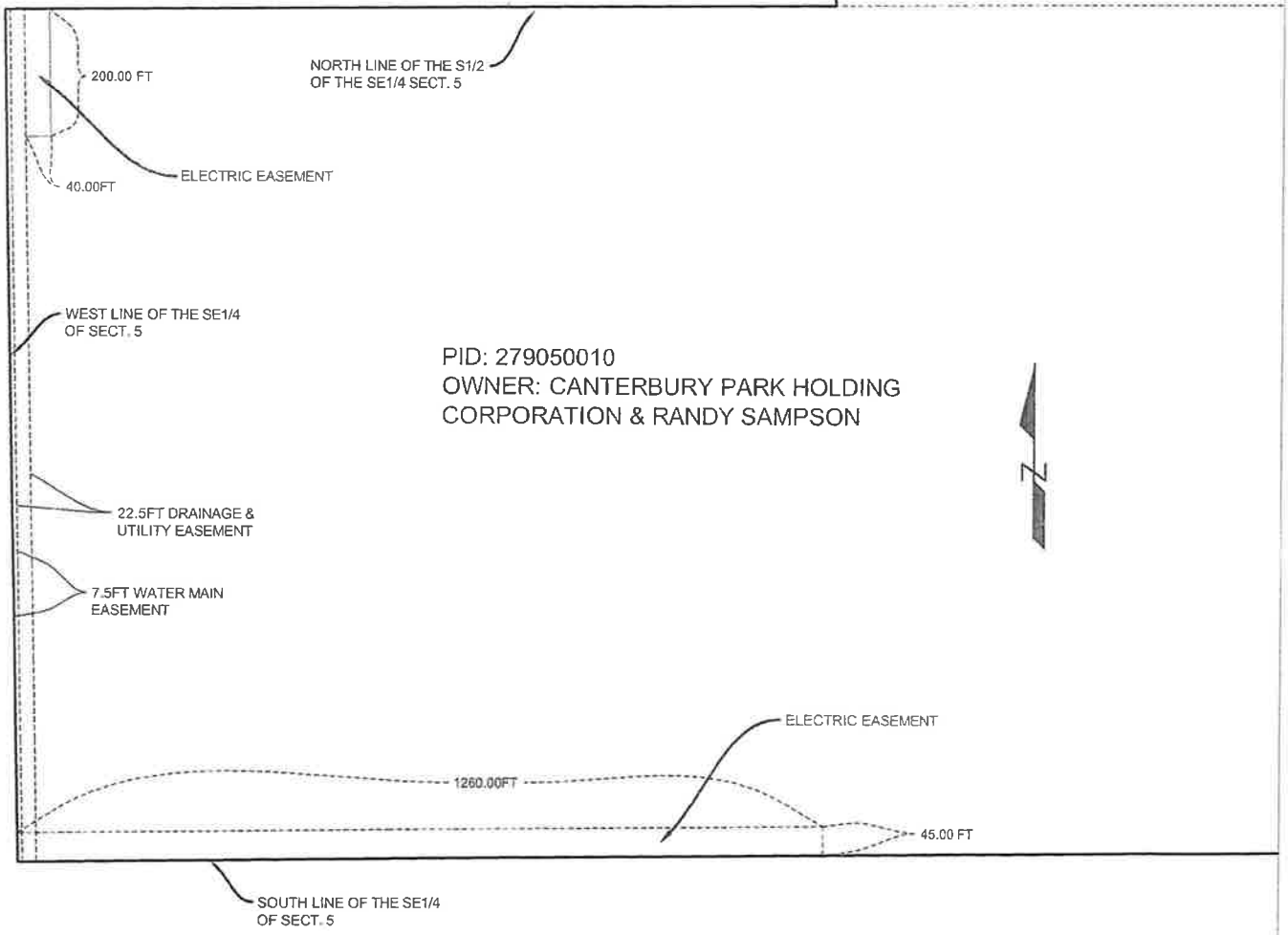
PROPERTY DESCRIPTION

THAT PART OF SECTION 5, TOWNSHIP 115, RANGE 22, SCOTT COUNTY, MINNESOTA INCLUDING THE SOUTH HALF OF THE SOUTHEAST QUARTER, AND THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER EXCEPT THE WEST 150.00 FEET OF THE NORTH 333.00 FEET OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER.

EASEMENT DESCRIPTION

A TEMPORARY EASEMENT FOR OVERHEAD ELECTRIC DISTRIBUTION PURPOSES OVER, UNDER AND ACROSS THE EAST 40.00 FEET OF THE WEST 70.00 FEET OF THE NORTH 200.00 FEET OF THE SOUTH HALF OF THE SOUTHEAST QUARTER OF SECTION 5, TOWNSHIP 115, RANGE 22, SCOTT COUNTY, MINNESOTA.

AND TOGETHER WITH, A TEMPORARY EASEMENT FOR OVERHEAD ELECTRIC DISTRIBUTION PURPOSES OVER, UNDER AND ACROSS THE SOUTH 45.00 FEET OF THE WEST 1260.00 FEET OF THE SOUTHEAST QUARTER OF SECTION 5, TOWNSHIP 115, RANGE 22, SCOTT COUNTY, MINNESOTA.



RESOLUTION #1278

A RESOLUTION FOR VACATION OF TEMPORARY ELECTRIC UTILITY EASEMENT WITHIN A PORTION OF LOT 1, BLOCK 2, AND OUT LOT D, CANTERBURY PARK SEVENTH ADDITION SHAKOPEE, SCOTT COUNTY, MINNESOTA

WHEREAS, Doran Canterbury I LLC, a Minnesota limited liability company is the owner of property, described as Lot 1, Block 2, Canterbury Park Seventh Addition and Canterbury Development LLC, a Minnesota limited liability company is the owner of property, described as Out Lot D, Canterbury Park Seventh Addition, Shakopee, Scott County, Minnesota, (collectively the "Property") and

WHEREAS, There presently exists a Temporary Electric Utility Easement across a portion of the Property granted to the Shakopee Public Utilities Commission (SPUC), filed as Document No. A996691 in the Office of the Registrar of Titles Scott County, Minnesota (the "Existing Electric Utility Easement"), and

WHEREAS, the duration of the Existing Electric Utility Easement was only intended to remain in full force and effect until an underground feeder capacity set of cables were able to be installed along the extension of Shenandoah Drive from Eastway Avenue to Eagle Creek Boulevard in Shakopee, MN, and

WHEREAS, said underground electric cables have since been installed by SPUC concurrent with the construction of said extension of Shenandoah Drive, and

WHEREAS, SPUC has removed all of its facilities that were occupying the Existing Electric Utility Easement, and

WHEREAS, Doran Canterbury I LLC and Canterbury Development LLC desire that the Existing Electric Utility Easement be vacated, and

WHEREAS, SPUC is willing to agree to the vacation of the Existing Electric Utility Easement.

NOW THEREFORE, BE IT RESOLVED, SPUC hereby vacates the Existing Electric Utility Easement, filed as Document No. A996691.

Passed in regular session of the Shakopee Public Utilities Commission, this 20th day of July, 2020.

_____

Commission President: Debra Amundson

ATTEST:

_____

Commission Secretary: John R. Crooks

Receipt:# 544922

A996691

EAS $46.00

Return to:
SHAKOPEE PUBLIC
UTILITIES COMM
255 SARAZIN ST
PO BOX 470
SHAKOPEE MN 55379-470

Certified Filed and/or recorded on:
2/19/2016 12:30 PM
Office of the County Recorder
Scott County, Minnesota
James L Hentges, County Recorder

TEMPORARY ELECTRIC UTILITY EASEMENT AGREEMENT

This TEMPORARY ELECTRIC UTILITY EASEMENT AGREEMENT is given this 17th day of January, 2016 by CANTERBURY PARK HOLDING CORPORATION, a Minnesota corporation ("Owner") to the SHAKOPEE PUBLIC UTILITIES COMMISSION, a municipal utility commission organized under Minnesota law ("SPUC").

Recitals

A. Owner is the fee owner of certain real estate (the "Property") in Scott County, Minnesota described as follows:

See Exhibit "A" for property description. Scott County, Minnesota
PID#279080710

B. In furtherance of a public utility project, the SPUC desires to obtain from Owner, and Owner desires to convey to SPUC, a certain easement over a portion of the Property.

Easement

1. Grant of Easement. For good and valuable consideration, receipt of which is acknowledged by Owner, the Owner hereby grants and conveys to SPUC, its successors, assigns and licensees, the following temporary easement for electrical utility purposes over the area described below (the "Easement Area"):

See Exhibit "A" for easement description and sketch.

2. Scope of Easement Rights. The temporary electrical utility easement includes the right to inspect, locate, erect, improve, construct, relocate, remove, operate, maintain, alter and repair an overhead electric distribution line or system, underground conduit and/or cable lines for distributing electrical power, including all wires, cables, hand holes, manholes, transformers, transformer enclosures, concrete pads, connection boxes, ground connection attachments, equipment and related accessories and appurtenances within the Easement Area. The easement includes the right to improve and make such changes, alterations, substitutions and additions in and to SPUC's facilities within the Easement Area as SPUC may from time to time deem advisable or expedient. This easement includes the right to cut, trim or remove from the Easement Area trees, shrubs, roots, or other vegetation, and any buildings, fences or temporary structures within the Easement Area that in SPUC's judgment

unreasonably interfere with SPUC's facilities. SPUC shall have the right to permit the use of the easement by other utilities, subject to and in accordance with this instrument.

3. Right of Access. Owner also grants to SPUC a right of ingress to and egress from the Easement Area over those portions of the above-described Property as reasonably necessary for SPUC to gain access to the Easement Area for purposes of inspecting, maintaining, altering and repairing SPUC's facilities. SPUC agrees to exercise its right of ingress and egress so as to minimize damage and inconvenience to the Owner.

4. Owner's Use. Owner hereby reserves to itself the right to use the land included within the Easement Area (including without limitation, parking of vehicles on the surface thereof), subject to all governmental rules and regulations, and provided that such use will not unreasonably disturb or interfere with SPUC's electrical utility facilities or prevent reasonable ingress and egress thereto for the purposes of operation, use, maintenance and repair (including reconstruction) thereof. It is also understood and agreed between the parties hereto that no permanent building or structure shall be placed by Owner, its successors or assigns within the temporary electrical utility easement area. Owner specifically agrees that, subject to all governmental rules and regulations, Owner retains the right to cross and recross the easement area with other utility lines, pipes, wires and easements, parking and access easements and that Owner may install paving, curb and gutter, and landscaping on the easement area which are not inconsistent with the grant of the permanent electrical utility easement herein. (Grantor's right to replacement or repair of such installations is subject, however, to the limitations in paragraph 5 of this Agreement.)

5. Restoration. SPUC will, at its sole cost and expense and promptly after completion of its work, replace the surface and subsurface of the soil as may be disturbed in the use, operation, maintenance and repair (including reconstruction) of SPUC's electrical facilities in substantially the same condition that existed prior to the improvement or repair, and repair all driveways and other paved areas and replace sod which may be damaged by construction on the Easement Area or which is a direct result of the exercise of the rights herein granted. Owner specifically agrees that SPUC shall have no obligation to replace or repair surface improvements installed by Owner within the Easement Area, other than paved areas or sod.

6. Compliance with Laws. SPUC shall comply with all applicable laws and regulations in connection with its use of this easement.

7. Environmental Matters. SPUC shall not be responsible for any costs, expenses, damages, demands, obligations or losses, including penalties and reasonable attorney's fees, resulting from any claims, actions, suits, or proceedings based upon a release or threat of release of any hazardous substances, pollutants, or contaminants which may have existed on, or which relate to, the easement area or Property prior to the date of this instrument.

8. Duration of Easement. The temporary easement granted herein shall remain in full force and effect until after an underground feeder capacity set of cables is installed along the future extension of Shenandoah Drive from Eastway Avenue to Eagle Creek Boulevard in Shakopee, MN. Said underground electric cables shall be installed by SPUC concurrent with the construction of said extension of Shenandoah Drive. Upon expiration of this Temporary Electric Utility Easement Agreement, SPUC agrees to execute such reasonable documents as necessary to evidence the expiration of this Temporary Electric Utility Easement.

9. Warranty of Owner. The Owner warrants that it is the owner of a fee simple interest in the Property, that it has the right and authority to grant the easement conveyed by this instrument, and that the Property is free and clear of any lien, encumbrance, easement, restriction, covenant or condition, except for those filed of record with the County Recorder in and for Scott County, Minnesota.

10. Easement to Run with the Land. The easement granted herein shall run with the land and is binding upon the Owner, its heirs, successors and assigns.

CANTERBURY PARK HOLDING CORPORATION

By: _____
Randall D. Sampson
Its: President

STATE OF MINNESOTA)
) ss.
COUNTY OF Scott)

The foregoing instrument was acknowledged before me this 27th day of January, 2016 by Randall D. Sampson, the President of Canterbury Park Holding Corporation, a Minnesota corporation, on behalf of said corporation.

NANCY J LUEGGE
NOTARY PUBLIC - MINNESOTA
MY COMMISSION EXPIRES 01/31/2020

_____
Notary Public

SHAKOPEE PUBLIC UTILITIES COMMISSION

By: _____
Its: Utilities Manager

STATE OF MINNESOTA)
) ss.
COUNTY OF SCOTT)

The foregoing instrument was acknowledged before me this 27 day of January, 20 16 by _____ the _____ of the Shakopee Public Utilities Commission, a municipal utility commission under the laws of Minnesota, by and on behalf of said utility commission.

_____
Notary Public

THIS INSTRUMENT WAS DRAFTED BY:
Kennedy & Graven, Chartered
200 South Sixth Street, Suite 470
Minneapolis, MN 55402
(612) 337-9300

CYNTHIA RAE MENKE
NOTARY PUBLIC - MINNESOTA
MY COMMISSION EXPIRES 01/31/20

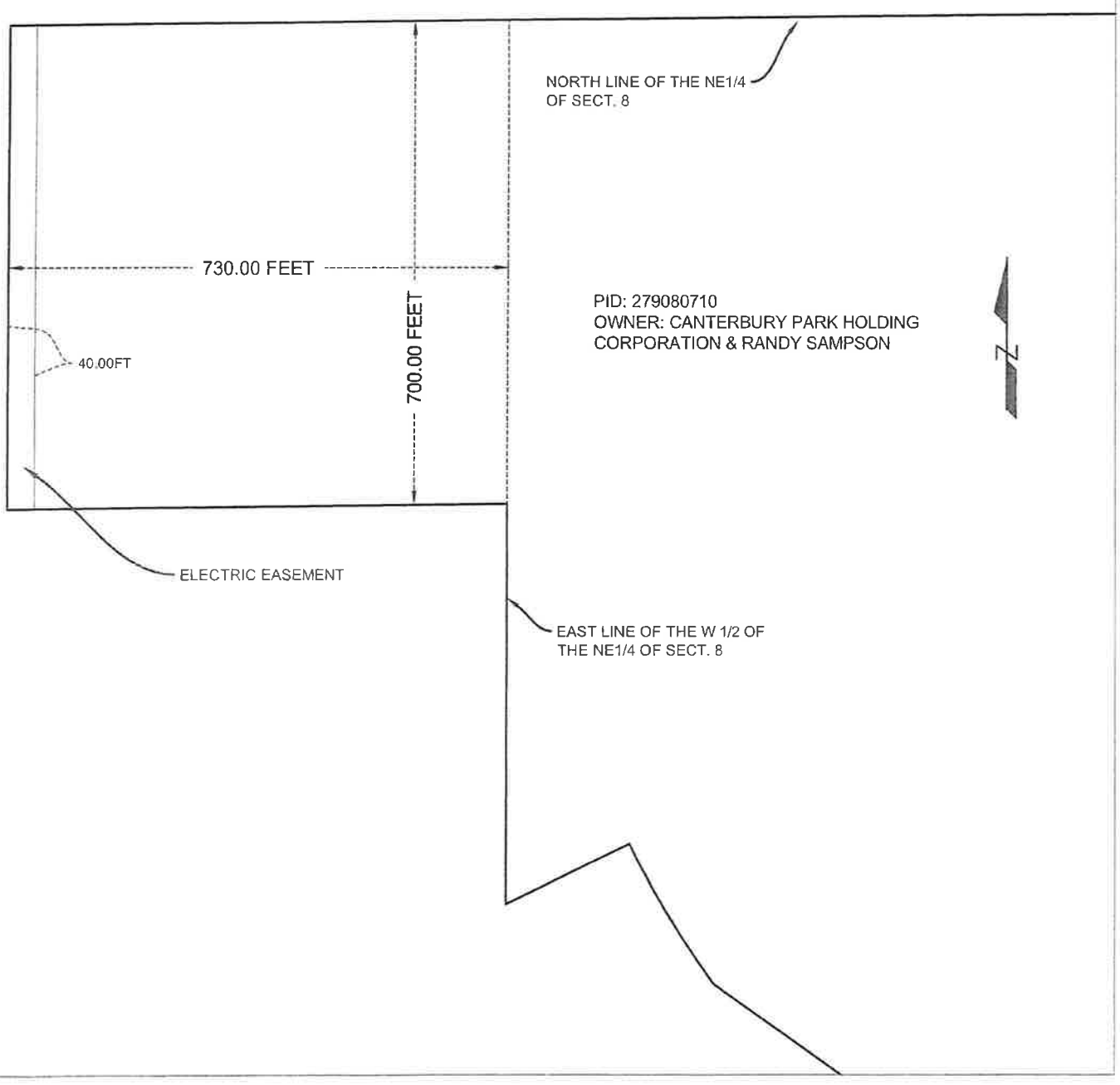
EXHIBIT "A"

PROPERTY DESCRIPTION

THAT PART OF SECTION 8, TOWNSHIP 115, RANGE 22, SCOTT COUNTY, MINNESOTA INCLUDING THE EAST HALF OF THE NORTHEAST QUARTER OF SAID SECTION 8, LYING NORTH OF COUNTY ROAD 16, EXCEPT THE PLAT OF CANTERBURY PARK 5TH ADDITION, AND INCLUDING THE NORTH 700.00 FEET OF THE EAST 730.00 FEET OF THE WEST HALF OF THE NORTHEAST QUARTER OF SAID SECTION 8.

EASEMENT DESCRIPTION

A TEMPORARY EASEMENT FOR OVERHEAD ELECTRIC DISTRIBUTION PURPOSES OVER, UNDER AND ACROSS THE WEST 40.00 FEET OF THE NORTH 700.00 FEET OF THE EAST 730.00 FEET OFTHE WEST HALF OF THE NORTHEAST QUARTER OF SECTION 8, TOWNSHIP 115, RANGE 22, SCOTT COUNTY, MINNESOTA.



RESOLUTION #1279

A RESOLUTION FOR VACATION OF TEMPORARY ELECTRIC UTILITY EASEMENT WITHIN A PORTION OF OUT LOTS D AND F, CANTERBURY PARK SEVENTH ADDITION
SHAKOPEE, SCOTT COUNTY, MINNESOTA

WHEREAS, Canterbury Development LLC, a Minnesota limited liability company is the owner of property, described as Out Lots D and F, Canterbury Park Seventh Addition, Shakopee, Scott County, Minnesota, (collectively the "Property") and

WHEREAS, There presently exists a Temporary Electric Utility Easement across a portion of the Property granted to the Shakopee Public Utilities Commission (SPUC), filed as Document No. A998495 in the Office of the Registrar of Titles Scott County, Minnesota Collectively (the "Existing Electric Utility Easement"), and

WHEREAS, the duration of the Existing Electric Utility Easement was only intended to remain in full force and effect until an underground feeder capacity set of cables were able to be installed along the extension of Shenandoah Drive from Eastway Avenue to Eagle Creek Boulevard in Shakopee, MN, and

WHEREAS, said underground electric cables have since been installed by SPUC concurrent with the construction of said extension of Shenandoah Drive, and

WHEREAS, SPUC has removed all of its facilities that were occupying the Existing Electric Utility Easement, and

WHEREAS, Canterbury Development LLC desires that the Existing Electric Utility Easement be vacated, and

WHEREAS, SPUC is willing to agree to the vacation of the Existing Electric Utility Easement.

NOW THEREFORE, BE IT RESOLVED, SPUC vacates the Existing Electric Utility Easement, filed as Document No. A998495.

Passed in regular session of the Shakopee Public Utilities Commission, this 20th day of July, 2020.

_____
Commission President: Debra Amundson

ATTEST:

_____
Commission Secretary: John R. Crooks

Receipt:# 546580

EAS $46.00

Return to:
SHAKOPEE PUBLIC
UTILITIES COMM
255 SARAZIN ST
PO BOX 470
SHAKOPEE MN 55379-470

A998495

Certified Filed and/or recorded on:
3/25/2016 2:58 PM
Office of the County Recorder
Scott County, Minnesota
James L Hentges, County Recorder

TEMPORARY ELECTRIC UTILITY EASEMENT AGREEMENT

This TEMPORARY ELECTRIC UTILITY EASEMENT AGREEMENT is given this 24th day of January, 2016 by EUGENE F. HAUER, a single person ("E. Hauer"), AND/OR AS SUCCESSOR TRUSTEE OF THE VIRGINIA T. HAUER TRUST DATED JANUARY 10, 1995 AND/OR AS TRUSTEE OF THE EUGENE F. HAUER TRUST DATED JANUARY 10, 1995 (collectively, "Trustee") and JANE HAUER ALSO KNOWN AS JANE M. HAUER, a single person ("J. Hauer", and E. Hauer, Trustee and J. Hauer are hereinafter collectively referred to as "Owner") to the SHAKOPEE PUBLIC UTILITIES COMMISSION, a municipal utility commission organized under Minnesota law ("SPUC").

Recitals

A. Owner is the fee owner of certain real estate (the "Property") in Scott County, Minnesota described as follows:

> See Exhibit "A" for property description. Scott County, Minnesota
> PID#279080400

B. In furtherance of a public utility project, the SPUC desires to obtain from Owner, and Owner desires to convey to SPUC, a certain easement over a portion of the Property.

Easement

1. Grant of Easement. For good and valuable consideration, receipt of which is acknowledged by Owner, the Owner hereby grants and conveys to SPUC, its successors, assigns and licensees, the following temporary easement for electrical utility purposes over the area described below (the "Easement Area"):

> See Exhibit "B" for easement description and sketch.

2. Scope of Easement Rights. The temporary electrical utility easement includes the right to inspect, locate, erect, improve, construct, relocate, remove, operate, maintain, alter and repair an overhead electric distribution line or system, underground conduit and/or cable lines for

distributing electrical power, including all wires, cables, hand holes, manholes, transformers, transformer enclosures, concrete pads, connection boxes, ground connection attachments, equipment and related accessories and appurtenances within the Easement Area. The easement includes the right to improve and make such changes, alterations, substitutions and additions in and to SPUC's facilities within the Easement Area as SPUC may from time to time deem advisable or expedient. This easement includes the right to cut, trim or remove from the Easement Area trees, shrubs, roots, or other vegetation, and any buildings, fences or temporary structures within the Easement Area that in SPUC's judgment unreasonably interfere with SPUC's facilities. SPUC shall have the right to permit the use of the easement by other utilities, subject to and in accordance with this instrument.

3. Right of Access. Owner also grants to SPUC a right of ingress to and egress from the Easement Area over those portions of the above-described Property as reasonably necessary for SPUC to gain access to the Easement Area for purposes of inspecting, maintaining, altering and repairing SPUC's facilities. SPUC agrees to exercise its right of ingress and egress so as to minimize damage and inconvenience to the Owner.

4. Owner's Use. Owner hereby reserves to itself the right to use the land included within the Easement Area (including without limitation, parking of vehicles on the surface thereof), subject to all governmental rules and regulations, and provided that such use will not unreasonably disturb or interfere with SPUC's electrical utility facilities or prevent reasonable ingress and egress thereto for the purposes of operation, use, maintenance and repair (including reconstruction) thereof. It is also understood and agreed between the parties hereto that no permanent building or structure shall be placed by Owner, its successors or assigns within the temporary electrical utility easement area. Owner specifically agrees that, subject to all governmental rules and regulations, Owner retains the right to cross and recross the easement area with other utility lines, pipes, wires and easements, parking and access easements and that Owner may install paving, curb and gutter, and landscaping on the easement area which are not inconsistent with the grant of the permanent electrical utility easement herein. (Grantor's right to replacement or repair of such installations is subject, however, to the limitations in paragraph 5 of this Agreement.)

5. Restoration. SPUC will, at its sole cost and expense and promptly after completion of its work, replace the surface and subsurface of the soil as may be disturbed in the use, operation, maintenance and repair (including reconstruction) of SPUC's electrical facilities in substantially the same condition that existed prior to the improvement or repair, and repair all driveways and other paved areas and replace sod which may be damaged by construction on the Easement Area or which is a direct result of the exercise of the rights herein granted. Owner specifically agrees that SPUC shall have no obligation to replace or repair surface improvements installed by Owner within the Easement Area, other than paved areas or sod.

6. Compliance with Laws. SPUC shall comply with all applicable laws and regulations in connection with its use of this easement.

7. Environmental Matters. SPUC shall not be responsible for any costs, expenses, damages, demands, obligations or losses, including penalties and reasonable attorney's fees, resulting from any claims, actions, suits, or proceedings based upon a release or threat of release of any hazardous substances, pollutants, or contaminants which may have existed on, or which relate to, the easement area or Property prior to the date of this instrument.

8. Duration of Easement. The temporary easement granted herein shall remain in full force and effect until after an underground feeder capacity set of cables is installed along the future extension of Shenandoah Drive from Eastway Avenue to Eagle Creek Boulevard in Shakopee, MN. Said underground electric cables shall be installed by SPUC concurrent with the construction of said extension of Shenandoah Drive. Upon expiration of this Temporary Electric Utility Easement Agreement, SPUC agrees to execute such reasonable documents as necessary to evidence the expiration of this Temporary Electric Utility Easement.

9. Warranty of Owner. The Owner warrants that it is the owner of a fee simple interest in the Property, that it has the right and authority to grant the easement conveyed by this instrument, and that the Property is free and clear of any lien, encumbrance, easement, restriction, covenant or condition, except for those filed of record with the County Recorder in and for Scott County, Minnesota.

10. Easement to Run with the Land. The easement granted herein shall run with the land and is binding upon the Owner, its heirs, successors and assigns.

[Signature Page to Temporary Electric Utility Easement Agreement]

OWNER:

Eugene F. Hauer
EUGENE F. HAUER

STATE OF FLORIDA)
) ss.
COUNTY OF Charlotte)

The foregoing instrument was acknowledged before me this 29th day of February, 2016 by Eugene F. Hauer, a single person.

Sean D
Notary Public

SEAN DEGRAW
Notary Public - State of Florida
Commission # FF 933646
My Comm. Expires Nov 6, 2019
Bonded through National Notary Assn.

Eugene F. Hauer
EUGENE F. HAUER, AS SUCCESSOR TRUSTEE OF THE VIRGINIA T. HAUER TRUST DATED JANUARY 10, 1995

STATE OF FLORIDA)
) ss.
COUNTY OF Charlotte)

The foregoing instrument was acknowledged before me this 29th day of February, 2016 by Eugene F. Hauer, as Successor Trustee of the Virginia T. Hauer Trust dated January 10, 1995 on behalf of the Trust.

Sean D
Notary Public

SEAN DEGRAW
Notary Public - State of Florida
Commission # FF 933646
My Comm. Expires Nov 6, 2019
Bonded through National Notary Assn.

[Signature Page to Temporary Electric Utility Easement Agreement]

EUGENE F. HAUER, AS TRUSTEE OF THE EUGENE F. HAUER TRUST DATED JANUARY 10, 1995

STATE OF FLORIDA)
) ss.
COUNTY OF Charlotte)

The foregoing instrument was acknowledged before me this 29th day of February, 2016 by Eugene F. Hauer, as Trustee of the Eugene F. Hauer Trust dated January 10, 1995 on behalf of the Trust.

Notary Public

SEAN DEGRAW
Notary Public - State of Florida
Commission # FF 933648
My Comm. Expires Nov 6, 2019
Bonded through National Notary Assn.

[Signature Page to Temporary Electric Utility Easement Agreement]

JANE HAUER ALSO KNOWN AS JANE M. HAUER

STATE OF MINNESOTA)
) ss.
COUNTY OF SCOTT)

The foregoing instrument was acknowledged before me this 29 day of February, 2016 by Jane Hauer also known as Jane M. Hauer, a single person.

KEVIN JOHN WETHERILLE
Notary Public
Minnesota
My Commission Expires January 31, 2017

Notary Public

[Signature Page to Temporary Electric Utility Easement Agreement]

SHAKOPEE PUBLIC UTILITIES COMMISSION

By: _____
Its: Utilities Manager

STATE OF MINNESOTA)
) ss.
COUNTY OF SCOTT)

The foregoing instrument was acknowledged before me this 14 day of March 2016 by John R. Crooks the utilities manager of the Shakopee Public Utilities Commission, a municipal utility commission under the laws of Minnesota, by and on behalf of said utility commission.

_____
Notary Public

CYNTHIA RAE MENKE
NOTARY PUBLIC - MINNESOTA
MY COMMISSION EXPIRES 01/31/20

The undersigned and Contract for Deed Vendee on the land described in Exhibit "A" hereto attached hereby consent and join in the Grant of Right-of-Way Easement hereinbefore given.

CANTERBURY EXCHANGE, L.L.C.,
a Minnesota limited liability company

By: FIRST AMERICAN EXCHANGE COMPANY, LLC,
a Delaware limited liability company
Its Sole Member and Manager

By: _____
Mark A. Bullock
Its: Legal Counsel

STATE OF UTAH)
) ss.
COUNTY OF Salt Lake)

The foregoing instrument was acknowledged before me this 28th day of January, 2016, by Mark A. Bullock, Legal Counsel of First American Exchange Company, LLC, a Delaware limited liability company, as sole member and manager of Canterbury Exchange, L.L.C., a Minnesota limited liability company, on behalf of said limited liability company.

_____
Notary Public

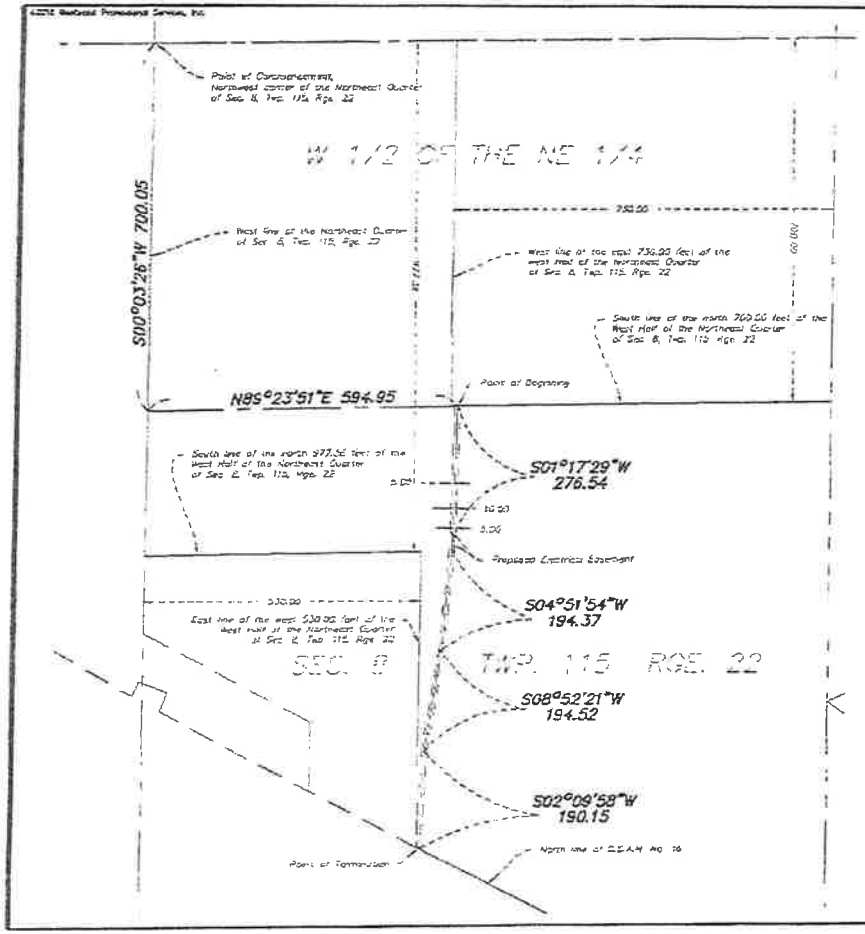
Notary Public
RICHARD LIMB
Commission #661823
My Commission Expires
December 17, 2016
State of Utah

THIS INSTRUMENT WAS DRAFTED BY:
Kennedy & Graven, Chartered
200 South Sixth Street, Suite 470
Minneapolis, MN 55402
(612) 337-9300

EXHIBIT "A"

PROPERTY DESCRIPTION

THAT PART OF THE WEST HALF OF THE NORTHEAST QUARTER OF SECTION 8, TOWNSHIP 115, RANGE 22, SCOTT COUNTY, MINNESOTA, LYING NORTHERLY OF THE NEW ALIGNMENT OF CSAH 16; EXCEPTING THE NORTH 700.00 FEET OF THE EAST 730.00 FEET (AS MEASURED IN RIGHT ANGLES) THEREOF AND EXCEPTING THAT PART OF THE WEST HALF OF THE NORTHEAST QUARTER OF SECTION 8, TOWNSHIP 115, RANGE 22, SCOTT COUNTY, MINNESOTA, LYING SOUTH OF THE NORTH 977.36 FEET AND LYING WEST OF THE EAST LINE OF THE WEST 530.00 FEET THEREOF.



Easement Description

A 70.00 foot wide strip of land lying over, under and across that part of the west half of the Northeast Quarter of Section 8, Township 115, Range 22, Scott County, Minnesota, lying northerly of the new alignment of C.S.A.H. 16; excepting the north 700.00 feet of the east 730.00 feet (as measured in right angles) thereof and excepting that part of the west half of the Northeast Quarter of Section 8, Township 115, Range 22, Scott County, Minnesota, lying south of the north 977.36 feet and lying west of the east line of the west 530.00 feet thereof, the centerline of which is described as follows;

Commencing at the northwest corner of said Northeast Quarter of Section 8; thence South 00 degrees 03 minutes 26 seconds West assumed bearing along the west line of said Northeast Quarter of Section 8, a distance of 700.05 feet to the south line of the north 700.00 feet of the Northeast Quarter of Section 8; thence North 89 degrees 23 minutes 51 seconds East along said south line of the north 700.00 feet, a distance of 594.95 feet to the point of beginning of the centerline to be described; thence South 01 degree 17 minutes 29 seconds West, a distance of 276.54 feet; thence South 04 degrees 51 minutes 54 seconds West, a distance of 194.37 feet; thence South 08 degrees 52 minutes 21 seconds West, a distance of 194.52 feet; thence South 02 degrees 09 minutes 58 seconds West, a distance of 190.15 feet to said north line of C.S.A.H. No. 16 and there terminating.

The sidelines of said easement are to be prolonged or shortened to terminate at said South line of the north 700.00 feet of the West Half of the Northeast Quarter of Section 8 and the north line of C.S.A.H. No. 16.

Easement Description & Sketch

EXHIBIT "B"

Date 02/11/16 Sheet 1 OF 1

Westwood

Phone (952) 937-5150 7699 Anagram Drive
Fax (952) 937-5822 Eden Prairie, MN 55344
Toll Free (888) 937-5150

Westwood Professional Services, Inc.

Prepared for: Canterbury Park Holding Corporation
1100 Canterbury Road South
Shakopee, Minnesota, 55379

Canterbury Park

Shakopee, Minnesota

Electric Utility Easement Sketch

SHAKOPEE PUBLIC UTILITIES
MEMORANDUM

TO: John Crooks, Utilities Manager

FROM: Joseph D. Adams, Planning & Engineering Director

SUBJECT: Utility Facilities Easement Agreement for Water Tower #8

DATE: July 15, 2020

ISSUE

The City of Shakopee is now requiring all new developments to enter into a Utility Facilities Easement Agreement to ensure that the privately owned utility facilities on the development's property are maintained.

BACKGROUND

The new water tower #8 in the La Tour Terrace plat construction contract has been awarded and we are waiting for the building permit to be released. One of the conditions is to enter into a Utility Facilities Easement Agreement with the City of Shakopee for the private storm water facilities to serve the property.

DISCUSSION

The City has an interest in ensuring that the private utility facilities located on private property are maintained so they function as designed and approved by the City. In those atypical situations where the property owner does not maintain their private utility facilities, the agreement provides the City the legal right to enter the property and take appropriate actions to protect the City's interests and their public facilities.

Staff worked with City staff to clarify that this agreement only applies to the private (SPU) storm water sewer facilities and not to the public (SPU) water facilities. All of the water facilities on site, including the water tower itself, the water main connecting the tower to the distribution system and all future water supply wells are public and the responsibility of SPU.

It is highly unlikely that the City would have to ever invoke their rights on the Utilities Commission's properties, but the City wants to treat all developments the same moving forward.

REQUESTED ACTION

Staff requests the Commission approve the Utility Facilities Easement Agreement and authorize its execution by the Commission President and Utilities Manager.

UTILITY FACILITIES EASEMENT AGREEMENT

THIS UTILITY FACILITIES EASEMENT AGREEMENT (this "Easement Agreement") is given on _____, 2020 by SHAKOPEE PUBLIC UTILITIES COMMISSION, a municipal utility commission organized under Minnesota law ("Owner"), to CITY OF SHAKOPEE, a Minnesota municipal corporation ("City"), in accordance with the following:

1. **Ownership**. Owner is the fee owner of the property legally described on the attached Exhibit A ("Property").

2. **Grant of Easement**. For valuable consideration, Owner conveys to the City an easement for Utility Facilities, as hereinafter defined, purposes over, under, and across the Property on the terms and conditions hereinafter set forth.

3. **Scope of Easement Rights**. The Easement includes the right of the City, its contractors, employees, agents and assigns to:

   a. reasonable right of ingress and egress to inspect Utility Facilities pursuant to Section 5 hereof;

   b. reasonable right of ingress and egress to perform the Owner's Obligations upon default by Owner pursuant to Section 5 hereof;

   c. locate, construct, reconstruct, operate, maintain, inspect, alter and repair the Utility Facilities in accordance with Section 5 hereof; and

   d. cut, trim, or remove trees, shrubs, or other vegetation that in the City's judgment unreasonably interfere with the Utility Facilities.

4. **Owner's Obligations**. Owner will construct its public water main and private stormwater facilities, which connect to the City's public stormwater facilities, in accordance with Exhibit B (the "Utility Facilities"), a full size original of which is on file with the Shakopee City Engineer. The Utility Facilities shall not include Owner's water main, water storage tank, wells, and related facilities on the Property. Owner will maintain the Utility Facilities and any other required utility improvements approved and required by the City. Maintenance includes at a minimum annual inspection, cleaning and repair of the Utility Facilities. Maintenance of the stormwater Utility Facilities also includes removal of sediment and pollutants in all pre-treatment devices, the periodic removal of sedimentation within the stormwater Utility Facilities, the removal of any blockage and annual inspection, as necessary. If necessary, the work must include periodic removal of sedimentation and trash from the stormwater Utility Facilities to maintain original design, volumes and configurations as approved by the City. Annual inspections of approved stormwater Utility Facilities must be performed, and an annual report must be provided to the City of Shakopee Public Works Department October 1 of the same year as the inspection, using the form attached as Exhibit C. An apparent failure of the facility must also be corrected before submitting the annual report.

5. **Enforcement.**

5.1. The City may enter the Property for the purposes of inspection of the Utility Facilities and enforcement of the obligations of Owner under this Easement Agreement. If Owner fails to perform its obligations under this Easement Agreement, the City must provide written notice of default to Owner before taking any corrective action. If the failure continues for 30 days after the City's written notice, the City may take whatever actions it deems reasonably necessary in order to fulfill the obligations of Owner under this Easement Agreement. If it is determined by the City that it is necessary to enter the Property to maintain or repair Utility Facilities to protect public utility facilities or the public health, safety or welfare without first giving such notice to Owner, it may do so, giving Owner such notice as is reasonably possible under the circumstances. Owner must reimburse the City for the reasonable out-of-pocket costs incurred by the City for its corrective action within 30 days after receipt by Owner of a written demand from the City accompanied by reasonable documentation of the expenses. If Owner fails to reimburse the City within the 30-day period prescribed above, the City may recover its costs by assessing the amounts against the Property to be collected with property taxes. Owner waives all rights that it might have to receive notice and a hearing or to contest these assessments. Further, the City may enforce the terms of this Easement Agreement by any proceeding in law or in equity to restrain violation, to compel compliance, or to recover damages, including attorneys' fees and costs of the enforcement actions. Owner is not liable for the actions of any third party, other than its employees, agents, or contractors, that may violate the terms of this Easement Agreement unless Owner, its employees, agents, or contractors had actual knowledge of the violation and failed to take reasonable action to stop the violation.

5.2. Failure to enforce any provision of this Easement Agreement upon a violation of it will not be deemed a waiver of the right to do so as to that or any subsequent violation.

5.3. Invalidation of any of the terms of this Easement Agreement will in no way affect any of the other terms, which will remain in full force and effect.

6. **Duration of Easement**. This Easement Agreement is permanent and remains in effect in perpetuity.

7. **Warranty of Owner**. Owner warrants that it is the owner of a fee simple interest in the Property, that it has the right to grant this Easement Agreement, and that the Property is free and clear of any lien, encumbrance, easement, restriction, covenant or condition, except for those filed of record with the County Recorder or Registrar of Titles for Scott County, Minnesota.

8. **Easement Runs with Land**. This Easement Agreement run with the land and are binding on Owner, its heirs, successors and assigns.

9. **Amendments**. This Easement Agreement may not be amended without the

written approval of the City.

10. **Governing Law**. The laws of the State of Minnesota shall govern the interpretation, validity, performance and enforcement of this Easement Agreement.

[The remainder of this page is intentionally left blank]

SHAKOPEE PUBLIC UTILITIES COMMISSION,
a Minnesota municipal utility commission

By:_____
Name: _____
Title: President

By:_____
Name: John Crooks
Title: Utilities Manager

STATE OF MINNESOTA)
) ss.
COUNTY OF SCOTT)

The foregoing instrument was acknowledged before me this ____ day of _____, 2020, by _____, the President, and by John Crooks, the Utilities Manager, both of the Shakopee Public Utilities Commission, a municipal utility commission under the laws of Minnesota, by and on behalf of said utility commission.

_____
Notary Public

THIS INSTRUMENT WAS DRAFTED BY:
City of Shakopee
Public Works Department
485 Gorman Street
Shakopee, MN 55379
(952) 233-9369

For City use only:
Planning File #_____
Date of Council approval _____

EXHIBIT A

Description of Parcel

Lot 1, Block 1, LaTour Terrace, according to the recorded plats thereof, Scott County, Minnesota.

WATERMAIN CONSTRUCTION NOTES

A. REFER TO SHEET C1.03 FOR "GENERAL NOTES".

B. ALL AREAS OUTSIDE THE PROPERTY BOUNDARIES THAT ARE DISTURBED BY UTILITY CONSTRUCTION SHALL BE RESTORED IN KIND.

C. THE WATERMAIN IMPROVEMENTS FOR THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SHAKOPEE PUBLIC UTILITIES WATER POLICY STANDARD, EXCEPT AS MODIFIED HEREIN. CONTRACTOR SHALL OBTAIN A COPY OF THESE SPECIFICATIONS.

D. CONTRACTOR SHALL NOT OPEN, TURN OFF, INTERFERE WITH, OR ATTACH ANY PIPE OR HOSE TO OR TAP WATERMAIN BELONGING TO THE UTILITY UNLESS DULY AUTHORIZED TO DO SO BY THE UTILITY. ANY ADVERSE CONSEQUENCES OF ANY SCHEDULED OR UNSCHEDULED DISRUPTIONS OF SERVICE TO THE PUBLIC ARE THE LIABILITY OF CONTRACTOR.

E. ALL SITE WORK WATERMAIN TO BE DUCTILE IRON - CLASS 52.

E.1. ALL WATERMAIN TO HAVE A MINIMUM 7.5-FEET OF COVER OVER TOP OF WATERMAIN.

E.2. PROVIDE EBBA "MEGALUGS" ON ALL PIPE BENDS AND FITTINGS, MINIMUM 40' DISTANCE OF BEND OR FITTING. INSTALL STAINLESS STEEL TIE RODS AND CONCRETE RESTRAINTS WHERE INDICATED ON PLANS.

E.3. WRAP ALL BURIED WATERMAIN, FITTINGS AND JOINT RESTRAINTS WITH V-BIO ENHANCED POLYETHYLENE ENCASEMENT. INSTALL WRAP IN ACCORDANCE WITH THE DUCTILE IRON PIPE ASSOCIATION RECOMMENDED METHODS AND PROCEDURES.

F. ALL SOILS TESTING SHALL BE COMPLETED BY THE SOILS ENGINEER. EXCAVATION FOR THE PURPOSE OF REMOVING UNSTABLE OR UNSUITABLE SOILS SHALL BE COMPLETED AS REQUIRED BY THE SOILS ENGINEER. THE UTILITY BACKFILL CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF THE SOILS ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOILS TESTS AND SOIL INSPECTIONS WITH THE SOILS ENGINEER.

G. REFER TO GRADING PLAN FOR FINISH GRADING AND ACCESS DRIVE RECONSTRUCTION.

H. REFER TO EROSION CONTROL PLAN FOR EROSION CONTROL MEASURES.

I. REFER TO LANDSCAPE PLAN FOR RESTORATION OF DISTURBED AREAS.

J. CONTRACTOR IS RESPONSIBLE FOR LOCATING IN-PLACE UTILITY LINES, PREVIOUSLY INSTALLED, BEFORE TRENCHING NEW LINES.
1. ENGAGE UNDERGROUND UTILITY LOCATOR TO LOCATE AND FLAG IN-PLACE LINES.
2. UTILITY LOCATING INCIDENTAL TO CONTRACT.

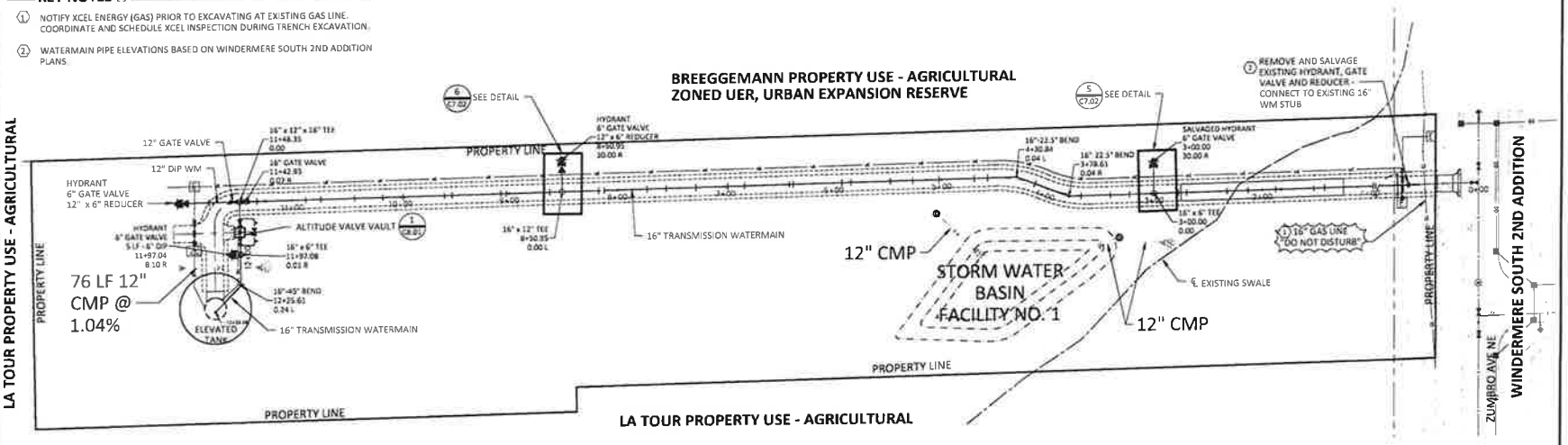
KEY NOTES

① NOTIFY XCEL ENERGY (GAS) PRIOR TO EXCAVATING AT EXISTING GAS LINE. COORDINATE AND SCHEDULE XCEL INSPECTION DURING TRENCH EXCAVATION.

② WATERMAIN PIPE ELEVATIONS BASED ON WINDERMERE SOUTH 2ND ADDITION PLANS.

NORTH

SCALE: 0 50 100 IN FEET



Client

SHAKOPEE PUBLIC UTILITIES
255 SARAZIN STREET
SHAKOPEE, MN. 55379
TELEPHONE: 952-445-1988
UTILITIES MANAGER: JOHN CROOKS
PLANNING & ENGINEERING DIRECTOR: JOE ADAMS P.E.
WATER SUPERINTENDENT: LON SCHEMEL

Sambatek
www.sambatek.com
12800 Whitewater Drive, Suite 300
Minnetonka, MN 55343
763.476.6010 telephone
763.476.8532 facsimile
Engineering | Surveying | Planning | Environmental
PROJECT MANAGER: MIKE BURDORF P.E.

Project

WATER TANK 8

Location

SHAKOPEE, MN

Certification

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed professional ENGINEER under the laws of the state of Minnesota

Michael Burdorf
Registration No. 53720 Date: 2/14/2020

If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's Minnetonka, MN office

Summary

Designed: MJB Drawn: DJD
Approved: MJB Book / Page:
Phase: FINAL Release for Bid: 2/14/2020

Revision History

No.	Date	By	Submittal / Revision

Sheet Title

UTILITY PLAN

Sheet No. Revision

EXHIBIT B

Project No. 20709.05

SHAKOPEE PUBLIC UTILITIES
MEMORANDUM

TO: John Crooks, Utilities Manager

FROM: Joseph D. Adams, Planning & Engineering Director

SUBJECT: 2020 Water Reconstruction Fund Project to Replace the 12-inch Trunk Water Main along Hansen Avenue between CR 21 and Crossings Boulevard

DATE: July 14, 2020

ISSUE

This water main replacement project has been deferred until a future year. SEH, Inc.'s Dave Hutton will present the water main replacement alternatives report to the Commission.

BACKGROUND

The 12-inch trunk water main running parallel to and north of Hansen Avenue between CR 21 and Crossings Boulevard was installed in 2000 and is located in a high water table area. The surrounding (peat) soils are causing corrosion of the pipe. There have been two leaks in the pipe that have had to be repaired due to the corrosion and the pipe needs to be replaced prematurely. The water main was installed to bring a second source of water to the Southbridge residential area prior to the commercial development that followed. The water main is installed in an easement that parallels and predates the construction of Hansen Avenue.

SEH, Inc consulting engineers were retained to study the options available to replace the water main and ensure under the local soil conditions the corrosion would not be repeated.

The engineer's estimate for the Hansen Avenue Water Main Replacement project from CR 21 to Crossings Boulevard ranges from $520,000 to $635,000, depending on which construction method is employed.

The Water Reconstruction Fund is the source of funds that pays for water main replacement costs. There is a separate usage rate on water customer bills called the Reconstruction Charge that all water customers pay each month based on the amount of water consumed. The current rate is $0.42 per 1,000 gallons per month and the current fund balance as of 6/30/2020 is $746,390.88.

Below is a chart with an excerpt from the 2019 financial statements with the Water Reconstruction Fund end of year balance, planned expenses, projected revenues and end of 2024 projected balance:

		Water Reconstruction
2019 Audited Fund Balances	12/31/2019	488,865.75
2019 Oversizing/Transmission Costs Paid in 2020		
2020 - 2024 Planned CIP Infrastructure Costs		(2,485,000.00)
2020 - 2024 Estimated Revenues/Net Receipts		2,600,637.02
Estimated/Projected Fund Balance	12/31/2024	604,502.77

DISCUSSION

Assuming the lowest cost option is selected a funding increase of $285,000 would be necessary, plus any inflationary effects from delaying the project. If the highest cost option is selected the necessary funding increase would be at least $400,000. Any of the options selected will have an effect on the Water Reconstruction Fund balance that may necessitate an increase in the Reconstruction Charge on customers' bills.

Staff has reviewed the report and discussed the findings and alternatives preferred. Once the water main replacement alternative is selected, an updated financial analysis of the Reconstruction Fund can be made available and adjustment of the Reconstruction Charge going forward into 2021 will be appropriate.

The City of Shakopee is planning to re-surface Hanson Avenue in 2021 and prefers the water main project be completed prior to the pavement replacement.

RECOMMENDED ACTION

Staff recommends this project be completed in 2021 prior to or coincident with the City of Shakopee's project to re-surface Hanson Avenue using the lowest cost alternative of Structural Cured-in-Place Pipe (CIPP) lining at an estimated cost of $520,000.

SEH

Building a Better World for All of Us®

TECHNICAL MEMORANDUM

TO: Mr. Lon R. Schemel
Water Superintendent
Shakopee Public Utilities

FROM: David E. Hutton, PE

DATE: July 10, 2020

RE: 2020 Hansen Avenue Watermain Rehabilitation Study
SEH No. SHPUC 154633

ERRRBACKGROUND

Shakopee Public Utilities (SPU) desires to rehabilitate a 12-inch DIP main that is located adjacent to Hansen Avenue between Crossings Boulevard and CR 18. The pipe is approximately 637 feet long and terminates at a valve approximately 100 feet from the end of the casing pipe under CR 18. The main is currently located in an easement adjacent to several storm water ponds that provide drainage facilities for the surrounding developments. The main is only 20 years old, but is experiencing leaks and breaks due to the corrosive soils in the area, the general swampy, heavy peat soil conditions, and high groundwater. There are no services connected to this main as it primarily serves as a looping main for system pressure and reliability.

The SPU is looking to replace this main using traditional dig and replace methods. Existing policy requires that all watermains utilize ductile iron pipe (DIP). Given the high groundwater and difficult construction conditions, SEH recommends that the SPU consider using trenchless technology options to rehabilitate this main, as opposed to excavation. Staff have indicated that trenchless methods may be an option but need more information to discuss the possibility of using a trenchless method with the Commissioners.

ALTERNATIVES

The forces and issues matrix reviews trenchless alternatives including: Cured-in-Place-Pipe (CIPP), Horizontal Directional Drilling (HDD), and Pipe Bursting (PB). A cost estimate, overall impacts, and advantages/disadvantages of each trenchless alternative, in addition to two traditional, open cut alternatives, have been evaluated in the matrix.

This study evaluates the schematic level cost and the feasibility of five alternatives for the watermain rehabilitation adjacent to Hansen Avenue. A brief description of all of the methods are as follows:

A. Structural Cured-in-Place Pipe (CIPP) lining (Figure 1): This method includes the installation of a flexible tube liner and resin by either pull-in-place or inversion methods, before curing the resin with either hot water or steam. This method has the smallest construction footprint.

B. Horizontal Directional Drilling (HDD) (Figure 2): This method includes the "drilling" of a new pipeline, parallel to, or beneath, the existing watermain.

C. Pipe bursting (PB) (Figure 3): Pipe bursting effectively bursts or explodes the existing pipeline in place, while pulling a new pipeline into place that is surrounded by existing soil and the broken pieces of the old pipe.

D. Traditional Open Cut (Figure 4): With this method, the entire pipeline is excavated and removed (or abandoned in place), and a new pipeline installed. The new pipeline installed can be along the existing alignment or along a new one

For each of the above methods, the following issues and schematic level costs were evaluated (see Exhibit 1):

1. Constructability (installation procedures, obstacles, and difficulties)
2. Existing and Proposed Alignment/Profile
3. Materials (compliance with SPU policy requiring DIP)
4. Fusing pipeline impacts
5. 48" RCP Storm Sewer conflict
6. Private Utility conflicts
7. Impacts to streets
8. Impacts to private property
9. Environmental impacts
10. Schematic level costs (Exhibit 2)

SUMMARY OF AVAILABLE DATA

The SPU has provided record drawings of the watermain in discussion. Figures 1 through 4 were created using pre-existing GIS data from the SEH database.

FORCES AND ISSUES SUMMARY

Attached in Exhibit 1 is the Forces and Issues Matrix for the rehabilitation of the watermain adjacent to Hansen Avenue. The matrix outlines the advantages and disadvantages of each method relative to the particular issues identified. The following conclusions about each method can be drawn from the matrix:

A. Structural Cured-in-Place-Pipe Lining: CIPP lining offers the most advantages (i.e. least impacts regarding issues). It has the smallest construction footprint of the trenchless methods described in this study. CIPP lining does require that the pipe be out of service for cleaning, televising, and lining. However, since there are no services connected to this main, as it primarily serves as a looping main for system pressure and reliability, the impacts are negligible. The final product is epoxy resin soaked liner within the existing DIP. This option essentially creates a new 75+ year pipe inside the host ductile iron pip.

B. Horizontal Directional Drilling (HDD): Typically fusible polyvinyl chloride (PVC) or fusible high-density polyethylene (HDPE) pipe materials are used with this installation method; however, DIP can also be used. Considering the SPU policy only allowing for installation of DIP, this alternative was evaluated assuming the installation of zinc coated DIP. For the DIP installation through HDD, cartridge loading installation is required, requiring pits larger than that required of CIPP lining. The 48" RCP storm sewer also provides a considerable challenge to HDD, so a new, deeper vertical alignment would be required. An alternative would be to relocate the pipe to the west, but this would require a new easement. This method requires the least amount of time for the pipe to be out of service, which would only be for making the connections to the existing watermain.

C. Pipe Bursting: Pipe bursting is generally used when an increase in pipe diameter may be necessary on the same alignment, and open cut installation is not an option. While SPU is not looking to increase the pipe size of this watermain, pipe bursting would also allow for the newly installed DIP to be along the existing

alignment. Typically, fusible polyvinyl chloride (PVC) or fusible high-density polyethylene (HDPE) pipe materials are used with this installation method, however DIP can be used. Pipe bursting can only accommodate minimal profile changes, making the 48" RCP storm sewer an obstacle that would not be passable with pipe bursting. Pipe bursting would only be feasible up to the storm sewer (approximately 2/3 of the alignment), requiring open cut for the remainder of the alignment. Additionally, the existing DIP is extremely difficult to burst. This difficulty often times leads to equipment becoming lodged in the existing pipe, with no other option to complete the work than excavation. Pipe bursting does require that the pipe to be out of service for cleaning, televising, and lining. However, since there are no services connected to this main, as it primarily serves as a looping main for system pressure and reliability, the impacts are negligible.

D. Traditional Open Cut: The traditional open cut options are feasible, though they pose constructability issues. To excavate a trench along the entirety of the existing watermain alignment would require dewatering measures and extensive erosion and sedimentation control. A DNR permit would also, more than likely, be required. The installation of a new DIP alignment, following the curves of Hansen Ave does not pose any major constructability issues, however, traffic control and dewatering measures would be required. Installing a new watermain, regardless of the chosen alignment, would still encounter the conflict of the 48" RCP storm sewer pipe. Additionally, due to the organic soils and high ground water, these alternatives have the most risk associated with unknown costs and variables (i.e. dewatering and permitting).

SCHEMATIC LEVEL COSTS

In addition, Exhibit 2 details the cost estimate associated with each method. A summary of the schematic level costs for each method is as follows:

Forces (Methods) [1]	
A – Structural Cured-In-Place-Pipe (CIPP) Lining	$520,000
B – Horizontal Directional Drilling (HDD)	$575,000
C – Pipe Bursting (PB)[2]	n/a
D – Open Cut (Existing Alignment)	$570,000
E – Open Cut (New Alignment)	$635,000

(1) Schematic level costs include a 30% contingency and 25% for estimated engineering and finance costs.

(2) Due to the extreme constructability issues encountered with this method, pipe bursting is not recommend and therefore a cost estimate was not calculated for this option.

RECOMMENDATIONS

Our recommended approach to rehabilitating the watermain adjacent to Hansen Avenue is to use structural cured-in-place-pipe lining. Not only is the cost less expensive than all other options evaluated, it provides minimal disturbances to the existing water system, water users, and the surrounding public roadways. This is the only alternative that does not result in a new ductile iron pipe though, so the SPU policy will need to be addressed.

SEH would be more than happy to provide a detailed education to SPU and its Commissioners to discuss the benefits and technical details of structural cured-in-place-pipe liners.

ATTACHMENTS:

Exhibit 1- Forces & Issues Matrix
Exhibit 2- Cost Estimate
Figure 1- Cured-in-Place-Pipe (CIPP) Option
Figure 2- Horizontal Directional Drilling Option
Figure 3- Pipe Bursting Options
Figure 4- Open Cut Options

SEH

Shakopee Public Utilities Council
2020 Hansen Ave Watermain Rehabilitation Study - Forces & Issues Matrix
Exhibit 1

Date: 7/10/2021
Revised:

FORCES (Alternatives)

	ISSUES	A - Structural Cured-in-Place-Pipe (CIPP) Lining — Existing pipeline remains in place, as host pipe — ~600 LF +/- 12-Inch Ductile Iron Pipe: Description	Advantage or Negligible Impact	Disadvantage	B - Horizontal Directional Drilling (HDD) — Existing pipeline is abandoned in place — ~600 LF +/- 12-Inch Ductile Iron Pipe: Description	Advantage or Negligible Impact	Disadvantage	C - Pipe Bursting (PB) — Existing pipeline is split, displaced by new pipeline — ~600 LF +/- 12-Inch Ductile Iron Pipe: Description	Advantage or Negligible Impact	Disadvantage	D - Open Cut, Existing Alignment — Existing pipeline is removed and replaced — ~100 LF +/- 12-Inch Ductile Iron Pipe: Description	Advantage or Negligible Impact	Disadvantage	E - Open Cut, New Alignment — Existing pipeline is abandoned and a new alignment is installed along Hansen Ave. — ~600 LF +/- 12-Inch Ductile Iron Pipe: Description	Advantage or Negligible Impact	Disadvantage
1	Constructability	2 pits, approximately 10' x 10' would be required for CIPP installation. [illegible]	X		2 pits, approximately 10' x 25' would be required for HDD operations. It would result in a new alignment approximately 10 feet away from the old one		X	2 pits, approximately 8' x 24' would be required for pipe bursting operations. [illegible]		X	Given the location of the existing alignment between a stormwater pond and swampy borrow pit, excavation conditions may prove to be wetter than usual, requiring large amounts of dewatering. Additionally, this would result in longer a longer construction period and potentially higher costs. There may or may not be possible wetland impacts that would need to be mitigated		X	Installation of a new 12" DIP watermain along Hansen Ave does not pose any noteworthy constructability issues. The old main could be abandoned. The new main would be located in the boulevard of Hanson Blvd making it more accessible for maintenance	X	
2	Alignment/Profile	[illegible]	X		The HDD alignment would [illegible] horizontal alignments, however the profile would be considerably deeper to avoid the 48" RCP conflict. The additional cost to HDD a deeper profile is negligible	X		The current profile and alignment would remain the same	X		The alignment would stay the same	X		The proposed alignment would be located along Hansen Ave. with 10' horizontal clearance from the existing 12" PVC sanitary sewer located along Hansen Ave	X	
3	Materials (Complies with SPU policy requiring DIP)	[illegible]		X	DIP can be pulled into place using HDD. However, DIP cannot be bagged to protect from hot soils due to installation procedures. Zinc coated DIP would be the material of choice for this method due to it's resistance to soil corrosion	X		[illegible] from hot soils due to installation procedures. HDPE is a viable material option, except HDPE violates the SPU policy requiring DIP for all watermains		X	DIP can be installed	X		DIP can be installed	X	
4	Fuse pipeline impact	N/A	X		DIP can be loaded piece by piece, or "cartridge loaded" as it is pulled into place. Therefore only the 2 - 10' x 25' pits would be required	X		DIP can be loaded piece by piece, or "cartridge loaded" as it is pulled into place. Therefore only the 2 - 8' x 24' pits would be required	X		N/A	X		N/A	X	
5	48" RCP storm sewer crossing the rehabilitated pipe	N/A	X		By relocating the alignment north of the existing 12" DIP, the current conflict with the 48" RCP is avoided	X		Pipe bursting would have to cease prior to the 48" RCP conflict, as the bursting/splitting equipment cannot navigate the bends necessary to avoid the storm sewer		X	Care should be taken when excavating and installing the new 12" DIP to avoid damage to the 48" RCP		X	Care should be taken when excavating and installing the new 12" DIP to avoid damage to the 48" RCP		X
6	Private utilities crossing the rehabilitated pipe	Private utility conflicts for any trenchless option should not pose a problem as the existing main is typically deeper than private utilities. Except for the pits, no excavation is needed	X		Private utility conflicts for any trenchless option should not pose a problem as the existing main is typically deeper than private utilities. Except for the pits, no excavation is needed	X		Private utility conflicts for the trenchless portion of this option should not pose a problem as the existing main is typically deeper than private utilities. Standard GSOC procedures would be followed for the open cut portion of this option		X	Standard GSOC procedures would be followed for the open cut portion of this option		X	Standard GSOC procedures would be followed for the open cut portion of this option		X
7	Impacts to streets (traffic, etc.)	There would be no impacts to streets or traffic, as CIPP pits would be located far enough back from the curb	X		There would be no impacts to streets or traffic, as HDD pits would be located far enough back from the curb	X		There would be no impacts to streets or traffic, as pipe bursting pits would be located far enough back from the curb, as would the excavation necessary in the existing alignment	X		There would be no impacts to streets or traffic, as all excavation required would be along the existing alignment between the stormwater pond and swampy borrow pit	X		There would be minor impacts to Hansen Ave traffic and [illegible]		X
8	Impacts to private property	The majority of the section of pipe to be rehabilitated runs through property owned by Shakopee Crossings LTD PTNSHP. The property includes a stormwater pond and swampy borrow pit. No direct impact is made on property owner, with the exception of obtaining easements to dig the necessary lining pits	X		The majority of the section of pipe to be rehabilitated runs through property owned by Shakopee Crossings LTD PTNSHP. The property includes a stormwater pond and swampy borrow pit. No direct impact is made on property owner, with the exception of obtaining easements to dig the necessary HDD pits	X		The majority of the section of pipe to be rehabilitated runs through property owned by Shakopee Crossings LTD PTNSHP. The property includes a stormwater pond and swampy borrow pit. No direct impact is made on property owner, with the exception of obtaining easements to dig the necessary pipe bursting pits, as well as the excavation required from the 48" RCP conflict		X	The majority of the section of pipe to be rehabilitated runs through property owned by Shakopee Crossings LTD PTNSHP. The property includes a stormwater pond and swampy borrow pit. No direct impact is made on property owner, with the exception of obtaining easements to dig necessary trench widths for excavation		X	There would be minimal impacts to the Shakopee Crossings LTD PTNSHP property, as the watermain would be installed in the ROW along Hansen Ave. The [illegible]	X	
9	Environmental Impacts	Environmental impacts would be minimal, as the 2 pits required would be limited in size to approximately 10' x 10'	X		Environmental impacts would be minimal, as the 2 pits required would be limited in size to approximately 10' x 25'		X	Environmental impacts would be moderate, as the pits would need to be sized to allow for excavation down to the existing 10' deep DIP, as well as the excavation needed to dig and replace the section of pipe that crosses underneath the existing 48" RCP. Proper erosion and sedimentation control measures would be needed to protect the adjacent stormwater pond and swampy borrow pit		X	Due to the existing alignment being located between a swampy borrow pit and stormwater pond, significant dewatering measures would be required to excavate [illegible] that may be required by the DNR to do so		X	By abandoning the existing alignment in place and moving the proposed alignment along Hansen Ave, [illegible] is the controlled activity that may be required by the DNR to do so		X
Advantages v/s Disadvantages			Advantages 8	Disadvantages 1		Advantages 7	Disadvantages 2		Advantages [illegible]	Disadvantages [illegible]		Advantages [illegible]	Disadvantages [illegible]		Advantages [illegible]	Disadvantages [illegible]
Estimated Price / LF (1)		[illegible]			[illegible]			Due to the extreme constructability issues encountered with this method, pipe bursting is not recommended, and therefore a cost estimate was not calculated for this option			[illegible]			[illegible]		
Estimated Price (1)		[illegible]			[illegible]						[illegible]			[illegible]		

Assumptions:
1. The segment needing rehabilitation can be isolated without affecting any water users. The existing system can sufficiently back feed all users, therefore no temporary water distribution would be required

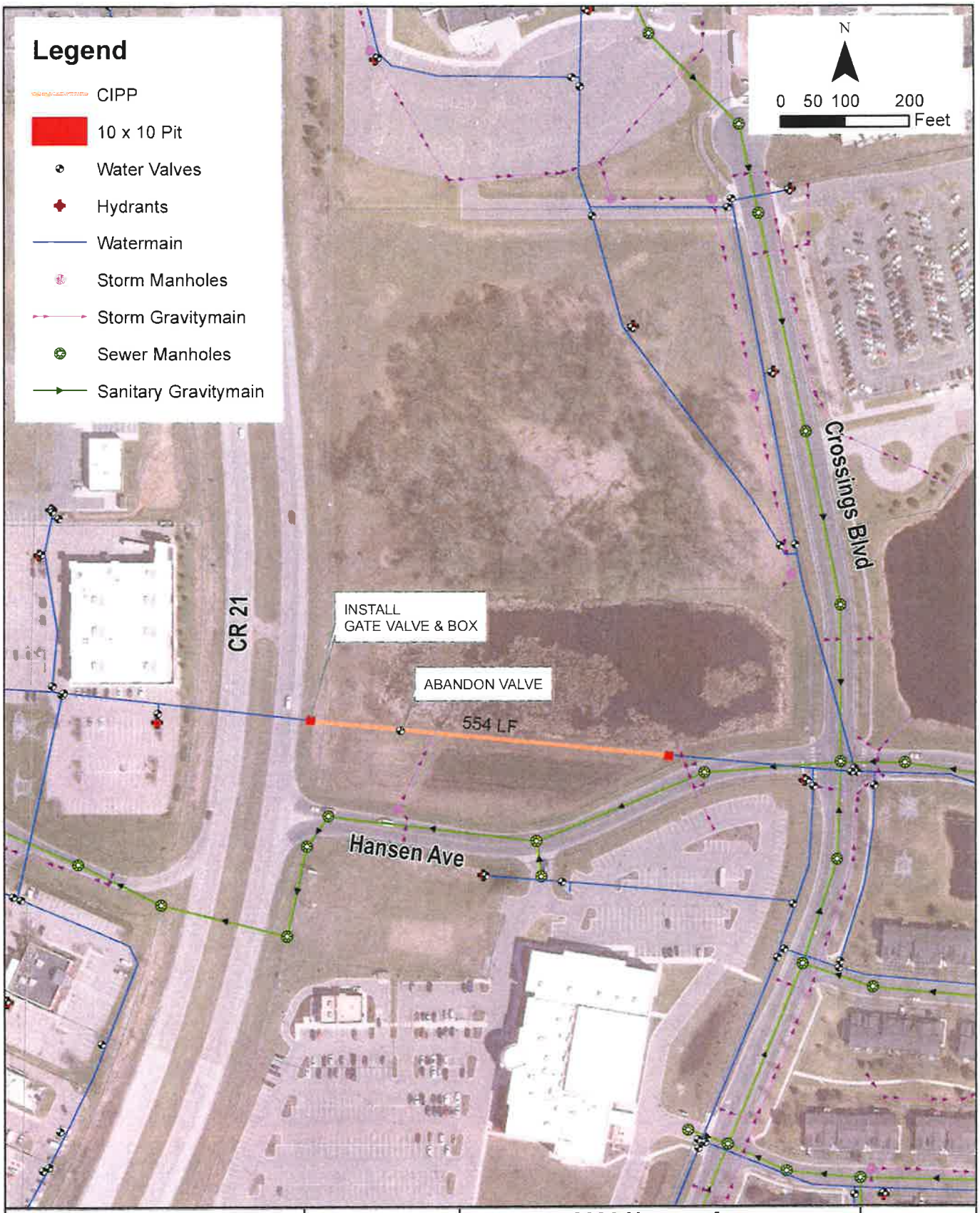
Shakopee Public Utilities Council
2020 Hansen Ave Watermain Rehabilitation Study - Forces & Issues Matrix
Exhibit 2 - Cost Estimate

Date: 7/10/2020
Revised:

FORCES (Alternatives)

Item Name	Unit	Unit Cost	A - Structural Cured-In-Place-Pipe (CIPP) Lining: Existing pipeline remains in place, as host pipe; ~600 LF +/- 12-inch Ductile Iron Pipe — Notes	Quantity	Total	B - Horizontal Directional Drilling (HDD): Existing pipeline is abandoned in place; ~600 LF +/- 12-inch Ductile Iron Pipe — Notes	Quantity	Total
General								
Mobilization	LS	$50,000		1	$50,000		1	$50,000
Traffic Control (CIPP, HDD, PB)	LS	$25,000		1	$25,000		1	$25,000
Traffic Control (Open Cut)	LS	$50,000						
Remove Watermain Pipe (1)	LF	$50	10 ft at each pit	20	$1,000	10 ft at each pit	20	$1,000
Abandon in place Watermain Pipe (2)	LF	$10				Abandon existing alignment	800	$8,000
Connect to Existing Watermain	EA	$2,500		2	$5,000		2	$5,000
Ductile Iron Fittings (large qty) (3)	LB	$10						
Ductile Iron Fittings (small qty) (4)	LB	$15	5 lb/ft for 20 ft	100	$2,000	5 lb/ft for 40 ft	200	$3,000
Access Pit (HDD, PB) (5) (7)	EA	$50,000				2 pits required	2	$100,000
Access Pit (CIPP) (6) (7)	EA	$25,000	2 pits required	2	$50,000			
Open Cut								
Remove Curb and Gutter	LF	$15						
Concrete Curb and Gutter - B618	LF	$30						
Turf Restoration	SY	$15						
Abandon Gate Valve	EA	$750		1	$1,000		1	$1,000
Remove Gate Valve & Box	EA	$500						
12-inch Gate Valve & Box	EA	$6,300		1	$6,000		1	$6,000
Dewatering (Trenchless)	LS	$25,000		1	$25,000		1	$25,000
Dewatering (Open Cut)	LS	$100,000						
12-inch Pipe								
Watermain (CIPP) - Lining	LF	$250		600	$150,000			
Watermain (HDD) - Zinc coated DIP (8)	LF	$200					600	$120,000
Watermain (Open Cut, Trenchless Connections) - DIP	LF	$250	10 ft at each pit	20	$5,000	20 ft at each pit	40	$10,000
Watermain (Open Cut) - DIP	LF	$200						
		Subtotal			$320,000			$354,000
		30% Contingency			$96,000			$106,000
		25% Engineering & Finance			$104,000			$115,000
		Total			$520,000			$575,000
		Average Estimated Price / LF	$870			$960		
		Estimated Price	$520,000			$575,000		

Item Name	C - Pipe Bursting (PB): Existing pipeline is split, displaced by new pipeline; ~600 LF +/- 12-inch Ductile Iron Pipe — Notes	Quantity	Total	D - Open Cut, Existing Alignment: Existing pipeline is removed and replaced; ~600 LF +/- 12-inch Ductile Iron Pipe — Notes	Quantity	Total	E - Open Cut, New Alignment: Existing pipeline is abandoned and a new alignment is installed along Hansen Ave; ~700 LF +/- 12-inch Ductile Iron Pipe — Notes	Quantity	Total
General									
Mobilization					1	$50,000		1	$50,000
Traffic Control (CIPP, HDD, PB)					1	$25,000			
Traffic Control (Open Cut)								1	$50,000
Remove Watermain Pipe (1)					600	$30,000			
Abandon in place Watermain Pipe (2)							Abandon existing alignment	800	$8,000
Connect to Existing Watermain					2	$5,000		2	$5,000
Ductile Iron Fittings (large qty) (3)				2 lb/ft for 600 ft	1,200	$12,000	2 lb/ft for 700 ft	1,400	$14,000
Ductile Iron Fittings (small qty) (4)									
Access Pit (HDD, PB) (5) (7)									
Access Pit (CIPP) (6) (7)									
Open Cut									
Remove Curb and Gutter							Approximately 1/2 open cut length	350	$4,000
Concrete Curb and Gutter - B618								350	$11,000
Turf Restoration				20' x 600' = 1200 SF	130	$2,000	20' x 700' = 1400 SF	160	$2,000
Abandon Gate Valve								1	$1,000
Remove Gate Valve & Box					1	$1,000			
12-inch Gate Valve & Box					1	$6,000		1	$6,000
Dewatering (Trenchless)									
Dewatering (Open Cut)					1	$100,000		1	$100,000
12-inch Pipe									
Watermain (CIPP) - Lining									
Watermain (HDD) - Zinc coated DIP (8)									
Watermain (Open Cut, Trenchless Connections) - DIP									
Watermain (Open Cut) - DIP				Entirety of existing alignment	600	$120,000	Entirety of new alignment	700	$140,000
Subtotal						$351,000			$391,000
30% Contingency						$105,000			$117,000
25% Engineering & Finance						$114,000			$127,000
Total						$570,000			$635,000
Average Estimated Price / LF	Due to the extreme constructability issues encountered with this method, pipe bursting is not recommended, and therefore a cost estimate was not calculated for this option.			$950			$910		
Estimated Price				$570,000			$635,000		



Path: X:\PT\S\SHPUC\154633\5-final-dsgn\51-drawings\90-GIS\Maps\Hansen Ave\Fig 1- CIPP.mxd

SEH
10901 Red Circle Dr. Suite 300
Minnetonka, MN 55343
PHONE: (952) 912-2600
FAX: (888) 908-8166
TF: (800) 325-2055
www.sehinc.com

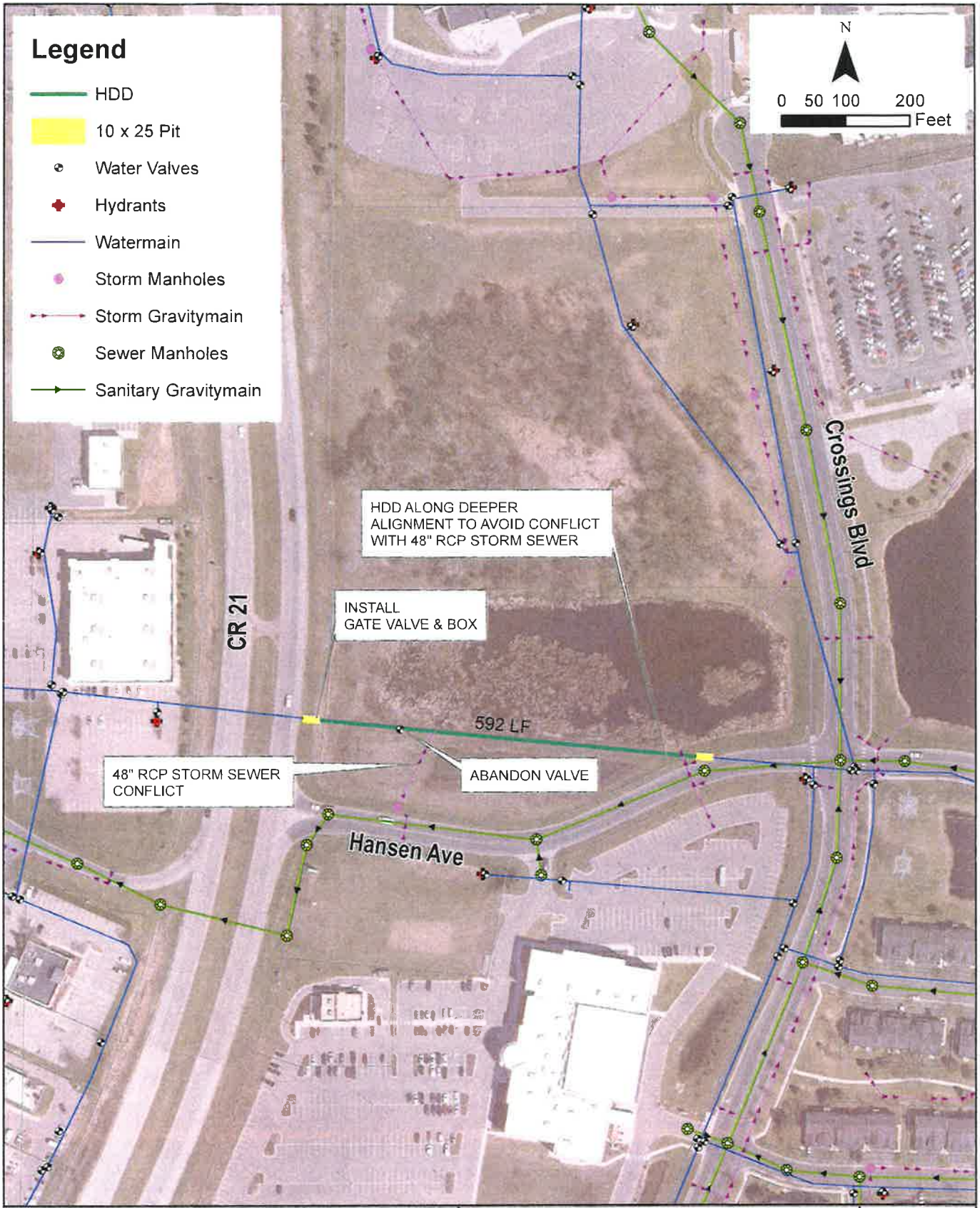
Project: SHPUC 154633
Print Date: 6/9/2020

Map by: abreland
Projection: Scott County
Source: Scott County, City of Shakopee

2020 Hansen Ave Watermain Rehabilitation Study

Cured-in-Place-Pipe (CIPP) Option
Shakopee, MN

Figure 1



Path: X:\PT\StS\HPUC\154633\5-final-dsgn\51-drawings\90-GIS\Maps\Hansen Ave\Fig 2- HDD.mxd

SEH

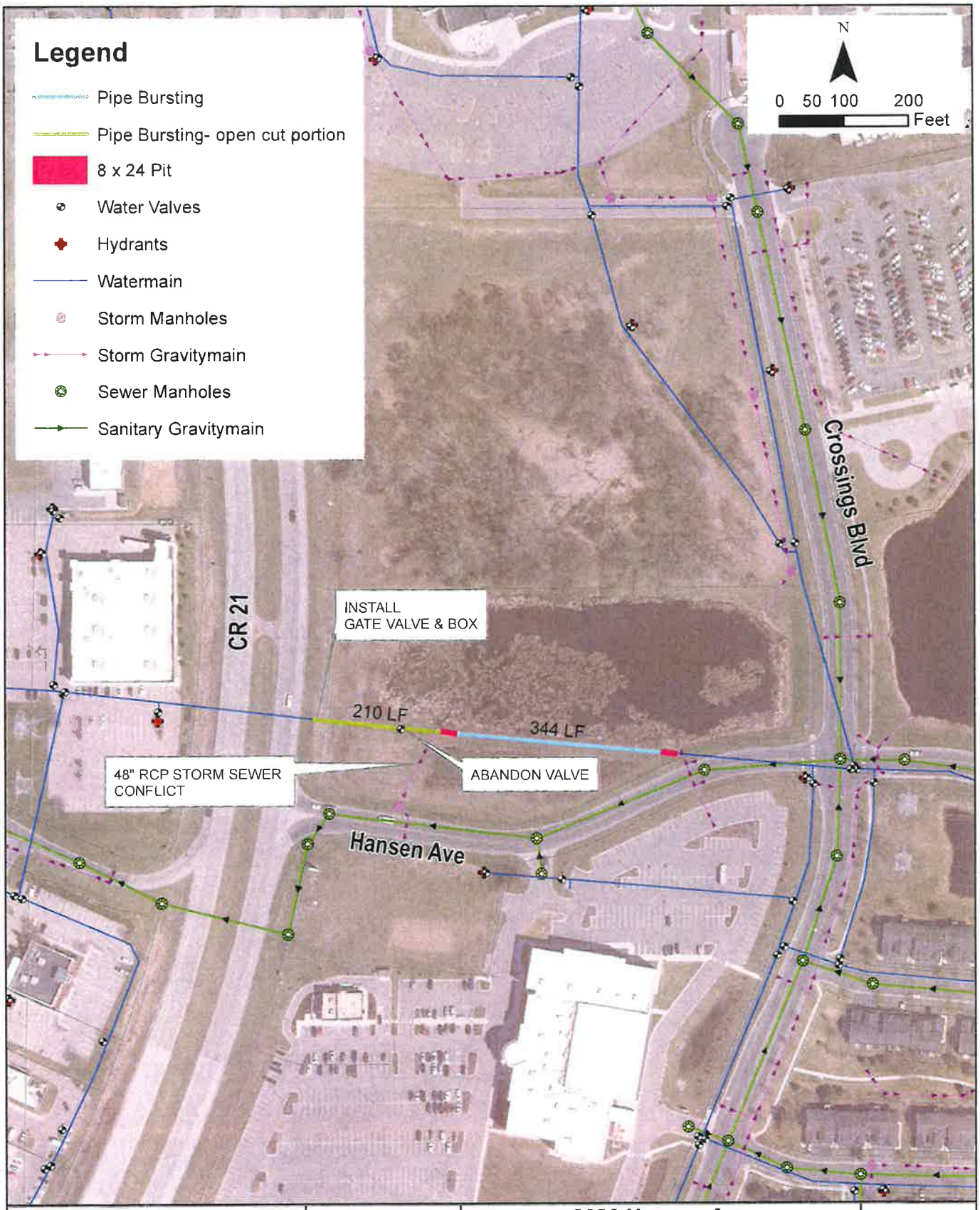
10901 Red Circle Dr. Suite 300
Minnetonka, MN 55343
PHONE: (952) 912-2600
FAX: (888) 908-8166
TF: (800) 325-2055
www.sehinc.com

Project: SHPUC 154633
Print Date: 6/11/2020

Map by: abreland
Projection: Scott County
Source: Scott County, City of Shakopee

2020 Hansen Ave
Watermain Rehabilitation Study
Horizontal Directional Drilling (HDD) Option
Shakopee, MN

Figure 2



Path: X:\PT\S\SHPUC\154633\5-final-dsgn\51-drawings\80-GIS\Maps\Hansen Ave\Fig 3- PB.mxd

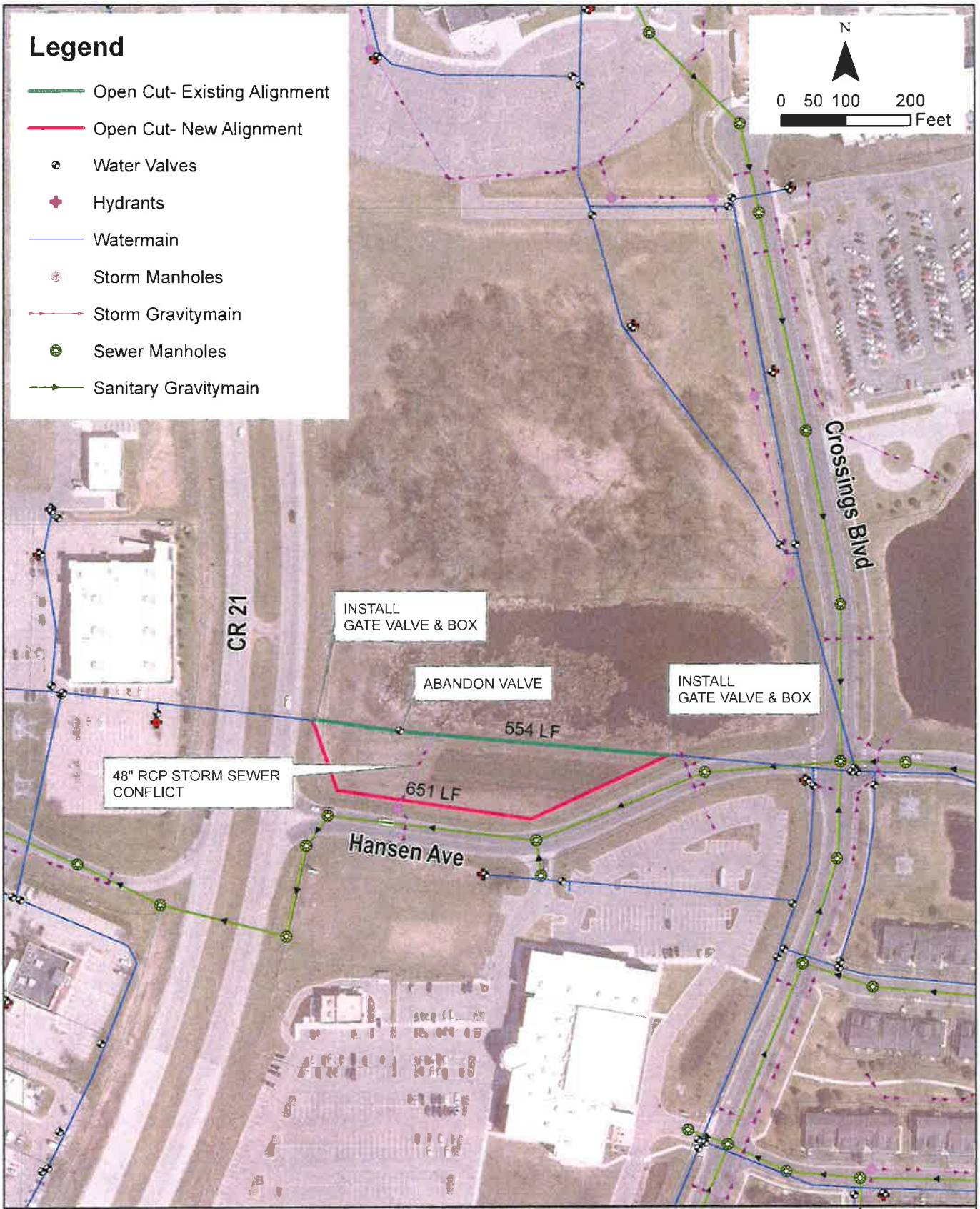
SEH
10901 Red Circle Dr. Suite 300
Minnetonka, MN 55343
PHONE: (952) 912-2600
FAX: (888) 908-8166
TF: (800) 325-2055
www.sehinc.com

Project: SHPUC 154633
Print Date: 6/9/2020

Map by: abreland
Projection: Scott County
Source: Scott County, City of Shakopee

2020 Hansen Ave
Watermain Rehabilitation Study
Pipe Bursting Option
Shakopee, MN

Figure 3



Path: X:\PT\S\SHPUC\154633\5-final-design\51-drawings\90-GIS\Maps\Hansen Ave\Fig 4- Open Cut.mxd

SEH

10901 Red Circle Dr. Suite 300
Minnetonka, MN 55343
PHONE: (952) 912-2600
FAX: (888) 908-8166
TF: (800) 325-2055
www.sehinc.com

Project: SHPUC 154633
Print Date: 4/2/2020

Map by: abreland
Projection: Scott County
Source: Scott County, City of Shakopee

2020 Hansen Ave
Watermain Rehabilitation Study
Open Cut Options
Shakopee, MN

Figure
4

July 20, 2020

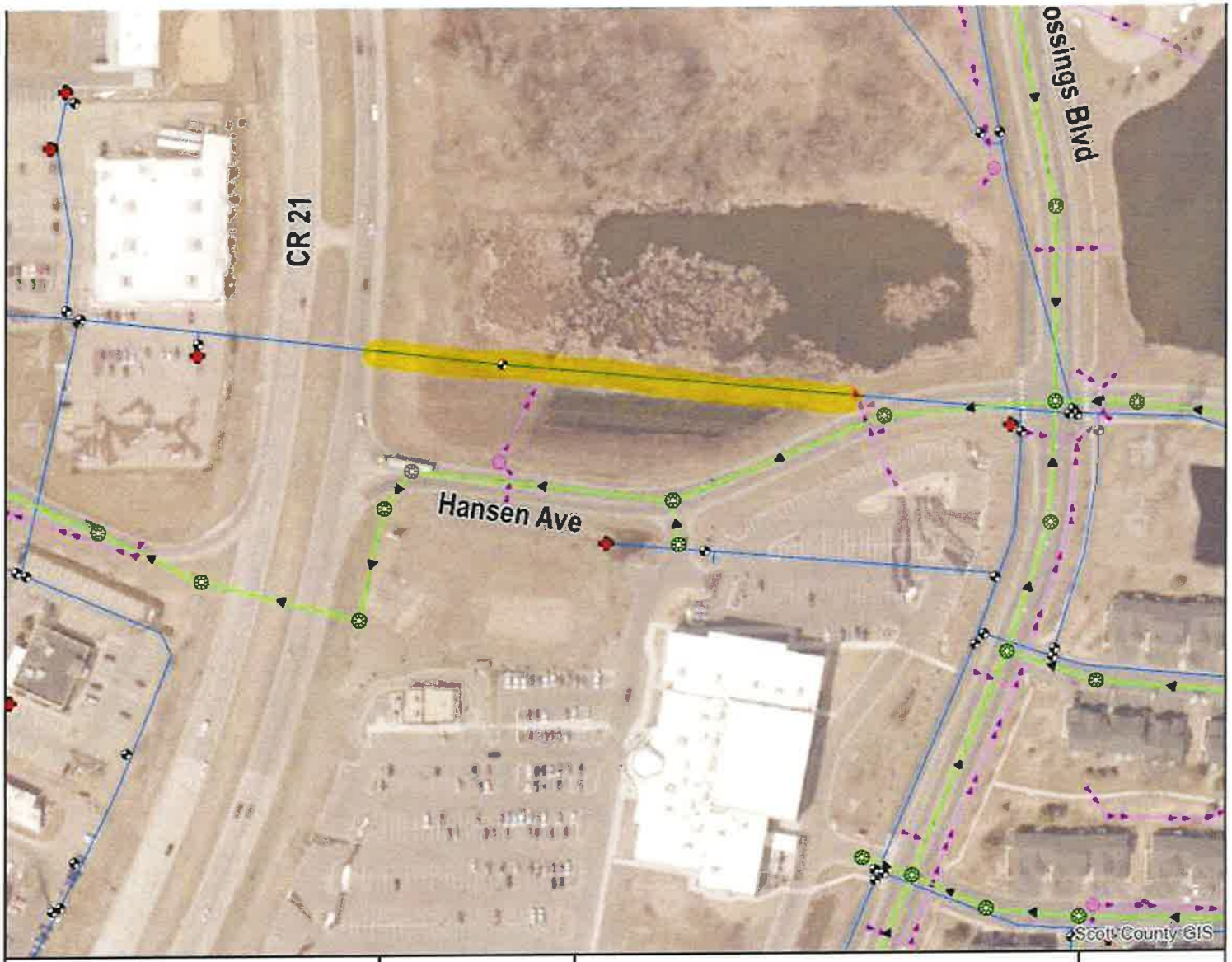
Presentation to Shakopee Public Utilities Commission on Hanson Blvd WM Rehab options

Dave Hutton, PE

SEH

Project details

- 12” DIP pipe, 637 feet long
- Through an easement area adjacent to storm water ponds and wet soils
- Only 20 years old but experiencing leaks and breaks, probably due to the organic, corrosive soils.
- Adjacent to Hanson Blvd between Crossings Blvd and CR 21



Path: X:\PT\SS\SHPUC\154633\5-final-dsgn\51-drawing\5180-GIS\Maps\Hansen Ave\Project Area.mxd

SEH

3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110
PHONE: (651) 490-2000
FAX: (888) 908-8166
TF: (800) 325-2055
www.sehinc.com

Project: SHPUC 154633
Print Date: 3/23/2020

Map by: abreland
Projection: Scott County
Source: Scott County, City of Shakopee

Hansen Ave
PROJECT NAME
Project Location

Figure
1

Forces and Issues Matrix

- Forces = Alternatives
  - Both traditional, open cut and trenchless alternatives were evaluated (5 total)
- Issues are used to compare pros/cons or advantages/disadvantages of forces
  - 9 issues were established and
  - cost estimates developed

SEH

Forces and Issues Matrix

Issues used to compare alternatives:

1. Constructability
2. Alignment and profile
3. Materials comply with SPUC policy
4. Fused pipe impacts
5. 48” Storm Sewer crossing conflicts
6. Private utilities
7. Impacts to streets and public infrastructure
8. Impacts to private property
9. Environmental

SEH

Option A – Cured In Place Pipe (CIPP)

Description

- Pull in place flexible tube (felt liner) impregnated with an epoxy resin that cures into a hard pipe via hot water/steam or UV. NSF 61 and AWWA approved. Has been used on water mains in U.S. for 20+ years.
- Creates a new 75+ year pipe inside the existing pipe. Results in a Class IV structural stand alone liner that is completely independent of host pipe.
- The existing host pipe merely exists to provide grade and alignment for the installation of the new CIPP liner.

Option A – Cured In Place Pipe (CIPP)

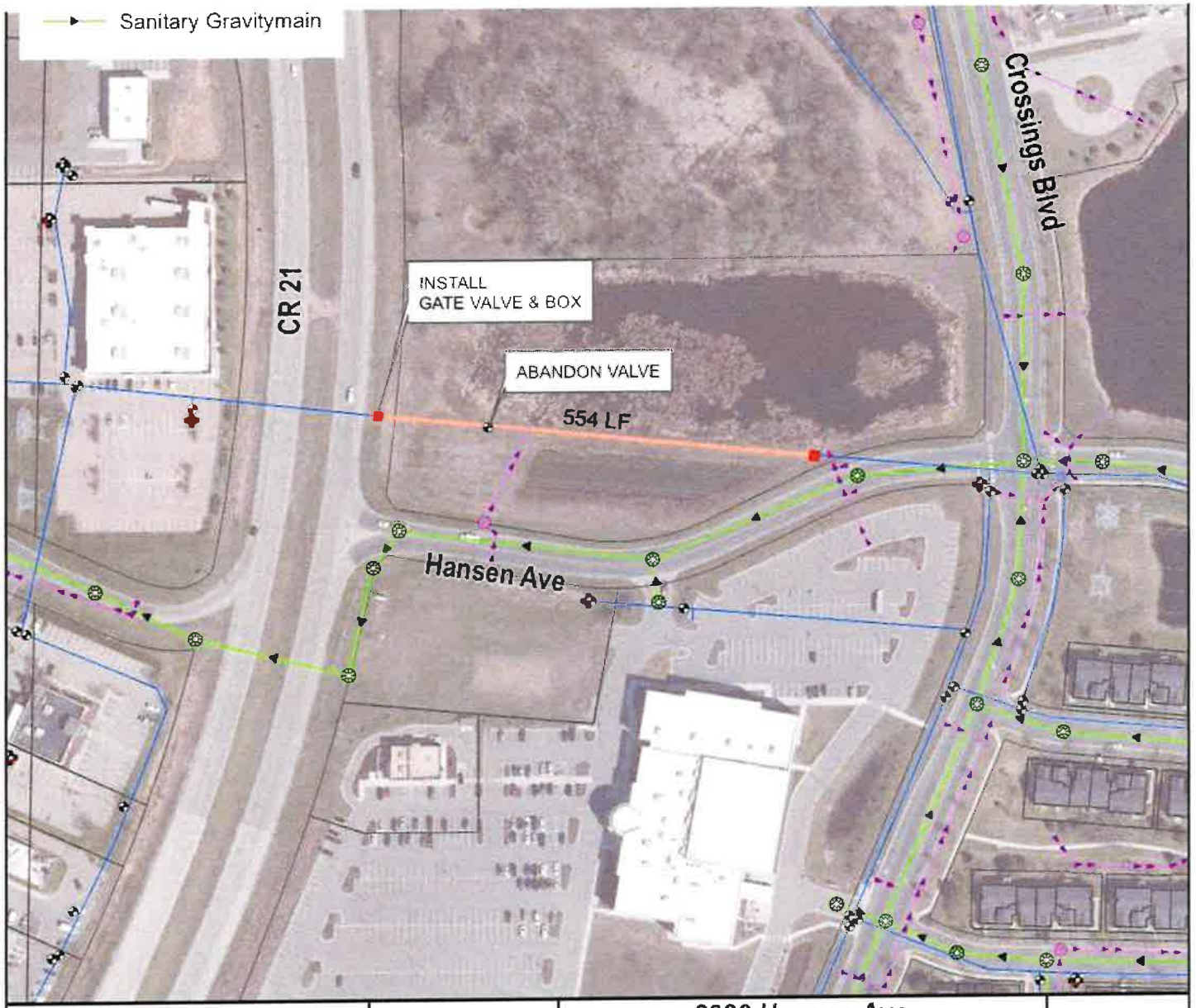
Pros

- Ease of construction
  - The whole process is about 2 weeks – excavate the pits, clean and CCTV line, install liner and cure, pressure and bacteria tests and put back in service.
- Minimal footprint – only two small 10 x 10 pits
  - Minimal impact to wetlands, dewatering

Cons

- Cannot line thru 90 degree bends (45's OK)
- Must take water main out of service
- Does not meet SPU policy of DIP material

SEH



SEH

10901 Red Circle Dr. Suite 300
Minnetonka, MN 55343
PHONE: (952) 912-2600
FAX: (888) 908-8166
TF: (800) 325-2055
www.sehinc.com

Project: SHPUC 154633
Print Date: 5/9/2020

Map by: abreland
Projection: Scott County
Source: Scott County, City of Shakopee

2020 Hansen Ave
Watermain Rehabilitation Study
Cured-in-Place-Pipe (CIPP) Option
Shakopee, MN

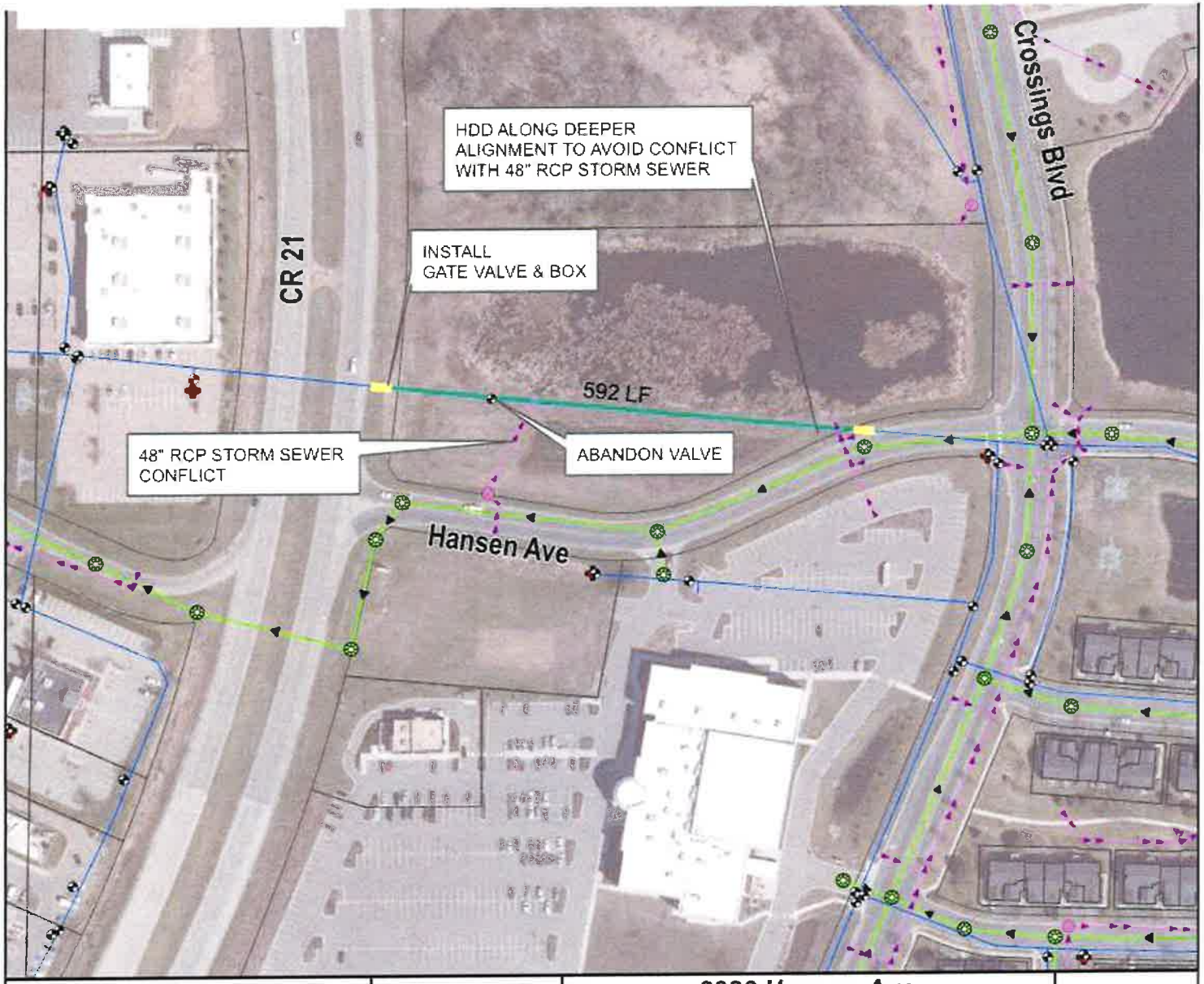
Figure
1

Option B – Horizontal Directional Drilling (HDD)

Description

- Drilling a new pipe parallel to existing pipe
- Two pits needed, same as CIPP, only slightly larger, 10 x 25 feet
- Materials used are generally HDPE or PVC
- Pipe is fused above ground for entire length to install so surface impacts needs to be considered

Directional Drilling



SEH

10901 Red Circle Dr. Suite 300
Minnetonka, MN 55343
PHONE: (952) 912-2600
FAX: (888) 908-8166
TF: (800) 325-2055
www.sehinc.com

Project: SHPUC 154633
Print Date: 6/11/2020

Map by: abreland
Projection: Scott County
Source: Scott County, City of Shakopee

2020 Hansen Ave
Watermain Rehabilitation Study
Horizontal Directional Drilling (HDD) Option
Shakopee, MN

Figure 2

Option B – Horizontal Directional Drilling (HDD)

Pros

- Existing watermain can remain in service until final cut over.
- Minimal footprint – only two small 10 x 25 pits
  - Minimal impact to wetlands, dewatering

Cons

- Would need to go deeper (10') to go under 48" storm sewer on same alignment
- Material is generally HDPE or PVC.
- DIP can be substituted but it cannot be "bagged" for hot soils - zinc lined DIP can be used
- Fewer contractors have experience with DIP "cartridge" method – increasing costs

Option C – Pipe Bursting

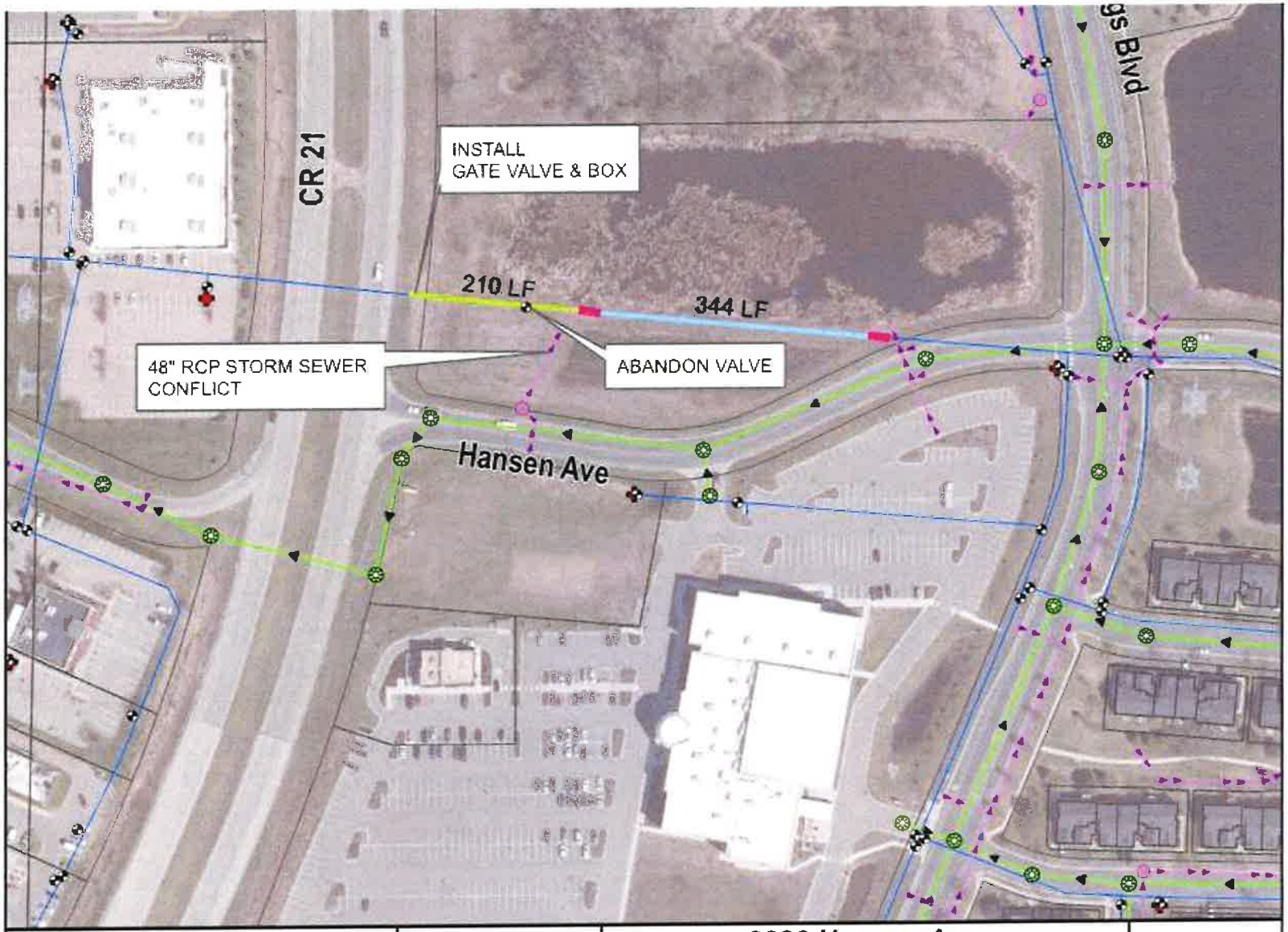
Description

- Bursting sends a "ram" in to explode or burst the existing pipe
- Pulls a new fused pipe, either PVC or HDPE behind in the same alignment.
- Can use DIP "cartridges" method but this is very rare and few contractors have used it.
- Highly dependent on soil types
- Is generally used when an increase in pipe diameter is desired

SEH

Pipe Bursting

SEH



Path: X:\PT\S\SHPUC\154633\5-final-design\5-1-drawings\BR-GIS\Maps\Hansen Ave\Fig 3- PB.mxd

SEH

10901 Red Circle Dr. Suite 300
Minnetonka, MN 55343
PHONE: (952) 912-2600
FAX: (888) 908-8166
TF: (800) 325-2055
www.sehinc.com

Project: SHPUC 154633
Print Date: 6/9/2020

Map by: sureland
Projection: Scott County
Source: Scott County, City of Shakopee

2020 Hansen Ave
Watermain Rehabilitation Study
Pipe Bursting Option
Shakopee, MN

Figure 3

Option C – Pipe Bursting

Pros

- Minimal footprint – two 10 x 25 pits
  - Minimal impact to wetlands, dewatering

Cons

- DIP is not able to be "burst" so a cutter tool is used.
- More risk for contractors – there is a chance of lodging the cutter resulting in an open cut to complete.
- Cannot change profile, so about 1/3 of the pipe at the 48" storm conflict would need to be open cut
- While DIP can be used, it is extremely rare

This option was eliminated from further consideration due to the construction issues outlined above.

Option D – Open Cut, Existing Alignment

Pros

- Traditional more familiar method of construction
- Able to install DIP per policy

Cons

- Major environmental impacts with the storm water ponds and wet areas
- Dewatering costs could be much higher than anticipated. Higher risk for contractors
- Soil stability for pipe bedding structure

Without actual soil borings, these factors are somewhat unknown at this stage in the process

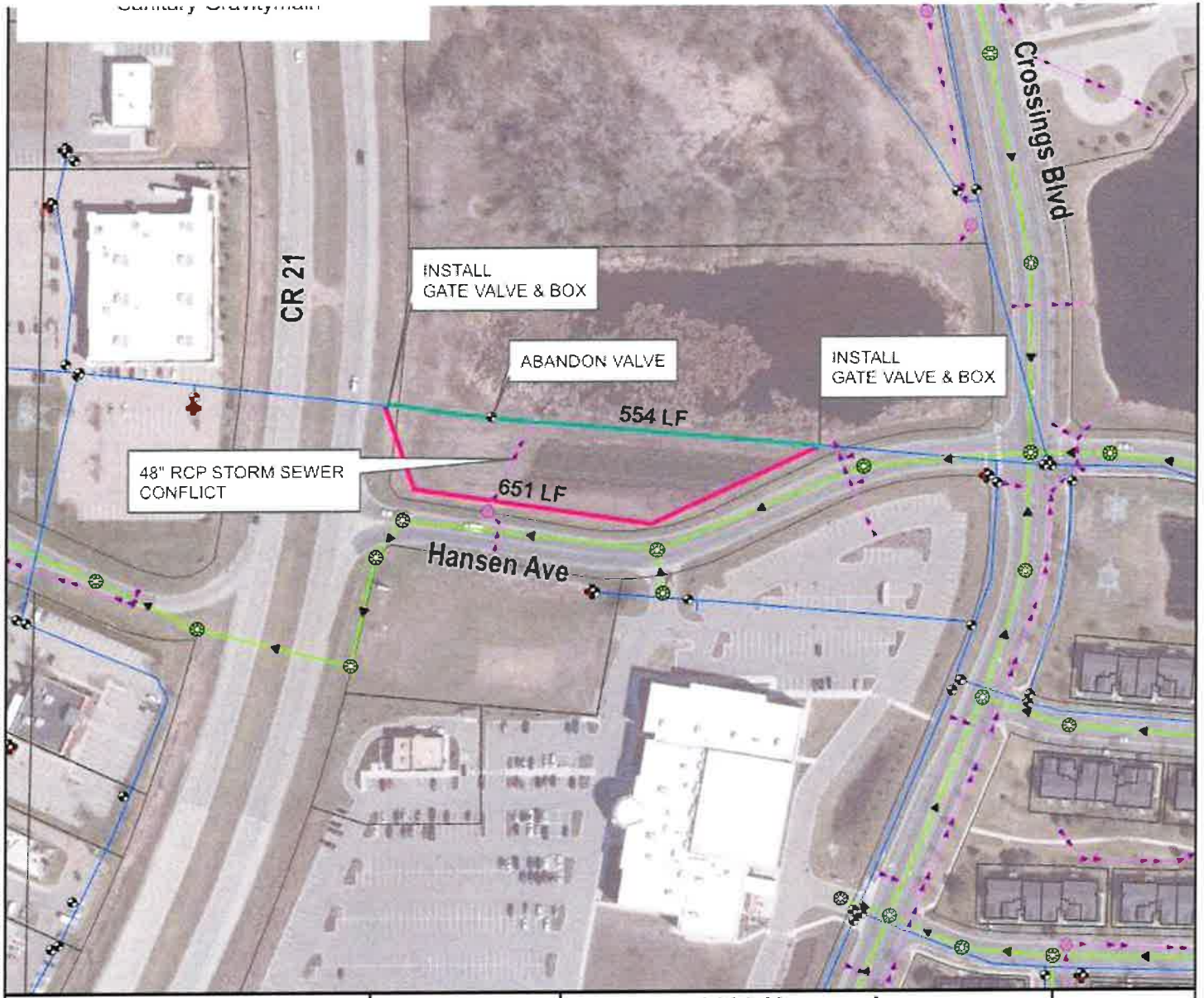
Option E – Open Cut, New Alignment

Pros

- Same as option D, plus
- Would move main closer to a street for potential ease of maintenance

Cons

- Same as Option D, plus
- Due to proximity to road and other infrastructure, additional construction costs may be incurred



Path: X:\PT\S\SHPUC\154633\5-final-dsgn\51-drawings\80-GIS\Maps\Hansen Ave\Fig 4- Open Cut.mxd

SEH

10901 Red Circle Dr. Suite 300
Minnetonka, MN 55343
PHONE: (952) 912-2600
FAX: (888) 908-8166
TF: (800) 325-2055
www.sehinc.com

Project: SHPUC 154633
Print Date: 4/2/2020

Map by: abreland
Projection: Scott County
Source: Scott County, City of Shakopee

2020 Hansen Ave
Watermain Rehabilitation Study
Open Cut Options
Shakopee, MN

Figure 4

Costs Comparison

Alternative	Estimated Costs
A. CIPP	$520,000
B. HDD	$575,000
C. Pipe Bursting	n/a
D. Open Cut, Existing Align	$570,000
E. Open Cut, New Align	$635,000

SEH

Conclusions

- Of the trenchless alternatives, CIPP Lining has the most advantages and lowest costs
- For the open cut alternatives, there is higher risk due to unknown soils and groundwater conditions. Soil borings during design would help minimize that risk.
- Because of the unknowns and potential risk assumed by contractors, we are not as confident of our cost estimate – especially the dewatering estimate of $100,000
- Open cut is the only method that results in new DIP pipe in conformance with SPUC policy, although CIPP creates a liner within a the existing CIP pipe
- CIPP is not new to the water industry and is proven

SEH

SHAKOPEE PUBLIC UTILITIES
MEMORANDUM

TO: SHAKOPEE PUBLIC UTILITIES COMMISSION

FROM: JOHN R. CROOKS, UTILITIES MANAGER

SUBJECT: WATER CONNECTION FUND AND TRUNK WATER FUND ANALYSIS REPORT – EHLERS, INC

DATE: JULY 14, 2020

There was a joint meeting with the SPU Commission and the Shakopee City Council that was held on March 12, 2019. One item that was discussed was the SPU Water Capacity Charge (WCC) and the Trunk Water Charge (TWC).

It was agreed upon that SPU would do an analysis of both charges and their associated fund balances through the ultimate build out of the City. To accomplish this, the City of Shakopee stated that an Alternative Urban Areawide Review (AUAR), as required by the Metropolitan Council, would be completed for the Jackson Township Development Area.

A draft of the study was available September 2019. The AUAR was completed by the City in February 2020. The City Council adopted the AUAR on March 17, 2020. The AUAR then became part of the City of Shakopee 2040 Comprehensive Plan.

This report was necessary for SPU to update their 2018 Comprehensive Water System Plan. Population projections, zoning, land use and other critical information in the AUAR was then applied to the SPU Comprehensive Water System Plan. This work by the SPU consultant, SEH, and was recently completed and reviewed by Staff.

SPU is now at the point to move forward with the analysis of the WCC and TWC. Prior review of WCC and TWC charges and comparison with surrounding communities was completed and presented to the Commission in June 2020.

I have had meetings with Ehlers,Inc, to perform the analysis for SPU. Senior Municipal Advisor Jason Aarsvold, Senior Municipal Advisor Greg Johnson and Economic Development Advisor Jessica Cook will be the principals in the study and analysis being done. Unfortunately, with current issues with COVID, the

study will not be completed until October 2020. However, that would allow time for SPU to adjust the WCC and/or TWC, if needed, and be incorporated into the 2021 budget.

SPU
Shakopee Public Utilities

po box 470 • 255 sarazin street
shakopee, mn 55379
main # 952.445-1988 • fax # 952.445-7767

July 13, 2020

TO: John Crooks, Utilities Manager

FROM: Greg Drent, Electric Superintendent

Subject: Service Bulletin on Cooper Eaton Switch's

Cooper/Eaton has a pad mount switchgear maintenance advisory bulletin to inspect and check moisture content of the oil of their pad mount switchgear. SPU has about 110 of those switches on our system. We had one switch fail in Southbridge last year.

Testing is ongoing; we had to wait until the temperature of the oil was above 59 degrees F to perform the moisture testing. The testing is going well and we have 42 of the 110 tested.

We have had a couple switches test a little high in moisture content. We contacted the manufacturer about the results and they wanted us to provide another oil sample so we did that. A second sample was taken and one switch still had elevated levels of moisture. The manufacturer is currently evaluating the test results but we did not want the oil switch on our system with elevated moisture content so we decided to change the unit out.

In the next weeks, we will be testing the remaining switches on our electric system and evaluating the oil samples for moisture content. If any units are above the recommended levels we will be changing them out and putting new oil, gasket and lid on the units.

SPU
Shakopee Public Utilities

po box 470 • 255 sarazin street
shakopee, mn 55379
main # 952.445-1988 • fax # 952.445-7767
www.spucweb.com

July 15, 2020

TO: John Crooks, Utilities Manager

FROM: Sharon Walsh, Director of Marketing and Customer Relations

SUBJECT: Status Update – New SPU Website Launch

Overview

The new SPU website is in the final stages of development. Content has been written and corresponding pages developed. Navigation and functionality are being tested and copy is being proofed.

Secure, interactive forms have been designed and built. These will replace the static pdf pages that previously had to be downloaded and printed. The exception to this is the employment application/form. This will remain as is, but can be easily added at a later date when input from an HR Manager can be provided.

This website will support and complement the new branding of SPU in both color scheme and fonts. It is the final element of our rebranding project.

Following all testing and proofing, the anticipated launch date is Monday, August 3rd, 2020.

Action Required

No action is required at this time.

SHAKOPEE PUBLIC UTILITIES
MEMORANDUM

TO: SHAKOPEE PUBLIC UTILITIES COMMISSION

FROM: JOHN R. CROOKS, UTILITIES MANAGER

SUBJECT: SHARED SERVICES BETWEEN SPU AND THE CITY OF SHAKOPEE – MEETING REVIEW AND UPDATE

DATE: JULY 15, 2020

As directed by the SPU Commission at the June 15, 2020 Commission meeting, a second meeting was scheduled between myself and Assistant City Administrator Nathan Burkett.

The meeting took place in the SPU Service Center on July 13th. Several items were discussed that were included in the email dated June 26th. Those being GIS/ERSI and Microsoft 365.

The majority of the meeting was centered on staffing and concerns of SPU staff about job security. The discussion also led to oversight and authority over positions which may be involved with both independent organizations.

Attached to this memo is an email outlining the meeting as provided by Mr. Burkett.

Staff will schedule another meeting for next week.

Crooks, John

From: Nathan Burkett <NBurkett@Shakopeemn.gov>
Sent: Tuesday, July 14, 2020 9:57 AM
To: Crooks, John
Subject: Meeting Follow up

John,

Thanks again for meeting me yesterday. I continue to be hopeful we come up with some good ideas that will advance both organizations. Just a couple items after a bit more thought:

- I fully understand the need to manage employee questions and concerns. I stand behind my statement that our philosophy and approach at the City is not and will not be to merge services for the purpose of eliminating employees. Our philosophy is very much "people first" when it comes to staff leadership and that will continue no matter what. I also cannot imagine that we will be so quick to become so efficient that we do not need our people to continue the work they do. You can give your staff assurances that efficiency does not equal layoffs or staff reductions. Maybe in the long run we find that we can do more with less together – but that would mean we take advantage of retirements or natural attrition.

- I also understand that there are two independent bodies involved in this and that we need to ensure appropriate oversight for both the governing bodies and the management of each organizations. I am certain there are methods that would work to maintain appropriate levels of oversight at each level, as well as ensuring appropriate accounting controls and operational latitude for the team on the ground doing the work. I did not think that far forward prior to our meeting but I did mention matrix organizations – which I think is a viable model for how this would look. Here is a link to some information on matrix organizations. It does not exactly apply but gives an overview of how they work and pros and cons.

I appreciate your approach to try to understand the barriers before diving in head first. I am the same way – if we at acknowledge their existence we can truly evaluate our options more easily. I plan to do a little bit of research on other organizations who have tried similar approaches as this to see if there is anything I can find that will give us some ideas.

I look forward to our next meeting with our finance teams!

SHAKOPEE

Nate Burkett
Assistant City Administrator, City of Shakopee
485 Gorman St., Shakopee MN 55379
952-233-9310 | nburkett@ShakopeeMN.gov | www.ShakopeeMN.gov
Follow us on: Facebook | Twitter | YouTube

SHAKOPEE PUBLIC UTILITIES

"Lighting the Way – Yesterday, Today and Beyond"

July 9, 2020

TO: John Crooks, Utilities Manager

FROM: Renee Schmid, Director of Finance and Administration

SUBJECT: Insurance Liability Coverage - Waiver

Overview

- Staff is in the process of renewing the Utilities Property and Liability Insurance Coverage for the coming year. In order to extend coverage, the Commission is required to make a decision to either "waive" or "not waive" the monetary limits on municipal tort liability. More information regarding the implications of this decision is included in the attached waiver form from the League of Minnesota Cities.

Recommendation

- Staff recommends the commission elect to "not waive" the monetary limits as a measure to limit any future claims exposure.

Requested Action by Commission

The Commission is asked to make a decision on tort liability limits and select one option below:

- The Commission **DOES NOT WAIVE** the monetary limits on municipal tort liability established by Minnesota Statues, Section 466.04
- The Commission **WAIVES** the monetary limits on municipal tort liability established by Minnesota Statues, Section 466.04 to the extent of the limit on the liability coverage obtained from LMCIT.

Post Office Box 470 • 255 Sarazin Street • Shakopee, Minnesota 55379-0470
(952) 445-1988 • Fax (952) 445-7767 • www.spucweb.com

LEAGUE MINNESOTA CITIES

LIABILITY COVERAGE – WAIVER FORM

Members who obtain liability coverage through the League of Minnesota Cities Insurance Trust (LMCIT) must complete and return this form to LMCIT before the member's effective date of coverage. Return completed form to your underwriter or email to pstech@lmc.org.

The decision to waive or not waive the statutory tort limits must be made annually by the member's governing body, in consultation with its attorney if necessary.

Members who obtain liability coverage from LMCIT must decide whether to waive the statutory tort liability limits to the extent of the coverage purchased. The decision has the following effects:

- *If the member does not waive the statutory tort limits*, an individual claimant could recover no more than $500,000 on any claim to which the statutory tort limits apply. The total all claimants could recover for a single occurrence to which the statutory tort limits apply would be limited to $1,500,000. These statutory tort limits would apply regardless of whether the member purchases the optional LMCIT excess liability coverage.

- *If the member waives the statutory tort limits and does not purchase excess liability coverage*, a single claimant could recover up to $2,000,000 for a single occurrence (under the waive option, the tort cap liability limits are only waived to the extent of the member's liability coverage limits, and the LMCIT per occurrence limit is $2,000,000). The total all claimants could recover for a single occurrence to which the statutory tort limits apply would also be limited to $2,000,000, regardless of the number of claimants.

- *If the member waives the statutory tort limits and purchases excess liability coverage*, a single claimant could potentially recover an amount up to the limit of the coverage purchased. The total all claimants could recover for a single occurrence to which the statutory tort limits apply would also be limited to the amount of coverage purchased, regardless of the number of claimants.

Claims to which the statutory municipal tort limits do not apply are not affected by this decision.

LMCIT Member Name:
Shakopee Public Utilities Commission

Check one:

☐ The member **DOES NOT WAIVE** the monetary limits on municipal tort liability established by Minn. Stat. § 466.04.

☐ The member **WAIVES** the monetary limits on municipal tort liability established by Minn. Stat. § 466.04, to the extent of the limits of the liability coverage obtained from LMCIT.

Date of member's governing body meeting: 07/20/2020

Signature:_____ Position: _____

SPU
Shakopee Public Utilities

11d

July 15, 2020

TO: John Crooks, Utilities Manager — Propose as Consent

CC: Joe Adams
Sherri Anderson
Greg Drent
Lon Schemel
Sharon Walsh

FROM: Kelley Willemssen, Senior Accounting Specialist

SUBJECT: Financial Results for June, 2020

The following Financial Statements are attached for your review and approval.

Month to Date and Year to Date Financial Results – June, 2020

- Combined Statement of Revenue & Expense and Net Assets – Electric, Water and Total Utility
- Electric Operating Revenue & Expense Detail
- Water Operating Revenue & Expense Detail

Key items to note:

Month to Date Results – June, 2020

- Total Utility Operating Revenues for the month of June totaled $4.4 million and was favorable to budget by $44k or 1%. Electric revenues totaled $3.9 million and were unfavorable to budget by $24k or 0.6% due to lower than plan revenue in commercial and industrial sales and customer penalties. Water revenues totaled $570k and were favorable to budget by $70k or 13.5%.
- Total operating expenses were $4.5 million and are favorable to budget by $230k or 4.9%. Total purchased power in June was $3.3 million and was $157k or 4.6% lower than budget for the month. Total Operating Expense for electric including purchased power totaled $4.0 million and was favorable to budget by $174k or 4.1% due to lower than plan purchased power costs and timing of expenditures in administrative and general expense and operation maintenance expense. Total Operating Expense for Water totaled $394k and was also favorable to budget by $57k or 12.6% due to lower than plan expenditures in pumping and maintenance and administrative and general expenses.
- Total Utility Operating Income was a loss of $48k but was favorable to budget by $274k due to lower than plan operating expenses of $230k and higher than plan operating revenues of $44k.
- Total Utility Non-Operating Revenue was $53k and was unfavorable to budget by $51k driven by lower than plan investment income of $38k, and lower than plan rental and miscellaneous income of $15k.
- Capital Contributions for the month of June totaled $24k and were unfavorable to budget by $306k primarily due to the timing of collections on water capacity charge fees and by lower than plan trunk water fees.

- Change in Net Position was a loss of $173k and was unfavorable to budget by $82k primarily due to lower than plan capital contributions of $306k and investment income of $38k. The deficit was partially offset by higher than plan operating income of $274k.
- Electric usage billed to customers in June was 35,395,345 kWh, an increase of 16.7% from May usage billed at 30,332,514 kWh.
- Water usage billed to customers in June was 168.2 million gallons, an increase of 55.3% from May usage billed at 108.3 million gallons.

Year to Date Financial Results – June, 2020

- Total Utility Operating Revenues year to date June totaled $23.5 million and were unfavorable to budget by $886k or 3.6%. Electric revenues totaled $21.4 million and were unfavorable to budget by $878k or 3.9% driven by lower than plan energy sales in industrial and commercial of $337k, lower than plan customer penalties due to waiving of fees, lower than plan conservation revenues due to lower sales, and lower than plan power cost adjustment revenues of $691k due to lower sales and lower unit costs of purchased power. Average cost per kWh purchased year-to-date in 2020 was 7.13 cents per kWh or 3.79% lower than the planned cost per kWh of 7.40 cents per kWh, which results in lower power cost adjustment revenue in addition to lower kWh sales volumes. Water revenues totaled $2.1 million and were also unfavorable to budget by $8k or 0.4% driven by lower than plan sales volumes in commercial and industrial, offset by favorable sales in residential.
- Total Utility Operating Expenses year to date June were $22.0 million and were favorable to budget by $1.7 million or 7.3% primarily due to lower than plan purchased power costs of $814k, expenditures in energy conservation of $202k and administrative and general expenses of $783k of which includes, outside services of $174k, employee benefits of $194k and depreciation expense of $3k. Total Operating Expense for electric including purchased power was $19.6 million and was favorable to budget by $1.4 million or 6.8%. Total Operating Expenses for Water was $2.4 million and was also favorable to budget by $308k or 11.3%.
- Total Utility Operating Income was $1.5 million and was favorable to budget by $846k driven by lower than planned operating expenses of $1.7 million and partially offset by lower than plan operating revenues of $886k.
- Total Utility Non-Operating Income was $887k and was favorable to budget by $101k due to higher than planned investment income of $164k, and lower than plan interest expense on customer deposits of $16k, and were partially offset by lower than plan rental and miscellaneous income of $73k due to timing, and a $6k loss on the disposition of equipment in electric.
- YTD Capital Contributions were $830k and are unfavorable to budget by $1.1 million primarily due to timing of collection of trunk water fees of $231k and timing of collection of water capacity charge fees of $925k.
- Municipal contributions to the City of Shakopee totaled $1.2 million year to date and are higher than plan by $6k or 0.5%. The actual estimated payment throughout the year is based on prior year results and will be trued up at the end of the year.
- YTD Change in Net Position is $2.0 million and is unfavorable to budget by $207k reflecting lower than plan operating revenues, lower than plan operating expense, higher than plan non-operating revenues, and lower than plan capital contributions.

SHAKOPEE PUBLIC UTILITIES

MONTH TO DATE FINANCIAL RESULTS

June 2020

SPU
Shakopee Public Utilities

SHAKOPEE PUBLIC UTILITIES
COMBINED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN FUND NET POSITION

	Month to Date Actual - June 2020			Month to Date Budget - June 2020			Electric MTD Actual v. Budget B/(W)		Water MTD Actual v. Budget B/(W)		Total Utility MTD Actual v. Budget B/(W)	
	Electric	Water	Total Utility	Electric	Water	Total Utility	$	%	$	%	$	%
OPERATING REVENUES	$ 3,856,099	569,716	4,425,816	3,880,327	501,765	4,382,092	(24,227)	-0.6%	67,951	13.5%	43,723	1.0%
OPERATING EXPENSES						-						
Operation, Customer and Administrative	3,867,538	240,724	4,108,262	4,043,303	294,876	4,338,179	175,765	4.3%	54,152	18.4%	229,917	5.3%
Depreciation	212,556	153,270	365,826	210,622	155,720	366,342	(1,934)	-0.9%	2,451	1.6%	517	0.1%
Amortization of Plant Acquisition	-	-	-	-	-	-	-	0.0%	-	-	-	0.0%
Total Operating Expenses	4,080,094	393,994	4,474,088	4,253,925	450,596	4,704,521	173,830	4.1%	56,603	12.6%	230,433	4.9%
Operating Income	(223,995)	175,722	(48,272)	(373,598)	51,169	(322,429)	149,603	40.0%	124,553	243.4%	274,156	85.0%
NON-OPERATING REVENUE (EXPENSE)												
Rental and Miscellaneous	4,470	2,569	7,040	21,090	1,160	22,250	(16,619)	-78.8%	1,409	121.5%	(15,210)	-68.4%
Interdepartment Rent from Water	7,500	-	7,500	7,500		7,500	-	0.0%	-	-	-	0.0%
Investment Income	28,851	12,381	41,232	56,116	23,203	79,318	(27,265)	-48.6%	(10,821)	-46.6%	(38,086)	-48.0%
Interest Expense	(2,775)	(125)	(2,900)	(5,413)	(183)	(5,596)	2,638	48.7%	58	31.6%	2,696	48.2%
Amortization of Debt Issuance Costs and Loss on Refunding	-	-	-	-	-	-	-	#DIV/0!	-	-	-	#DIV/0!
Gain/(Loss) on the Disposition of Property	-	-	-	-	-	-	-	-	-	-	-	0.0%
Total Non-Operating Revenue (Expense)	38,046	14,826	52,872	79,292	24,180	103,472	(41,246)	-52.0%	(9,354)	-38.7%	(50,600)	-48.9%
Income Before Contributions and Transfers	(185,949)	190,548	4,600	(294,306)	75,349	(218,956)	108,357	36.8%	115,199	152.9%	223,556	102.1%
CAPITAL CONTRIBUTIONS	-	23,691	23,691	-	329,545	329,545	-	-	(305,853)	-92.8%	(305,853)	-92.8%
TRANSFER TO MUNICIPALITY	(184,909)	(16,000)	(200,909)	(183,552)	(17,182)	(200,734)	(1,358)	-0.7%	1,182	6.9%	(176)	-0.1%
CHANGE IN NET POSITION	$ (370,858)	198,240	(172,618)	(477,857)	387,712	(90,146)	106,999	22.4%	(189,472)	-48.9%	(82,473)	-91.5%

SHAKOPEE PUBLIC UTILITIES
ELECTRIC OPERATING REVENUE AND EXPENSE

	MTD Actual June 2020	MTD Budget June 2020	MTD Actual v. Budget Better/(Worse) $	%
OPERATING REVENUES				
Sales of Electricity				
Residential	$ 1,494,333	1,265,846	228,487	18.1%
Commercial and Industrial	2,296,627	2,527,446	(230,818)	-9.1%
Uncollectible accounts	-	-	-	-
Total Sales of Electricity	3,790,960	3,793,291	(2,331)	-0.1%
Forfeited Discounts	(226)	22,719	(22,944)	-101.0%
Free service to the City of Shakopee	8,909	7,125	1,785	25.1%
Conservation program	56,456	57,192	(737)	-1.3%
Total Operating Revenues	3,856,099	3,880,327	(24,227)	-0.6%
OPERATING EXPENSES				
Operations and Maintenance				
Purchased power	3,288,284	3,445,060	156,776	4.6%
Distribution operation expenses	78,760	40,708	(38,051)	-93.5%
Distribution system maintenance	73,613	57,035	(16,578)	-29.1%
Maintenance of general plant	16,793	29,587	12,795	43.2%
Total Operation and Maintenance	3,457,449	3,572,390	114,941	3.2%
Customer Accounts				
Meter Reading	10,472	10,667	196	1.8%
Customer records and collection	45,037	49,719	4,682	9.4%
Energy conservation	99,046	60,407	(38,639)	-64.0%
Total Customer Accounts	154,555	120,794	(33,761)	-27.9%
Administrative and General				
Administrative and general salaries	54,350	63,793	9,442	14.8%
Office supplies and expense	16,789	22,488	5,698	25.3%
Outside services employed	23,711	38,934	15,223	39.1%
Insurance	10,803	13,928	3,125	22.4%
Employee Benefits	140,740	167,761	27,021	16.1%
Miscellaneous general	9,141	43,216	34,074	78.8%
Total Administrative and General	255,534	350,119	94,585	27.0%
Total Operation, Customer, & Admin Expenses	3,867,538	4,043,303	175,765	4.3%
Depreciation	212,556	210,622	(1,934)	-0.9%
Amortization of plant acquisition	-	-	-	0.0%
Total Operating Expenses	$ 4,080,094	4,253,925	173,830	4.1%
OPERATING INCOME	$ (223,995)	(373,598)	149,603	40.0%

SHAKOPEE PUBLIC UTILITIES
WATER OPERATING REVENUE AND EXPENSE

	MTD Actual June 2020	MTD Budget June 2020	MTD Actual v. Budget Better/(Worse) $	MTD Actual v. Budget Better/(Worse) %
OPERATING REVENUES				
Sales of Water	$ 569,736	498,206	71,530	14.4%
Forfeited Discounts	(19)	3,560	(3,579)	-100.5%
Uncollectible accounts	-	-	-	-
Total Operating Revenues	569,716	501,765	67,951	13.5%
OPERATING EXPENSES				
Operations and Maintenance				
Pumping and distribution operation	70,287	46,738	(23,549)	-50.4%
Pumping and distribution maintenance	10,482	41,664	31,181	74.8%
Power for pumping	24,428	25,537	1,109	4.3%
Maintenance of general plant	5,000	7,570	2,570	33.9%
Total Operation and Maintenance	110,197	121,508	11,311	9.3%
Customer Accounts				
Meter Reading	5,638	5,780	142	2.4%
Customer records and collection	14,790	13,672	(1,118)	-8.2%
Energy conservation	508	833	325	39.0%
Total Customer Accounts	20,936	20,285	(652)	-3.2%
Administrative and General				
Administrative and general salaries	33,513	40,924	7,410	18.1%
Office supplies and expense	6,981	8,006	1,025	12.8%
Outside services employed	5,372	20,012	14,640	73.2%
Insurance	3,601	4,643	1,042	22.4%
Employee Benefits	50,160	61,794	11,633	18.8%
Miscellaneous general	9,962	17,704	7,742	43.7%
Total Administrative and General	109,590	153,083	43,492	28.4%
Total Operation, Customer, & Admin Expenses	240,724	294,876	54,152	18.4%
Depreciation	153,270	155,720	2,451	1.6%
Amortization of plant acquisition	-	-	-	-
Total Operating Expenses	393,994	450,596	56,603	12.6%
OPERATING INCOME	$ 175,722	51,169	124,553	243.4%

SHAKOPEE PUBLIC UTILITIES

YEAR TO DATE FINANCIAL RESULTS

June 2020

SPU
Shakopee Public Utilities

SHAKOPEE PUBLIC UTILITIES
COMBINED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN FUND NET POSITION

	Year to Date Actual - June 2020			Year to Date Budget - June 2020			Electric YTD Actual v. Budget B/(W)		Water YTD Actual v. Budget B/(W)		Total Utility YTD Actual v. Budget B/(W)	
	Electric	Water	Total Utility	Electric	Water	Total Utility	$	%	$	%	$	%
OPERATING REVENUES	$ 21,417,189	2,100,177	23,517,365	22,295,131	2,108,628	24,403,759	(877,942)	-3.9%	(8,452)	-0.4%	(886,394)	-3.6%
OPERATING EXPENSES						-						
Operation, Customer and Administrative	18,321,948	1,497,788	19,819,737	19,757,585	1,791,567	21,549,152	1,435,637	7.3%	293,778	16.4%	1,729,415	8.0%
Depreciation	1,275,334	919,619	2,194,953	1,263,729	934,323	2,198,052	(11,605)	-0.9%	14,704	1.6%	3,099	0.1%
Amortization of Plant Acquisition	-	-	-	-	-	-	-	0.0%	-	-	-	0.0%
Total Operating Expenses	19,597,282	2,417,408	22,014,690	21,021,315	2,725,890	23,747,204	1,424,032	6.8%	308,482	11.3%	1,732,515	7.3%
Operating Income	1,819,907	(317,231)	1,502,676	1,273,817	(617,262)	656,555	546,090	42.9%	300,031	48.6%	846,121	128.9%
NON-OPERATING REVENUE (EXPENSE)												
Rental and Miscellaneous	54,428	170,408	224,836	126,538	172,249	298,787	(72,110)	-57.0%	(1,841)	-1.1%	(73,951)	-24.8%
Interdepartment Rent from Water	45,000	-	45,000	45,000		45,000	-	0.0%	-	-	-	0.0%
Investment Income	492,006	148,461	640,467	336,694	139,216	475,909	155,312	46.1%	9,246	6.6%	164,558	34.6%
Interest Expense	(16,788)	(724)	(17,512)	(32,479)	(1,096)	(33,574)	15,690	48.3%	372	33.9%	16,062	47.8%
Amortization of Debt Issuance Costs and Loss on Refunding	-	-	-	-	-	-	-	#DIV/0!	-	0.0%	-	#DIV/0!
Gain/(Loss) on the Disposition of Property	(5,603)	-	(5,603)	-	-	-	(5,603)	0.0%	-	-	(5,603)	-
Total Non-Operating Revenue (Expense)	569,042	318,146	887,188	475,753	310,369	786,122	93,290	19.6%	7,776	2.5%	101,066	12.9%
Income Before Contributions and Transfers	2,388,949	915	2,389,864	1,749,569	(306,892)	1,442,677	639,380	36.5%	307,807	100.3%	947,187	65.7%
CAPITAL CONTRIBUTIONS	10,589	819,259	829,848	-	1,977,269	1,977,269	10,589	-	(1,158,010)	-58.6%	(1,147,421)	-58.0%
MUNICIPAL CONTRIBUTION	(980,294)	(230,468)	(1,210,762)	(1,101,309)	(103,094)	(1,204,403)	121,016	11.0%	(127,374)	-123.6%	(6,359)	-0.5%
CHANGE IN NET POSITION	$ 1,419,244	589,706	2,008,949	648,260	1,567,283	2,215,543	770,984	118.9%	(977,577)	-62.4%	(206,593)	-9.3%

SHAKOPEE PUBLIC UTILITIES
ELECTRIC OPERATING REVENUE AND EXPENSE

	YTD Actual June 2020	YTD Budget June 2020	YTD Actual v. Budget Better/(Worse) $	%
OPERATING REVENUES				
Sales of Electricity				
Residential	$ 7,831,561	7,723,431	108,130	1.4%
Commercial and Industrial	13,154,383	14,058,519	(904,136)	-6.4%
Uncollectible accounts	-	-	-	#DIV/0!
Total Sales of Electricity	20,985,944	21,781,950	(796,006)	-3.7%
Forfeited Discounts	64,961	136,312	(71,352)	-52.3%
Free service to the City of Shakopee	53,457	42,747	10,710	25.1%
Conservation program	312,828	334,122	(21,294)	-6.4%
Total Operating Revenues	21,417,189	22,295,131	(877,942)	-3.9%
OPERATING EXPENSES				
Operations and Maintenance				
Purchased power	15,287,562	16,101,189	813,627	5.1%
Distribution operation expenses	311,561	244,250	(67,311)	-27.6%
Distribution system maintenance	303,334	342,208	38,874	11.4%
Maintenance of general plant	122,402	177,523	55,122	31.1%
Total Operation and Maintenance	16,024,859	16,865,171	840,312	5.0%
Customer Accounts				
Meter Reading	63,565	64,005	439	0.7%
Customer records and collection	261,142	298,314	37,172	12.5%
Energy conservation	164,601	362,444	197,843	54.6%
Total Customer Accounts	489,308	724,762	235,454	32.5%
Administrative and General				
Administrative and general salaries	369,724	382,755	13,031	3.4%
Office supplies and expense	123,057	134,927	11,870	8.8%
Outside services employed	138,571	233,604	95,033	40.7%
Insurance	64,819	83,569	18,750	22.4%
Employee Benefits	948,340	1,073,502	125,162	11.7%
Miscellaneous general	163,269	259,295	96,025	37.0%
Total Administrative and General	1,807,781	2,167,652	359,871	16.6%
Total Operation, Customer, & Admin Expenses	18,321,948	19,757,585	1,435,637	7.3%
Depreciation	1,275,334	1,263,729	(11,605)	-0.9%
Amortization of plant acquisition	-	-	-	0.0%
Total Operating Expenses	$ 19,597,282	21,021,315	1,424,032	6.8%
OPERATING INCOME	$ 1,819,907	1,273,817	546,090	42.9%

SHAKOPEE PUBLIC UTILITIES
WATER OPERATING REVENUE AND EXPENSE

	YTD Actual June 2020	YTD Budget June 2020	YTD Actual v. Budget Better/(Worse) $	YTD Actual v. Budget Better/(Worse) %
OPERATING REVENUES				
Sales of Water	$ 2,096,447	2,087,270	9,177	0.4%
Forfeited Discounts	3,729	21,358	(17,629)	-82.5%
Uncollectible accounts	0	-	0	#DIV/0!
Total Operating Revenues	2,100,177	2,108,628	(8,452)	-0.4%
OPERATING EXPENSES				
Operations and Maintenance				
Pumping and distribution operation	322,259	280,430	(41,829)	-14.9%
Pumping and distribution maintenance	136,208	249,982	113,774	45.5%
Power for pumping	141,355	153,220	11,865	7.7%
Maintenance of general plant	23,193	45,419	22,226	48.9%
Total Operation and Maintenance	623,015	729,051	106,036	14.5%
Customer Accounts				
Meter Reading	35,726	34,678	(1,048)	-3.0%
Customer records and collection	80,814	82,030	1,217	1.5%
Energy conservation	558	5,000	4,442	-
Total Customer Accounts	117,098	121,708	4,610	3.8%
Administrative and General				
Administrative and general salaries	232,958	245,542	12,584	5.1%
Office supplies and expense	39,860	48,035	8,175	17.0%
Outside services employed	41,346	120,075	78,729	65.6%
Insurance	21,606	27,856	6,250	22.4%
Employee Benefits	323,954	393,074	69,120	17.6%
Miscellaneous general	97,952	106,227	8,275	7.8%
Total Administrative and General	757,676	940,808	183,133	19.5%
Total Operation, Customer, & Admin Expenses	1,497,788	1,791,567	293,778	16.4%
Depreciation	919,619	934,323	14,704	1.6%
Amortization of plant acquisition	-	-	-	-
Total Operating Expenses	$ 2,417,408	2,725,890	308,482	11.3%
OPERATING INCOME	$ (317,231)	(617,262)	300,031	48.6%

SPU
Shakopee Public Utilities

Proposed As Consent Item
11e

COMM. MTG. 2020 DATE

July 15, 2020

TO: John Crooks, Utilities Manager

FROM: Kelley Willemssen, Senior Accounting Specialist

SUBJECT: Dashboard Metrics - June, 2020

The SPU Commission requested staff to provide information regarding trends in customer sales and customer receivables in order to monitor the potential impacts of the COVID-19 pandemic on SPU's business. The graphs and data reflect monthly metrics and year to date.

The following reports are included for Commission review:

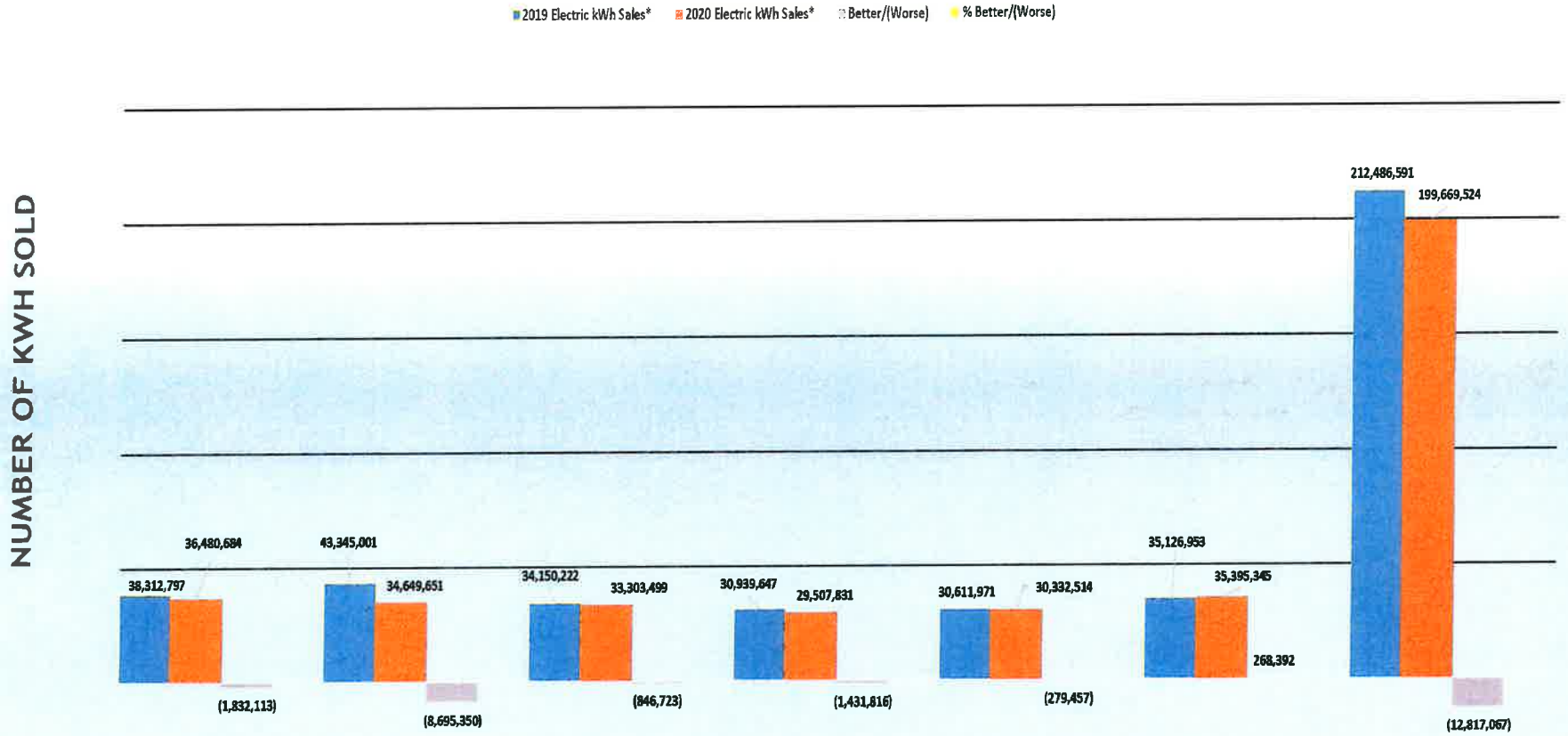
- SPU kWH Sales
- SPU Water Gallons Sales
- SPU Electric Accounts Receivable # & $ of Accounts: 31-60 Days
- SPU Water Accounts Receivable # & $ of Accounts: 31- 60 Days
- SPU Electric Accounts Receivable # & $ of Accounts: > 120 Days
- SPU Water Accounts Receivable # & $ of Accounts: > 120 Days
- SPU 06/30/20 Accounts Receivable Aging Summary Report (2 pages)

Thank you.

SPU
Shakopee Public Utilities

SPU ELECTRIC KWH SALES

(*INCLUDES UME)

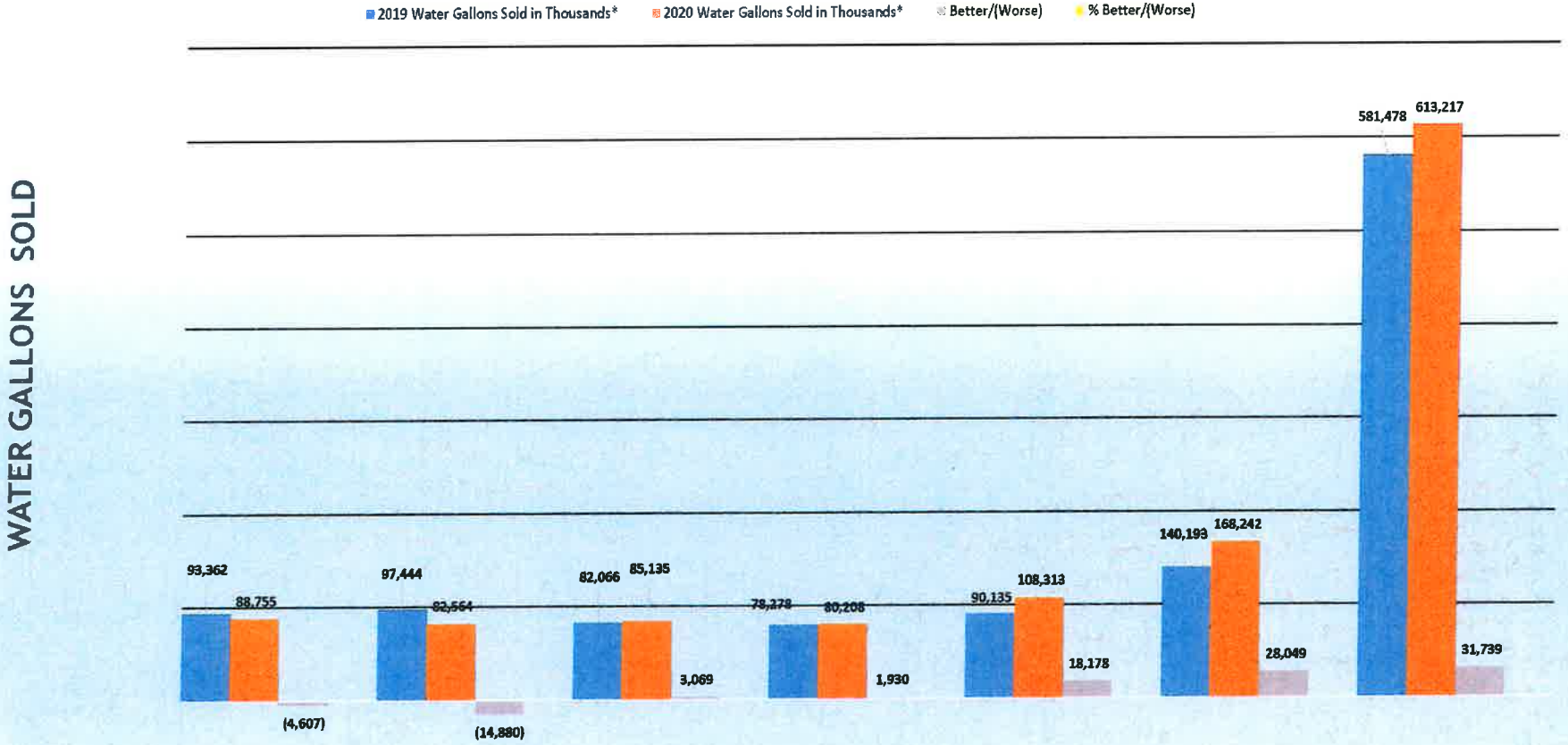


	Jan	Feb	Mar	Apr	May	Jun	YTD
2019 Electric kWh Sales*	38,312,797	43,345,001	34,150,222	30,939,647	30,611,971	35,126,953	212,486,591
2020 Electric kWh Sales*	36,480,684	34,649,651	33,303,499	29,507,831	30,332,514	35,395,345	199,669,524
Better/(Worse)	(1,832,113)	(8,695,350)	(846,723)	(1,431,816)	(279,457)	268,392	(12,817,067)
% Better/(Worse)	-4.8%	-20.1%	-2.5%	-4.6%	-0.9%	0.8%	-6.0%

SPU
Shakopee Public Utilities

SPU WATER GALLONS SALES (IN THOUSANDS)

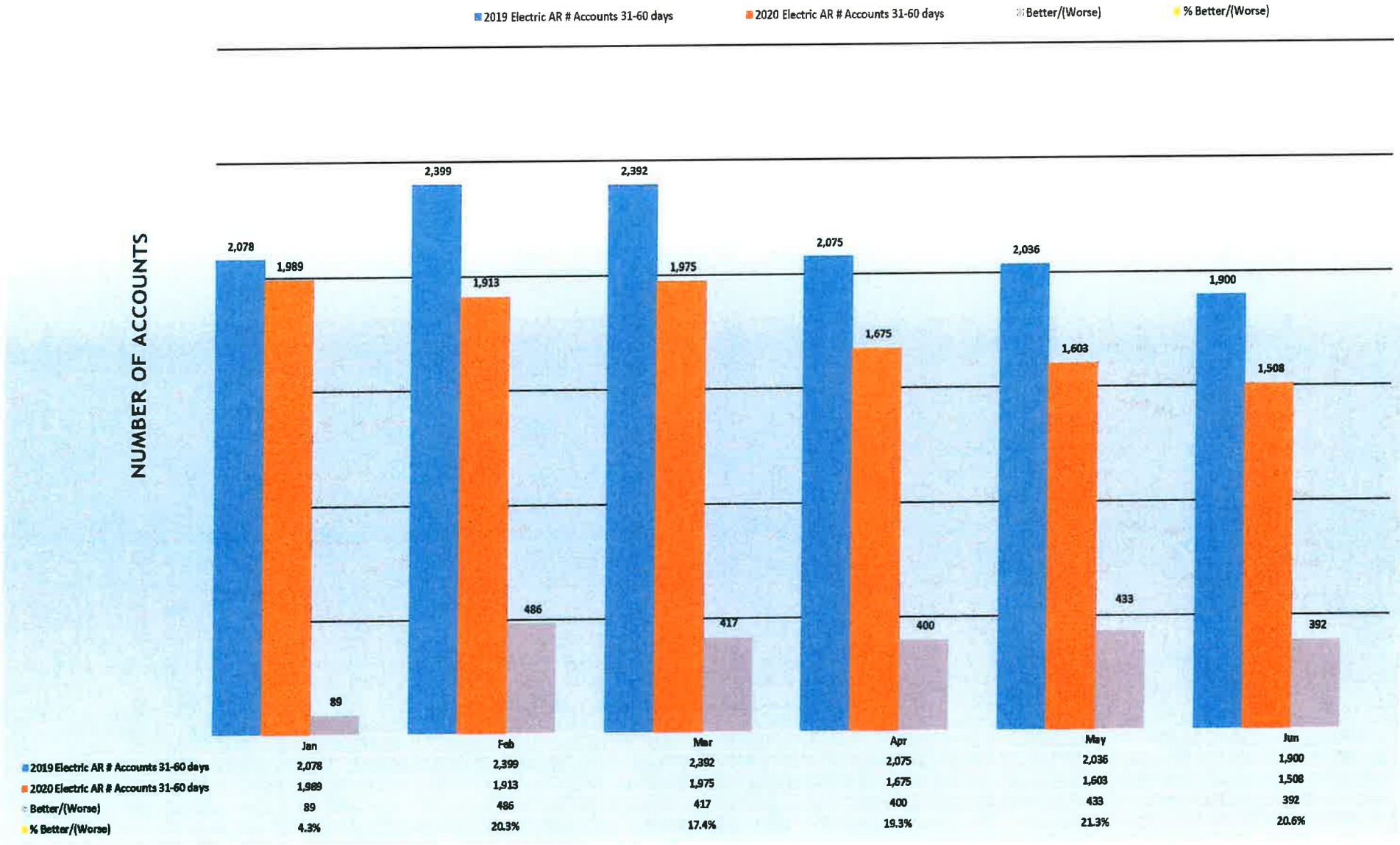
(*EXCLUDES HYDRANT SALES)



	Jan	Feb	Mar	Apr	May	Jun	YTD
2019 Water Gallons Sold in Thousands*	93,362	97,444	82,066	78,278	90,135	140,193	581,478
2020 Water Gallons Sold in Thousands*	88,755	82,564	85,135	80,208	108,313	168,242	613,217
Better/(Worse)	(4,607)	(14,880)	3,069	1,930	18,178	28,049	31,739
% Better/(Worse)	-4.9%	-15.3%	3.7%	2.5%	20.2%	20.0%	5.5%

SPU
Shakopee Public Utilities

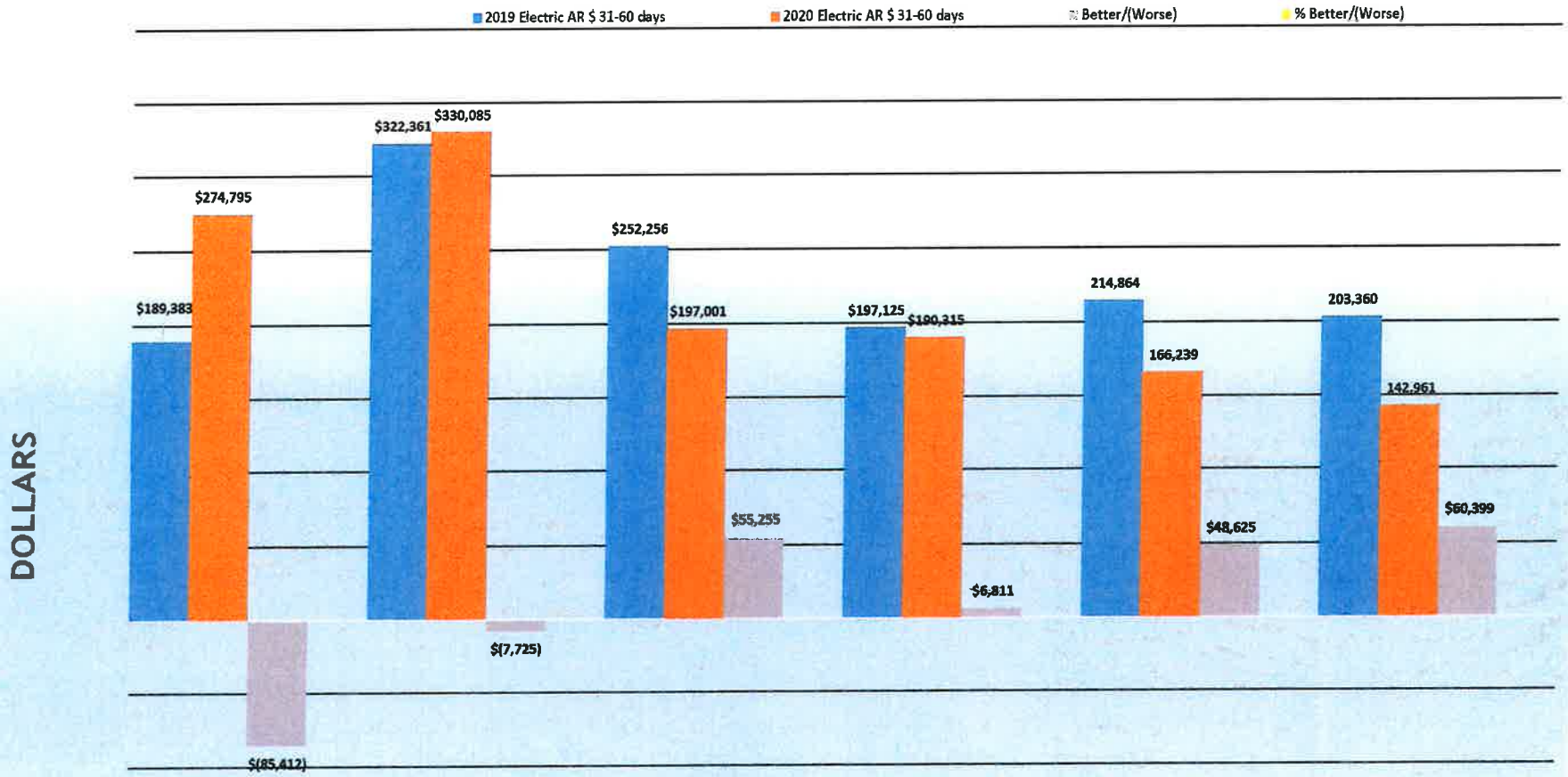
SPU ELECTRIC AGED RECEIVABLES 31 - 60 DAYS: # OF ACCOUNTS



	Jan	Feb	Mar	Apr	May	Jun
2019 Electric AR # Accounts 31-60 days	2,078	2,399	2,392	2,075	2,036	1,900
2020 Electric AR # Accounts 31-60 days	1,989	1,913	1,975	1,675	1,603	1,508
Better/(Worse)	89	486	417	400	433	392
% Better/(Worse)	4.3%	20.3%	17.4%	19.3%	21.3%	20.6%

SPU
Shakopee Public Utilities

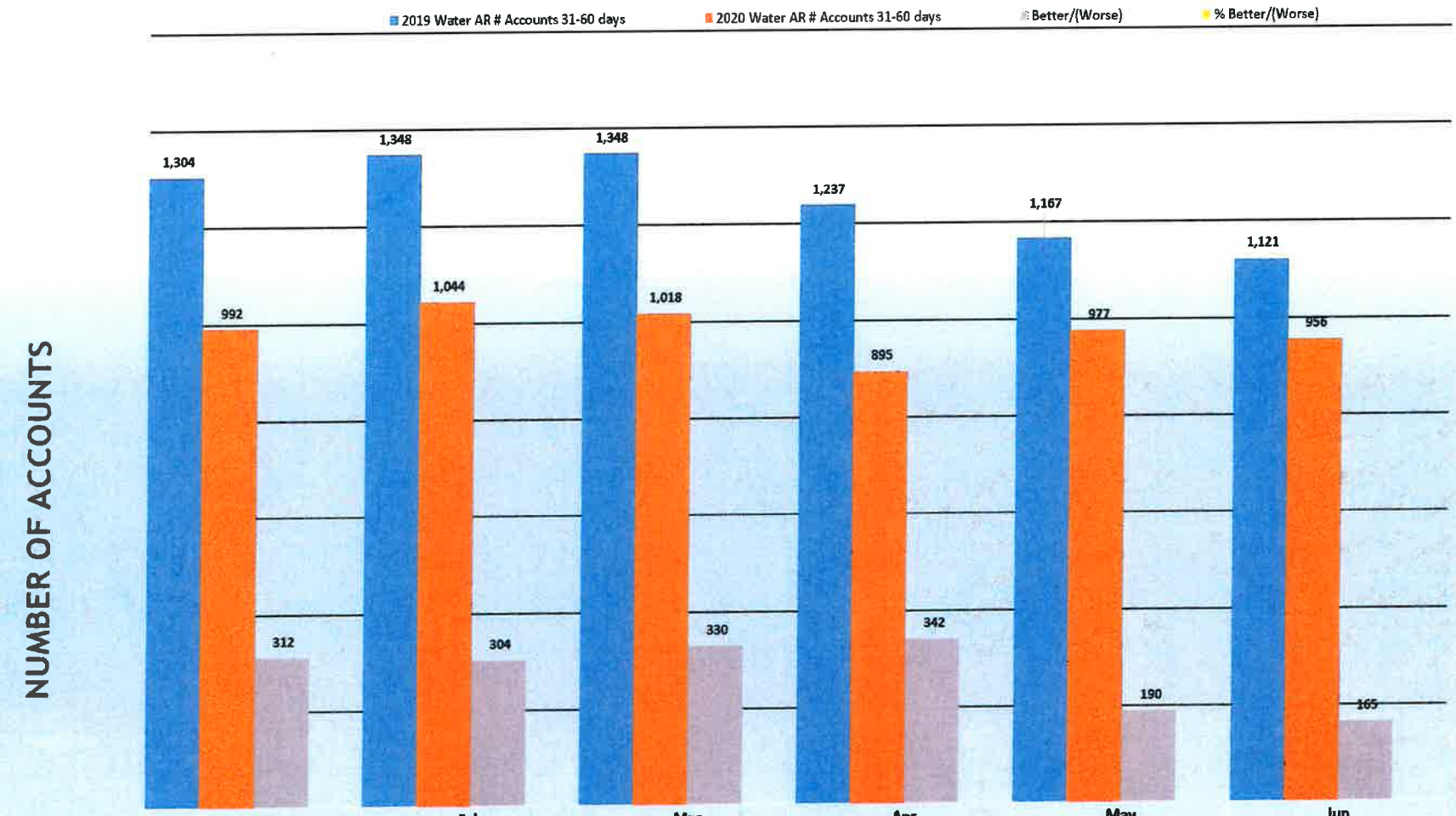
SPU ELECTRIC AGED RECEIVABLES $ 31 - 60 DAYS



	Jan	Feb	Mar	Apr	May	Jun
2019 Electric AR $ 31-60 days	$189,383	$322,361	$252,256	$197,125	214,864	203,360
2020 Electric AR $ 31-60 days	$274,795	$330,085	$197,001	$190,315	166,239	142,961
Better/(Worse)	$(85,412)	$(7,725)	$55,255	$6,811	$48,625	$60,399
% Better/(Worse)	-45.1%	-2.4%	21.9%	3.5%	22.6%	29.7%

SPU
Shakopee Public Utilities

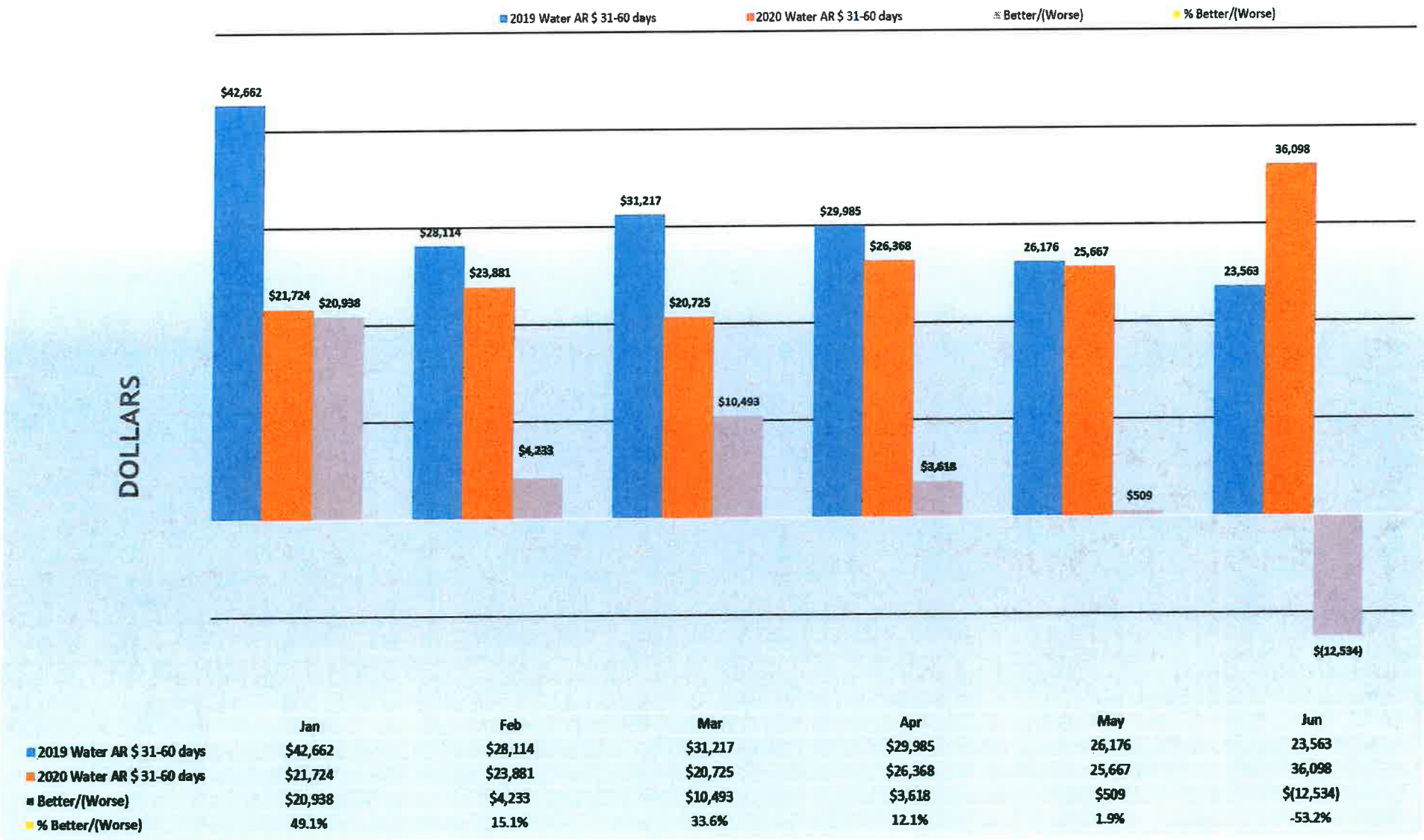
SPU WATER AGED RECEIVABLES 31 - 60 DAYS: # OF ACCOUNTS



	Jan	Feb	Mar	Apr	May	Jun
2019 Water AR # Accounts 31-60 days	1,304	1,348	1,348	1,237	1,167	1,121
2020 Water AR # Accounts 31-60 days	992	1,044	1,018	895	977	956
Better/(Worse)	312	304	330	342	190	165
% Better/(Worse)	23.9%	22.6%	24.5%	27.6%	16.3%	14.7%

SPU
Shakopee Public Utilities

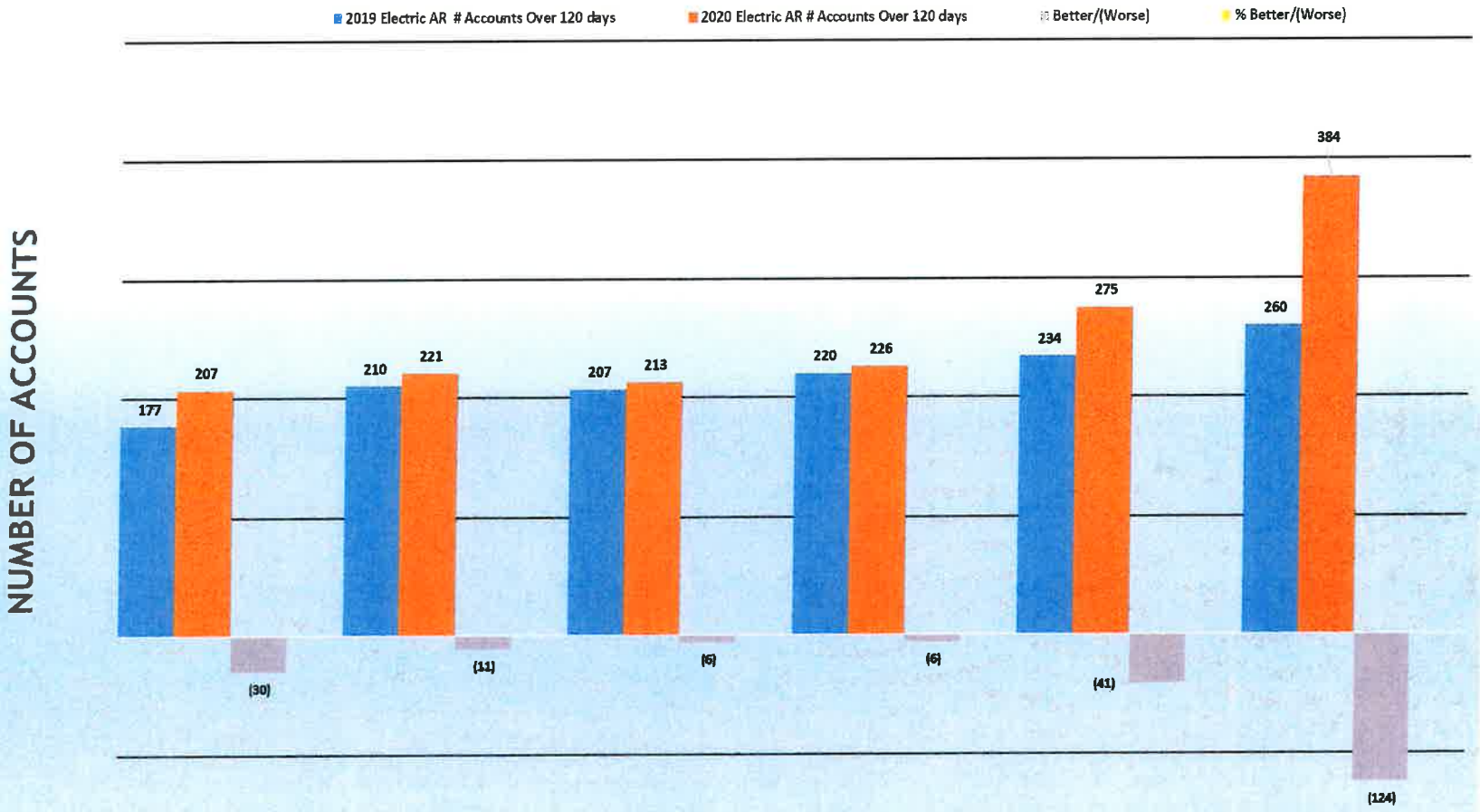
SPU WATER AGED RECEIVABLES $ 31 - 60 DAYS



	Jan	Feb	Mar	Apr	May	Jun
2019 Water AR $ 31-60 days	$42,662	$28,114	$31,217	$29,985	26,176	23,563
2020 Water AR $ 31-60 days	$21,724	$23,881	$20,725	$26,368	25,667	36,098
Better/(Worse)	$20,938	$4,233	$10,493	$3,618	$509	$(12,534)
% Better/(Worse)	49.1%	15.1%	33.6%	12.1%	1.9%	-53.2%

SPU
Shakopee Public Utilities

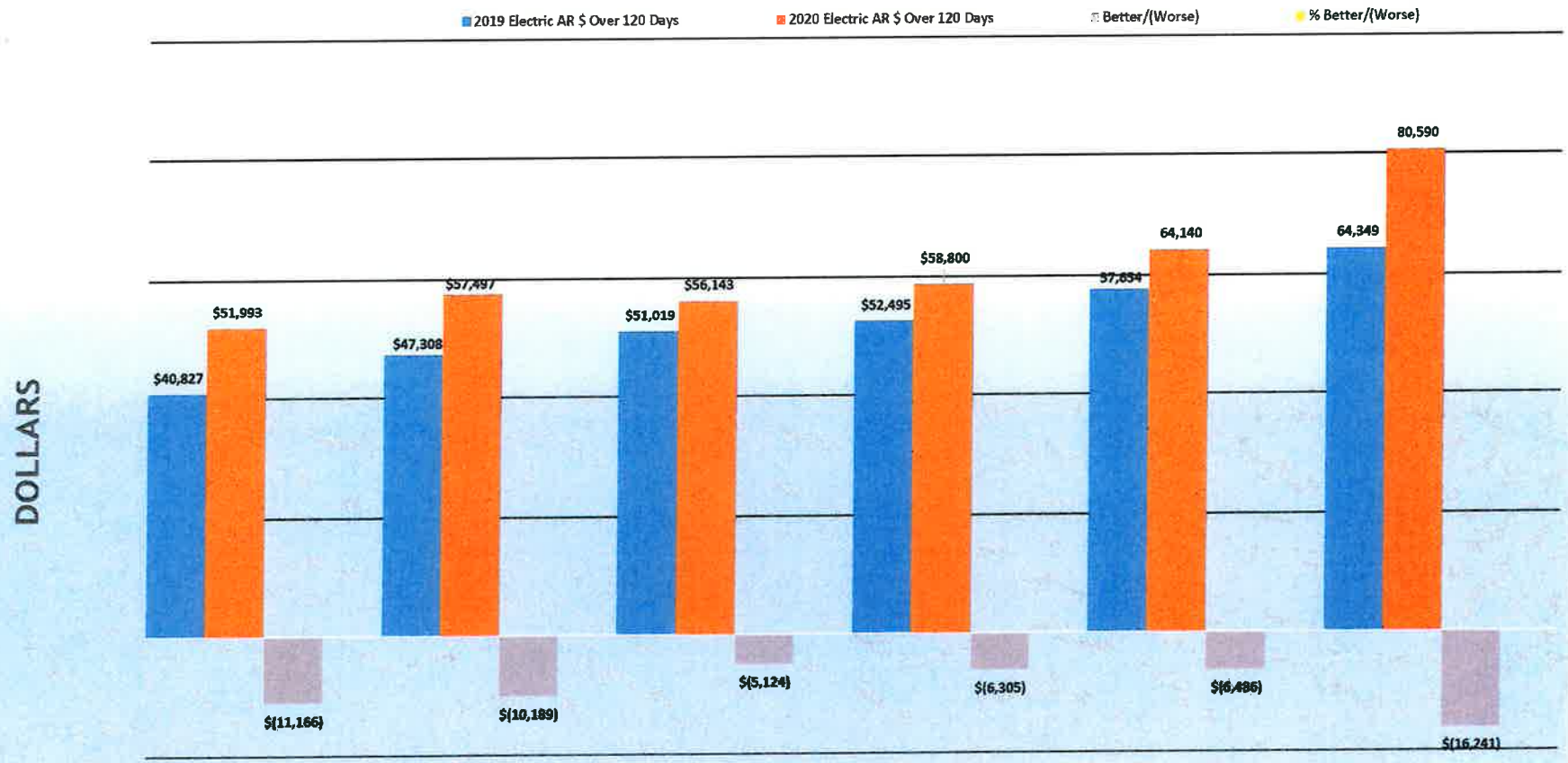
SPU ELECTRIC AGED RECEIVABLES > 120 DAYS: # OF ACCOUNTS



	Jan	Feb	Mar	Apr	May	Jun
2019 Electric AR # Accounts Over 120 days	177	210	207	220	234	260
2020 Electric AR # Accounts Over 120 days	207	221	213	226	275	384
Better/(Worse)	(30)	(11)	(6)	(6)	(41)	(124)
% Better/(Worse)	-16.9%	-5.2%	-2.9%	-2.7%	-17.5%	-47.7%

SPU
Shakopee Public Utilities

SPU ELECTRIC AGED RECEIVABLES $ >120 DAYS



	Jan	Feb	Mar	Apr	May	Jun
2019 Electric AR $ Over 120 Days	$40,827	$47,308	$51,019	$52,495	57,654	64,349
2020 Electric AR $ Over 120 Days	$51,993	$57,497	$56,143	$58,800	64,140	80,590
Better/(Worse)	$(11,166)	$(10,189)	$(5,124)	$(6,305)	$(6,486)	$(16,241)
% Better/(Worse)	-27.3%	-21.5%	-10.0%	-12.0%	-11.3%	-25.2%

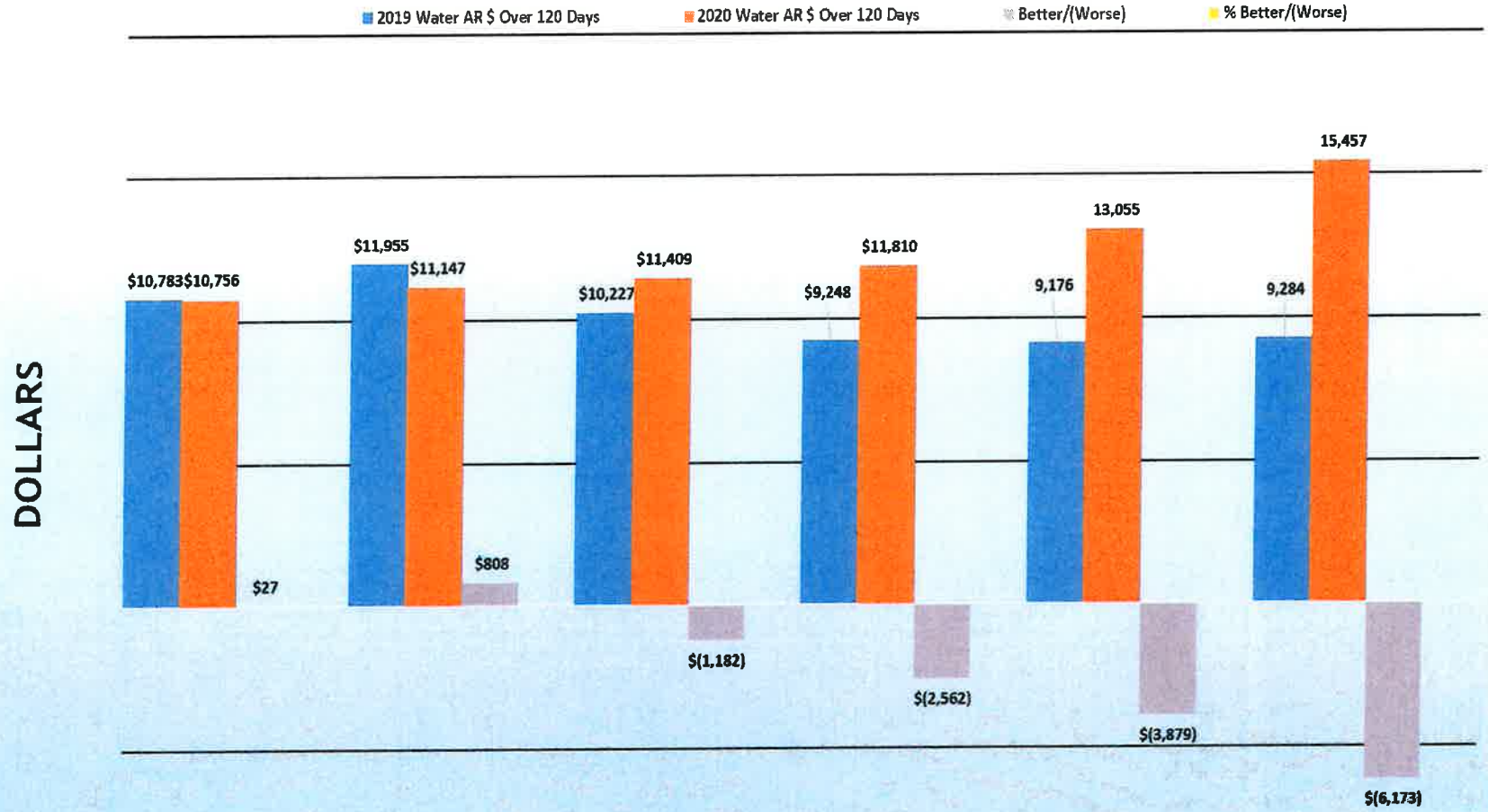
SPU
Shakopee Public Utilities

SPU WATER AGED RECEIVABLES > 120 DAYS: # OF ACCOUNTS

	Jan	Feb	Mar	Apr	May	Jun
2019 Water AR # Accounts Over 120 Days	154	165	136	120	113	128
2020 Water AR # Accounts Over 120 Days	136	138	128	129	142	200
Better/(Worse)	18	27	8	(9)	(29)	(72)
% Better/(Worse)	11.7%	16.4%	5.9%	-7.5%	-25.7%	-56.3%

SPU
Shakopee Public Utilities

SPU WATER AGED RECEIVABLES $ >120 DAYS



	Jan	Feb	Mar	Apr	May	Jun
2019 Water AR $ Over 120 Days	$10,783	$11,955	$10,227	$9,248	9,176	9,284
2020 Water AR $ Over 120 Days	$10,756	$11,147	$11,409	$11,810	13,055	15,457
Better/(Worse)	$27	$808	$(1,182)	$(2,562)	$(3,879)	$(6,173)
% Better/(Worse)	0.2%	6.8%	-11.6%	-27.7%	-42.3%	-66.5%

SPU
Shakopee Public Utilities

Shakopee Public Utilities

Accounts Receivable Aging Summary Report

As of 6/30/2020

Summary of Accounts

Service	1 to 30	31 to 60	61 to 90	91 to 120	Over 120	Total	General Ledger (GL)	Total - GL
Electric	$3,788,829.68	$142,960.62	$46,679.49	$32,661.50	$80,590.02	$4,091,721.31	$4,091,721.31	$0.00
Water	$518,835.11	$36,097.57	$8,635.82	$4,344.15	$15,456.97	$583,369.62	$583,369.62	$0.00
Sewer	$305,824.26	$28,505.52	$12,186.54	$7,060.64	$17,874.15	$371,451.11	$371,451.11	$0.00
Storm Drainage	$98,322.19	$7,998.11	$1,501.85	$980.50	$2,625.74	$111,428.39	$111,428.39	$0.00
Totals	$4,711,811.24	$215,561.82	$69,003.70	$45,046.79	$116,546.88	$5,157,970.43	$5,157,970.43	$0.00

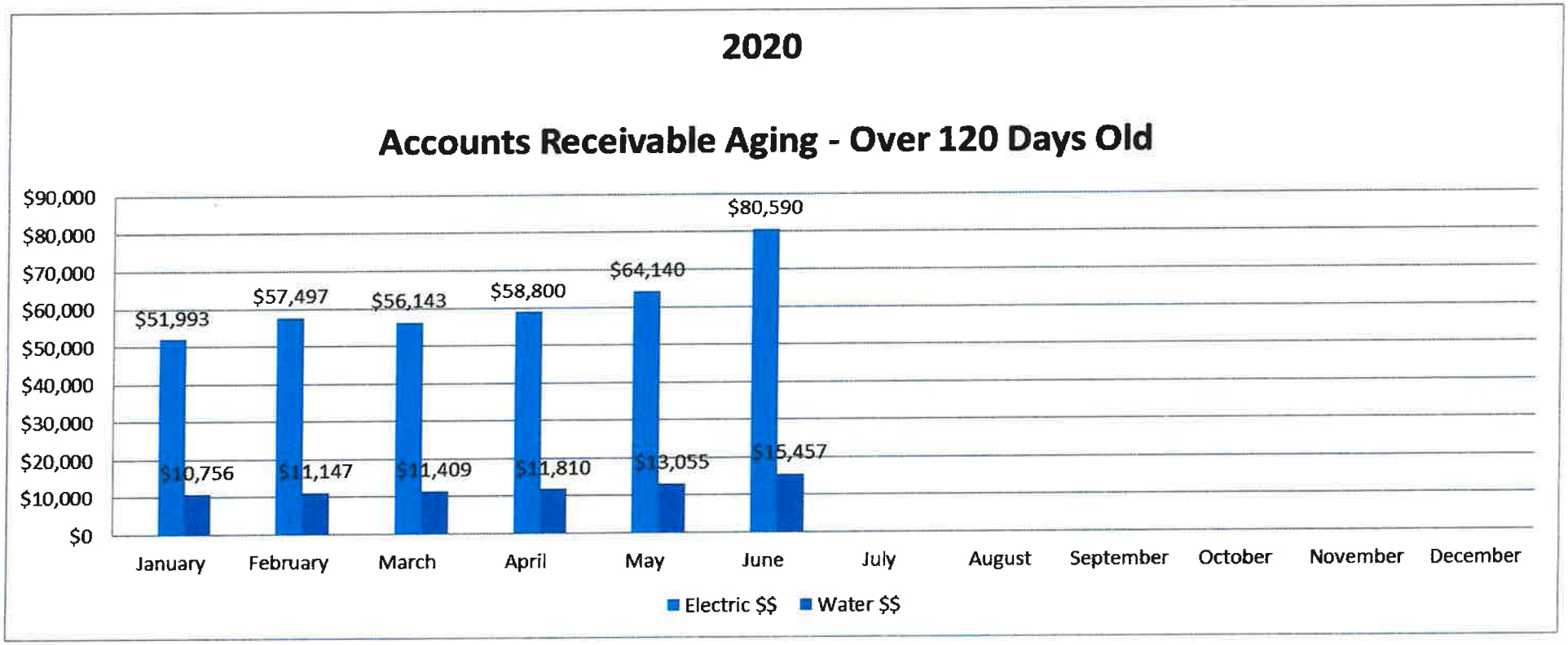
Number Accounts with a Balance

Service	1 to 30	31 to 60	61 to 90	91 to 120	Over 120	Total
Electric	16,920	1,508	551	330	384	17,178
Water	10,817	956	356	199	200	10,917
Sewer	10,395	1,086	411	237	204	10,474
Storm Drainage	12,424	1,347	520	303	275	12,529
Totals	17,984	2,142	904	537	530	18,240

SPU
Shakopee Public Utilities

Accounts Receivable Aging Summary Report - 2020

Over 120 days	Electric $$	Electric # of Accts	Water $$	Water # of Accts	Total $$ Electric & Water	Total # of accts Electric & Water
January	$ 51,993.20	207	$ 10,755.94	136	$ 62,749.14	343
February	$ 57,496.81	221	$ 11,146.63	138	$ 68,643.44	359
March	$ 56,142.85	213	$ 11,408.58	128	$ 67,551.43	341
April	$ 58,800.20	226	$ 11,809.98	129	$ 70,610.18	355
May	$ 64,139.75	275	$ 13,055.13	142	$ 77,194.88	417
June	$ 80,590.02	384	$ 15,456.97	200	$ 96,046.99	584



SHAKOPEE PUBLIC UTILITIES
MEMORANDUM

TO: SHAKOPEE PUBLIC UTILITIES COMMISSION

FROM: JOHN R. CROOKS, UTILITIES MANAGER

SUBJECT: WATER TREATMENT PLANT FEASIBILITY STUDY - REVIEW

DATE: JULY 16, 2020

The 2020 Goals and Objectives were approved by the SPU Commission at the June 1, 2020 meeting. A copy of the Goals and Objectives is attached for your review.

ISSUE

Item 5. Conduct a Water Treatment Plant Feasibility Study by September 2020 will be reviewed at the July 20, 2020 meeting.

OVERVIEW

There have been concerns with nitrate (NO3) levels in Shakopee's Jordan aquifer for many years. With increasing NO3 levels in the late 1990's, coupled with the rapid growth of the City of Shakopee due to the opening of the Bloomington Ferry 169 Bridge, there were serious concerns as to the ability of SPU to supply the increasing demand on water production associated with the rapid growth.

SPU hired a consultant, Bonestroo, Rosene, Anderlink & Associates to perform a Water Treatment Plant Feasibility Study looking into alternative water supplies and possible water treatment options for SPU. The study was completed and presented to the SPU Commission in May 2001.

Attached to this memorandum is the Cover Letter, Table of Contents, Executive Summary and the Summary, Conclusions and Recommendations from that study.

DISCUSSION

As can be seen in the attachments, alternative water supplies were researched. Also, water treatment plants were analyzed and researched as part of the study. It was determined that alternative water supplies were cost prohibitive and somewhat risky to construct.

The study then reviewed potential treatment plant options, with those being Nitrate removal and Iron/Manganese (Fe/Mn) treatment.

The study then analyzed the option of developing a Southern Wellfield to address the levels of NO3 in the lower elevations of Shakopee. However, with the development of a Southern Wellfield, the issue of elevated levels of Fe and Mn were anticipated to be an issue, thus requiring treatment.

Costs of the two types of treatment were researched and the costs, in 2001 dollars, is presented. The cost to provide treatment is very expensive and would result in higher charges and rates to customers.

The Commission agreed that the Camus Quarry option was not feasible. Treatment options were also considered by the Commission to be excessive. The option of a Southern Wellfield was then proposed to be the option that SPU would pursue.

As an outcome of that Commission meeting, Staff began to explore sites to develop a wellfield consisting of 5 wells. This site would need to be located in areas of significant soil coverage to eliminate elevated levels of NO3 and also be aware of elevated levels of Fe and Mn associated with the bluffs surrounding Shakopee, as the study pointed out.

As the investigation into a site was taking place, the City of Shakopee was in the planning stages for a potential Soccer Complex to be constructed on 17th Avenue in Shakopee. The area was large enough to allow 5 wells, with proper spacing to not allow aquifer interference between the wells. The area was also large enough to site a Pump House, 2 Control Houses and also accommodate water treatment if required. Most importantly there was soil coverage over the bedrock which was much deeper than the minimal coverage in areas along the Minnesota River.

The partnering with the City of Shakopee went well. The Shakopee School District was also included in the proposed wellfield discussion. A partnership with the City, Shakopee Scholl District, and SPU on the development of the 17th Avenue site is an example of a win-win-win situation.

Design work for the wellfield began in 2003. Initial sampling of the area indicated that there would be low levels of NO3 and also low levels of Fe/Mn. With that being determined, Pump House and Well #15 were constructed in 2004. The

following year the first Control House and Wells #16 and #17 were constructed. The final Control House and Wells #18 and #19 will be constructed as demand in the Normal Elevation and 1-HES increase.

REVIEW

In looking back on the data generated with the Bonestroo Study it is important to look at NO3 levels in 1999, as compared to today. As stated in the report Well #7 had been taken out of service due to high levels of NO3 (at times exceeding 10.0mg/l) and levels with Wells #6 and #8 ranging from 7.06 – 9.19 mg/l. Also, at that time there were only 9 wells in Shakopee. Today, there are 18 wells supplying water to Shakopee.

Comparing levels from 1999 to today, the is a marked decrease in NO3 levels in Shakopee wells. Stringent internal NO3 sampling procedures and protocol have been in place for over 20 years, with a wealth of data to analyze. The most recent NO3 results are included for your review. Reasons for the decreasing levels are associated with evolution of Shakopee moving away from agricultural farming practices and being replaced with urban development and changes with waste disposal methods at Canterbury Park.

Levels of Fe and Mn are also monitored and phosphate (PO4) sequestration is used with success with Wells #12 and #13 with their associated levels of Mn.

CONCLUSION

Even with the positive results with decreasing levels of NO3 and no increasing levels of Fe and Mn, there is still the future possibility that water treatment could be required.

Staff believes the levels of NO3 and levels of Fe/Mn will remain constant, but there could be potential of NO3 increasing. With more urban development and high levels of lawn fertilizer applications with residents and businesses an increase in NO3 could occur. However, with the monthly water analyses being done an all SPU wells, we will be able to identify trends and be proactive in any decision making.

Future water treatment issues may lie with the addition of more unregulated contaminants becoming regulated by the EPA. With the current administration in place, there has not been much movement with additional regulations on drinking water. That may certainly change with a different administration in place.

With that being said, all SPU wells, since 2001, have been located on sites that are large enough to have water treatment constructed on site, if required. Also, in keeping with the recommendations from this report, the property in which Water

Tower #8 is being constructed in also large enough to develop a second wellfield is needed.

REQUEST

Provide direction to Staff on the results of this report and if an updated study should be performed in 2021.

SHAKOPEE PUBLIC UTILITIES
MEMORANDUM

TO: SHAKOPEE PUBLIC UTILITIES COMMISSION

FROM: JOHN R. CROOKS, UTILITIES MANAGER

SUBJECT: SPU COMMISSION GOALS AND OBJECTIVES - 2020

DATE: MAY 28, 2020

The following 8 items were identified at the May 18 Commission Goals and Objectives discussion. The items are scheduled to be completed within the next 12 months, unless otherwise noted.

Items are listed under the Commission's 2015 Strategic Initiatives.

2020 Goals / Objectives

To preserve, cultivate and advance the existing reputation of the Shakopee Utilities Commission in our community and service areas; with all customer

1. Examine Financial Relief for SPU Customers Struggling with Issues Related to COVID-19
2. Conduct a Legal Review of All Rules and Regulations that is Required for Compliance by SPU
3. Examine Internal Controls within SPU
4. Conduct a Banking Analysis for SPU
5. Conduct a Water Treatment Plant Feasibility Study by September

To continue our commitment to all Shakopee Public Utilities employees

To be properly positioned in adapting changes, both short and long term, in the Water and Electric industries and therefore continually evolve the present Shakopee Public Utilities business model in a direction that most positively serves our community and service areas

6. Examine Lowering SPU Fees and Charges

7. Set Up Quarterly Economic Development Meetings with Representatives of the Commission, City Council, Developers and Planning Staff from SPU and the City

8. Develop a Plan for Joint Economic Development Efforts with the City

Bonestroo
Rosene
Anderlik &
Associates
Engineers & Architects

May 15, 2001

Shakopee Public Utilities Commission
1030 East Fourth Avenue
Shakopee, MN 55379-1699

Re: Water Treatment Plant Feasibility Study
BRA File No. 77-00-100

Dear President and Commission Members:

Transmitted herewith is our Report on the Water Treatment Plant Feasibility Study for the Shakopee Public Utilities Commission. The report evaluates the cost for two options – conventional treatment and membrane treatment – for treating water directly withdrawn from the CAMAS Quarry. Also evaluated is the cost for treating water withdrawn from Shakopee limestone formation wells ringing the quarry. The report also evaluates the cost of a southern wellfield and the cost of nitrate removal facilities. An Executive Summary on the findings of the Water Treatment Plant Feasibility Study is included at the beginning of the report.

We wish to acknowledge the friendly and able assistance that Lou Van Hout, Joe Adams and John Crooks afforded us during completion of the study.

We would be pleased to discuss this report and the findings of our study with the Commission, Staff and other interested individuals at any mutually convenient time.

Respectfully submitted,

BONESTROO, ROSENE, ANDERLIK & ASSOCIATES, INC.

Thomas A. Roushar, P.E.

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Thomas A. Roushar, P.E.

Date: May 15, 2001 Reg.No. 12084

2335 West Highway 36 ▪ St. Paul, MN 55113 ▪ 651-636-4600 ▪ Fax: 651-636-1311

Table of Contents

List of Tables

List of Figures

Executive Summary

The Water Treatment Plant Feasibility Study evaluated the following alternative water supplies and water treatment plants:

CAMAS Quarry

Direct Withdrawal

- Conventional Treatment Plant
- Membrane Treatment Plant

Shakopee Formation Wells Ringing Quarry

- Direct Filtration Plant

Southern Jordan Formation Wellfield

- Iron and Manganese Removal Plant

Nitrate Removal Plant

Discussion

It is not recommended that SPUC implement either of the water treatment plants – conventional treatment plant or membrane treatment plant – to treat water withdrawn directly from the CAMAS quarry. This recommendation is based on the following considerations:

- Highest Project Costs
- Highest 50-Year Present Worth Cost
- Greatest Risk of Contamination

The other water supply alternative – direct filtration plant – involving the CAMAS quarry is not recommended either. Although cost-competitive with the southern wellfield alternative, this water supply alternative has greater inherent risks compared to a southern wellfield. These risks include:

- Potential microbial contamination
- Contamination from an industrial spill or rail car derailment
- Nitrate contamination

The two remaining water supply alternatives involve the drilling of additional Jordan formation wells for water supply. The southern wellfield is a proactive approach to addressing the nitrate contamination problem because future Jordan wells would be drilled in the southern portion of the City–an area that should produce low nitrate or nitrate–free water from the Jordan formation. The other alternative–nitrate removal plant–is a reactive approach to the nitrate contamination problem. This approach would involve drilling additional Jordan formation wells in the Normal and 1st High Elevation

Service Districts. By siting the wells in areas of greater soil cover, such as the bluff line or up onto the bluff, the risk of nitrate concentration exceeding the Primary Drinking Standard of 10 milligrams per liter would be reduced. However, should a well or pair of wells pump water with a nitrate concentration in excess of the standard of 10 mg/l, it would be necessary to construct a nitrate removal plant. Unfortunately, there is not a way of quantifying the cost of this approach because the number of wells that may need nitrate removal cannot be predicted.

Well No. 11 will be put on-line shortly. Sampling and analysis during test pumping showed a nitrate concentration of only 0.76 mg/l. Historically, nitrate concentrations in SPUC's Jordan wells have risen with time after the wells have been placed in service. However, SPUC has reason to be optimistic about Well No. 11 because of the low starting level for nitrate.

Well No. 12 is currently being bid and will be constructed on the site of the 1st High Elevation Service District elevated reservoir. This site is partway up the bluff. Therefore, Well No. 12 will be a good "test case" to prove out the belief that high nitrates can be avoided by drilling Jordan formation wells further south in areas of greater soil cover.

Well No. 11 has very low iron and manganese concentrations – 0.049 mg/l and 0.008 mg/l, respectively. Well No. 12 will be on higher ground than Well No. 11. Comparison of the iron and manganese concentrations in the water from Well No. 12 with the Well No. 11 concentrations should provide an indication of whether higher iron and manganese concentrations can be expected in Jordan formation wells in a southern wellfield.

If nitrate removal is not necessary or only required for only a small percentage of new Jordan wells drilled in the Normal and 1st High Elevation Service Districts, the most cost-effective water supply alternative will be to continue SPUC's recent practice of drilling wells in pairs in locations adjacent to trunk watermains. This statement, of course, assumes that iron and manganese removal would be necessary for southern wellfield. However, as previously noted, it is not possible to predict with certainty the number of wells that may need nitrate removal. Therefore, this water supply alternative poses a greater financial risk than the southern wellfield water supply alternative.

The nitrate concentration in the water pumped from Well No. 12 will provide further indication of whether nitrate can be avoided by drilling wells further to the south in Shakopee. The iron and manganese concentrations in the Well No 12 water will provide further indication of whether higher iron and manganese concentrations can be expected in wells in a southern wellfield. As noted above, Well No. 12 is currently being bid. Test pumping is anticipated in October. The iron, manganese and nitrate concentrations in the Well No. 12 water will be known at that time.

In the section titled *Summary, Conclusions and Recommendations*, Bonestroo has suggested the following additional tasks related to the southern wellfield:

- Re-sample the Engelhaven, Westridge Lake Estates, Stonebrooke 1st Addition and Stonebrooke 2nd Addition wells for iron, manganese and nitrate.

- Sample and test the Beckrich Park Estates wells for iron, manganese and nitrate.

- Conduct a pumping test and aquifer evaluation of the Jordan formation.

The additional iron and manganese concentration data will confirm the need for iron and manganese removal. The additional nitrate concentration data will re-confirm that low nitrate or nitrate-free water can be pumped from the Jordan formation in southern Shakopee. The pumping test and aquifer evaluation will quantify the expected yield and required spacing of the wells in a southern wellfield. This information, in turn, will permit the proper "sizing" of the wellfield.

If the additional iron and manganese testing confirms the need for an expensive ($6 million) iron and manganese removal plant, the other water supply alternative, that of installing nitrate removal facilities on an as-needed basis, becomes more financially attractive. Eventually SPUC must decide whether to implement the southern wellfield or continue drilling Jordan formation wells in the Normal and 1st High Elevation Service Districts and then add nitrate removal facilities as an as-needed basis. This decision will be heavily impacted by the cost of each of these alternatives and rightfully so.

Should the additional iron and manganese testing confirm the need for an iron and manganese removal plant of the southern wellfield, Bonestoo is suggesting a more in-depth evaluation of nitrate removal. Although this report includes an evaluation of nitrate removal it was completed with a lesser level of effort than the other evaluations. SPUC did not authorize a nitrate removal evaluation. Bonestroo completed an "abbreviated" nitrate removal evaluation, nevertheless, because we felt strongly that all water supply alternatives should be considered in the Water Treatment Plant Feasibility Study.

A more in-depth evaluation of the costs of nitrate removal would provide SPUC with the best possible information to make a decision on whether to implement the southern wellfield or to implement nitrate removal on an as-needed basis.

Summary, Conclusions and Recommendations

In the previous sections of this report, the following alternative water supplies and water treatment plants were evaluated:

CAMAS Quarry

Direct Withdrawal

- Conventional Treatment Plant
- Membrane Treatment Plant

Shakopee Formation Wells Ringing Quarry

- Direct Filtration Plant

Southern Jordan Formation Wellfield

- Iron and Manganese Removal Plant

Nitrate Removal Plant

The cost estimates for these alternative water supplies are tabulated below:

Table 17 – Alternative Water Supply Cost Estimates

Alternative	Project Costs	50-Year PW Cost
Conventional Treatment Plant	$15,866,038	$27,509,393
Membrane Treatment Plant	$15,317,655	$38,443,489
Direct Filtration Plant	$11,738,219	$19,486,582
Iron and Manganese Removal Plant	$11,592,822	$18,905,229
Nitrate Removal Plant	$9,342,100	$18,305,146

By comparing the cost estimates, it can be concluded that the project costs and the 50-year present worth costs for the water treatment plants – conventional treatment plant and membrane treatment plant – withdrawing water directly from the CAMAS quarry are much higher than for the other three alternatives.

As previously discussed, there are inherent contamination risks with using the CAMAS quarry for water supply. Due to its location in an industrial area and its proximity to the main line

Union Pacific Railroad tracks, an industrial spill or a rail car derailment could contaminate the quarry water and render it unusable for an extended period of time. Also, it should be noted that the quarry water is not nitrate–free. Testing conducted during 1998 indicated an average nitrate concentration of approximately 2 mg/l. Although this nitrate level is well below the Primary Drinking Water Standard of 10 mg/l, there remains the possibility that the nitrate concentration could rise to above the 10 mg/l standard.

Another inherent drawback to the direct withdrawal of water from the CAMAS quarry is related to capacity. The capacity of a water treatment plant withdrawing water directly from the quarry would be limited to approximately 6 MGD.

Because of the higher costs for the water treatment plant and the greater inherent contamination risks, direct withdrawal of water from the CAMAS quarry is not recommended.

The remaining CAMAS quarry alternative is that of ringing the quarry with Shakopee formation wells to intercept the water flowing into the quarry. Based on a conversation with the Minnesota Department of Health, it was concluded that a direct filtration plant would likely be the treatment choice for this water supply alternative. However, the Minnesota Department of Health will not make a final determination until after a test well is drilled and a micro–particulate analysis is conducted. If this analysis shows micro-particulates in the size range of the giardia and cryptosporidium parasites, a surface water treatment plant–conventional treatment plant or membrane treatment plant–would be required, the cost of which would be comparable to that of a plant withdrawing water directly from the quarry.

In addition to microbial contamination, nitrate contamination is a concern for Shakopee formation wells ringing the CAMAS quarry. As previously discussed, the 1998 testing of quarry water indicates an average nitrate concentration of 2 mg/l. Because the wells ringing the quarry would intercept water before it flows into the quarry, it is reasonable to expect a comparable nitrate concentration. Should the nitrate concentration rise to above 10 mg/l, nitrate removal facilities would have to be added to the direct filtration plant.

Due to the fact that the wells ringing the quarry would be up gradient from the quarry, the risk of contamination as the result of an industrial spill or rail car derailment would be reduced. However, heavy pumping could reverse the groundwater gradient, drawing contamination from these sources to the Shakopee formation wells. Therefore, although the risk of contamination due to a spill or rail car derailment is reduced, some risk remains.

The cost estimates for the direct filtration plant supplied by Shakopee formation wells are approximately equal to the cost estimates for the iron and manganese removal plant supplied by Jordan formation wells in a southern wellfield. However, water quality issues related to microbial contamination, the possibility of contamination resulting from an industrial spill or rail car derailment, and possible increases in nitrate contamination can all be avoided by implementing the southern wellfield alternative. Based on these considerations, a direct filtration plant supplied water by Shakopee formation wells ringing the CAMAS quarry is not recommended.

The two remaining water supply alternatives – iron and manganese removal plant and nitrate removal plant – involved drilling additional Jordan wells in pace with the City of Shakopee's increased demand for water. Implementing the southern wellfield would be a proactive measure to drill the wells in a location that would avoid nitrate contamination. The nitrate removal alternative, on the other hand, would be a remedial or reactive measure that would be implemented should high nitrate levels become a problem. It is our understanding that the site plan for future Well No. 12 includes the space for a water treatment plant should one become necessary.

Whether to be proactive and implement the southern wellfield to avoid nitrate or whether to be reactive and treat for nitrates on an as-needed basis is the essence of the question. The primary advantage of the southern wellfield is, of course, avoidance of nitrate contamination. However, the southern wellfield has a couple of distinct disadvantages.

- First, an expensive iron and manganese removal WTP would likely be necessary.
- Second, a long and expensive connecting watermain would be required to convey water to the Normal and 1st High Elevation Service Districts.

On the other hand, both of these expenditures should be avoidable by drilling future wells in the Normal and 1st High Elevation Service Districts. None of SPUC's existing Jordan formation wells have iron and manganese concentrations high enough to require removal by filtration. This fact leads to the conclusion that iron and manganese removal should likely not be necessary for future wells in these service districts.

If SPUC continues its current practice of strategically placing new wells adjacent to trunk watermains, future expenditures for watermains to connect new wells in the Normal and 1st High Elevation Service Districts to the respective distribution systems will be minimized.

The obvious unknown and major drawback to future wells in the Normal and 1st High Elevation Service Districts is the possibility of high nitrates. Wells No. 4, 5, 6, and 7 were all drilled in areas of minimal soil cover over the Shakopee formation. Drilling future wells in areas of greater soil cover should provide water with lower nitrate concentrations. Locations as far south as possible in the 1st High Elevation Service District or even onto the bluff would be preferable.

An obvious problem with drilling future wells along or even up the bluff line is getting water to the Normal Elevation Service District, which is separated from the bluff line by the 1st High Elevation Service District. This problem could be overcome by either of the following approaches:

- Construct watermain to connect the future wells directly to the Normal Elevation Service District, or

- Feed the Normal Elevation Service District from the 1st High Elevation Service District through the use of pressure reducing valves.

The first approach would result in additional waermain construction. Because the watermains connecting the future wells to the Normal Elevation Service District would have lower pressure, they would not be part of the 1st High Elevation Service District water distribution "grid". Rather, they would be part of the Normal Elevation Service District distribution system, unusable by any of the homes or businesses in the 1st High Elevation Service District because of the lower pressure.

The second approach, that of feeding the Normal Elevation Service District "through" the 1st High Elevation Service District, would avoid the unusable waterman from the bluff line across the 1st High Elevation Service District. However, it is electrically inefficient to do so. The wells on the 1st High Elevation Service District will require high horsepower motors and consume more electricity than wells on the Normal Elevation Service District due to the fact that they will pump water into a higher elevated reservoir. Feeding the Normal Elevation Service District from the 1st High Elevation Service District is electrically inefficient because of these higher horsepower motors.

Although there will be additional costs associated with either of these approaches to providing water to the Normal Elevation Service District, they should still be cost-effective compared to drilling wells in the Normal Elevation Service District and later having to construct a nitrate removal plant.

As noted earlier in this Report, Well No. 12 is currently being bid. That well will be drilled on the site for the new elevated reservoir to serve the 1st High Elevation Service District. The well and water tower site is along Dominion Avenue, which is part way up the bluff line. Well No. 12 will provide a test case to prove out whether nitrate concentration diminishes in the Jordan formation as you proceed south in Shakopee. Also, the iron and manganese concentrations in the water pumped from Well No. 12 can be compared to the concentrations in the City's other wells. This comparison will allow a determination of whether higher iron and manganese concentrations can be expected further south in the City.

Earlier it was noted that the essential question to be answered is whether SPUC should be proactive and develop a southern wellfield or reactive by adding nitrate removal to those wells that develop nitrate concentrations in excess of the Primary Drinking Water Standard of 10 mg/l. Well No. 12 should provide some additional insight into the correct approach. However, Well No. 12 will not be ready for test pumping until October of this year. In the interim, SPUC may wish to further evaluate the feasibility of implementing the southern wellfield. Re-sampling and testing for iron, manganese and nitrates could be performed on the Engelhaven, Westridge Lake Estates, Stonebrooke 1st Addition and Stonebrooke 2nd Addition wells to confirm the earlier testing results. Sampling and analysis of additional wells, particularly those of the Beckrich Park Estates, could be conducted to add to the database. This additional sampling and testing should be conducted to confirm the need for iron and manganese removal – by far and away the largest drawback of the southern wellfield.

The cost estimates for the southern wellfield that appeared earlier in this report assumed that five Jordan formation wells would be drilled on a 40 acre tract. Five wells on a 40 acre tract provides a well spacing much greater than the spacing between Wells No. 4 and 5, between Wells No. 6 and 7 and between Wells No. 9 and 11. A greater spacing was assumed for report purposes to be conservative. Also, the greater spacing reflects the decline in Jordan aquifer transmissivity as you proceed south and west in Shakopee.

The SPUC should consider a pumping test and aquifer evaluation that, in turn, would help define the expected yield and required spacing for Jordan wells in a southern wellfield. It may prove out that a 40 acre tract can support more wells. Or, put in another way, the pumping test and aquifer evaluation may prove that a smaller tract would support the five wells necessary for a 6 MGD iron and manganese removal WTP. Drilling a test well and a monitoring well into the Jordan formation would be an expensive proposition. However, it should be possible to conduct

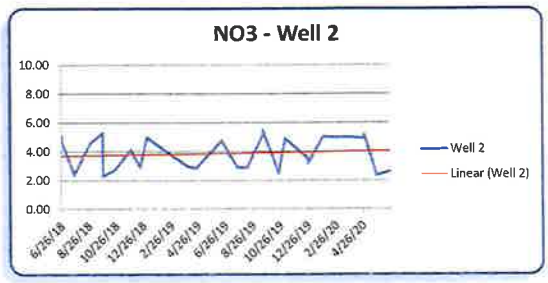
the pumping test by using one of the existing Jordan wells in the area of the southern wellfield as the pumping well and one or more of the existing wells as the monitoring well(s). Obviously, this approach would require the cooperation of the owners of the wells. Also, SPUC would have to reimburse the owner of the pumping well for the electrical power consumed during the pumping test.

As noted earlier, the reactive approach to the nitrate concentration problem would be to continue to drill Jordan formation wells in the Normal and 1st High Elevation Service Districts. Then, if and only if nitrate levels become a problem, add nitrate removal treatment to the problem wells. Although the costs for a nitrate removal WPT appear earlier in this repot, the evaluation of the nitrate removal WTP was not completed with the same level of effort applied to the other water treatment alternatives. This lesser evaluation can be explained by the fact that the SPUC did not authorize the completion of the optional Nitrate Removal and Blending Study. Bonestroo provide a brief evaluation of this alternative because it is our belief that the SPUC needs this information for comparison purposes before making a decision on the southern wellfield. The SPUC may wish to authorize additional evaluation of the nitrate removal alternative to bring its evaluation up to the same level of effort applied to the other evaluations.

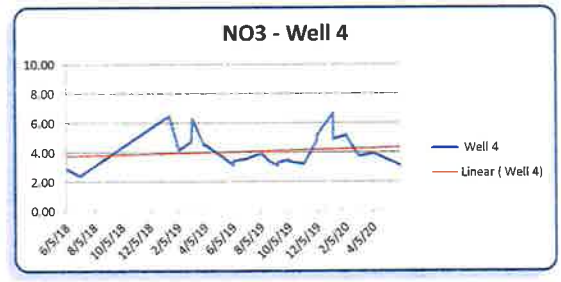
MN Department of Health
800-818-9318

Shakopee Public Utilities Commission
Water Department
Nitrate Results
Reported in mg/L

Location	Sample Collected	Results Received	Results	Lab	Run Time
2	6/26/18	7/2/18	5.07	MVTL	312 hrs prior
2	6/26/18	8/17/18	4.70	MDH	
2	7/24/18	8/17/18	2.41	MVTL	264 hrs prior
2	8/28/18	10/15/18	4.57	MVTL	168 hrs prior
2	9/25/18	10/15/18	5.30	MVTL	168 hrs prior
2	9/26/18	10/15/18	2.30	MDH	
2	10/23/18	11/7/18	2.76	MVTL	168 hrs prior
2	11/27/18	12/5/18	4.12	MVTL	168 hrs prior
2	12/18/18	12/26/18	2.89	MVTL	168 hrs prior
2	12/18/18	1/14/19	2.90	MDH	
2	1/2/19	1/14/19	4.97	MVTL	168 hrs prior
2	4/1/19	7/11/19	3.00	MDH	
2	4/23/19	5/1/19	2.84	MVTL	168 hrs prior
2	4/23/19	5/17/19	2.90	MDH	
2	5/21/19	5/29/19	3.83	MVTL	168 hrs prior
2	6/18/19	7/3/19	4.74	MVTL	168 hrs prior
2	7/23/19	7/29/19	2.89	MVTL	168 hrs prior
2	8/13/19	8/23/19	2.90	MVTL	168 hrs prior
2	9/17/19	10/3/19	5.16	MVTL	168 hrs prior
2	9/17/19	11/12/19	5.50	MDH	
2	10/22/19	11/12/19	2.52	MVTL	168 hrs prior
2	11/5/19	11/14/19	4.91	MVTL	168 hrs prior
2	12/23/19	1/23/20	3.60	MDH	
2	12/26/19	1/23/20	3.20	MVTL	168 hrs prior
2	1/28/20	2/21/20	5.02	MVTL	168 hrs prior
2	2/25/20	3/19/20	4.98	MVTL	168 hrs prior
2	3/17/20	3/24/20	4.99	MVTL	168 hrs prior
2	4/28/20	4/30/20	5.18	MVTL	168 hrs prior
2	4/27/20	6/5/20	4.90	MDH	
2	5/26/20	5/29/20	2.36	MVTL	168 hrs prior
2	6/25/20	6/30/20	2.62	MVTL	168 hrs prior



4	6/5/18	6/14/18	2.80	MVTL	168 hrs prior
4	6/5/18	7/18/18	2.90	MDH	
4	7/3/18	11/19/18	2.40	MDH	168 hrs prior
4	1/15/19	1/29/19	6.50	MVTL	168 hrs prior
4	2/5/19	2/12/19	4.16	MVTL	168 hrs prior
4	3/5/19	3/14/19	4.76	MVTL	168 hrs prior
4	3/5/19	3/29/19	4.80	MDH	
4	3/7/19	3/25/19	6.30	MDH	168 hrs prior
4	4/2/19	4/11/19	4.48	MVTL	168 hrs prior
4	4/2/19	12/9/19	4.60	MDH	
4	5/7/19	5/14/19	3.82	MVTL	168 hrs prior
4	6/4/19	6/21/19	3.14	MVTL	168 hrs prior
4	6/4/19	7/11/19	3.40	MDH	
4	7/2/19	7/24/19	3.57	MVTL	168 hrs prior
4	8/6/19	8/23/19	3.95	MVTL	168 hrs prior
4	8/6/19	12/9/19	3.90	MDH	
4	8/20/19	8/27/19	3.44	MVTL	168 hrs prior
4	9/9/19	10/3/19	3.11	MVTL	168 hrs prior
4	9/9/19	11/12/19	3.30	MDH	
4	10/1/19	11/12/19	3.50	MVTL	168 hrs prior
4	10/1/19	12/9/19	3.40	MDH	
4	11/5/19	11/14/19	3.24	MVTL	168 hrs prior
4	12/2/19	1/23/20	4.80	MDH	
4	12/3/19	12/13/19	5.18	MVTL	168 hrs prior
4	1/7/20	1/23/20	6.69	MVTL	168 hrs prior
4	1/7/20	3/24/20	4.90	MDH	
4	2/4/20	2/21/20	5.19	MVTL	168 hrs prior
4	3/3/20	3/19/20	3.76	MVTL	168 hrs prior
4	4/7/20	4/10/20	3.94	MVTL	168 hrs prior
4	5/5/20	5/9/20	3.51	MVTL	168 hrs prior
4	6/2/20	6/5/20	3.12	MVTL	168 hrs prior



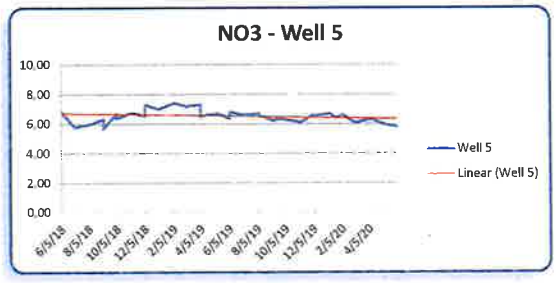
MVTL = Minnesota Valley Testing Laboratories
MDH = Minnesota Department of Health
TCWC = Twin City Water Clinic

Run times will represent the well being in step 1 for one week (168 hrs)

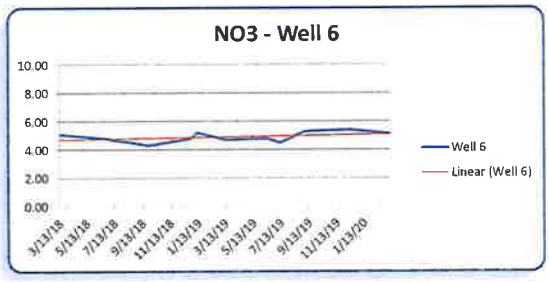
MN Department of Health
800-818-9318

Shakopee Public Utilities Commission
Water Department
Nitrate Results
Reported in mg/L

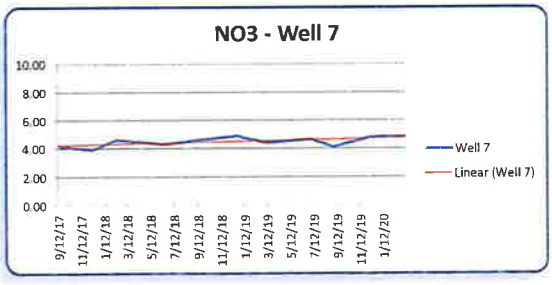
Location	Sample Collected	Results Received	Results	Lab	Run Time
5	6/5/18	6/14/18	6.83	MVTL	168 hrs prior
5	6/5/18	7/18/18	6.80	MDH	
5	7/3/18	11/19/18	5.80	MDH	
5	8/7/18	8/20/18	5.99	MVTL	168 hrs prior
5	9/4/18	10/15/18	6.32	MVTL	168 hrs prior
5	9/4/18	10/15/18	5.70	MDH	
5	10/2/18	10/15/18	6.67	MVTL	168 hrs prior
5	10/2/18	11/19/18	6.40	MDH	
5	11/6/18	11/19/18	6.74	MVTL	168 hrs prior
5	12/4/18	12/11/18	6.55	MVTL	168 hrs prior
5	12/4/18	12/26/18	7.30	MDH	
5	1/2/19	1/14/19	7.01	MVTL	168 hrs prior
5	1/2/19	3/4/19	7.00	MDH	
5	2/5/19	2/12/19	7.42	MVTL	168 hrs prior
5	3/5/19	3/14/19	7.16	MVTL	168 hrs prior
5	3/5/19	3/29/19	7.20	MDH	
5	4/2/19	4/11/19	7.29	MVTL	168 hrs prior
5	4/2/19	12/9/19	6.50	MDH	
5	5/7/19	5/14/19	6.73	MVTL	168 hrs prior
5	6/4/19	6/21/19	6.38	MVTL	168 hrs prior
5	6/4/19	7/11/19	6.80	MDH	
5	7/2/19	7/24/19	6.62	MVTL	168 hrs prior
5	8/6/19	8/23/19	6.70	MVTL	168 hrs prior
5	8/6/19	12/9/19	6.50	MDH	
5	8/20/19	8/27/19	6.46	MVTL	168 hrs prior
5	9/9/19	10/3/19	6.16	MVTL	168 hrs prior
5	9/9/19	11/12/19	6.30	MDH	
5	10/1/19	11/12/19	6.34	MVTL	168 hrs prior
5	10/1/19	12/9/19	6.30	MDH	
5	11/5/19	11/14/19	6.10	MVTL	168 hrs prior
5	12/2/19	1/23/20	6.60	MDH	
5	12/3/19	12/13/19	6.53	MVTL	168 hrs prior
5	1/7/20	1/23/20	6.69	MVTL	168 hrs prior
5	1/20/20	3/24/20	6.40	MDH	
5	2/4/20	2/21/20	6.60	MVTL	168 hrs prior
5	3/3/20	3/19/20	6.05	MVTL	168 hrs prior
5	4/7/20	4/10/20	6.34	MVTL	168 hrs prior
5	5/5/20	5/9/20	5.98	MVTL	168 hrs prior
5	6/2/20	6/5/20	5.82	MVTL	168 hrs prior



Location	Sample Collected	Results Received	Results	Lab	Run Time
6	3/13/18	4/10/18	5.10	MDH	168 hrs prior
6	6/19/18	7/18/18	4.80	MDH	456 hrs prior
6	9/26/18	10/15/18	4.30	MDH	192 hrs prior
6	12/27/18	2/5/19	4.80	MDH	168 hrs prior
6	1/8/19	1/14/19	5.21	MVTL	168 hrs prior
6	3/12/19	3/29/19	4.70	MDH	168 hrs prior
6	6/11/19	7/11/19	4.80	MDH	168 hrs prior
6	7/9/19	7/24/19	4.48	MVTL	168 hrs prior
6	9/3/19	11/12/19	5.30	MDH	
6	12/10/19	1/23/20	5.40	MDH	
6	3/10/20	3/19/20	5.13	MVTL	168 hrs prior



Location	Sample Collected	Results Received	Results	Lab	Run Time
7	9/12/17	10/3/17	4.20	MDH	168 hrs prior
7	12/12/17	1/8/18	3.90	MDH	168 hrs prior
7	2/13/18	3/26/18	4.60	MDH	168 hrs prior
7	6/19/18	7/18/18	4.30	MDH	456 hrs prior
7	9/18/18	10/15/18	4.60	MDH	216 hrs prior
7	12/27/18	2/5/19	4.90	MDH	168 hrs prior
7	1/8/19	1/14/19	4.78	MVTL	168 hrs prior
7	3/12/19	3/29/19	4.40	MDH	168 hrs prior
7	6/11/19	7/11/19	4.60	MDH	168 hrs prior
7	7/9/19	7/24/19	4.64	MVTL	168 hrs prior
7	9/3/19	11/12/19	4.10	MDH	
7	12/10/19	1/23/20	4.80	MDH	
7	3/10/20	3/19/20	4.84	MVTL	168 hrs prior



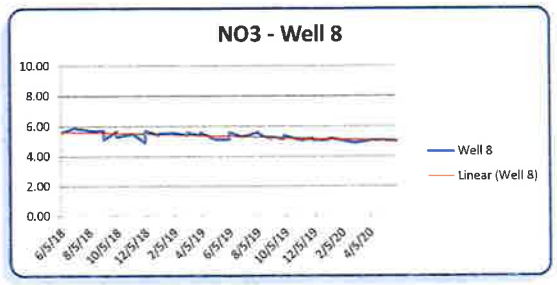
MVTL = Minnesota Valley Testing Laboratories
MDH = Minnesota Department of Health
TCWC = Twin City Water Clinic

Run times will represent the well being in step 1 for one week (168 hrs)

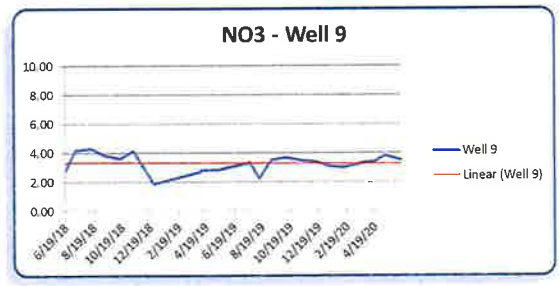
MN Department of Health
800-818-9318

Shakopee Public Utilities Commission
Water Department
Nitrate Results
Reported in mg/L

Location	Sample Collected	Results Received	Results	Lab	Run Time
8	6/5/18	6/14/18	5.59	MVTL	168 hrs prior
8	6/5/18	7/18/18	5.60	MDH	
8	7/3/18	11/19/18	5.90	MDH	
8	8/7/18	8/20/18	5.72	MVTL	168 hrs prior
8	9/4/18	10/15/18	5.72	MVTL	168 hrs prior
8	9/4/18	10/15/18	5.10	MDH	
8	10/2/18	10/15/18	5.65	MVTL	168 hrs prior
8	10/2/18	11/19/18	5.30	MDH	
8	11/6/18	11/19/18	5.51	MVTL	168 hrs prior
8	12/4/18	12/11/18	4.89	MVTL	168 hrs prior
8	12/4/18	12/26/18	5.70	MDH	
8	1/2/19	1/14/19	5.41	MVTL	168 hrs prior
8	1/2/19	3/4/19	5.50	MDH	
8	2/5/19	2/12/19	5.58	MVTL	168 hrs prior
8	3/5/19	3/14/19	5.41	MVTL	168 hrs prior
8	3/5/19	3/29/19	5.60	MDH	
8	4/2/19	4/11/19	5.40	MVTL	168 hrs prior
8	4/2/19	12/9/19	5.60	MDH	
8	5/7/19	5/14/19	5.13	MVTL	168 hrs prior
8	6/4/19	6/21/19	5.12	MVTL	168 hrs prior
8	6/4/19	7/11/19	5.60	MDH	
8	7/2/19	7/24/19	5.32	MVTL	168 hrs prior
8	8/6/19	12/9/19	5.60	MDH	
8	8/13/19	8/23/19	5.38	MVTL	168 hrs prior
8	9/3/19	10/3/19	5.20	MVTL	168 hrs prior
8	9/3/19	11/12/19	5.30	MDH	
8	10/1/19	11/12/19	5.16	MVTL	168 hrs prior
8	10/1/19	12/9/19	5.40	MDH	
8	11/5/19	11/14/19	5.08	MVTL	168 hrs prior
8	12/2/19	1/23/20	5.20	MDH	
8	12/3/19	12/13/19	5.08	MVTL	168 hrs prior
8	1/7/20	1/23/20	5.07	MVTL	168 hrs prior
8	1/7/20	3/24/20	5.20	MDH	
8	2/4/20	2/21/20	5.08	MVTL	168 hrs prior
8	3/3/20	3/19/20	4.89	MVTL	168 hrs prior
8	4/7/20	4/10/20	5.06	MVTL	168 hrs prior
8	5/5/20	5/9/20	5.05	MVTL	168 hrs prior
8	6/2/20	6/5/20	5.02	MVTL	168 hrs prior



Location	Sample Collected	Results Received	Results	Lab	Run Time
9	6/19/18	6/26/18	2.92	MVTL	96 hrs prior
9	6/19/18	7/18/18	2.80	MDH	
9	7/10/18	7/18/18	4.20	MVTL	240 hrs prior
9	8/14/18	8/20/18	4.29	MVTL	168 hrs prior
9	9/11/18	10/15/18	3.83	MVTL	168 hrs prior
9	10/16/18	11/7/18	3.61	MVTL	168 hrs prior
9	11/13/18	11/29/18	4.15	MVTL	168 hrs prior
9	12/27/18	1/14/19	1.87	MVTL	168 hrs prior
9	4/9/19	4/16/19	2.69	MVTL	168 hrs prior
9	4/9/19	5/1/19	2.80	MDH	
9	5/14/19	5/20/19	2.82	MVTL	168 hrs prior
9	7/23/19	7/29/19	3.32	MVTL	168 hrs prior
9	8/13/19	8/23/19	2.23	MVTL	168 hrs prior
9	9/9/19	10/3/19	3.49	MVTL	168 hrs prior
9	10/8/19	11/12/19	3.68	MVTL	168 hrs prior
9	12/10/19	12/19/19	3.42	MVTL	168 hrs prior
9	11/12/19	12/9/19	3.48	MVTL	168 hrs prior
9	1/14/20	2/3/20	3.07	MVTL	168 hrs prior
9	2/11/20	2/21/20	2.99	MVTL	168 hrs prior
9	3/10/20	3/19/20	3.20	MVTL	168 hrs prior
9	4/14/20	4/17/20	3.41	MVTL	168 hrs prior
9	4/14/20	4/29/20	3.30	MDH	
9	5/12/20	5/15/20	3.81	MVTL	168 hrs prior
9	6/16/20	6/19/20	3.51	MVTL	168 hrs prior



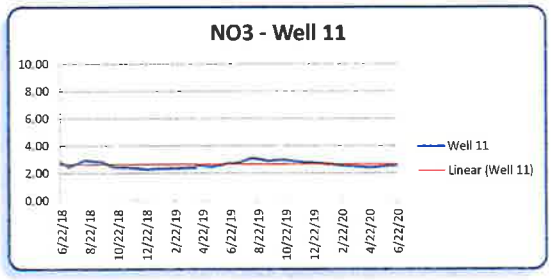
MVTL = Minnesota Valley Testing Laboratories
MDH = Minnesota Department of Health
TCWC = Twin City Water Clinic

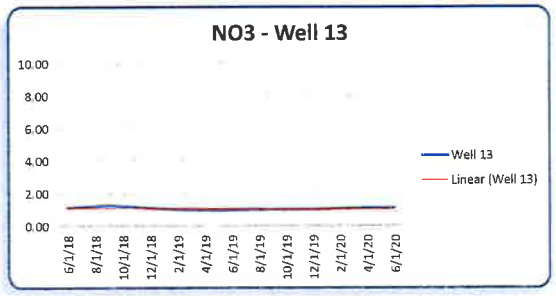
Run times will represent the well being in step 1 for one week (168 hrs)

MN Department of Health
800-818-9318

Shakopee Public Utilities Commission
Water Department
Nitrate Results
Reported in mg/L

Location	Sample Collected	Results Received		Results	Lab	Run Time
10	4/17/12	4/20/12	<	1.00	TCWC	158 hrs prior
10	1/21/14	1/29/14	<	1.00	TCWC	144 hrs prior
10	3/25/14	4/1/14		3.61	MVTL	96 hrs prior
10	4/23/14	5/7/14	<	0.20	MVTL	24 hrs prior
10	4/23/14	6/16/14	<	0.05	MDH	*
10	6/16/15	6/26/15	<	0.05	MVTL	144 hrs prior
10	4/11/17	4/17/17	<	0.05	MVTL	168 hrs prior
10	1/8/19	1/14/19	<	0.05	MVTL	168 hrs prior
10	7/9/19	7/24/19	<	0.05	MVTL	168 hrs prior
11	6/22/18	7/18/18		2.80	MDH	24 hrs prior
11	7/10/18	7/18/18		2.48	MVTL	24 hrs prior
11	8/14/18	8/20/18		2.95	MVTL	168 hrs prior
11	9/18/18	10/15/18		2.83	MVTL	168 hrs prior
11	10/16/18	11/7/18		2.45	MVTL	168 hrs prior
11	11/13/18	11/29/18		2.41	MVTL	168 hrs prior
11	12/27/18	1/14/19		2.25	MVTL	168 hrs prior
11	1/8/19	1/14/19		2.31	MVTL	168 hrs prior
11	4/9/19	4/16/19		2.40	MVTL	168 hrs prior
11	4/9/19	5/1/19		2.60	MDH	
11	5/14/19	5/20/19		2.48	MVTL	168 hrs prior
11	6/18/19	7/3/19		2.71	MVTL	168 hrs prior
11	7/9/19	7/24/19		2.72	MVTL	168 hrs prior
11	8/6/19	8/23/19		3.07	MVTL	168 hrs prior
11	8/20/19	8/27/19		3.06	MVTL	168 hrs prior
11	9/17/19	10/3/19		2.89	MVTL	168 hrs prior
11	10/15/19	11/12/19		2.98	MVTL	168 hrs prior
11	11/19/19	12/9/19		2.84	MVTL	168 hrs prior
11	4/21/20	4/24/20		2.41	MVTL	168 hrs prior
11	4/21/20	6/5/20		2.40	MDH	
11	6/23/20	6/26/20		2.58	MVTL	168 hrs prior
12	4/11/17	4/17/17		0.92	MVTL	168 hrs prior
12	9/5/17	9/26/17		0.72	MVTL	168 hrs prior
12	12/5/17	12/22/17		0.72	MVTL	168 hrs prior
12	9/4/18	10/15/18		0.62	MVTL	168 hrs prior
12	12/4/18	12/11/18		0.58	MVTL	144 hrs prior
12	3/5/19	3/14/19		0.68	MVTL	168 hrs prior
12	5/28/19	6/6/19		0.53	MVTL	168 hrs prior
12	9/9/19	10/3/19		0.65	MVTL	168 hrs prior
12	12/10/19	12/19/19		0.74	MVTL	168 hrs prior
12	3/10/20	3/19/20		0.73	MVTL	168 hrs prior
12	6/9/20	6/12/20		0.62	MVTL	168 hrs prior
13	6/5/18	6/14/18		1.11	MVTL	24 hrs prior
13	9/4/18	10/15/18		1.28	MVTL	168 hrs prior
13	12/4/18	12/11/18		1.08	MVTL	168 hrs prior
13	3/5/19	3/14/19		0.98	MVTL	168 hrs prior
13	5/28/19	6/6/19		0.95	MVTL	168 hrs prior
13	9/3/19	10/3/19		1.01	MVTL	168 hrs prior
13	12/3/19	12/13/19		1.00	MVTL	168 hrs prior
13	3/3/20	3/19/20		1.08	MVTL	168 hrs prior
13	6/2/20	6/5/20		1.11	MVTL	168 hrs prior
14	4/23/14	6/16/14	<	0.05	MDH	*
14	4/11/17	4/17/17	<	0.05	MVTL	20 hrs prior
14	9/5/17	9/26/17	<	0.05	MVTL	24 hrs prior
14	12/5/17	12/22/17	<	0.05	MVTL	168 hrs prior
14	3/6/18	3/26/18	<	0.05	MVTL	168 hrs prior
14	6/5/18	6/14/18	<	0.05	MVTL	24 hrs prior





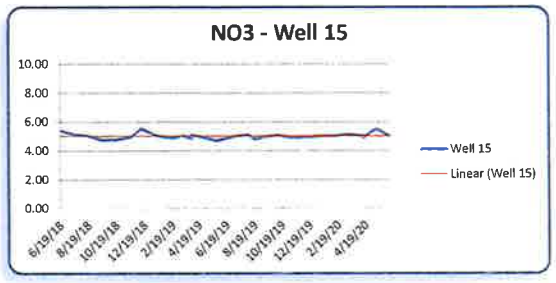
MVTL = Minnesota Valley Testing Laboratories
MDH = Minnesota Department of Health
TCWC = Twin City Water Clinic

Run times will represent the well being in step 1 for one week (168 hrs)

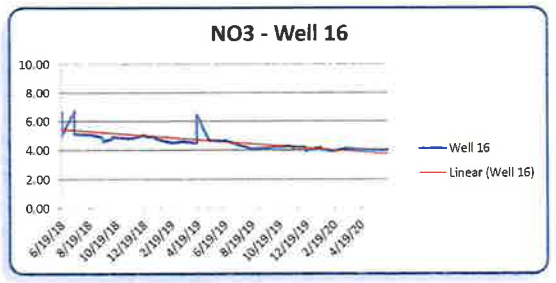
MN Department of Health
800-818-9318

Shakopee Public Utilities Commission
Water Department
Nitrate Results
Reported in mg/L

Location	Sample Collected	Results Received	Results	Lab	Run Time
15	6/19/18	6/26/18	5.40	MVTL	408 hrs prior
15	7/17/18	8/17/18	5.16	MVTL	120 hrs prior
15	8/21/18	10/15/18	5.02	MVTL	168 hrs prior
15	9/18/18	10/15/18	4.76	MVTL	168 hrs prior
15	10/16/18	11/7/18	4.74	MVTL	168 hrs prior
15	11/20/18	11/29/18	4.98	MVTL	168 hrs prior
15	12/11/18	12/21/18	5.54	MVTL	168 hrs prior
15	1/15/19	1/29/19	5.05	MVTL	168 hrs prior
15	2/19/19	3/4/19	4.91	MVTL	168 hrs prior
15	3/15/19	3/25/19	5.05	MVTL	168 hrs prior
15	4/2/19	4/11/19	4.87	MVTL	168 hrs prior
15	4/2/19	5/1/19	5.10	MDH	
15	5/7/19	5/14/19	4.89	MVTL	168 hrs prior
15	5/28/19	6/6/19	4.70	MVTL	168 hrs prior
15	7/2/19	7/24/19	4.99	MVTL	168 hrs prior
15	8/6/19	8/23/19	5.11	MVTL	168 hrs prior
15	8/20/19	8/27/19	4.81	MVTL	168 hrs prior
15	9/9/19	10/3/19	4.97	MVTL	168 hrs prior
15	10/8/19	11/12/19	5.07	MVTL	168 hrs prior
15	12/10/19	12/19/19	4.95	MVTL	168 hrs prior
15	11/12/19	12/9/19	4.93	MVTL	168 hrs prior
15	1/14/20	2/3/20	5.01	MVTL	168 hrs prior
15	2/11/20	2/21/20	5.01	MVTL	168 hrs prior
15	3/10/20	3/19/20	5.13	MVTL	168 hrs prior
15	4/14/20	4/17/20	5.05	MVTL	168 hrs prior
15	4/14/20	4/28/20	4.90	MDH	
15	5/12/20	5/15/20	5.54	MVTL	168 hrs prior
15	6/9/20	6/12/20	5.05	MVTL	168 hrs prior



Location	Sample Collected	Results Received	Results	Lab	Run Time
16	6/19/18	6/26/18	6.65	MVTL	408 hrs prior
16	6/19/18	7/18/18	5.00	MDH	
16	7/17/18	8/17/18	6.76	MVTL	408 hrs prior
16	7/17/18	11/19/18	5.10	MDH	
16	9/18/18	10/15/18	4.87	MVTL	168 hrs prior
16	9/18/18	10/15/18	4.60	MDH	
16	10/9/18	10/15/18	4.79	MVTL	168 hrs prior
16	10/9/18	11/19/18	4.90	MDH	
16	8/21/18	10/15/18	5.09	MVTL	192 hrs prior
16	11/20/18	11/29/18	4.81	MVTL	168 hrs prior
16	12/18/18	12/26/18	5.06	MVTL	192 hrs prior
16	12/18/18	1/14/19	5.00	MDH	
16	1/15/19	1/29/19	4.90	MVTL	168 hrs prior
16	1/15/19	3/4/19	4.80	MDH	
16	2/19/19	3/4/19	4.51	MVTL	168 hrs prior
16	3/19/19	3/25/19	4.63	MVTL	168 hrs prior
16	3/19/19	4/4/19	4.60	MDH	
16	4/16/19	4/23/19	4.50	MVTL	168 hrs prior
16	4/16/19	12/9/19	6.50	MDH	
16	5/14/19	5/20/19	4.68	MVTL	168 hrs prior
16	6/18/19	7/3/19	4.64	MVTL	168 hrs prior
16	6/18/19	7/11/19	4.70	MDH	
16	7/16/19	7/24/19	4.40	MVTL	168 hrs prior
16	8/20/19	8/27/19	4.08	MVTL	168 hrs prior
16	8/20/19	12/9/19	4.10	MDH	
16	11/12/19	1/23/20	4.30	MDH	
16	11/19/19	12/9/19	4.04	MVTL	168 hrs prior
16	11/20/19	12/26/19	4.20	MDH	
16	12/16/19	1/23/20	4.20	MDH	
16	12/17/19	12/26/19	3.99	MVTL	168 hrs prior
16	1/20/20	3/24/20	4.20	MDH	
16	1/21/20	2/3/20	4.05	MVTL	168 hrs prior
16	2/18/20	3/19/20	3.95	MVTL	168 hrs prior
16	3/17/20	3/24/20	4.14	MVTL	168 hrs prior
16	4/21/20	4/24/20	4.03	MVTL	168 hrs prior
16	6/16/20	6/19/20	4.01	MVTL	168 hrs prior



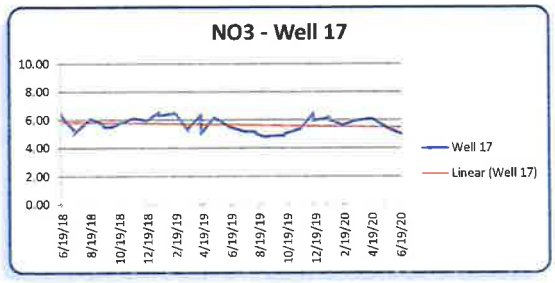
MVTL = Minnesota Valley Testing Laboratories
MDH = Minnesota Department of Health
TCWC = Twin City Water Clinic

Run times will represent the well being in step 1 for one week (168 hrs)

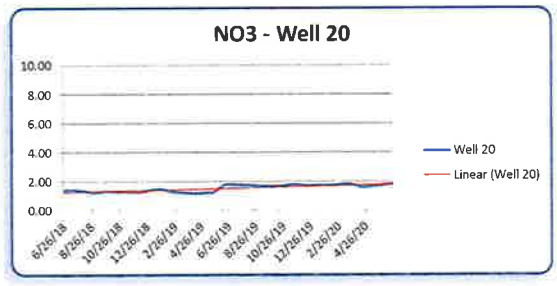
MN Department of Health
800-818-9318

Shakopee Public Utilities Commission
Water Department
Nitrate Results
Reported in mg/L

Location	Sample Collected	Results Received	Results	Lab	Run Time
17	6/19/18	6/26/18	6.52	MVTL	408 hrs prior
17	6/19/18	7/18/18	6.30	MDH	
17	7/17/18	8/17/18	5.30	MVTL	408 hrs prior
17	7/17/18	11/19/18	5.00	MDH	
17	8/21/18	10/15/18	6.10	MVTL	168 hrs prior
17	9/18/18	10/15/18	5.70	MVTL	168 hrs prior
17	9/18/18	10/15/18	5.50	MDH	
17	10/9/18	10/15/18	5.50	MVTL	168 hrs prior
17	10/9/18	11/19/18	5.60	MDH	
17	11/20/18	11/29/18	6.13	MVTL	168 hrs prior
17	12/18/18	12/26/18	5.97	MVTL	168 hrs prior
17	12/18/18	1/14/19	5.90	MDH	
17	1/15/19	1/29/19	6.56	MVTL	168 hrs prior
17	1/15/19	3/4/19	6.30	MDH	
17	2/19/19	3/4/19	6.49	MVTL	168 hrs prior
17	3/19/19	3/25/19	5.25	MVTL	168 hrs prior
17	3/19/19	4/4/19	5.40	MDH	
17	4/16/19	4/23/19	6.40	MVTL	168 hrs prior
17	4/16/19	12/9/19	5.00	MDH	
17	5/14/19	5/20/19	6.19	MVTL	168 hrs prior
17	6/18/19	7/3/19	5.50	MVTL	168 hrs prior
17	6/18/19	7/11/19	5.50	MDH	
17	7/16/19	7/24/19	5.20	MVTL	168 hrs prior
17	8/13/19	8/23/19	5.16	MVTL	168 hrs prior
17	8/13/19	12/9/19	5.00	MDH	
17	9/3/19	10/3/19	4.77	MVTL	168 hrs prior
17	9/3/19	11/12/19	4.80	MDH	
17	10/15/19	11/12/19	4.89	MVTL	168 hrs prior
17	10/15/19	12/9/19	5.00	MDH	
17	11/19/19	12/9/19	5.38	MVTL	168 hrs prior
17	12/16/19	1/23/20	6.50	MDH	
17	12/17/19	12/26/19	5.98	MVTL	168 hrs prior
17	1/20/20	3/24/20	6.20	MDH	
17	1/21/20	2/3/20	5.98	MVTL	168 hrs prior
17	2/18/20	3/19/20	5.64	MVTL	168 hrs prior
17	3/17/20	3/24/20	5.95	MVTL	168 hrs prior
17	4/21/20	4/24/20	6.09	MVTL	168 hrs prior
17	5/26/20	5/29/20	5.37	MVTL	168 hrs prior
17	6/23/20	6/26/20	4.98	MVTL	168 hrs prior



Location	Sample Collected	Results Received	Results	Lab	Run Time
20	6/26/18	7/2/18	1.39	MVTL	72 hrs prior
20	7/24/18	8/17/18	1.42	MVTL	576 hrs prior
20	8/28/18	10/15/18	1.24	MVTL	192 hrs prior
20	9/25/18	10/15/18	1.30	MVTL	168 hrs prior
20	10/23/18	11/7/18	1.30	MVTL	216 hrs prior
20	12/11/18	12/21/18	1.29	MVTL	168 hrs prior
20	1/22/19	2/5/19	1.49	MVTL	168 hrs prior
20	2/26/19	3/6/19	1.25	MVTL	168 hrs prior
20	3/26/19	4/1/19	1.18	MVTL	168 hrs prior
20	4/23/19	5/1/19	1.15	MVTL	168 hrs prior
20	4/23/19	5/17/19	1.20	MDH	
20	5/21/19	5/29/19	1.21	MVTL	168 hrs prior
20	6/18/19	7/3/19	1.79	MVTL	168 hrs prior
20	8/20/19	8/27/19	1.72	MVTL	168 hrs prior
20	9/9/19	10/3/19	1.63	MVTL	168 hrs prior
20	10/15/19	11/12/19	1.64	MVTL	168 hrs prior
20	11/19/19	12/9/19	1.78	MVTL	168 hrs prior
20	12/17/19	12/26/19	1.67	MVTL	168 hrs prior
20	1/21/20	2/3/20	1.73	MVTL	168 hrs prior
20	2/18/20	3/19/20	1.72	MVTL	168 hrs prior
20	3/17/20	3/24/20	1.82	MVTL	168 hrs prior
20	4/21/20	4/24/20	1.59	MVTL	168 hrs prior
20	4/20/20	6/5/20	1.60	MDH	
20	6/23/20	6/26/20	1.81	MVTL	168 hrs prior



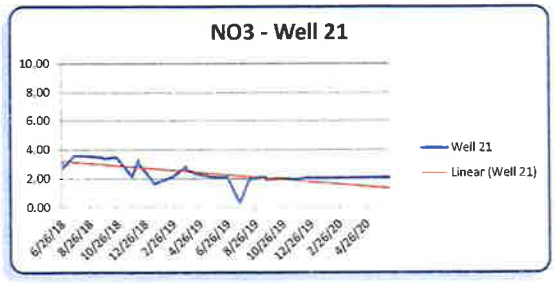
MVTL = Minnesota Valley Testing Laboratories
MDH = Minnesota Department of Health
TCWC = Twin City Water Clinic

Run times will represent the well being in step 1 for one week (168 hrs)

MN Department of Health
800-818-9318

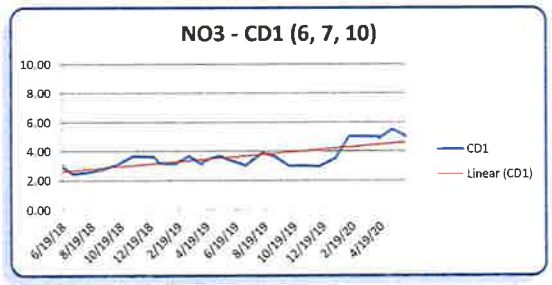
Shakopee Public Utilities Commission
Water Department
Nitrate Results
Reported in mg/L

Location	Sample Collected	Results Received	Results	Lab	Run Time
21	6/26/18	7/2/18	3.07	MVTL	240 hrs prior
21	6/26/18	8/17/18	2.70	MDH	
21	7/24/18	8/17/18	3.60	MVTL	576 hrs prior
21	8/28/18	10/15/18	3.54	MVTL	168 hrs prior
21	9/25/18	10/15/18	3.45	MVTL	216 hrs prior
21	9/26/18	10/15/18	3.40	MDH	
21	10/23/18	11/7/18	3.49	MVTL	168 hrs prior
21	11/27/18	12/5/18	2.13	MVTL	192 hrs prior
21	12/11/18	12/21/18	3.28	MVTL	168 hrs prior
21	12/11/18	1/14/19	3.10	MDH	
21	1/15/19	1/29/19	1.65	MVTL	168 hrs prior
21	2/26/19	3/6/19	2.13	MVTL	168 hrs prior
21	3/26/19	4/1/19	2.82	MVTL	168 hrs prior
21	3/26/19	7/11/19	2.60	MDH	
21	4/23/19	5/1/19	2.31	MVTL	168 hrs prior
21	4/23/19	5/17/19	2.30	MDH	
21	5/21/19	5/29/19	2.12	MVTL	168 hrs prior
21	6/25/19	7/3/19	2.11	MVTL	168 hrs prior
21	6/25/19	8/3/19	2.20	MDH	
21	7/23/19	7/29/19	0.33	MVTL	168 hrs prior
21	8/13/19	8/23/19	2.00	MVTL	168 hrs prior
21	9/17/19	11/12/19	2.10	MDH	
21	9/17/19	10/3/19	1.94	MVTL	168 hrs prior
21	10/22/19	11/12/19	1.99	MVTL	168 hrs prior
21	11/26/19	12/13/19	1.94	MVTL	168 hrs prior
21	12/23/19	1/23/20	2.10	MDH	
21	12/26/19	1/23/20	2.04	MVTL	168 hrs prior
21	6/16/20	6/19/20	2.08	MVTL	168 hrs prior



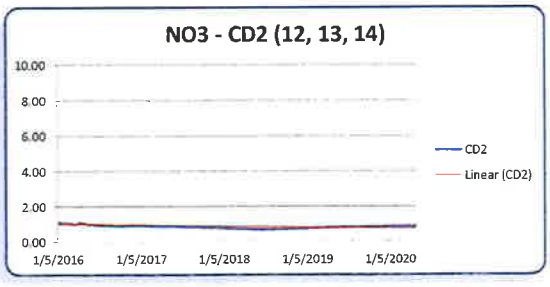
Combined Discharge - Wells 6-7-10

CD 1	6/19/18	6/26/18	3.05	MVTL	168 hrs prior
CD 1	6/19/18	7/18/18	2.90	MDH	
CD 1	7/10/18	7/18/18	2.46	MVTL	240 hrs prior
CD 1	8/14/18	8/20/18	2.59	MVTL	168 hrs prior
CD 1	9/11/18	10/15/18	2.78	MVTL	168 hrs prior
CD 1	10/9/18	10/15/18	3.06	MVTL	168 hrs prior
CD 1	11/13/18	11/29/18	3.68	MVTL	168 hrs prior
CD 1	12/27/18	1/14/19	3.63	MVTL	168 hrs prior
CD 1	1/8/19	1/14/19	3.19	MVTL	168 hrs prior
CD 1	2/12/19	2/22/19	3.16	MVTL	168 hrs prior
CD 1	3/12/19	3/18/19	3.67	MVTL	168 hrs prior
CD 1	4/9/19	4/16/19	3.13	MVTL	168 hrs prior
CD 1	4/9/19	5/1/19	3.30	MDH	
CD 1	5/14/19	5/20/19	3.69	MVTL	168 hrs prior
CD 1	6/11/19	6/21/19	3.37	MVTL	168 hrs prior
CD 1	7/9/19	7/24/19	3.04	MVTL	168 hrs prior
CD 1	8/13/19	8/23/19	3.89	MVTL	168 hrs prior
CD 1	9/3/19	10/3/19	3.74	MVTL	168 hrs prior
CD 1	10/8/19	11/12/19	3.02	MVTL	168 hrs prior
CD 1	12/10/19	12/19/19	2.96	MVTL	168 hrs prior
CD 1	11/12/19	12/9/19	3.00	MVTL	168 hrs prior
CD 1	1/14/20	2/3/20	3.51	MVTL	168 hrs prior
CD 1	2/11/20	2/21/20	5.05	MVTL	168 hrs prior
CD 1	4/14/20	4/17/20	5.03	MVTL	168 hrs prior
CD 1	4/14/20	4/29/20	4.90	MDH	
CD 1	5/12/20	5/15/20	5.52	MVTL	168 hrs prior
CD 1	6/9/20	6/12/20	5.04	MVTL	168 hrs prior



Combined Discharge - Wells 12-13-14

CD 2	1/5/2016	1/13/2016	1.08	MVTL	192 hrs prior
CD 2	2/23/2016	2/29/2016	1.03	MVTL	208 hrs prior
CD 2	3/22/2016	3/28/2016	0.96	MVTL	288 hrs prior
CD 2	4/12/2016	4/19/2016	1.07	MVTL	120 hrs prior
CD 2	5/10/2016	5/16/2016	0.98	MVTL	165 hrs prior
CD 2	5/10/2016	6/2/2016	0.97	MDH	
CD 2	7/12/2016	7/18/2016	0.93	MVTL	170 hrs prior
CD 2	10/11/2016	10/17/2016	0.87	MVTL	168 hrs prior
CD 2	11/8/2016	11/17/2016	0.91	MVTL	168 hrs prior
CD 2	1/10/2017	1/20/2017	0.92	MVTL	216 hrs prior
CD 2	4/11/2017	4/17/2017	0.85	MVTL	144 hrs prior
CD 2	6/8/2017	6/28/2017	0.86	MDH	144 hrs prior
CD 2	6/22/2018	7/18/2018	0.67	MDH	528 hrs prior
CD 2	4/16/2019	5/1/2019	0.78	MDH	165 hrs prior
CD 2	4/27/2020	6/5/2020	0.86	MDH	165 hrs prior



MVTL = Minnesota Valley Testing Laboratories
MDH = Minnesota Department of Health
TCWC = Twin City Water Clinic

Run times will represent the well being in step 1 for one week (168 hrs)