

AGENDA  
SHAKOPEE PUBLIC UTILITIES COMMISSION  
REGULAR MEETING  
October 18, 2021  
at 5:00 PM

To watch this meeting live click or copy the link: <https://tinyurl.com/SPU-YouTube-Live>

1. **Call to Order** at 5:00pm in the SPU Service Center, 255 Sarazin Street
  - a. Roll Call
  
2. **Communications**
  
3. **Consent Agenda**
  - C=> 3a) Approval of the October 4, 2021 Minutes (GD)
  - C=> 3b) Approval of October 18, 2021 Agenda (KM)
  - C=> 3c) October 6, 2021 Warrant List  
Account Credit Request/Deposit Refunds (JM)
  - C=> 3d) October 18, 2021 Warrant List (JM)
  - C=> 3e) Water Dashboard (LS)
  - C=> 3f) COVID-19 Vaccination Incentive Program (GD)
  - C=> 3g) Employee Recognition Policy (GD)
  - C=> 3h) Audit Recommendations (JM)
  
4. **Liaison Report** (JB)
  
5. **Public Comment Period.** The public comment period provides an opportunity for the public to address the Commission on items that are not on the agenda. Comments should **not** exceed five minutes. The SPU President may adjust that time limit based upon the number of persons seeking to comment. This comment period may not be used to make personal attacks, to air personality grievances, or for political endorsements or campaigns. The public comments are intended for informational purposes only; Commissioners will not enter into a dialogue with commenters, and questions from Commissioners will be for clarification only.
  
6. **General Manager Report**
  - 6a) General Manager Report – Verbal (GD)
  
7. **Reports: Water Items**
  - 7a) Water System Operations Report – Verbal (LS)
  - 7b) Comprehensive Evaluation of Municipal Water Treatment for SPU (LS)
  - 7c) Resolution #2021-21 Approving Exchange Agreement and All Documents Necessary to Carry Out Exchange Agreement and Completion of Closing Under Exchange Agreement (JA)
  - 7d) West End – Lower Bluff Service Area (JA)

8. **Reports: Electric Items**
  - 8a) Electric System Operations Report – Verbal (BC)
  - 8b) City of Prior Lake Franchise Fees (KB)
  - 8c) 100% Renewable Residential Options (GD)
  
9. **Reports: Human Resources**
  
10. **Reports: General**
  - 10a) Marketing/Customer Service Report – Verbal (SW)
  - 10b) Update on MVEC Meeting for Territory Acquisition (GD) \*\*
  
11. **Items for Future Agendas**
  
12. **Tentative Dates for Upcoming Meetings**
  - November 1, 2021
  - November 15, 2021
  - December 6, 2021
  - December 20, 2021
  
13. **Adjournment**

\*\* A portion of this meeting may be closed under Minnesota Statutes, Section 13D.05, subd. 3(c)(3) to develop or consider offers or counteroffers for the purchase or sale of real or personal property.

MINUTES OF THE  
SHAKOPEE PUBLIC UTILITIES COMMISSION  
OCTOBER 4, 2021  
Regular Meeting

1. Call to Order. President Mocol called the October 4, 2021 meeting of the Shakopee Public Utilities Commission to order at 7:11 pm, after a staff-led tour of water and electric facilities, including pump house #20, water tower #3, Dean Lake substation, and MMPA’s Shakopee Energy Park. President Mocol, Vice President Fox, Commissioner Brennan, Commissioner Krieg, and Commissioner Letourneau were present.

2. Approval of Consent Agenda. Items 3a and 3e were removed from the Consent Agenda. Vice President Fox moved approved of the Consent Agenda: (3b) September 20, 2021 Minutes; (3c) October 4, 2020 Agenda; (3d) October 4, 2021 Warrant List; (3f) Well Head Protection – Status; (3g) MMPA September Meeting Updates. Commissioner Brennan seconded the motion.

September 7, 2021 Minutes. Commissioner Brennan moved to reconsider the September 7, 2021 minutes, seconded by Vice President Fox. Ayes: Mocol, Fox, Brennan, Krieg, and Letourneau. Nays: None. Motion carried. Commissioner Brennan moved to revise the September 7, 2021 minutes as indicated. Commissioner Letourneau seconded the motion. Ayes: Mocol, Fox, Brennan, Krieg, and Letourneau. Nays: None. Motion carried.

Quarterly Nitrate Report. Commissioner Brennan asked about increased nitrate levels in wells 17 and 21. Water Superintendent Lon Schemel explained that the wells were re-sampled and the results showed that levels had returned to normal range. Mr. Schemel noted that if nitrate levels ever exceed 8.5 then SPU stops pumping from that well to investigate. Commissioner Brennan moved approval of the quarterly nitrate report, seconded by Vice President Fox. Ayes: Mocol, Fox, Brennan, Krieg, and Letourneau. Nays: None. Motion carried.

3. Liaison Report. Commissioner Brennan noted that the City Council had approved the 2022- 2026 CIP as well as the preliminary tax levy of \$22,486,000, which is an increase of approximately 6.99%. She noted that at its meeting on October 5<sup>th</sup>, the City Council will declare October as Domestic Violence Awareness Month. The Commission expressed support for the Declaration and will post this on SPU’s website.

4. Public Comment Period. No public comments were offered.

5. General Manager Report. Greg Drent, General Manager, provided an update on current projects, including discussions with the compensation and benefits informal working group, 2022 – 2026 CIP preparation, proposing a joint meeting with the City Council, and a scheduled meeting with Minnesota Valley Electric Cooperative representatives.

6. Water Report. Mr. Schemel noted that flushing should be done in the Southbridge area shortly and then SPU will be done for the season. He reported that SPU received the results of the thorough Minnesota Department of Health sanitary survey, which showed zero problems. Mr. Schemel also reported that ten plastic services were installed before SPU prepared the final specifications for tracer wire. He noted that the topic was discussed with City staff and they will hold on issuing these permits until the specification is finalized.

7. Electric Report. Mr. Drent described four outages since the last Commission meeting. He also provided an update on Electric Department projects, including an estimated mid-November completion for SPU EV Chargers.

8. Human Resources: COVID Vaccine Incentives. Mr. Drent reported that 70% of SPU employees are fully vaccinated. The Commission discussed potential vaccination incentives for employees, including a policy recently adopted by the City of Bloomington. Vice President Fox moved approval of an incentives policy similar to the City of Bloomington, with a deadline for employee completion by December 31, 2021. Commissioner Brennan seconded the motion. Ayes: Mocol, Fox, Brennan, Krieg, and Letourneau. Nays: None. Motion carried.

9. Customer Service/Marketing Update. Sharon Walsh, Marketing/Customer Relations Director, reported that SPU attended the Big Vehicle Fair and she thanked Jordan and Jack who did a great job on behalf of the Electric Department. Ms. Walsh noted that SPU posted penalties this month, affecting almost 2,500 accounts, and totaling \$31,492.39. She reported that over 700 customers with good credit history will receive a return of their security deposits. Ms. Walsh noted an increase in late delivery of SPU bills by mail. She spoke with the post office and plans to promote paperless billing to help customers get their bill faster. Ms. Walsh also noted that she is applying for a CERTs Seed Grant to help pay for the labor, installation, and material expenses related to the EV charging station.

10. 2022 Wage and Compensation Planning Assumptions. Jean McGann, AEM, presented an overview of the 2022 budget process as well as the specific issues of employee COLA increases and health insurance renewal options. Ms. McGann explained that the informal working group recommended a 3% COLA increase and the 2-year health insurance renewal option, with a cap on the cost increase in the second year of a maximum of 7%. Commissioner Brennan moved approval of a 3% COLA increase for 2022, and the health insurance 2-year contract renewal option. Commissioner Krieg seconded the motion. Ayes: Mocol, Fox, Brennan, Krieg, and Letourneau. Nays: None. Motion carried.

11. Electric Service Territory Discussions. Commissioner Letourneau moved, seconded by Vice President Fox, that the Commission go into closed session under Minnesota Statutes, Section 13D.05, subdivision 3(c) to develop or consider offers for the purchase of electric service territory rights and facilities of Minnesota Valley Electric Cooperative. Ayes: Mocol, Fox, Brennan, Krieg,

and Letourneau. Nays: None. Motion carried. In open session, President Mocol noted that the Commissioners gave direction to staff to proceed with the meeting with MVEC representatives.

12. Adjourn. Motion by Commissioner Brennan, seconded by Vice President Fox, to adjourn to the October 18, 2021 meeting. Ayes: Mocol, Fox, Brennan, Krieg, and Letourneau. Nays: None. Motion carried.

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Greg Drent, Commission Secretary

AGENDA  
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## SHAKOPEE PUBLIC UTILITIES COMMISSION

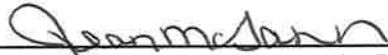
Warrant List  
 Account Credit Request/Deposit Refunds  
 October 6, 2021

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

ADEN, AHMED	\$17.36
BABIAR, JESSICA	\$64.82
BAKAY, IGNAT & ASHLEY	\$5.30
BARTLEY, JENNIFER & MICHAEL	\$88.20
BERG, PAMELYN	\$73.79
BERGSTAD APARTMENTS	\$36.36
BICKLEY, RANDY	\$13.53
BOYER, LESLIE RANAE	\$39.11
BRYANT, AMANDA	\$24.98
BULLIS, BRYCE	\$1.53
BUN, LEE M & KIMBERLY	\$51.15
CHAN, YEE MUN	\$70.00
CHANDRADAT, SCOTT R	\$20.58
CHATTERJEE, SUMON & SANHITA	\$2.72
CHEAH, JULIE	\$20.00
CHORNOUSYAK, DMYTRO	\$22.54
CLAUGHLIN, ADAM E.M.	\$21.00
COLLER, FRED W	\$1.06
CRUZ, JOANNE	\$25.00
DESAI, NIKUNJKUMAR & DINALBAHE	\$7.53
DILLON, BARBARA	\$35.48
DR WELLS LLC	\$15.00
ENGER, MELISSA	\$3.00
FARAH, ABDIRASHID	\$27.19
GABEL, SUSAN	\$75.00
GANDI, AHMED M	\$31.24
HAGEN, FRANCIS & TERRI	\$30.00
HARRIS, ALEXIA	\$43.77
HEIDER, NICHOLAS	\$47.00
HOFFMAN, DARYL J	\$5.30
HOPPE, DANIELLE	\$1.39
ISD #720-HIGH SCHOOL	\$53.07
JEMTRUD, HOLLY	\$213.11
JOHNSON, BURT L	\$3.91
KIYABU, KAYLYNN S	\$22.57
KLC SHAKOPEE LLC	\$11.21
KLC SHAKOPEE LLC	\$37.49
KLINGELHUTZ, JASON	\$74.20
KNUTSON, SAMANTHA	\$47.25
KOPYLOV, LAURA	\$79.43
LADD, ARYN	\$70.84
LAEHELDT, JAMES W & PAM	\$32.88
LEBLANC, ALYSSA	\$78.98
MAHER, BRIDGETT A	\$34.89
MARKEY ESTATE, NORMAN J	\$20.69



MERTEN, KATIE	\$55.76
MUER, MICHAEL & LORA	\$22.80
MURPHY, JOHN T	\$6.60
MY PILLOW INC	\$716.83
NGUYEN, THANH TRUNG	\$35.07
NISSSEN, RICHARD A	\$8.64
OLSON, DYLAN	\$7.95
OTIS, NOAH	\$13.76
PEREZ VALLE, THALYA	\$53.70
PRESLY, COLIN G	\$59.40
RAHMAN, NICK	\$58.22
REISDORFF, GEORGE	\$23.36
RODRIGUEZ, AUGUSTO	\$158.43
SCHIEFFER, CARLY	\$7.85
SCOTT COUNTY CDA	\$17.14
STAFF, PHILIP	\$8.80
STARZINSKI, MAREN	\$12.33
TOVAR, MARIA C	\$93.90
TRAN, JACKIE	\$160.60
WAGNER, BRIANNA & CALEB	\$50.90
WILEMAN, BRET & KRISTEEN	\$100.03
WOLFF, JOHN	\$33.15
YELICH, ZACHARY	\$90.20
TOTAL	<u><u>\$3,496.87</u></u>



Presented for approval by: Interim Director of Finance & Administration

Approved by General Manager

Approved by Commission President

## SHAKOPEE PUBLIC UTILITIES COMMISSION

## WARRANT LISTING

October 18, 2021

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:

Abdo, Eick & Meyers, LLP	\$46,188.87
American Messaging Services, LLC	\$1,547.39
American Water Works Association	\$221.00
ALTEC INDUSTRIES, INC	\$37.45
AMARIL UNIFORM CO.	\$1,025.51
AMERICAN PUBLIC POWER ASSOCIATION	\$825.00
ANDERSON, STEVEN	\$150.00
APPA	\$1,000.00
APPLE FORD OF SHAKOPEE	\$66.73
ARAMARK REFRESHMENT SERVICES INC	\$257.88
ARROW ACE HARDWARE	\$106.11
ASTLEFORD INTERNATIONAL & ISUZU	\$40.71
B & B TRANSFORMER INC	\$45,836.00
BADGER STATE INSPECTION, LLC	\$3,976.00
BDH2-MARSHALL, LLC	\$1,194.84
BEHRENS, MARSHA	\$175.00
BERGERSON-CASWELL INC	\$4,530.00
BERNDTSON, ROBERT	\$255.36
BEST BUY FOR BUSINESS	\$310.91
BIRDS LAWN CARE LLC	\$3,385.00
BOMMINENI, SURESH	\$400.00
BORDER STATES ELECTRIC SUPPLY INC	\$11,609.68
CARLSON, BRADLEY	\$707.60
CENTERPOINT ENERGY	\$640.71
CHHANG, DAVE	\$175.00
CHOICE ELECTRIC INC	\$822.10
CITY OF PRIOR LAKE	\$3,747.00
CITY OF SHAKOPEE	\$5,064.43
CITY OF SHAKOPEE	\$492,671.21
CITY OF SHAKOPEE	\$187,000.00
CITY OF SHAKOPEE	\$680.00
CITY OF SHAKOPEE	\$2,999.90
CONSOER, STEVE/SHERRI	\$225.00
CORE & MAIN LP	\$7,868.09
CROWE, NANCY	\$180.00
DAKOTA SUPPLY GROUP	\$108,105.12
DEFINITIVE TECHNOLOGY SOLUTIONS, INC	\$12,342.76
DEMARAY, MARK	\$175.00
DICK'S/LAKEVILLE SANITATION INC	\$264.83
DITCH WITCH OF MINNESOTA INC	\$55,915.00
DRENT, GREG	\$95.61
EDWARDS, JOSEPH	\$200.00
FERGUSON US HOLDINGS, INC.	\$1,630.18
FIRST PRESBYTERIAN CHURCH	\$20.00
FRONTIER ENERGY, INC.	\$5,239.49
GEIS, PEYTON	\$71.99
GOPHER STATE ONE-CALL	\$858.60
GRAINGER	\$63.66
H R SPURRIER	\$150.00
HACH COMPANY	\$915.16
HANSON, JACKLYN	\$15.68
HAWKINS INC	\$4,052.79
HD SUPPLY FACILITIES MAINTENANCE LTD	\$1,137.88
HENNEN'S AUTO SERVICE, INC.	\$37.89
HRExpertiseBP LLC	\$675.00
IMPACT MAILING OF MINNESOTA, INC.	\$13,744.95
INNOVATIVE OFFICE SOLUTIONS LLC	\$1,864.49
INTEGRATED CITY SOLUTIONS	\$18,550.00
INTERSTATE ALL BATTERY CTR	\$65.71
INTERSTATE POWER SYSTEMS INC	\$1,895.08
IRBY - STUART C IRBY CO	\$118,859.48
ITRON INC	\$3,557.71
J & E MFG. CO.	\$1,832.73
John Henry Foster Minnesota Inc.	\$1,669.36
JEFF TEMP	\$350.00
KENYON, FREDERICK	\$350.00
KRIEG, HOLLY	\$175.00
LIEU, THUAT & HANG	\$275.00
LINK LUMBER	\$30.07
LOCATORS & SUPPLIES INC	\$166.56

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Commission:	
LOFFLER COMPANIES INC.	\$1,012.68
MCCUSKER, BRIAN	\$175.00
MICHELS CORPORATION	\$30,914.04
MIDWEST SAFETY COUNSELORS, INC.	\$537.52
MIKE'S AUTO REPAIR INC	\$68.06
MILSOFT UTILITY SOLUTIONS, INC.	\$3,000.00
MINN DEPT OF HEALTH	\$28,715.31
MINN VALLEY TESTING LABS INC	\$442.00
MMPA c/o Avant Energy	\$3,447,229.51
MMUA	\$10,536.50
MN DEPT OF COMMERCE	\$1,978.97
MN DEPT OF REVENUE ACH PAYMENTS	\$309,939.00
MRA-THE MANAGEMENT ASSOCIATION	\$36.00
MUCHOW, DION	\$500.00
NAGEL COMPANIES LLC	\$4,994.00
NAPA AUTO PARTS	\$89.50
NCPERS GROUP LIFE INSURANCE	\$176.00
NEVILLE, GERRY	\$216.72
NEXUS A STRATOS COMPANY DBA COMPUTEX	\$1,095.68
NICKOLAY, CINDY	\$280.56
NORTHERN STATES POWER CO.	\$5,082.99
ODLAND, BETH & EINAR	\$200.00
Principal Financial Group	\$3,414.41
PIERRE, DANIEL	\$122.05
POMP'S TIRE SERVICE INC	\$257.16
PRIORITY 1 OUTDOORS INC.	\$1,295.00
PURE PRESSURE	\$211.29
RAJ, PAUL	\$350.00
RASK, SHAWN	\$165.00
RDO EQUIPMENT CO.	\$160.64
RESCO	\$3,006.50
ROMANSKY, ROBERT	\$50.22
SAMBATEK	\$11,811.70
SCHWARTZ, BRANDON	\$303.42
SCOTT COUNTY RECORDERS OFFICE	\$92.00
SCOTT COUNTY TREASURER	\$324.00
SHORT ELLIOTT HENDRICKSON INC	\$37,819.79
SLATER, MICHAEL	\$150.00
SOUTHAYA, BOUNNA	\$200.00
SOUTHWEST NEWS MEDIA DBA DIV. OF RED	\$353.76
TRIPLETT, GREG	\$117.04
UPS STORE # 4009	\$17.13
VERIZON CONNECT FLEET USA LLC	\$316.97
VERIZON WIRELESS	\$1,435.88
VESSCO, INC	\$6,416.90
VON BANK, JAMIE	\$263.08
VOURLLOS, MICHAEL	\$172.92
WESCO DISTRIBUTION INC	\$11,868.44
WETTERLIN, ANDREW	\$700.00
WHITESIDE, KARTH	\$500.00
WILLEMSEN, KELLEY	\$433.70
YESENKO, JOEL	\$500.00
	\$5,111,322.30

  
Presented for approval by: Interim Director of Finance & Administration

Approved by General Manager

Approved by Commission President

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American Messaging Services, LLC	\$1,547.39	Smart switch 10/1-10/31/2021
American Water Works Association	\$221.00	Annual Membership for Tony Myers
ALTEC INDUSTRIES, INC	\$37.45	Hydraulic tube assembly unit #616
AMARIL UNIFORM CO.	\$1,025.51	Repair for water dept.
AMERICAN PUBLIC POWER ASSOCIATION	\$825.00	Customer Connections Conf.
ANDERSON, STEVEN	\$150.00	2021 Res. Energy Star Appliance
APPA	\$1,000.00	Workshop, Implementation & App. for Fall
APPLE FORD OF SHAKOPEE	\$66.73	Water dept. Trk #619 Oil change
ARAMARK REFRESHMENT SERVICES INC	\$257.88	Javia Columbian Coffee
ARROW ACE HARDWARE	\$106.11	Water dept. SS Clamp, Paint, blade
ASTLEFORD INTERNATIONAL & ISUZU	\$40.71	Nut wheel hub bolt
B & B TRANSFORMER INC	\$45,836.00	25KVA single phase padmount transformer
BADGER STATE INSPECTION, LLC	\$3,976.00	Drawing Review & Field Inspection, T-Mob WO#2449
	\$1,194.84	Hotel accommodations for E.K. M.E., T.O., J.V., J.R.
	\$175.00	2021 Res. Star Clothes Washer
BH2-MARSHALL, LLC	\$4,530.00	New water meter well#5
BEHRENS, MARSHA	\$255.36	213 Miles reimb.
BERGERSON-CASWELL INC	\$310.91	Docking stations
BERNDTSON, ROBERT	\$3,385.00	Sept. lawn care
BEST BUY FOR BUSINESS	\$400.00	2021 STAR CLOTHES WASHER
BIRDS LAWN CARE LLC	\$11,609.68	ReliaWrap 36X36 sheets, PVC Glue, parallel groove clamps, fault indicator, street wire, straps
BOMMINENI, SURESH	\$707.60	Reimb. for charging station for SPU EV
BORDER STATES ELECTRIC SUPPLY INC	\$640.71	Gas usage at 10th Ave. & SPU building
	\$175.00	2021 Res. Appliance recycling
	\$822.10	Pumphouse #12 isolate gr meter interfere WO#2466
	\$3,747.00	Sept. Franchise Fee
	\$5,064.43	Sept fuel usage
CARLSON, BRADLEY	\$492,671.21	Sept. SW \$395,958.67 & SD \$96,712.54
CENTERPOINT ENERGY	\$187,000.00	4th Qtr. Transfer Fee
CHHANG, DAVE	\$680.00	Sept. R.O.W. permits
CHOICE ELECTRIC INC	\$2,999.90	Storm drainage/SPU Properties 4th Qtr.
	\$225.00	2021 Res. Star Clothes Washer
	\$7,868.09	1 iPERL FIRE SERVICE METER WO#2451
	\$180.00	2021 Res. Appliance rebate
	\$108,105.12	300KVA 3 Phase Transformers Padmount
	\$12,342.76	Sharp PN-C861H 4K 86 Aquos board
	\$175.00	2021 Res. Star Clothes Washer
	\$264.83	Oct. garbage service
	\$55,915.00	SV40 Yanmar Excavator WO#2463
	\$95.61	Reimb. service territory/energy park tou
	\$200.00	2021 Res. Energy Star Appliance
	\$1,630.18	3720 Snow gloves R4601L
	\$20.00	Refund due
	\$5,239.49	Sept. Shak mgmt, C&I implementation
	\$71.99	2021 IRRIGATION CONTROLLERS
	\$858.60	Sept. Locates
	\$63.66	Lock Ring Remover, 24 In,
	\$150.00	2021 Res. Energy Star Appliance
	\$915.16	SPADNS 2 (Arsenic&#8208;free)#2527025
	\$15.68	Waconia Op. Expo mileage reimb.
	\$4,052.79	Chlorine Cylinder
	\$1,137.88	Flyght Ready 4 Pump
	\$37.89	Elec. Dept. Trk #633 Oil filter, & Oil
	\$675.00	HR Consulting for Sept.
	\$13,744.95	Collection Letters 9/28 files
	\$1,864.49	Office Supplies
	\$18,550.00	Premium 2 color Hydrant Painting
	\$65.71	PH00210 CR2-1 batteries
	\$1,895.08	Water dept. batteries exploded
	\$118,859.48	15Kv Current Transformer 400:5
	\$3,557.71	Maint Agreement 11/1-10/31/2022
	\$1,832.73	Refund on WO#2442
	\$1,669.36	Maint contract. 10/1- 3/30/22
	\$350.00	2021 Res. Energy Cooling & Heating
CITY OF PRIOR LAKE		
CITY OF SHAKOPEE		
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CONSOER, STEVE/SHERRI		
CORE & MAIN LP		
CROWE, NANCY		
DAKOTA SUPPLY GROUP		
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DEMARAY, MARK		
DICK'S/LAKEVILLE SANITATION INC		
DITCH WITCH OF MINNESOTA INC		
DRENT, GREG		
EDWARDS, JOSEPH		
FERGUSON US HOLDINGS, INC.		
FIRST PRESBYTERIAN CHURCH		
FRONTIER ENERGY, INC.		
GEIS, PEYTON		
GOPHER STATE ONE-CALL		
GRAINGER		
H R SPURRIER		
HACH COMPANY		
HANSON, JACKLYN		
HAWKINS INC		
HD SUPPLY FACILITIES MAINTENANCE LTD		
HENNEN'S AUTO SERVICE, INC.		
HRExpertiseBP LLC		
IMPACT MAILING OF MINNESOTA, INC.		
INNOVATIVE OFFICE SOLUTIONS LLC		
INTEGRATED CITY SOLUTIONS		
INTERSTATE ALL BATTERY CTR		
INTERSTATE POWER SYSTEMS INC		
IRBY - STUART C IRBY CO		
ITRON INC		
J & E MFG. CO.		
John Henry Foster Minnesota Inc.		
JEFF TEMP		

## SHAKOPEE PUBLIC UTILITIES COMMISSION

## WARRANT LISTING

October 18, 2021

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:

KENYON, FREDERICK	\$350.00	2021 Res. Energy Cooling & Heating
KRIEG, HOLLY	\$175.00	2021 Res. Star Clothes Washer
LIEU, THUAT & HANG	\$275.00	2021 Res. Energy Star Lighting
LINK LUMBER	\$30.07	20lbs staples for ground wire
LOCATORS & SUPPLIES INC	\$166.56	Rain bibs for water dept., cargo bag
LOFFLER COMPANIES INC,	\$1,012.68	Copier machine contract 10/1-12/31/21
MCCUSKER, BRIAN	\$175.00	2021 STAR CLOTHES WASHER
MICHELS CORPORATION	\$30,914.04	Pymt #3 Hansen Ave. WO#2356
MIDWEST SAFETY COUNSELORS, INC.	\$537.52	Large Leather Gloves electric dept
MIKE'S AUTO REPAIR INC	\$68.06	Elec. trk #632 Oil change
MILSOFT UTILITY SOLUTIONS, INC.	\$3,000.00	Two day training classes for Martin
MINN DEPT OF HEALTH	\$28,715.31	Community Water Supply Connection fee
MINN VALLEY TESTING LABS INC	\$442.00	Nitrate & Nitrite
MMPA c/o Avant Energy	\$3,447,229.51	Sept. power bill
MMUA	\$10,536.50	2021 MMUA Leadership Academy M.V.
MN DEPT OF COMMERCE	\$1,978.97	Unclaimed Property 7/1-6/29/2020
MN DEPT OF REVENUE ACH PAYMENTS	\$309,939.00	Sept. Sales & Use tax
MRA-THE MANAGEMENT ASSOCIATION	\$36.00	Background check for Kevin Menden
MUCHOW, DION	\$500.00	2021 Res. Cooling & Heating Rebate
NAGEL COMPANIES LLC	\$4,994.00	URD Cable replacement
NAPA AUTO PARTS	\$89.50	grease cart
NCPERS GROUP LIFE INSURANCE	\$176.00	Oct. Premium
NEVILLE, GERRY	\$216.72	144 Miles reimb.
NEXUS A STRATOS COMPANY DBA COMPUTEX	\$1,095.68	1 year Adobe Creative Cloud Lic. Renewal
NICKOLAY, CINDY	\$280.56	156 Miles reimb.
NORTHERN STATES POWER CO.	\$5,082.99	Sept. power bill
ODLAND, BETH & EINAR	\$200.00	2021 Res. Energy Star Appliance
Principal Financial Group	\$3,414.41	Oct. Premium 2021 for LTD
PIERRE, DANIEL	\$122.05	Laptop chargers - Reimb.
POMP'S TIRE SERVICE INC	\$257.16	Road side servic3
PRIORITY 1 OUTDOORS INC.	\$1,295.00	Pumphouse #15,16,12,20,9,3 & SPU,winteri
PURE PRESSURE	\$211.29	Meter refund
RAJ, PAUL	\$350.00	2021 Res. Cooling & Heating Rebate
RASK, SHAWN	\$165.00	2021 Res. Appliance recycling
RDO EQUIPMENT CO.	\$160.64	Handle, adapter, hose clamp
RESCO	\$3,006.50	Cable 6-6-6 Erskine Aluminum Strmd
ROMANSKY, ROBERT	\$50.22	USB-C Ethernet Adapter for new Laptop
SAMBATEK	\$11,811.70	\$11,088.60 - WO#2525 Well #23, \$723.10 - WO#2041-Windermere Booster station pump house
SCHWARTZ, BRANDON	\$303.42	Op. training, mileage/hotel
SCOTT COUNTY RECORDERS OFFICE	\$92.00	Water capacity agree W/Doran Canterbury
SCOTT COUNTY TREASURER	\$324.00	Permit U197-2021, UID#15512
SHORT ELLIOTT HENDRICKSON INC	\$37,819.79	\$7290.00 -WO#2505 Stagecoach road improvements, \$5988.00-WO#2474 - Windermere South 4th Addition, \$4229.42- WO#2488-Canterbury Crossings, \$17054.00, WO#2492-Summerland Place 1st Addition, \$1344.94-WO#2432- Feasibility Study, \$1202.39-WO#2467-2018 Am. Water Infrastructure, \$166.04 - WO#2356-Hanson Blvd. WM CIPP
SLATER, MICHAEL	\$150.00	2021 Res. Energy Star Appliance
SOUTHAYA, BOUNNA	\$200.00	2021 Res. Star appliance
SOUTHWEST NEWS MEDIA DBA DIV. OF RED	\$353.76	Sept. legals
TRIPLETT, GREG	\$117.04	63 Miles reimb.
UPS STORE # 4009	\$17.13	reissued for meter reader (lost orig. ch
VERIZON CONNECT FLEET USA LLC	\$316.97	Vehicle tracking
VERIZON WIRELESS	\$1,435.88	Cell phone usage 8-24-9/23
VESSCO, INC	\$6,416.90	WO#2349- \$1700.00-Powell closure system, 2 hours onsite labor,\$4716.90- Rebuilding chlorine system
VON BANK, JAMIE	\$263.08	Trk #621 Pintle hitch
VOURLLOS, MICHAEL	\$172.92	July mileage reimb.
WESCO DISTRIBUTION INC	\$11,868.44	Label-UTICOM, module 4 pt feed thru, Primary pedestal enclosures
WETTERLIN, ANDREW	\$700.00	2021 Res. Energy Cooling & Heating
WHITESIDE, KARTH	\$500.00	2021 Res. Energy Cooling & Heating
WILLEMSEN, KELLEY	\$433.70	Reimb. hotel for MNGFOA Conf.
YESENKO, JOEL	\$500.00	2021 Res. Energy Star Appliance

SHAKOPEE PUBLIC UTILITIES COMMISSION

WARRANT LISTING

October 18, 2021

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:

\$5,111,322.30

\_\_\_\_\_  
Presented for approval by: Interim Director of Finance & Administration

\_\_\_\_\_  
Approved by General Manager

\_\_\_\_\_  
Approved by Commission President

# Monthly Water Dashboard

As of: **September 2021** **Shakopee Public Utilities Commission**

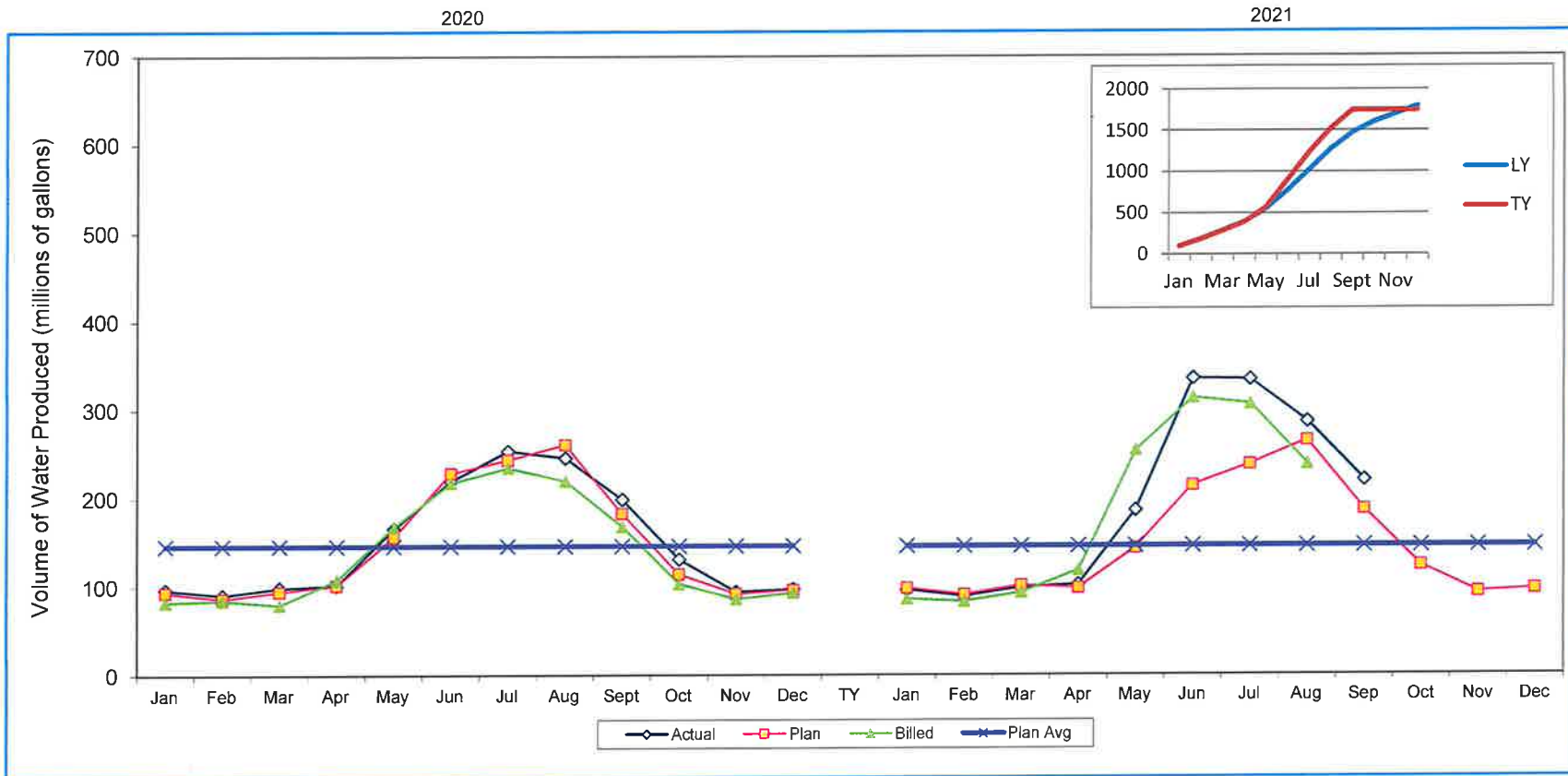
ALL VALUES IN MILLIONS OF GALLONS

## Element/Measure Water Pumped/Metered

Averages

2018	153
2019	139
2020	150


Last 6 months actuals	102	186	335	334	286	220
-----------------------	-----	-----	-----	-----	-----	-----



	LY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	TY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Actual		97	91	99	102	166	220	254	246	199	131	94	97		96	89	99	102	186	335	334	286	220			
Plan		94	87	95	102	156	229	244	261	183	114	92	96		98	91	101	98	143	214	238	265	187	123	93	96
YTD % *															98%	98%	98%	99%	108%	122%	126%	122%	122%			
Billed		83	85	80	108	168	218	235	220	168	103	86	93		86	83	93	118	254	313	306	238				

\* Actual gallons pumped vs. Plan



DATE: October 8, 2021  
To: All SPU Employees  
From: Greg Drent, General Manager   
Re: COVID-19 Vaccination Incentive Program

---

Shakopee Public Utilities takes its responsibility to provide a safe and healthy environment for its employees and its customer seriously. Throughout the COVID-19 pandemic, Shakopee Public Utilities has and will continue to take the necessary steps to ensure all employees and customers are safe and healthy while at work or in the SPU facilities.

Science tells us that unvaccinated employees have an increased risk of contracting COVID-19, even if they had a prior lab confirmed case of COVID-19. In recent weeks, we have seen a resurgence in positive COVID-19 cases. If an employee is unvaccinated, they will be required to quarantine for 14 days following their potential exposure. Vaccinated employees are not required to quarantine unless they are experiencing symptoms or have tested positive for COVID-19.

Additionally, unvaccinated and vaccinated employees alike can carry and spread the virus. Vaccines are highly effective and safe. We also see most of the breakthrough cases are asymptomatic or mild for fully vaccinated individuals. Vaccination is the best tool we have to protect our employees from COVID-19.

As such, unvaccinated employees place SPU and its operations in the position of not being able to meet customers' needs because employees are not able/allowed to come to work, either due to their own illness or from a significant exposure.

COVID-19 VACCINATION INCENTIVE PROGRAM:

SPU strongly encourages employees to become fully vaccinated for COVID-19. As an incentive to increase the numbers of vaccinated employees, SPU is instituting a COVID-19 Vaccination Incentive Program. The Program recognizes those employees who have done what they can do to slow the spread of this virus and to protect themselves and others by receiving the vaccine.





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The Program will provide two incentives to employees who are **fully vaccinated** by December 31, 2021 (including those vaccinated before the start of this program).

1. PAID COVID LEAVE

SPU will provide a bank of paid COVID-19 leave (up to 2 weeks). This bank leave may be used if the employee becomes ill with COVID-19 or they have a minor child who tests positive for COVID-19 and/or needs to quarantine due to exposure. To request paid COVID-19 leave, the first step is to contact Human Resources as soon as you become aware of the need for leave time.

Unvaccinated employees will be required to use their own accrued paid leave in order to be paid during any time they are required to be off work.

2. PERSONAL TIME

SPU will provide eight hours of personal time off to all full-time fully vaccinated employees or four hours of personal time to all permanent part-time fully vaccinated employees. This leave will be in the form of an extra Floating Holiday in 2022.

Qualifications to be eligible for the Incentive Program:

In order to qualify for the COVID-19 Vaccination Incentive Program, employees must be fully vaccinated. Fully vaccinated means two weeks following receipt of the final dose of the COVID-19 vaccine.

Employees are required to provide proof of vaccination from the Minnesota Immunization Information Connection (MIIC) and a sign Tennessee warning (attached below) to Human Resources no later than December 31, 2021.  
<https://www.health.state.mn.us/people/immunize/miic/dockettip.pdf>

Shakopee Public Utilities commends those employees that have already received the vaccine and strongly encourage its unvaccinated employees to become fully vaccinated. You can receive a vaccine near you. Go to [www.vaccines.gov](http://www.vaccines.gov) and enter in your zip code. You will find many vaccine sites in the area.



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## **Tennessen Warning**

### **Shakopee Public Utilities COVID-19 Vaccination Incentive Program**

Shakopee Public Utilities is asking you to supply your immunization records from the Minnesota Immunization Information Connection website or from your healthcare provider to determine your eligibility for its COVID-19 vaccination incentive program. The Minnesota Government Data Practices Act classifies this data as private data about you and requires Shakopee Public Utilities to provide this Tennessen Warning or data privacy notice to you.

The law does not require you to provide your records and there are no legal consequences for refusing to provide them. However, if you do not provide your records, Shakopee Public Utilities cannot determine if you are eligible for the COVID-19 Vaccination Incentive Program and you will not receive the incentives SPU is offering to employees.

If you do provide your records, the following SPU employees and entities have a business or legal right to access this information:

- Human Resources, Finance, Legal, and other SPU personnel who need access to the records to determine your eligibility for the program and to implement the program;
- State and Federal courts
- State and Federal enforcement agencies, including but not limited to the Federal Equal Employment Opportunity Commission and Minnesota Department of Human Rights;
- People or entities whom you authorize to receive copies of your immunization records;
- Any other person or entity authorized by state or federal law or court order.

In addition, Human Resources will aggregate immunization status and provide it to Department Heads in summary form and in a way that does not identify the vaccination status of specific employees. The purpose of this is to provide Department Heads with sufficient information to make informed decisions that help create and ensure a safe working environment for all employees. SPU may also use the records to determine compliance with other SPU COVID-19 policies, which may include mask or vaccination requirements.

I have reviewed and understand this Tennessen Warning and agree to submit my immunization records.

Print Name \_\_\_\_\_

Sign Name \_\_\_\_\_

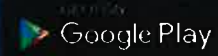
Date: \_\_\_\_\_



# Easy Access to Your and Your Family's Immunization Records

The free Docket mobile app lets you:

- Access immunization records.
- Review what vaccines you have received.
- See what vaccines you need to get.



## Three easy steps to access your immunization records with Docket

### 1. Set up your account.

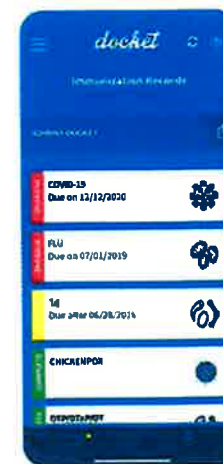
- Download the free Docket app on your mobile device. Log in with email, Apple, or Google.

### 2. Search your immunization records.

- Select "Immunizations" from the main menu.
  - Anyone with a valid email or phone number on file with the Minnesota Immunization Information Connection (MIIC) can access their records. If you cannot locate your or your family's records using the Docket app, go to [Find My Immunization Record \(www.health.state.mn.us/people/immunize/miic/records.html\)](https://www.health.state.mn.us/people/immunize/miic/records.html).
  - There may be times when a lot of people are trying to access records that could result in extra wait times. Please refer to Docket's Twitter feed @dockethealthapp for up-to-date service announcements.

### 3. Stay healthy and up to date.

- **Simple vaccine verification:** Access Minnesota immunization records needed for school, work, etc.
- **Add family members:** View your family's immunizations from a single Docket account.




If you have questions about the app, send an email to [support@dockethealth.com](mailto:support@dockethealth.com). For more information on MIIC immunization records, go to Minnesota Immunization Information Connection (MIIC) ([www.health.state.mn.us/miic](http://www.health.state.mn.us/miic)).

*docket*<sup>™</sup>



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DATE: October 12, 2021  
TO: SPU Commissioners  
FROM: Greg Drent, General Manager   
Subject: Employee Recognition, Meals and Refreshments Program

---

**Background:** SPU would like to have a formal Employee Recognition, Meal, and Refreshments policy to set clear expectations for staff to follow.

This policy will be in the SPU handbook that the staff is currently updating. In past years we have had the event in December. We would like to move forward with a formal policy and schedule this event before bringing the updated handbook to the commission for approval.

See attached policy for review.

**Action:**

Approve Employee Recognition, Meals and Refreshments policy

# Employee Recognition, Meals and Refreshments

Shakopee Public Utilities recognized the hard work and contributions of active and retiring employees through a formal Employee Recognition Program. The recognition program encourages productivity, creativity, and engagement. This policy is intended to provide guidelines regarding authorized expenditures that meet the definition of public purpose and are authorized in accordance with the organization's annual budgeting process.

Even though a limited personal employee benefit may be derived from some of the authorized expenditures outlined in this policy, these expenditures are identified as meeting public purpose of recruitment, retention, and development of SPU's largest asset, its personnel. The policy is not intended to be all-inclusive but provide examples for guidance on acceptable purchases.

The Commission and staff recognize that public funds may only be spent if the expenditure meets a public purpose, which is defined in the Minnesota Supreme Court as an expenditure that meets all of the following:

- The activity will benefit the community as a body.
- The activity is directly related to functions of the government.
- The activity does not have as its primary objective the benefit of a private interest.

## Recognition Events

**Employee Recognition:** Two employee training/recognition events are held each year. Service awards, retiree recognition, and recognition for other employee accomplishments are given at these events. These events are also used to deliver training or to provide updates on pertinent Shakopee Public Utilities projects with all employees. Both events will include a meal and will minimize disruption of service to the public.

**New Hire Celebration:** A department may offer light refreshments to encourage team building and welcome new employees.



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**Promotion/Professional Award Celebrations:** A department may offer light refreshments to celebrate an employee's professional award or an employee's promotion

**Voluntary Resignations and Retirements:** SPU will recognize a departing employee's service by providing memorabilia and/or light refreshments, the total cost of which may not exceed \$150.00. Any employee with 10 or more years of service who resigns or retires from SPU in good standing shall be eligible. No employee is required to be recognized under this provision.

In addition, retiring employees will be invited to a commission meeting to be recognized and thanked by the SPU commission and receive a plaque from the commission.

**Wellness and Safety Program:** Shakopee Public Utilities commission recognizes wellness and safety activities for their public purpose of improving the health and wellness of employees. Expenditures are allowed for refreshments, training and activities that encourage improved levels of health and safety for employees. SPU recognizes the ultimate goals of controlling the cost of SPU's provided health insurance, a lower frequency and cost of workers' compensation claims, and an improved quality of life for employees.

**Flowers:** Flowers will be sent on behalf of SPU for the death of an employee, or the spouse, registered domestic partner, parent or child of an employee or commission member. Relationships listed are assumed to include step relatives and legal adoptions.

**Meals and Refreshments:** Costs associated with meals and/or refreshments will be permitted for the following:

- SPU's meetings and events that have the purpose of discussing SPU issues or providing training. These meetings would normally have an agenda. This provision does not include regular staff meetings.
- During emergency situations as determined by the Department Director. SPU General Manager must sign off on the receipts before submitting to Finance.
- Refreshments for staff working in extreme weather conditions. (i.e. water and isotonic drinks for hydration purposes, etc.).
- Meetings related to SPU business to promote (economic development activities) or network with other public officials (i.e.: SPU General Manager meetings with other governmental agencies.)
- Professional association meetings and/or accreditation processes.
- Work activities requiring continuous service when it is difficult to break for meals (i.e.: water main breaks, participation in all-day interview panel, community events, electric outages).
- SPU or commission meetings held during or adjacent to a meal hour.
- Meals that are connected with official SPU business travel pursuant to the Expense Reimbursement and Travel policy.

**Use of SPU funds are prohibited for the following:**





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- Alcoholic beverages.
- Tipping of more than 18% on SPU approved reimbursable meals
- Employee functions or celebrations that are solely in nature (i.e.: birthdays, holidays, ice cream socials).
- Fundraisers for Non-SPU related events.
- Participation in optional activities that are not included in the regular conference registration fee (optional golf rounds, sporting events, concerts).
- Meetings between staff members that are not in accordance with the permitted uses above such as routine staff meetings.
- Gifts to private individuals or organizations
- Donations to non-SPU related events

**Special Requests:** From time to time, there may be an event that is a proper public expenditure, but that is not contemplated by this policy. Departments may submit to SPU General Manager a request for such a public expenditure in writing. This request must identify how the expenditure is related to a public purpose as stated in the public purpose criteria outlined above and given to Finance for processing upon approval.



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**DATE:** October 13, 2021  
**TO:** Greg Drent, General Manager *GD*  
**FROM:** Jean McGann, Consulting Finance Director *JM*  
**SUBJECT:** Auditor Recommendation

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### Background

On August 2, 2021, Shakopee Public Utilities released an Audit Request for Proposal. The Audit Request for Proposal was posted to the League of Minnesota website, Shakopee Public Utilities website and emailed directly to several audit firms in the Twin Cities that work with governmental clients.

Shakopee Public Utilities received three proposals for audit services and there were two firms that declined to propose due to other client commitments and scheduling conflicts. The three firms that submitted proposals are:

- Bergan/KDV
- Clifton, Larson Allan (CLA)
- Wipfli

On September 30, 2021 a small working group interviewed Bergan/KDV and Clifton, Larson Allan (CLA). Member of the small working group are Commissioner Fox, Commissioner Letourneau, General Manager Drent, Accounting Supervisor Willemsen and me. The recommendation of the small working group is to select Clifton, Larson Allan (CLA) as the audit firm for Shakopee Public Utilities.

Clifton, Larson Allan has affirmed they are able to meet the timeline outlined in the proposal for audit fieldwork.

### Recommendation

The Commission is requested to have the General Manager enter into an agreement with Clifton, Larson Allan for 2021, 2022 and 2023 audit services.





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TO: Greg Drent, General Manager *GD*  
FROM: Lon R. Schemel, Water Superintendent *L. Schemel*  
SUBJECT: Comprehensive Evaluation of Municipal Water Treatment for SPU  
Final Report & Presentation  
DATE: October 15, 2021

At the October 18, 2021 Commission meeting, Ryan Hanson, EIT, and Graduate Engineer with SEH will be presenting the summary for the Comprehensive Evaluation of Municipal Water Treatment Report.

The complete report is attached. Staff requests that the Commission accept the Comprehensive Evaluation of Municipal Water Treatment study.

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# Comprehensive Evaluation for Municipal Water Treatment

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Shakopee Public Utilities Commission Meeting, October 18, 2021



# Presentation Outline

- Review of SPU's Water Quality, Treatment, and Operations
- Discuss Study Results
- Present Treatment Alternatives
- Describe Recommendations

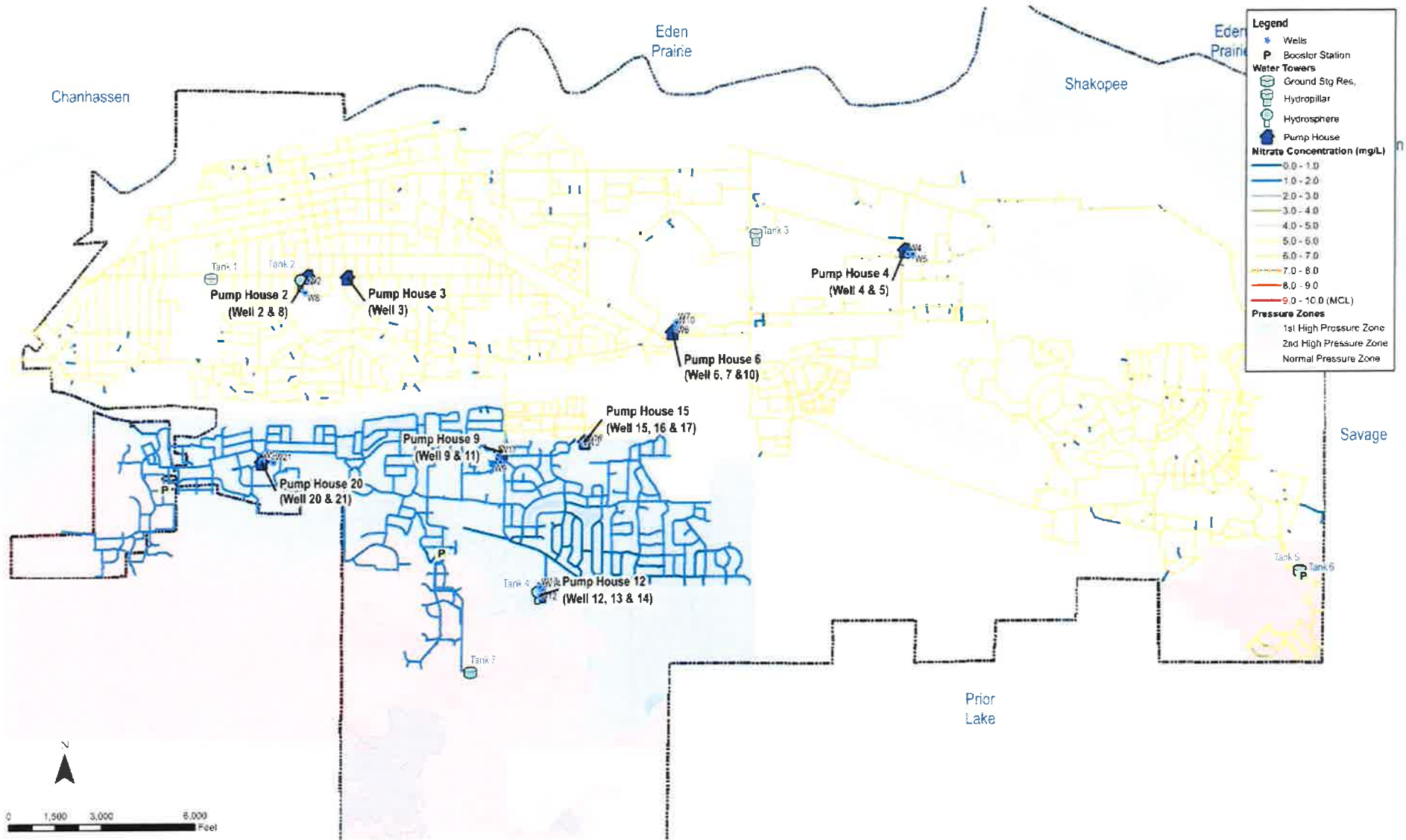
# Current Water Treatment

- No Filtration
- Current Treatment
  - Chlorine
    - All wells
  - Fluoride
    - All wells
  - Polyphosphates
    - At Well 12 and soon to be Well 15
    - To reduce aesthetic issues related to manganese

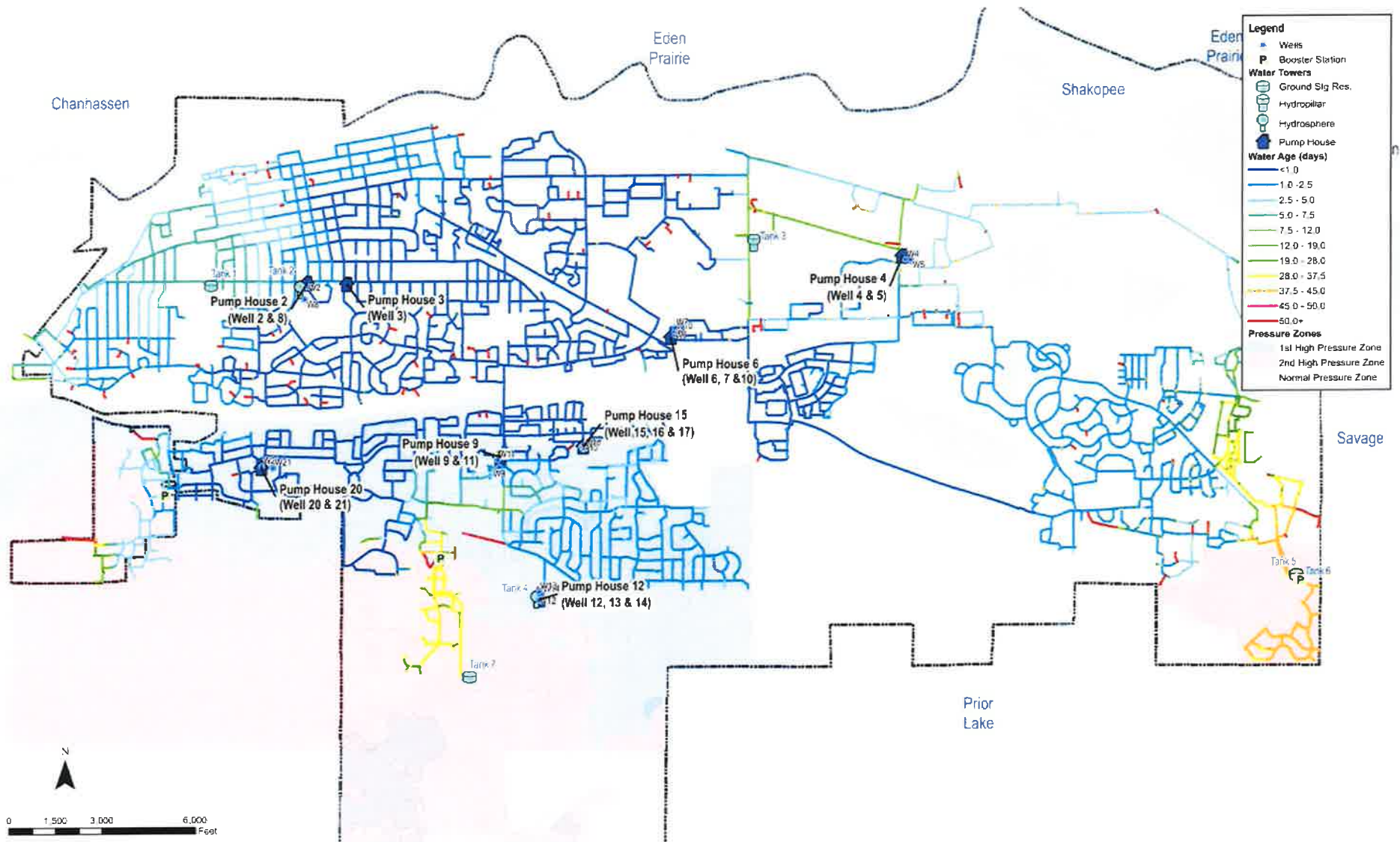
# Water Modeling

- Modeled using WaterGEMS
- Average Day Demand: 7MGD
- Utilized SPU's typical pumping steps & scenarios
- Modeled for:
  - Water Age
  - Nitrate Distribution

# Water Quality Modeling System-Wide



# Water Age Modeling System-Wide



# Results of Study

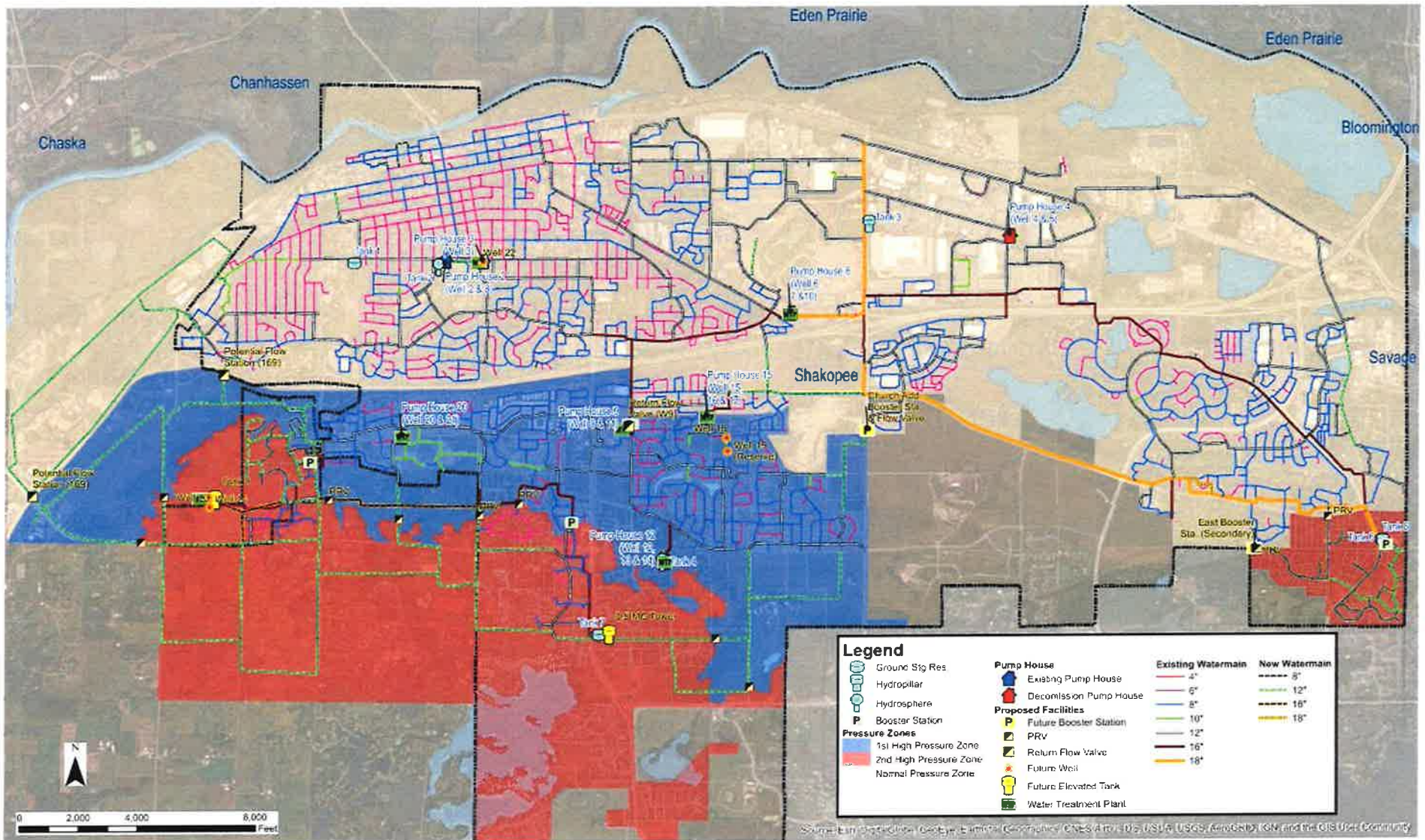
- SPU is meeting all enforced water quality standards by EPA
- Modeling results did not raise any concerns with operational practices
- SPU manages the system to ensure the best quality water
  - Ensures free chlorine presence at farther reaches of system
  - Feeds polyphosphates to eliminate “red” and “black” water potential
  - Uses worse quality wells <1% of total pumpage
  - Blends wells prior to distribution
- To plan for any future treatment needs, SPU may want to start implementing **NOW**



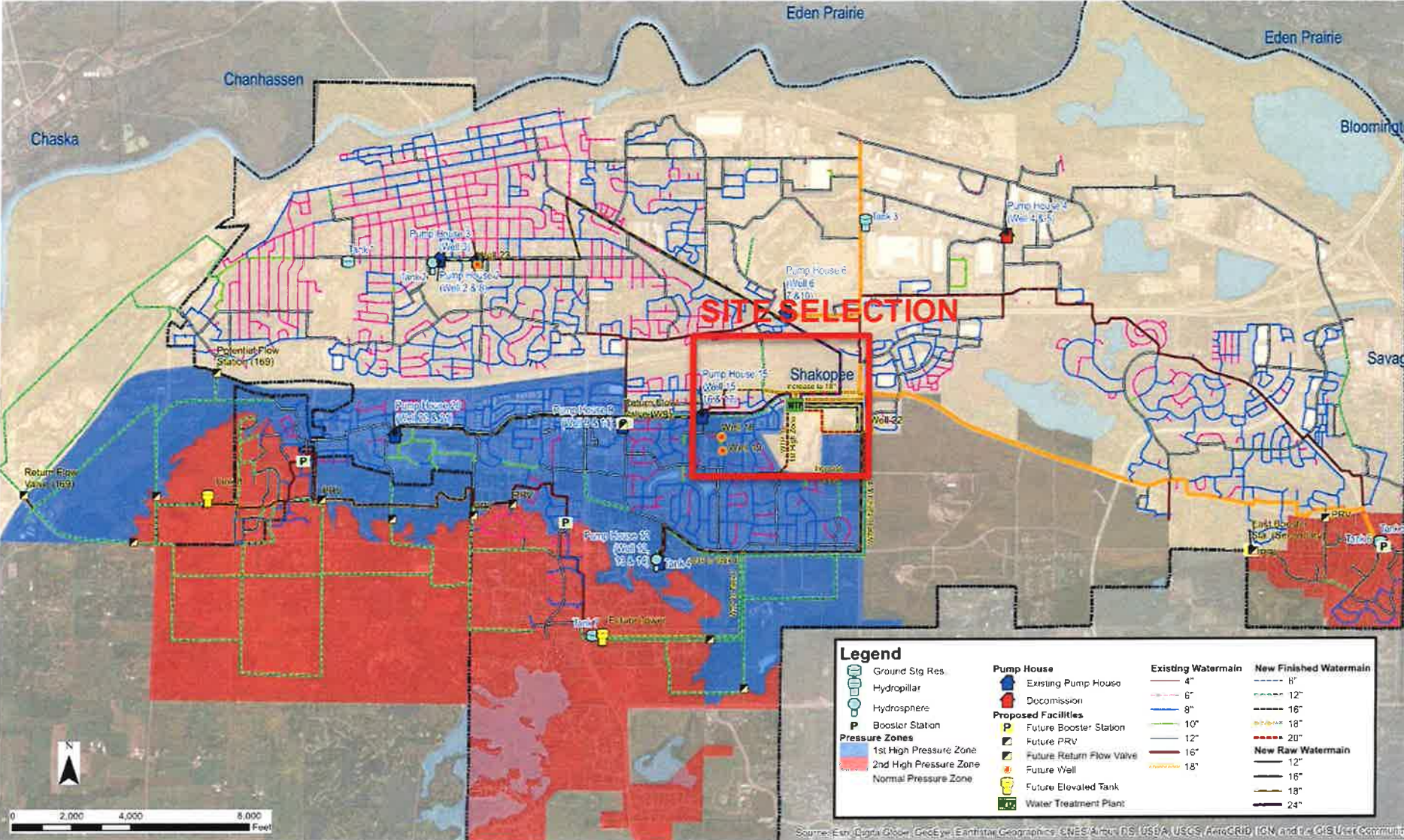
# System-Wide Water Treatment

- **Alternative 1 – Satellite Treatment**
  - Pressure or Gravity Options
    - Iron and Manganese Reduction
    - Nitrate Reduction
- **Alternative 2 – Central Treatment**
  - Pressure or Gravity Options
    - Iron and Manganese Reduction
    - Nitrate Reduction
    - Lime Softening (optional)
- **Alternative 3 – Hybrid Arrangement**
  - Pressure or Gravity Options
    - Iron and Manganese Reduction
    - Nitrate Reduction

# Alternative 1 - Satellite Treatment



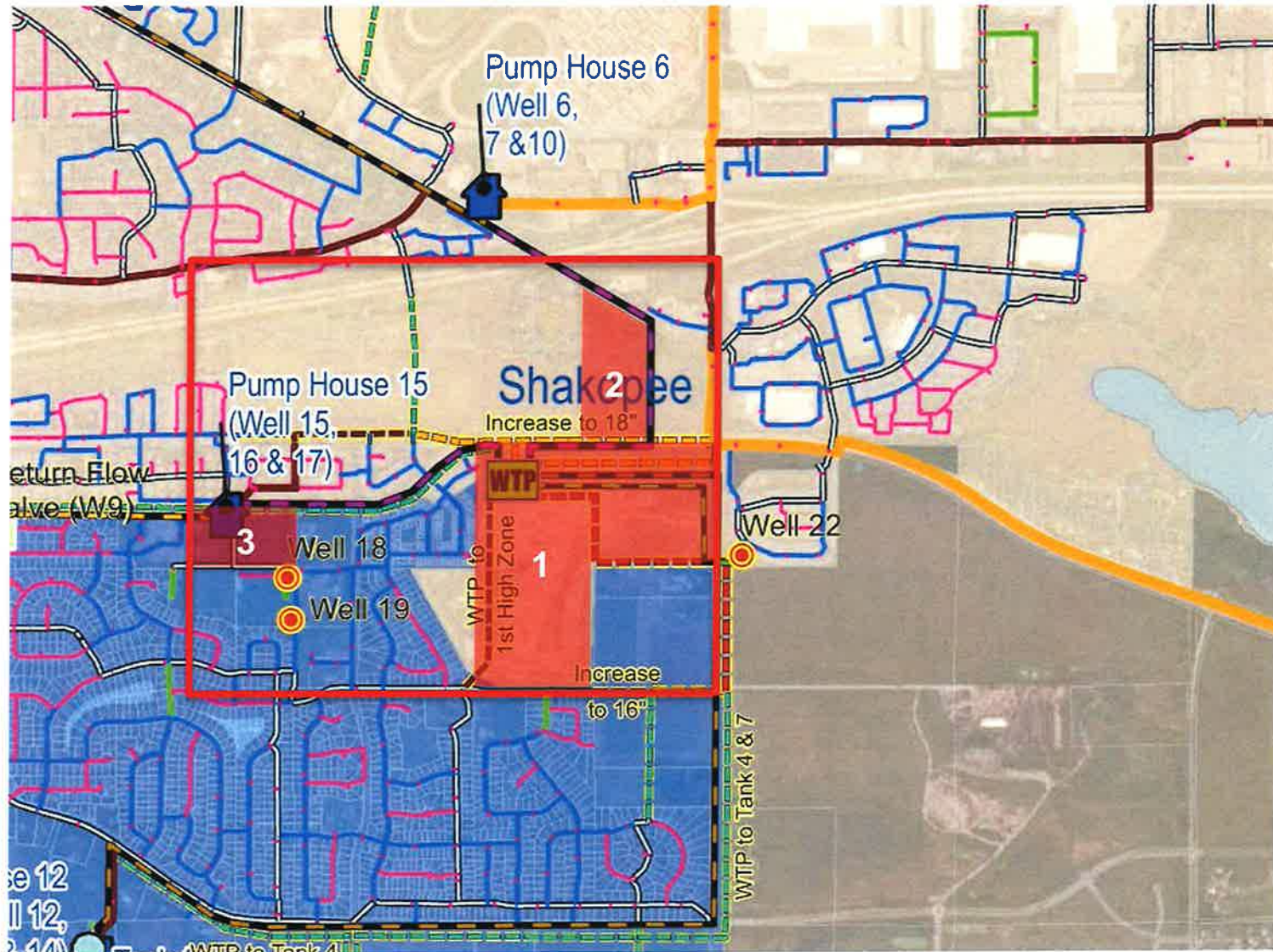
# Alternative 2 - Central Treatment



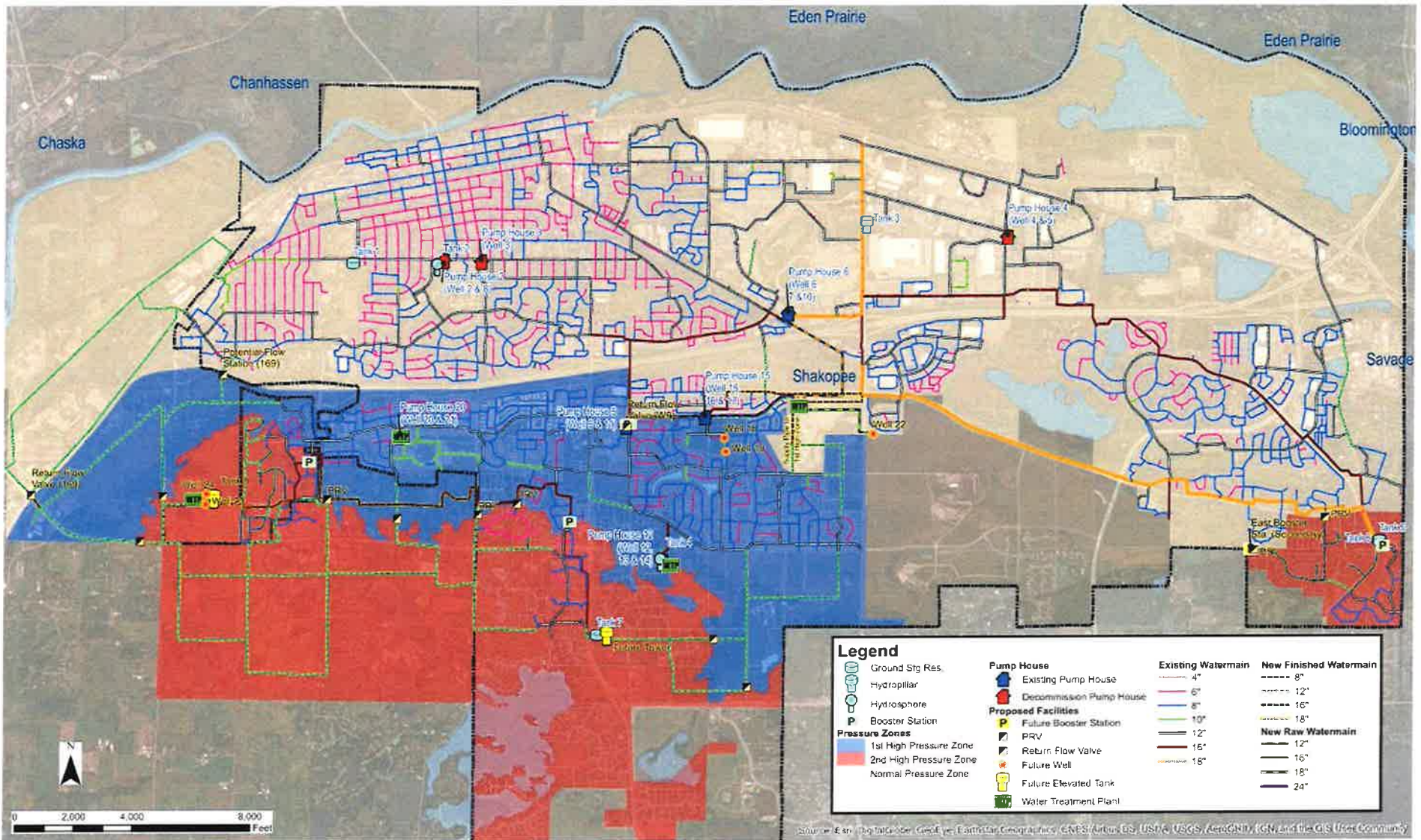
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



# Central WTP Site Location



# Alternative 3 - Hybrid Treatment



# Costs of Treatment Alternatives

Alternative	Filtration Type	Construction Cost			Total Probable Cost	Annual O&M
		Treatment	Wells	Watermain		
Alternative 1 – Satellite	Gravity	\$50,100,000	\$6,050,000	\$435,000	\$76,389,750	\$2,795,477
Alternative 2 – Central	Gravity	\$41,450,000	\$4,050,000	\$31,827,500	\$104,392,125	\$2,484,245
	Gravity w/ Softening	\$66,450,000			\$138,142,125	\$5,345,575
Alternative 3 – Hybrid	Gravity	\$47,900,000	\$5,050,000	\$10,228,750	\$85,291,313	\$2,747,911

NOTE: Does not include land acquisition costs.

At the time of design, all treatment techniques will be further explored.

# Recommendations

1. Pursue Alternative 3 (Hybrid)
2. Construct gravity treatment facilities
3. Purchase a site for the Hybrid WTP between Pump House 15 and Mystic Lake Dr (CR83)
4. Sample groundwater at Tank 8
5. Ensure any installed watermains match the Alternative 3 (Hybrid) system map

To plan for any future treatment needs, SPU may want to start implementing **NOW**





# Well Water Quality

## 2018-2020 Water Quality Summary

Parameter	Well No.									HBV	Secondary Standard	EPA MCL
	2	3	4	5	6	7	8	9	10			
Arsenic (µg/L)	*	2.21	*	*	*	*	*	*	1.81 - 4.8			10
Iron (mg/L)	*	<b>1.75</b>	*	*	*	*	*	*	<b>0.42 - 1.98</b>		0.3	
Manganese (mg/L)***	*	*	*	*	0.025 - 0.033	*	*	*	0.006 - 0.009	0.1	0.05	
Nitrate (mg/L)	2.20 - 6.32	**	2.40 - 6.69	5.50 - 7.88	4.30 - 5.60	4.10 - 5.30	4.62 - 6.08	1.87 - 4.45	*	10		10
Hardness, Total	318 - 346	261	323 - 366	398 - 405	318 - 319	359 - 367	326 - 367	422 - 467	163 - 192			
Radium 226/228 (pCi/L)	*	*	*	*	*	*	*	*	<b>6.2</b>			5 (combined)
Radon 226/228 (pCi/L)	*	*	*	*	*	*	*	*	280			300

Parameter	Well No.									HBV	Secondary Standard	EPA MCL
	11	12	13	14	15	16	17	20	21			
Arsenic (µg/L)	*	*	*	<b>18.3 - 25.3</b>	*	*	*	*	*			10
Iron (mg/L)	*	*	*	<b>0.63 - 1.2</b>	*	*	*	*	*		0.3	
Manganese (mg/L)***	*	<b>0.074 - 0.082</b>	0.006 - 0.013	0.032 - 0.041	0.036 - <b>0.118</b>	*	0.029 - 0.037	*	*	0.1	0.05	
Nitrate (mg/L)	2.25 - 3.07	0.53 - 0.74	0.95 - 1.28	N/D	2.82 - 5.54	3.73 - 6.76	4.77 - 7.12	1.15 - 2.01	0.33 - 3.60	10		10
Hardness, Total	415 - 436	349 - 373	371 - 386	314 - 338	351 - 361	366 - 396	366 - 390	250 - 280	291 - 366			
Radium 226/228 (pCi/L)	*	*	*	<b>7.2</b>	*	*	*	*	*			5 (combined)
Radon 226/228 (pCi/L)	*	*	*	274	*	*	*	*	*			300

\* Non-Detectable concentration

\*\* No recent data

\*\*\* EPA has set forth a lifetime health advisory value of 0.3 mg/L for manganese



# Well Water Quality - Nitrate

Well No.	2018			2019			2020			HBV (mg/L)	EPA MCL (mg/L)
	Nitrate Conc. (mg/L)			Nitrate Conc. (mg/L)			Nitrate Conc. (mg/L)				
	MIN.	AVG.	MAX.	MIN.	AVG.	MAX.	MIN.	AVG.	MAX.		
2	2.20	3.68	6.32	2.52	3.78	5.50	2.36	4.10	5.18	10	10
4	2.40	4.28	5.50	3.11	4.16	6.50	3.10	4.07	6.69		
5	5.70	6.96	7.88	6.10	6.67	7.42	5.50	6.11	6.69		
6	4.30	4.75	5.10	4.48	4.98	5.40	5.13	5.44	5.60		
7	4.30	4.60	4.90	4.10	4.55	4.80	4.84	5.05	5.30		
8	4.89	5.67	6.08	5.08	5.35	5.60	4.62	4.96	5.25		
9	1.87	3.75	4.45	2.23	3.10	3.68	2.99	3.40	4.07		
10	N/D			< 0.05			N/D				
11	2.25	2.58	2.95	2.31	2.73	3.07	2.40	2.63	2.86		
12	0.58	0.60	0.62	0.53	0.65	0.74	0.62	0.67	0.73		
13	1.08	1.16	1.28	0.95	0.99	1.01	0.98	1.06	1.11		
14	< 0.05			N/D			N/D				
15	4.04	4.95	5.54	4.70	4.96	5.11	2.82	4.81	5.54		
16	4.60	5.25	6.76	3.99	4.54	6.50	3.73	4.04	4.30		
17	5.00	6.10	7.12	4.77	5.56	6.56	4.92	5.72	6.30		
20	1.24	1.28	1.30	1.15	1.48	1.79	1.59	1.81	2.01		
21	2.13	3.25	3.60	0.33	2.04	2.82	2.04	2.22	2.38		
6, 7, & 10 Blended	2.59	3.15	3.68	2.96	3.32	3.89	3.26	4.33	5.52		
12, 13, & 14 Blended	0.67			0.78			0.86				

# Comprehensive Evaluation for Water Treatment

Shakopee Public Utilities

Shakopee, Minnesota

SEH No. 157387 | October 14, 2021



Building a Better World  
for All of Us®

Engineers | Architects | Planners | Scientists

# Comprehensive Evaluation for Water Treatment

Shakopee Public Utilities  
Shakopee, Minnesota

SEH No. 157387

October 14, 2021

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



---

Miles Jensen

Date: October 13, 2021

License No.: 19869

Reviewed By: Ryan Hanson

Date: October 13, 2021

Short Elliott Hendrickson Inc.  
3535 Vadnais Center Drive  
St. Paul, MN 55110-5196  
651.490.2000



# Executive Summary

The Shakopee Public Utilities (SPU) gets their water from eighteen (18) groundwater supply wells. Fourteen (14) of those groundwater wells pump water from the Prairie du Chien-Jordan Sandstone aquifer, two (2) utilize water from the Tunnel City-Wonewoc aquifer, and the other two (2) wells pump from the Mount Simon-Hinckley aquifer. The total capacity of the municipal wells is 24.4 million gallons a day (MGD) and a reliable supply capacity of 20.3 MGD, when subtracting the highest capacity well. Due to topography, there are three (3) different pressure zones in the water system; the Normal Elevation Service (NES); the First High Elevations Service (1HES), and the Second High Elevation Service (2HES) zones.

The SPU water system does not include a water treatment facility. The water pumped from the Prairie du Chien-Jordan aquifer is generally considered to be of such high quality, with respect to the US Environmental Protection Agency's (EPA) enforceable National Primary Drinking Water Regulations (NPDWR), that SPU has not had a reason, nor have they been required to actively remove anything from their groundwater source. SPU only operates and maintains fluoridation and chlorination treatment systems for the prevention of tooth decay and residual disinfection throughout the distribution system piping. SPU also has the ability to feed polyphosphates at Well No. 12 and Well No. 15, to help reduce the chance of aesthetic issues caused by iron and manganese.

SPU continuously monitors their wells to ensure they stay in compliance with the EPA's NPDWRs, as well as striving to meet the National Secondary Drinking Water Regulations (NSDWR) and other non-enforceable water quality standards. If one of SPU's wells is discovered to have a water quality parameter (iron, manganese, nitrate, arsenic, radium, etc.) that has surpassed a drinking water standard, SPU takes the necessary steps to ensure that the well is either rarely used for supply and/or properly blended with a cleaner well. Any blending that is done and reported within the SPU water system is done at the wellhouse prior to entering the distribution system.

In an effort to ensure that their customers are providing safe, good quality water, SPU has actively been monitoring nitrates throughout their wells for the last two decades. Wells utilizing water from the Jordan Sandstone aquifer have detected levels of nitrates, especially in areas of Shakopee with lower elevations due to the decreased soil cover between the ground surface and the aquifer. None of the levels of nitrate in SPU's wells are currently exceeding the EPA's Maximum Contaminant Level (MCL) of 10 mg/L, so therefore SPU is not required to treat for nitrates. The monitoring results have also shown that over the last 20 years the nitrate levels have mostly stayed the same or have diminished throughout the water supply wells. It is expected that this downward trend will continue as agriculture land is developed into residential and commercial properties throughout the watershed, reducing leaching into the aquifer.

With all of the water being supplied by SPU meeting all legally enforceable drinking water standards, SPU is not required to provide additional treatment other than their existing fluoridation and disinfection. Nevertheless, because of SPU's dedication and commitment to public health and their desire to provide abundant high-quality water to their customers, SPU completed this water treatment feasibility study to actively plan for any water quality or regulatory issues that they may face in the future. The study examined the quality of SPU's municipal water, analyzed current operating practices, evaluated supply and municipal treatment options, and recommend viable solutions to increase the quality of water being supplied to the consumers.

# Executive Summary (continued)

## Systemwide Treatment Alternatives

For this study, three (3) treatment systemwide alternatives were evaluated. Each treatment alternative took into consideration the existing and planned infrastructure, water quality of each well, and economic impacts. The goal was to generate a template for the necessary upgrades to the existing and future system to provide treatment that would greatly reduce iron, manganese, nitrate and provide equally treated water to all of SPU's customers that excels beyond their already great quality water.

- **Alternative 1 – Satellite Treatment.** The satellite treatment option reduces the amount of transmission mains required to provide systemwide treatment by constructing treatment facilities within the vicinity of each of the existing wells, with exception to Well No. 2 and Well No. 8 (Pump House 2), which is most feasible to route to the nearby Well No. 3 site. This alternative proposed new well sites for the additional future capacity needed and planned the satellite treatment facilities accordingly. In total, it is recommended that seven (7) treatment facilities be constructed to provided treatment in all three (3) of SPU's pressure zones. This alternative allows each treatment facility to be tailored to the specific water quality at the site-specific wells to treat accordingly, as well as provide a better option for phased implementation based on the need for treatment. The downside to this alternative is additional infrastructure necessary to treat at seven (7) different well sites as compared to one centralized facility, which would in turn increase operations and maintenance costs.
- **Alternative 2 – Central Treatment.** The central treatment option would convey all of SPU's wells to one central location, providing equally treated water to the entire system. This proposed alternative reduces the cost of treatment facilities and required processing equipment by having one centralized treatment facility. For that reason, this alternative would be the most economical option to provide softened water, if that was desired. The main pitfall to one central facility would be the transmission mains required to convey the raw water from each of the wells and the necessary expense to transfer water to the other two (2) pressure zones. To reduce to cost, the proposed new well sites to meet the future capacity needs were selected to try and lessen watermain lengths. The most economical advantage to this alternative would be the reduced operations and maintenance costs associated with maintaining only one treatment facility versus several.
- **Alternative 3 – Hybrid Treatment.** The last alternative is a combination of the two other alternatives. The proposed alternative would include a NES zone centralized facility that would treat water from SPU's nearby wells, while less conveniently located wells would construct satellite treatment plants. This option will reduce the amount of transmission mains required and reduce the treatment processes and equipment required to provide systemwide treatment. To reduce to cost, the proposed new well sites to meet the future capacity needs were selected to try and lessen watermain lengths. This alternative attempts to reduce the infrastructure necessary by only treating at four (4) different sites as compared to seven (7) with the satellite alternative. The most economical advantage to this alternative would be reduce operations and maintenance costs associated with maintaining less facilities.

## Cost Analysis

SPU has designed their system to utilize their good quality water by distributing supply wells throughout the three (3) pressure zones. If treatment was ever needed, SPU intended to implement treatment at the individual well sites. A supply, treatment, and storage capacity fund was set up to help fund any future treatment needs, however, it is unlikely that the fund would be able to support the entire project and the

# Executive Summary (continued)

expected operations and maintenance costs. That is why, it is important that SPU be economical with which alternative they pursue.

Table ES-1 provides a summary of the capital and annual costs of each alternative.

**Table ES-1 – Alternative Summary**

Alternative	Type	Construction Cost			Total Probable Cost	Annual O&M
		Wells	Watermain	Treatment		
Alternative 1 - Satellite	Pressure	\$6,050,000	\$435,000	\$45,600,000	\$70,314,750	\$2,944,638
	Gravity			\$50,100,000		
Alternative 2 - Central	Pressure	\$4,050,000	\$31,827,500	\$36,450,000	\$97,642,125	\$2,616,050
	Gravity			\$41,450,000		
	Gravity w/ Softening			\$66,450,000		
Alternative 3 - Hybrid	Pressure	\$5,050,000	\$10,228,750	\$41,400,000	\$76,516,313	\$2,888,255
	Gravity			\$47,900,000		

## Recommendations

Based on the results of this study, additional treatment beyond the current fluoride and chlorine additions is not warranted at this time. The water system is managed and operated to continually supply good drinking water quality that meets EPA's mandatory water quality standards for drinking water contaminants.

To address the potential of future treatment needs, the following recommendations are presented below:

1. Given that the annual operation and maintenance costs associated with Alternative 3 (Hybrid) are lower than Alternative 1 (Satellite), it is recommended that the configuration of Alternate 3 be followed. To that end, it is recommended that appropriate property acquisitions and pipeline installations be carried out to ensure that the water infrastructure is established should treatment ever become necessary.
2. Construct the water treatment facilities to be gravity treatment plants, due to the advantages this type of design offers at a comparable cost.
3. Purchase a site for the NES zone centralized treatment facility between Pump House 15 and Mystic Lake Dr (Co Rd 83), due to the proximity to other nearby wells.
4. Sample the groundwater of the proposed future wells at the Tank 8 site in the 2HES zone, prior to designing a satellite WTP.
5. Ensure that any currently planned watermain extensions match the Alternative 3 (Hybrid) proposed watermain system map supplied in Appendix D.

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# Comprehensive Evaluation for Water Treatment

Prepared for Shakopee Public Utilities

## 1 Introduction

The Shakopee Public Utilities (SPU) owns and operates the municipal drinking water system that serves the City of Shakopee, which is a community of approximately 42,000 people located in the northern part of Scott County. The water system has a long history with the first well being constructed in 1910, which fed a small network of water main and a wooded storage tank which sustained pressure. The small network of watermain continued to grow and extend out as the community grew, which now feeds approximately 39,000 people via an estimated 11,000 metered accounts.

SPU's water system has grown to include eighteen (18) groundwater supply wells, four (4) elevated storage tanks, three (3) ground storage facilities, and four (4) booster stations. The system utilizes three (3) pressure zones: the Normal Elevation Service (NES); the First High Elevations Service (1HES), and the Second High Elevation Service (2HES) zones. SPU maintains over 208 miles of water mains ranging in material (cast iron, ductile iron, and PVC) and size up to 18 inches in diameter.

The City of Shakopee's location with respect to nearby major urban centers, principal transportation corridors, and available lands makes the community an ideal place for both continued steady residential and commercial growth and development. To stay ahead of the increasing population and its demand for high quality drinking water, SPU regularly reviews and updates its long-range planning documents. Following on the heels of completing an update to their Comprehensive Water System Plan in 2019, SPU is now evaluating its need for municipal water treatment with this study.

The purpose of this feasibility study is to examine water quality, analyze current operating practices, evaluate supply and municipal treatment options, and recommend viable solutions to increase the quality of water being supplied to their consumers.

## 2 Existing Water Infrastructure

The following sections describe the water supply and treatment infrastructure for SPU's water system.

### 2.1 Existing Supply

SPU's water supply is made up of eighteen (18) groundwater supply wells. Fourteen (14) of those groundwater wells pump water from the Prairie du Chien-Jordan Sandstone aquifer, two (2) utilize water from the Tunnel City-Wonewoc aquifer, and the other two (2) wells pump from the Mount Simon-Hinckley aquifer. The total capacity of the municipal wells is 17,859 gallons per

minute (gpm), which is equivalent to 24.4 million gallons a day (MGD), and a reliable supply capacity of 20.3 MGD when subtracting the highest capacity well.

SPU designed their system to utilize their good quality water by distributing supply wells throughout the pressure zones. Some of the wells pump to a common wellhouse to allow for blending of the water prior to entering the water distribution system. Any blending that is done and reported within the SPU water system is done at the wellhouse prior to being delivered to any SPU customer.

Table 1 provides a summary of each well.

**Table 1: SPU Well Information**

Well No.	MN Unique Well #	Year Installed	Zone	Pump House No.	Capacity (gpm)	Well Depth (Feet)	Status	Aquifer
Well 2	206803	1944/ 2002	NES	Pump House 2	300	525	Active	Tunnel City-Wonewoc
Well 3*	205978	1956	NES	Pump House 3	900	755	Out of Service	Mount Simon
Well 4	206854	1971	NES	Pump House 4	715	254	Active	Jordan
Well 5	206855	1971	NES	Pump House 4	850	253	Active	Jordan
Well 6	180922	1981	NES	Pump House 6	1175	222	Active	Jordan
Well 7	415975	1986	NES	Pump House 6	1100	218	Active	Jordan
Well 8	500657	1989	NES	Pump House 2	1100	262	Active	Jordan
Well 9	554214	1994	1HES	Pump House 9	1050	315	Active	Jordan
Well 10**	578948	2001	NES	Pump House 6	1125	800	Active	Mount Simon
Well 11	611084	2001	1HES	Pump House 9	1000	312	Active	Jordan
Well 12	626775	2001	1HES	Pump House 12	810	352	Active	Jordan
Well 13	674456	2002	1HES	Pump House 12	1036	338	Active	Jordan
Well 14	694904	2004	1HES	Pump House 12	381	597	Emergency	Tunnel City-Wonewoc
Well 15	694921	2005	NES	Pump House 15	1150	295	Active	Jordan
Well 16	731139	2006	NES	Pump House 15	1450	285	Active	Jordan
Well 17	731140	2007	NES	Pump House 15	1400	290	Active	Jordan
Well 20	722624	2005	1HES	Pump House 20	1142	275	Active	Jordan
Well 21	722625	2005	1HES	Pump House 20	1175	275	Active	Jordan

\* Well No. 3 is no longer used and merely serves as an emergency, standby well

\*\* Well No. 10 is used less than 1% of the total water pumped annually

## 2.1.1 Water Pumpage

Historical water pumping data for SPU's water supply wells, including 2018-2020 production years, is summarized in the Table 2 below. The wells pumping from the Prairie du Chien-Jordan aquifer supplies a significant quantity of water to the SPU's water system and is expected to provide most of the water in the future. Based on pumping records, approximately 97% of the water supplied is from the Prairie du Chien-Jordan aquifer and less than 3% from the Tunnel City-Wonewoc and Mount Simon aquifer.

If one of SPU's wells is discovered to have a water quality parameter that does not meet water quality standards, SPU takes the necessary steps to ensure that the well is either rarely used for

supply and/or properly blended with a cleaner well prior to distribution. This is the case for Well No. 3 and Well No. 14, which are essentially not used for supply, and Well No. 10, which is used less than 1% of the total water pumped annually.

Table 2 provides a pumping summary of each well for 2018 to 2020.

**Table 2: Historical Water Pumpage (2018-2020)**

Well No.	2018		2019		2020	
	Total (1,000 gal)	% of total	Total (1,000 gal)	% of total	Total (1,000 gal)	% of total
2	47,675	2.6%	39,631	2.4%	48,770	2.7%
3	0	-	0	-	0	-
4	50,745	2.8%	102,669	6.2%	67,067	3.7%
5	154,146	8.4%	102,042	6.1%	68,226	3.8%
6	114,322	6.2%	153,619	9.2%	187,253	10.4%
7	198,541	10.8%	173,743	10.4%	236,255	13.1%
8	285,218	15.5%	205,578	12.4%	274,138	15.3%
9	181,998	9.9%	37,118	2.2%	120,479	6.7%
10	5,489	0.3%	186	0.0%	161	0.0%
11	101,831	5.5%	64,237	3.9%	117,210	6.5%
12	66,115	3.6%	78,390	4.7%	84,312	4.7%
13	89,528	4.9%	94,647	5.7%	151,674	8.4%
14	23	-	0	-	0	-
15	54,056	2.9%	107,141	6.4%	47,975	2.7%
16	137,825	7.5%	184,210	11.1%	124,929	7.0%
17	113,720	6.2%	130,532	7.8%	67,595	3.8%
20	105,617	5.7%	67,810	4.1%	129,327	7.2%
21	133,750	7.3%	122,357	7.4%	71,526	4.0%
<b>Total (1,000 gal)</b>	<b>1,840,599</b>		<b>1,663,910</b>		<b>1,796,897</b>	

## 2.2 Existing Treatment

The SPU water system does not include a water treatment facility. The water pumped from the Prairie du Chien-Jordan aquifer is generally considered to be of such high quality, with respect to the Environmental Protection Agency's (EPA) enforceable National Primary Drinking Water Regulations (NPDWR), that SPU has not had a reason, nor have they been required to actively remove anything from their groundwater source. SPU only operates and maintains fluoridation and chlorination treatment systems for the prevention of tooth decay and residual disinfection throughout the distribution system piping. SPU also has the ability to feed polyphosphates at Well No. 12 and Well No. 15, to help reduce the chance of aesthetic issues caused by iron and manganese.

## 2.3 Water Storage

Water storage tanks play an important role in the operation of a water system by sustaining system pressure and supplying water when needed. Four (4) elevated tanks and three (3) ground level reservoirs provide distribution storage for the SPU water system. An eighth tank (Tank 8) is currently being built on the south-western edge of the system to supply the west 2HES. All facilities provide "floating" storage for the system meaning, they supply flow from the tank via gravity.

Table 3 provides a summary of each storage facility.

**Table 3: Existing Storage Facilities**

Structure Name	Type of Storage Structure	Year Constructed	Primary Material	Overflow Elev. (ft)	Storage Capacity (Gallons)
Tank 1	Elevated	1966	Steel	933	2,000,000
Tank 2	Elevated	1940	Steel	933	250,000
Tank 3	Elevated	1980	Steel	933	1,500,000
Tank 4	Elevated	2002	Steel	1015	500,000
Tank 5	Ground	2005	Steel	933	2,500,000
Tank 6	Ground	2005	Steel	933	2,500,000
Tank 7	Ground	2015	Steel	1015	2,000,000
Tank 8*	Elevated	2020	Steel	1115	750,000
<b>Total Capacity (million gallons)</b>					<b>12.0</b>

\*Currently under construction.

## 2.4 Booster Stations

The SPU water system currently has four (4) booster stations that transfer water between zones, as well as sustain pressure in the corresponding pressure zone.

Table 4 provides a summary of each of the booster pumps at each of the interzone booster pumping stations.

**Table 4: Existing Booster Stations**

Facility	From Pressure Zone	To Pressure Zone	Pump No.	Capacity (gpm)	Total Station Capacity (MGD)
Well 9 Booster	NES	1HES	1	1000	2.9
			2	1000	
Valley Creek	1HES	2HES	1	1000	2.9
			2	1000	
Windermere (West)	1HES	2HES	1	1000	2.9
			2	1000	
Riverview (East)	NES	2HES	1	1000	2.9
			2	1000	

## 2.5 Distribution System

SPU's water distribution system is made up of over 208 miles of water mains ranging in material (cast iron, ductile iron, and PVC) and size up to 18 inches in diameter. The presence of large water main as exists in the Shakopee water system supports the ability of the water system to transmit large system flows. Below are the lengths of various diameters of pipe:

- 0.015 miles of 4" diameter
- 57.6 miles of 6" diameter
- 80.6 miles of 8" diameter
- 3.4 miles of 10" diameter
- 51.5 miles of 12" diameter
- 9.5 miles of 16" diameter
- 5.6 miles of 18" diameter

## 3 Water System Evaluation

In the previous comprehensive water plans, the water system was evaluated in regards to numerous system criteria to continuously update and set a list of recommended alternatives. For this study, an evaluation of SPU's water system was performed to determine the need for future treatment and any additional supply that would be required to meet future water needs.

### 3.1 Source Water Quality

Desirable water quality implies water that is clear, tasteless, odorless, and free of chemical and microbiological contaminants. The quality of water delivered by the community water supplier must meet legislated water quality standards and should meet other standards recognized as desirable by the water industry.

#### 3.1.1 Water Quality Standards

SPU and all public utilities are required to meet water quality rules and regulations under the Safe Drinking Water Act. SPU must meet all regulations and participate in required programs established by the governing bodies, the U.S. Environmental Protection Agency (EPA), and the Minnesota Health of Department (MDH).

##### 3.1.1.1 National Primary Drinking Water Regulations (NPDWR)

The National Primary Drinking Water Regulations (NPDWR) are legally enforceable primary standards and treatment techniques that apply to public water systems. Primary standards and treatment techniques protect public health by limiting the levels of contaminants in drinking water.

The NDPWRs are standards enforceable by law established to protect drinking water and public health. These standards create limits, referred to as the Maximum Concentration Levels (MCL), on the concentrations of contaminants present in drinking water and water sources. Levels are also established within the regulation to indicate at what concentrations and length of exposure a contaminant can impact human health. Governing bodies can take legal actions against utilities if public water supplies are not in compliance with the MCLs.

Please visit the EPA's website for the complete list of National Primary Drinking Water Regulations.

##### 3.1.1.2 National Secondary Drinking Water Regulations (NSDWR)

The NSDWRs are non-enforceable standards for contaminants that impact the aesthetic of drinking water. EPA believes that if these contaminants are present in your water at levels above these standards, the contaminants may cause the water to appear cloudy or colored, or to taste or smell bad. This may cause a great number of people to stop using water from their public water system even though the water is safe to drink. Secondary standards are set to give public water systems some guidance on removing these chemicals to levels that are below what most people will find to be noticeable. It is recommended that public water supplies meet these drinking water standards even though they are not legally enforceable.

Please visit the EPA's website for the complete list of National Secondary Drinking Water Regulations.

### 3.1.1.3 Minnesota Department of Health (MDH) Requirements

All regulations established by the U.S. EPA are adopted by the MDH. The MDH also developed health-based rules and guidance to evaluate potential human health risks from exposures to chemicals in groundwater. Health-Based Values (HBVs) and Health Risk Limits (HRLs) are developed by toxicologists at MDH using the best science and public health policies available at the time of their development. An HBV or HRL is the level of a contaminant that can be present in water and pose little or no health risk to a person drinking that water. HBVs and HRLs are developed to protect sensitive or highly exposed populations. HBVs and HRLs are guidance used by the public, risk managers, and other stakeholders to make decisions about managing the health risks of contaminants in groundwater and drinking water.

Please visit the MDH's website for the complete list of health-based water guidance values.

### 3.1.2 Existing Drinking Water Quality

SPU is proud of the fact that their drinking water is supplied directly from the naturally safe wells and has consistently tested below levels that would require any filtration or other extensive treatment. SPU continuously monitors their wells to ensure they stay in compliance with the EPA's NPDWRs, as well as striving to meet the National Secondary Drinking Water Regulations (NSDWR) and other non-enforceable water quality standards. If one of SPU's wells is discovered to have a water quality parameter (iron, manganese, nitrate, arsenic, radium, etc.) that has surpassed a drinking water standard, SPU takes the necessary steps to ensure that the well is either rarely used for supply and/or properly blended with a cleaner well. Any blending that is done and reported within the SPU water system is done at the wellhouse prior to entering the distribution system.

The tables presented in Appendix A identify the general water quality parameters for the SPU's source water supply wells for the years 2018, 2019, and 2020. Also included in Appendix A is a separate table of extensive water testing results for nitrate during the same period. A further description of the parameters of potential concern are described below in more detail.

#### 3.1.2.1 Iron

Iron occurs naturally in rocks and soil across Minnesota and is often found in most groundwater sources. However, iron is not a health risk but can cause discolored water, stained plumbing fixtures, and an unpleasant metallic taste to the water. This can lead to customer complaints about the water. Iron deposits can also buildup in pressure tanks, storage tanks, water heaters, and pipelines, causing decrease capacity, reduce pressure, and increase maintenance for the utility and user. As of right now, the only drinking water guidance value for iron is EPA's NSDWR for iron of 0.3 mg/L.

To satisfy their customers and to reduce any potential of aesthetic, taste, or odor complaints, SPU has largely considered the NSDWR concentration of 0.3 mg/L of iron to be their water quality goal that would be supplied to their customers. Any well that tests above that value is considered high and is monitored closely.

Only three (3) of SPU's existing wells have recorded iron levels above the NSDWR of 0.3 mg/L. Well No. 14, with iron levels between 0.63 mg/L and 1.20 mg/L, is not rarely operated as it is only available for emergency use. Additionally, when this well is operated, the water is blended with water from Well No. 12 or Well No. 13 which have very low levels of iron. This allows for the water to be combined to produce a finished water effluent with very minimal iron concentration.

Well No. 10 has also reported high iron levels, which are between 0.42 mg/L and 1.98 mg/L. This well is considered a peaking well, meaning it is used sparingly, and is only operated to supplement large water use days; typically less than 1% of the total annual water pumped. When the well is operated it is blended with water from either Well No. 6 or Well No. 7.

In addition to Well No. 10 and Well No. 14, Well No. 3 is known to have high levels of iron. It was reported in 2020 that Well No. 3 contained a concentration of 1.75 mg/L. SPU regards Well No. 3 as an emergency well and does not use it.

### 3.1.2.2 Manganese

Manganese occurs naturally in rocks and soil across Minnesota and the upper Midwest and is often found in groundwater sources. Your body needs some manganese to stay healthy, but too much can be harmful. Studies have found that children and adults who drink water with high levels of manganese for a long time may have problems with memory, attention, and motor skills. Infants (babies under one year old) are much more susceptible to acute exposure, which may lead to development of learning and behavior problems if they drink water with too much manganese in it.

Currently, there is no federally enforceable maximum contaminant levels (MCLs) for manganese in drinking water. In 2004, EPA set a non-enforceable lifetime health advisory (HA) level of 0.3 mg/L for chronic exposure to manganese and a 1-day and 10-day HA of 1 mg/L for acute exposure. The EPA suggests 0.3 mg/L be used for both chronic and acute exposure for infants younger than 6 months old.

To further keep household drinking water safe, the MDH has developed their own guidance value or HBV of 0.10 mg/L, which was developed to be a safe level of manganese for bottle fed babies. However, if everyone in your household is more than one year old or an infant who never drinks tap water or formula made with tap water, the MDH believes that a safe level of manganese in your water is 0.30 mg/L or less. This coincides with the EPA's lifetime health advisory level.

To reduce the potential of staining and taste concerns in the water supply, the EPA has also set a NSDWR for manganese of 0.05 mg/L. Public water systems are not required to meet this value; however, it can serve as a helpful guideline to reduce customer complaints. To satisfy their customers and to reduce any potential of aesthetic, taste, or odor complaints, SPU has largely considered the NSDWR value of 0.05 mg/L of manganese to be their water quality goal that would be supplied to their customers. Any well that tests above that value is considered high and is monitored closely.

Only two (2) of SPU's existing wells have reported manganese levels above the NSDWR of 0.05 mg/L. Well No. 12 has reported manganese levels between 0.07 mg/L and 0.08 mg/L, which is only slightly above the NSDWR, but not surpassing the MDH's HBV. To combat any water aesthetic issues as a result of the manganese levels, SPU feeds polyphosphates to the Well No. 12. SPU has also been approved to start feeding polyphosphates to Well No. 15, which has reported manganese levels between 0.04 mg/L and 0.12 mg/L. Both of these wells are used on a somewhat regular basis (less than 10% of total annual water supplied), but more sparingly than the wells with more favorable water quality.

### 3.1.2.3 Nitrate

Nitrate contamination is often attributed to runoff from fertilizer use; leaking from septic tanks, sewage; erosion of natural deposits and livestock waste. The EPA's MCL for nitrate is 10 mg/L.



Consuming levels of nitrate above 10 mg/L can affect how blood carries oxygen and can cause methemoglobinemia (also known as blue baby syndrome). Other symptoms connected to methemoglobinemia in infants include decreased blood pressure, increased heart rate, headaches, stomach cramps, and vomiting.

In an effort to ensure that their customers are providing safe, good quality water, SPU has actively been monitoring nitrates throughout their wells for the last two decades. Wells utilizing water from the Jordan Sandstone aquifer have detected levels of nitrates, especially in areas of Shakopee with lower elevations due to the decreased soil cover between the ground surface and the aquifer.

None of the levels of nitrate in SPU's wells are currently exceeding the EPA's MCL of 10 mg/L, but many have reported levels around or above 5.0 mg/L, which has raised some concerns throughout their customers. From 2018 to 2020, SPU's Well No. 2, Well No. 4, Well No. 5, Well No. 6, Well No. 7, Well No. 8, Well No. 15, Well No. 16, and Well No. 17 reported levels above 5.0 mg/L of nitrate, with Well No. 5, Well No. 6, Well No. 8, and Well No. 17 averaging above 5.0 mg/L of nitrate. SPU will continue to monitor these wells to ensure that they remain below the MCL of 10 mg/L and that the water is safe for their customers.

It should be noted that the monitoring results have shown nitrate levels, in all of SPU's wells, have mostly stayed the same or gotten lower over the past 20 years. It is expected that this downward trend will continue as agriculture land is developed into residential and commercial properties throughout the watershed, reducing leaching into the aquifer.

#### 3.1.2.4 Radium

Radium becomes an issue when naturally occurring deposits erode. Certain rock types have naturally occurring trace amounts of "mildly radioactive" elements (radioactive elements with very long half-lives) that serve as the "parent" of other radioactive contaminants ("daughter products"). These radioactive contaminants, depending on their chemical properties, may accumulate in drinking water sources at levels of concern. The "parent radionuclide" often behaves very differently from the new element, the "daughter radionuclide" in the environment. The EPA set the MCL for radium 226/228 to be 5 pCi/L.

Well No. 14 and Well No. 3, which SPU uses as emergency wells only, as well as Well No. 10, have a history of containing moderate concentrations of combined radium 226/228 that exceed the MCL. All three (3) wells have been observed to have radium levels that exceed the EPA MCL of 5 pCi/L. Since Well No. 3 and Well No. 14 are not currently in use, they are less of a concern. Well No. 10 is used very sparingly and is always blended with water from Well No. 6 and Well No. 7 at the pump house. The concentration of radium in the blended water is well below the MCL prior to entering the distribution system.

#### 3.1.2.5 Arsenic

Arsenic occurs naturally in rocks and soil across Minnesota. Small amounts can dissolve into groundwater that may be used for drinking water. Drinking water contaminated with low levels of arsenic over a long period of time is associated with diabetes and increased risk of cancers of the bladder, lungs, liver, and other organs. The enforceable standard for arsenic is a MCL of 10 µg/L.

From 2018 to 2020, Well No. 14 reported arsenic concentrations between 18.4 and 25.30 µg/L and is the only well that has concentration of arsenic that exceed the EPA MCL of 10 µg/L. As explained above, SPU regards Well No. 14 an emergency well and rarely uses it for supply.

### 3.1.2.6 Sodium

Sodium is a naturally occurring element that is found widely throughout the environment. Due to issues with hypertension and other health concerns, some people have a sodium restricted diet. A goal of 2,400 mg per day of dietary sodium has been proposed by several government and health agencies. Drinking water containing between 30 and 60 mg/L is unlikely to be perceived as salty by most individuals and would contribute only 2.5% to 5% of the dietary goal if tap water consumption is 2 liters per day.

From 2018 to 2020, the sodium concentrations in SPU's wells ranged from 8.27 mg/L to 63.6 mg/L over the past three years. These sodium concentrations indicate that SPU's water is not likely to contribute a significant amount of sodium to a resident's diet.

### 3.1.2.7 Hardness

Water above 100 mg/L of hardness is considered hard. The raw water from all of the wells is hard with total hardness ranging from the SPU wells ranges from 163 mg/L to 446 mg/L. Hardness levels in these ranges are very common to groundwater supplied systems across the Midwest. Water that is considered "hard" has a hardness of approximately 150 to 300 mg/L as CaCO<sub>3</sub> and is considered "very hard" with CaCO<sub>3</sub> above 300 mg/L. It can be assumed that much of the water supplied by SPU is considered "very hard" and requires softening to prevent calcium buildup on appliances at the tap.

## 3.2 Hydraulic Modeling

A hydraulic computer model was generated to evaluate the performance of the SPU's current water distribution system. The model used the most recent geographical information system (GIS) data for SPU's water system assets, and was created using WaterGEMS®, a pipe network program developed by Bentley®. The previously calibrated model was verified using hydraulic and pumping data supplied by SPU from June 2020.

Since pressures in the current system are not of concern, the model was utilized to assess water quality throughout the system. Using an average day demand of 7 MGD and utilizing four (4) pump priority or "steps" used by SPU, shown in the following table (Table 5), the system was modeled for water distribution age and nitrate distribution throughout the system. The following sections describe the results in detail.

**Table 5: Typical Well Steps Used for Operation**

Well No.	Zone	Tank Level Controls	Week 1 Steps	Week 2 Steps	Week 3 Steps	Week 4 Steps
2	NES	Tank 1	3	1	2	1
3	NES	Tank 1	Not Used	Not Used	Not Used	Not Used
4	NES	Tank 1	1	3	3	2
5	NES	Tank 1	1	3	3	2
6	NES	Tank 1	3	1	1	1
7	NES	Tank 1	3	1	1	1
8	NES	Tank 1	1	2	1	1
9	NES	Tank 1	1	3	1	3
10	NES	Tank 1	5	5	5	5
11	NES	Tank 1	2	1	2	1
12	1HES	Tank 4	2	1	2	1
13	1HES	Tank 4	1	2	1	2
14	1HES	Tank 4	Emergency	Emergency	Emergency	Emergency
15	NES	Tank 3	3	2	1	3
16	NES	Tank 3	1	3	2	1
17	NES	Tank 3	2	1	3	2
20	1HES	Tank 4	2	1	2	1
21	1HES	Tank 4	1	2	1	2

### 3.2.1 Water Distribution Age Modeling

The water age refers to the time it takes for water to travel from a water source to consumers and is influenced by water distribution system flow velocities and pipe lengths. Water age is an important performance indicator to many utilities because excessive age can cause problems with the water quality.

The water age distribution model was run through a 50-day age simulation to generate water ages throughout the system (Appendix B). In general, most of the service area is under 24-hours of age in the system. The areas with higher water age are in the vicinity of the larger ground storage tanks. This is caused by a low turnover of water in these larger tanks, causing older water to be supplied nearest the tank. The fear in the higher water age areas of the system is chlorine residual being too low, causing various taste and odor issues. SPU has indicated that there has not been taste and odor issues commonly occurring anywhere throughout the system. It is the goal of SPU to have a chlorine residual of 0.9 mg/L in the distribution system. Recent tests show that the chlorine residual at Tank 5 and Tank 6, which have the highest water age in the system, are maintaining a chlorine residual of 0.3-0.4 mg/L, which is still above the typical minimum recommendation of 0.2 mg/L.

There are no concerns with current operations by SPU with regards to the water age throughout the system.

### 3.2.2 Nitrate Distribution Modeling

As for the nitrate distribution throughout the system. The system was modeled using a max concentration over the last three years (2018-2020) at each well, to create a “worst-case”

scenario. The nitrate distribution model was run through an extended period simulation to generate peak concentrations through the system (Appendix B).

The modeling results indicate that enough wells that supply the NES zone have high enough concentrations of nitrate that much of the zone could potentially receive nitrate concentrations above 5.0 mg/L. Conversely, the modeling results indicate that the 1HES zone is utilizing wells with lower nitrate concentration could potentially receive blended nitrate concentrations of 1.0 mg/L to 3.0 mg/L. However, the concentrations in the NES zone are not above the EPA's MCL of 10 mg/L of nitrate, some areas are receiving much higher levels of nitrate compared to some areas in the 1HES zone.

### 3.3 Total System Reliable Supply Capacity

The reliable supply capacity of a water system is the total available delivery rate with the largest pumping unit(s) out of service. The reliable supply capacity is less than the total supply capacity because well and other supply pumps must be periodically taken out of service for maintenance. These water supply pumps can be off-line for periods of several days to several weeks, depending on the nature of the maintenance being performed. For a system as large as SPU with eighteen (18) high-capacity wells, it is somewhat likely for two (2) wells to be offline at the same time, comprising approximately 10 percent of the total supply capacity. Because of this, system wide well supply requirements will assume that the SPU water supply system should be capable of meeting maximum day demands (MDD) with the largest two (2) wells out of service.

Under present operating conditions, the existing wells have a combined total capacity of about 24.4 MGD when operating 24 hours per day. However, the reliable capacity of the supply wells is approximately 20.3 MGD with the two (2) highest yielding wells out of service. The availability of this reliable supply capacity assumes that there will be no significant declines or changes in the water supply capacity over the next 20 years.

As previously completed in the previous water system plans, an analysis was made of past water consumption characteristics by reviewing annual pumpage and water sales records for the period from 2000 to 2018. Average and maximum day water consumption during this period, together with the amount of water sold in each customer category, was analyzed to create projections of future water requirements. Table 6 identifies the projections that were made in that analysis. It was determined that by 2040, SPU's projected drought-year average day with full buildout could reach a potential 9.0 MGD, with a maximum day demand of approximately 25 MGD if year 2040 were a drought year. This indicates a potential need for approximately 4.0 – 5.0 MGD more in reliable supply capacity to meet projected water system demand growth. This would equate to roughly three (3) new wells by 2040, as dictated by the previous studies. The suggested location for these wells is discussed later in this report.

**Table 6: Summary of Water Needs Projections per Service Zone**

Zone	Average Day Demand (MGD)	Maximum Day Demand (MGD)	Portion of Total Demand
<b>2020</b>			
NES	5.00	13.86	70.6%
1HES	1.69	4.67	23.8%
2HES (Central)	0.09	0.25	1.3%
2HES (West)	0.27	0.75	3.8%
2HES (East)	0.08	0.22	1.1%
<b>Total</b>	<b>7.1</b>	<b>19.6</b>	<b>100%</b>
<b>2030</b>			
NES	5.37	14.87	65.9%
1HES	1.91	5.29	23.4%
2HES (Central)	0.14	0.38	1.7%
2HES (West)	0.67	1.85	8.2%
2HES (East)	0.11	0.30	1.3%
<b>Total</b>	<b>8.1</b>	<b>22.6</b>	<b>100%</b>
<b>2040</b>			
NES	5.63	15.60	62.4%
1HES	2.09	5.79	23.1%
2HES (Central)	0.18	0.50	2.0%
2HES (West)	1.03	2.87	11.5%
2HES (East)	0.13	0.37	1.5%
<b>Total</b>	<b>9.0</b>	<b>25.0</b>	<b>100%</b>

Source: Comprehensive Water Plan - 2019 Supplement

## 4 Water Treatment Techniques

Based on the water quality information; with proper blending and prioritizing better water quality wells, SPU is not required to provide additional treatment other than their existing fluoridation and disinfection. Nevertheless, because of SPU's dedication and commitment to public health and their desire to provide abundant high-quality water to their customers, SPU completed this water treatment feasibility study to actively plan for any water quality or regulatory issues that they may face in the future.

The following treatment systems are included in this evaluation. This evaluation will help present the cost of treatment to SPU and their customers to determine if municipally treated water is something to be desired.

### 4.1 Iron and Manganese Removal

The most common and most cost-effective option for iron and manganese removal is chemical oxidation followed by filtration. In groundwater, the manganese and iron ions are in solution. When a strong oxidant is added to the water, typically chlorine or oxygen and permanganate, iron and manganese is converted from soluble compounds to filterable solids. The iron and manganese can be subsequently removed in the filtration process.

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

## 4.2 Nitrate Removal

Nitrates are very difficult contaminants to eliminate from water. Nitrates will not be removed by sediment filters, carbon filters, or by the hollow fiber membrane of an ultrafiltration system. Similarly, a traditional cation exchange water softener will not reduce or remove nitrates. To remove nitrate from drinking water, a few common methods are anion exchange, reverse osmosis, biological denitrification over fluidize beds, and electro dialysis reversal (EDR).

### 4.2.1 Anion Exchange

Anion exchange is a process that can be utilized to remove nitrate (a monovalent anion) from water. The anion exchange resin (small plastic beads) are embedded with basic (pH) functional groups. The nitrate and other anions displace chloride on the ion exchange resin and are removed from the water. This process is identical to home water softening, except that water softening is a cation exchange process. The anion exchange resin is periodically regenerated with salt brine to clean the nitrate off of the resin. For every million gallons of water treated, approximately 2 tons (4,000 lbs) of salt and 45,000 gallons of water is used. The spent salt brine is then discharged to the sewer.

### 4.2.2 Reverse Osmosis

Reverse osmosis (RO) is a membrane process that is used to remove dissolved solutes from water. Unlike ultrafiltration membranes which use small pores to filter out solids, RO uses preferential diffusion for separation. Water is pumped at high pressure across the surface of the membrane, causing a portion of the water to diffuse through the membrane. The water that passes through the membrane is referred to as permeate and the remaining water is referred to as reject water. RO filtration has the following characteristics:

- Ability to remove 99% of dissolved salts (nitrate, hardness, sulfates, etc.)
- Removes 60-80% of TOC
- Approximately 82% water recovery (18% reject water)
- Provides a potential barrier against future contamination or emerging contaminants (particularly with the addition of advanced oxidation processes)

### 4.2.3 Biological Denitrification

Biological denitrification can be utilized to remove nitrate from water. Denitrification is a process where bacteria in low oxygen (anoxic) conditions reduce nitrate into nitrogen gas. Denitrification happens naturally in the environment as part of the nitrogen cycling process.

Biological denitrification requires a carbon substrate for the reaction to occur. In wastewater treatment, where denitrification is common, the wastewater contains the necessary carbon substrate. For denitrifying drinking water, a carbon substrate needs to be added, commonly acetic acid. It is possible that other nutrients (phosphorus) could also be required for cell growth.

The biological denitrification process would require an acetic acid chemical feed, fluidized bed reactors, followed by aeration to strip the nitrogen gas from the water and add oxygen.

## 4.2.4 Electrodialysis Reversal

Electrodialysis reversal (EDR) is a membrane process that can be utilized to remove dissolved salts, including nitrate, from water. EDR is used to transport salt ions from one solution through membranes to another solution under the influence of an electric potential difference. The EDR process does not require regeneration.

EDR has the following filtering characteristics:

- Ability to remove 75% of dissolved salts (nitrate, hardness, sulfates, etc.) with 2 stages
- Approximately 90% water recovery (10% reject water)
- Does not remove suspended solids or uncharged dissolved solids (TOC)

## 4.3 Municipal Softening

The majority of the metro area communities do not soften their water and leave the choice of softening up to the individual residents. However, some metro area communities including Minneapolis, St. Paul, Richfield, Eden Prairie, White Bear Lake, Bloomington, Tonka Bay, and Forest Lake soften their water at a municipal level. However, many of the metro area communities do not soften their water and leave the choice of softening up to the individual residents. Municipal scale water softening is very expensive from a capital, operations, and maintenance standpoint and would likely require increased water rates to accomplish.

### 4.3.1 Lime Softening

Lime softening is a water treatment process that uses calcium hydroxide, or limewater, to soften water by removing calcium and magnesium ions. In this process, hydrated lime is added to the water to raise its pH to a point where the calcium carbonate is no longer soluble in the water. By forming calcium carbonate precipitate; the calcium can be removed by filtration. The lime softening process offers many benefits, including the reduction of dissolved minerals in the water and the reduction of heavy metals and other elements such as barium, arsenic, and uranium that naturally exist in some water sources.

After the water is softened by the use of lime, the precipitated solids must be removed before the water can be used for drinking. This is typically done by taking the lime slurry generated in the clarifier and removing the water from it (dewatering) using a filter press. The clear filtrate, or liquid, that results from this process is ready for the next step in the water treatment process. The resulting dewatered filter cake, consisting primarily of lime, can then be easily disposed of, or even used by farmers as a soil amendment.

### 4.3.2 Ion Exchange Softening

Ion exchange softening involves exchanging calcium and magnesium ions for sodium ions with an ion exchange resin. This is exactly the same process that is used in a home water softener. To regenerate an ion exchange softener, the resin is flushed with a concentrated solution of brine. This regeneration process uses large quantities of salt. For every million gallons of water treated, approximately 2 tons (4,000 lbs) of salt and 45,000 gallons of water is used. The spent salt brine is then discharged to the sewer.

Since SPU sends their wastewater to the Metropolitan Council Environmental Services (MCES) Metro Wastewater Treatment Plant, the discharge would ultimately be discharged to the Mississippi River. While the MCES Metro Wastewater Treatment Plant currently meets its

discharge limits, chlorides have received more regulatory scrutiny recently. Operating a municipal scale ion exchange softening process may become less feasible in the future due to chlorides in wastewater.

## 5 Water Quality Survey

The public involvement process incorporates citizens and stakeholders in the early stages of the planning process and encourages their participation throughout a project's lifecycle. Collaborating with the public allows policy makers to foster a shared project vision and enjoy a higher level of acceptance among planners, citizens, and other project stakeholders. The planning process can come to life when the community emerges to share their voices. To accomplish this, SEH worked with SPU to develop a series of questions to pose to SPU's customers, regarding their satisfaction with their water quality. The questions were designed to gauge the customers interest and support for municipal treatment throughout SPU's system. The survey asked customers to weigh in on the following issues:

- Customers' perception of the current quality of water they receive
  - Concerns with taste and odor
  - Comfort with current manganese levels
  - Comfort with current nitrate levels
- Current cost of water service (water rates)
- Customers' interest, or willingness, to pay more for advanced water treatment
- Willingness to pay for municipally softened water

See the attached Memorandum 3 – Water Quality Survey (Appendix C), which describes in detail the results of the survey.

## 6 Proposed System Improvements

After analyzing SPU's distribution system layout, water concentrations in each well, and distribution modeling results, three (3) systemwide treatment alternatives were developed. These alternatives will each provide treated water to the entire system. See Appendix D for the complete maps representing each of the following options. All three (3) of these options designed to satisfy a projected ultimate demand of 25 MGD.

### 6.1 Alternative 1 – Satellite Treatment

#### 6.1.1 Description

This systemwide treatment alternative proposes individual treatment facilities to be constructed within the vicinity of each water supply well (See Appendix D). This satellite alternative reduces the amount of transmission mains required to provide systemwide treatment by source treating at each of existing pump house sites, with exception to Pump House 2, which is most feasible to route to Pump House 3. In total, it is recommended that seven (7) treatment facilities be constructed to provide treatment in all three (3) of SPU's pressure zones. This alternative allows each treatment facility to be tailored to the specific water quality at the site-specific wells to treat accordingly, as well as provide a better option for phased implementation based on need for treatment.

Table 7 describes the proposed treatment facilities included in Alternative 1 (Satellite). The proposed facilities are described in more detail in the following sections.



**Table 7: Alternative 1 (Satellite) Proposed Water Treatment Facilities**

Satellite WTP Location	Supply Wells			Water Quality (2018 - 2020) <sup>[1]</sup>			Proposed Treatment
	Existing Wells	New Wells <sup>[2]</sup>	MGD <sup>[3]</sup>	Iron	Manganese	Nitrate	
Pump House 3 Site	2, 8	Well 22	3.7	0.00	0.00	2.2-6.3	Nitrate Removal
Pump House 15 Site	15, 16, 17	Well 18 & 19	9.2	0.0-0.03	0.0-0.12	2.8-7.1	Iron, Manganese, & Nitrate Removal
Pump House 9 Site	9, 11	NONE	3.0	0.00	0.00	1.9-4.5	Nitrate Removal
Pump House 12 Site	12, 13, 14	NONE	2.7	0.0-1.2	0.1-0.08	0.0-0.9	Iron & Manganese Removal
Pump House 20 Site	20, 21	NONE	3.3	0.00	0.00	1.1-3.6	Nitrate Removal
Pump House 6 Site	6, 7, 10	NONE	4.9	0.0-0.42 <sup>[4]</sup>	0.0-0.03	0.0-5.6	Iron & Manganese Removal <sup>[5]</sup>
Tank 8 Site	NONE	22, 23	3.3	Unknown water quality.			Iron, Manganese, and Nitrate Removal <sup>[6]</sup>

<sup>[1]</sup> Ranges based on existing supply wells concentration from 2018-2020

<sup>[2]</sup> New well capacities assumed to be 1,250 gpm.

<sup>[3]</sup> Assumes all supply wells are running.

<sup>[4]</sup> In 2020, Well 10 recorded an unexpected iron concentration of 1.98 mg/L

<sup>[5]</sup> If Well 10 is to be utilized, nitrate levels could be diluted below 5.0 mg/L, but the iron levels would require removal. However, if Well 10 is to be decommissioned, the nitrate levels would require nitrate removal.

<sup>[6]</sup> Treatment technique should be reassessed after determining the new well's water quality.

## 6.1.2 Pump House 3 Site

The proposed satellite treatment plant will be within the Pump House 3 site and will treat water supplied from Well No. 2 and Well No. 8, as well as a potential new well that will share the site (Well No. 22). This would require watermains to be constructed from Pump House 2 to the Pump House 3 site. As noted previously in the report, existing Well No. 3 is not operated due to subpar water quality and will remain as a last resort emergency well that would require blending when operating.

If Well No. 2, Well No. 8, and the new Well No. 22 were all running, the plant's capacity would need to be designed to treat 3.7 MGD (5.0 MGD with Well No. 3 running). Assuming the concentration of the new Well No. 22 would be similar to the nearby wells out of the Jordan aquifer, a water quality analysis of water from Well 2, Well 8, and Well 22 estimates that nitrate could range from 2.2 mg/L to 6.3 mg/L (without blending), depending on which well is running, and expect iron and manganese levels to be near zero. To achieve reduced levels of nitrate, the proposed satellite WTP should be designed as a nitrate removal facility. A potential layout for a 3 MGD ion exchange WTP adjacent to Pump House 3 is shown on Appendix E.

It should be noted that Well No. 3 has elevated levels of iron that could cause fouling on ion exchange resin. Well No. 3 should be only run when it is diluted with the other three (3) wells and should be used sparingly.

### 6.1.3 Pump House 6 Site

The proposed satellite treatment plant will be within the Pump House 6 site and will treat water supplied from Well No. 6, Well No. 7, and Well No. 10. Well 10 is currently used less than 1% of the total yearly pumpage due to a history of containing moderate concentrations of iron, radon and radium 226/228. If Well No. 10 is going to supply the satellite WTP, it will need to always blended with water from Well No. 6 and Well No. 7 to reduce the concentration of radium and radon. If all three (3) wells were running, the plant's capacity would need to be designed to treat 5.0 million gallons per day.

A water quality analysis of the water from Well No. 6, Well No. 7, and Well No. 10 estimates that nitrate could range from 2.7 mg/L to 3.7 mg/L, depending on which well is running and ensuring Well No. 10 is always being blended with another well, and expect iron and manganese levels to be near 0.66 mg/L and 0.01 mg/L respectively. To achieve reduced levels of iron, the proposed satellite WTP should be designed as an iron and manganese removal facility. If Well No. 10 was to not be utilized as a supply well, the satellite WTP should be designed as a nitrate removal facility.

Due to the size of the site, additional land will likely need to be acquired to fit the WTP on the site. SPU indicated that there is a possibility to purchase some of the land to the west owned by the Shakopee Energy Park. This would have to be worked out during the design phase of the project. A potential layout for a 5 MGD gravity filtration WTP adjacent to Pump House 6 is shown in Appendix E.

### 6.1.4 Pump House 9 Site

The proposed satellite treatment plant will be within the Pump House 9 site and will treat water supplied from Well No. 9 and Well No. 11. If both wells running, the plant's capacity would need to be designed to treat 3.0 million gallons per day. A water quality analysis of water from Well No. 9 and Well No. 11 estimates that nitrate could range from 1.87 mg/L to 4.45 mg/L, depending on which well is running, and expect iron and manganese levels to be near zero. To achieve reduced levels of nitrate, the proposed satellite WTP should be designed as a nitrate removal facility.

Due to the size of the site, additional land will likely need to be acquired to the west of Pump House 9. SPU indicated that there is a possibility to convert some of the parking lot to the west to incorporate the water treatment facility. This would have to be worked out during the design phase of the project. A potential layout for a 3 MGD ion exchange WTP is shown in Appendix E.

### 6.1.5 Pump House 12 Site

The proposed satellite treatment plant will be within the Pump House 12 site and will treat water supplied from Well No. 12, Well No. 13, and Well No. 14. As noted previously in the report, existing Well No. 14 is not operated frequently due to subpar water quality and will remain as a last resort emergency well that would require blending when operating. Due to the low pumping capacity of Well No. 14, it may be more economical to decommission the well rather than pay for the upkeep.

If Well No. 12 and Well No. 13 were both running, the plant's capacity would need to be designed to treat 2.7 MGD (3.2 MGD with Well No. 14 running). A water quality analysis of water from Well No. 12 and Well No. 13 estimates that manganese could range from 0.01 mg/L to 0.08 mg/L, depending on which well is running, and expect iron and nitrate levels to be near zero. To achieve reduced levels of manganese, the proposed satellite WTP should be designed as an iron and manganese removal facility. These processes will also remove the high levels of iron from Well No. 14, if it was required to supply the WTP. A potential layout for a 3 MGD filtration WTP is shown in Appendix E.

### 6.1.6 Pump House 15 Site

The proposed satellite treatment plant will be within the Pump House 15 site and will treat water supplied from Well No. 15, Well No. 16, and Well No. 17, as well as two (2) potential new wells (Well No. 18 and Well No. 19). If Well No. 15, Well No. 16, and Well No. 17 were all running, the plant's capacity would need to be designed to treat 5.8 million gallons per day. With the potential new wells supplying approximately 1.8 MGD each, the water treatment capacity should be increased to 9.4 MGD.

Assuming the concentration of the new wells would be similar to the nearby wells out of the Jordan aquifer, a water quality analysis of water from the wells estimates that nitrate could range from 2.8 mg/L to 7.1 mg/L, depending on which wells are running, and expect iron levels to be between 0.0 mg/L and 0.03 mg/L, and manganese levels between 0.0 mg/L and 0.12 mg/L. To achieve reduced levels of nitrate, iron, and manganese, the proposed satellite WTP should be designed as an iron, manganese, and nitrate removal facility.

Due to the size of the Pump House 15 site, additional land will likely need to be acquired. SPU indicated that there is a possibility to utilize some of the 17th Avenue Sports Complex land near Pump House 15. This would have to be worked out during the design phase of the project. A potential layout for a 10 MGD filtration and ion exchange WTP is shown in Appendix E.

### 6.1.7 Pump House 20 Site

The proposed satellite treatment plant will be within the Pump House 20 site and will treat water supplied from Well No. 20, and Well No. 21. If both wells were running, the plant's capacity would need to be designed to treat 3.3 million gallons per day. A water quality analysis of water from Well No. 20 and Well No. 21 estimates that nitrate could range from 1.1 mg/L to 3.6 mg/L, depending on which well is running, and expect iron and manganese levels to be near zero. To achieve reduced levels of nitrate, the proposed satellite WTP should be designed as a nitrate removal facility.

Due to the size of the site, additional land will likely need to be acquired to the west of Pump House 20. SPU indicated that there is a possibility to convert some of the parking lot to the west to incorporate the water treatment facility. This would have to be worked out during the design phase of the project. A potential layout for a 3.0 MGD ion exchange WTP is shown in Appendix E.

### 6.1.8 Tank 8 Site

The proposed satellite treatment plant will be at the new Tank 8 site on the west side of town. The proposed WTP will be supplied by two (2) new wells (Well No. 23 and Well No. 24). It is anticipated that the capacity would need to be designed to treat 3.0 million gallon per day. Since

there hasn't been a water quality analysis done at the proposed site, it should be assumed that the WTP should be designed to treat for iron, manganese, and nitrates. To achieve reduced levels of iron, manganese, and nitrates, the proposed satellite WTP should be designed as an iron and manganese, and nitrate removal facility. A potential layout for a 3 MGD filtration and ion exchange WTP is shown in Appendix E.

## 6.1.9 Supply Wells Improvements

As discussed above, it can be expected that future project demands will cause SPU to see supply deficiencies. Thus, this alternative suggests adding four (4) new wells to satisfy water demands across the entire system and decommissioning two (2) of SPU's existing wells. SPU has identified multiple potential well sites which could all be feasible site options to increase supply to meet future demands. The proposed new wells for the Alternative 1 (Satellite) will be Well No. 18, Well No. 22, Well No. 23, and Well No. 24, as well as Well No. 19, which will be considered a reserve site for future increased demands.

### 6.1.9.1 Well No. 18 & Well No. 19 (Reserve)

With anticipation of demand increases in the future, SPU planned ahead and constructed watermain to two (2) potential well sites that would feed Pump House 15 (Well No. 18 and Well No. 19). Well No. 18 and Well No. 19 have potential sites that have already been located by SPU in the vicinity of the Shakopee Soccer Association soccer fields. For the Alternative 1 (Satellite), it is proposed that Well No. 18 be constructed as planned to feed the satellite WTP at the Pump House 15 site and Well No. 19 be held as a reserve option for any additional capacity that would need to be added down the road.

### 6.1.9.2 Well No. 22

In order to satisfy future demands in the NES zone, the proposed Well No. 22 would be located next to Well No. 3. As noted previously in the report, the existing Well No. 3 is not operated due to subpar water quality. The construction of a new water production well would allow water from the new well to be blended with water from Well No. 3, as well as Well No. 2 and Well No. 8, to produce an effluent that meets the drinking water standards. By constructing such a well, the capacity of Well No. 3 could potentially be utilized to reduce the need for additional supply.

### 6.1.9.3 Tank 8 Site (Well No. 23 & Well No. 24)

In order to satisfy future demands in the 2HES (west) and to not rely solely on a booster station, additional capacity may be needed on the west side of the system. For the Alternative 1 (Satellite), it is proposed that Well No. 23 and Well No. 24 be constructed to supply this area. The proposed location of the wells would be on the same site as newly constructed Tank 8 in the 2HES (west) and would work in conjunction with Tank 8. Due to their location in a higher-pressure zone, they could also easily feed water to the lower pressure zones by gravity.

### 6.1.9.4 Decommission Wells

It is being proposed that Well No. 4 and Well No. 5, which accounts for 1,500 gpm of the system's capacity, would be decommissioned due to their poor water quality and lack of capacity. To make up for this capacity, one of the additional four (4) wells will satisfy the lost capacity. If SPU decides to treat Well No. 4 and Well No. 5, neither Well No. 18 and Well No. 19 would be needed and could be kept as reserve for future supply.

### 6.1.9.5 Watermain Improvements

Under the Alternative 1 (Satellite), a series raw water and finished water distribution mains must be constructed to deliver adequate flows. These watermains were modeled to accurately determine the size for the anticipated flows from the 2040 demands. Although the local knowledge of development patterns was utilized in the preparation of the watermain additions, as a conceptual plan, the actual location of the improvements will depend upon future planning efforts and the circumstances at the time of the improvement are implemented and may not follow exactly as shown in the figure. The following watermain additions are included in the Alternative 1 conceptual plan:

#### Raw Watermain

- 12" DIP – 1,500 feet

### 6.1.10 Construction Costs

The following table (Table 8) is the estimated probable cost to implement this alternative. The cost estimate only includes the work needed to implement systemwide treatment based on the described Alternative 1 (Satellite) above and does not include land acquisition costs and work that was already part of the SPU's existing Capital Improvement Plan (CIP). The estimated total cost to implement systemwide satellite treatment is \$70,314,750 for satellite pressure WTPs and \$76,389,750 for satellite gravity WTPs.

**Table 8: Alternative 1 (Satellite) Cost Estimate**

Item	Cost	
New Wells	\$6,000,000	
Decommissioning Wells	\$50,000	
Raw Watermain	\$435,000	
Finished Watermain	-	
<b>Treatment</b>	<b>Pressure</b>	<b>Gravity</b>
Iron & Manganese Removal	\$26,000,000	\$30,500,000
Nitrate Removal	\$19,600,000	\$19,600,000
Lime Softening	-	-
<b>Construction Subtotal</b>	<b>\$52,085,000</b>	<b>\$56,585,000</b>
Contingency (15%)	\$7,812,750	\$8,487,750
<b>Construction Total</b>	<b>\$59,897,750</b>	<b>\$65,072,750</b>
Engineering & Admin (20%)	\$10,417,000	\$11,317,000
<b>Total Probable Cost</b>	<b>\$70,314,750</b>	<b>\$76,389,750</b>

*NOTE: Probable cost does not include any land acquisition that may be required.*

## 6.1.11 Operations and Maintenance Costs

The following table (Table 9) is the estimated operations and maintenance cost associated with Alternative 1.

**Table 9: Alternative 1 (Satellite) Annual Operation, Maintenance, & Replacement Costs**

Item	Annual Cost	
	Pressure	Gravity
Annual Equipment Replacement	\$1,124,768	\$885,622
Labor	\$390,000	\$390,000
Gas	\$48,000	\$44,000
Chemicals	\$666,156	\$666,156
Insurance	\$50,000	\$60,000
Electricity	\$544,375	\$642,688
Equip. Repair	\$121,338	\$107,012
<b>Total Annual Cost</b>	<b>\$2,944,638</b>	<b>\$2,795,477</b>

NOTE: Does not include existing utility annual costs.

## 6.2 Alternative 2 – Central Treatment

### 6.2.1 Description

This systemwide treatment alternative proposes a singular centralized treatment facility for the whole system (See Appendix D). This alternative would convey all of SPU's water supply wells to one central location, providing equally treated water to the entire system. This proposed alternative reduces the cost of facilities and required processing equipment by having one centralized treatment facility. For that reason, this alternative would be the most economical option to provide softened water, if that was desired. The main pitfall to a central plant would be the transmission mains required to convey the raw water from each of the wells to one central location.

To meet maximum day demands for SPU through 2040, the central WTP is proposed to be 25 MGD. The WTP should be designed to include filtration, ion exchange, and potential lime softening. A potential layout for a 25 MGD filtration and ion exchange WTP is shown in Appendix E.

### 6.2.2 Location

The WTP is proposed to be located on the gravel pit site (1650 Co Rd 83, Shakopee, MN), which is southwest of the intersection of Mystic Lake Dr and 17<sup>th</sup> Ave E. An extension of Philipp Ave will eventually run through the gravel site parallel to 17<sup>th</sup> Ave E. The proposed WTP should be located south of the future road to allow enough room for future development. If SPU decides that this location is not the most advantageous for the central WTP, a similar site between Pump House 15 and Mystic Lake Dr (Co Rd 83) should be selected due to the proximity to nearby wells. This would have to be worked out during the design phase of the project.

## 6.2.3 Treatment

### 6.2.3.1 Filtration

The design of the WTP is based on the reduction of iron and manganese to below secondary standards of 0.30 mg/L and 0.05 mg/L, respectively. This is proposed to be achieved by adding the oxidants (chlorine or oxygen and sodium permanganate) and filter the soluble compounds out through sand filtration. For the filtration process, the WTP can be designed to be either gravity or pressure filtration with sand as the primary filtration media. For gravity filtration, the WTP requires high service pumps after the filtration to pump to the distribution system. High service pumps are not required in a pressure filtration system because the well pumps push the water through the process units to the water tower and distribution system.

Sand filters (gravity and pressure) require periodic backwashing to remove solids from the filters. After a backwash, the solids are allowed to settle and the clear water is recycled back to the filters. This can be done with backwash tanks or lamella plate settlers. The major benefit of plate settlers is the elimination for the need for batch processing of backwash water from backwash tanks and provide significant operational flexibility. Either option will need to be further discussed in the design phase.

### 6.2.3.2 Anion Exchange

In addition to iron and manganese removal, SPU is looking to reduce the nitrate concentration in their distribution system. The anion exchange process would follow the filtration process. The anion exchange layout will consist of anion-exchange vessels holding the resin, intermediate pumps to pressurize the vessels, and salt silos. The anion exchange resin is periodically regenerated with salt brine to clean the nitrate off of the resin. The spent salt brine is then discharged to the sewer. Typically, for every million gallons of water treated, approximately 2 tons (4,000 lbs) of salt and 45,000 gallons of water is used. Operating at 25 MGD capacity, almost 50 tons of salt would be used and needed to be discharged to the sewer every day.

### 6.2.3.3 Lime Softening

An optional addition to the WTP is to add softening. To reduce chloride being discharged into the system, designing for lime softening is a good treatment method. The lime softening layout would consist of lime silos, lime slackers, clarifiers, and a dewatering facility. Lime softening will create a large capital expense and generate higher operation and maintenance costs. In addition, a 25 MGD lime softening WTP could easily generate up to 200,000 pounds of solid waste that would need to be repurposed or disposed of by the utility.

## 6.2.4 Building Layout/General Sequence

A potential gravity filter building layout is included in Appendix E. The chemical rooms are located on the west side of the building, with exterior doors accessible for deliveries. The electrical, mechanical, high service pump room, and generator rooms are located in close proximity to each other to allow for short conduit runs to motor controls.

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

When the filters are being backwashed, the wastewater will need to be conveyed to a backwash tank. The backwash tank will allow for the particulate to settle out and provide on-site retention to better control the water being supplied to the sewer.

## 6.2.5 Supply Well Improvements

As discussed above, it can be expected that future project demands will cause SPU to see supply deficiencies. Thus, this alternative suggests adding four (4) new wells to satisfy water demands across the entire system, and decommissioning two (2) of SPU's existing wells. SPU has identified multiple potential well sites which could all be feasible site options to increase supply to meet future demands. The proposed new wells for the Alternative 2 (Central) will be Well No. 18, Well No. 19 Well No. 22, and Well No. 23.

### 6.2.5.1 Well No. 18 & Well No. 19

With anticipation of demand increases in the future, SPU planned ahead and constructed watermain to two (2) potential well sites that would feed Pump House 15 (Well No. 18 and Well No. 19). Well No. 18 and Well No.19 have potential sites that have already been located by SPU in the vicinity of the Shakopee Soccer Association soccer fields. Since the piping is already in place, the wells could either feed directly to the proposed WTP or feed to Pump House 15, where it will then be conveyed to the WTP.

### 6.2.5.2 Well No. 22

The proposed Well No. 22 would be located next to Well No. 3 on the same site. The construction of this well would not require an additional building and the new well could be piped directly into the Pump House 3 where it will then be conveyed to the WTP.

### 6.2.5.3 Well No. 23

SPU currently owns a portion of property near the Church Addition Development. For the Alternative 2 (Central), it is proposed that a well (Well No. 23) be constructed on this site to supply the WTP. Centrally located, this well site could provide an economic location for a new well that would have a short watermain to feed the WTP.

### 6.2.5.4 Decommission Wells

It is proposed that Well No. 4 and Well No. 5, which accounts for 1,500 gpm of the system's capacity, would be decommissioned due to the long watermain that would be required to feed the central WTP. To make up for this capacity, one of the additional four (4) wells will satisfy the lost capacity.

### 6.2.5.5 Watermain Improvements

Under the Alternative 2 (Central), a series raw water and finished water distribution mains must be constructed to deliver adequate flows. These watermains were modeled to accurately determine the size for the anticipated flows from the 2040 demands. Although the local knowledge of development patterns was utilized in the preparation of the watermain conceptual plan, the actual location of the improvements will depend upon future planning efforts and the circumstances at the time of the improvement are implemented and may not follow exactly as shown in the figure. The following watermain additions are included in the Alternative 2 (Central) WTP conceptual plan:



**Raw Watermain**

- 12" DIP – 5,000 feet
- 16" DIP – 40,500 feet
- 18" DIP – 3,250 feet
- 24" DIP – 9,750

**Finished Watermain**

- 12" DIP – 26,250 feet
- 16" DIP – 13,000 feet
- 18" DIP – 3,400 feet
- 20" DIP – 4,250 feet

6.2.6 Construction Cost

The following table (Table 10) is the estimated probable cost to implement this alternative. The cost estimate only includes the work needed to implement systemwide treatment based on the described alternative above and does not include land acquisition and work that was already part of the SPU's existing Capital Improvement Plan (CIP). Some of the pipes that are included in the current CIP are needing to be upsized if this alternative is selected. SPU should plan ahead and upsize those pipes when they are constructed initially.

The estimated total cost to implement a centralized treatment facility is \$97,642,125 for a central pressure WTP and \$104,392,125 for a central gravity WTP. The treatment would consist of filtration and ion exchange. If SPU would like to municipally soften their water, a lime softening process would need to be included. The estimated total cost to implement a centralized lime softening, as well as iron, manganese and nitrate removal facility, would be \$138,142,125.

**Table 10: Alternative 2 (Central) Cost Estimate**

Item	Cost		
New Wells	\$4,000,000		
Decommissioning Wells	\$50,000		
Raw Watermain	\$20,700,000		
Finished Watermain	\$11,127,500		
Treatment	Pressure	Gravity	Gravity w/ Softening
Iron & Manganese Removal	\$27,000,000	\$32,000,000	\$32,000,000
Nitrate Removal	\$9,450,000	\$9,450,000	\$9,450,000
Lime Softening	-		\$25,000,000
<b>Construction Subtotal</b>	<b>\$72,327,500</b>	<b>\$77,327,500</b>	<b>\$102,327,500</b>
Contingency (15%)	\$10,849,125	\$11,599,125	\$15,349,125
<b>Construction Total</b>	<b>\$83,176,625</b>	<b>\$88,926,625</b>	<b>\$117,676,625</b>
Engineering & Admin (20%)	\$14,465,500	\$15,465,500	\$20,465,500
<b>Total Probable Cost</b>	<b>\$97,642,125</b>	<b>\$104,392,125</b>	<b>\$138,142,125</b>

NOTE: Probable cost does not include any land acquisition that may be required.

## 6.2.7 Operations and Maintenance Costs

The following table (Table 11) is the estimated operations and maintenance cost associated with Alternative 2 (Central).

**Table 11: Alternative 2 (Central) Annual Operation, Maintenance, & Replacement Costs**

Item	Annual Cost		
	Pressure	Gravity	Gravity w/ Softening
Annual Equipment Replacement	\$853,435	\$601,720	\$738,474
Labor	\$156,000	\$156,000	\$811,200
Gas	\$20,000	\$20,000	\$24,000
Chemicals	\$854,875	\$854,875	\$2,504,875
Insurance	\$28,750	\$40,250	\$60,250
Electricity	\$598,000	\$717,600	\$842,400
Equip. Repair	\$104,990	\$93,800	\$364,376
<b>Total Annual Cost</b>	<b>\$2,616,050</b>	<b>\$2,484,245</b>	<b>\$5,345,575</b>

NOTE: Does not include existing utility annual costs.

## 6.3 Alternative 3 – Hybrid Treatment

### 6.3.1 Description

This hybrid treatment alternative is a combination of the two other alternatives. This alternative proposes a NES zone centralized treatment facility that would convey water from SPU's nearby wells, while less conveniently located wells will construct satellite treatment plants (See Appendix D). This will reduce the infrastructure for treatment processes and equipment required by only treating at four (4) different sites as compared to seven (7) with the satellite alternative. It will also reduce the amount of transmission mains required to provide systemwide treatment.

Table 12 describes the proposed treatment facilities as part of Alternative 3 (Hybrid). The proposed facilities are described in more detail in the following sections.

**Table 12: Alternative 3 (Hybrid) Proposed Water Treatment Facilities**

Satellite WTP Location	Supply Wells			Water Quality (2018 - 2020) <sup>[1]</sup>			Proposed Treatment
	Existing Wells	New Wells <sup>[2]</sup>	MGD <sup>[3]</sup>	Iron	Manganese	Nitrate	
Gravel Site	Well No. 6, 7, 9, 10, 11, 15, 16, and 17	Well No. 18, 19, & 22	18.8	Unknown water quality for Well No. 18, 19, and 22			Iron, Manganese, and Nitrate Removal <sup>[4]</sup>
Pump House 12	12, 13, 14	NONE	2.7	0.0-1.2	0.1-0.08	0.0-0.9	Iron & Manganese Removal
Pump House 20	20, 21	NONE	3.3	0.00	0.00	1.1-3.6	Nitrate Removal
Tank 8	NONE	Well No. 23 & 24	3.3	Unknown water quality.			Iron, Manganese, and Nitrate Removal <sup>[4]</sup>

<sup>[1]</sup> Ranges based on existing supply wells concentration from 2018-2020

<sup>[2]</sup> New well capacity assumed to be 1,200 gpm.

<sup>[3]</sup> Assumes all supply wells are running.

<sup>[4]</sup> Treatment technique should be reassessed after determining the new well's water quality.

### 6.3.2 NES Zone WTP (Gravel Site)

The proposed WTP will treat water supplied from all the SPU's NES zone wells (Well No. 6, 7, 9, 10, 11, 15, 16, and 17) as well and three (3) new wells (Well No. 18, 19, and 22). If all the wells were running, the plant's capacity would need to be designed to treat 18.8 million gallons per day. A water quality analysis of water is difficult to determine, since not all the wells will be running at the same time and three (3) of the eleven (11) supply wells are new wells. To allow for changing water conditions and full operational control, the WTP should be designed to reduce the levels of iron, manganese, and nitrate.

A potential layout for an 18 MGD filtration and ion exchange WTP is shown in Appendix E.

#### 6.3.2.1 Site Location

The WTP is proposed to be located on the gravel pit site (1650 Co Rd 83, Shakopee, MN), which is southwest of the intersection of Mystic Lake Dr and 17<sup>th</sup> Ave E. An extension of Philipp Ave will eventually run through the gravel site parallel to 17<sup>th</sup> Ave E. The proposed WTP should be located south of the future road to allow enough room for future development. If SPU decides that this location is not the most advantageous for the central WTP, a similar site between Pump House 15 and Mystic Lake Dr (Co Rd 83) should be selected due to the proximity to nearby wells. This would have to be worked out during the design phase of the project.

### 6.3.3 Pump House 12 Site

The proposed satellite treatment plant will be within the Pump House 12 site and will treat water supplied from Well No. 12, Well No. 13, and Well No. 14. As noted previously in the report, existing Well No. 14 is not operated frequently due to subpar water quality and will remain as a last resort emergency well that would require blending when operating. Due to the pumping

capacity of Well No. 14, it may be more economical to decommission the well rather than pay for the upkeep.

If Well No. 12 and Well No. 13 were both running, the plant's capacity would need to be designed to treat 2.7 MGD (3.2 MGD with Well No. 14 running). A water quality analysis of water from Well 12 and Well 13 estimates that manganese could range from 0.01 mg/L to 0.08 mg/L, depending on which well is running, and expect iron and nitrate levels to be near zero. To achieve reduced levels of manganese, the proposed satellite WTP should be designed as an iron and manganese removal facility. These processes will also remove the high levels of iron from Well No. 14, if it was required to supply the WTP. A potential layout for a 3 MGD filtration WTP is shown in Appendix E.

#### 6.3.4 Pump House 20 Site

The proposed satellite treatment plant will be within the Pump House 20 site and will treat water supplied from Well No. 20 and Well No. 21. If both wells were running, the plant's capacity would need to be designed to treat 3.3 million gallons per day. A water quality analysis of water from Well No. 20 and Well No. 21 estimates that nitrate could range from 1.1 mg/L to 3.6 mg/L, depending on which well is running, and expect iron and manganese levels to be near zero. To achieve reduced levels of nitrate, the proposed satellite WTP should be designed as a nitrate removal facility.

Due to the size of the site, additional land will likely need to be acquired to the west of Pump House 20. SPU indicated that there is a possibility to convert some of the parking lot to the west to incorporate the water treatment facility. This would have to be worked out during the design phase of the project. A potential layout for a 3.0 MGD ion exchange WTP is shown in Appendix E.

#### 6.3.5 Tank 8 Site

The proposed satellite treatment plant will be at the new Tank 8 site on the west side of town. The proposed WTP will be supplied by two (2) new wells (Well No. 23 and Well No. 24). It is anticipated that the capacity would need to be designed to treat 3.0 million gallon per day. Since there hasn't been a water quality analysis done at the proposed site, it should be assumed that the WTP should be designed to treat for iron, manganese, and nitrates. To achieve reduced levels of iron, manganese, and nitrates, the proposed satellite WTP should be designed as an iron and manganese, and nitrate removal facility. A potential layout for a 3 MGD filtration and ion exchange WTP is shown in Appendix E.

#### 6.3.6 Supply Wells Improvements

As discussed above, it can be expected that future project demands will cause SPU to see supply deficiencies. Thus, this alternative suggests adding five (5) new wells to satisfy water demands across the entire system and decommissioning five (5) of SPU's existing wells. SPU has identified multiple potential well sites which could all be feasible site options to increase supply to meet future demands. The proposed new wells for the Alternative 3 (Hybrid) will be Well No. 18, Well No. 19, Well No. 22, Well No. 23, and Well No. 24.

### 6.3.6.1 Well No. 18 & Well No. 19

With anticipation of demand increases in the future, SPU planned ahead and constructed watermain to two (2) potential well sites that would feed Pump House 15 (Well No. 18 & Well No. 19). Well No. 18 and Well No.19 have potential sites located in the vicinity of the Shakopee Soccer Association soccer fields. Since the piping is already in place, the wells could either feed directly to the proposed WTP or feed to Pump House 15, where it will then be conveyed to the WTP.

### 6.3.6.2 Well No. 22

SPU currently owns a portion of property near the Church Addition Development. As proposed in the 2019 Water System Plan Update, this site would be utilized for the Church Addition Booster Station and Flow Control Valve. Centrally located, this well site could provide an economic location for a new well that would have a short watermain expenses to feed to the WTP.

### 6.3.6.3 Tank 8 Site (Well No. 23 & Well No. 24)

In order to satisfy future demands in the 2HES zone (west) and to not rely solely on a booster station, additional capacity may be needed on the west side of Shakopee. For the Alternative 3 Hybrid, it is proposed that Well No. 23 and Well No. 24 be constructed to supply this area. The proposed location of the wells would be on the same site as new Tank 8 in the 2HES zone (west) and would work in conjunction with Tank 8. Due to their location in a higher pressure zone, they could also easily feed water to the lower pressure zones by gravity. Additionally, the construction of these wells near each other, as well as the proposed WTP, would allow for shorter watermains to be constructed.

### 6.3.6.4 Decommission Wells

As part of this Alternative 3 (Hybrid) Treatment, it is proposed that Well No. 2, Well No. 3, Well No. 8, Well No. 4 and Well No. 5, which accounts for 3,800 gpm (5.5 MGD) of the system's capacity. To make up for this capacity, two (2) of the additional five (5) wells will satisfy the lost capacity. If SPU decides to treat Well No. 4 and Well No. 5, or Well No. 2 and Well No. 8, then Well No. 19 could be ignored as a new source of supply.

### 6.3.6.5 Watermain Additions

Under this alternative, a series raw water and finished water distribution mains must be constructed to deliver adequate flows to and from the NES Zone WTP. These watermains were modeled to accurately determine the size for the anticipated flows from the 2040 demands. Although the local knowledge of development patterns was utilized in the preparation of the watermain conceptual plan, the actual location of the improvements will depend upon future planning efforts and the circumstances at the time of the improvement are implemented and may not follow exactly as shown in the figure. The following watermain additions are included in the Alternative 3 (Hybrid) conceptual plan:

#### Raw Watermain

- 12" DIP – 3,250 feet
- 16" DIP – 3,250 feet
- 18" DIP – 5,500 feet
- 24" DIP – 4,250 feet

#### Finished Watermain

- 12" DIP – 4,250 feet
- 16" DIP – 5,000 feet
- 18" DIP – 750

### 6.3.7 Construction Cost

The following table (Table 13) is the estimated probable cost to implement this alternative. The cost estimate only includes the work needed to implement systemwide treatment based on the described alternative above and does not include land acquisition costs and work that is already part of the SPU's existing Capital Improvement Plan (CIP). The estimated total cost to implement Alternative 3 (Hybrid) is \$76,516,313 for pressure WTPs and \$85,291,313 for gravity WTPs.

**Table 13: Alternative 3 (Hybrid) Cost Estimate**

Item	Cost	
	Pressure	Gravity
New Wells	\$5,000,000	
Decommissioning Wells	\$50,000	
Raw Watermain	\$6,427,500	
Finished Watermain	\$3,801,250	
<b>Treatment</b>	<b>Pressure</b>	<b>Gravity</b>
Iron & Manganese Removal	\$28,000,000	\$34,500,000
Nitrate Removal	\$13,400,000	\$13,400,000
Lime Softening	-	-
<b>Construction Subtotal</b>	<b>\$56,678,750</b>	<b>\$63,178,750</b>
Contingency (15%)	\$8,501,813	\$9,476,813
<b>Construction Total</b>	<b>\$65,180,563</b>	<b>\$72,655,563</b>
Engineering & Admin (20%)	\$11,335,750	\$12,635,750
<b>Total Probable Cost</b>	<b>\$76,516,313</b>	<b>\$85,291,313</b>

NOTE: Probable cost does not include any land acquisition that may be required.

### 6.3.8 Operations and Maintenance Costs

The following table (Table 14) is the estimated operations and maintenance cost associated with Alternative 3 (Hybrid).

**Table 14: Alternative 3 (Hybrid) Annual Operation, Maintenance, & Replacement Costs**

Item	Annual Cost	
	Pressure	Gravity
Annual Equipment Replacement	\$1,093,235	\$842,841
Labor	\$390,000	\$390,000
Gas	\$30,667	\$30,667
Chemicals	\$733,480	\$733,480
Insurance	\$50,000	\$60,000
Electricity	\$472,763	\$588,516
Equip. Repair	\$118,109	\$102,407
<b>Total Annual O&amp;M Cost</b>	<b>\$2,888,255</b>	<b>\$2,747,911</b>

NOTE: Does not include existing utility annual costs.

## 7 Alternative Evaluation and Recommendation

With all the water being supplied by SPU meeting all legally enforceable drinking water standards, SPU is not required to provide additional treatment other than their existing fluoridation and disinfection. However, due to SPU's dedication and commitment to public health and their desire to provide abundant high-quality water to their customers, SPU completed this water treatment feasibility study to actively plan for any water quality or regulatory issues that they may face in the future. The study examined the quality of SPU's municipal water, analyzed current operating practices, evaluated supply and municipal treatment options, and recommended viable solutions to increase the quality of water being supplied to the consumers.

For this study, three (3) treatment systemwide alternatives were evaluated. Each treatment alternative took into consideration the existing and planned infrastructure, water quality of each well, and economical impacts to the customer base. The goal was to generate a template for the necessary upgrades to the existing and future system to provide treatment that would greatly reduce iron, manganese, nitrate and provide equally treated water to all of SPU's customers that excels beyond their already great quality water.

### 7.1 Alternative Evaluation

The study laid out three (3) alternatives to supply SPU's customers with treated water, based on the water quality analysis of the source water. Alternative 1 (Satellite) looked at point source treatment at individual wells with satellite WTPs, Alternative 2 (Central) laid out an approach to conveying all supply water to one centralized treatment facility, and Alternative 3 (Hybrid) combined both approaches with a combination of centralized and satellite WTPs.

Feasibility level opinions of probable cost (OPC) broken down by construction category were prepared above for the gravity and pressure filtration alternatives. A breakdown of each of the alternative's capital costs are included in Table 15. It can be seen that the construction cost of treatment for Alternative 2 (Central) and Alternative 3 (Hybrid) is lower than the construction cost of treatment for Alternative 1 (Satellite). This is due to the economy of scale, which is a proportionate saving in costs gained by an increased scale of construction. However, Alternative 2 (Central) and Alternative 3 (Hybrid) make up for the difference in construction costs by requiring more watermain construction costs. See the full alternatives cost analysis breakdown in Appendix F.

**Table 15: Comparison of Estimate of Probable Cost**

Item	Alternative 1 - Satellite		Alternative 2 - Central			Alternative 3 - Hybrid	
	Pressure	Gravity	Pressure	Gravity	Gravity Lime Softening	Pressure	Gravity
Iron & Manganese Removal	\$26,000,000	\$30,500,000	\$27,000,000	\$32,000,000	\$32,000,000	\$28,000,000	\$34,500,000
Nitrate Removal	\$19,600,000	\$19,600,000	\$9,450,000	\$9,450,000	\$9,450,000	\$13,400,000	\$13,400,000
Lime Softening	-	-	-		\$25,000,000	-	-
<b>Treatment Subtotal</b>	<b>\$45,600,000</b>	<b>\$50,100,000</b>	<b>\$36,450,000</b>	<b>\$41,450,000</b>	<b>\$66,450,000</b>	<b>\$41,400,000</b>	<b>\$47,900,000</b>
New Wells	\$6,000,000		\$4,000,000			\$5,000,000	
Decommission Wells	\$50,000		\$30,000			\$50,000	
Raw watermain	\$435,000		\$20,700,000			\$6,427,500	
Finished Watermain	-		\$14,621,250			\$3,900,000	
<b>Construction Subtotal</b>	<b>\$52,085,000</b>	<b>\$56,585,000</b>	<b>\$72,327,500</b>	<b>\$77,327,500</b>	<b>\$102,327,500</b>	<b>\$56,678,750</b>	<b>\$63,178,750</b>
Contingency (15%)	\$7,812,750	\$8,487,750	\$10,849,125	\$11,599,125	\$15,349,125	\$8,501,813	\$9,476,813
<b>Construction Total</b>	<b>\$59,897,750</b>	<b>\$65,072,750</b>	<b>\$83,176,625</b>	<b>\$88,926,625</b>	<b>\$117,676,625</b>	<b>\$65,180,563</b>	<b>\$72,655,563</b>
Engineering & Admin (20%)	\$10,417,000	\$11,317,000	\$14,465,500	\$15,465,500	\$20,465,500	\$11,335,750	\$12,635,750
<b>Total Probable Cost</b>	<b>\$70,314,750</b>	<b>\$76,389,750</b>	<b>\$97,642,125</b>	<b>\$104,392,125</b>	<b>\$138,142,125</b>	<b>\$76,516,313</b>	<b>\$85,291,313</b>

In all three (3) of the alternatives, the capital cost of the pressure filter treatment plant is slightly less than the gravity filter treatment plant. However, Table 16 identifies that the annual cost of the pressure filter treatment plant is more than the gravity filter treatment plant. The pressure filter treatment plant has a higher life cycle cost due to the expense of painting and maintaining the steel filters; whereas concrete gravity filters require very little maintenance. See the full alternatives operations and maintenance analysis breakdown in Appendix F.

**Table 16: Annual Costs Alternatives Analysis**

Alternative	Type	Annual Operation and Maintenance Cost
<b>Alternative 1 - Satellite</b>	Pressure	\$2,944,638
	Gravity	\$2,795,477
<b>Alternative 2 - Central</b>	Pressure	\$2,616,050
	Gravity	\$2,484,245
	Gravity w/ Softening	\$5,345,575
<b>Alternative 3 - Hybrid</b>	Pressure	\$2,888,255
	Gravity	\$2,747,911



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

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

### 7.1.1 Effect on Water Rates

The Shakopee Public Utilities currently uses a two-tiered structure to charge their customers for water which is charged per 1,000 gallons used by the customer. After the first 5,000 gallons, the cost per 1,000 of water used gets progressively more expensive. In addition to the water usage charge, SPU charges their customers a \$0.42 per 1,000 gallons reconstruction charge, and a fixed service charge depending on the size of their line. The reconstruction charge was implemented to create a Reconstruction Charge Fund, which would support any future supply and treatment needs that SPU would face in the future.

To predict the impact of the implementation of systemwide treatment on SPU's customers water charges, the annual operations & maintenance, as well as the annual loan repayment, must be calculated into the current water rate structure. According to SPU, the Reconstruction Charge Fund could supply approximately \$20M for the proposed water treatment alternative. Assuming that the funds set aside would be applied to the capital construction cost of the project and the remaining costs would require a 20-year loan, SPU could expect to see annual payments of their loan between \$2.5M and \$5M (\$7M with lime softening). Adding the additional operations and maintenance costs, SPU will require additional annual revenues between \$5.5M and \$7.5M (\$12.5M for lime softening).

**Table 17: Annual Costs Alternatives Analysis**

Alternative	Type	Construction Cost	Total Probable Cost	Annual O&M	Construction Costs Annual Loan Repayment (20-yr @ 5%)		Additional Annual Revenue Needed (w/ \$20M reserves applied)
					(no reserves applied)	(\$20M in reserves applied to capital)	
Alternative 1 - Satellite	Pressure	\$52,085,000	\$70,314,750	\$2,944,638	\$4,179,435	\$2,574,583	\$5,519,221
	Gravity	\$56,585,000	\$76,389,750	\$2,795,477	\$4,540,527	\$2,935,675	\$5,731,152
Alternative 2 - Central	Pressure	\$72,327,500	\$97,642,125	\$2,616,050	\$5,803,746	\$4,198,894	\$6,814,944
	Gravity	\$77,327,500	\$104,392,125	\$2,484,245	\$6,204,959	\$4,600,107	\$7,084,351
	Gravity w/ Softening	\$102,327,500	\$138,142,125	\$5,345,575	\$8,211,023	\$6,606,172	\$11,951,747
Alternative 3 - Hybrid	Pressure	\$56,678,750	\$76,516,313	\$2,888,255	\$4,548,050	\$2,943,198	\$5,831,452
	Gravity	\$63,178,750	\$85,291,313	\$2,747,911	\$5,069,626	\$3,464,775	\$6,212,686

## 7.2 Recommendation

Based on the results of this study, additional treatment beyond the current fluoride and chlorine additions is not warranted at this time. The water system is managed and operated to continually supply good drinking water quality that meets EPA’s mandatory water quality standards for drinking water contaminants. SPU is proud of the fact that their drinking water is supplied directly from the naturally safe wells that provides high-quality water to their customers without extensive treatment. However, due to SPU’s dedication and commitment to public health and their desire to provide abundant high-quality water to their customers, SPU completed this water treatment feasibility study to actively plan for any water quality or regulatory issues that they may face in the future. This report laid out three (3) possible alternatives to provide systemwide treatment and increase the quality of water being supplied to the consumers.

SPU designed their system to utilize their good quality water by distributing supply wells evenly throughout the pressure zones. If treatment was ever needed, SPU intended to implement treatment at the individual well sites. For that reason, it is recommended that SPU not pursue Alternative 2 (Central), unless municipal softening is planned to be implemented. The costs associated with watermain construction are too great to be economical. If SPU decides to pursue systemwide treatment, Alternative 1 (Satellite) and Alternative 3 (Hybrid) are both very viable solutions to systemwide treatment.

To address the potential of future treatment needs, the following recommendations are presented below:

1. Given that the annual operation and maintenance costs associated with Alternative 3 (Hybrid) are lower than Alternative 1 (Satellite), it is recommended that the configuration of Alternate 3 be followed. To that end, it is recommended that appropriate property acquisitions and pipeline installations be carried out to ensure that the water infrastructure is established should treatment ever become necessary.
2. Construct the water treatment facilities to be gravity treatment plants, due to the advantages this type of design offers at a comparable cost.
3. Purchase a site for the NES zone centralized treatment facility between Pump House 15 and Mystic Lake Dr (Co Rd 83), due to the proximity to other nearby wells.
4. Sample the groundwater of the proposed future wells at the Tank 8 site in the 2HES zone, prior to designing a satellite WTP.
5. Ensure that any currently planned watermain extensions match the Alternative 3 (Hybrid) proposed watermain system map supplied in Appendix D.

# Appendix A

Water Quality Tables (2018-2020)

### 2018 Water Quality Summary

Parameter	Well No.										HBV	Secondary Standard	EPA MCL	
	2	3	4	5	6	7	8	9	10					
Copper (mg/L)	< 0.005	NA	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005		1	1.3	
Arsenic (µg/L)	< 1		< 0.5	< 0.5	< 1	< 0.5	< 1	< 2	1.81					10
Chloride (mg/L)	32		113	147	87.6	139	55.4	77	13.7				250	
Iron (mg/L)	< 0.015		< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.03	<b>0.422</b>				0.3	
Manganese (mg/L)	< 0.005		< 0.005	0.025	< 0.005	< 0.005	< 0.005	< 0.005	0.008	0.1			0.05	
Sulfate (mg/L)	19.3		11.8	15	10.5	10.4	13.8	21.1	6.9				250	
Alkalinity, Total (as CaCO <sub>3</sub> )	269		249	260	250	271	258	328	207					
Calcium (mg/L)	83.2		93.2	103	76.2	86.4	87.3	110	39.4					
Magnesium (mg/L)	33.6		32.3	35.4	31	34.7	35.5	46.8	15.8					
Sodium (mg/L)	13.1		39.3	46.4	35.2	63.6	19.2	20.8	32.1					
Zinc (mg/L)	< 0.01		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	2			5	
Hardness, Total	346		366	403	318	359	364	467	163					

Parameter	Well No.										HBV	Secondary Standard	EPA MCL
	11	12	13	14	15	16	17	20	21				
Copper (mg/L)	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005		1	1.3
Arsenic (µg/L)	< 2	< 0.5	< 1	<b>25.3</b>	< 1	< 1	< 1	< 1	< 1	< 1			10
Chloride (mg/L)	32.8	16.3	23.5	< 3	32.5	48.6	44.3	32.8	34.7			250	
Iron (mg/L)	< 0.015	< 0.015	< 0.015	<b>1.2</b>	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015		0.3	
Manganese (mg/L)	< 0.005	<b>0.076</b>	0.013	0.041	0.036	< 0.005	0.037	< 0.005	< 0.005	0.1		0.05	
Sulfate (mg/L)	20	15.3	15.9	42.8	11.8	15.4	16	7.69	14.4			250	
Alkalinity, Total (as CaCO <sub>3</sub> )	336	315	315	280	274	292	294	230	283				
Calcium (mg/L)	100	81.5	86.5	87.4	82.9	93.4	91.3	70.2	88.9				
Magnesium (mg/L)	44	35.3	37.6	29.2	34.9	36.8	39.4	24.8	35				
Sodium (mg/L)	12.1	8.35	11.6	8.97	15.3	17.5	17.4	11.4	11				
Zinc (mg/L)	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	2		5	
Hardness, Total	431	349	371	338	351	385	390	277	366				

\* EPA has set forth a lifetime health advisory value of 0.3 mg/L for manganese

**2019 Water Quality Summary**

Parameter	Well No.										HBV	Secondary Standard	EPA MCL	
	2	3	4	5	6	7	8	9	10					
Copper (mg/L)	< 0.005	NA	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005		1	1.3	
Arsenic (µg/L)	< 0.5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.95			10
Chloride (mg/L)	37.1		155	72.7	76.3	124	48.2	63.6	12.1			250		
Iron (mg/L)	< 0.03		< 0.015	< 0.015	< 0.03	< 0.015	< 0.03	< 0.015	<b>0.417</b>				0.3	
Manganese (mg/L)	< 0.005		< 0.005	0.026	< 0.005	< 0.005	< 0.005	< 0.005	0.006	0.1		0.05		
Sulfate (mg/L)												250		
Alkalinity, Total (as CaCO <sub>3</sub> )	266		259	240	256	262	261	329	200					
Calcium (mg/L)	73.7		83.4	105	73.8	85.4	76.8	97.9	42.8					
Magnesium (mg/L)	32.6		29.6	34.7	32.6	36.6	34.4	43	16.8					
Sodium (mg/L)	14.7		26.7	54	32.6	56.3	15.3	18.2	24.9					
Zinc (mg/L)	< 0.01		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	2		5		
Hardness, Total	318		330	405	319	364	333	422	176					
Radium 226/228 (pCi/L)									<b>6.2</b>					5 (combined)
Radon 222 (pCi/L)									280					300

Parameter	Well No.										HBV	Secondary Standard	EPA MCL
	11	12	13	14	15	16	17	20	21				
Copper (mg/L)	< 0.005	< 0.01	< 0.01	< 0.005	< 0.01	0.005	< 0.005	< 0.005	< 0.005	< 0.005		1	1.3
Arsenic (µg/L)	< 0.5	< 0.5	< 0.5	<b>18.4</b>	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5			10
Chloride (mg/L)	42.1	14	21.4	3	43.5	51.7	43	34.2	36.2		250		
Iron (mg/L)	< 0.015	< 0.015	< 0.015	<b>0.633</b>	< 0.015	< 0.015	< 0.03	< 0.03	< 0.03			0.3	
Manganese (mg/L)	< 0.005	<b>0.082</b>	0.01	0.032	<b>0.118</b>	< 0.005	0.036	< 0.005	< 0.005	0.1	0.05		
Sulfate (mg/L)											250		
Alkalinity, Total (as CaCO <sub>3</sub> )	338	323	329	289	279	299	295	214	259				
Calcium (mg/L)	95	83.3	85.6	78.6	82.2	95.4	82.9	62.7	73.6				
Magnesium (mg/L)	43.2	40	41.8	28.6	35.4	38.4	38.5	22.7	30				
Sodium (mg/L)	14.7	8.42	10.5	8.16	17.3	17.9	16	12.4	12.2				
Zinc (mg/L)	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	2	5		
Hardness, Total	415	373	386	314	351	396	366	250	307				
Radium 226/228 (pCi/L)				<b>7.2</b>									5 (combined)
Radon 222 (pCi/L)				274									300

\* EPA has set forth a lifetime health advisory value of 0.3 mg/L for manganese

**2020 Water Quality Summary**

Parameter	Well No.										HBV	Secondary Standard	EPA MCL
	2	3	4	5	6	7	8	9	10				
Copper (mg/L)	< 0.005	0.017	< 0.01	< 0.01	< 0.005	< 0.01	< 0.005	< 0.01	< 0.01	0.046		1	1.3
Arsenic (µg/L)	< 0.5	2.21	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	4.8			10
Chloride (mg/L)	16.5	11	83	158	63.1	123	56.9	70.8	13.7			250	
Iron (mg/L)	< 0.015	<b>1.75</b>	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	<b>1.98</b>		0.3	
Manganese (mg/L)*	< 0.005	0.034	< 0.005	< 0.005	0.033	< 0.005	< 0.005	< 0.005	< 0.005	0.009	0.1	0.05	
Sulfate (mg/L)	14.7	13.1	8.8	11.2	9.8	13.3	10.4	18.2	9			250	
Alkalinity, Total (as CaCO <sub>3</sub> )	271	267	243	261	256	270	250	337	205				
Calcium (mg/L)	77	62.3	80.6	102	76.7	89.4	78.9	104	46.4				
Magnesium (mg/L)	30.8	25.6	29.6	34.7	31	34.9	31.4	45.2	18.5				
Sodium (mg/L)	14.4	20.8	33.4	61.9	26.3	53.9	19.1	18.7	13.6				
Zinc (mg/L)	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	2	5	
Hardness, Total	319	261	323	398	319	367	326	446	192				

Parameter	Well No.										HBV	Secondary Standard	EPA MCL
	11	12	13	14	15	16	17	20	21				
Copper (mg/L)	< 0.005	< 0.01	< 0.005	< 0.005	< 0.01	0.005	< 0.005	< 0.01	< 0.005			1	1.3
Arsenic (µg/L)	< 0.5	< 0.5	< 0.5	<b>19.4</b>	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5				10
Chloride (mg/L)	41.7	18.3	24.3	< 3	44.6	46.4	51.4	34.6	35.9			250	
Iron (mg/L)	< 0.015	< 0.015	< 0.015	<b>0.776</b>	< 0.015	< 0.015	< 0.03	< 0.015	< 0.015			0.3	
Manganese (mg/L)*	< 0.005	<b>0.074</b>	0.006	0.036	<b>0.084</b>	< 0.005	0.029	< 0.005	< 0.005	0.1		0.05	
Sulfate (mg/L)	17.4	15	17.6	62.7	11.2	14	14.9	5.1	< 5			250	
Alkalinity, Total (as CaCO <sub>3</sub> )	337	326	334	287	286	305	303	231	242				
Calcium (mg/L)	99.8	87.3	86.7	81.2	88.5	89.7	92.7	72.3	72.5				
Magnesium (mg/L)	45.3	37.7	38.6	28.5	34	34.6	36.1	24.2	26.7				
Sodium (mg/L)	15.1	8.92	10.3	8.27	16.8	15.7	16.6	12.5	12.9				
Zinc (mg/L)	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	2		5	
Hardness, Total	436	373	375	320	361	366	380	280	291				

\* EPA has set forth a lifetime health advisory value of 0.3 mg/L for manganese

### Nitrate Water Quality Summary (2018-2020)

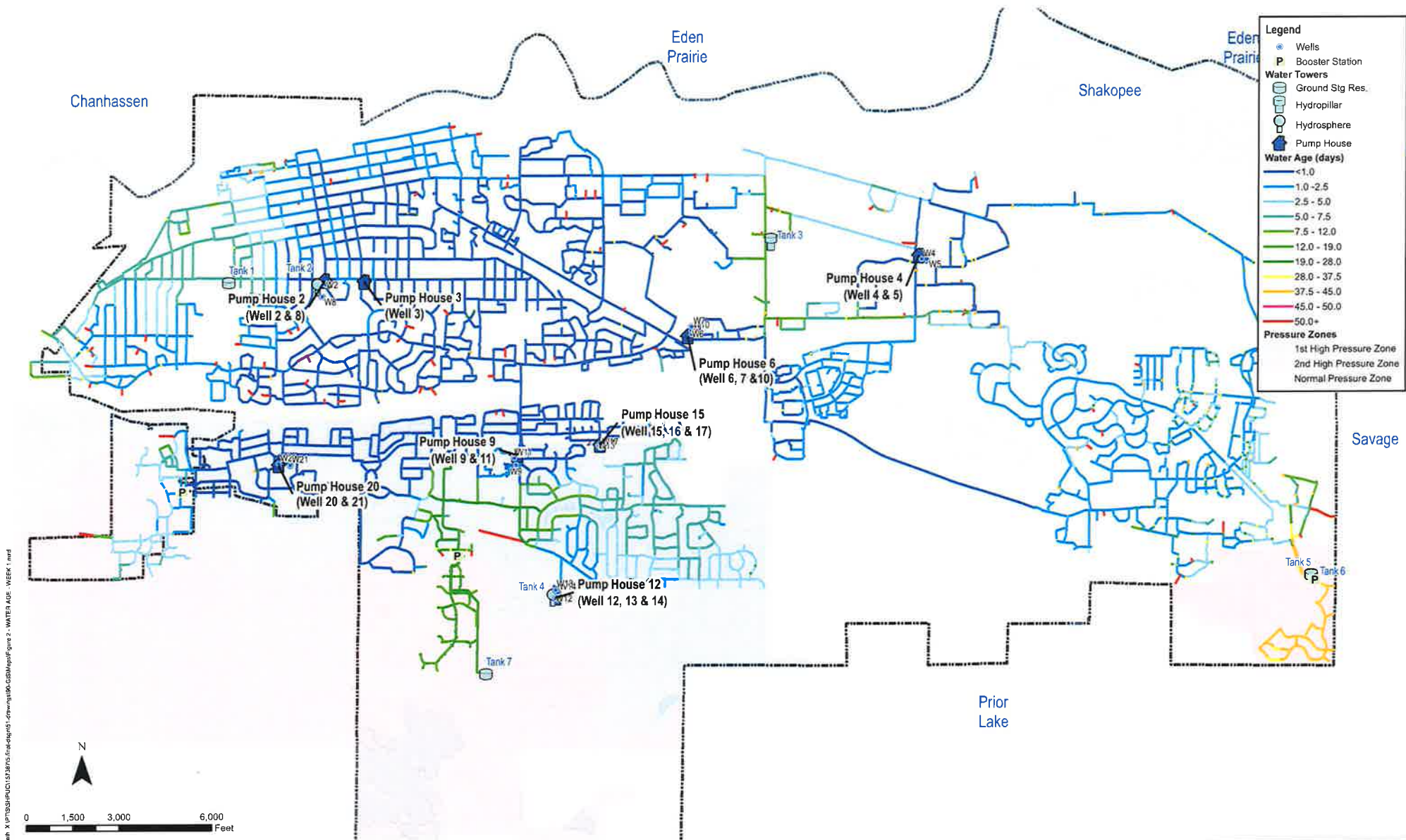
Well No.	2018			2019			2020			HBV (mg/L)	EPA MCL (mg/L)
	Nitrate Conc. (mg/L)			Nitrate Conc. (mg/L)			Nitrate Conc. (mg/L)				
	MIN.	AVG.	MAX.	MIN.	AVG.	MAX.	MIN.	AVG.	MAX.		
2	2.20	3.68	6.32	2.52	3.78	5.50	2.36	4.10	5.18	10	10
4	2.40	4.28	5.50	3.11	4.16	6.50	3.10	4.07	6.69		
5	5.70	6.96	7.88	6.10	6.67	7.42	5.50	6.11	6.69		
6	4.30	4.75	5.10	4.48	4.98	5.40	5.13	5.44	5.60		
7	4.30	4.60	4.90	4.10	4.55	4.80	4.84	5.05	5.30		
8	4.89	5.67	6.08	5.08	5.35	5.60	4.62	4.96	5.25		
9	1.87	3.75	4.45	2.23	3.10	3.68	2.99	3.40	4.07		
10	N/D			< 0.05			N/D				
11	2.25	2.58	2.95	2.31	2.73	3.07	2.40	2.63	2.86		
12	0.58	0.60	0.62	0.53	0.65	0.74	0.62	0.67	0.73		
13	1.08	1.16	1.28	0.95	0.99	1.01	0.98	1.06	1.11		
14	< 0.05			N/D			N/D				
15	4.04	4.95	5.54	4.70	4.96	5.11	2.82	4.81	5.54		
16	4.60	5.25	6.76	3.99	4.54	6.50	3.73	4.04	4.30		
17	5.00	6.10	7.12	4.77	5.56	6.56	4.92	5.72	6.30		
20	1.24	1.28	1.30	1.15	1.48	1.79	1.59	1.81	2.01		
21	2.13	3.25	3.60	0.33	2.04	2.82	2.04	2.22	2.38		
6, 7, & 10 Blended	2.59	3.15	3.68	2.96	3.32	3.89	3.26	4.33	5.52		
12, 13, & 14 Blended	0.67			0.78			0.86				



# Appendix B

Water Modeling Maps



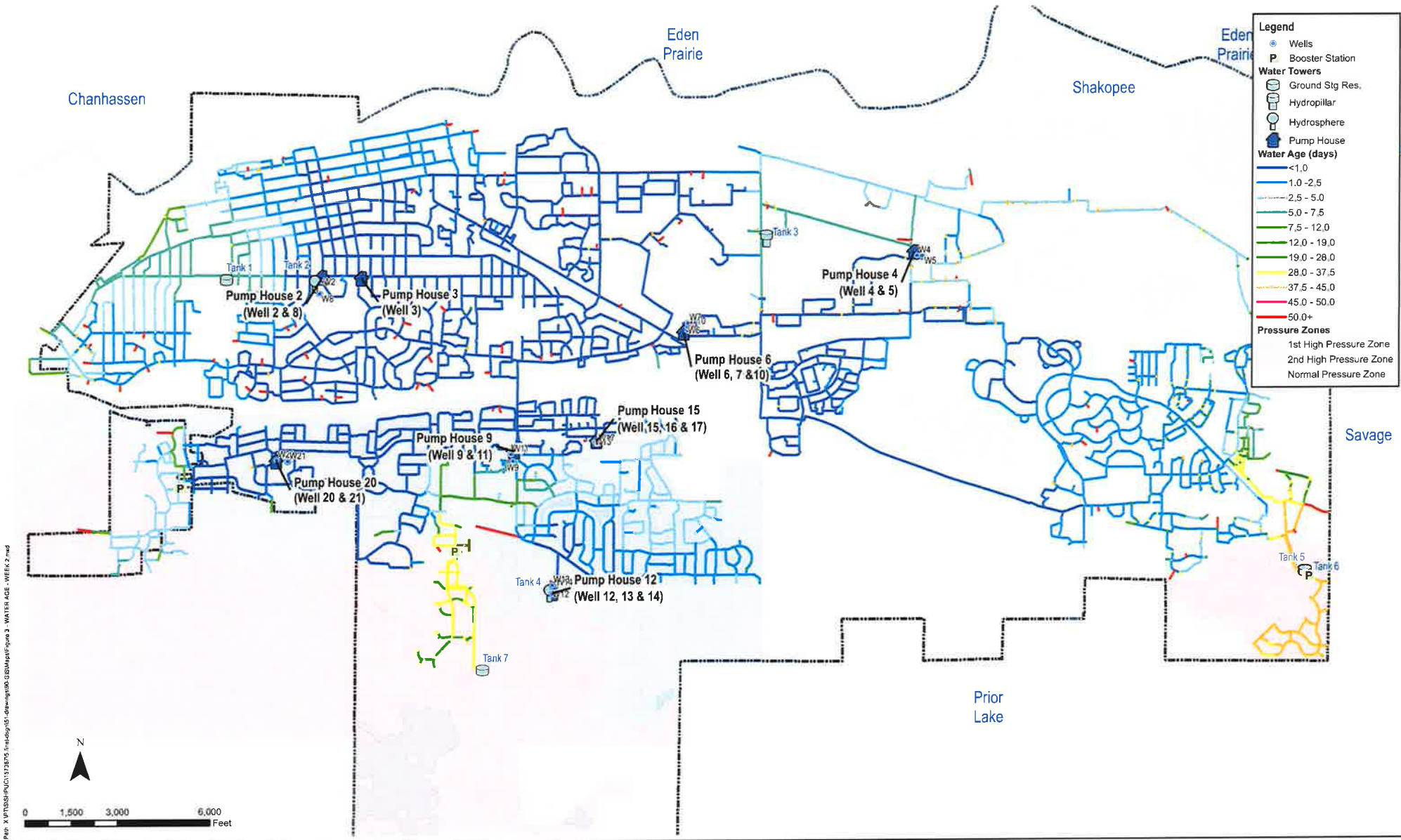


P:\p\13\SHAKOPEE\1373765\final\figs\1-figs\figs\figure 2 - WATER AGE - WEEK 1.mxd



Water Age - Week 1 Well Steps  
 Shakopee Public Utilities  
 Shakopee, Minnesota

**FIGURE 2**  
 Existing Water System Map



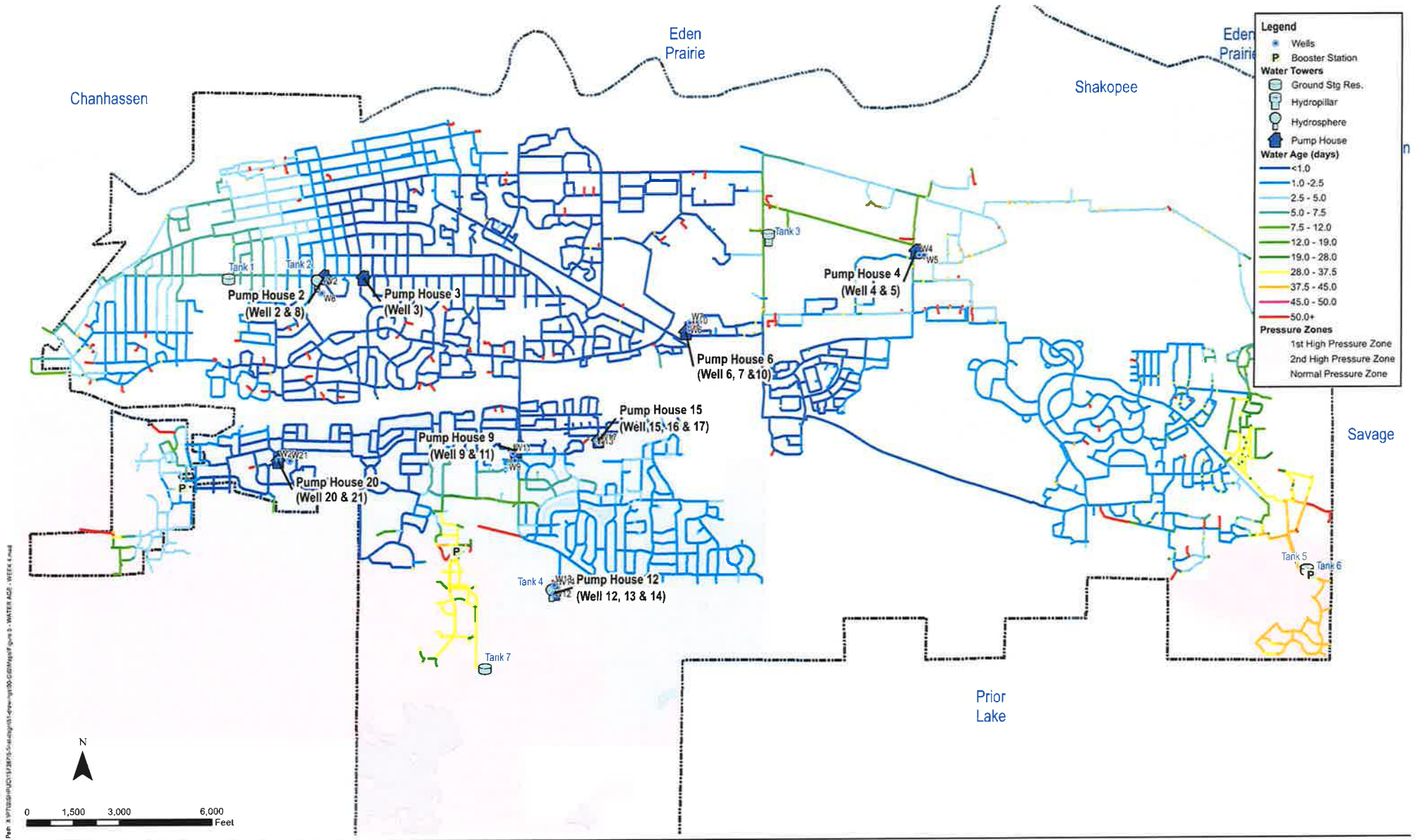
Map: X:\PTD\SHPUC\157367\mxd\fig15-deriving\GSDMap\Figure 3 - WATER AGE - WEEK 2.mxd

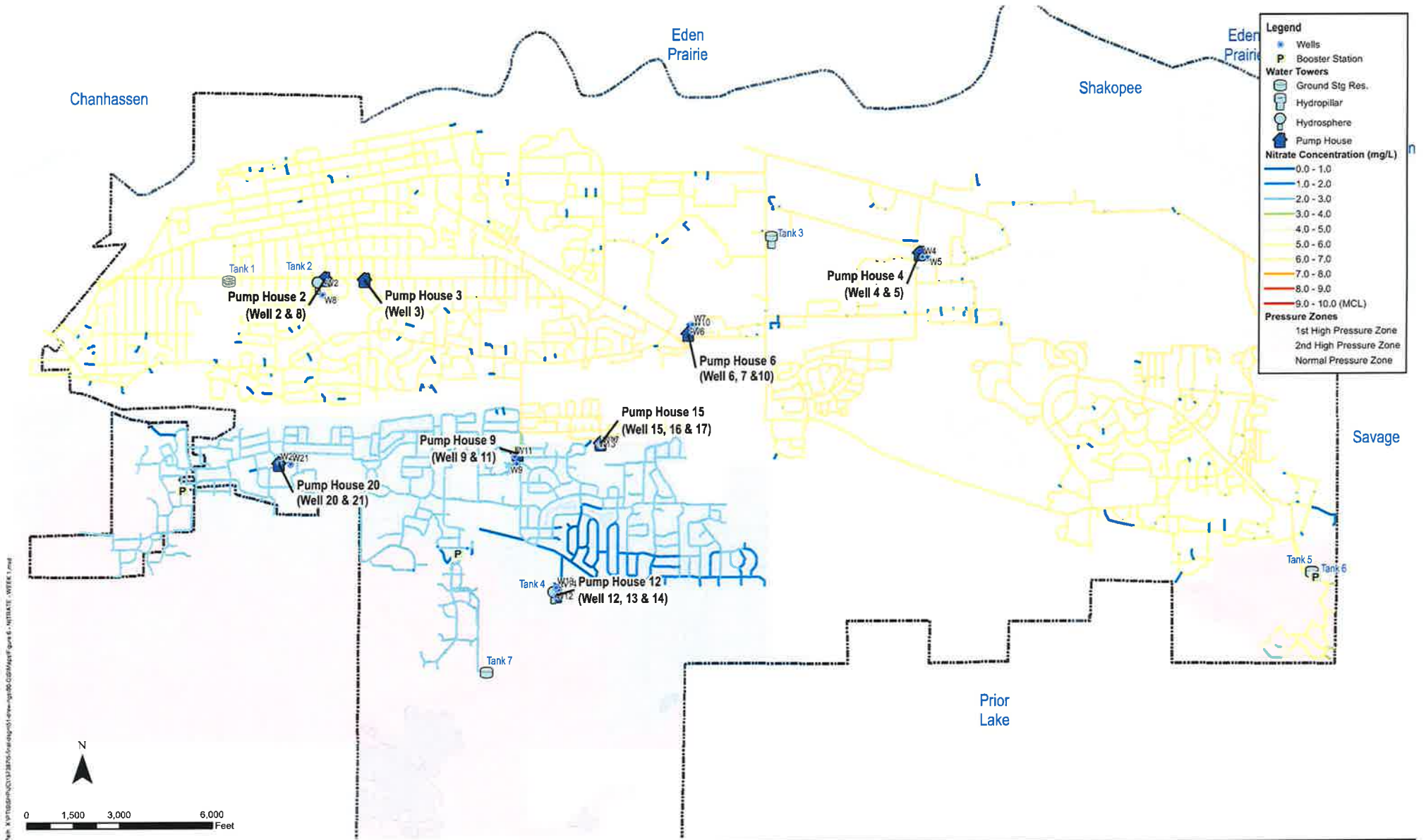


Water Age - Week 2 Well Steps  
 Shakopee Public Utilities  
 Shakopee, Minnesota

**FIGURE 3**  
 Existing Water System Map

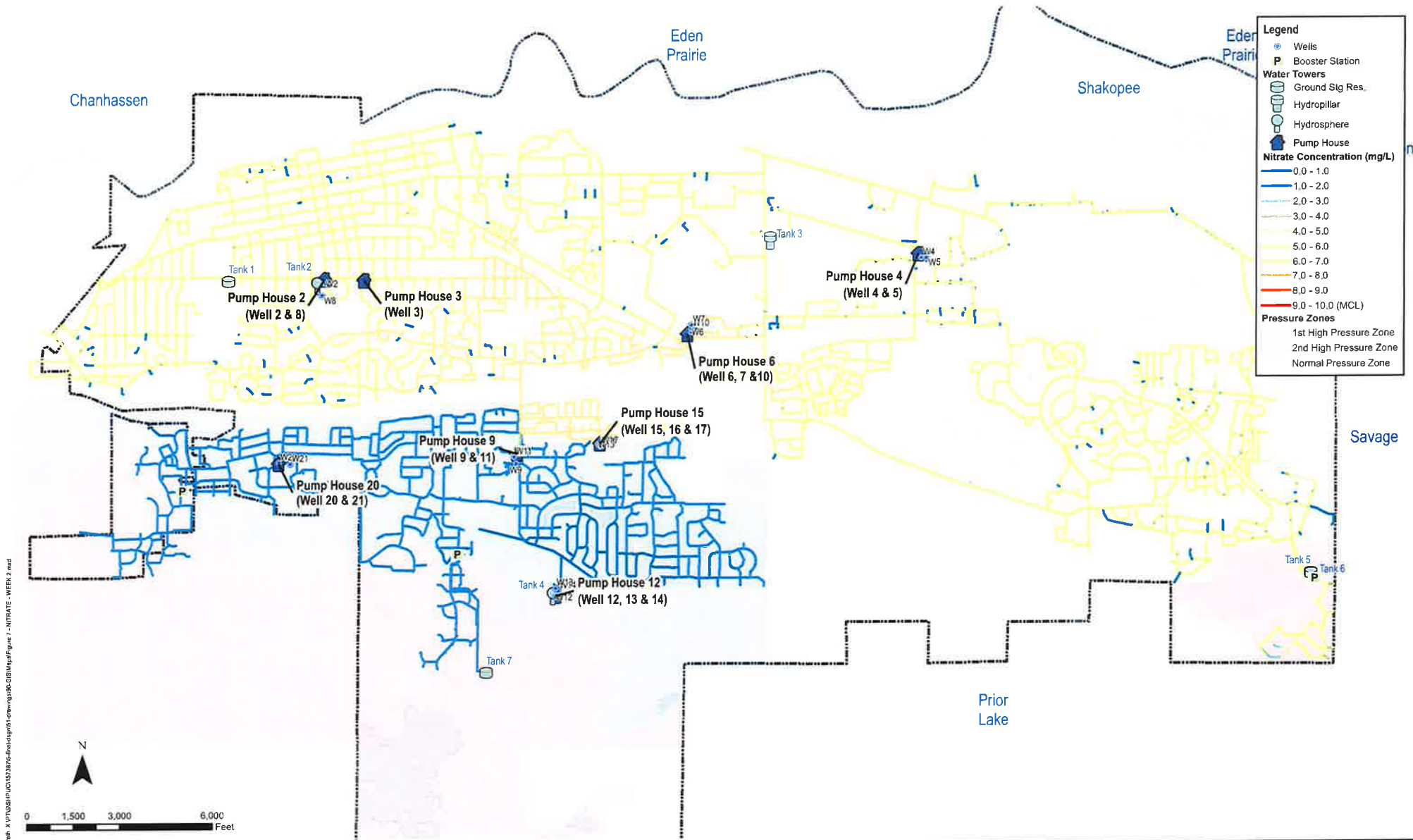






Nitrate - Week 1 Well Steps  
 Shakopee Public Utilities  
 Shakopee, Minnesota

**FIGURE 6**  
 Existing Water System Map



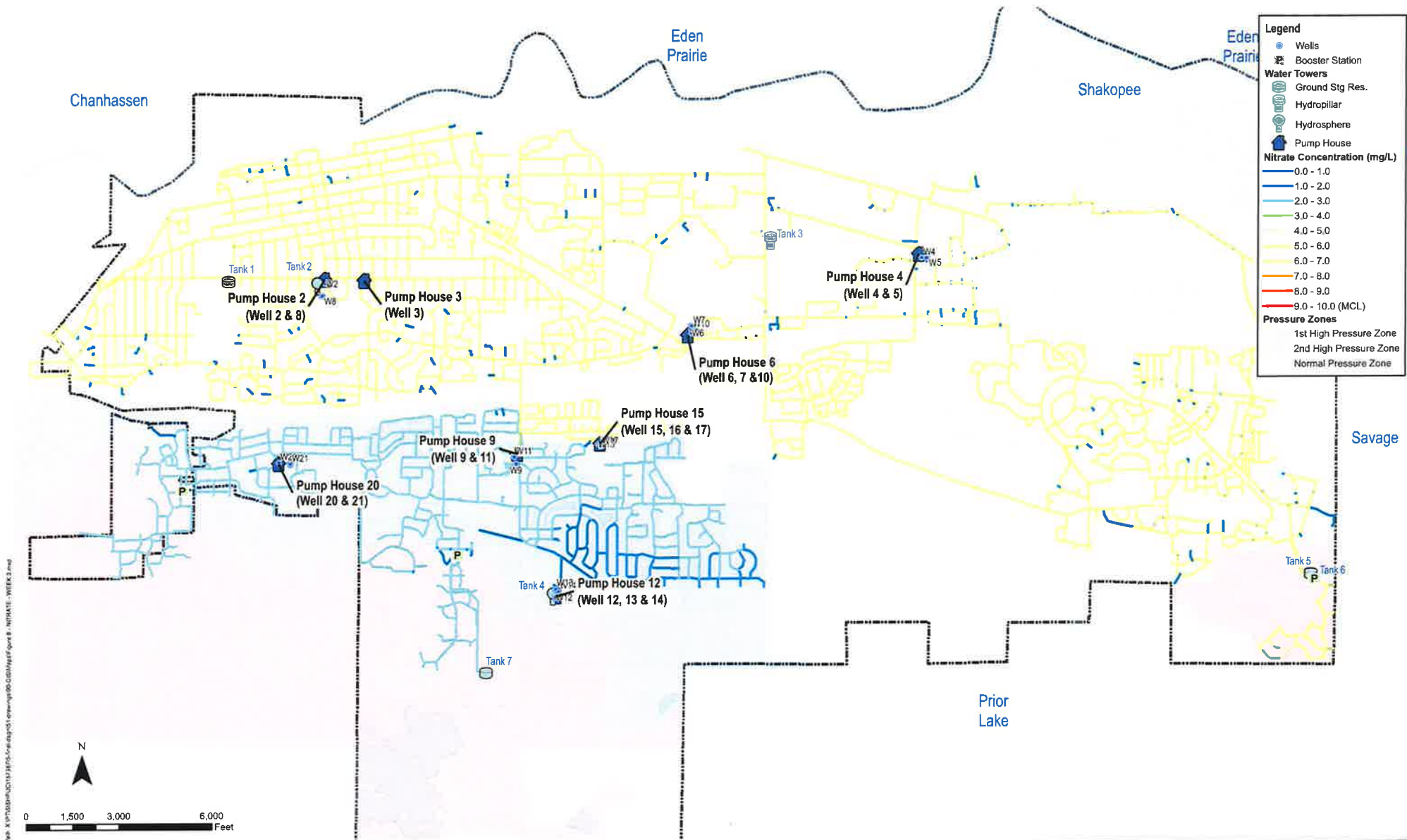
Path: X:\P\GIS\SHPU\157387\157387.mxd; Figure 7 - NITRATE - WEEK 2.mxd



Nitrate - Week 2 Well Steps  
 Shakopee Public Utilities  
 Shakopee, Minnesota

**FIGURE 7**  
 Existing Water System Map





File: X:\P\GIS\MapDocs\157387\MapDocs\157387\_Week3.mxd  
 Project: 157387 - Nitrate - Week 3  
 Date: 1/29/2021



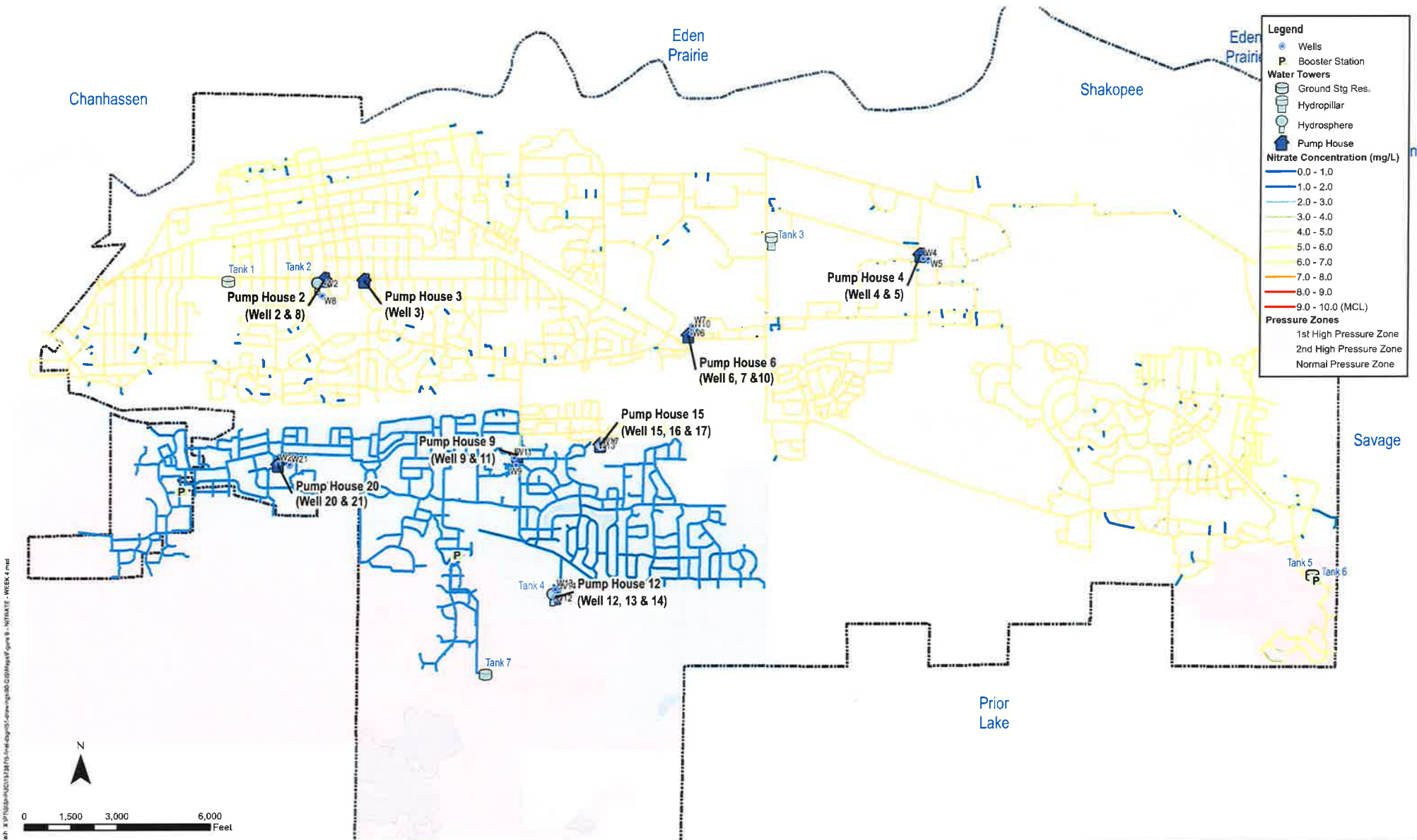
Project Number: SHPUC 157387  
 Print Date: Print Date: 1/29/2021

Map by:  
 Projection:  
 Source:



Nitrate - Week 3 Well Steps  
 Shakopee Public Utilities  
 Shakopee, Minnesota

**FIGURE 8**  
 Existing Water System Map



Nitrate - Week 4 Well Steps  
 Shakopee Public Utilities  
 Shakopee, Minnesota

**FIGURE 9**  
 Existing Water System Map



## Appendix C

Memorandum 3 – Water Quality Survey



Building a Better World  
for All of Us®

## MEMORANDUM

TO: Lon Schemel

FROM: Miles Jensen

DATE: April 27, 2021

RE: Memorandum 3 - Water Quality Survey  
SEH No. 157387 14.00

Dear Lon Schemel,

The following memorandum is submitted to satisfy the Memorandum No. 3 that was proposed for this project. This will be a steppingstone to start future conversations with Shakopee Public Utilities' (SPU) customer about the water quality and the potential for advanced treatment of the water their being provided.

### Public Involvement

The public involvement process incorporates citizens and stakeholders in the early stages of the planning process and encourages their participation throughout a project's lifecycle. Collaborating with the public allows policy makers to foster a shared project vision and enjoy a higher level of acceptance among planners, citizens, and other project stakeholders. The planning process can come to life when the community emerges to share their voices. Now, we also recognize there is no single technique that works for all situations. This survey is the first step towards collaboration with SPU's customers about their water quality and the potential for advanced treatment.

### Survey Overview

SEH worked with SPU to develop a series of questions to pose to SPU's customers, regarding their satisfaction with their water quality. The survey provides background information on SPU's current water quality, applicable regulatory standards, and health and age based issues. The questions were designed to gauge the customers interest and support for municipal treatment throughout SPU's system. The survey asked customers to weigh in on the following issues:

- Customers' perception of the current quality of water they receive
  - Concerns with taste and odor
  - Comfort with current manganese levels
  - Comfort with current nitrate levels
- Current cost of water service (water rates)
- Customers' interest, or willingness, to pay more for advanced water treatment
- Willingness to pay for municipally softened water

The survey was available online from February to March 2021 and the URL was provided through SPU's website, SPU's water bill (email and letter form), and through a SPU's Facebook post. From the time it was available, it was able to generate 312 complete survey responses and 140 partial responses. This is estimated to be about 2%-3% of the residential homeowners served by SPU (based on approximately 16,500 residential households served). See the attached survey and results in **APPENDIX A**.

Engineers | Architects | Planners | Scientists

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

651.490.2000 | 800.325.2055 | 888.908.8166 fax | [sehinc.com](http://sehinc.com)

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When reviewing the survey results, it is important to consider that respondents may be more likely to complete an opinion survey if they have complaints than if they are fully satisfied. This survey yielded a balanced mix of comments that give a range of customer opinions and preferences. That being said, this survey should not speak for all of SPU's customers. Further discussions with customers will be required to get a better understanding of what the customer's want. This survey was not intended to make a decision, but to start the conversation of water quality and the potential for advanced treatment of the water they're being provided.

## **Shakopee Public Utilities Water Quality Survey Results**

### Water Quality Concerns

Participants were asked about their satisfaction with the quality of their water supplied by SPU. In general, it seems to be about a 50/50 split from the respondents on the satisfaction with their water.

Of the 396 responses:

- 79 (20%) are very satisfied with the quality their water
- 122 (31%) are mostly satisfied with the quality of their water
- 189 (48%) are not satisfied with the quality of their water

The following question asked participants had any concerns or issues with tastes and/or odors with your water in the past 5 years. Of the 51% of respondents from the previous question that we satisfied with the quality of their water, it appears that some of them have experienced some taste and odor issues over the last 5 years.

Of the 393 responses:

- 138 (35%) haven't had concerns or issues with taste/odor
- 126 (32%) have had concerns or issues with taste/odor on occasion
- 118 (30%) have had concerns or issues with taste/odor frequently

Between these two questions, respondents supplied optional comments to backup their answers. The following are some of the frequent comments supplied:

- Bad taste
- Very hard water
- Strong chlorine smell/taste
- Suspended particles
- Occasional staining on toilets

Using the addresses provided by respondents, SPU was able to put together a heat map of water quality satisfaction (**APPENDIX B**). It can be seen that some grouping of respondents who are not satisfied with the quality of their water can be found throughout the distribution system, however most of the responses are intermixed. Some areas with dense grouping of negative responses that should be investigated further are as follows:

- Homes near 17<sup>th</sup> Ave E and Sarazin St
- Homes near 10<sup>th</sup> Ave E and Naumkeag St S
- Homes northeast of the Townline Ave and 17<sup>th</sup> Ave E intersection
- The Hamlet at Southbridge (Co Rd 21 & Co Rd 18)
- Blakewood Estates (Eagle Creek Blvd & Mystic Lake Dr)

Cost of Water

Supplied with the following table, participants were asked their opinion of the current cost of water.

Availability	USAGE CHARGE (per 1000 GALLONS)	PLUS	RECONSTRUCTION CHARGE (per 1000 GALLONS)
RESIDENTIAL SERVICE	1 - 5000 GALLONS \$2.49		
	>5000 GALLONS \$2.98		

Of the 391 respondents:

- 297 (76%) think that their current cost of water is appropriate
- 66 (17%) think that their current cost of water is higher than expected
- 28 (7%) think that their current cost of water is lower than expected

The following are some of the frequent comments supplied, regarding the current cost of water:

- How does the price of water compare to other cities without treatment?
- Price is high for untreated water
- Willingness to pay for better water

Manganese in SPU's Water

Participants were asked about their comfort level with the current manganese levels found in SPU's wells. In particular, this is a complex question. Manganese concentrations in finished water is not enforced by the Environmental Protection Agency (EPA), only recommendations for aesthetic guidelines have been made (0.05 mg/L). In addition to EPA's recommendations, Minnesota Department of Health (MDH) has also put forth non-enforced guidelines for manganese concentrations in finished water (0.1 mg/L for infants, 0.3 mg/L for general public). Although a vast majority of SPU's wells have tested below the EPA's guideline for aesthetic considerations (0.05 mg/L), a couple of the wells have tested at or slightly below MDH's guideline of 0.1 mg/L. In an attempt to communicate this information in the simplest way possible, the information in the following table was presented as part of the survey.

Year	Manganese Concentrations in SPU's Groundwater Wells <sup>[1]</sup>			EPA's Aesthetic Quality Guideline <sup>[3]</sup>	MDH's Health Quality Guideline <sup>[4]</sup>	
	Minimum (mg/L)	Average (mg/L)	Maximum (mg/L)		for Infants (<1 year)	for General Public (>1 year)
2018	<0.005	0.015	0.076	0.05	0.1	0.3 <sup>[5]</sup>
2019	<0.005	0.021	<b>0.118<sup>[2]</sup></b>			
2020	<0.005	0.018	0.084			

[1] Does not include two (2) wells that SPU considers as emergency wells and do not use.

[2] Only on one occasion in 2019 did a well exceed the MDH's health quality guideline (0.10 mg/L).

[3] The EPA's Secondary Max Contaminant Levels (SMCL) were developed to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor, and are not federally enforceable.

[4] The MDH's health based values (HBVs) were developed to better keep your household drinking water safe.

[5] EPA has set forth a lifetime health advisory value of 0.3 mg/L for manganese.

Of the 338 respondents:

- 101 (30%) are comfortable with the current manganese levels
- 43 (13%) are comfortable with the current manganese levels, but would be willing to pay more to reduce the levels further

- 130 (39%) are not comfortable with the current manganese levels and would be willing to pay more to reduce the levels further
- 57 (17%) answered “Neutral/I don’t know”, which may indicate that more information may need to be provided to make an educated answer.

Nitrate in SPU’s Water

Participants were asked their comfort level with the current nitrate levels found in SPU’s wells. Compared to manganese, this is a simpler question as the EPA has a regulated Maximum Contaminant Level (MCL) of 10 mg/L. This is an enforceable standard that is accepted by the MDH. The EPA and MDH considers any level of nitrate below 10 mg/L to have no known or expected risk to health of a consumer.

In the last 5 years, there hasn’t been a case in any of SPU’s wells with nitrate levels exceeding EPA’s MCL of 10 mg/L, however, a few of the wells have seen values above 5.0 mg/L (maximum of 7.9 mg/L), which may indicate a degradation of ground water quality and requires monitoring to ensure nitrate concentrations do not increase to dangerous levels. In an attempt to communicate this information in the simplest way possible, the information in the following table was presented as part of the survey.

Year	Nitrate Concentrations in SPU’s Groundwater Wells <sup>[1]</sup>			EPA’s Maximum Contaminant Level <sup>[2][3]</sup>	MDH’s Health Quality Standard <sup>[4]</sup>
	Minimum (mg/L)	Average (mg/L)	Maximum (mg/L)		
2018	0.6	3.7	7.9		
2019	0.3	3.5	7.4		
2020	0.6	3.5	6.7		

*NOTE: Nitrate levels in all of SPU’s wells have been naturally dropping over the past 20 years with decreasing agricultural land in the area.*

*[1] Does not contain two (2) wells that SPU considers as emergency wells and do not use.*

*[2] The EPA’s Maximum Contaminant Level (MCL) is an enforceable maximum allowable amount of a contaminant in drinking water which is delivered to the consumer.*

*[3] The EPA’s Maximum Contaminant Level Goal (MCLG) for nitrate is 10mg/L. The EPA considers any level of a contaminant below which has no known or expected risk to health of a consumer.*

*[4] The MDH’s Health Risk Limit (HRL) is based off EPA’s MCL.*

Of the 333 respondents:

- 123 (37%) are comfortable with the current nitrate levels
- 149 (45%) are not comfortable with the current nitrate levels and would be willing to pay more to reduce the levels further
- 61 (18%) participants answered “Neutral/I don’t know”, which may indicate that more information may need to be provided to make an educated response.

Price to Treat SPU’s Water

As a follow up to the questions regarding manganese and nitrate concentrations, participants were asked how much they would be willing to pay to receive treated water with reduced the levels of manganese and nitrate. A preliminary cost estimate for systemwide treatment determined that rate increases could easily triple (3x) the current cost of water to construct satellite water treatment facilities, and almost quadruple (4x) the current rates to construct a centralized treatment facility.

Of the 320 respondents:

- 101 (32%) are comfortable with their water quality and do not want to pay for treatment
- 47 (15%) are not comfortable with their water quality and would be willing to pay as much as triple (3x) their current rate
- 32 (10%) are not comfortable with their water quality and would pay whatever is necessary

- 99 (31%) are not comfortable with their water quality, but do not want to pay more
- 41 (13%) opted to supply a write-in answer, rather than one of the supplied answers

This question included many written-out comments. Below are some of the frequent comments supplied, regarding the rate increase to construct systemwide treatment:

- Wanting more information on how rates were calculated
- Wanting a comparison of other cities water quality and price of water
- Require demonstrated improvements to make an informed decision
- Willingness to pay more, but concerned with triple (3x) the cost being too high

#### Price to Soften SPU's Water

With the anticipation that many of SPU's customers struggle with hard water, participants were asked how much they would be willing to pay to receive municipally softened water. Much like the cost estimate to reduce manganese and nitrate, a preliminary cost estimate was put together to municipally soften SPU's water. The construction of a softening plant requires more capital costs than a conventional water treatment plant. That is why, the only economically feasible option to soften SPU's water would be a centralized treatment facility. The plant would require filtration for particulate and manganese removal, ion exchange (or other) for nitrate removal, and lime softening processes to soften the water. In addition to the treatment processes, a centralized facility would require many miles of water main to be constructed to bring all of SPU's wells to one central location. To pick up these costs, it is estimated that rate increases could easily require water to cost \$13.00 per 1,000 gallons.

Of the 318 respondents:

- 114 (36%) are comfortable with their water hardness and do not want to pay for treatment
- 60 (19%) would be willing to pay up to \$13 per 1,000 gallons
- 23 (7%) would pay whatever is necessary
- 91 (29%) are not comfortable with their water hardness, but do not want to pay more
- 30 (9%) opted to supply a write-in answer, rather than one of the supplied answers.

Below are some of the frequent comments supplied, regarding the rate increase for municipally softened water:

- Wanting more information on how rates were calculated
- Wanting a comparison of other cities water rates with softened water
- Concerns with the financial impact of low-income residents
- Require demonstrated improvements to make an informed decision
- Willingness to pay more, but concerned with \$13 per 1,000 gallons being too high

#### **Public Information Meeting**

Based on the survey results, we recommend SPU host a public informational meeting to discuss the survey results and share more information on SPU's current water quality. SPU rarely gets calls and/or complaints regarding the quality of their water, so it is concerning the number of customers dealing with poor water quality or water quality concerns. An open house format would allow SPU to help customers get their questions answered and to work towards potential solutions to issues that face the water users. SEH can supply supplementary drawings and cost estimates to support conversations about the state of SPU's water treatment moving forward. Below are some of the recommended topics to cover, in response to concerns submitted through the survey:

- Comparison of other cities water quality and price of water
- Discussion regarding taste, odor, and/or particulate in customer's water
- Demonstrated improvements that would be required to provide system-wide treatment
- Rate increases and additional cost information to provide treated water



- Information on water softener maintenance
- Required processes to provide municipally softened water, costs, benefits, and downsides

### **Schedule**

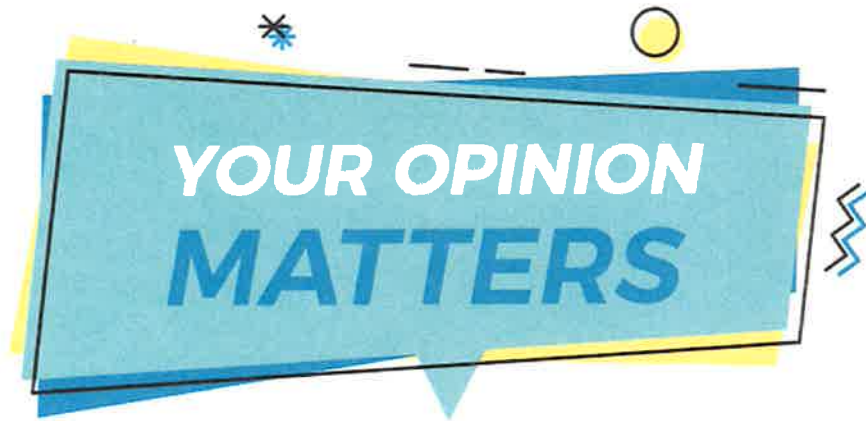
- I. *Task 1 – Project Initiation & Data Collection (COMPLETED)*
  - A. Memorandum No. 1 (Water Quality Assessment)
  
- II. *Task 2 – Water Quality Model (COMPLETED)*
  - A. Prepare Memorandum No. 2 (For February 1, 2021 Commission Meeting)
  
- III. *Task 3 – Public Involvement (COMPLETED)*
  - A. Public Involvement Process
    1. Water Quality Survey
  - B. Prepare Memorandum No. 3
  - C. Public Open House (TBD)
  
- IV. *Task 4 – Preliminary Analysis (COMPLETED)*
  - A. Water Treatment Plant layout design.
  - B. Utility site locations.
  
- V. *Task 5 – Conduct Technical Analysis (In Progress, Due May 12, 2021)*
  - A. Review feasible facility layouts and major process element sizing.
  
- VI. *Task 6 – Cost Estimates (In Progress, Due May 12, 2021)*
  - A. Finalize cost estimates based on Technical Analysis
  - B. Apply to rate increases
  
- VII. *Task 7 - Feasibility Report (In Progress, Anticipated May 31 2021)*
  - A. Incorporate customer feedback and previous Memorandums
  - B. Submit draft feasibility report to SPU (For May 17, 2021 Commission Meeting)
  - C. Hold Meeting with the SPU staff to review the draft Feasibility Report
  - D. Update the Feasibility Report following input from SPU
  - E. Transmit the Final Feasibility Report to SPU (Anticipated May 31, 2021)

### **Attachments**

- Shakopee Public Utilities Water Quality Survey Results
- Water Survey Results Map

# **APPENDIX A**

## **WATER QUALITY SURVEY QUESTIONS & RESULTS**



## Shakopee Public Utilities Water Quality Survey

Dear SPU Customer,

Thank you for your interest in water quality and providing your feedback. Your response is very important to us.

Please fill out this survey and return to SPU in one of two ways:

- Place it in an envelope **labeled “Water Survey”** and put in the **24-hour drop box** at the SPU Service Center located at: 255 Sarazin Street, Shakopee, MN (*No postage necessary*)
- Add postage and mail to:

**SPU, Attn: Water Survey**  
**PO Box 540**  
**Shakopee, MN 55379**

Thank you again for your participation.



## **Shakopee Public Utilities** **Water Quality Survey**

We are requesting your feedback to understand what is important to you, and what additional costs you would be willing to support to increase water quality above what we have already achieved. Please take a few minutes to put some thought into the following questions to help us understand what is important to you in your drinking water.

### **Water System Background**



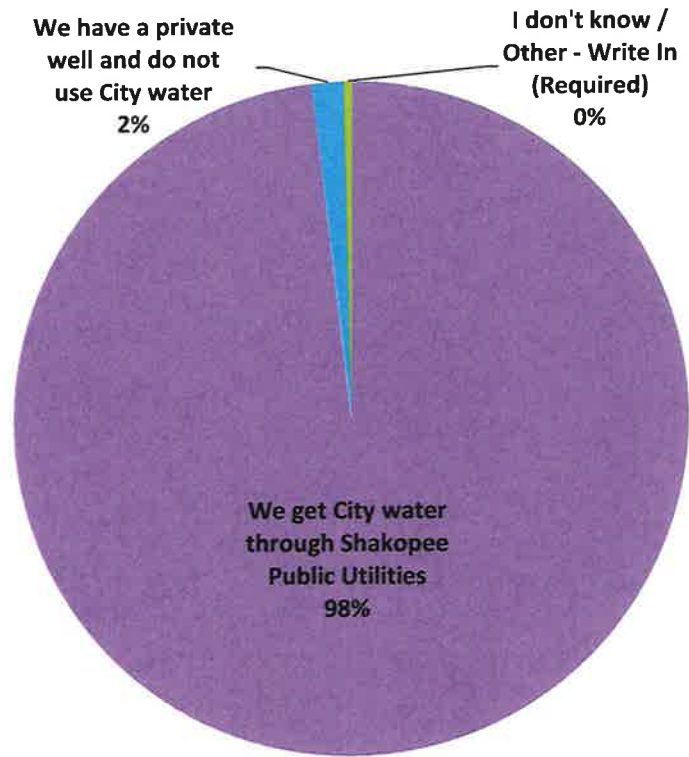
The Shakopee Public Utilities (SPU) supplies water and utilities to the City of Shakopee with water from eighteen (18) groundwater wells throughout the city. Throughout the year, SPU collects and tests the groundwater frequently in order to ensure that it meets or exceeds Environmental Protection Agency (EPA) standards for safety.

SPU is proud to share that our water has consistently tested below levels that would require any filtration. Your drinking water is supplied directly from the naturally clean wells where it is treated with the addition of chlorine for disinfection, and fluoride to prevent of tooth decay.

Nevertheless, because of SPU's commitment to public health and the provision of abundant high-quality water to its customer, SPU is engaged in a comprehensive evaluation of municipal water treatment alternatives.

## General Questions

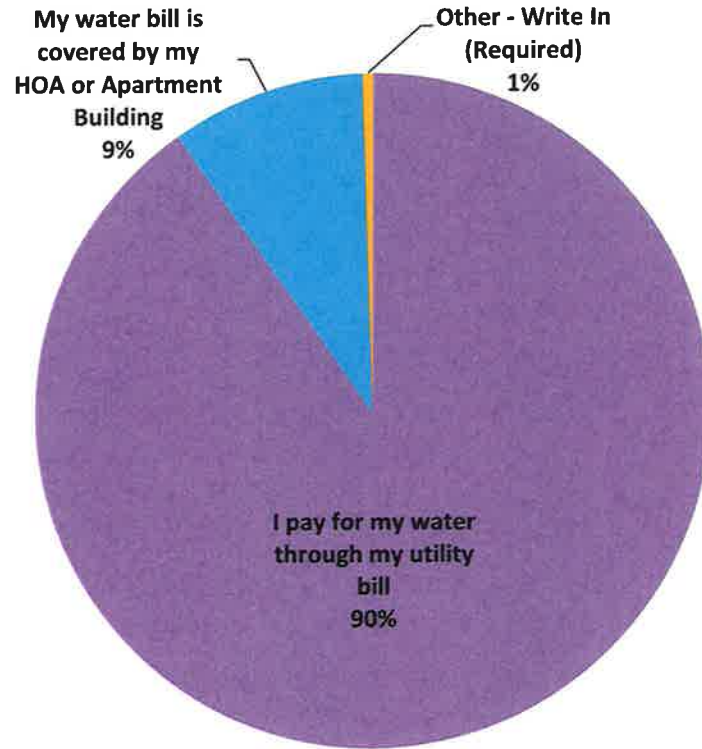
### 1) How do you get your water? (required)\*



#### Comments:

- Not sure
- Cub Foods water

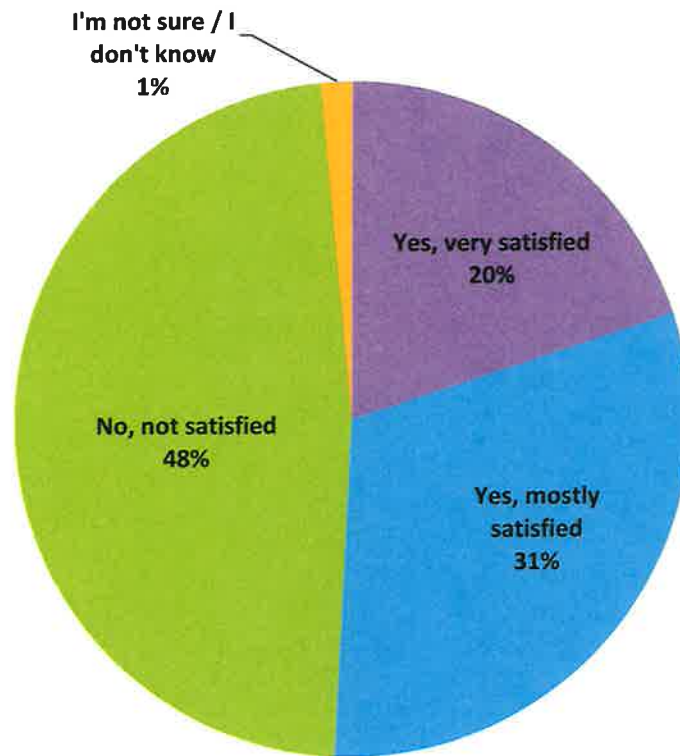
**2) How do you pay for your water?**



**Comments:**

- Our townhome charges us 20.00 a month for water

### 3) Are you satisfied with the quality of your water today?



#### Comments:

- Too many minerals in the water, bad taste
- While very hard, the water is otherwise great for city water. I use a water softener for most of my inside the house water.
- The taste of the water is not good. My whole household has to drink filtered, bottled or sparkling water. The smell of chlorine is often very strong too
- We've lived in Shakopee for nearly 60 years and have never had a problem with the water quality
- Water is very hard and occasionally smells

- Too many chemicals (always smells and tastes like bleach), the ph is too high for my plants, the water is so hard the pipes have to be replaced ahead of recommended timeline.
- I can for sure taste a difference when the system is shocked. And when they flush the hydrants. But overall. Good.
- Very hard and it tastes/smells like chlorine
- The water is very hard and leaves stains with cleaning.
- I don't feel it filters out enough cancer causing chemicals
- We have some of the hardest water in the nation. The required use of salt and the resulting brine dumped down the drain at every household is not cost effective, efficient, or environmentally friendly. In addition to my water softener I've had to install a whole-home water filter to reduce extreme skin irritation following showers.
- The water is horrible. It gives my dog bladder stones and I have sores from it.
- Extremely hard water.
- Water is very hard.
- The water is very hard and has a chemical taste
- I will not drink tap water, it tastes horrible and usually smelly fishy. It also seems like it's really hard and there is a lot of deposits.
- Could be much better and safer
- The water is so hard I had to replace my water softener. It is set to 20 which is near the highest. I get drinking water from the EP artesian spring
- My main concern is that the nitrates are too high. Nearly every city around us treats their water for nitrates, but Shakopee doesn't. I have a fish tank, and the main reason for changing water in the tank is nitrates that build up from fish waste. There are times when I test my dirty fish tank water and also test the tap water, and find the nitrate levels are the same. So not only does that make it impossible to lower the nitrates in my tank by doing a water change, it also worries me that I'm drinking water that has a level of nitrates that is harmful to fish. I know Shakopee water technically is under the limit for nitrates, but it worries me how close it gets to that limit at times
- Very hard water



- Tastes bad
- It's cloudy and has particles in it
- Too hard. Stinks sometimes
- Have lived in multiple surrounding suburbs, water here is unbelievably hard.
- My water is fine when we use a softener for washing and showering. We don't drink it. It doesn't taste good.
- Sometimes smells like chemicals. Is cloudy on occasion.
- Even after it is filtered, with a filter changed regularly, it leaves a nasty white film on everything. My tub and toilet are also gross. I grew up on well water with high iron content and that was nice and tested better
- Way too hard without a softener. Ruined pipes
- Tastes terrible, even with a water softener and testing the water (yes it's soft) Shakopee water does not clean dishes well and leaves spots. Have to use softener in laundry or clothes smell
- Very hard water even with water softener. Tastes terrible, sometimes almost has a chlorine smell
- We have a filter for drinking water. The water that comes out of the tap does not taste good.
- I've lived in Shakopee for 44 years, and have been drinking it as well. Very good water.
- Bad taste, lots of buildup on faucets and showers/tubs
- The water has far too much calcium and other minerals / hardness
- I am from Eden Prairie and moved to Shakopee last year. The water here tastes dirty and my family and I are forced to buy bottled water.
- Just wish it wasn't so hard and left so many hard water stains even with a brand new water softener.
- Tap water is unpleasant taste
- Water has been excellent.

- The amount of calcium deposits ruin appliances. I need to run vinegar monthly. Sometimes the water smells like a pool coming out of the tap
- Water softener was mush after 6 years. Neighbors too so the quality is killing the softeners.
- The water is fine but I really wish we had a treatment facility and could get rid of these water softeners.
- Would love to have the water softened before it reaches the house. I moved from Bloomington MN and that's one thing I miss.
- Very hard water...I've had to replace toilets, water heater and dishwasher, along with faucet heads due to the lime scale build up. Even with regular cleaning. I'm now looking into a water softener to help prevent this.
- The water leaves residue and some kind of build up on everything.
- Water tastes bad and have to make sure its well filtered to drink.
- Extremely hard water despite our water softener. Our shower and sink are full of stains.
- The water has too much sediment on kettles after boiling it
- I moved here from Chaska so anything would be an improvement. I do find the water here to be very good and I regularly drink tap water exclusively. In Chaska I would only drink bottled water.
- The hardness of the water has caused deposit build-ups on faucets causing a need to replace sooner than preferred. Not everyone can afford a water softener
- I only drink tap water, love it
- I use a water softener, and I keep it supplied with salt for the last 4 years.
- Hard
- Smells like chlorine all the time.
- Extremely hard water despite our softner. Stains in every bath and sink.
- Extremely hard water despite our water softener. Stains on every sink and tub.
- Very hard water

- I brush my teeth so please pass on the fluoride
- The water is too hard and has a chlorine smell
- Its pretty horrible. Hard water..leaves white stuff everywhere and turns my floors completely yellow from washing them from the tap. WE NEED SOFTER WATER PLEASE PLEASE PLEASE.
- I wish it was pre-conditioned so I don't have to use a water softener, like the SMSC does for their water
- Sometimes the taste is not the best
- Too hard. Awful taste. I have to buy water to drink and to use in my coffee maker
- I've noticed the taste of the water get worse the past 5 years. I'm actually buying bottled water to drink now. I never thought I would. In the summer, I can taste the chlorine. At other times I can only drink it if it's cold.
- It is hard water if you don't have a water softener, I can tell when my water softener is getting low or happens to run out. We don't drink it we use filtered water
- Water is very hard and easily calcified. I use filtered water for everything.
- Our drinking water is good!
- Quality reads ABOVE safe levels for dissolved particles. I can't even drink it, the taste is not good and tastes like chemicals. Use filters to get lower particles and they don't last long due to quality.
- We've lived in many cities in different states and Shakopee's water is the best tasting water we've had anywhere, certainly the best in the metro area. Because I was Manager of Scott County Environmental Health for 36 years I monitored water quality throughout the County and am very appreciative of Shakopee's water. It doesn't have the iron problems common in other municipal water supplies from other aquifers used in the county. I was instrumental in working with the State to develop the first county-wide geologic atlas in the state to help identify ground water risk areas.
- We moved from Bloomington 4 years ago. Shakopee water sucks.
- SPUC billing rates can be outrageous. Not sustainable for certain households.
- There is a pink residue from the water
- Build up on faucets even with water softener

- Shakopee water is ridiculously hard even with a new water softener.
- It is very hard and metallic
- Everything in my house that comes in contact with the water is covered in white build-up: sinks, plumbing fixtures, dishes, shower heads, etc. Filters I use for tap water have to be changed more frequently than in previous residences.
- We've lived in Shakopee for more than 40 years, and have always been satisfied with the water quality. We don't understand all of the complaints.
- I have to filter the water because it doesn't taste good from the tap and I don't trust the quality
- Very hard and not treated
- I think it smells like chlorine and I don't like the taste of it. We filter our water through our fridge but want to get a whole house filtration system. Saving up for that.
- Taste funny
- Need water softener and still have water heaters failing early. Also for drinking does not taste the cleanest.
- My water leaves residue on everything, clogs filters and tastes off.
- My water from the faucet taste's funny, leave residue in my ice and is very hard on my faucets, pipes, fixtures.
- Extremely hard
- Requires a lot of water softening
- Water is very hard. Went through one Water softener.
- Very good
- Taste is awful, it is super hard water, fill up a glass its cloudy even after I run for a minute and after it clears, a bunch of ice at the bottom of my glass
- It tastes gross and the calcium build up is beyond horrible.
- Clear and fresh
- The water is way too hard and causes build up in appliances, damaging them.

- The water is very hard and difficult to treat at home. Requires very high settings and frequent regenerations of water softener which leads to excessive salt usage and waste. Hard on appliances and humidifiers.
- It's a little hard
- Hard water. Ruins toilets, appliance, showers and ice cubes have vehicle floaters
- My water is very hard and has a terrible taste, I don't drink it.
- I don't like the taste of the faucet water
- I'm concerned about nitrates leaking into the water system during the warm months.
- Best water ever
- The taste of the water is horrible and hardness level is way high. We have had to purchase a reverse osmosis drinking water system and a water softener with approximately 50 lbs of salt per week.
- We soften our water and have filtration systems in place. We believe this is the responsibility of the home owner and not the city. The utility company should maintain water safety.
- We have very hard water. Residue on all appliances. Even appliances that are only 1 year old
- The water is awful and I would never drink it. Sometimes it is orange. Can you please test it?
- it tastes yucky
- The water looks and tastes horrible
- I like it, except I do not like the chlorine smell in it :(
- Very satisfied with water. Not interested in paying more for treatment.
- cloudy and tastes old/stale
- Very hard water so keep checking all the time.
- It's black and moldy I toilet bowl tanks, tastes terrible for drinking water even through a clean filter in the fridge. Water softener can't even soften it.

- I don't like the flouride
- I have drank the water fresh from the tap, but it is not the best tasting water. Plus it has an extremely high calcium content, evident by the continued clogging of my coffee pot.
- So hard and I don't have space for a water softener
- Water is hard and leaves white (probably calcium) deposits on dishes, etc.
- The water is far too hard, even though I have a water softener. I have to soak my electric kettle in vinegar every other week due to the mineral build up.
- Very hard water. Water does not taste good at all. The ppm count is on the border of max allowed. Water from the faucet is not drinkable unless ita filtered. Very disappointing.
- I am concerned about nitrate levels and other harmful contaminants in SPU water that are "under the minimum safety standards".. just under the legal limits doesn't mean it is desirable, safe or morally correct. Spend some money and treat the water.
- can smell the chlorine in the summer; so much goopy sedimentation on the bottom of glasses, never use to be like that; cut out the fluoride poison
- We have to buy bottled water because the taste of the water that comes from the faucet is salty, undrinkable.
- Love city water!! I personally think it tastes great. It is better then other well water and great taste in comparison to other towns. I would recommend leaving it as is because it is great water!
- I don't like it calcifying my coffee maker.
- Shakopee is known for very hard water. Wish quality was improved at the city level for those getting it from the city
- It doesn't taste good.
- A little on the hard side.
- I have a water softener, keep it filled, and we have a filter in our fridge. Non-filtered water tastes terrible and we have damage to our glassware due to poor water quality.
- It's a bit hard, and requires softening to prevent eczema for several in our family.
- hard water, bad taste

- I buy bottled H2O and use a PUR Filter and never drink tap water. The ring of sediment on my H2O softener, toilet tanks, icemaker shows me undrinkable. At times there is dirt ring in less used toilet.
- Dislike the taste and the water does not meet standards for pregnant women or an infant and toddlers which are present in my home.
- I wish the water was treated. We have a water softener, but have considered getting a whole-house filter.
- Shakopee has excellent water.
- Water is very hard
- Please get a water treatment plant like all the other cities.
- Hard water, taste at the tap is a bit off but fine.
- It doesn't have a good taste
- I have reverse osmosis to drink, and softener for all other faucets
- I don't like how it washes white clothes (things get dingy and gray very quickly) and it is very, very hard, so I'm constantly battling with hard water deposits
- The water is too hard. It's destroying our appliances
- Little things floating. Really gross
- Water is very hard. No issues with taste
- Water is too hard and doesn't taste good. I have a water filter for drinking. I almost didn't move to Shakopee because of water taste
- The water is hard, has to be filtered and requires a water softener. It leaves deposits that requires water heaters to be consistently replaced.
- The water is very hard in Shakopee. Other than that, we have been happy overall.
- We are finding more deposits in our water
- It smells heavy of chlorine
- Basic pond water.

- Smells like chlorine
- Even with water softener, still to hard. White marks on stainless steel pots when boiling water to cook...
- The taste is bad, which makes me wonder what might be in it. Surprised a town of our size does not have a water treatment facility. The extremely hard water seems bad for lawns and pipes... and coffee makers. ;)
- My water is very hard. I even got a new water softener and it's still hard and my hair doesn't always get clean and soap doesn't lather well. Although getting a new water softener was an improvement.
- Hope the hard water level is much lower
- I drink a lot of water and it tastes almost metallic to start the day, like out of a hose most days. It seems to get better throughout the day but it's definitely not good first thing.
- The chlorine taste and smell is overwhelming!
- We use a filter system
- Often tastes too bad to drink
- My water frequently tastes / smells like chlorine
- Would like water treatment plant
- It has many minerals that leave marks on glass and smells of chlorine
- There is too much iron. I used to work for Culligan so I know how the water tests. My water is terrible unless I have an iron filter
- Our water is extremely hard & has an off taste. It is hard on our appliances and fixtures. We spend time and money filtering or purchasing drinking water, constantly cleaning, repairing and replacing fixtures and appliances. Our coffee maker, as a small example, has had to be replaced almost every year we have lived in Shakopee.
- It's ok, hate the chlorine smell and taste
- Other than being very hard- water is ok
- Water is very hard and taste is not desired. We get all our drinking water from the well in EP

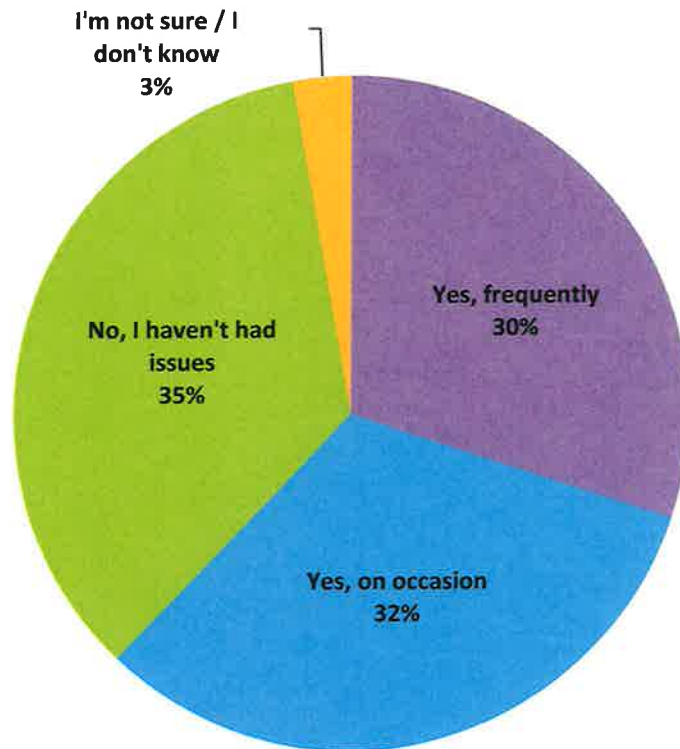


- Newly moved here. Taste is good from tap.
- We moved here from Bloomington and in my opinion, no one has better water than Bloomington.
- We don't drink the water we filter it before use.
- It's terrible. I've had to replace multiple faucets because of the corrosion. 3 kitchen sink, 4 shower, 2 bathroom sink. Soon fridge water dispenser.
- Tested the water quality myself 300 times over the limit for sediments. Very not safe. I tested the water in two locations here in shakopee same results by a water company.
- I have been drinking this water for 80 years and never had any problems with the cleanliness or taste.
- Hard water and our water pressure sucks
- It is very hard.
- I would like to see it properly treated to remove nitrates.
- Very hard and bad taste
- Tastes awful
- We have a water softener now so much better
- HORRIBLE HORRIBLE HORRIBLE white film all over every single thing...has wrecked 2 toilets..my dishwasher..I am begging for help
- I'm always having to clean faucet heads bc of calcium build up and the toilets always have a line in the bowl.
- It's extremely hard
- It's very hard and leaves build up if we don't keep up with it. Also, we can't use it on crush appliances, ie coffee maker, because the hard water ends up ruining it.
- Water is extremely hard and damaging to everything it touches. The taste is very bitter and gross.
- Terrible taste, also have to use CLR cleaner almost weekly to clean the excessive amount of buildup off of all my faucets and shower heads. Had to start using distilled water in my coffee maker because it will be clogged in about 2 weeks. Worst water quality I have

ever seen. Me and my family have seriously been considering moving out of Shakopee and the water is a major factor. We all have developed skin problems as well in the last 5 years living here

- Taste to salty and leaves rust in the tub
- Water is hard and full of minerals.
- Tastes awful and I will not drink fluoride
- Very hard water, leaves a lot of stains.
- The water quality is mostly good, but there always seems to be a white residue that is left over when the water dries, or when I water my houseplants a white residue will form on the soil
- Horrible taste and too hard
- Get rid of the lime in the water.
- Too much chlorine/pool water odor.
- The water seems very hard compared to other counties we've been in and it always needs salt or our dishes are covered in thick film of coating hard water.
- Taste has alot of chlorine, you can just smell it when you turn the tap on
- White partials in the water if not filtered.
- I feel like my toilets and sinks are hard to clean. Water tastes ok but not great. I do have a special filter for my sink for drinking water but do use unfiltered water for cooking.
- Water is too hard.
- Damn the water is so "hard" which kills my household appliances.
- Water is horrible. Tastes awful. Very hard water. Seems to be getting wore. One of our considerations for staying/moving is the quality of our water.
- The water is drinkable but we do not like it. We get our drinking water from a spring in Eden Prairie

**4) Have you had any concerns or issues with tastes and/or odors with your water in the past 5 years?**



**Comments:**

- We don't drink out of the faucets due to the bad taste.
- We all know, or should know, that city water must be treated to make it safe. I have an inexpensive 3-stage filter under the kitchen sink for drinking and cooking water.
- We have a Culligan system in our home, but when from the tap it tastes terrible.
- The water in Shakopee has a less than desirable taste. I've helped install multiple carbon filters for people to help with this. Shakopee's bad water taste was even brought up during an MPR segment on Appetites on July 11, 2019. Have a listen here (Starting at the 3 minute mark): <https://www.mprnews.org/story/2019/07/11/appetites-tap-water>
- TASTE
- We don't drink the water

- It's terrible and I won't drink it.
- It used to taste fine, but a year or so ago it started tasting bad. I have been using a Britta filter and that helps, but it makes me worried what might be getting through the filter.
- It used to taste fine, but about a year ago it started tasting bad. I've been using a Britta filter, which has helped the taste.
- Sulfur smell.
- Have only lived here for 3 years
- I think our tap water tastes terrible, we always filter or buy drinking water.
- We've run into issues where water has been brown looking and water pressure can be very low.
- Smells like chlorine often
- Yellow at times
- The water taste is horrible.
- Different areas of town are worse, lived on Bluestem and that water wasn't drinkable had to buy bottle water. On Providence the water is better but seems to be getting progressively bad tasting.
- We have to use a water filter the taste is terrible.
- Every once in a while we get a halogen taste that is noticeably different and unappealing but running water for 10 minutes solves it
- I didn't like the taste, and the minerals caused issues with my humidifier and shower heads, so I use a water softener
- Prominent chlorine smell.
- Tastes awful, would not drink it. We use a filter.
- Tastes terrible, have to use a Brita filter.
- I feel like the hardness level of our water fluctuates. We have a softener but still end up with calcium build up, even after making adjustments to the softener

- We go to cub to get our drinking water as well as our water we use to put in our coffee maker and electric tea maker. We are unable to use tap water in anything electric or it destroys the coffee maker or etc. WE NEED CITY WATER TO HAVE SOFTNER IN IT..LIKE ST PAUL OR MPLS. IT DESTROYS HAIR AND SKIN..
- We buy bottled water now. We have a filter on our fridge and the water still doesn't taste good.
- Sulfurous odors
- We filter our water so I am unsure how it tastes, we will not drink it straight from the tap
- Cannot drink it as the taste is off. Drink filtered water only
- Yes-chemically and doesn't taste good
- Shakopee has excellent water quality.
- Taste is so bad and water is so hard that we had to invest in whole house filtration
- Water is very hard & causes havoc on household appliances.
- No issues with odors; however, taste is not great. Also, prefer not to have to chew my water (there are always white floaties).
- when my filter broke and I had to drink tap water. the taste is worse than when it's filtered.
- But I haven't inquired. It's smells like chlorine coming from the tap.
- I trust the SPU
- I have had a full house carbon filter and R.O. drinking water for >5yrs bc I want cleaner and more trustworthy water for my family.
- Turn on the faucet and have drinking water
- Smells skunky at times
- Sometimes I notice the chorine when it's added.
- I run the water through a Brita filter, so I am not really sure how the water is without it.
- We do not drink our water

- rusty water
- There should not be an odor or taste to the water
- only the chlorine
- Occasionally smells almost chlorine like
- Actually all the time, because water is unpleasant for consumption, unless it filtered
- Water is very hard. Taste is not great
- yes smells like chlorine, tastes weird, like heavy metals
- The water occasionally turns brown, I don't use it
- We have been buying water for drinking from the grocery store because our water does not taste good and sometimes stinks.
- Always.
- There has been some white buildup in appliances that frequently use water. Unsure if this is from the softening process from the water softener or residual that could not be resolved with softening/ filtering
- smells when you get a glass of water we stopped drinking it three years ago
- I don't drink my tapwater
- Please get a water treatment plant like all the other cities.
- Taste issue
- Sometimes smells like chlorine. I only drink it filtered through the refrigerator and replace the filters frequently
- Doesn't taste like pure water unless it's run through a filter
- Taste isn't good
- Water always tastes bad. Sometimes you smell chlorine
- I've had to install a water softener to help. Next step is water filtration system.
- Smells like chlorine

- That why we buy water filtered and drink from dispenser
- I switched to a whole house water filtration system and reverse osmosis, that's how bad it was.
- No odors really, but definitely taste.
- Chlorine seems high. I wish there wasn't Fl
- Tastes / smells like chlorine.
- We have installed filtration for drinking water. In past 5 years I believe I recall one notice for this topic. It's not about taste. I want it safe.
- Chlorine. There are "floatys" in the ice too
- I will not drink the cities water
- Taste
- It's just not as good as we were used to
- We have purchased a water softener, dechlorinator and whole house filter, along with a drinking water (Reverse osmosis) system to combat the taste and smell of the water we have had while on city water.
- Way too much chlorine all at once.
- I grew up in Bloomington and always drank the water out of the tap. I wouldn't think of doing that in Shakopee after seeing how gross the filter gets in our in home filter. Also I am not a fan of water softeners at all.
- We use a filter water pitcher
- On occasion it will be rusty or smell bad
- Tastes awful
- City hall micro management
- It tastes so terrible and has wrecked all my glasses and plates due to hardness..tastes so bad I have to go to Cub and fill gallon jugs. How will I do this in a few years? Im 62. Its horrible to do when its super cold out...I HATE THE WATER
- It always tastes HORRIBLE.

- I sometimes smell a strong odor like chlorine.
- I don't like the regular taste. I have an Eco Smart water purifier.
- Literally shit floating in the water
- Salty
- Tastes Bad
- Not very often, but sometimes there is a smell or slight taste of chemicals
- Taste seems off
- Without my water filters I couldn't rely on SPUC water.
- Awful water. Getting worse each year.,
- The water is drinkable but we do not like it. We get our drinking water from a spring in Eden Prairie
- Water seems to be aggressive on my plumbing



## Cost of SPU's Water

SPU's 2021 residential water rates are \$2.49 per 1,000 gallons of water plus a monthly service fee of less than \$4.00. Usage greater than 5,000 gallons is billed at \$2.98 per 1,000 gallons.

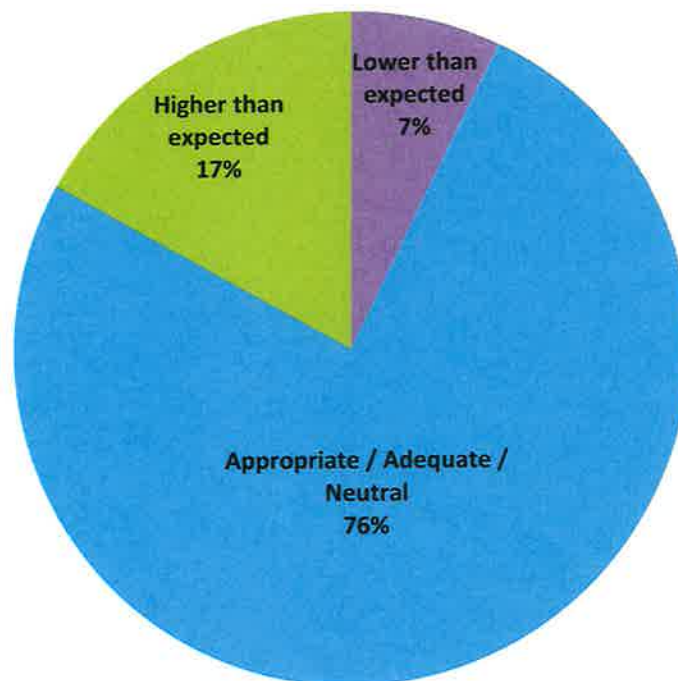
*(The average SPU residential customer uses about 2,250 gallons per month per person, which would cost an individual resident approximately \$9.00 per month.)*

### SPU Residential Water Rates (Effective January 2021)

Availability	USAGE CHARGE (per 1000 GALLONS)	PLUS	RECONSTRUCTION CHARGE (per 1000 GALLONS)
RESIDENTIAL SERVICE	1 - 5000 GALLONS \$2.49		
	>5000 GALLONS \$2.98		

Please refer to [SPU's 2021 Water Rates](#) for more information regarding your water bills.

### 5) How do you feel about the current cost of your water?



**Comments:**

- I'd pay more for better water
- I believe the cost has been low as not much filtering or treatment goes into it
- How much more per month would it cost to filter it?
- Way cheaper then living in Bloomington
- Water is included in my rent.
- HOA overs our bill.
- Paid through HOA so I never see the amount. Please dramatically increase the rate above a certain threshold in the summer to discourage lawn irrigation
- People around the nation have to purchase bottled water because their municipal water supplies provide poor tasting or quality water. Shakopee's drinking water is better than bottled water.
- When one considers the required necessity of water softening and filtration the price of shock P water is extremely high.
- SPUC prices are high.
- I would pay more for better water
- Will be nice to know what other cities charge is I can compare.
- Lived in lakeville before. There you only paid for all sewer water and street lights every 3 months. Water was cheaper but the other 3 items were about 1/3 the cost. I feel it is a lower quality water for a very high price! That said I do want it to be clean and safe.
- Seems ok
- Why we pay Sewer to the Met Council?
- This is me just using Google to look at the average price of water in the US.
- I don't have a cost to compare it against. Sometimes I dont even use 1000 gallons a month. I'm satisfied with the cost.

- No increase of fee for over 5000 gallons used. Ridiculous. Question the reconstruction charge as well.
- The cost is too high for the poor quality water that is provided
- it's all the extra fees that are bothersome
- I would pay higher rates for better/safer water
- Paying anything for terrible water is too high. That being said, I would happily pay double for water as good as I had in Bloomington- WITHOUT a softener or filter.
- When I lived in Eden Prairie the cost was much less and better water
- The water rates are too high for water that is not treated with a water treatment plant and can't believe a community this size does not have higher standards for water quality. Yes it meets the bare minimum quality standards but water rates are not significantly lower compared to water rates of communities who provide treatment. Many residents are not even aware there is no water treatment plant.
- Neutral - it is part of my HOA so I'm not sure what the bill would be separate.
- Please get a water treatment plant like all the other cities.
- How would I know what I should be paying? 🤖
- I trust your judgement. I will do more research across the metro
- Only lived here for 8 months
- I grew up in Richfield which has awesome water. No need for softener or filters. Wish we had that here.
- I hate paying for shit water
- Too high for hard water with poor taste
- Higher than it should be for the quality of the water.

## Iron & Manganese in SPU's Water



**Manganese** occurs naturally in rocks and soil across Minnesota and is often found in Minnesota ground and surface water. While a small amount of manganese is essential for human health, drinking water with too much manganese can be a risk to health. Manganese can also cause discoloration and an unpleasant taste in drinking water. It can also stain laundry or cause a brownish-black or black stain on your toilet.

**Iron** may affect the appearance and taste of water by giving it a slightly red color and a metallic taste that can affect how food and beverages taste. For the most part, however, **iron** does not usually present a health risk. For the purposes of this survey we will focus on manganese as iron would be removed if filtration were installed.

### Current Regulatory Agency Guidelines

Parameter	EPA's Aesthetic Quality Guideline <sup>[1]</sup>	MDH's Health Quality Guideline <sup>[2]</sup>	
		for Infants (<1 year)	for General Public (>1 year)
Manganese (mg/L)	0.05	0.1	0.3 <sup>[3]</sup>

*[1] The EPA's Secondary Max Contaminant Levels (SMCL) were developed to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor, and are not federally enforceable.*

*[2] The MDH's health based values (HBVs) were developed to better keep your household drinking water safe.*

*[3] EPA has set forth a lifetime health advisory value of 0.3 mg/L for manganese.*

If you would like to learn more about manganese in Minnesota's water sources, please visit the [MDH's page on manganese](#).

### Manganese in SPU's Water

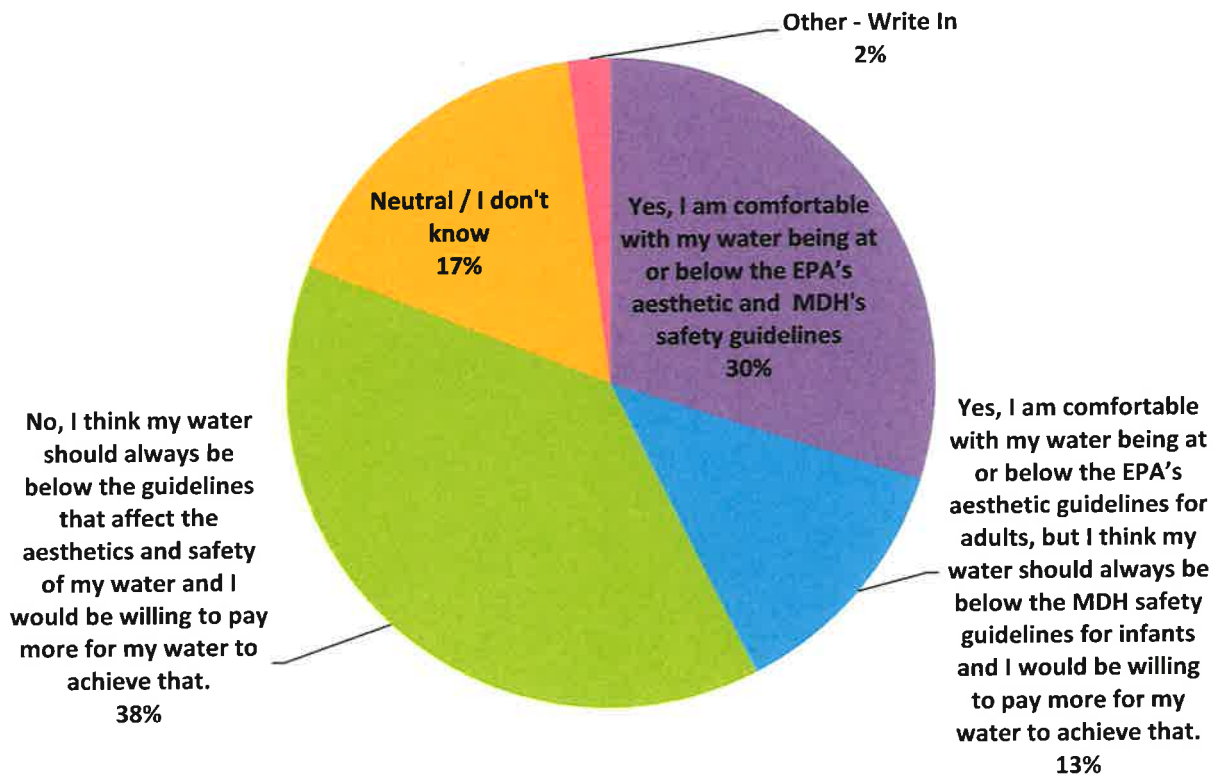
Year	Manganese Concentrations in SPU's Groundwater Wells <sup>[1]</sup>		
	Minimum (mg/L)	Average (mg/L)	Maximum (mg/L)
2018	<0.005	0.015	0.076
2019	<0.005	0.021	0.118 <sup>[2]</sup>
2020	<0.005	0.018	0.084

[1] Does not include two (2) wells that SPU considers as emergency wells and do not use.

[2] Only on one occasion in 2019 did a well exceed the MDH's health quality guideline (0.10 mg/L).

In the last three years, SPU's tested groundwater manganese levels have all been below the MDH's health-based values of 0.10 mg/L (see table above), with the exception of one occasion from one well. That occasion was 0.12 mg/L in 2019. Additionally, the majority of SPU's wells have tested below the EPA's guideline for aesthetic considerations (0.05 mg/L), with a couple of well testing slightly higher (0.09 mg/L).

#### 6) Are you comfortable with the manganese levels in SPU's water?



**Comments:**

- Already pay for it. Give me without charge
- I don't think you should have to pay more for water to be safe for everyone including infants
- I think it should be safe for infants without charging more.
- I want better quality water but your price is already HIGH!
- No. SPU has rates higher than neighboring cities
- No amount of treatment is going to satisfy everyone. Let those who want top quality tap water install their own treatment equipment rather than charge everyone for city water, much of which is used in toilets and on lawns and gardens.
- Perhaps you should have made the survey mobile friendly so that all charts can be read in full.
- Do not want to pay more. Feel the company can better budget its overhead and not overcharge consumers
- Its not good. Why we have to go with all our jugs and get water at cub. the reverse osmosis water. Its a horrible pain in the butt!!!! HELP. Water quality in Shakopee is horrible its kinda a standing joke basically we live on the wrong side of the river..everyone in st paul and mpls has great water and it does not destroy everything in their home including their skin and hair.
- Are the wells evenly blended to mitigate outliers that occasionally test outside standards?
- I shouldn't have to pay more for my water quality to reach its guidelines. If it was considerably below possibly.
- Iron and manganese are minerals essential to health and common in multi-vitamins. Even when they are high in drinking water, as in some parts of the country, they are aesthetic problems, not health concerns.
- I don't like that these rates are achieved by mixing well water. They should be the same level throughout the system. Build a treatment facility!
- Your watching
- I don't know why people in Shakopee complain
- Well, now I understand what that stain is in the toilet that I can never seem to scrub off, and we just bought new toilets last year.
- I don't really like MDH so I'm not 100% on board with a lot of their health values.

- Owners need to decide for themselves--not the city--if they want levels below safety guidelines. We like RO water but the city would be stupid to try to provide that for the entire city.
- I have those toilet stains
- Not interested in paying more..
- Numbers look good and not wanting to pay more
- wont pay more for quality water that should be in line with the Regulatory Agency Guidelines not less than the recommended levels
- Numbers look good. No need to spend more.
- How is this even a question? We deserve to have the same water quality as other communities.
- My laundry gets yellow stains. And yellow gel like substance builds up in my toilet tank. Maybe there is oil under my house? Haha!
- Please get a water treatment plant like all the other cities.
- However, if it is so close, it should not cost very much
- I dont know if it should or not have I dont know. I would think less is always better.
- I've definitely noticed black staining in all my toilets and it's really hard to clean and looks gross for guests

## Nitrate in SPU's Water



**Nitrate** is a compound that naturally occurs causing low levels of nitrate in drinking water—usually less than 3 mg/L. Higher levels of nitrate in water can be a result of **runoff or leakage from fertilized soil, wastewater, landfills, animal feedlots, septic systems, or urban drainage**. Consuming too much nitrate can affect how blood carries oxygen and can be extremely **harmful to infants (6 months or less)** and can result in methemoglobinemia, or **blue baby syndrome**. Only recently has scientific evidence emerged to assess the health impacts of drinking water with high nitrate on adults.

**SPU's nitrate levels have consistently tested below the EPA's MCL (10 mg/L).**

### Nitrate in SPU's Wells

Year	Nitrate Concentrations in SPU's Groundwater Wells <sup>[1]</sup>		
	Minimum (mg/L)	Average (mg/L)	Maximum (mg/L)
2018	0.6	3.7	7.9
2019	0.3	3.5	7.4
2020	0.6	3.5	6.7

*NOTE: Nitrate levels in all of SPU's wells have been naturally dropping over the past 20 years with decreasing agricultural land in the area.*

*[1] Does not contain two (2) wells that SPU considers as emergency wells and do not use.*



### Nitrate Regulatory Standards

Parameter	EPA's Maximum Contaminant Level <sup>[1][2]</sup>	MDH's Health Quality Standard <sup>[3]</sup>
Nitrate (mg/L)	10	10

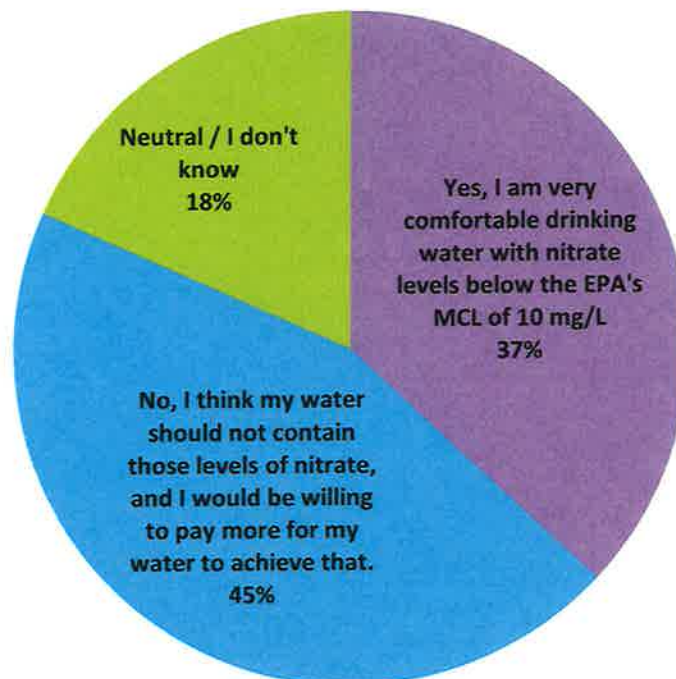
[1] The EPA's Maximum Contaminant Level (MCL) is an enforceable maximum allowable amount of a contaminant in drinking water which is delivered to the consumer.

[2] The EPA's Maximum Contaminant Level Goal (MCLG) for nitrate is 10mg/L. The EPA considers any level of a contaminant below which has no known or expected risk to health of a consumer.

[3] The MDH's Health Risk Limit (HRL) is based off EPA's MCL.

If you would like to learn more about nitrate in Minnesota's water systems, please refer to [MDH's page on nitrates](#).

**7) Are you comfortable with your water that meets EPA guidelines for nitrate, or would you like to see the levels even lower?**



**Comments:**

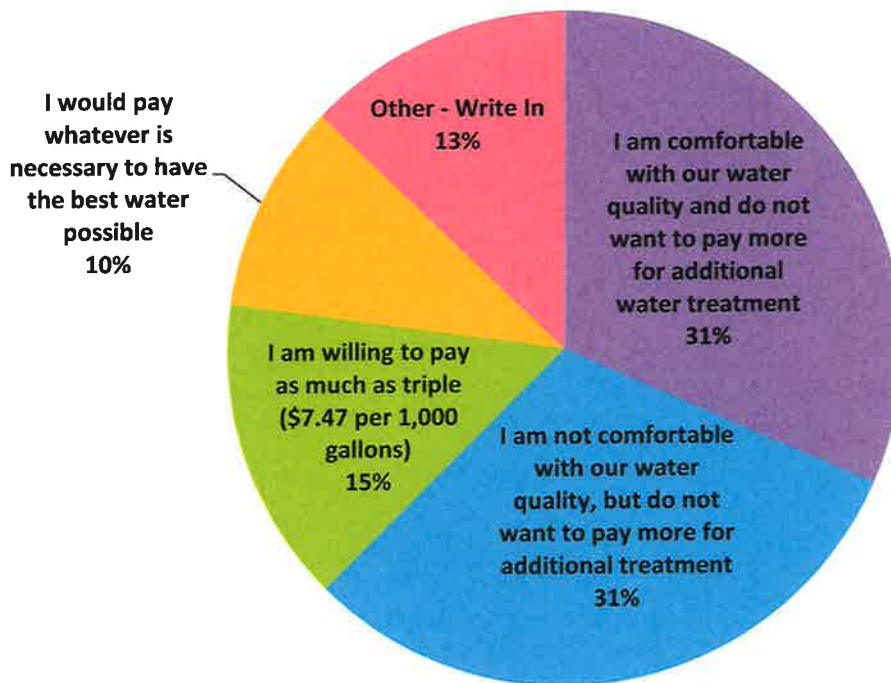
- If I wasn't comfortable with city water I would install a reverse osmosis system or buy bottled water for drinking.
- My main concern is that the nitrates are too high. Nearly every city around us treats their water for nitrates, but Shakopee doesn't. I have a fish tank, and the main reason for changing water in the tank is nitrates that build up from fish waste. There are times when I test my dirty fish tank water and the tap water, and find the nitrate levels are the same. So not only does that make it impossible to lower the nitrates in my tank by doing a water change, it also worries me that I'm drinking water that has a level of nitrates that is harmful to fish. I know Shakopee water technically is under the limit for nitrates, but it worries me how close it gets to that limit at times.
- Why not aim for nitrate levels as low as possible without having to pay more??
- I am concerned that nitrates could be contributing to more issues in people with diabetes or kidney and other disease. Lack of oxygen can lead to serious issues.
- Not wanting to pay more. Be a responsible, ethical company.
- We consume nitrates in many processed foods at much higher rates than from our drinking water. Nitrates are only a concern for infants who are fed water reconstituted dry formula, and only when concentrations are considerably higher than municipal water in Shakopee. In my role as Environmental Manager for Scott County I found and mapped private wells with high concentrations of nitrates primarily the result of poor location and design of wells and old deep septic systems.
- Those rates are achieved by mixing the water in the system. Levels should be uniform throughout the system. Build a treatment facility!
- You cannot please everybody
- You should possibly remove the payment clause on these questions if you were looking for honest answers. There appears to be bias in these questions.
- Numbers look good and not willing to pay more
- Nitrates should be removed and near zero!!!
- Comfortable with guidelines AND would pay more for lower levels.
- Numbers look good. No need to spend more.
- Seriously? We harm our residents because we are ok with terrible water because that is what SPUC has always done?
- The charts above are cutoff and you can't see the reported levels. Was this done on purpose? Shakopee has high levels per MDH.
- Please get a water treatment plant like all the other cities.

- Not happy and not paying
- It would depend on how much more for all of this.
- I want the levels lower without increased cost
- No. The water should be safe. And, not expensive.
- I was unable to see the numbers that went with years 2018-2020 in the last two charts. The right side of my view was cut off.
- It's to high
- Again I don't think we should have to pay more for completely safe drinking water. All families including low income families deserve the same rights to completely safe and clean drinking water.

## Filtration Treatment

To supply everyone equally treated water by reducing the iron & manganese, and/or nitrate levels prior to distribution, it can be expected that the cost of water for our customers could see a significant increase.

8) If you currently pay \$2.49 per 1,000 gallons used, how much would you feel comfortable paying for water to have additional filtration and treatment? \*



*\*Note: The increase would only apply to the water portion of your bill and would not increase the cost of electricity, stormwater or sanitary sewer portions of your bill.*

**Comments:**

- 25% more
- 3.69 per 1,000
- A fair rate comparable other cities with treatment plants.
- Don't think we should have to pay for water when we don't know how much we use in a townhome
- Double
- Fix the problems just do it for the health of the community.
- I already pay privately for filtration of city water. Don't increase cost. If we want cleaner, we can do it on our own.
- I am not comfortable w current water but willing to pay a little more but not triple
- I am willing to pay higher, however water treatment facilities need to be subsidized by the state.
- I am willing to pay more but not triple
- I would be willing to pay 0.50 more per 1000 gallons for treated water.
- I would be willing to pay more...perhaps 25-50% more but triple seem pretty high.
- I would like to know how much it would cost to get safe, drinkable water and be able to get rid of the water softener.
- I would pay more but would need to see what comparable municipalities are paying for the same service.
- I would pay more for better water, but not triple
- I would pay more if the water was drinkable
- I would pay what is reasonable — not whatever is necessary — to have the best water possible
- I wouldn't want to pay triple the cost; I would be ok with a slight increase
- I'd be ok with double so long as there was a notable difference
- I'd pay double.
- Is triple the cost more or less than the necessary amount? I'd be willing to pay more than currently paying for better and safer water.
- Leave it the hell alone, I do not want the Karen's telling me what to pay
- Okay with a small increase
- Reasonable rates in line with what other cities with better filtration systems pay.

- Up to double
- Up to double current rate.
- Willing to pay extra but not sure why tripling the rate is the only option. Could be double to be as effective
- Willing to pay more
- Willing to pay more but not triple the current cost
- Would pay \$4 per 1000 gallon
- You provided no range below tripling the cost. Be more transparent. also how do our rates compare to neighboring communities.
- Maybe you could publish what percentage of city water is typically used for toilets, laundry, lawns, gardens, etc., and ask people if they would like that water to cost as much as the water they drink. If not, the better solution is to treat drinking and cooking water in each residence. Maybe SPU could research and offer such equipment at lower than market cost as opposed to tripling current water rates for everyone.
- I don't see the need to make any changes to our water, as long as it meets the EPA guidelines. As long as individual wells are tested regularly and kept in compliance with the EPA guidelines, I don't see the need to burden the citizens of Shakopee with increased rates, especially when it would prove to be a hardship for many families who are currently experiencing loss of jobs, and are having a hard time providing food & shelter for their families
- I am comfortable paying more. I know there are ways I can cut back on my water usage if it were to become more expensive than I would like.
- Sure I would pay 3x, but commitment to "whatever necessary" is a big step because not everyone is going to agree. I don't want to get gouged, but sharing what other cities pay would let us make an informed decision
- I don't pay for water directly and I plan on moving in the next few years.
- I am a professional engineer in the the water treatment industry. Stop saying filtration. Particulate debris is not in the discussion and your use of it in context of nitrate or hardness reduction is misleading. Almost any treatment you do will lower our water's LSI and I dont want my family drinking corrosion byproducts.
- I am in the process of installing a whole house water filtration system. Water quality has been the one negative or surprise about moving to Shakopee.
- I would be so so willing to pay for my own water here if I had much better quality!!
- I would be willing to pay more if that filtration also included methods that reduce or eliminate in home water softening.

- Money can be better spent by identifying and addressing potential sources of ground water contamination within the well-head protection areas required to be defined by state laws.
- Since I don't trust SPUC to spend our money transparently or wisely I won't offer a price
- If prices were to increase three times that of current prices, what does that say about the quality of our present water?
- this is a flawed question. We need realistic costs with demonstrated improvements to make an informed decision.
- Clean, healthy water is priceless...and helps pipes last longer!
- We filter ALL our drinking-cooking water!
- I think it's a public health issue to make sure that water is safe for everyone without costing a lot of extra money.
- Water bills shouldn't have to be increased if SPUC was managed properly
- Mix it
- Let the "complainer" pay for it
- I don't know why you would need to only have an option for triple the cost. We should be meeting standards.
- The City Council and Manager need to stay out of this. They are over reaching and causing problems where none exist. We have enough conflict as is in Minnesota.
- Not interested in paying more for treatment
- I am unwilling to pay more for water treatment
- The safety of drinking water and the health of my family is worth every dollar. Every other major metro community has water treatment and our community deserves better.
- really pathetic question, why don't you give discounted water filtration systems to customers and let them be in charge of their own water quality since you can't seem to do it right
- Why can't the city figure it out? How do we rate to other cities water quality and price? And why would have to be so much more? What is not being supplied for our residents safety?
- NOT interested in paying more when the water is fine.
- Get it done.
- Using \$2.49 rate is not a good representation. That rate is for less than 5,000 gallons and an average family home should be used at rate of \$2.98 per 1k gallon. Triple rates for a

family would be almost \$9 per 1k and that's is absurd compared to other city water rates. Where is all the money earmarked from all these homes over all these years for a water treatment plant and monies collected with hookup rates? Very upsetting that we would be gouged for this now!

- Please get a water treatment plant like all the other cities.
- **ONLY IF OUR NON DRINKING WATER IS SPLIT OUT FROM OUR DRINKING WATER!**
- I already paid to filter out the smell and funky taste of the water so I'm not interested in paying more for new filtration system.
- I'm willing to pay a little more for better water, but not triple.
- Not enough selectable answers for this question.
- I have trusted you would do the right thing for 9+ years. We have a growing community with lots of manufacturing coming in. I want more than the companies to be benefited to come to our town. Our community must plan for this increase water demand. Chaska, St cloud and others have a water treatment plant. We deserve one too. There has to be some joint collaboration across the metro to support our community to get to a place to understand it's not cheap but that doesn't mean we should be sacrificing our community's safety.
- My grass doesn't need softened water. Filtering all of it is silly.
- I am deeply concerned with how much higher water costs could negatively impact our lower income residents. We must find ways to achieve better water filtration without just simply "passing the cost" on. Access to clean potable water is a human right and we need to figure out a way to make it that way.
- And I would pay **OUT OF MY OWN POCKET EVERY MONTH** to have better water. Our hair and skin are destroyed
- already pay too much



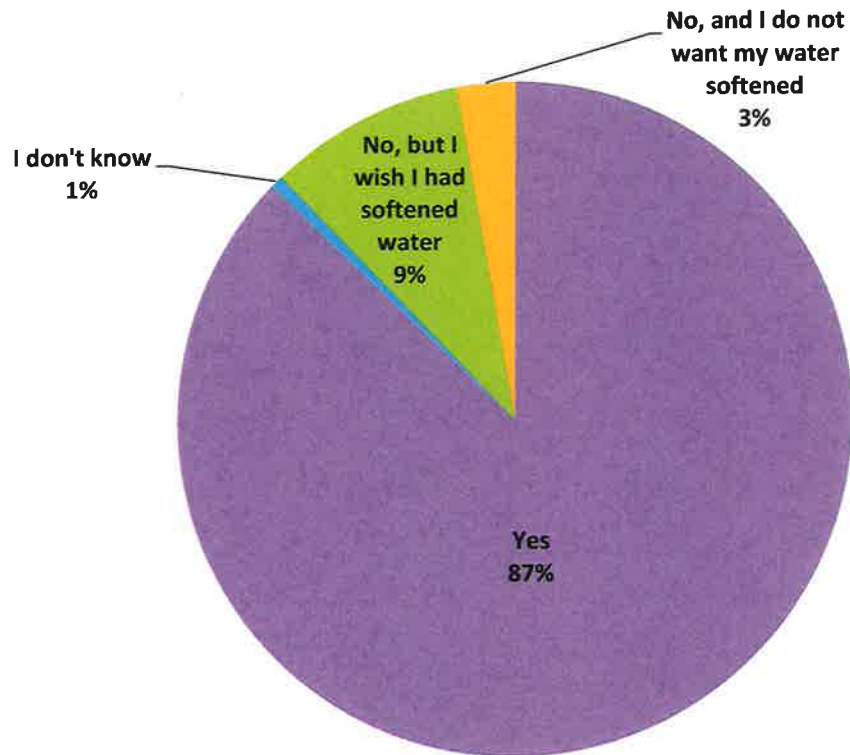
## Municipally Softened Water



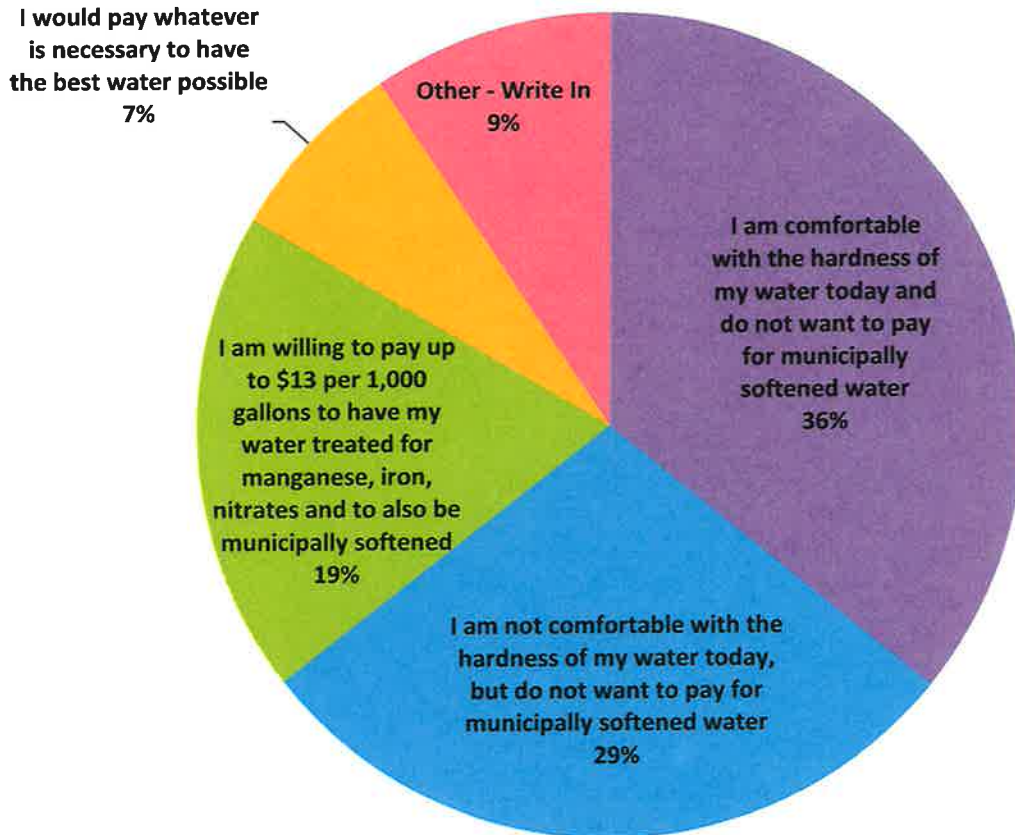
**Hardness** in water is caused by excess calcium and magnesium ions in the water. Hard water causes scaling on fixtures and can plug pipes. Water above 100 mg/L of hardness is considered hard. The hardness in the water from the SPU wells ranges from 163 mg/L to 446 mg/L, and averages about 350 mg/L. Currently, SPU does not soften water before delivering it to customers.

Some customers choose to soften their water with in-home water softeners, which typically costs about \$1,000 to \$2,500 to install, and \$5 to \$20 per month to run and refill with salt.

9) Do you currently soften your water at home?



**10) A centralized filtration water treatment plant would be the only way to soften water for all SPU customers. If you currently pay \$2.49 per 1,000 gallons used, how much would you be willing to pay for water to be softened, in addition to the other filtration treatments noted in Question 8? \***



*\*Note: The increase would only apply to the water portion of your bill and would not increase the cost of electricity, stormwater or sanitary sewer portions of your bill.*

**Comments:**

- \$4
- I am on a tight budget and would be willing to pay a small increase, but not a large increase at this time
- I don't trust SPUC to spend our money transparently or wisely.
- I don't want hard water but I am not a fan of paying more.
- I have a water system with ion cleaner rather than salted softener. Don't add more salt. It can cause health issues for those with conditions.
- I rent and do not pay for water directly.
- I would like to see municipally softened water, at a reasonable price
- I would need to see what the comparable rate in other municipalities with similar water situations to have an educated amount.
- I would pay \$3 - \$4/1000 gallons for treated water.
- I'd be willing to pay the \$13.00. Hard to say I'd pay whatever it takes without some sort of range.
- I'm not comfortable with the hardness and would be willing to pay something reasonable. But not "whatever is necessary" — bad survey question response.
- Just fix the issues
- Maybe 20% more
- Not sure
- Okay with an increase
- See comments
- Shouldn't have to pay
- This should be included
- Very few cities soften water it's up to the operator of the owner that receives it
- We do use a water softener but the water is still extremely hard. We have hard water spots in showers that are very hard to clean.
- What is the price necessary for the best water possible? But yes I'm sick of hard water in Shakopee and willing to pay more.
- Willing to pay more but not 5x current rate
- Willing to pay up to \$7 more for the water to be softened

- Would pay for municipally softened water ONLY if it is done in a manner that does not harm the environment or use extra water to do so.
- would accept a moderate cost increase only for water softening
- It depends on method SPU would use to soften the water. If it's like the typical home water softener that replaces calcium and magnesium ions with sodium ions from salt, then that would be a bad idea particularly for lawns and gardens that need watering. Also, the salt gets into the ground and surface water. Road salt is already a problem for that reason.
- Again, the infrastructure to provide a central filtration water treatment plant for the citizens of Shakopee would be a financial hardship for all the citizens, not to mention the challenge of connecting all the wells and the disruption the digging all over town would cause to our daily lives, for who knows how many years.
- Doesn't everyone drink bottled water these days anyway? If I had a concern about the water I drink from the tap I would have a conditioner installed locally.
- Again, a comparison of what other cities with softner systems would be useful.
- I don't know what is average to pay but 13\$ seems incredibly high
- I strongly do not want city softened water
- Stop saying filtration!!!!!!! Call it the right thing!!!!!!! Lime soda softening, reverse osmosis, ion exchange. Be honest and present the factual downsides or the city council will win, dissolve SPUC, and take your reserves which you have smartly set aside.
- The water hardness is so unacceptable.
- Please do not soften the municipal water. I have an R/O system and I would be unable to use with softened water.
- \$13 / 1000 is too much but 350mg is too high too. Please find other alternatives. There has to be some way to lower it closer to 100mg so that home softeners would function better.
- Help!! We need better water softner. The softner system we have in our rental unit is horrific and does not work yet we have no choice. Id be so so willing to pay for water to be soft. We cannot use the city water at all to use in kitchen. I ve gone thru 2 toilets it clogs up everything and destroys everything..also has destroyed my washer clothes and my dishwasher... HELP
- Moved from Bloomington. Night and day difference. The water is so heavy here. Would rather have better water instead of over working my water heater and potential pipe issues
- The chemicals used for softening water are less healthful than the calcium and magnesium that would be removed. We do not drink soft water for that reason.

- I would pay the same price as Bloomington
- I do not think that the rate needs to be as high as \$13 to pay for municipally softened water. But I think it's a huge asset for a community.
- another bad question. Water hardness is unique and personal to each person. We should know to what level you're going to soften the water, and the associated cost.
- This will help residential plumbing last longer, please do it. All other neighboring cities soften their water.
- We have a water Softener
- I care most for the water softening benefits
- Since this is cheaper to deal with from home, I'd rather do that. I don't need to soften the water that's going to end up on my lawn.
- I think those that have a water softener should get a credit of some sort should the city choose to municipally soften water.
- I must be ignorant to these costs. How do other places achieve this without a cost increase from 2.49 to 13 dollars? I can't imagine the city of Shakopee is that significantly lower than those that have this system. This makes me unable to answer the question. Maybe make it softer without this system in place.
- After filtration via refrigerator, the hardness of water in my house is 500 ppm (TDS tester) which is extremely high.
- A centralized filtration system would make water no longer affordable for many people in the community. If that is the goal of the City Council, then they should proceed.
- We installed a water softener and accept responsibility for those costs
- I already have a water softener I do not see the point to pay more to do something I have in my home
- Not interested in paying the City to soften water for me
- Softening your water should be a choice and not done for everyone nor should it be expected to make everyone pay for it..
- Please publish in the monthly SPUC letter what the cost for a water treatment facility would require and what each household can expect to pay for treated water. Is this true it would cost \$13 per 1000 gallons for treated water? From the point of building a treatment facility until ??? forever??
- We already have a water softener, and don't want to pay extra for what we already have.
- \$13 per 1000gallons is steep for treated and softened water.. it would make SPU water the most expensive in the metro.. why so expensive? why haven't you planned for this

in the design and layout of your infrastructure over the last 30 years that Shakopee has exploded in growth? I'll pay it, but it's irresponsible you didn't plan for this.

- again offer discounted units to individual households
- Softening water should be the customer's choice. Not willing to pay more so everyone can have it.
- I love going through jugs of CLR to keep our shower working. Also, I love replacing glasses that we received as wedding gifts 4 years ago. That seems normal.
- Water treatment should be provided and paid for by homeowner. Treatment to provide safer water for the health of our residents needs to be the priority!
- Please get a water treatment plant like all the other cities. Screw the staff at the city for trying to take over you, they can't even run the city correctly without issues.
- I would be willing to pay more, but not \$13 per 1000 gallons. I would pay up to \$5 if it meant I would get consistent soft water.
- Would be okay with paying up to \$5.00/thousand for soft water only, not for other treatments.
- Again, major concerns with how this could impact lower income people in the area.
- I only have to buy a coffee maker every 5 months
- Willing to pay \$6.50 per 1000 gal.
- Again there are counties already doing this and there bills do not come in much higher if at all higher.
- I'm curious if my water softener at home is as effective as the proposed city softening and if would give us really soft water to have both in place. I don't want to pay a ton for city softening though since we do have a pretty new water softener at home.

## Customer Verification

**18) Last question! What is your water service street address? (Required)\***

---

**TENNESSEN WARNING NOTICE**

*This information is used to confirm that survey responses have come from current SPU customers only, and that response data is not being influenced by outside parties or entities. You may choose not to provide this information, however your feedback may not be included in the response summary of verified customers. This information will only be used by the SPU to get customer feedback on water quality, and will not be shared with 3rd parties.*



## Thank you for taking the survey!

Your response is very important to us.

Please return your survey responses to SPU in one of two ways:

- Place it in an envelope **labeled “Water Survey”** and put in the **24-hour drop box** at the SPU Service Center located at: 255 Sarazin Street, Shakopee, MN *(No postage necessary)*
- Add postage and mail to:

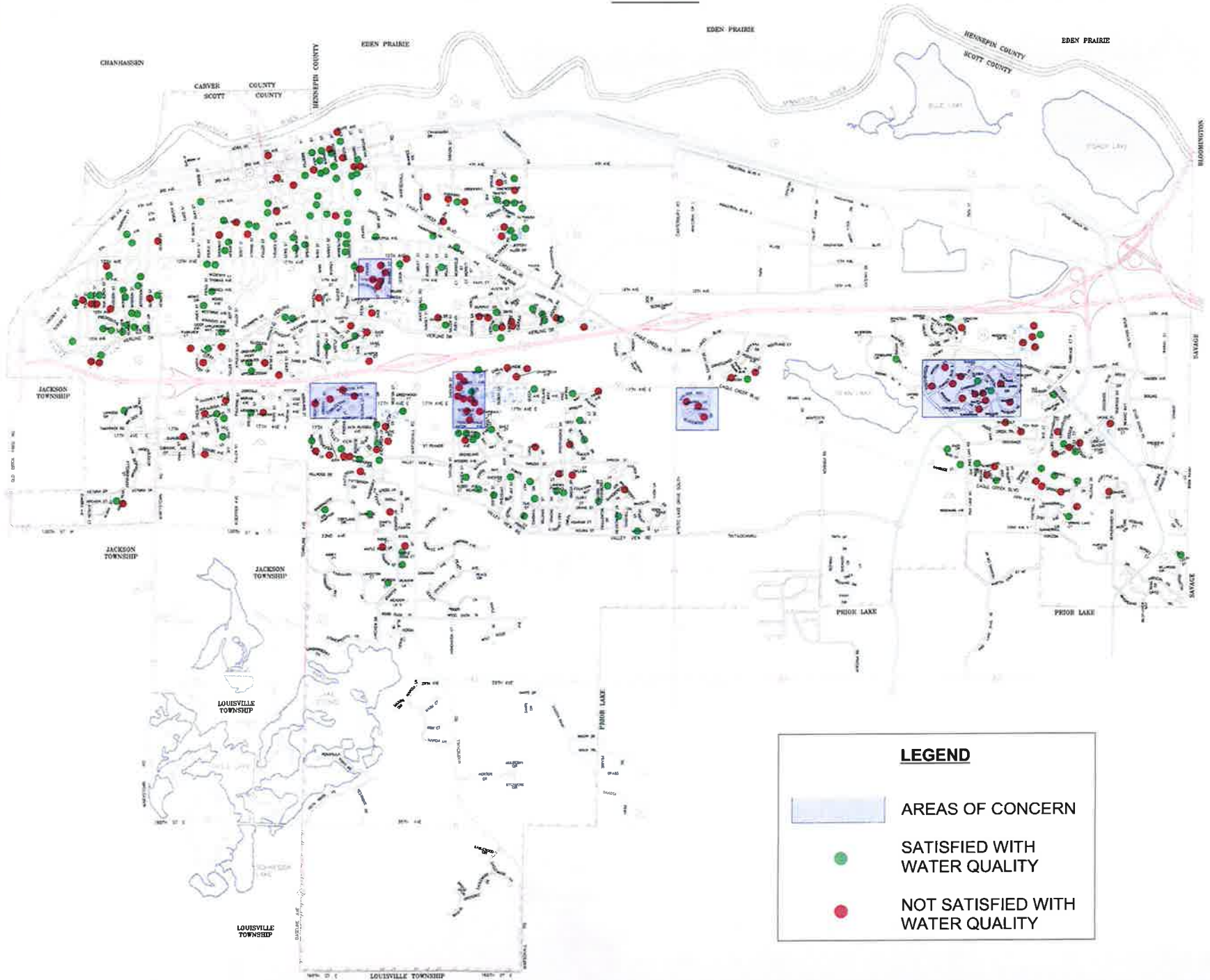
**SPU, Attn: Water Survey**  
**PO Box 540**  
**Shakopee, MN 55379**



## **APPENDIX B**

# **WATER QUALITY SATISFACTION HEAT MAP**

# WATER QUALITY SATISFACTION HEAT MAP

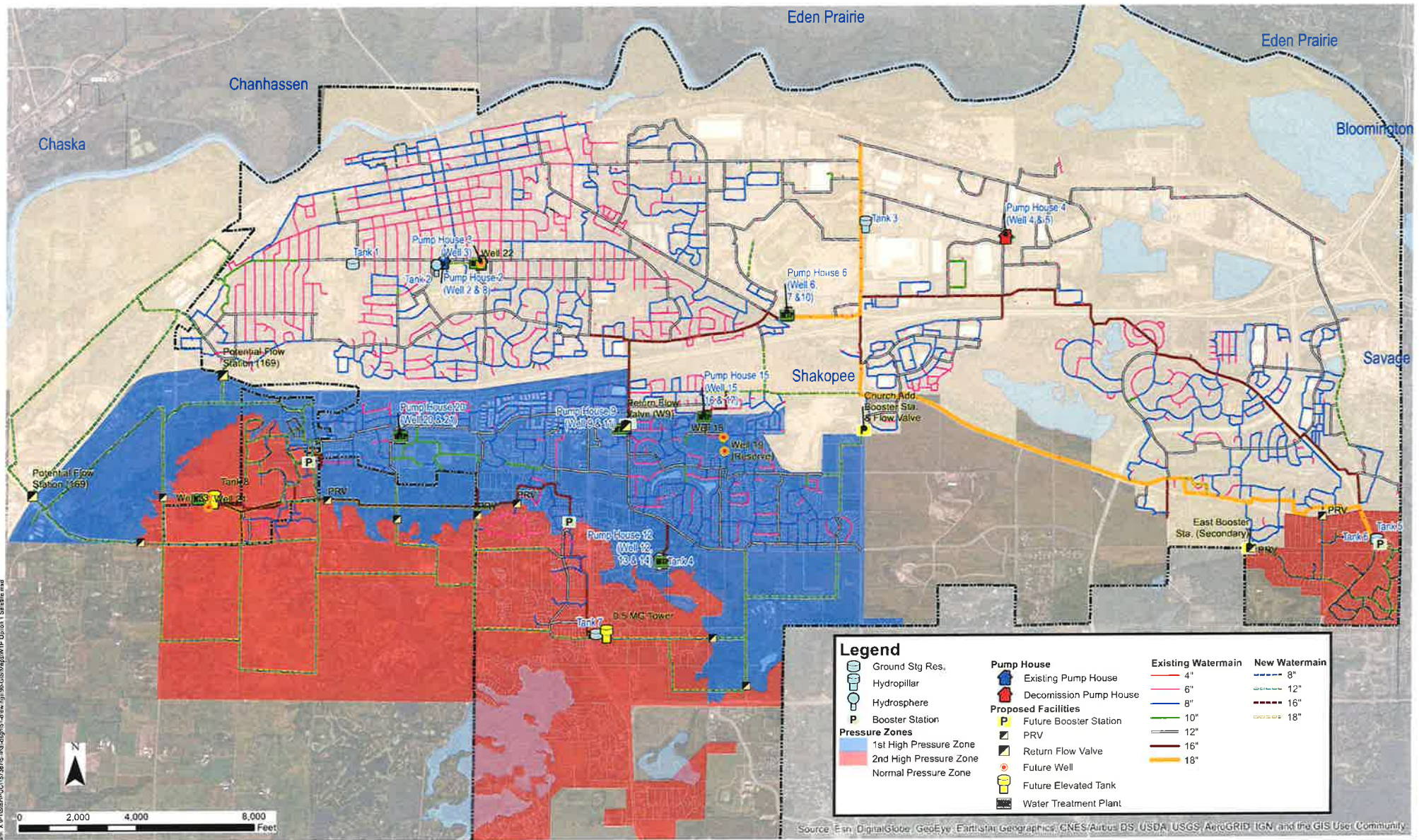


**LEGEND**

-  AREAS OF CONCERN
-  SATISFIED WITH WATER QUALITY
-  NOT SATISFIED WITH WATER QUALITY

# Appendix D

Alternatives Water System Maps

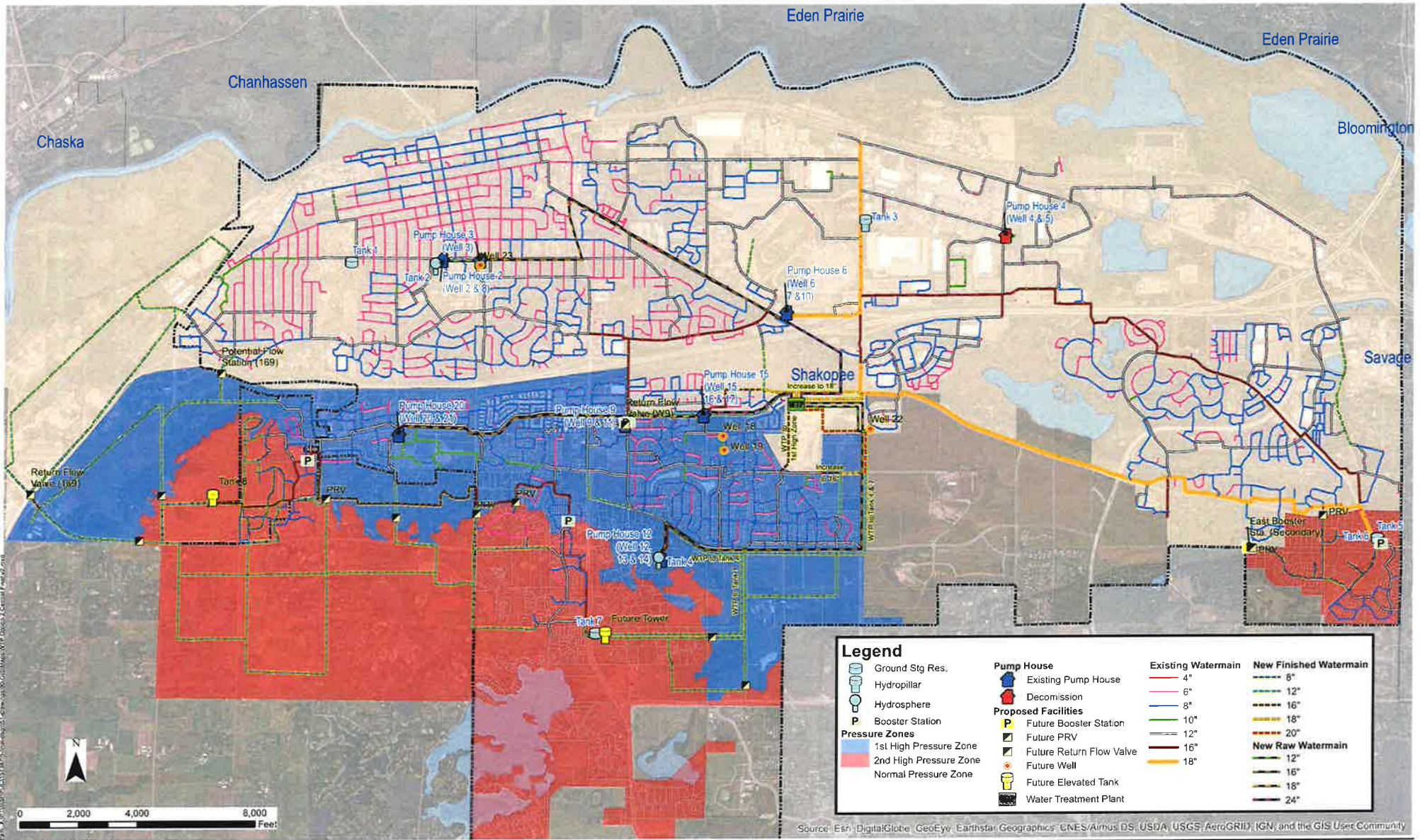


Alternative 1 - Satellite Systemwide Treatment  
 Shakopee Public Utilities  
 Shakopee, Minnesota

**FIGURE 1**  
 Ultimate Water System Map



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

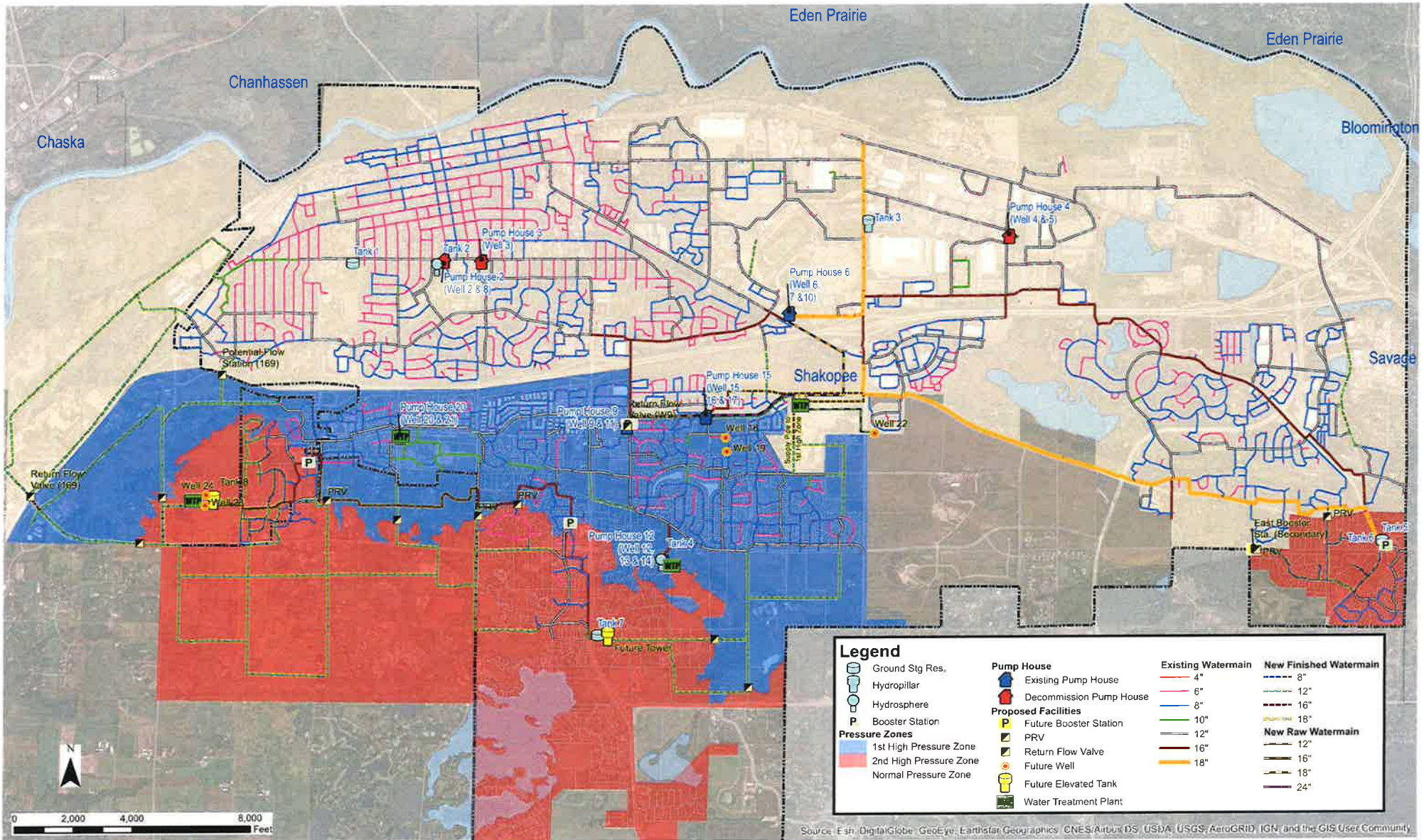


Alternative 2 - Central Systemwide Treatment  
 Shakopee Public Utilities  
 Shakopee, Minnesota

**FIGURE 2**  
 Ultimate Water System Map



Source: Esri | DigitalGlobe | GeoEye | Earthstar | Geographics | CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Alternative 3 - Hybrid Systemwide Treatment  
 Shakopee Public Utilities  
 Shakopee, Minnesota

**FIGURE 3**  
 Ultimate Water System Map



# Appendix E

Water Treatment Plant Site/Building Layouts





**PUMP HOUSE NO. 3**  
 3MGD ION EXCHANGE WTP

<p>SHEET</p>	<p><b>SHEET TITLE</b>                  SHAKOPEE PUBLIC UTILITIES                  PROPOSED WATER TREATMENT                  FACILITY PLAN</p>	<p>SHEET NO. 1234                  SHEET DATE 3/15/2021                  DESIGNED BY RAH                  DRAWN BY RAH</p>	<p>DATE 3/15/21                  REVISIONS</p>	<p><b>SPU WATER TREATMENT FEASIBILITY STUDY</b>                  FOR SHAKOPEE PUBLIC UTILITIES                  SHAKOPEE, MN</p>	<p>DATE: 3/15/2021                  DRAWN BY: RAH</p>	<p><b>SEH</b>                  SEH ENGINEERING                  1000 W. WISCONSIN AVE. SUITE 200                  SHAKOPEE, MN 56085                  PHONE: 507.281.1234                  WWW.SEHENGINEERING.COM</p>
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PUMP HOUSE NO. 6  
SMGD GRAVITY FILTRATION WTP



PUMP HOUSE NO. 9  
 3MGD ION EXCHANGE WTP

SARAZIN ST

**SHEETING**  
 SHAKOPEE PUBLIC UTILITIES  
 PROPOSED WATER TREATMENT  
 FACILITY PLAN

SHEET NO. 22-14-001  
 SHEET DATE: 10/14/2019  
 DESIGNED BY: RYAN HANSON  
 DRAWN BY: RYAN HANSON

SCALE: 3/16" = 1'-0"  
 DATE: 10/14/2019

SPU WATER TREATMENT FEASIBILITY  
 STUDY  
 FOR SHAKOPEE PUBLIC UTILITIES  
 SHAKOPEE, MN

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PUMP HOUSE NO. 12  
 3MGD GRAVITY FILTRATION WTP



SEH  
 6000 EAST 14TH AVENUE, SUITE 100  
 DENVER, CO 80232  
 TEL: 303.733.8800  
 WWW.SEH.COM

SPU WATER TREATMENT FEASIBILITY  
 STUDY  
 FOR SHAKOPEE PUBLIC UTILITIES  
 SHAKOPEE, MN

DATE	BY	REVISION
03/14/2021	RYAN WARDEN	ISSUE FOR PERMITTING

PROJECT NO.	PROJECT NAME	DATE
2021-001	3MGD GRAVITY FILTRATION WTP	03/14/2021

SHAKOPEE PUBLIC UTILITIES  
 PROPOSED WATER TREATMENT  
 FACILITY PLAN

SHEET



PUMP HOUSE NO. 15  
 10MGD GRAVITY FILTRATION & ION EXCHANGE WTP



DATE: 10/14/2017  
 TIME: 9:57 AM  
 USER: RYAN WATSON  
 PROJECT: SHAKOPEE PUBLIC UTILITIES WATER TREATMENT PLANT

SPU WATER TREATMENT FEASIBILITY STUDY  
 FOR SHAKOPEE PUBLIC UTILITIES  
 SHAKOPEE, MN

DATE: 10/14/2017  
 TIME: 9:57 AM  
 USER: RYAN WATSON  
 PROJECT: SHAKOPEE PUBLIC UTILITIES WATER TREATMENT PLANT

DATE: 10/14/2017  
 TIME: 9:57 AM  
 USER: RYAN WATSON  
 PROJECT: SHAKOPEE PUBLIC UTILITIES WATER TREATMENT PLANT

DATE: 10/14/2017  
 TIME: 9:57 AM  
 USER: RYAN WATSON  
 PROJECT: SHAKOPEE PUBLIC UTILITIES WATER TREATMENT PLANT

DATE: 10/14/2017  
 TIME: 9:57 AM  
 USER: RYAN WATSON  
 PROJECT: SHAKOPEE PUBLIC UTILITIES WATER TREATMENT PLANT





18MGD GRAVITY FILTRATION & ION EXCHANGE WTP



**CENTRAL WTP**  
 25MGD GRAVITY FILTRATION, ION EXCHANGE, & LIME SOFTENING WTP



SEH CONSULTANTS, INC.  
 10000 UNIVERSITY AVENUE, SUITE 100  
 MINNETONKA, MN 55345  
 TEL: 952.895.2200  
 FAX: 952.895.2201  
 WWW.SEHCONSULTANTS.COM

SPU WATER TREATMENT FEASIBILITY STUDY  
 FOR SHAKOPEE PUBLIC UTILITIES  
 SHAKOPEE, MN

DATE: 08/14/2021  
 PROJECT: SHAKOPEE PUBLIC UTILITIES  
 SHEET: 18-14-000-037-04  
 USER: RYAN HANSEN

PROJECT: SHAKOPEE PUBLIC UTILITIES  
 SHEET: 18-14-000-037-04  
 USER: RYAN HANSEN

PROJECT: SHAKOPEE PUBLIC UTILITIES  
 SHEET: 18-14-000-037-04  
 USER: RYAN HANSEN

PROJECT: SHAKOPEE PUBLIC UTILITIES  
 SHEET: 18-14-000-037-04  
 USER: RYAN HANSEN



# Appendix F

Detailed Cost Opinions







Systemwide Water Treatment Alternatives Operations, Maintenance, and Repairs Costs Comparison

Alternative No	WTP Type	Zone	Site Location	Supply Wells				WTP Average Use (MGD)	Pressure														Total Annual Cost for Nitrate, Iron & Manganese Removal						
				Existing Wells	New Wells	Capacity <sup>1)</sup>			IRON & MANGANESE REMOVAL							Total Annual O&M \$/R	NITRATE REMOVAL												
						gpm	MGD		Equipment Replacement	Labor	Gas	Chemicals	Insurance	Electricity	Equipment Repair		Equipment Replacement	Labor	Gas	Chemicals	Insurance	Electricity		Equipment Repair	Total Annual O&M \$/R				
ALT. 1 (Satellite)	SATELLITE	NIS	Pump House 3	Well 7 & 8	Well 22	3,600	3.7	0.75	-	-	-	-	-	-	-	-	-	-	\$126,991	\$77,000	\$7,333	\$63,148	\$7,790	\$48,750	\$10,838	\$298,807	\$298,807		
	SATELLITE	NES	Pump House 11	Well 18, 19, & 17	Well 19 & 18	5,400	9.2	3.00	\$383,299	\$122,087	\$18,965	\$105,000	\$18,043	\$155,000	\$41,494	\$872,229	\$57,309	-	\$211,578	\$1,304	\$19,500	\$8,255	\$301,986	\$1,174,215					
	SATELLITE	NIS	Pump House 7	Well 8, 11, & 10	NONE	3,000	3.0	0.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	SATELLITE	1MS	Pump House 12	Well 12, 14	NONE	3,800	3.7	0.75	\$95,515	\$30,527	\$3,391	\$28,250	\$3,261	\$48,750	\$10,369	\$218,057	\$196,951	\$12,000	\$7,333	\$63,148	\$7,790	\$48,750	\$10,838	\$298,807	\$298,807				
	SATELLITE	1MS	Pump House 25	Well 20 & 21	NONE	2,817	3.8	0.75	\$95,515	\$30,527	\$3,391	\$28,250	\$3,261	\$48,750	\$10,369	\$218,057	\$196,951	\$12,000	\$7,333	\$63,148	\$7,790	\$48,750	\$10,838	\$298,807	\$298,807				
	SATELLITE	2MS	Tank 8	NONE	Well 23 & 34	2,400	3.8	0.75	\$95,515	\$30,527	\$3,391	\$28,250	\$3,261	\$48,750	\$10,369	\$218,057	\$196,951	\$12,000	\$7,333	\$63,148	\$7,790	\$48,750	\$10,838	\$298,807	\$298,807				
	SATELLITE	NIS	Pump House 8	Well 6, 7, 10	NONE	3,400	4.8	1.25	\$139,193	\$50,870	\$5,632	\$43,750	\$5,428	\$81,250	\$17,283	\$363,429	\$392,489	\$156,000	\$22,000	\$464,906	\$25,000	\$170,625	\$41,846	\$1,272,866	\$2,644,638				
TOTAL								8.0	\$743,388	\$244,000	\$26,000	\$201,250	\$25,000	\$373,750	\$79,492	\$1,671,772	\$392,489	\$156,000	\$22,000	\$464,906	\$25,000	\$170,625	\$41,846	\$1,272,866	\$2,644,638				
ALT. 2 (Central)	CENTRAL	NIS/ 1MS/ 2MS	Gravel Star (North West Corner)	Well 6, 7, 10, 13, 14, 15, 9, 11, 20, 21, 12, 13, 14, 2, 4, & 8	Well 14, 19, 22, & 25	11,019	30.8	8.0	\$743,318	\$156,000	\$20,000	\$288,000	\$25,000	\$520,000	\$80,762	\$1,823,879	\$131,318	-	\$574,875	\$3,750	\$78,000	\$24,228	\$792,171	\$2,616,050					
								TOTAL	8.0	\$743,318	\$156,000	\$20,000	\$288,000	\$25,000	\$520,000	\$80,762	\$1,823,879	\$131,318	-	\$574,875	\$3,750	\$78,000	\$24,228	\$792,171	\$2,616,050				
ALT. 3 (HYBRID)	HYBRID	NIS	Gravel Star (North West Corner)	Well 6, 7, 10, 13, 14, 15, 9, & 11	Well 14, 19, 22 (Development East of Gravel Star)	13,050	18.8	3.8	\$585,714	\$183,198	\$30,621	\$159,612	\$19,838	\$796,421	\$63,046	\$1,335,686	\$145,193	N/A	N/A	\$413,191	\$2,974	\$44,463	\$18,914	\$624,716	\$1,950,624				
								0.8	\$75,753	\$24,207	\$2,800	\$20,818	\$2,566	\$18,684	\$8,223	\$172,942	\$18,938	-	-	\$53,895	\$388	\$5,800	\$1,645	\$60,865	\$253,607				
								0.8	\$75,753	\$4,387	\$7,690	\$20,818	\$2,566	\$18,684	\$8,223	\$173,342	-	-	-	-	-	-	-	-	-	-	-	-	-
								0.8	\$75,753	\$4,387	\$7,690	\$20,818	\$2,566	\$18,684	\$8,223	\$173,342	\$798,824	\$516,000	\$4,647	\$63,148	\$7,790	\$48,750	\$10,838	\$298,807	\$111,092	\$511,092	\$511,092		
TOTAL								8.8	\$732,280	\$234,000	\$26,000	\$201,250	\$28,000	\$373,750	\$79,492	\$1,871,772	\$360,356	\$166,000	\$4,667	\$533,230	\$22,000	\$99,613	\$38,417	\$1,316,489	\$2,715,813				

ANNUAL COSTS

NOTES:  
<sup>1)</sup> New wells capacity assumed to be 1,200 gpm



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TO: Greg Drent, Interim General Manager 

FROM: Joseph D. Adams, Planning & Engineering Director 

SUBJECT: Resolution 2021-21 A Resolution Approving Exchange Agreement and All Documents Necessary to Carry Out Exchange Agreement and Completion of Closing Under Exchange Agreement

DATE: October 14, 2021

#### ISSUE

The Commission previously approved a Land Swap Agreement with DR Horton to trade a permanent drainage easement over a portion of the Tank #8 site to use for storm water ponding in exchange for Outlot B in Windermere South 5<sup>th</sup> Addition to provide SPU a site for a future water supply well. The original agreement did not include all of the temporary easement areas necessary for construction nor a permanent easement over the drainage pipe exiting from the storm water pond that was inadvertently omitted by the developer.

#### BACKGROUND

A revised agreement that incorporates the necessary additional easement areas described above is attached; along with Resolution #2021-21 that the Commission should adopt as a best practice when effecting land rights agreements per legal counsel.

#### RECOMMEDATION

Staff is recommending the Commission adopt Resolution #2021-21 A Resolution Approving Exchange Agreement and All Documents Necessary to Carry Out Exchange Agreement and Completion of Closing Under Exchange Agreement.

## RESOLUTION NO. 2021-21

### RESOLUTION APPROVING EXCHANGE AGREEMENT AND ALL DOCUMENTS NECESSARY TO CARRY OUT EXCHANGE AGREEMENT AND COMPLETION OF CLOSING UNDER EXCHANGE AGREEMENT

**WHEREAS**, the Shakopee Public Utilities Commission, a municipal utility commission organized under Minnesota law (the “Commission”), is proposing to enter into an Exchange Agreement (the “Exchange Agreement”) with D.R. Horton, Inc.-Minnesota, a Delaware corporation (the “Seller”), to receive a parcel of real property depicted in Exhibit A to the Exchange Agreement (the “Property”) in exchange for granting certain temporary easements to the Seller and permanent easements to the City of Shakopee; and

**WHEREAS**, the Commission has determined that it is appropriate to execute, accept and deliver the Exchange Agreement; and

**WHEREAS**, the Commission has determined that it is appropriate to finalize and close the transaction contemplated by the Exchange Agreement and to execute, accept and deliver such documents as are necessary to acquire the Property and carry out the transaction; and

**WHEREAS**, the Commission has determined that the acquisition of the Property and the granting of the easements is in the public interest.

**NOW, THEREFORE, BE IT RESOLVED BY THE SHAKOPEE PUBLIC UTILITIES COMMISSION AS FOLLOWS:**

1. That the Commission hereby ratifies, confirms, authorizes and approves the execution of the Exchange Agreement and authorizes and approves the transactions contemplated by the Exchange Agreement.
2. That the Commission hereby ratifies, confirms, authorizes and approves, and directs the President or the General Manager of the Commission to finalize, accept and/or deliver in the name and on behalf of the Commission, the Exchange Agreement and all documents, affidavits and certificates in such form and on such terms and conditions as deemed necessary or appropriate in connection with the Exchange Agreement and the acquisition of the Property, including all closing documents and other documents as may be required to complete the transactions contemplated by the Exchange Agreement.
3. That the President or the General Manager of the Commission is hereby authorized, empowered and directed to make such changes to the foregoing documents, affidavits and certificates and any other closing documents necessary to carry out the transactions contemplated by the Exchange Agreement as the President or the General Manager of the Commission deems reasonable and necessary.
4. That the President or General Manager of the Commission are authorized, empowered and directed to do all other acts and things as are deemed necessary or desirable in their discretion to effectuate the acquisition.



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

Passed in regular session of the Shakopee Public Utilities Commission this 18<sup>th</sup> day of October, 2021.

\_\_\_\_\_  
Commission President: Kathi Mocol

ATTEST:

\_\_\_\_\_  
Secretary: Greg Drent

**EXCHANGE AGREEMENT**

**DATE:** \_\_\_\_\_, 2021

**BETWEEN:** **D.R. HORTON, INC.-MINNESOTA,**  
**a Delaware corporation** (“DHI”)

**AND:** **SHAKOPEE PUBLIC UTILITIES COMMISSION,**  
**a Minnesota municipal utility commission** (“SPUC”)

**RECITALS**

A. DHI is the fee owner of Lot 1, Block 1, Outlots at La Tour Terrace (the “Parent Parcel”). DHI has obtained Preliminary Plat approval from the City of Shakopee (the “City”) for a subdivision of the Parent Parcel, to be named Windermere South 5<sup>th</sup> Addition, which subdivision will contain the Access Parcel, as defined below.

B. SPUC is the fee owner of Lot 1, Block 1, La Tour Terrace (the “SPUC Parcel”) and in exchange for the Access Parcel, which DHI wishes to convey and SPUC wishes to receive, SPUC wishes to convey and DHI wishes the City of Shakopee (the “City”) and itself to obtain permanent and temporary easements, over portions of the SPUC Parcel as further described below.

C. The SPUC Parcel, the Access Parcel (defined below), and all of the easements contained in the Drainage and Storm Pipe Easement Agreement and the Three Temporary Easements (both as defined below) are further depicted on Exhibit A-2.

**AGREEMENT**

**NOW, THEREFORE,** in consideration of the foregoing Recitals, the mutual covenants and promises contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

**I. EXCHANGE – FEE TITLE TO ACCESS PARCEL**

1.1 Access Parcel. DHI is in the process of platting the parcel of real property depicted in Exhibit A-1 as Outlot B, Windermere South 5<sup>th</sup> Addition, in the proposed plat of Windermere South 5<sup>th</sup> Addition (the “Plat”), together with all improvements thereon and all rights, privileges, easements, licenses, appurtenances and hereditaments relating thereto (collectively, the “Access Parcel”). The exact dimensions, location and legal description of the Access Parcel will not be finally determined until the Plat is finalized. Notwithstanding any current insufficiency of the legal description of the Access Parcel, the parties desire to proceed to enter into this Exchange Agreement (this “Agreement”) and to mutually agree on the exact dimensions, location and legal description of the Access Parcel pursuant to the Plat, which Plat will be recorded at or prior to Closing.

- 1.2 Conveyance of Access Parcel. Subject to the terms and conditions of this Agreement, DHI will transfer and convey to SPUC, and SPUC will receive and accept from DHI, the Access Parcel. SPUC intends to use the Access Parcel as an access parcel to the SPUC Parcel.
- 1.3 Closing. The closing of the conveyance (“Closing”) will occur at such time as DHI has received all approvals and is prepared to record the Plat.

## **II. EXCHANGE – GRANT OF EASEMENTS**

- 2.1 Payment in Form of Exchange. In exchange for the Access Parcel, SPUC will grant to DHI three temporary easements (collectively the “Three Temporary Easements” and individually the “Temporary Easement Agreement,” the “Temporary Construction Easement Agreement,” and the “Temporary Storm Pipe Construction Easement Agreement”) and SPUC will grant to the City two permanent easements (the “Drainage and Storm Pipe Easement Agreement”), all over portions of the SPUC Parcel, for drainage, ponding, grading, and construction purposes. The terms of the Drainage and Storm Pipe Easement Agreement are more specifically defined in Exhibit B. The terms of the Temporary Easement Agreement are more specifically defined in Exhibit C. The terms of the Temporary Construction Easement Agreement are more specifically defined in Exhibit D. The terms of the Temporary Storm Pipe Construction Easement Agreement are more specifically defined in Exhibit E.
- 2.2 Timing of Exchange. SPUC and DHI will sign and deliver the Three Temporary Easements to each other immediately following the execution of this Agreement and SPUC will sign and deliver the Drainage and Storm Pipe Easement Agreement to the City and the City will sign and deliver the Drainage and Storm Pipe Easement Agreement at or before Closing.

## **III. TITLE TO ACCESS PARCEL**

- 3.1 Preliminary Title Commitment. Within fifteen (15) days of the date of this Agreement, DHI will furnish to SPUC a commitment for an owner’s policy of title insurance (ALTA Form 06/17/06) covering the tax parcel of land underlying the Access Parcel (the “Preliminary Title Commitment”), issued by Old Republic National Title Insurance Company, through Scott County Abstract and Title, Inc., or such other title insurer as may be acceptable to SPUC (the “Title Company”), with standard exceptions for mechanic’s liens and parties in possession deleted, with searches for special assessments and with an amount of coverage equal to \$125,000.00. The Preliminary Title Commitment will include a copy of each instrument listed as an exception to title or referred to therein. The service charge for the Preliminary Title Commitment will be paid by DHI.
- 3.2 Final Title Commitment. As soon as the Access Parcel is able to be platted, DHI will furnish to SPUC a final commitment for an owner’s policy of title insurance (ALTA Form 06/17/06) covering the Access Parcel (the “Final Title Commitment”) issued by the Title Company, with standard exceptions for mechanic’s liens, survey and parties in possession deleted, with searches for special assessments and with an amount of coverage equal to \$125,000.00. The Final Title Commitment will include a copy of each instrument listed as an exception to title or referred to therein, except for any instruments previously furnished

with the Preliminary Final Commitment. The service charge for the Final Title Commitment will be paid by DHI, but the premium for any policy issued pursuant to the Final Title Commitment will be paid by SPUC.

- 3.3 Survey. As soon as the Access Parcel is able to be platted, and DHI has completed its work under the Three Temporary Easements, then DHI will furnish to SPUC, at DHI's cost, an "as-built" survey in both print and CADD formats of the Access Parcel made by a registered land surveyor and certified to SPUC, the Title Company and the title insurer, showing the location of any easements, improvements, encroachments, and the contours and topography of the Access Parcel, and conforming to the current standard detail requirements established by the American Land Title Association and the National Society for Professional Surveyors (the "Survey").
- 3.4 Examination of Title. SPUC will be allowed thirty (30) days after receipt of the Preliminary Title Commitment and fifteen (15) days after receipt of the Final Title Commitment and Survey to examine title to the Access Parcel and make objections. Objections will be made in writing or be deemed waived. Any exceptions to title accepted by SPUC or not timely objected to as aforesaid are, collectively, the "Permitted Encumbrances."
- 3.5 Corrections to Title. If any objections to title to the Access Parcel are made as provided in Section 3.4, DHI may elect in its sole and absolute discretion, but is not obligated, to attempt to cure any or all objections. If DHI elects to attempt to cure any such objections, DHI will be allowed until ten (10) days prior to the last day of the Due Diligence Period to cure or agree to cure at Closing (i.e., by providing required title affidavits) such objections. If DHI notifies SPUC that it chooses not to cure any or all objections, or if DHI has not informed SPUC at least ten (10) days prior to the end of the Due Diligence Period that such objections are or will be cured, then SPUC may as its sole remedies either: (a) terminate this Agreement by giving DHI written notice thereof on or before the last day of the Due Diligence Period, in which case both parties shall be released from all further obligations under this Agreement (subject, however, to any other obligations and agreements which expressly survive termination); or (b) waive all or any of the objections and close the transaction, in which event the uncured objections shall be deemed waived by SPUC and shall thereafter be Permitted Encumbrances under this Agreement. If SPUC fails to give such written notice of termination within the time required herein, it shall be conclusively deemed that SPUC has elected to waive the objections not so cured and to accept them as Permitted Encumbrances.

#### **IV. REVIEW OF THE ACCESS PARCEL**

- 4.1 Due Diligence Information. Within fifteen (15) days after the date of this Agreement, DHI will make available at its offices for review and copy by SPUC all records, engineering studies, reports and tests, construction reports, studies and other permitting documents for Windermere South 5<sup>th</sup> Addition, "as-built" CADD files of construction documents, and other documents and surveys relating to the condition, suitability, and desirability of the Access Parcel that are in the possession of DHI or otherwise reasonably available to DHI (the "Available Reports"). As they become available in the development process, DHI shall similarly make available to SPUC all such further documents regarding the Access Parcel,

which shall also be considered part of the Available Reports. Notwithstanding the foregoing, the Available Reports shall exclude all environmental reports except the ESA Report of Findings discussed in Section 4.2, any reports or documents which are proprietary to DHI or which are privileged and confidential pursuant to a recognized legal privilege (such as attorney-client communications and/or attorney work product) (such excluded documents and reports are referred to collectively as the “Excluded Materials”). For purposes hereof, proprietary information includes any internally-generated or internally-created reports, investigations, analysis and other documents which relate to or constitute cash flow budgets, accounting budgets, marketing information, market analysis or similar information. All Available Reports and other materials prepared by third parties for, on behalf of, or at the request of DHI, but expressly excluding any Excluded Materials, are collectively referred to herein as “Due Diligence Information.” With respect to any Due Diligence Information provided to SPUC and any other information made available to SPUC by or on behalf of DHI, SPUC acknowledges and agrees that: (a) DHI makes no covenant, representation or warranty whatsoever as to such information, including without limitation, its content, reliability, accuracy or completeness; (b) if SPUC uses or relies on any information provided by DHI, SPUC shall do so solely at its own risk, and DHI makes no representation, warranty or assurance as to whether SPUC has any right to use or rely thereon; (c) the parties preparing any such information are not the agents of DHI; (d) except to the extent that Mike Suel, DHI’s Land Development Manager, becomes personally aware of any such misrepresentations, misstatements, mistakes, errors or other inaccuracies, DHI shall have no duty to advise SPUC of any misrepresentations, misstatements, mistakes, errors or other inaccuracies contained in such information; and (e) DHI shall have no liability, and is hereby released from all liability to SPUC, its successors and/or assigns, with respect to such information, including without limitation, any liability for misrepresentations, misstatements, mistakes, errors or other inaccuracies contained in such information, except to the extent that Mike Suel, DHI’s Land Development Manager, becomes personally aware of any such misrepresentations, misstatements, mistakes, errors or other inaccuracies and DHI fails within a reasonable time period to so advise SPUC in accordance with subsection (d).

- 4.2 ESA Report of Findings. Within fifteen (15) days after the date of this Agreement, DHI will cause to be prepared and will provide a copy to SPUC of an Environmental Site Assessment Report of Findings (the “ESA Report of Findings”), which ESA Report of Findings will include all of the Access Parcel. DHI shall have no liability, and is hereby released from all liability to SPUC, its successors and/or assigns, with respect to such information, including without limitation, any liability for misrepresentations, misstatements, mistakes, errors or other inaccuracies contained in such ESA Report of Findings, except to the extent that Mike Suel, DHI’s Land Development Manager, becomes personally aware of any such misrepresentations, misstatements, mistakes, errors or other inaccuracies and DHI fails within a reasonable time period to advise SPUC of same.
- 4.3 Due Diligence. SPUC will be allowed thirty (30) days after the date of this Agreement (the “Due Diligence Period”) to review the Due Diligence Information and the ESA Report of Findings, inspect the Access Parcel, perform such inventories, observations, tests, and investigations as SPUC may reasonably deem appropriate, and otherwise satisfy itself regarding the condition, suitability, and desirability of the Access Parcel. If SPUC in its

sole discretion is not satisfied with the Access Parcel, SPUC may on or before the expiration of the Due Diligence Period terminate this Agreement by giving written notice to DHI. Upon such termination, neither party will have any further obligations under this Agreement.

- 4.4 Environmental Inspection. SPUC may provide its environmental consultant with a copy of the ESA Report of Findings and pursuant to Section 10.2, SPUC may at its cost conduct investigations of the environmental condition of the Access Parcel. Such investigation will include soil borings and DHI consents to such borings so long as SPUC provides DHI with the scope of work prior to completion of the borings and allows DHI to have its representative present at the Access Parcel during the completion of such work. If SPUC conducts a Phase I environmental investigation and such report contains a recommendation for a Phase II investigation, SPUC will have the option of either terminating this Agreement or providing to DHI a written request for a Phase II investigation that includes an explanation of the reasons for such request and the proposed Phase II testing. DHI may consent to the Phase II investigation in its sole and absolute discretion and, if DHI does not consent, SPUC may terminate this Agreement. If such consent is granted, SPUC may order at SPUC's cost a Phase II investigation. If a Phase II investigation is ordered, the Due Diligence Period will be extended by an additional sixty (60) days for investigation and submittal of such report.
- 4.5 Confidentiality. SPUC may disclose information in the Due Diligence Information and the ESA Report of Findings or information otherwise obtained by SPUC in the course of its review and inspections to its attorneys, consultants, investors, lenders and tenants. Otherwise, unless and until Closing occurs and subject to the Minnesota Government Data Practices Act, SPUC will keep all such information confidential.
- 4.6 Cooperation. DHI will cooperate with SPUC in making all necessary filings, petitions, and submissions required by SPUC to obtain the necessary governmental approvals for SPUC's planned use of the Access Parcel. DHI will take no action, either personally or in connection with a related entity, that would be inconsistent with or in contravention of its obligations to cooperate hereunder.

## V. CONDITIONS TO CLOSING

- 5.1 DHI Conditions. The obligation of DHI to complete the exchange under this Agreement is subject to the reasonable satisfaction of DHI that:
- (a) the representations and warranties of SPUC contained in Section 9.2 are true and correct in all material respects as of Closing;
  - (b) SPUC has in all material respects performed and observed all covenants, agreements and conditions of this Agreement to be performed or observed by it prior to or on Closing;
  - (c) DHI has received a certificate or certificates dated the day of Closing and signed by a responsible officer of SPUC certifying as to the matters set forth in items (a) and (b) of this Section;

- (d) no action or proceeding has been instituted or threatened by any third party unaffiliated with DHI to enjoin or delay this transaction or obtain material damages from DHI with respect to this transaction which DHI in good faith believes presents a significant risk of succeeding; and
- (e) SPUC has delivered to DHI all of the items required to be delivered to DHI pursuant to Section 6.1 and has delivered the Drainage and Storm Pipe Easement Agreement to the City.

5.2 SPUC Conditions. The obligation of SPUC to complete the exchange under this Agreement is subject to the reasonable satisfaction of SPUC that:

- (a) the representations and warranties of DHI contained in Section 9.1 are true and correct in all material respects as of Closing;
- (b) DHI has in all material respects performed and observed all covenants, agreements and conditions of this Agreement to be performed or observed by it prior to or at Closing;
- (c) SPUC has received a certificate or certificates dated the day of Closing and signed by a responsible officer of DHI certifying as to the matters set forth in items (a) and (b) of this Section;
- (d) no action or proceeding has been instituted or threatened by any third party unaffiliated with SPUC to enjoin or delay this transaction or obtain material damages from SPUC with respect to this transaction which SPUC in good faith believes presents a significant risk of succeeding;
- (e) as of two (2) days before and as of Closing, DHI has removed from the Access Parcel any and all containers of motor oil, paint, solvents, petroleum products, all motor vehicle tires and batteries, and all Hazardous Substances, pollutants, and environmental contaminants;
- (f) DHI has all Stormwater Pollution Prevention Plan (“SWPPP”) erosion control measures and temporary seeding and mulching in place on the Access Parcel; and
- (g) DHI has delivered to SPUC all of the items required to be delivered to SPUC pursuant to Section 6.2.

5.3 Unsatisfied Conditions. If any condition set out in Section 5.1 or 5.2 is unsatisfied on the date scheduled for Closing, the party for whose benefit the condition is may at its option:

- (a) waive the condition and proceed with Closing;
- (b) delay Closing for up to sixty (60) days to allow the condition to be satisfied; or
- (c) terminate this Agreement.

If this Agreement is so terminated, neither DHI nor SPUC will have the right to specific performance or damages for default of this Agreement.

## VI. CLOSING

6.1 SPUC's Closing Documents. SPUC will deliver to DHI at Closing:

- (a) a resolution of the board of commissioners of SPUC authorizing and approving the transaction contemplated by this Agreement, certified as true and correct by the secretary of SPUC;
- (b) the original Drainage and Storm Pipe Easement Agreement executed by SPUC and the City and substantially in the form of Exhibit B attached hereto;
- (c) a CSW Notice of Permit Modification Form regarding the SWPPP to be completed, provided and submitted to the Minnesota Pollution Control Agency ("MPCA") by DHI pursuant to Section 6.2(g), completed as to SPUC's portion of the Form and executed by SPUC; and
- (d) any other items required by this Agreement or reasonably required by the Title Company.

6.2 DHI's Closing Documents. DHI will deliver to SPUC at Closing:

- (a) a limited warranty deed duly executed by DHI conveying the Access Parcel to SPUC;
- (b) original copies of all contracts and records in DHI's possession;
- (c) an affidavit satisfactory to SPUC that DHI is not a foreign person under Section 1445 of the United States Internal Revenue Code;
- (d) a well disclosure statement as required under Minnesota Statutes section 103I.235, if appropriate disclaimer language is not contained in the deed delivered at Closing;
- (e) an affidavit satisfactory to SPUC that at Closing there are no outstanding, unsatisfied judgments, tax liens, or bankruptcies against DHI, no labor, services, materials, or machinery furnished to the Access Parcel for which mechanics' liens could be filed, and no unrecorded interests in the Access Parcel which have not been fully disclosed to SPUC;
- (f) a resolution of the board of directors of DHI authorizing and approving the transaction contemplated by this Agreement, certified as true and correct by an officer of DHI;
- (g) a CSW Notice of Permit Modification Form regarding the SWPPP to be completed (except for SPUC's portion), executed (except for SPUC's execution of its portion)



and submitted to the MPCA by DHI, and a copy of the State Storm Water General Permit for Lot 1, Block 1, Outlots at La Tour Terrace; and

- (h) any other items required by this Agreement or reasonably required by the Title Company.

6.3 Preparation and Delivery of Access Parcel. Prior to Closing, DHI will:

- (a) properly seal and abandon any wells on the Access Parcel per the Minnesota Department of Health and other applicable requirements;
- (b) properly remove any septic systems (including any tanks and drainfields) on the Access Parcel per the Minnesota Department of Health and other applicable requirements;
- (c) grade and deliver the Access Parcel in accordance with the grading plan approved by SPUC and the City; and
- (d) remove any remaining improvements, including basement concrete block and floors.

6.4 Installation of Public Street, Sanitary Sewer and Water Stubs, and Storm Water Improvements. After Closing, DHI shall at its sole cost and expense install a 4-inch sanitary sewer stub and one 1-inch water main stub to the perimeter of the Access Parcel and install a public street adjacent to the Access Parcel, all in accordance with the street and utility plans on file with the City in connection with the preliminary Plat and the development plans. DHI will use its best efforts to complete this work by November 1, 2022, subject to *force majeure*.

6.5 Delivery of Possession. DHI will deliver possession of the Access Parcel to SPUC at Closing.

6.6 Further Actions. At SPUC's request from time to time after Closing, DHI will at no cost to DHI execute and deliver such further documents of conveyance and take such other action as SPUC may reasonably require to convey the Access Parcel to SPUC.

## VII. CLOSING COSTS AND PRORATIONS

7.1 Closing Costs. SPUC and DHI will each be responsible for its legal, accounting and other expenses associated with the transaction contemplated by this Agreement up to and including the date final adjustments are made pursuant to this Agreement. DHI will be responsible for any document recording fees required for correction of title and the document recording fees for the Drainage and Storm Pipe Easement Agreement and the Three Temporary Easements. SPUC will pay any state deed tax required in connection with the Access Parcel, all other document recording fees, fees associated with the transfer or obtaining of licenses and permits required to operate the Access Parcel, mortgage registry taxes, and any sales or use taxes required in connection with the transaction. DHI and

SPUC will each pay half of the closing fee and any escrow fees imposed by the Title Company, title insurer or its closing agent in connection with this transaction.

- 7.2 Taxes and Assessments. Real estate taxes with respect to the Access Parcel due and payable in the year in which Closing occurs will be prorated as of Closing. DHI will pay all special assessments payable, levied or pending as of Closing and all real estate taxes due and payable in years prior to the year in which Closing occurs. SPUC will pay all such taxes and assessments due and payable in years following the year in which Closing occurs.
- 7.3 Income and Expenses. Except as set out in Section 7.2, all income and operating expenses relating to the Access Parcel will be prorated as of the close of business of the day before Closing. DHI will be responsible for the expenses and entitled to the revenues accrued or applicable to the period prior to Closing. SPUC will be responsible for the expenses and entitled to the revenues accrued or applicable to the day of Closing and thereafter.
- 7.4 Estimates. If any amount to be apportioned under Section 7.3 cannot be calculated with precision because any item included in such calculation is not then known, such calculation will be made on the basis of reasonable estimates of DHI of the items in question. Promptly after any such item becomes known to either party, such party will so notify the other and will include in such notice the amount of any required adjustment. If such adjustment requires an additional payment by SPUC to DHI, SPUC will make such payment to DHI simultaneously with its giving or within twenty (20) days of its receipt of such notice, as the case may be. If such adjustment requires a refund by DHI to SPUC, DHI will make such refund simultaneously with its giving or within twenty (20) days after its receipt of such notice, as the case may be.

## VIII. ACCESS PARCEL CONVEYED “AS IS.”

- 8.1 Access Parcel Conveyed As Is, Where Is, and with all Faults. As a material inducement to DHI to enter into this Agreement and to transfer and convey the Access Parcel to SPUC subject to the terms of this Agreement and for the exchange of the Drainage and Storm Pipe Easement Agreement and the Three Temporary Easements stated herein, DHI and SPUC covenant and agree as set forth in this Section 8.1. SPUC acknowledges and agrees that but for SPUC’s agreement to these provisions, DHI would not convey the Access Parcel to SPUC. SPUC agrees that SPUC will take the Access Parcel at Closing subject to the following conditions:
- (a) Disclaimer of Warranties. Except for the representations, warranties, covenants and agreements expressly set forth in this Agreement, DHI hereby specifically disclaims any warranty, guaranty, promise, covenant, agreement, or representation of any kind or character, oral or written, past, present or future, express or implied, of, as to, or concerning: (i) the nature and condition of the Access Parcel, including, without limitation, (A) the water, soil and geology, the suitability thereof and/or of the Access Parcel for any and all activities and uses which SPUC may elect to conduct, (B) the manner or quality of the construction or materials, if any, incorporated into the Access Parcel and/or the manner, quality, state of repair or lack of repair of the Access Parcel or any improvements thereon or related thereto,

(including without limitation any offsite improvements and infrastructure) and (C) the existence of any environmental hazards or conditions (including but not limited to the presence of Hazardous Substances of any type and/or above or below ground storage tanks, and/or pipelines) at, on, under, or near the Access Parcel or compliance with any applicable Environmental Laws or other Applicable Laws of any Governmental Authority; (ii) the nature and extent of any right-of-way, lease, possession, lien, encumbrance, license, reservation, or other condition concerning the Access Parcel; (iii) the value of the Access Parcel and/or the income or profits which may or may not be derived from the Access Parcel, or any potential appreciation in value or the resale value of the Access Parcel; and (iv) the compliance of the Access Parcel or its operation with any laws, ordinances, or regulations of any Governmental Authority, including without limitation any Environmental Laws and/or any land use laws or the compliance of the Access Parcel or its operation with any development agreements, covenants, conditions, or restrictions, or any other agreements or arrangements related to the development, use, or operation of the Access Parcel. Except for the representations, warranties, covenants and agreements expressly set forth in this Agreement, the conveyance of the Access Parcel is made on an **“AS IS”**, **“WHERE IS”** AND **“WITH ALL FAULTS”** basis, and SPUC expressly acknowledges that DHI makes no warranty or representation, express or implied, or arising by operation of law, including, but not limited to, any warranty of condition, title (other than the special warranty of title with respect to the Access Parcel), zoning, tax consequences, operating history or projections, valuation, governmental approvals, or any other matter or thing relating to or affecting the Access Parcel, including, without limitation, (i) the value, merchantability, marketability, profitability, suitability or fitness for a particular use or purpose of the Access Parcel or any portion thereof, and (ii) the manner or quality of construction or materials incorporated into any of the Access Parcel. Except as provided in this Agreement, DHI has no obligation to make repairs, replacements or improvements to the Access Parcel, or to pay any fees, costs or expenses related to the Access Parcel, or for any other liability or obligation with respect to the Access Parcel (except for any taxes or assessments to be paid by DHI at Closing and other costs and expenses to be paid by DHI as expressly set forth in this Agreement).

- (b) “Hazardous Substances” means any pollutants, materials, substances, or wastes identified or regulated in any way under applicable Environmental Laws, including, without limitation: any “hazardous waste” as defined by RCRA, and regulations promulgated thereunder, any “hazardous substance” as defined by CERCLA, and regulations promulgated thereunder, and any toxic substance as defined under or regulated by the Toxic Substances Control Act; asbestos, polychlorinated biphenyls, radon, freon and other chlorofluorocarbons, explosive and radioactive materials; petroleum and petroleum based products; urea formaldehyde foam insulation; underground and above ground storage tanks, whether empty, filled or partially filled with any substance, including without limitation any petroleum product or any other hazardous substance; any substance the presence of which on the Access Parcel is prohibited by any Environmental Laws; and any other substance or material which by or under any Environmental Laws requires special

handling or notification of any Governmental Authority in its collection, storage, treatment, use, or disposal.

- (c) “Environmental Laws” means any local, state, or Federal law, rule or regulation pertaining to environmental regulation, contamination, clean-up, or disclosure, or otherwise to health and safety, including without limitation each of the following, as the same may be amended from time to time, and all regulations promulgated pursuant to or in connection with any of the following: (1) the Resource Conservation and Recovery Act of 1976 (42 U.S.C. § 6901 et seq.), as amended by the Used Oil Recycling Act of 1980, the Solid Waste Disposal Act Amendments of 1980, and the Hazardous and Solid Waste Amendments of 1984 (as amended, “RCRA”); (2) the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 U.S.C. § 9601 et seq.), as amended by the Superfund Amendments and Reauthorization Act of 1986 (as amended, “CERCLA”); (3) the Toxic Substances Control Act (15 U.S.C. § 2601 et seq.); (4) the Endangered Species Act (15 U.S.C. § 1531 et seq.); (5) laws, statutes, ordinances, rules, regulations, orders, or determinations relating to “wetlands”, including without limitation those set forth in the Clean Water Act (33 U.S.C. § 1251 et seq.); and (6) the Federal Insecticide, Fungicide and Rodenticide Act, as amended.
- (d) “Governmental Authority” or “Governmental Authorities” means the United States, the State of Minnesota, the County of Scott, and the City, or any other governmental authority or agency having jurisdiction over the Access Parcel or any activities SPUC may conduct on or in the vicinity of the Access Parcel, including without limitation any municipal utility district, water control and improvement district, or similar district or taxing authority in which the Access Parcel is located or otherwise having jurisdiction over the Access Parcel, and any other agency, department, commission, board, or bureau or instrumentality of any of the foregoing, including without limitation the Army Corps of Engineers, the Federal Emergency Management Agency, the Environmental Protection Agency, and the MPCA.
- (e) “Applicable Law” means any city, county, state, federal, or other governmental regulation, ordinance, law, code, statute or constitution, including any zoning ordinance or use restriction or any administrative, executive, or judicial orders, decrees, or determinations which govern, regulate, control, or otherwise apply to or relate in any manner to the Access Parcel and the ownership, development, use, or operation of the Access Parcel, to the construction, marketing, leasing, and sale of improvements constructed (or to be constructed) on the Access Parcel, and/or to the interpretation and enforcement of this Agreement, including without limitation all Environmental Laws (as hereinafter defined).
- (f) SPUC’s Additional Representations, Warranties and Covenants. SPUC represents to DHI that SPUC is a knowledgeable buyer of real estate and that, except for the representations, warranties, covenants, and agreements of DHI set forth in this Agreement, SPUC is relying solely on its own expertise and that of SPUC’s consultants and advisors in purchasing the Access Parcel. SPUC further

acknowledges and agrees that having been given the opportunity to inspect the Access Parcel, except for the representations, warranties, covenants, and agreements of DHI set forth in this Agreement, SPUC is relying solely on and will rely solely on its own investigation of the Access Parcel and not on any information provided or to be provided by DHI or any employee, agent, representative, or broker of DHI or otherwise attributed to DHI, and all such reliance is expressly and unequivocally disclaimed by SPUC. Except as set forth in this Agreement, SPUC further unequivocally disclaims the existence of any duty to disclose on the part of DHI or any employee, agent, representative, or broker of DHI and any reliance of SPUC on the silence or any alleged nondisclosure of DHI or any of its employees, agents, representatives, or brokers. SPUC further acknowledges and agrees that any information provided or to be provided with respect to the Access Parcel was obtained from a variety of sources and that DHI has not made any independent investigation or verification of such information and makes no representations as to the accuracy or completeness of such information. Except for the representations, warranties, covenants, and agreements of DHI set forth in this Agreement, DHI is not liable or bound in any manner by any verbal or written statements, representations or information pertaining to the Access Parcel, or the operation thereof, furnished by any real estate broker, agent, employee, servant or other person. Upon Closing, except for the representations, warranties, covenants, and agreements of DHI set forth in this Agreement, SPUC shall assume the risk that adverse matters, including, but not limited to, adverse physical and environmental conditions and development and construction defects, may not have been revealed by SPUC's inspections and investigations and includes, without limitation, matters which, if known by SPUC, would materially affect SPUC's decision to acquire the Access Parcel. Except for the representations, warranties, covenants, and agreements of DHI set forth in this Agreement, SPUC hereby assumes all risk and liability (and agrees that DHI shall not be liable for any special, direct, indirect, consequential, incidental, punitive, or other damages) resulting or arising from or relating to the ownership, use, condition, location, development, maintenance, repair, or operation of the Access Parcel.

- 8.2 Survival. SPUC hereby acknowledges, confirms, and agrees as follows: (i) the provisions of Section 8.1 are a material inducement to DHI entering into the transaction which is the subject of this Agreement, including without limitation the Drainage and Storm Pipe Easement Agreement to be granted by SPUC to the City and the Three Temporary Easements to be granted by SPUC to DHI, all in exchange for the Access Parcel; and (ii) the provisions of Section 8.1 will survive any termination of this Agreement (including any termination as a result of DHI's default) and Closing, to the maximum extent permitted by any Applicable Law.

## **IX. WARRANTIES AND REPRESENTATIONS**

- 9.1 DHI Warranties. DHI warrants and represents to SPUC that:

- (a) to the best knowledge of Mike Suel, DHI's Land Development Manager, the Due Diligence Information and the ESA Report of Findings made available to SPUC

pursuant to Sections 4.1 and 4.2 are true and correct copies, have not been amended or modified, and are in full force and effect and free from default or notice of default;

- (b) no brokerage commission or other compensation is due and unpaid in connection with any lease, tenancy or occupancy of the Access Parcel or any renewal thereof;
- (c) DHI has not received any notice of a violation of any building codes, fire codes, health codes, zoning codes, Environmental Laws, or other laws and regulations affecting the Access Parcel or the use thereof;
- (d) DHI has not received any notice of a condemnation, environmental, zoning or other regulation or proceeding being instituted or planned which would detrimentally affect the use and operation of the Access Parcel for its intended purpose;
- (e) DHI has not received any notice of hearing of a public improvement project from any governmental assessing authority, the costs of which may be assessed against the Access Parcel;
- (f) there are no wells on or serving the Access Parcel (this statement being made pursuant to the disclosure requirements of Minnesota Statutes section 103I.235);
- (g) there are no individual sewage treatment systems on or serving the Access Parcel (this statement being made pursuant to the disclosure requirements of Minnesota Statutes section 115.55);
- (h) DHI does not know of any underground or aboveground storage tanks currently on the Access Parcel, or any underground or aboveground storage tanks formerly on the Access Parcel that had a release for which no corrective action was taken, except as may otherwise be disclosed in the Due Diligence Information or affidavit filed of record (this statement being made pursuant to the disclosure requirements of Minnesota Statutes section 116.48);
- (i) DHI has removed, or will remove prior to Closing, all wells, individual sewage treatment systems, underground or above ground storage tanks, house improvements, personal property, containers of motor oil, paint or solvents, petroleum products, motor vehicle tires and batteries, and all Hazardous Substances from the Access Parcel, including but not limited to any such Hazardous Substances identified in any environmental assessment of the Access Parcel;
- (j) to the best of DHI's knowledge, no methamphetamine production has occurred on the Access Parcel;
- (k) DHI is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has all requisite power and authority to carry out its business in Minnesota as conducted, to execute and deliver this Agreement and the documents entered into pursuant hereto, and to carry out its obligations under this Agreement and such documents;

- (l) this Agreement has been duly authorized, executed and delivered on behalf of DHI and constitutes the valid and binding agreement of DHI, enforceable in accordance with its terms;
- (m) the execution, delivery and performance of this Agreement by DHI will not result in a breach or violation of DHI or constitute a default by DHI under any agreement, instrument or order to which DHI is a party or by which DHI is bound;
- (n) DHI is not aware of any action, proceeding or investigation pending or threatened which might materially adversely affect the Access Parcel or the ability of DHI to perform its obligations under this Agreement; and
- (o) the stormwater ponding systems in Lot 1, Block 1, Outlots at La Tour Terrace have been designed in an appropriate size so as to handle the stormwater runoff from the Access Parcel.

9.2 SPUC Warranties. SPUC warrants and represents to DHI that:

- (a) SPUC is a municipal utility commission duly organized, validly existing and in good standing under the laws of the State of Minnesota and has all requisite power and authority to carry on its business as conducted, to execute and deliver this Agreement and the documents entered into pursuant hereto, and to carry out its obligations under this Agreement and such documents;
- (b) this Agreement has been duly authorized, executed and delivered on behalf of SPUC and constitutes the valid and binding agreement of SPUC, enforceable in accordance with its terms;
- (c) the execution, delivery and performance of this Agreement by SPUC will not result in a breach or violation by SPUC or constitute a default by SPUC under any agreement, instrument or order to which SPUC is a party or by which SPUC is bound; and
- (d) SPUC is not aware of any action, proceeding or investigation pending or threatened which might materially adversely affect the ability of SPUC to perform its obligations under this Agreement.

**X. OPERATIONS PRIOR TO CLOSING**

10.1 Operation. During the period from the execution of this Agreement to Closing, DHI will cause the Access Parcel to be operated in the manner in which it has been operated prior to the execution of this Agreement. DHI will not without SPUC's written consent permit any new leases or contracts or any amendment, modification, termination, surrender, extension or assignment of any of the contracts or any sublease of the Access Parcel or any waiver of DHI's rights under any of the contracts. DHI will keep and comply with all requirements of encumbrances and will not without SPUC's written consent permit any new encumbrance or any amendment, modification or termination of any encumbrance or any waiver of DHI's rights under any encumbrance on the Access Parcel.

- 10.2 Inspection. During the period from execution of this Agreement to Closing, SPUC and its representatives may enter the Access Parcel to inspect the Access Parcel and perform such inventories, observations, tests and investigations as SPUC may reasonably deem appropriate. SPUC will at SPUC's cost repair any resulting damage to the Access Parcel and will indemnify and hold harmless DHI from any injury or damage to persons or property. Notwithstanding anything in this Agreement to the contrary, this obligation and indemnity survive termination of this Agreement.

## **XI. CASUALTY AND CONDEMNATION**

- 11.1 Notice of Damage or Taking. DHI will give SPUC prompt notice of any fire or other casualty occurring between the date of this Agreement and Closing which involves damage to the Access Parcel and of any actual or threatened taking in condemnation affecting the Access Parcel of which DHI has knowledge.

- 11.2 Option to Terminate. If prior to Closing:

- (a) the Access Parcel sustains damage by fire or other casualty;
- (b) the Access Parcel is taken in condemnation or by transfer in lieu of condemnation; or
- (c) condemnation proceedings are commenced against the Access Parcel,

SPUC may terminate its obligations under this Agreement by written notice given to DHI within fifteen (15) days after receipt of the notice referred to in Section 11.1. If so terminated, this Agreement will be void and of no effect and neither party will have any further rights or obligations under this Agreement.

- 11.3 Affect on Closing. If SPUC is not entitled to or does not timely make the election provided for in Section 11.2, this Agreement and the obligations of DHI and SPUC under this Agreement will remain in full force and effect except that:

- (a) SPUC will accept the Access Parcel with such damage or condemnation; and
- (b) DHI will at Closing, pay over to SPUC any insurance proceeds and condemnation awards received prior to Closing which have not been applied to repairs and restoration, and assign to SPUC DHI's interest in all unpaid insurance proceeds and condemnation awards.

## **XII. DEFAULTS AND REMEDIES**

- 12.1 SPUC's Default and DHI's Remedies. If SPUC defaults under this Agreement, and if SPUC fails to cure such default within ten (10) days after written notice of such default by DHI to SPUC, then DHI may, as DHI's sole and exclusive remedy, terminate this Agreement pursuant to Minnesota Statutes section 559.21, as amended from time to time.





McGrann Shea Carnival Straughn & Lamb, Chartered  
800 Nicollet Mail, Suite 2600  
Minneapolis, MN 55402  
Attention: Carla J. Pedersen  
Telephone: (612) 338-2525  
Facsimile: (612) 339-2386  
Email: cjp@mcgrannshea.com

If to DHI:

D.R. Horton, Inc. - Minnesota  
20860 Kenbridge Court, Suite 100  
Lakeville, MN 55044  
Attention: James R. Slaikeu, Vice President  
Telephone: (952) 985-7403  
Facsimile: (952) 985-7400  
Email: jrslaikeu@drhorton.com

with copies to:

D.R. Horton, Inc.  
9555 South Kingston Ct.  
Englewood, CO 80112  
Attention: Doug Brown, North Region President  
Telephone: (303) 488-0061  
Email: Dbrown@drhorton.com

D.R. Horton, Inc.  
9555 South Kingston Ct.  
Englewood, CO 80112  
Attention: Robert Coltin, Regional Counsel  
Telephone: (720) 488-2092  
Email: rcoltin@drhorton.com

Stinson LLP  
50 South Sixth Street, Suite 2600  
Minneapolis, MN 55402  
Attention: John C. Kuehn  
Telephone: (612) 335-1717  
Facsimile: (612) 335-1657  
Email: john.kuehn@stinson.com

- 13.2 Any party may, from time to time at any time change its address by giving ten (10) days' written notice to the other party of such change of address in the manner set forth above.

#### **XIV. GENERAL**

14.1 Assignment.

- (a) SPUC shall not have the right to sell, assign, or transfer this Agreement without DHI's prior written consent, which consent may be granted or withheld by DHI in

DHI's sole and absolute discretion, and any such purported assignment by SPUC without DHI's consent shall constitute a default by SPUC under this Agreement. Any assignment by SPUC shall not relieve SPUC of its obligations contained in this Agreement and SPUC shall remain personally liable for the same.

- (b) DHI shall not have the right to sell, assign, or transfer this Agreement without SPUC's prior written consent, which consent may be granted or withheld by SPUC in SPUC's sole and absolute discretion, and any such purported assignment by DHI without SPUC's consent shall constitute a default by DHI under this Agreement. Any assignment by DHI shall not relieve DHI of its obligations contained in this Agreement and DHI shall remain personally liable for the same.
- (c) The terms, provisions, warranties, representations, covenants, and agreements contained in this Agreement shall apply to, be binding upon, and inure to the benefit of, the parties hereto and their respective legal representatives, successors, and assigns.

- 14.2 Time is of the essence in the performance of this Agreement. If the time for performance of any obligations hereunder falls on a day that is not a Business Day, the time for performance of such obligations shall be extended to the next day which is a Business Day. "Business Day(s)" means any day which is not a Saturday, Sunday or Minnesota state or federal holiday.
- 14.3 The parties will cooperate to facilitate the conveyance of the Access Parcel to SPUC under the terms and conditions herein set forth.
- 14.4 The paragraph headings used in this Agreement are for convenience purposes only, and shall not be used in the interpretation of this Agreement.
- 14.5 All exhibits attached hereto are incorporated herein by reference and made a part of this Agreement.
- 14.6 Failure of DHI or SPUC to insist in any one or more instances upon the performance of any of the covenants, agreements, and/or conditions of this Agreement, or to exercise any right or privilege herein conferred shall not be construed as a waiver of any such covenant or condition.
- 14.7 Nothing contained herein is intended to create, nor shall it ever be construed to make, DHI and SPUC partners or joint venturers.
- 14.8 The term "Execution Date," "date of this Agreement," or "date hereof," as used herein, shall mean the later of the following dates: (1) the date of DHI's signature; or (2) the date of SPUC's signature; or (3) the date of the Corporate Approval of DHI.
- 14.9 Broker Commissions. SPUC and DHI each represents that no salesperson, broker, or agent has been retained by it in connection with this transaction. SPUC and DHI each indemnifies the other from any real estate or other sales commissions arising out of any claim of any

salesperson, broker or agent acting or claiming to have acted on behalf of the indemnifying party in connection with this transaction.

- 14.10 NOTWITHSTANDING ANYTHING CONTAINED HEREIN TO THE CONTRARY, NEITHER THIS AGREEMENT NOR ANY AMENDMENT HERETO SHALL BE A VALID AND ENFORCEABLE OBLIGATION OF DHI UNLESS EXECUTED BY ANY ONE OF DONALD R. HORTON, DAVID AULD, MICHAEL J. MURRAY, R. DOUGLAS BROWN or BILL W. WHEAT, EACH AN "AUTHORIZED OFFICER" OF DHI, AND IN THE CASE OF THIS AGREEMENT OR ANY AMENDMENT HERETO, THE EXECUTION BY SUCH OFFICER OCCURS WITHIN THIRTY (30) DAYS OF THE EXECUTION OF THIS AGREEMENT OR AMENDMENT BY DHI AND SPUC'S REPRESENTATIVE. Such approval by an Authorized Officer is referred to as "Corporate Approval".
- 14.11 This Agreement may be executed in any number of identical counterparts that, taken together, shall constitute collectively one agreement; but in making proof of this Agreement, it shall not be necessary to produce or account for more than one such counterpart. Additionally, (i) the signature pages taken from separate individually executed counterparts of this Agreement may be combined to form multiple fully-executed counterparts; and (ii) a facsimile signature or an electronically scanned signature shall be deemed to be an original signature for all purposes. All executed counterparts of this Agreement shall be deemed to be originals, but all such counterparts, when taken together, shall constitute one and the same agreement.
- 14.12 Entire Agreement. This Agreement contains the entire agreement between the parties relating to the Access Parcel, and neither party shall be bound by any verbal statement or agreement made heretofore. Except as otherwise expressly set forth in this Section, this Agreement may only be amended, modified, or changed by a traditional written document properly executed by DHI and SPUC. Such amendment may be transmitted by e-mail, facsimile, or other method permitted by the provisions for giving notice in this Agreement.
- 14.13 Survival. Except as may otherwise be expressly provided in this Agreement, all covenants, agreements, obligations and undertakings made by DHI and SPUC in or pursuant to this Agreement will survive Closing, for a period of three (3) years after Closing, whether or not so expressed in the immediate context of any such covenant, agreement, obligation or undertaking.
- 14.14 Construction. This Agreement will be construed and enforced in accordance with the laws of the State of Minnesota. Time is of the essence of this Agreement. DHI and SPUC acknowledge and agree that each has been given the opportunity to independently review this Agreement with legal counsel or has the requisite experience and sophistication to understand, interpret, and agree to the particular language of the provisions hereof DHI and SPUC have equal bargaining power, and intend the plain meaning of the provisions herein. In the event of an ambiguity in or dispute regarding the interpretation of this Agreement, the interpretation of this Agreement shall not be resolved by any rule of interpretation providing for interpretation against the party who causes the uncertainty to exist or against the drafter.

**IN WITNESS OF** this Agreement, DHI and SPUC have duly executed it as of the date first shown above.

**DHI:**

**D.R. HORTON, INC.-MINNESOTA,**  
a Delaware corporation

By: \_\_\_\_\_  
Its: \_\_\_\_\_

**SPUC:**

**SHAKOPEE PUBLIC UTILITIES COMMISSION,**  
a Minnesota municipal utility commission

By: \_\_\_\_\_  
Its: \_\_\_\_\_

By: \_\_\_\_\_  
Its: \_\_\_\_\_

*[Remainder of this page is intentionally left blank]*

**CORPORATE APPROVAL — HORTON:**

**D.R. Horton, Inc.-Minnesota**  
(a Delaware corporation)

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

*[Remainder of this page is intentionally left blank]*

**EXHIBIT A-1**

**Depiction of Proposed Plat of Windermere South 5<sup>th</sup> Addition**

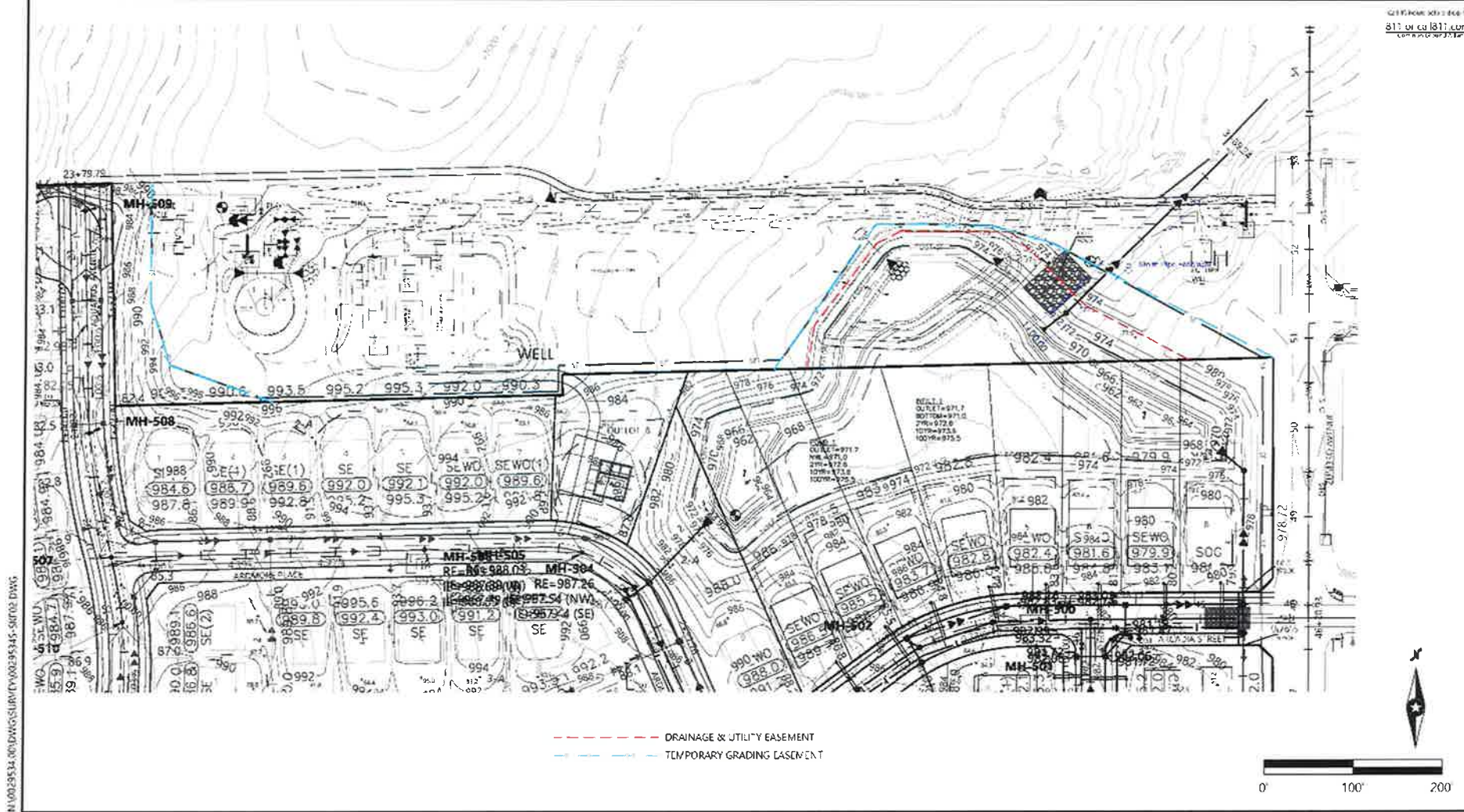
**[DRAFTER'S NOTE: REPLACE WITH DEPICTION WITHOUT ANY NOTATIONS.]**

**EXHIBIT A-2**

**Depiction of SPUC Parcel, Access Parcel, and all easements contained in Drainage and Storm Pipe Easement Agreement and Three Temporary Easements**

[See attached]





11:0029534.dwg (D:\GIS\11\110029534.dwg)

--- DRAINAGE & UTILITY EASEMENT  
 --- TEMPORARY GRADING EASEMENT

DESIGNED	
CHECKED	
DRAWN	
DATE	
FILED	

PREPARED FOR:  
**D.R. HORTON, INC. - MINNESOTA**

**WINDERMERE SOUTH  
 5TH ADDITION**  
 SHAKOPEE, MINNESOTA

**Westwood**  
 Phone (952) 837-0150 12701 Westwood Drive, Suite 8000  
 Fax (952) 837-0822 Minnetonka, MN 55343  
 Toll Free (888) 837-0150 westwoodps.com  
 Westwood Professional Services, Inc.

OFFSITE EASEMENT EXHIBIT

SHEET NUMBER  
**1** OF **1**  
 DATE 09/17/2021

PROJECT NUMBER: 0029534.00

## EXHIBIT B

### Drainage and Storm Pipe Easement Agreement

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SPACE ABOVE THIS LINE RESERVED FOR RECORDER'S USE

#### DRAINAGE AND STORM PIPE EASEMENT AGREEMENT

**THIS DRAINAGE AND STORM PIPE EASEMENT AGREEMENT** (this "**Agreement**") is made as of the \_\_\_ day of \_\_\_\_\_, 20\_\_\_, by and between Shakopee Public Utilities Commission, a Minnesota municipal utility commission ("**Grantor**"), and the City of Shakopee, a Minnesota municipal corporation ("**Grantee**").

#### Recitals

- A. Grantor is the fee owner of the real property located in the City of Shakopee, County of Scott, State of Minnesota (the "**Property**").
- B. Grantor desires to grant to Grantee, and Grantee desires to accept from Grantor, two non-exclusive easements, according to the terms and conditions contained herein.

#### Terms of Easement

1. Grant of Easements. Grantor hereby grants and conveys to Grantee two non-exclusive permanent easements ("**Easements**") for the uses and purposes and subject to the terms and conditions of this Agreement. The drainage easement (the "**Drainage Easement**") will be on, over, under, and across that portion of the Property legally described on the attached Exhibit A and depicted on the attached Exhibit B (the "**Drainage Easement Area**"). The storm pipe (the "**Storm Pipe**") will be located, except for manholes or other access points, underground (the "**Storm Pipe Easement**") and will be on, over, under, and across that portion of the Property legally described on the attached Exhibit C and depicted on the attached Exhibit D (the "**Storm Pipe Easement Area**").
2. Uses and Purposes.
  - (a) As to the Drainage Easement, the easement shall be for drainage, ponding, and grading purposes.

- (b) As to the Storm Pipe Easement, the easement shall be for the construction, reconstruction, operation, maintenance, repair, surface access to, and use of the Storm Pipe.
  - (c) Grantor hereby conveys all grasses, shrubs, trees, and natural growth on the Drainage Easement Area and the Storm Pipe Easement Area (the “**Easement Areas**”). Subject to Section 5 below, Grantee shall have the right to use and remove all earthen materials, structures, improvements, and obstructions that lie within the boundaries of the Easement Areas, including the right of clearing these Easement Areas to allow for the use of the land as stated herein. The Easements include the right of Grantee, its contractors, agents, and employees to enter the Easement Areas at all reasonable times for the purpose of locating, constructing, reconstructing, operating, maintaining, inspecting, altering, and repairing within the Easement Areas facilities for drainage, ponding, grading purposes and purposes related to the storm pipe or improvements of any type that are not inconsistent with drainage, ponding, grading, and storm pipe purposes. The Easements also include the right to cut, trim, or remove from the Easement Areas trees, shrubs, or other vegetation as in Grantee’s judgement unreasonably interfere with the Easements or facilities of the Grantee, its successors or assigns.
- 3. Notice of Construction and Maintenance Activities; Non-Interference. Grantee shall provide reasonable advance notice in writing to the Grantor of any construction, reconstruction, inspection, repair, maintenance, alteration, replacement and/or patrol activities (hereinafter referred to as “**Work**”) it plans to conduct in the Easement Areas. Grantee and its employees, contractors, subcontractors and agents shall cooperate and coordinate the Work in the Easement Areas so as not to unreasonably interfere with Grantor’s use of the Property.
- 4. Substantial Alteration or Reconstruction. As to the Storm Pipe Easement, in the event Grantee plans to substantially alter or reconstruct the Storm Pipe, Grantee, in addition to the notice required in Section 2 above, shall submit to Grantor: (i) its proposed alteration or reconstruction plans; and (ii) any other reasonable information required for Grantor’s review and comment. Grantee’s work on the Storm Pipe shall not unnecessarily interfere with Grantor’s use of the Property.
- 5. Improvements in Storm Pipe Easement Area. As to the Storm Pipe Easement, Grantee acknowledges that Grantor has placed and may in the future place improvements on, above or below the Storm Pipe Easement Area, and that all easements granted and conveyed herein shall be subject to such improvements existing now or in the future and, as to the future improvements, so long as the same does not unreasonably interfere with the Storm Pipe or Grantee’s use of the Storm Pipe Easement Area.
- 6. Responsibility for Maintenance. Grantee and its agents, successors and assigns, shall be solely responsible for all maintenance and repair of the Easement Areas and the Storm Pipe. Grantee shall also be responsible for repairing any damage caused by Grantee or its

contractors, subcontractors or agents in the Easement Areas or the Property as a result of such use or access.

7. Liens. Grantee shall keep the Property free and clear of any and all mechanics', material suppliers' and other liens for or arising out of or in connection with any Work or labor done, services performed, or materials or equipment used or furnished for or in connection with, any Work performed by Grantee.
8. Duration of Easements. The Easements shall be perpetual, shall run with the land, shall be binding upon Grantor, its successors and assigns, and shall be for the benefit of Grantee, its successors and assigns.
9. Warranty of Title. Grantor warrants it is the owner of the Property and has the right, title and capacity to convey the Easements to Grantee.
10. Binding Effect. This Agreement contains the entire agreement between the parties related to the subject matter hereof. It is the intention of the parties hereto that Grantor hereby grants the Easements herein specified without divesting itself of the right to use and enjoy the Property, subject only to the rights of Grantee to use the same for the purposes herein expressed.

*[Remainder of this page is intentionally left blank.]*

**GRANTOR:**

**SHAKOPEE PUBLIC UTILITIES COMMISSION,**  
a Minnesota municipal utility commission

By: \_\_\_\_\_

Its: \_\_\_\_\_

STATE OF MINNESOTA    )  
                                          ) ss.  
COUNTY OF \_\_\_\_\_ )

This instrument was acknowledged before me on the \_\_\_\_ day of \_\_\_\_\_, 2021, by \_\_\_\_\_, the \_\_\_\_\_ of Shakopee Public Utilities Commission, a Minnesota municipal utility commission, on behalf of the commission.

\_\_\_\_\_  
Notary Public

NOTARY STAMP OR SEAL



## **Drainage and Storm Pipe Easement Agreement**

### **EXHIBIT A**

#### **Legal Description of Drainage Easement Area**

An easement lying over, under and across that part of Lot 1, Block 1, LA TOUR TERRACE, according to the recorded plat thereof, Scott County, Minnesota, described as follows:

Commencing at the southeast corner of said Lot 1; thence South 88 degrees 03 minutes 51 seconds West, assumed bearing along the south line of said Lot 1, a distance of 38.13 feet; thence South 88 degrees 38 minutes 41 seconds West, along said south line a distance of 55.89 feet to the point of beginning; thence South 88 degrees 38 minutes 41 seconds West, along said south line a distance of 426.32 feet; thence North 09 degrees 16 minutes 42 seconds East, a distance of 49.47 feet; thence North 36 degrees 46 minutes 56 seconds East, a distance of 115.00 feet; thence North 62 degrees 15 minutes 25 seconds East, a distance of 31.54 feet; thence South 89 degrees 20 minutes 09 seconds East, a distance of 122.10 feet; thence South 45 degrees 19 minutes 19 seconds East, a distance of 118.51 feet; thence South 62 degrees 09 minutes 25 seconds East, a distance of 130.15 feet to the point of beginning.

Area: 41,774 sf or 0.96 ac

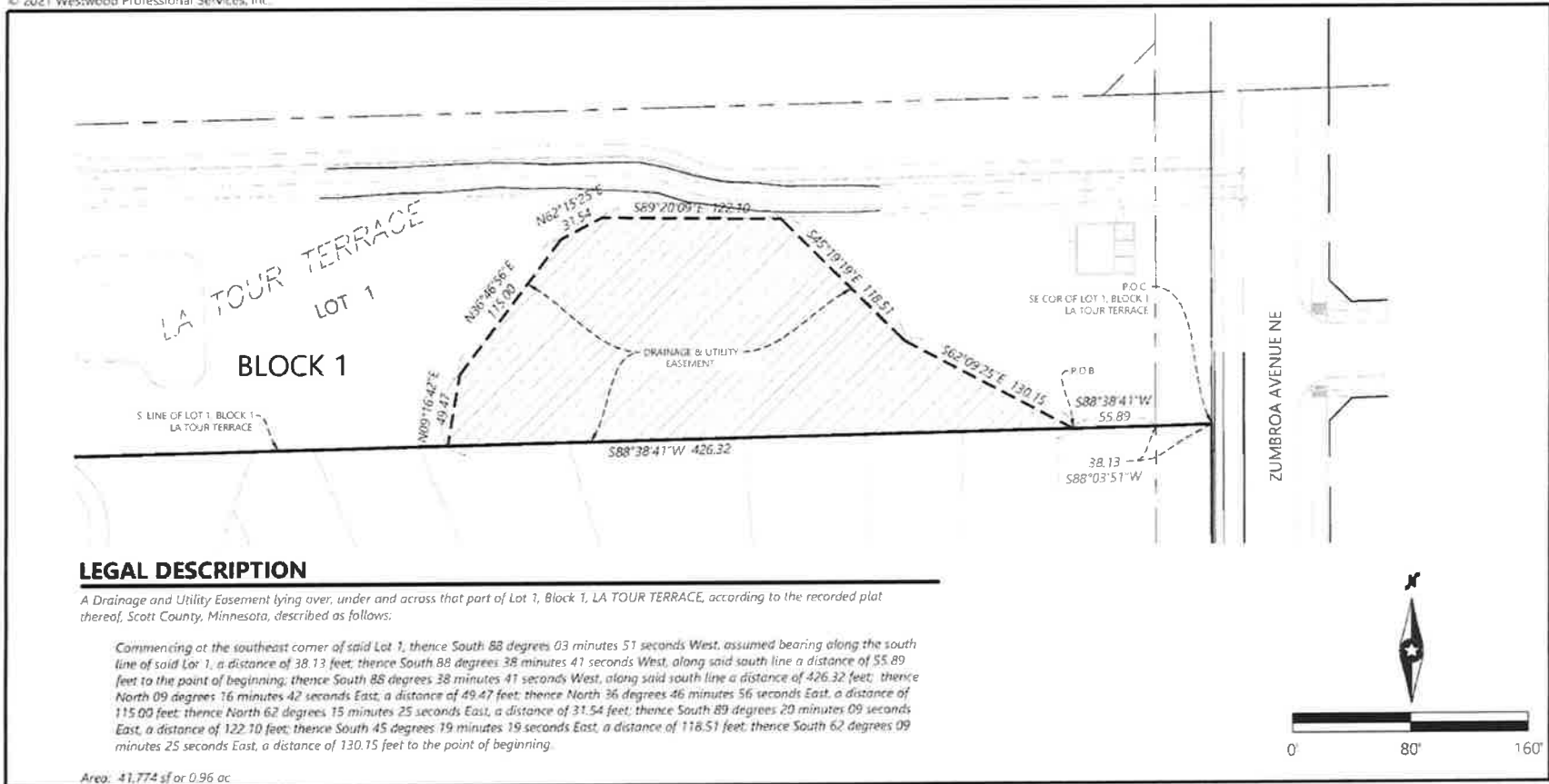
**Drainage and Storm Pipe Easement Agreement**

**EXHIBIT B**

**Depiction of Drainage Easement Area**

[See attached]



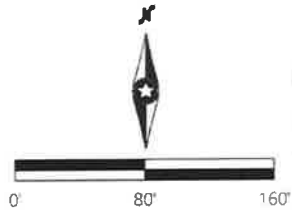


**LEGAL DESCRIPTION**

A Drainage and Utility Easement lying over, under and across that part of Lot 1, Block 1, LA TOUR TERRACE, according to the recorded plat thereof, Scott County, Minnesota, described as follows:

Commencing at the southeast corner of said Lot 1, thence South 88 degrees 03 minutes 51 seconds West, assumed bearing along the south line of said Lot 1, a distance of 38.13 feet; thence South 88 degrees 38 minutes 41 seconds West, along said south line a distance of 55.89 feet to the point of beginning; thence South 88 degrees 38 minutes 41 seconds West, along said south line a distance of 426.32 feet; thence North 09 degrees 16 minutes 42 seconds East, a distance of 49.47 feet; thence North 36 degrees 46 minutes 56 seconds East, a distance of 115.00 feet; thence North 62 degrees 15 minutes 25 seconds East, a distance of 31.54 feet; thence South 89 degrees 20 minutes 09 seconds East, a distance of 122.10 feet; thence South 45 degrees 19 minutes 19 seconds East, a distance of 118.51 feet; thence South 62 degrees 09 minutes 25 seconds East, a distance of 130.15 feet to the point of beginning.

Area: 41,774 sf or 0.96 ac



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0-0

WINDERMERE SOUTH 5TH ADDITION

DESIGNED	
DRAWN	MMW
CHECKED	MMW
DATE PLOTTED	
DATE PRINTED	

**WINDERMERE SOUTH 5TH ADDITION**  
SHAKOPEE, MINNESOTA

**Westwood**

Phone (952) 937-5150 82101 Windemere Drive, Suite #300  
 Fax (952) 937-5822 Minneapolis, MN 55343  
 Toll Free (888) 637-5150 www.westwoodps.com  
 Westwood Professional Services, Inc.

**DRAINAGE & UTILITY EASEMENT**

SHEET NUMBER: **1** OF **1**  
 DATE: 08/05/2021  
 PROJECT NUMBER: 0029534.00

## **Drainage and Storm Pipe Easement Agreement**

### **EXHIBIT C**

#### **Legal Description of Storm Pipe Easement Area**

A 20.00 foot wide easement lying over, under and across that part of Lot 1, Block 1, LA TOUR TERRACE, according to the recorded plat thereof, Scott County, Minnesota, the centerline of which is described as follows:

Commencing at the northeast corner of said Lot 1; thence South 88 degrees 03 minutes 51 seconds West, assumed bearing along the north line of said Lot 1, a distance of 38.15 feet; thence South 88 degrees 38 minutes 27 seconds West, along said north line a distance of 16.38 feet to the point of beginning of the centerline to be described; thence South 45 degrees 04 minutes 50 seconds West, a distance of 248.03 feet; thence South 52 degrees 45 minutes 51 seconds West, a distance of 37.50 feet and said centerline there terminating.

The sidelines of said easement are to be prolonged or shortened to terminate at said north line of Lot 1, Block 1.

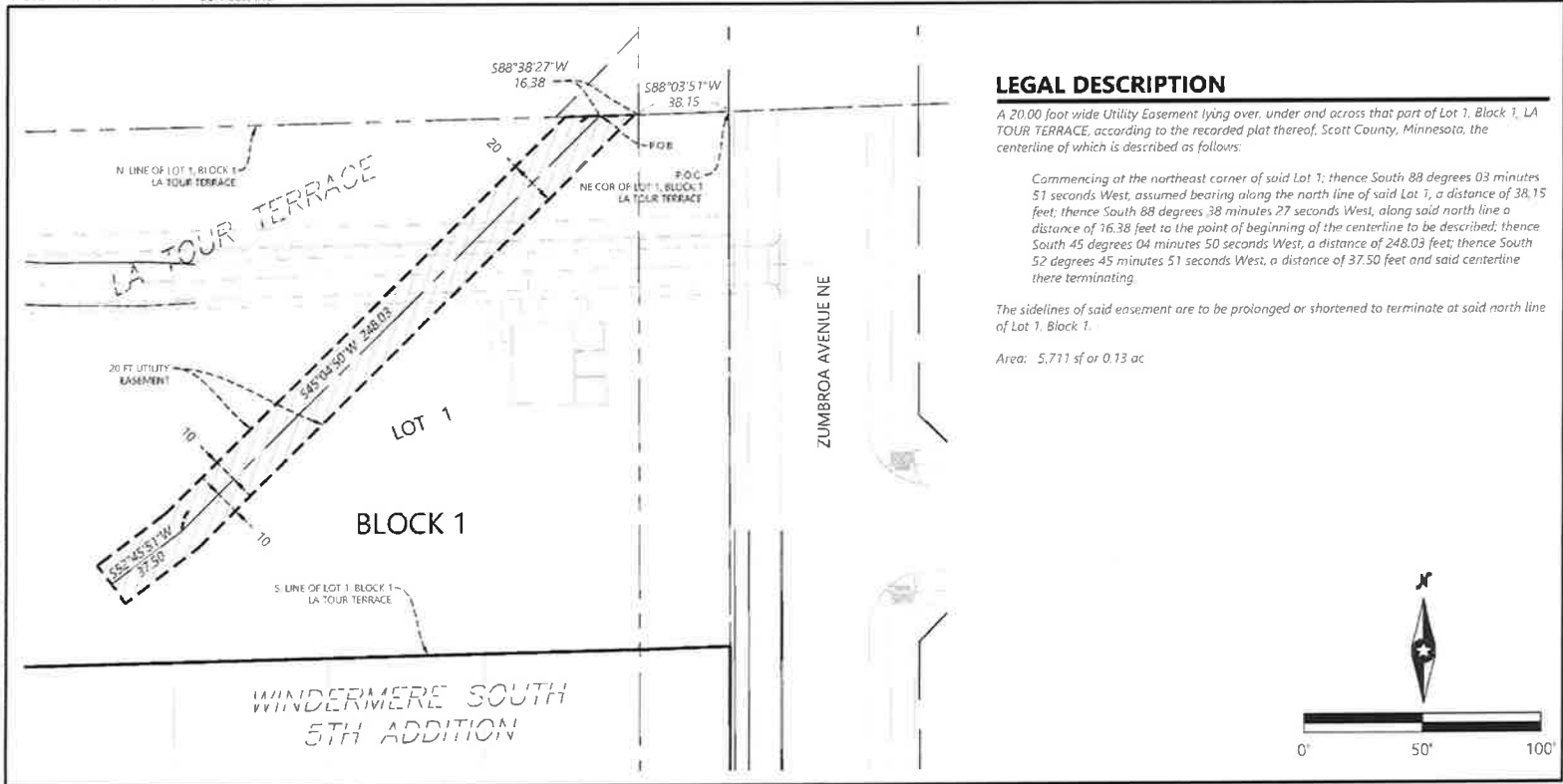
Area: 5,711 sf or 0.13 ac

**Drainage and Storm Pipe Easement Agreement**

**EXHIBIT D**

**Depiction of Storm Pipe Easement Area**

[See attached]



**LEGAL DESCRIPTION**

A 20.00 foot wide Utility Easement lying over, under and across that part of Lot 1, Block 1, LA TOUR TERRACE, according to the recorded plat thereof, Scott County, Minnesota, the centerline of which is described as follows:

Commencing at the northeast corner of said Lot 1; thence South 88 degrees 03 minutes 51 seconds West, assumed bearing along the north line of said Lot 1, a distance of 38.15 feet; thence South 88 degrees 38 minutes 27 seconds West, along said north line a distance of 16.38 feet to the point of beginning of the centerline to be described; thence South 45 degrees 04 minutes 50 seconds West, a distance of 248.03 feet; thence South 52 degrees 45 minutes 51 seconds West, a distance of 37.50 feet and said centerline there terminating.

The sidelines of said easement are to be prolonged or shortened to terminate at said north line of Lot 1, Block 1.

Area: 5,711 sf or 0.13 ac

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WINDERMERE SOUTH 5TH ADDITION

DATE:	
BY:	
CHECKED:	
APPROVED:	

**WINDERMERE SOUTH 5TH ADDITION**  
SHAKOPEE, MINNESOTA

**Westwood**  
 Phone (952) 937-5150 12701 Whitewater Drive, Suite #300  
 Fax (952) 937-3822 Minneapolis, MN 55342  
 Toll Free (888) 937-5154 westwoodps.com  
 Westwood Professional Services, Inc.

UTILITY EASEMENT

PROJECT NUMBER: 0029534 00

SHEET NUMBER:	1	OF	1
DATE:	09/28/2021		

## EXHIBIT C

### Temporary Easement

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SPACE ABOVE THIS LINE RESERVED FOR RECORDER'S USE

#### TEMPORARY EASEMENT AGREEMENT

**THIS TEMPORARY EASEMENT AGREEMENT** (this "**Agreement**") is made as of the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between Shakopee Public Utilities Commission, a Minnesota municipal utility commission ("**Grantor**" or "**SPUC**"), and D.R. Horton, Inc. — Minnesota, a Delaware corporation ("**Grantee**" or "**DHI**").

#### Recitals

- A. Grantor is the fee owner of the real property located in the City of Shakopee, County of Scott, State of Minnesota (the "**Property**").
- B. Grantor desires to grant to Grantee, and Grantee desires to accept from Grantor, a non-exclusive temporary easement, according to the terms and conditions contained herein.

#### Terms of Easement

- 1. Grant of Easement. Grantor hereby grants and conveys to Grantee a non-exclusive temporary easement ("**Easement**") for the uses and purposes and subject to the terms and conditions of this Agreement on, over, under, and across that portion of the Property legally described on the attached Exhibit A and depicted on the attached Exhibit B (the "**Easement Area**").
- 2. Uses and Purposes. The Easement shall be for drainage, ponding, and grading purposes. Grantor hereby conveys all grasses, shrubs, trees, and natural growth on the Easement Area. Grantee shall have the right to use and remove all earthen materials, structures, improvements, and obstructions that lie within the boundaries of the Easement Area, including the right of clearing the Easement Area to allow for the use of the land as stated herein. The Easement includes the right of Grantee, its contractors, agents, and employees to enter the Easement Area at all reasonable times for the purpose of locating, constructing, reconstructing, operating, maintaining, inspecting, altering, and repairing within the

Easement Area facilities for drainage, ponding, and grading purposes or improvements of any type that are not inconsistent with drainage, ponding, and grading purposes. The Easement also includes the right to cut, trim, or remove from the Easement Area trees, shrubs, or other vegetation as in Grantee's judgement unreasonably interfere with the Easement or facilities of the Grantee, its successors or assigns.

3. Duration of Easement. The Easement shall be temporary and terminate on June 30, 2022. Upon termination, DHI and SPUC will execute and DHI will record a termination of this Temporary Easement.
4. Warranty of Title. Grantor warrants it is the owner of the Property and has the right, title and capacity to convey to Grantee the Easement herein.
5. Binding Effect. This Agreement contains the entire agreement between the parties related to the subject matter hereof. It is the intention of the parties hereto that Grantor hereby grants the Easement herein specified without divesting itself of the right to use and enjoy the Property, subject only to the rights of Grantee to use the same for the purposes herein expressed.

*[Remainder of this page is intentionally left blank.]*

**GRANTOR:**

**SHAKOPEE PUBLIC UTILITIES COMMISSION,**  
a Minnesota municipal utility commission

By: \_\_\_\_\_

Its: \_\_\_\_\_

STATE OF MINNESOTA    )  
                                          ) ss.  
COUNTY OF \_\_\_\_\_ )

This instrument was acknowledged before me on the \_\_\_\_ day of \_\_\_\_\_, 2021, by \_\_\_\_\_, the \_\_\_\_\_ of Shakopee Public Utilities Commission, a Minnesota municipal utility commission, on behalf of the commission.

\_\_\_\_\_  
Notary Public

NOTARY STAMP OR SEAL





**Temporary Easement**

**EXHIBIT A**

**Legal Description of Easement Area**

An easement lying over, under and across that part of Lot 1, Block 1, LA TOUR TERRACE, according to the recorded plat thereof, Scott County, Minnesota, described as follows:

Beginning at the southeast corner of said Lot 1; thence South 88 degrees 03 minutes 51 seconds West, assumed bearing along the south line of said Lot 1, a distance of 38.13 feet; thence South 88 degrees 38 minutes 41 seconds West, along said south line, a distance of 518.81 feet; thence North 34 degrees 37 minutes 55 seconds East, a distance of 198.81 feet; thence South 89 degrees 34 minutes 58 seconds East, a distance of 127.18 feet; thence South 73 degrees 37 minutes 17 seconds East, a distance of 72.91 feet; thence South 62 degrees 28 minutes 31 seconds East, a distance of 278.14 feet to the point of beginning.

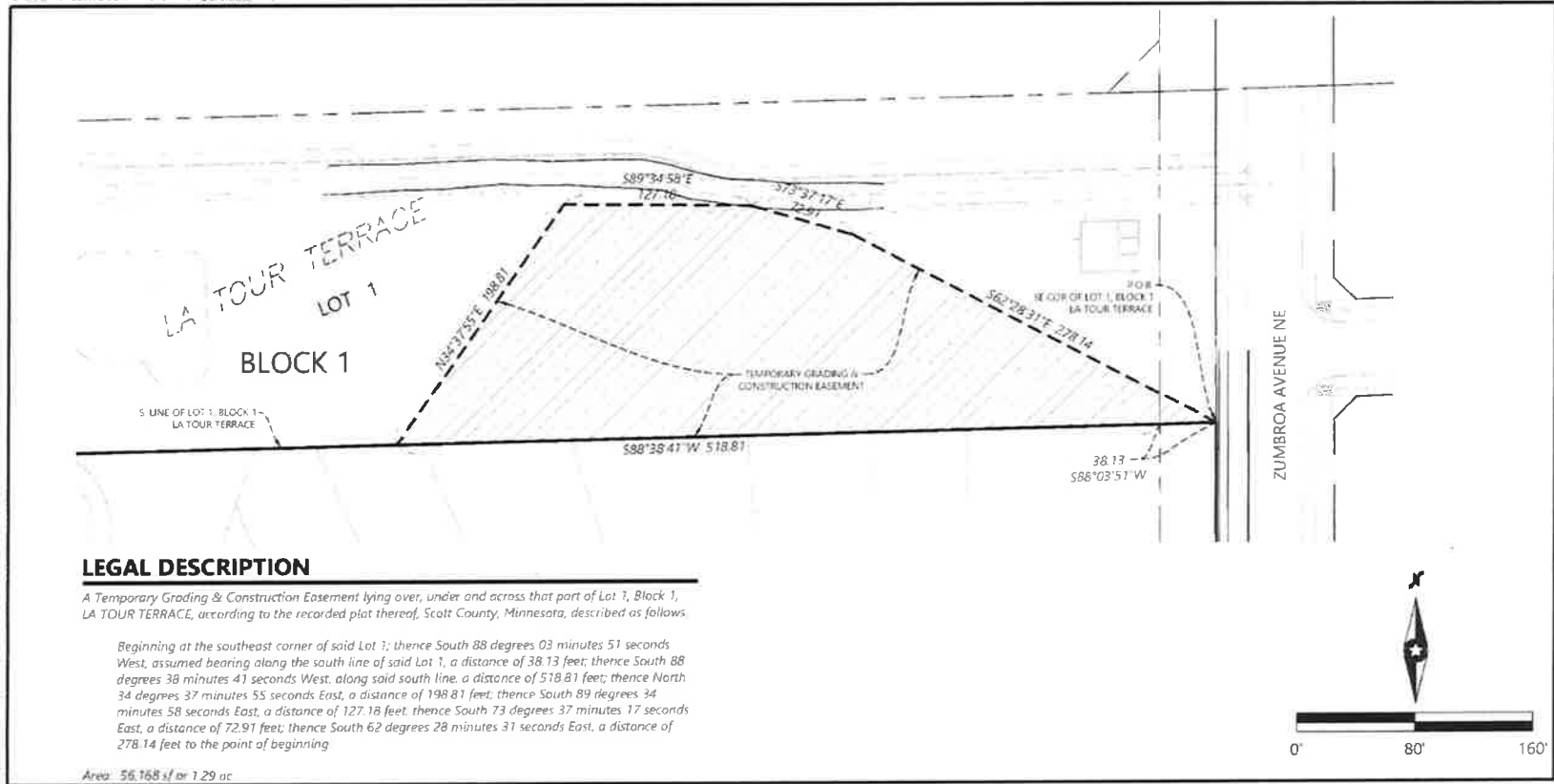
Area: 56,168 sf or 1.29 ac

**Temporary Easement**

**EXHIBIT B**

**Depiction of Easement Area**

[See attached]

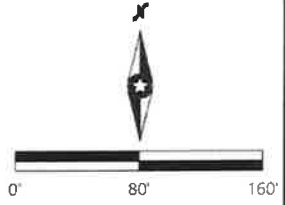


**LEGAL DESCRIPTION**

A Temporary Grading & Construction Easement lying over, under and across that part of Lot 1, Block 1, LA TOUR TERRACE, according to the recorded plat thereof, Scott County, Minnesota, described as follows.

Beginning at the southeast corner of said Lot 1; thence South 88 degrees 03 minutes 51 seconds West, assumed bearing along the south line of said Lot 1, a distance of 38.13 feet; thence South 88 degrees 38 minutes 41 seconds West, along said south line, a distance of 518.81 feet; thence North 34 degrees 37 minutes 55 seconds East, a distance of 198.81 feet; thence South 89 degrees 34 minutes 58 seconds East, a distance of 127.18 feet; thence South 73 degrees 37 minutes 17 seconds East, a distance of 72.91 feet; thence South 62 degrees 28 minutes 31 seconds East, a distance of 278.14 feet to the point of beginning

Area: 56,168 sq ft or 1.29 ac



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WINDERMERE SOUTH 5TH ADDITION

DESIGNED:	
CHECKED:	
DRAWN:	
DATE:	

**WINDERMERE SOUTH 5TH  
ADDITION**  
SHAKOPEE, MINNESOTA

**Westwood**  
 Phone: (952) 937-5156 12701 Whitewater Drive, Suite #200  
 Fax: (952) 937-0822 Shakopee, MN 55443  
 Toll-Free: (888) 937-5156 [www.westwoodps.com](http://www.westwoodps.com)  
 Westwood Professional Services, Inc.

**TEMPORARY GRADING &  
CONSTRUCTION EASEMENT**

PROJECT NUMBER: 0029534.00

SHEET NUMBER:	1
OF	1
DATE:	08/05/2021

**EXHIBIT D**

**Temporary Construction Easement Agreement**

---

SPACE ABOVE THIS LINE RESERVED FOR RECORDER'S USE

**TEMPORARY CONSTRUCTION EASEMENT AGREEMENT**

**THIS TEMPORARY CONSTRUCTION EASEMENT AGREEMENT** (this "**Agreement**") is made as of the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between Shakopee Public Utilities Commission, a Minnesota municipal utility commission ("**Grantor**" or "**SPUC**"), and D.R. Horton, Inc. — Minnesota, a Delaware corporation ("**Grantee**" or "**DHI**").

Recitals

- A. Grantor is the fee owner of the real property located in the City of Shakopee, County of Scott, State of Minnesota (the "**Property**").
- B. Grantor desires to grant to Grantee, and Grantee desires to accept from Grantor, a non-exclusive temporary easement, according to the terms and conditions contained herein.

Terms of Easement

- 1. Grant of Easement. Grantor hereby grants and conveys to Grantee a non-exclusive temporary easement ("**Easement**") for the uses and purposes and subject to the terms and conditions of this Agreement on, over, under, and across that portion of the Property legally described on the attached Exhibit A and depicted on the attached Exhibit B (the "**Easement Area**").

2. Uses and Purposes. The Easement shall be for grading and construction purposes. Grantor hereby conveys all grasses, shrubs, trees, and natural growth on the Easement Area. Grantee shall have the right to use and remove all earthen materials, structures, improvements, and obstructions that lie within the boundaries of the Easement Area, including the right of clearing the Easement Area to allow for the use of the land as stated herein. The Easement includes the right of Grantee, its contractors, agents, and employees to enter the Easement Area at all reasonable times for the purpose of locating, constructing, reconstructing, operating, maintaining, inspecting, altering, and repairing within the Easement Area facilities for grading and construction purposes or improvements of any type that are not inconsistent with grading and construction purposes. The Easement also includes the right to cut, trim, or remove from the Easement Area trees, shrubs, or other vegetation as in Grantee's judgement unreasonably interfere with the Easement or facilities of the Grantee, its successors or assigns.
3. Duration of Easement. The Easement shall be temporary and terminate on June 30, 2022. Upon termination, DHI and SPUC will execute and DHI will record a termination of this Temporary Construction Easement.
4. Warranty of Title. Grantor warrants it is the owner of the Property and has the right, title and capacity to convey to Grantee the Easement herein.
5. Binding Effect. This Agreement contains the entire agreement between the parties related to the subject matter hereof. It is the intention of the parties hereto that Grantor hereby grants the Easement herein specified without divesting itself of the right to use and enjoy the Property, subject only to the rights of Grantee to use the same for the purposes herein expressed.

*[Remainder of this page is intentionally left blank.]*

**GRANTOR:**

**SHAKOPEE PUBLIC UTILITIES COMMISSION,**  
a Minnesota municipal utility commission

By: \_\_\_\_\_  
Its: \_\_\_\_\_

STATE OF MINNESOTA    )  
                                          ) ss.  
COUNTY OF \_\_\_\_\_ )

This instrument was acknowledged before me on the \_\_\_\_ day of \_\_\_\_\_, 2021, by \_\_\_\_\_, the \_\_\_\_\_ of Shakopee Public Utilities Commission, a Minnesota municipal utility commission, on behalf of the commission.

\_\_\_\_\_  
Notary Public

NOTARY STAMP OR SEAL



**Temporary Construction Easement Agreement**

**EXHIBIT A**

**Legal Description of Easement Area**

An easement lying over, under and across that part of Lot 1, Block 1, LA TOUR TERRACE, according to the recorded plat thereof, Scott County, Minnesota, described as follows:

Beginning at the northwest corner of said Lot 1; thence North 88 degrees 38 minutes 27 seconds East, assumed bearing along the north line of said Lot 1, a distance of 45.46 feet; thence South 00 degrees 02 minutes 10 seconds West, a distance of 135.64 feet; thence South 17 degrees 03 minutes 21 seconds East, a distance of 73.37 feet; thence South 70 degrees 17 minutes 24 seconds East, a distance of 121.75 feet to the south line of said Lot 1; thence South 88 degrees 38 minutes 27 seconds West, along said south line a distance of 175.62 feet to the southwest corner of said Lot 1; thence North 01 degree 21 minutes 31 seconds West, along the west line of said Lot 1, a distance of 250.00 feet to the point of beginning.

Area: 14,820 sf or 0.34 ac

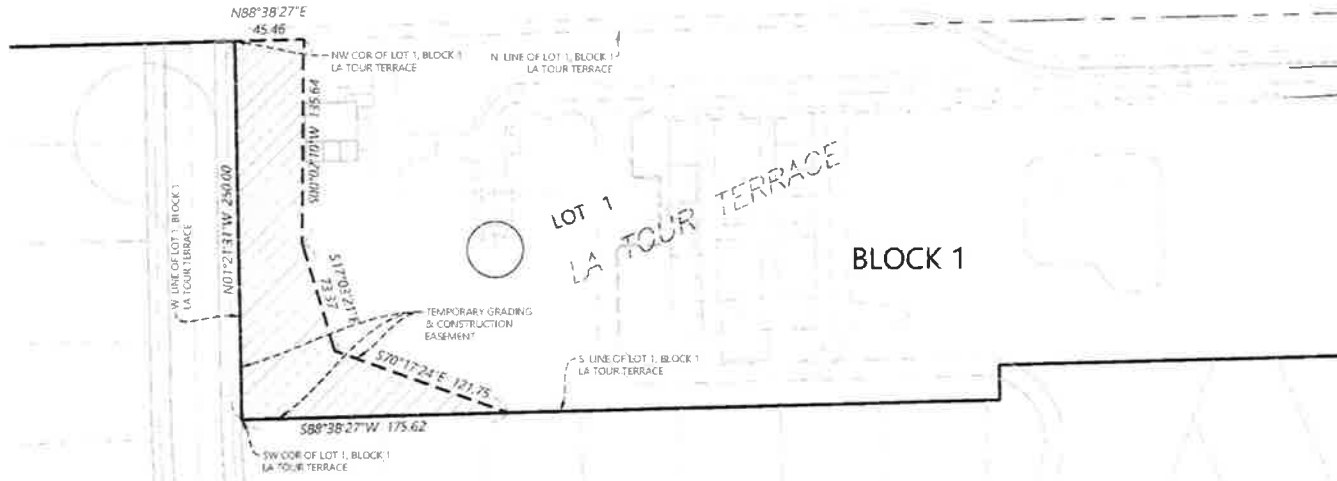


**Temporary Construction Easement Agreement**

**EXHIBIT B**

**Depiction of Easement Area**

[See attached]

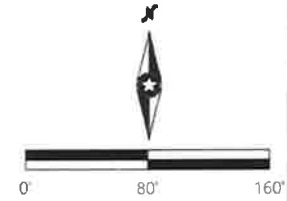


**LEGAL DESCRIPTION**

A Temporary Grading & Construction Easement lying over, under and across that part of Lot 1, Block 1, LA TOUR TERRACE, according to the recorded plat thereof, Scott County, Minnesota, described as follows

Beginning at the northwest corner of said Lot 1; thence North 88 degrees 38 minutes 27 seconds East, assumed bearing along the north line of said Lot 1, a distance of 45.46 feet; thence South 00 degrees 02 minutes 10 seconds West, a distance of 135.64 feet; thence South 17 degrees 03 minutes 21 seconds East, a distance of 73.37 feet; thence South 70 degrees 17 minutes 24 seconds East, a distance of 121.75 feet to the south line of said Lot 1; thence South 88 degrees 38 minutes 27 seconds West, along said south line a distance of 175.62 feet to the southwest corner of said Lot 1; thence North 01 degree 21 minutes 31 seconds West along the west line of said Lot 1; a distance of 250.00 feet to the point of beginning

Area: 14,820 sq ft or 0.34 ac



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WINDERMERE SOUTH 5TH ADDITION

DATE PLOTTED	
DATE PRINTED	
DATE CHECKED	
DATE APPROVED	
DATE WINDERMERE	

**WINDERMERE SOUTH 5TH  
ADDITION**  
SHAKOPEE, MINNESOTA

**Westwood**

Phone (952) 937-5190 12701 Whiteoak Dr. Suite #300  
 Fax (952) 937-5822 Minneapolis, MN 55443  
 Tollfree (800) 937-5190 [www.westwoodps.com](http://www.westwoodps.com)  
 Westwood Professional Services, Inc.

**TEMPORARY GRADING &  
CONSTRUCTION EASEMENT**

PROJECT NUMBER 0029534.00

SHEET NUMBER

1 OF 1

DATE 08/05/2021

**EXHIBIT E**

**Temporary Storm Pipe Construction Easement Agreement**

---

SPACE ABOVE THIS LINE RESERVED FOR RECORDER'S USE

**TEMPORARY STORM PIPE CONSTRUCTION EASEMENT AGREEMENT**

**THIS TEMPORARY STORM PIPE CONSTRUCTION EASEMENT AGREEMENT** (this "**Agreement**") is made as of the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between Shakopee Public Utilities Commission, a Minnesota municipal utility commission ("**Grantor**" or "**SPUC**"), and D.R. Horton, Inc. — Minnesota, a Delaware corporation ("**Grantee**" or "**DHI**").

Recitals

- A. Grantor is the fee owner of the real property located in the City of Shakopee, County of Scott, State of Minnesota (the "**Property**").
- B. Grantor desires to grant to Grantee, and Grantee desires to accept from Grantor, a non-exclusive temporary easement, according to the terms and conditions contained herein.

Terms of Easement

- 1. Grant of Easement. Grantor hereby grants and conveys to Grantee a non-exclusive temporary easement ("**Easement**") for the uses and purposes and subject to the terms and conditions of this Agreement on, over, under, and across that portion of the Property legally described on the attached Exhibit A and depicted on the attached Exhibit B (the "**Easement Area**").

2. Uses and Purposes. The Easement shall be for the construction, operation, maintenance, repair, surface access to and use of the storm pipe (the “**Storm Pipe**”). Grantor hereby conveys all grasses, shrubs, trees, and natural growth on the Easement Area. Subject to Sections 10 and 11, Grantee shall have the right to use and remove all earthen materials, structures, improvements, and obstructions that lie within the boundaries of the Easement Area, including the right of clearing the Easement Area to allow for the use of the land as stated herein. The Easement includes the right of Grantee, its contractors, agents, and employees to enter the Easement Area at all reasonable times for the purpose of locating, constructing, reconstructing, operating, maintaining, inspecting, altering, and repairing within the Easement Area facilities for the Storm Pipe and for construction purposes or improvements of any type that are not inconsistent with Storm Pipe construction purposes. The Easement also includes the right to cut, trim, or remove from the Easement Area trees, shrubs, or other vegetation as in Grantee’s judgement unreasonably interfere with the Easement or facilities of the Grantee, its successors or assigns.
3. Duration of Easement. The Easement shall be temporary and terminate on June 30, 2022. Upon termination, DHI and SPUC will execute and DHI will record a termination of this Temporary Storm Pipe Construction Easement.
4. Construction. Grantee and its employees, contractors, subcontractors and agents shall cooperate and coordinate the construction work in the Easement Area so as not to unreasonably interfere with Grantor’s use of the Property.
5. Restoration. Upon completion of construction, Grantee shall restore the Easement Area (and repair or replace any damaged structures or property) to a condition substantially similar to that existing prior to commencement of such work.
6. SPUC’s Use of its Driveway. Grantee’s construction activities shall not unreasonably interfere with SPUC’s use of its driveway, which driveway is depicted on Exhibit C.
7. Warranty of Title. Grantor warrants it is the owner of the Property and has the right, title and capacity to convey to Grantee the Easement herein.
8. Binding Effect. This Agreement contains the entire agreement between the parties related to the subject matter hereof. It is the intention of the parties hereto that Grantor hereby grants the Easement herein specified without divesting itself of the right to use and enjoy the Property, subject only to the rights of Grantee to use the same for the purposes herein expressed.

*[Remainder of this page is intentionally left blank.]*

**GRANTOR:**

**SHAKOPEE PUBLIC UTILITIES COMMISSION,**  
a Minnesota municipal utility commission

By: \_\_\_\_\_  
Its: \_\_\_\_\_

STATE OF MINNESOTA    )  
                                          ) ss.  
COUNTY OF \_\_\_\_\_ )

This instrument was acknowledged before me on the \_\_\_\_ day of \_\_\_\_\_, 2021, by \_\_\_\_\_, the \_\_\_\_\_ of Shakopee Public Utilities Commission, a Minnesota municipal utility commission, on behalf of the commission.

\_\_\_\_\_  
Notary Public

NOTARY STAMP OR SEAL



## **Temporary Storm Pipe Construction Easement Agreement**

### **EXHIBIT A**

#### **Legal Description of Easement Area**

A 20.00 foot wide easement lying over, under and across that part of Lot 1, Block 1, LA TOUR TERRACE, according to the recorded plat thereof, Scott County, Minnesota, the centerline of which is described as follows:

Commencing at the northeast corner of said Lot 1; thence South 88 degrees 03 minutes 51 seconds West, assumed bearing along the north line of said Lot 1, a distance of 38.15 feet; thence South 88 degrees 38 minutes 27 seconds West, along said north line a distance of 16.38 feet to the point of beginning of the centerline to be described; thence South 45 degrees 04 minutes 50 seconds West, a distance of 248.03 feet; thence South 52 degrees 45 minutes 51 seconds West, a distance of 37.50 feet and said centerline there terminating.

The sidelines of said easement are to be prolonged or shortened to terminate at said north line of Lot 1, Block 1.

Area: 5,711 sf or 0.13 ac

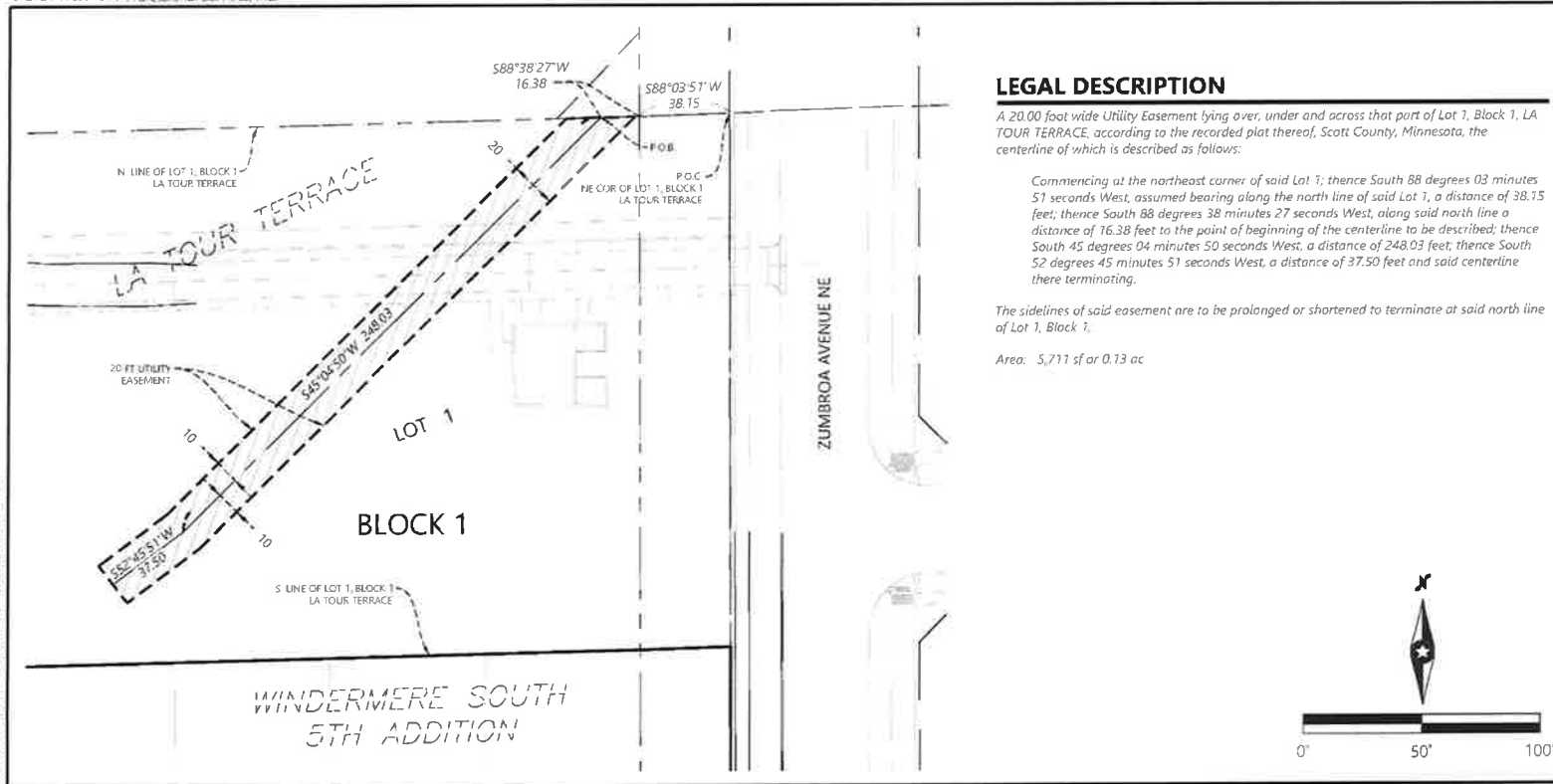
**Temporary Storm Pipe Construction Easement Agreement**

**EXHIBIT B**

**Depiction of Easement Area**

[See attached]





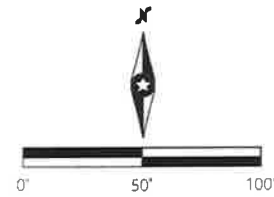
**LEGAL DESCRIPTION**

A 20.00 foot wide Utility Easement lying over, under and across that part of Lot 1, Block 1, LA TOUR TERRACE, according to the recorded plat thereof, Scott County, Minnesota, the centerline of which is described as follows:

Commencing at the northeast corner of said Lot 1; thence South 88 degrees 03 minutes 51 seconds West, assumed bearing along the north line of said Lot 1, a distance of 38.75 feet; thence South 88 degrees 38 minutes 27 seconds West, along said north line a distance of 16.38 feet to the point of beginning of the centerline to be described; thence South 45 degrees 04 minutes 50 seconds West, a distance of 248.03 feet; thence South 52 degrees 45 minutes 51 seconds West, a distance of 37.50 feet and said centerline there terminating.

The sidelines of said easement are to be prolonged or shortened to terminate at said north line of Lot 1, Block 1.

Area: 5,711 sf or 0.13 ac



N:\190729\534\1907.DWG(SURVEY)\00795345-ESTRIG.DWG

WINDERMERE SOUTH 5TH ADDITION

DATE:	
BY:	
CHECKED:	
FIELD:	
SCALE:	

**WINDERMERE SOUTH 5TH ADDITION**  
SHAKOPEE, MINNESOTA

**Westwood**  
 Phone: (952) 937-5156 12701 Whitewater Drive, Suite 4000  
 Fax: (952) 937-5822 Minneapolis, MN 55443  
 Toll Free: (888) 937-5156 [www.westwoodps.com](http://www.westwoodps.com)  
 Westwood Professional Services, Inc.

UTILITY EASEMENT

PROJECT NUMBER: 0029534.00

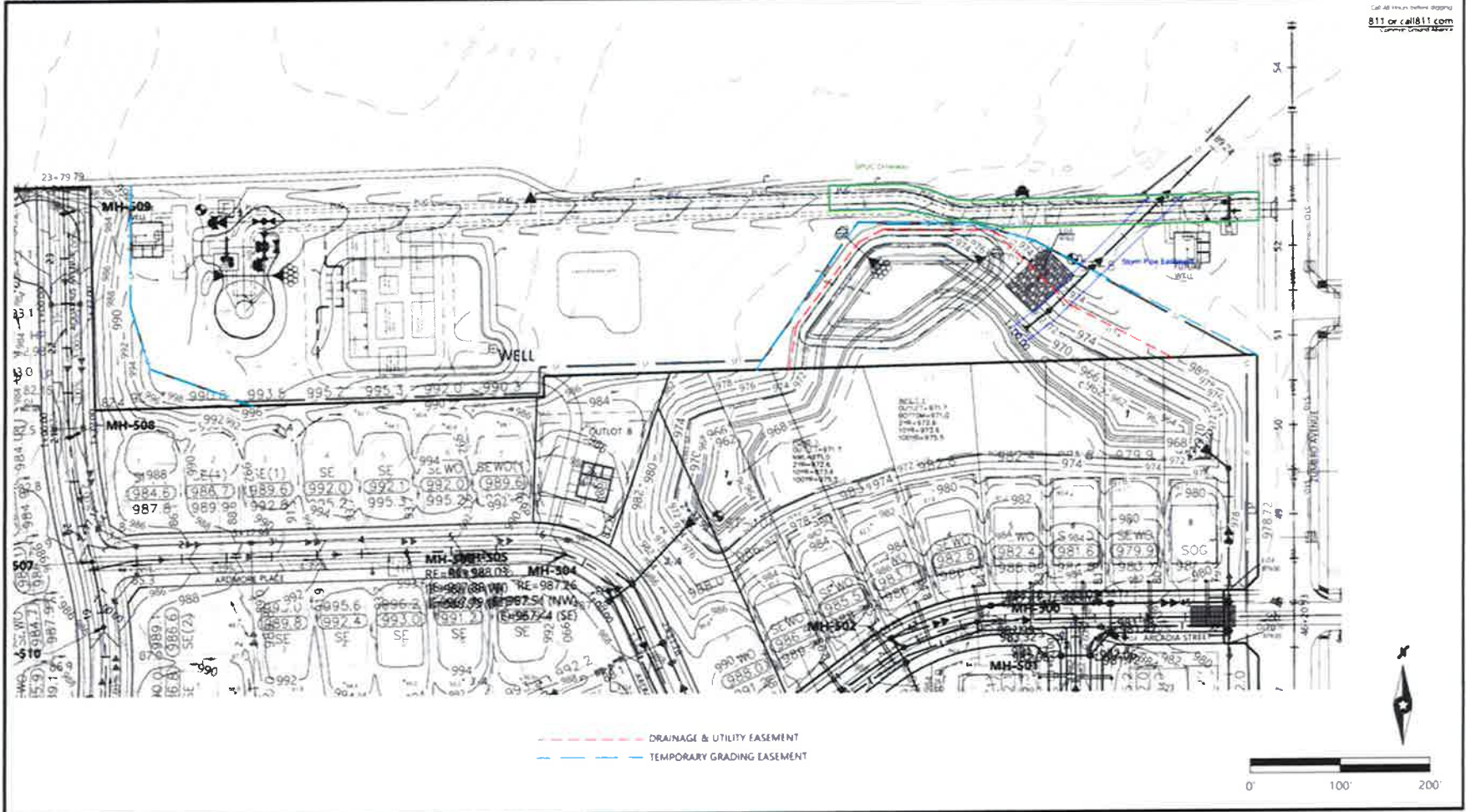
SHEET NUMBER:	1
OF	1
DATE:	09/28/2021

# Temporary Storm Pipe Construction Easement Agreement

## EXHIBIT C

### SPUC Driveway





N:\002\9534\000\DWG\SURVEY\0029534\_5 SE102.DWG

WINDERMERE SOUTH 5TH ADDITION

DESIGNED	
CHECKED	
DRAWN	SEM
FIELD CREW	
FIELD WORK DATE	

PREPARED FOR  
**D.R. HORTON, INC. - MINNESOTA**

**WINDERMERE SOUTH  
5TH ADDITION**  
SHAKOPEE, MINNESOTA

**Westwood**  
 Phone (852) 807-6160 12701 Whitewater Drive, Suite #300  
 Fax (852) 837-5822 Moorhead, MN 56543  
 Toll-Free (888) 917-6160 [www.westwoodps.com](http://www.westwoodps.com)  
 Westwood Professional Services, Inc.


**OFFSITE EASEMENT EXHIBIT**


SHEET NUMBER  
**1** of **1**  
DATE **09/17/2021**

PROJECT NUMBER 0029534-00



PO Box 470 • 255 Sarazin Street  
 Shakopee, Minnesota 55379  
 Main 952.445-1988 • Fax 952.445-7767  
 www.shakopeeutilities.com

TO: Greg Drent, General Manager 

FROM: Joseph D. Adams, Planning & Engineering Director 

SUBJECT: West End – Lower Bluff Service Area

DATE: October 14, 2021

## ISSUE

The City of Shakopee intends to extend a sanitary sewer force main west from the Windermere Addition and construct a lift station near the intersection of Colburn Drive and CR 69 to serve the newly annexed areas of Jackson Township. City staff has requested the Utilities Commission consider extending a trunk water main to serve the same area with municipal water service.

## BACKGROUND

The area to be crossed with the trunk water main is not ready for development, however there is development interest for properties further west that have been recently annexed into the city. The feasibility report for the proposed sanitary sewer facilities is attached for reference. Also attached for reference is a copy of Resolution #815 A Resolution Authorizing and Establishing a Fee for the Equivalent Lateral Water Main Portion of a Trunk Water Main Project.

## DISCUSSION

The most common past practice has been to approve water main extensions through properties requesting water service with the benefitting property being crossed funding the lateral water main cost, while SPU funded any trunk water main over sizing per SPU water main design criteria. Most are developer initiated projects and in other projects either the city or county initiated the project, in which case the lateral water main extension would normally have been assessed under the rules of Chapter 429 per MN state statutes.

In some cases, e.g. Townline Road/CR 79 with the extension of municipal services to Beckrich Park Estates,, CR 17 and Valley View Road Improvements, and Jennifer Lane constructed south of Valley Creek Crossings 2<sup>nd</sup> Addition for highway safety reasons, the Commission elected to initially fund the entire cost of the water main extension and defer collecting a special connection charge to recover the lateral water main equivalent cost when properties adjacent to the water



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main connected and developed. This is allowed under Chapter 444 of MN state statutes and the attached Resolution #815 established the Commission's policy in these situations.

Staff requested the city's engineering consultant Bolton and Menk submit a proposal for engineering services, including a brief feasibility study to estimate the cost and funding sources, for installing a 12-inch trunk water main adjacent to the city's planned sanitary sewer force main per the Comprehensive Water Plan to serve the area. The proposal to is attached for review.

Staff believes this consultant is uniquely qualified to perform the cost estimate and engineering services and notes Bolton and Menk is on the Commission's approved list of approved consulting engineers.

#### REQUESTED ACTION

Staff requests Utilities Commission direction to proceed with the proposed trunk water main extension and authorize the Proposal for Engineering Services by Bolton and Menk, at the not to exceed cost of \$37,000.



**BOLTON  
& MENK**

Real People. Real Solutions.

2638 Shadow Lane  
Suite 200  
Chaska, MN 55318-1172

Ph: (952) 448-8838  
Fax: (952) 448-8805  
Bolton-Menk.com

October 12, 2021

Joe Adams  
Planning & Engineering Director  
Shakopee Public Utilities  
P.O. Box 470  
255 Sarazin St.  
Shakopee, MN 55379

RE: West End – Lower Bluff Service Area  
Proposal for Watermain Design Services

Dear Mr. Adams:

Thank you for the opportunity to submit this proposal to perform engineering services for Shakopee Public Utilities. It is our understanding that Shakopee Public Utilities would like to include a 12-inch trunk watermain in the West End - Lower Bluff Lift Station and Forcemain project. This trunk watermain would run parallel to the proposed forcemain from the Windermere development to the proposed Lower Bluff Lift Station and to the west side of County Road 69. The proposed watermain would be installed along the south side of the proposed forcemain to facilitate service to future development of the Breeggemann parcel. Our understanding is that a brief feasibility study is required to verify alignment, design details and costs. Upon completion of the feasibility study, we will incorporate the watermain design into the Lower Bluff Lift Station and Forcemain plan set and construction documents which have been authorized for design by the City of Shakopee. We understand that Shakopee Public Utilities desires installation of the trunk watermain to be completed along with the forcemain which is scheduled to be completed by fall of 2022. Below is a task list for our proposed scope of work. Please note that some of these tasks are being completed as part of the lift station and forcemain design already authorized by the City of Shakopee.

**Task 1 – Topographic Survey**

- Complete topographic survey for the watermain route, and the surrounding area to collect data on private utilities, public utilities, and above ground infrastructure
- Obtain Gopher State One-Call utility locates
- Draft existing conditions
- Establish rights-of-way and easement areas
- Perform thorough property corner location & research within survey area

**Task 2 – Feasibility Study**

- Analyze alignment & profile options
- Analyze material, hydrant spacing and other design details
- Prepare cost analysis (8-inch & 12-inch)

**Task 3 – Watermain Design**

- Analyze construction materials & methods
- Prepare plans and specifications
- Perform private utility coordination
- Prepare project manual
- Prepare statement of estimated quantities
- Obtain all required permits
- Prepare preliminary and final engineer's estimate

**Task 4 - Bidding Administration**

- Prepare advertisement for bids
- Answer bidder's questions
- Issue addenda as needed
- Hold bid opening and tabulate the bids
- Review bids and prepare letter of award recommendation

We propose to complete the above design and bidding services for a total estimated fee of **\$37,250**. Our fees would be billed hourly and would not exceed the stated amount without prior authorization from Shakopee Public Utilities. This fee proposal is based on the assumption that there is sufficient space to install the trunk watermain parallel to the proposed forcemain within the existing easement. In the event the feasibility study determines that a different route is required, we will provide you with an updated scope and fee. It should also be noted that this proposal does not include any construction inspection or administrative costs. We will provide a scope and fee for construction related services once the project scope is finalized and prior to construction.

Thank you again for inviting Bolton & Menk, Inc. to offer you this proposal. We look forward to working with you on this project. If you have any questions or would like additional information, please do not hesitate to call me at 612-499-0533.

Sincerely,  
**Bolton & Menk, Inc.**



**Brian J. Guldán, PE**  
Principal Environmental Engineer

Accepted by:

Signature

CC: Josh Eckstein, Bolton and Menk, Inc.

\_\_\_\_\_  
Date

A RESOLUTION AUTHORIZING AND ESTABLISHING A FEE  
FOR THE EQUIVALENT LATERAL WATER MAIN PORTION  
OF A TRUNK WATER MAIN PROJECT

WHEREAS, Minn. Stat. Chapter 444 gives the Shakopee Public Utilities Commission discretion in determining and calculating appropriate charges and fees to be collected for providing water service to its customers;

WHEREAS, Minn. Stat. § 444.075, subd. 3 states that fees and charges may be imposed to pay for the construction, reconstruction, repair, enlargement, maintenance, operation, and use of water service facilities; and

WHEREAS, Minn. Stat. § 444.075, subd. 3 states that charges imposed for providing water service must be just and equitable and must relate to the use of and the availability of water service facilities and for connections with them; and

WHEREAS, the Shakopee Public Utilities Commission has established a trunk water policy establishing a trunk water main area assessment charge for the construction of municipal trunk water mains that are (over)sized in excess of the lateral water mains required to serve nearby property; and

WHEREAS, the Shakopee Public Utilities Commission has established a lateral water main design criteria policy establishing requirements for minimum size and number of lateral water mains required to serve nearby property based on zoning, flow requirements and size of the area being served; and

WHEREAS, the cost of installing and constructing lateral water mains are oftentimes paid by developers or other parties requesting such service or through the Chapter 429 special assessment process; and

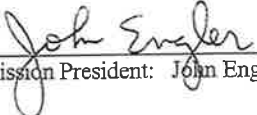
WHEREAS, the Shakopee Public Utilities Commission has concluded that in certain cases, the process established in Minn. Stat. Chapter 444 should be utilized to pay for the equivalent lateral water main construction costs associated with specific water main installations; and

WHEREAS, the Shakopee Public Utilities Commission desires to establish a policy to ensure that the fees for providing such lateral water main are just and equitable.

NOW, THEREFORE, BE IT RESOLVED by the Shakopee Public Utilities Commission as follows:

1. Pursuant to Minn. Stat. Chapter 444, there is hereby established a fee for the equivalent lateral water main portion of a trunk water main project.
2. The fee authorized by this Resolution shall be applicable in situations where the equivalent lateral water main portion of the trunk water main costs is not being paid by a developer or other person requesting the construction and installation of lateral water main for the purpose of receiving water service or in situations where the Commission concludes that collecting the costs through the Chapter 429 special assessment procedure project should not be utilized.
3. The lateral water main fee established by this Resolution shall be calculated at the time that the Commission approves the water main project based on the actual costs for constructing the water main, with consideration of the equivalent lateral water main portion of any oversized trunk water main. The fee shall be indexed on an annual basis and be calculated on an area basis based on the amount of property that will ultimately be served by the lateral water main. The fee shall be paid at the time of connection to the water system, and is in addition to any and all other applicable standard requirements to receive water service.

Passed in regular session of the Shakopee Public Utilities Commission, this 1<sup>st</sup> day of August, 2005.

  
Commission President: John Engler

ATTEST:  
  
Commission Secretary: Kent Archard



**West End - Lower Bluff  
Lift Station & Trunk  
Sanitary Sewer  
Feasibility Report**



**SHAKOPEE**

**Shakopee, Minnesota**



***February 2021***

AE2S Project #: P05475-2019-006

# City of Shakopee, Minnesota

## WEST END - LOWER BLUFF LIFT STATION & TRUNK SANITARY SEWER FEASIBILITY REPORT

February 2021

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



Robert L. Moberg, PE

Date: 2/16/21

License # 23334

Prepared by:  
Advanced Engineering and Environmental Services, Inc.  
6901 East Fish Lake Road, Suite 184  
Maple Grove, MN 55369-547

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Figure 3 – *Envision Shakopee* Future Land Use Plan

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Figure 7 – Alternate No. 2a Overview

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Figure 9 – Potential Development Scenarios

## APPENDICES

Appendix A – Opinion of Probable Construction Cost

Appendix B – Potential Funding and Fees Collected Tables

## 1.0 INTRODUCTION

### 1.1 Project Background & Study Area

The City of Shakopee is experiencing a period of rapid growth and development pressure continues to build along the US Highway 169 corridor on the west end of the community. In 2020, MnDOT completed construction of a grade-separated interchange at the intersection of Highway 169 and Chestnut Boulevard (Trunk Highway 41/CSAH 78). Completion of this interchange is expected to increase the level of interest in development along the corridor and adjacent areas. Anticipated growth and the resulting impacts to the area were evaluated in an environmental scoping document entitled, “*Jackson Township Development Area Alternative Urban Areawide Review*” (*Jackson Township AUAR*), dated February 2020.

The City of Shakopee has entered into an orderly annexation agreement with Jackson Township. The agreement provides a mechanism to allow for annexation of property in the Township by the City in an orderly manner. Annexation can occur either by petition from the property owner or by a public notification and hearing process led by the City. The study area for this report lies largely within Jackson Township, with a small portion lying within Louisville Township. (see [Figure 1](#)). In 2020, the City annexed several properties in Jackson Township, including some that are within the study area. The area of annexation is shown on [Figure 9](#). The City does not yet have an orderly annexation agreement in place with Louisville Township.

The first phase of improvements for the Windermere development, adjacent to the study area and generally located in the southwest quadrant of the Highway 169/Marystown Road interchange, was completed in 2017. As part of the improvements, a 27-inch trunk sanitary sewer was connected to a Metropolitan Council Environmental Services (MCES) interceptor sewer (Shakopee/Chaska Interceptor) with the intention of ultimately serving the Lower Bluff study area and two 18-inch trunk sewers were extended from the 27-inch trunk sewer to the Windermere property limits in the Upper Bluff development area.

### 1.2 Purpose of Study

The City retained the services of AE2S to determine the feasibility of extending trunk sanitary sewer improvements into and through the study area. This study identifies existing and anticipated future conditions in the study area, proposed trunk sanitary sewer improvements necessary to serve the area for future conditions, an opinion of probable cost for various improvements, property and easements required to install proposed improvements, and conclusions and recommendations for City consideration.

## 2.0 EXISTING CONDITIONS

### 2.1 Study Area Characteristics

The study area (approximately 2700 acres in size) is generally bounded by the Minnesota River on the north and west, a gravel mining operation along the west side of Highway 169 and properties abutting the south side of Chestnut Boulevard on the south, and Old Brick Yard Road and an ancient river bluff on the east. Highway 169 generally bisects the study area and development along the corridor is expected to drive the need for future street and utility improvements (see [Figure 1](#)).

The area contains a mix of rural residential, mobile home communities, commercial, industrial, open space, and agricultural uses. The Jackson Township AUAR further documents existing and planned land uses, existing and future zoning, as well as soil conditions, degrees of disturbance, and the presence of lakes, wetlands and other significant environmental features in the study area.

With one notable exception, the bluff that forms part of the easterly boundary of the study area is a feature the City desires to preserve, as it has remained largely undisturbed by the agriculture activity in the area. *Envision Shakopee* land use documents identify the area as a Bluff Preservation Area, limiting use of the bluff. The area of exception is the LaTour property, where the bluff area has been previously disturbed by agricultural activity.

In 2020, the City annexed several properties in Jackson Township, including some that are within the study area. The area of annexation is shown on [Figure 9](#). The City intends to annex additional areas in Jackson Township in 2021, best described as the remainder of the area contained within a potential 10-year development scenario, as defined in Section 4.3 of this report and as shown on [Figure 9](#).

Highway 169 is a controlled-access freeway with grade-separated interchanges at Marystown Road, Old Brick Yard Road, and Chestnut Boulevard. Scott County has jurisdiction for Marystown Road (CSAH 15), Old Brick Yard Road (CSAH 69), and Chestnut Boulevard (CSAH 78) east of Highway 169.

The MCES Shakopee/Chaska Interceptor Sewer conveys sewer flows from a regional lift station in the City of Chaska to a large diameter gravity sewer extending westerly from the Blue Lake WWTF. The gravity sewer lies within the Highway 169 right of way for several miles and ultimately terminates in the southerly right of way of Highway 169 on the west side of Marystown Road. A force main connecting the Chaska lift station to the MCES gravity sewer terminus at Marystown Road enters the Highway 169 right of way west of the Old Brick Yard Road interchange and runs along the south side of the highway.

Xcel Energy owns and operates a 345kV high-voltage overhead power transmission line that parallels Highway 169 and the line is contained within a 240-ft-wide easement along its length. Xcel Energy also owns and operates a 115kV high-voltage overhead power transmission line that extends from its substation along Highway 169 southerly through the study area and the line is contained within a 100- or 200-ft-wide easement along its length.

Xcel Energy owns and operates a 16-inch high pressure gas main that extends southerly from Highway 169 between Marystown Road and Old Brick Yard Road that is contained within a 50-ft easement along its length.

Shakopee Public Utilities Commission (SPUC) and Minnesota Valley Electric Cooperative (MVEC) each own and operate overhead electrical distribution lines within the study area. Old Brick Yard Road south of Highway 169 generally serves as a service territory boundary between SPUC and MVEC for electrical service. SPUC is planning to build an electrical substation somewhere in the study area in the foreseeable future.

SPUC secured property for a future 0.75 MG water tower at a location near the study area and plans to have the tower constructed and ready for operation in 2021. In their 2040 Comprehensive Water System Plan, SPUC identified two water supply wells and several trunk water mains that will provide the backbone for municipal water service to the area as it develops in the future.

## 2.2 Metropolitan Urban Service Area

As part of its responsibility for overseeing regional planning efforts in the 7-county metropolitan region, MCES has established and maintains the Metropolitan Urban Service Area (MUSA) boundaries. The MUSA boundaries are used to guide the extension of municipal sanitary sewer service throughout the region, ensuring that the rate of growth and corresponding system expansion does not exceed the ability to effectively treat the wastewater generated by the region. According to *Envision Shakopee* documents, the study area lies outside the current MUSA boundaries for Shakopee and the expansion of the MUSA boundary into Louisville Township is not identified in the Metropolitan Council's *Thrive MSP 2040 Guide Plan*. Extension of sewer service into the study area will require an expansion of the MUSA boundary (see [Figure 2](#)).

## 2.3 Existing Sanitary Sewer

Sanitary sewer service in the area is decentralized, with occupied properties being served either by individual sewage treatment systems (ISTS) or community sewage treatment systems (CSTS). ISTS and CSTS design, construction, and use are regulated by Scott County.

The first phase of the Windermere development included connecting a 27-inch trunk sanitary sewer to the MCES Shakopee/Chaska Interceptor and extending it into the development. From

the 27-inch trunk sewer, an 18-inch trunk sewer was extended toward the northwesterly corner of the development. Figure 2 shows the location of these improvements relative to the study area. While the 18-inch trunk sewer was sized to accommodate future sewer flows from the Lower Bluff area, a gravity extension of the trunk sewer into the study area is not feasible, as there is a significant elevation difference (50 - 60 ft) between the Upper Bluff area where the existing sewer is located and the Lower Bluff area where future sewer service is being considered.

### 3.0 FUTURE CONDITIONS

#### 3.1 Envision Shakopee 2040 Comprehensive Plan

The City completed an update to its Comprehensive Plan in 2019. The updated plan, called “*Envision Shakopee*” identifies planned land uses for the City and adjacent areas in Jackson and Louisville Townships. Figure 3 depicts the planned land uses in the study area. The Plan also identifies the anticipated timing of growth and development in the City through 2040.

#### 3.2 Jackson Township Development Area AUAR

The *Jackson Township AUAR* documents existing and proposed land uses, existing and future zoning, existing soil conditions and degree of disturbance, as well as the presence of lakes, wetlands and other significant environmental features in the area. The AUAR defines several subdistricts within its area of study. For this report, all of Subdistricts B and D and the Mixed-Use Center and Mixed-Use Employment Center areas of Subdistrict A make up the majority of the study area (see Figure 4). The AUAR also provides an estimate of the developable acreage and of the timing of development within its study area. Table 1 below contains the developable acreage data for the applicable subdistricts in the AUAR. These estimates were used to guide the calculation of anticipated sewer flows generated for the area.

**Table 1 - Jackson Township AUAR Developable Acreage**

Subdistrict	Developable Area Less Right of Way (Ac)				Totals
	Mixed Residential	Mixed Use Center	Mixed Use Employment Center	Suburban Residential	
A	-	31	20	-	51
B	37	36	171	-	244
D	-	27	270	46	343
<b>Totals</b>	37	94	461	46	638



### 3.3 Sanitary Sewer Master Plan

As part of its 2040 Comprehensive Plan update, the City retained AE2S in 2018 to update its Sanitary Sewer Master Plan and to create a hydraulic model of existing and projected sewer flows correlating with future growth and development. This report builds upon the trunk sewer extension concepts spelled out in the Master Plan.

The study area encompasses the extent of the developable area in the West Louisville Jackson (WLJ) sewer district identified in the Master Plan. It also includes a small portion of the West Jackson (WJ) sewer district, specifically some properties abutting Chestnut Boulevard and a parcel that extends into the Upper Bluff area. [Figure 5](#) shows the relationship between the sewer districts and the study area.

### 3.4 Ultimate Service Area

As mentioned in Section 3.2, the *Jackson Township AUAR* study boundaries for Subdistricts B and D and approximately the northern 1/3 of Subdistrict A comprise much of the study area for this report. The ultimate service area also includes some properties that abut Chestnut Boulevard on the south side (between Highway 169 and Old Brick Yard Road), some properties abutting Highway 169 on the east side (south of Chestnut Boulevard) and some properties lying south of Chestnut Boulevard and west of Highway 169. Nearly all the referenced properties are in Louisville Township and are anticipated to develop post-2040.

## 4.0 PROPOSED IMPROVEMENTS

### 4.1 Design Parameters

Design of sanitary sewer facilities is typically done in conformance with *Recommended Standards for Wastewater Facilities*, also known as the *Ten State Standards*, and Minnesota is one of ten states that has adopted the standards. In the *Standards* manual, design standards are provided for gravity sewers, lift stations, and force main sewers and it is recommended these standards, along with City design standards, be used for the proposed improvements identified in this report.

### 4.2 Alignment & Siting Considerations

Since the service area for the proposed improvements is in a rural setting and is largely undeveloped, defining a preferred alignment for the trunk sewer system is driven initially by existing topography, where the placement of sewer lines tends to follow the lowest ground surface elevations in the area. For the study area, topography generally drains in a northeasterly direction and the relative low ground lies between Highway 169 and the bluff line to the east. Actual development of individual properties will further define right of way and easement

corridors where street and utility improvements are placed.

Connection of a force main to an existing sanitary sewer system typically implies that some portion of the force main will be constructed around or through other existing improvements (streets, utilities, etc.). In this instance, impacts to the Windermere development infrastructure can be minimized by connecting to the end of the 18-inch trunk sewer in the northwesterly corner of the development.

Siting of a lift station is generally done to satisfy three primary objectives: (1) maximizing the area that can be efficiently served by gravity sewer; (2) minimizing the length of force main required for connection to a downstream system; and (3) utilizing available land to reduce the need for property and easement acquisition. In this case, locating a main lift station in the northeasterly portion of the study area, along the south side of Highway 169 somewhere between Old Brick Yard Road and Marystown Road, will optimize both objectives. A smaller secondary lift station will eventually need to be located on the northwesterly end of the study area, generally southwest of the Bonnevista Terrace Mobile Home Park. Ultimately, development interests will drive selection of the final locations.

Three alternate locations were identified for a potential lift station site. Site alternates and corresponding pipe alignments for each alternate are shown in [Figures 6-8](#) and are generally described as follows:

#### 4.2.1 [Alternate 1 \(see Figure 6\)](#)

The general location of Alternate 1 is on the south side of Highway 169 in the vicinity of the boundary between the NORCOR and Breeggemann properties. The force main (approximately 1700 linear feet) would be placed either in the Highway 169 right of way or along the northerly edge of the NORCOR property until it reaches the Windermere development, where the alignment would turn southerly to the connection point with an existing 18-inch trunk sewer. The two main advantages to this location are: (1) nearly the entire service area can flow by gravity sewer to the lift station; and (2) the length of force main needed to connect to the existing trunk sewer in Windermere is minimized. The two main disadvantages to this alternate are: (1) selection of an actual alignment and the associated easement corridor for the gravity trunk sewer through the Breeggemann property prior to development of the property is problematic and could impact the timing of other potential development west of Old Brick Yard Road; and (2) providing access to the lift station site prior to development of the Breeggemann and NORCOR properties would be a challenge, likely requiring either a shared access road with MCES within Highway 169 right of way or a dedicated access road along the northerly edge of the Breeggemann and NORCOR properties, until development of the property occurs. Electrical service for this alternate would be provided by SPUC.

#### 4.2.2 Alternate 2A (see Figure 7)

The general location of Alternate 2A is on the east side of Old Brick Yard Road at the intersection with Colburn Drive. The force main (approximately 5000 linear feet) would be placed along the easterly right of way line of Old Brick Yard Road and would run northerly to the boundary between Highway 169 right of way and the Breeggemann property and then run easterly to the connection point in Windermere. A future gravity sewer would be extended to serve the Breeggemann property if development of the property were to occur. Advantages to this alternate include a reduction in the length and associated cost of the gravity trunk sewer extension to Highway 169 and Chestnut Boulevard, elimination of the need for an access road to the lift station site (other than a short driveway off Old Brick Yard Road), and a potential reduction in the number of easements required for public improvements. It also would accommodate a scenario where development first occurs west of Old Brick Yard Road prior to development of the area east of Old Brick Yard Road. Electrical service for this alternate would likely be provided by SPUC.

#### 4.2.3 Alternate 2B (see Figure 8)

The general location of Alternate 2B is on the west side of Old Brick Yard Road at the intersection with Colburn Drive. Similar to Alternate 2A, after crossing Old Brick Yard Road, the force main (approximately 5200 linear feet) would be placed along the easterly right of way line of Old Brick Yard Road and would run northerly to the boundary between Highway 169 right of way and the Breeggemann property and then run easterly to the connection point in Windermere. A future gravity sewer would be extended to serve the Breeggemann property if development of the property were to occur, requiring installation of a casing pipe under Old Brick Yard Road. Advantages to this alternate include a reduction in the length and associated cost of the gravity trunk sewer extension to Highway 169 and Chestnut Boulevard, elimination of the need for an access road to the lift station site (other than a short driveway off Old Brick Yard Road), and a potential reduction in the number of easements required for public improvements. It also would accommodate a scenario where development first occurs west of Old Brick Yard Road prior to development of the area east of Old Brick Yard Road. A disadvantage to this alternate is it would eventually require installation of two casing pipes under Old Brick Yard Road to accommodate the force main and Breeggemann property sewer crossings. Electrical service for this alternate would likely be provided by SPUC.

A summary of advantages and disadvantages for each Alternate is found in Table 8. It may be possible to eliminate the Old Brick Yard Road / Colburn Drive intersection if another transportation outlet for Colburn Drive can be provided. Elimination of the existing intersection could then allow the lift station to be fully or partially located within the existing right of way. Further discussions with Scott County and additional transportation system analysis are required before this option can be considered viable.

### 4.3 Ultimate Buildout Considerations

Sizing of a lift station and associated force main is directly related to the amount of sewer flow generated in the lift station service area and the flow generated, in turn, is dependent on the timing of development. Since the study area is largely undeveloped, predicting the rate of development for the area and the timing of an ultimate buildout is highly speculative. Mechanical equipment (pumps, floats, meters, etc.) and electrical equipment (panels, controls, switches, etc.) used in a lift station generally have an expected service life of about 20 years. The expected service life of the equipment can be used as a guide in sizing the lift station components for the initial phase (low flow), intermediate phase (medium flow), and ultimate buildout (full flow) conditions.

As stated in Section 4.2, the timing of development and the resulting need for infrastructure improvements in the study area is speculative, given its rural nature. To mitigate against prematurely installing too large of a facility (wet well, pumps, force main, etc.), thereby resulting in excessive front-end costs and operational inefficiencies, three scenarios were considered to aid in sizing of the lift station components and the associated force main, as well as to analyze the timing of building a structure for the facility and of installing a permanent generator at the site. Figure 9 shows a potential phasing plan for the service area.

#### 4.3.1 Initial Period (10-Year Development Scenario)

During the initial period, the sewer flows generated by anticipated development that occurs within the first ten years of installation were used to size the wet well, pumps, and force main required to convey the estimated flows.

#### 4.3.2 Intermediate Period (20-Year Development Scenario)

For the intermediate period, the sewer flows generated by development that is anticipated to occur by 2040, as defined in *Envision Shakopee* and *Jackson Township AUAR* land use documents, were used to size the wet well, pumps, and force main required to efficiently convey the estimated flows. A 20-year period also correlates well with the end of the expected service life of mechanical and electrical components in the lift station.

#### 4.3.3 Ultimate Buildout (Post-20-Year Development Scenario)

For the ultimate buildout scenario, the sewer flows generated by development of the entire study area post-2040 were used to determine the ultimate size of the wet well, pumps, and force main required to efficiently convey the generated flows. This scenario also was used to determine the ultimate footprint of the lift station site, ensuring that enough area is secured in the near term to accommodate long-term needs.

Sizing of trunk gravity sewer is typically done for the ultimate buildout condition only, as the expected service life for the pipe is 75 – 100 years, replacement of an existing sewer main before it is absolutely necessary is expensive, and placement of a parallel line to convey larger flows at some future time is rarely cost-effective.

#### 4.4 Flow Projections

Using population, household, and employment projections from the *Envision Shakopee* Land Use Plan and from the *Jackson Township AUAR*, in conjunction with development phasing identified in the same documents, future sanitary sewer flows were predicted and then allocated to the proposed trunk sewer system, to aid in routing and sizing of the system improvements. Peaking factors, in accordance with MCES Design Standards, were applied to account for anticipated flows during periods of peak activity or during wet weather periods. Flow projections were also compared to predicted flows contained in the City’s Sanitary Sewer Master Plan hydraulic model for validation purposes. Flow projections for an initial 10-year development timeframe, a 20-year intermediate timeframe, and an ultimate buildout scenario are shown in Table 2.

**Table 2 - Sanitary Sewer Flow Projections**

Land Use Category	Projected Average Design Flows					
	10-Year		20-Year		Ultimate	
	Developed Acreage (Ac)	Projected Average Flows (gpm)	Developed Acreage (Ac)	Projected Average Flows (gpm)	Developed Acreage (Ac)	Projected Average Flows (gpm)
MUC <sup>(1)</sup>	83	46	83	46	94	52
MUEC <sup>(2)</sup>	191	118	461	249	938	544
MR <sup>(3)</sup>	37	26	37	26	37	26
SR <sup>(4)</sup>	0	0	46	29	85	54
<b>Totals</b>	311	190	627	350	1154	676

Table Notes: (1) Mixed Use Center; (2) Mixed Use Employment Center; (3) Mixed Residential; (4) Suburban Residential.

It should be noted that a projected average flow of 676 gpm equates to an average daily flow of 0.97 MGD, which is just below the 1.0 MGD threshold for completing a mandatory Environmental Assessment Worksheet (EAW), as defined in Minnesota Rules, Part 4410.4300.

#### 4.5 Lift Station & Force Main

Proposed lift station improvements typically include the following primary components:

1. Wet well vault.
2. Submersible pumps and float controls.
3. Process piping and valving.
4. Valve vault.
5. Flow metering.
6. Electrical equipment and control panel.
7. Electrical transformer pad (power to be provided by others).
8. Cloud-based SCADA system.
9. Concrete pad to support a portable or permanent back-up generator.
10. Space for vehicle parking (up to two vehicles).
11. Driveway access.
12. Building and/or screening.

As sewer flows through a lift station increase, the size and complexity of the station also tends to increase. With a larger lift station, the corresponding risk of failure is increased and this increased risk can be mitigated by installing additional pump(s) for back-up purposes, integrating a SCADA system to enable remote monitoring of the facility, providing a back-up generator to furnish more reliable power to the facility in extreme weather events, enclosing the facility within a building to protect mechanical and electrical equipment, and installing redundant piping to accommodate bypass pumping.

Sizing of a lift station and associated force main is directly related to the amount of sewer flow generated in the lift station service area and the flow generated, in turn, is dependent on the timing of development. Since the study area is largely undeveloped, predicting the rate of development for the area and the timing of an ultimate buildout is highly speculative. Mechanical equipment (pumps, floats, meters, etc.) and electrical equipment (panels, controls, switches, etc.) used in a lift station generally have an expected service life of about 20 years. The expected service life of the equipment can be used as a guide in sizing the lift station components for the initial phase (low flow), intermediate phase (medium flow), and ultimate buildout (full flow) conditions.

As stated in Section 4.2, the timing of development and the resulting need for infrastructure improvements in the study area is speculative, given the largely rural nature of the study area. To mitigate against prematurely installing too large of a facility (wet well, pumps, force main, etc.), thereby resulting in excessive front-end costs and operational inefficiencies, three scenarios were considered to aid in sizing of the lift station components and the associated force main, as well as to analyze the timing of building a structure for the facility and of installing a permanent generator at the site. [Figure 9](#) shows a potential phasing plan for the service area.

From the three scenarios described in Section 4.3, projected average daily and peak hourly flows and the corresponding wet well, pump, and force main sizes for each scenario are summarized in Table 3 below:

**Table 3 – General Lift Station Sizing for Three Development Scenarios**

Development Scenario	Projected Average Flow (gpm)	Projected Peak Flow (gpm)	General Wet Well Size (Dia)	General Pump Size (hp)	General Force Main Diameter (in)
Initial (10-Year)	190	703	6 ft <sup>(1)</sup>	15-25 <sup>(2)</sup>	6-8
Intermediate (20-Year)	350	1190	8 ft <sup>(1)</sup>	15-25 <sup>(2)</sup>	10-12
Ultimate Buildout	676	2163	8 ft <sup>(1)</sup>	25 <sup>(3)</sup>	12

Table Notes: (1) Operating range of 5 ft.  
 (2) Duplex Station (2 pump configuration).  
 (3) Triplex Station (3 pump configuration).

Sizing a wet well is typically done by selecting the size required to serve the ultimate buildout condition, eliminating the need for future excavations to increase wet well size. In some situations, multiple wet wells can be installed to meet both the initial and ultimate buildout conditions. Selection of a pump size should be made based on the anticipated flows during the expected life of the pump(s), allowing pump efficiency to be maximized. Selection of a force main size is directly dependent on wet well size and on pump size and configuration. In some cases, installation of parallel force mains can allow for a better match with initial and ultimate buildout conditions. Selection of these elements is typically done during final design, when a specific flow regime and resulting system hydraulics can be better identified.

#### 4.6 Trunk Sanitary Sewer

For the ultimate buildout scenario, a 21-inch trunk sewer with a minimum pipe slope of 0.10% is recommended for the pipe segment between the proposed lift station and the vicinity of Highway 169 and Chestnut Boulevard. Total length of this segment is approximately 8100 linear feet for Alternate 1 and approximately 5400 linear feet for Alternates 2A and 2B. Depth of this line varies between 12 and 25 feet from existing ground elevations. While actual depths are expected to differ once future development and grading occurs, the maximum allowable depth is 30 feet and the amount of pipe placed at maximum depth should be minimized, based on worst-case need. At the upstream terminus point of the 21-inch trunk sewer, a 21-inch trunk sewer with a minimum pipe slope of 0.10% is recommended for the pipe segment crossing of Highway 169 in the vicinity of Chestnut Boulevard. Conceptual alignments are shown in [Figures 6-8](#).

#### 4.7 Permitting Considerations

Extension of sanitary sewer improvements will require that numerous permits be secured prior to construction of the improvements. Table 4 summarizes the agencies and permit types required.

**Table 4 - Agency Permits and Approvals**

Agency	Permit /Approval Required	Purpose of Permit /Approval
MPCA	Sanitary Sewer Extension Permit	Extension of sanitary sewer
MPCA	NPDES Permit	Pollution prevention during project construction
Metropolitan Council	Comprehensive Plan Amendment	Change of MUSA boundary
MCES	Sanitary Sewer Extension Concurrence	Extension of sanitary sewer
MnDOT	Utility Accommodation Permit	Force main construction in Highway 169 right of way will require an exception to MnDOT policy
MnDOT	Utility Accommodation Permit	Use of shared access road in Highway 169 right of way
MnDOT	Utility Accommodation Permit	Trunk sewer crossing of Highway 169
Scott County	Right of Way Permit	Lift station driveway to CR 69
Scott County	Right of Way Permit	Pipeline crossings of CR 69 and CSAH 78
Scott County	Right of Way Permit	Force main construction in CR 69 right of way (if needed)
Jackson Township	Property Annexation	City annexation for lift station site
Xcel Energy	Encroachment Permit	Crossing of transmission line or gas main easement(s)
City of Shakopee	Building Permit	Lift station building construction

#### 4.8 Property & Easement Requirements

A lift station site typically requires 0.25 – 0.5 acre of property to accommodate the lift station facility, generator pad, electrical transformer pad, parking for one or two vehicles, and a driveway. If the City desires to use the site for other purposes (material/equipment storage, staging area for others, miscellaneous purposes, etc.), a larger footprint will be required.

For the proposed force main, a 20-ft wide utility easement will be needed to access, operate and maintain the pipeline, since it will be limited to 7 – 8 ft in depth. For the trunk sanitary sewer, a 50-ft to 75-ft wide utility easement will be required, depending on the expected depth of the pipeline. The easement could be replaced by dedicated right of way when it becomes available through future development.

The Jackson Township AUAR identifies several properties in the study area that may have some



degree of contamination. Prior to acquiring any property for this project, the City should consider conducting a Phase 1 environmental site assessment for the subject property.

## 5.0 OPINION OF PROBABLE CONSTRUCTION COST

### 5.1 Cost Basis for Improvements

Estimating the cost of future public improvements tends to be speculative, primarily due to several factors (economic uncertainty, the construction bidding climate, unknown soil conditions, etc.) that can influence the actual cost of constructing planned improvements. An opinion of probable construction cost was prepared for that portion of Alternate 1 and Alternate 2A between Old Brick Yard Road (including roadway crossings) and the point of connection in Windermere, as identified in Section 4.2, as well as for each development scenario described in Section 4.3. Under each development scenario, the incremental cost between Alternate 2A and Alternate 2B is nominal. The opinion includes estimated construction costs (in 2019 dollars), a 10% construction contingency, and a 25% contingency for legal, engineering, and administration costs. It excludes the cost of street construction and street restoration, extensive trench dewatering, and engineered fill for soil corrections. Estimated property acquisition costs were determined separately (see Section 5.2). The opinion shown for each alternate assumes a single standalone project for each scenario and does not include incremental costs for other scenarios. Table 5 provides a comparison of the opinion of probable construction cost for each alternate and scenario described.

**Table 5 - Comparison of Probable Construction Costs**

Site Alternate	Element	Probable Construction Costs - Development Scenario		
		10-Year	20-Year	Ultimate
Alternate #1	Trunk Sewer	\$818,100	\$818,100	\$818,100
	Lift Station	\$303,800	\$472,500	\$742,500
	Force Main	\$124,000	\$169,100	\$169,100
	<b>Totals</b>	<b>\$1,245,900</b>	<b>\$1,459,700</b>	<b>\$1,729,700</b>
Alternate #2A	Trunk Sewer	\$317,200	\$317,200	\$317,200
	Lift Station	\$303,800	\$472,500	\$742,500
	Force Main	\$369,800	\$504,300	\$504,300
	<b>Totals</b>	<b>\$990,800</b>	<b>\$1,294,000</b>	<b>\$1,564,000</b>

### 5.2 Property & Easement Acquisition Costs

The City requested an estimate of potential costs associated with the acquisition of property and easements to accommodate construction of proposed improvements. Land acquisition costs are highly speculative and subject to wide fluctuations in perceived value. For example, recent property acquisitions or appraisals in or near the study area for parcels with similar

characteristics have ranged in cost from \$45,000 - \$115,000 per acre. In some cases, the cost of property acquisition for easement purposes, where the underlying property owner retains some property rights, can be 10% - 20% less than an outright acquisition. The potential costs, if any, of environmental cleanup for contaminated soils or groundwater should be identified prior to acquisition of property.

Potential property acquisition costs for the trunk gravity sewer, lift station, and force main improvements shown in Alternates 1 and 2A between Old Brick Yard Road and the point of connection in Windermere are shown in Table 6, with acquisition costs assumed to be \$100,000 per acre. Potential acquisition costs for the sanitary sewer force main assume that shared right-of-way with other agencies (i.e., Scott County or MnDOT) is not an option, which is considered a worst-case scenario. Property acquisition costs can be eliminated altogether if the property and easements required for improvements are secured in conjunction with platting or subdivision of property. Environmental cleanup costs for acquired properties are excluded.

**Table 6 – Potential Property Acquisition Costs**

Site Alternate	Element	Potential Acquisition Area (Ac)		Estimated Cost
		Property	Easement	
Alternate #1 (see Figure 6)	Trunk Sewer <sup>(1)</sup>		4.7	\$470,000
	Lift Station	0.5		\$50,000
	Force Main <sup>(2)</sup>		0.7	\$70,000
	<b>Totals</b>	<b>0.5</b>	<b>5.4</b>	<b>\$590,000</b>
Alternate #2A (see Figure 7)	Trunk Sewer <sup>(1)</sup>			
	Lift Station	0.5		\$50,000
	Force Main <sup>(2)</sup>		2.2	\$220,000
	<b>Totals</b>	<b>0.5</b>	<b>2.2</b>	<b>\$270,000</b>

Table Notes: (1) 75-ft wide easement; (2) 20-ft wide easement.

### 5.3 MCES Shakopee-Chaska Interceptor Charges

MCES owns and operates the Shakopee-Chaska Interceptor through the City. The City currently has an allocated flow rate to the interceptor of 1.0 cubic feet per second (cfs) (peak flow). Once the cumulative City flow to the interceptor exceeds 1.0 cfs, the City will be required to pay MCES for a deferred lateral charge of \$124,667.68. In a similar manner, the City will be required to pay MCES for a deferred lateral charge of \$141,132.73 once cumulative City flows exceed 2 cfs and an additional charge of \$57,501.30 once cumulative City flows exceed 3 cfs. The City is keeping a line item in its Capital Improvements Program (CIP) to cover these costs. A summary of projected average and peak flows for the development scenarios identified in Section 4.3 is shown in Table 7 below.

**Table 7 – Projected Average and Peak Flows for Three Development Scenarios**

Development Scenario	Projected Average Flow (gpm)	Projected Average Flow (cfs)	Projected Peak Flow (gpm)	Projected Peak Flow (cfs)
Initial (10-Year)	190	0.42	703	1.57
Intermediate (20-Year)	350	0.78	1190	2.65
Ultimate Buildout	676	1.50	2163	4.82

A review of MCES flow meter data for the City in the 12-month period from September 1, 2019, to August 31, 2020, indicates the average daily flow for the entire City was 2.65 MGD (4.1 cfs). The peak daily flow for the same period was recorded at 3.85 MG (5.95 cfs) on August 10, 2020. The portion of flow allocated to the Shakopee-Chaska Interceptor in the City’s sanitary sewer model is about 45% of the total flow, which equates to 1.2 MGD (1.85 cfs) for an average daily flow and to 1.75 MG (2.7 cfs) for the peak daily flow at the junction with the Prior Lake Interceptor.

## 6.0 PROJECT FUNDING

Initial financing for the project is expected to come from the Sanitary Sewer Fund. As installation and extension of proposed improvements occur, there are several funding mechanisms available to the City to assist with paying for the improvements. Funding mechanisms include lateral sanitary sewer connection charges, trunk sanitary sewer charges, Sewer Availability Charges (SAC), sewer service charges, utility fees, and developer-led construction. Each funding mechanism is explained further below.

### 6.1 Lateral Sanitary Sewer Connection Charge

The City has a policy in place for determining special assessments to be levied for public improvements projects. Per the policy, lateral benefit is assessed on an area basis, where the assessable area is defined as total area less the area used for rights of way, natural waterways, swamps, lakes, or DNR-designated wetlands. In determining the lateral benefit costs, the City is responsible for the incremental costs of a sewer main greater than 8 inches in diameter (oversizing) and for the incremental costs of installation depths exceeding 12 feet (overdepth) and the incremental costs are to be paid from the Trunk Sanitary Sewer Fund. The City’s *Special Assessment Policies and Procedures for Public Improvements* can be applied to this project.

A lateral sanitary sewer connection charge is determined when the City pays for the initial cost of extending sanitary sewer improvements through an area or property. The benefitting area for the sewer improvements is determined and the benefitting area is assigned the cost of the improvements on an area basis. For this project, it is proposed to assign a lateral benefit to the portion of sanitary sewer extending from the existing sewer in the Windermere development to the lift station site. The lateral benefit is the equivalent estimated cost of extending an 8-inch

gravity sewer at a maximum depth of 12 feet along the proposed force main alignment(s). From Table 2, it is estimated there are a total of 1154 net developable acres. Lateral sanitary sewer connection charges are proposed to be collected by the SAC unit at the time of development.

## 6.2 Trunk Sanitary Sewer Charge

The City has a policy in place for determining charges to be levied for trunk sanitary sewer improvements. Per the policy, the current charge is \$2982 per developable acre, where a developable acre is defined as total acreage less acreage contained in outlots, rights of way, lakes, wetlands, easements encompassing 100-year high water levels of storm ponds, conservation easements, and parks. Trunk sanitary sewer charges for rural residential property (R1-A zoning) that doesn't subdivide are based on a land area of 0.30 acre, which is the minimum lot size for that zoning classification. A trunk sewer is defined as a gravity sewer that exceeds the minimum pipe size required to serve a development. The City's *Trunk Sanitary Sewer Charge Policy* applies to this project. The trunk sanitary sewer charge is applied to all properties within City limits lying south of US Highway 169 and to all property annexed into the City. The charge is collected on the developable acreage of the property and is used to fund the construction and maintenance of City-owned trunk sanitary sewers greater than 8-inch diameter.

## 6.3 City Sewer Availability Charge (SAC)

The City sewer availability charge is determined from the number of SAC units assigned by MCES to a specific development and is collected through building permits issued by the City. This is the "sewer access charge" and it covers the long-term depreciation and replacement of the sanitary sewer system. The SAC unit charge is currently set at \$515 per SAC unit. For the study area, it is estimated there are 3650 SAC units that could be created, using the land use guidance provided by *Envision Shakopee* and the *Jackson Township AUAR*.

## 6.4 Sewer Service Charge

This charge is collected through monthly utility billing and is based on the water and sewer usage for each property. This charge covers the MCES sewer service charge, as well as the cost of routine operation and maintenance of the sanitary sewer system.

## 6.5 Utility Fees

The utility fee is charged to developers that decide to construct public improvements themselves rather than requesting the City to do so. The utility fee covers City expenses related to processing the developer's application, administering the project, reviewing and approving developer plans, inspecting the construction and maintaining the improvements.

## 6.6 Developer-Led Construction

When development occurs, the developer is required to construct sanitary sewer throughout the development and to extend the system to the property lines, allowing for more efficient future extensions and connections. For this funding mechanism, the developer is solely responsible for the cost of the sewer improvements and the system is turned over to the City for operation and maintenance.

## 6.7 Project Funding Summary

For construction of this project, funding is expected to come from a combination of sources, including lateral sanitary sewer connection charges, trunk sanitary sewer charges, and sewer availability charges. The lift station, trunk sewer oversizing, and force main oversizing costs would be paid for through trunk sanitary sewer charges collected at the time subdivision plats are recorded. For Alternate 1, the base cost of the trunk gravity sewer would be determined by assigning an equivalent cost per linear foot value to the length of gravity sewer installed through the Breeggemann property (extending an 8-inch gravity sewer at a maximum depth of 12 feet along the proposed alignment) and this base cost would be paid for through lateral sanitary sewer connection charges. The base cost of the force main would be determined in a similar manner for the length of force main and would be paid for through lateral sanitary sewer connection charges to the lift station service area. Appendix B contains several tables that summarize the funding sources and fees collected for various scenarios, if the lift station and force main are installed for the ultimate buildout condition.

## 7.0 CONCLUSIONS & RECOMMENDATIONS

Development of property within the study area for the planned land uses and development densities identified in *Envision Shakopee* and in the *Jackson Township AUAR* requires a centralized municipal sanitary sewer collection system. The proposed improvements outlined in this report are necessary to support planned development in the study area, are cost-effective to provide a safe and reliable sanitary sewer collection system and are feasible from an engineering perspective.

Before the City proceeds with acquisition of any property or easements for sanitary sewer improvements described in this report, completion of a Phase 1 environmental site assessment for each affected property is recommended, to determine the presence of contaminated soils or groundwater, if any, and to determine the extent (and associated costs) of any required cleanup of contaminated material.

Selection of Alternates 1, 2A, or 2B for a lift station site and related trunk sewer and force main routing will be dependent on timing of proposed development(s), property owner interest, and other factors outside City control. Each alternate is considered feasible. The willingness of landowners and/or developers to dedicate or negotiate the easements required to construct the

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sanitary sewer improvements will have a direct bearing on the final site selection for the lift station and on the routing of the trunk sewer and force main.

A comparison of advantages, disadvantages, and estimated total project costs for each alternate is summarized in Table 8 below.

**Table 8 – Comparison of Advantages & Disadvantages of Alternates**

<b>Alternate</b>	<b>Advantages</b>	<b>Disadvantages</b>	<b>Estimated Total Cost (1)</b>
<b>1</b>	<ul style="list-style-type: none"> <li>○ Minimizes force main length</li> <li>○ Maximizes area served by gravity sewer</li> </ul>	<ul style="list-style-type: none"> <li>○ Limited lift station site access</li> <li>○ Greatest potential easement acquisition cost</li> <li>○ Most expensive</li> <li>○ Likely dependent on Breeggemann property development</li> </ul>	<b>\$2,049,700</b>
<b>2A</b>	<ul style="list-style-type: none"> <li>○ Eliminates need for access road to lift station</li> <li>○ Minimizes length and cost of gravity trunk sewer</li> <li>○ Provides flexibility in responding to development</li> </ul>	<ul style="list-style-type: none"> <li>○ Requires acquisition of more Breeggemann property than Alternate 2B</li> </ul>	<b>\$1,564,000</b>
<b>2B</b>	<ul style="list-style-type: none"> <li>○ Eliminates need for access road to lift station</li> <li>○ Minimizes length and cost of gravity trunk sewer</li> <li>○ Provides flexibility in responding to development</li> </ul>	<ul style="list-style-type: none"> <li>○ Requires two casing pipes for Old Brick Yard Road force main and gravity sewer crossings</li> </ul>	<b>\$1,568,400</b>

Table Note: (1) Includes cost associated with 20-year development scenario and potential easement costs.

For installation of force main improvements within US Highway 169 right-of-way (shown in all three alternates), the City should pursue an agreement with Mn/DOT to allow for the installation. By doing so, the cost of easement acquisition would likely be reduced. Mn/DOT staff has indicated the City will likely need to prove a hardship in order to share the right-of-way.

If the City decides to proceed with either Alternate 2A or 2B, it should work with Scott County to secure a corridor for force main improvements in Old Brick Yard Road (CSAH 69). By doing so, the cost of easement acquisition would likely be reduced.

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The City should work with property owners and developers in the study area to finalize an alignment for the trunk sewer main, lift station site, and force main alignment. By doing so, a final design for the improvements can be successfully completed.

Unless there is an indication that significant development is expected to occur in the study area within the next ten years, planning and designing lift station improvements for an initial 10-year development scenario is recommended.

## LIST OF FIGURES

**Figure 1 - Area of Study**

**Figure 2 - Existing Sanitary Sewer in Study Area**

**Figure 3 - *Envision Shakopee* Future Land Use Plan**

**Figure 4 - Study Area Relative to Future Land Use**

**Figure 5 - Future Trunk Sewer in Study Area**

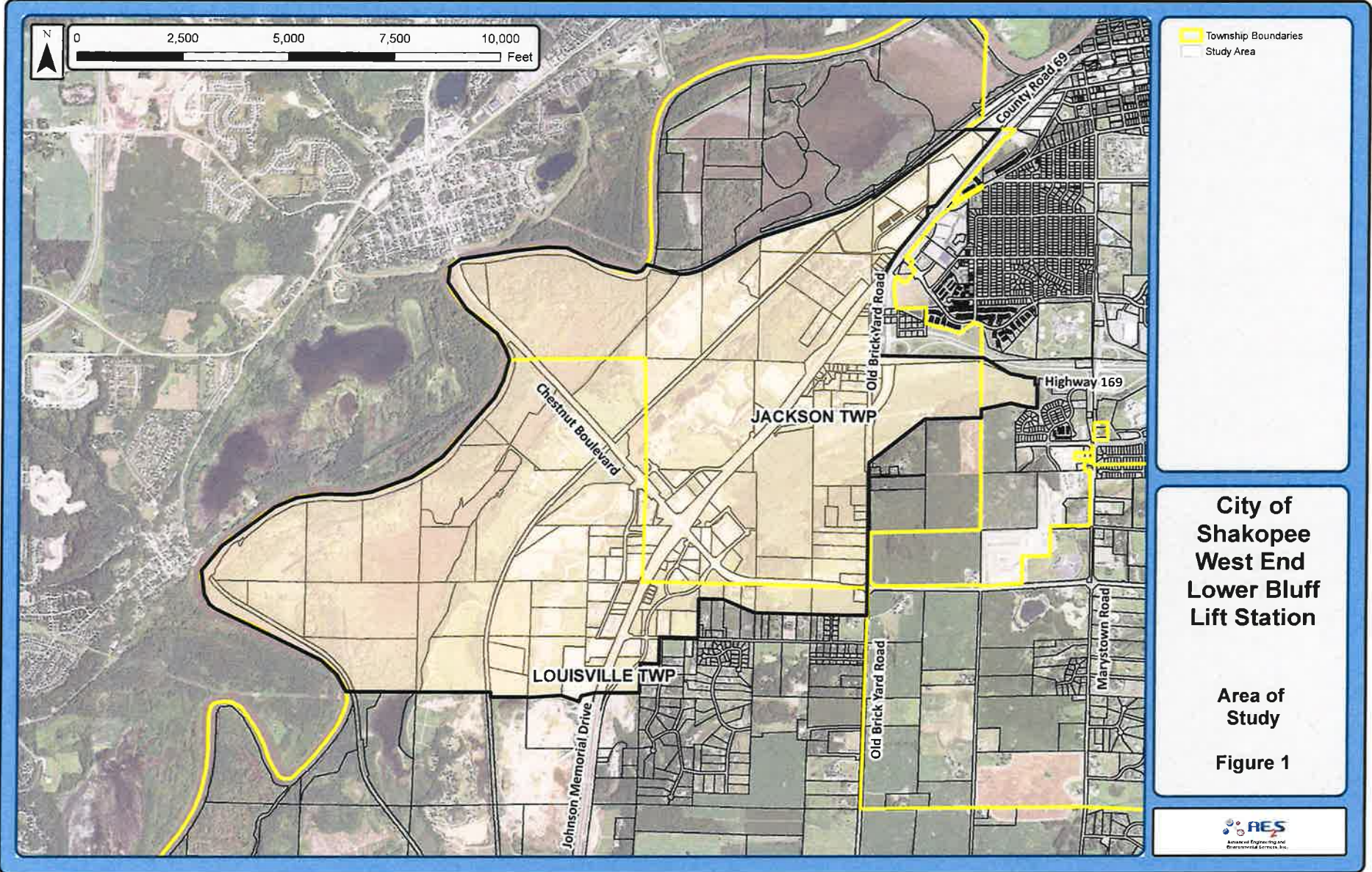
**Figure 6 - Alternate No. 1 Overview**

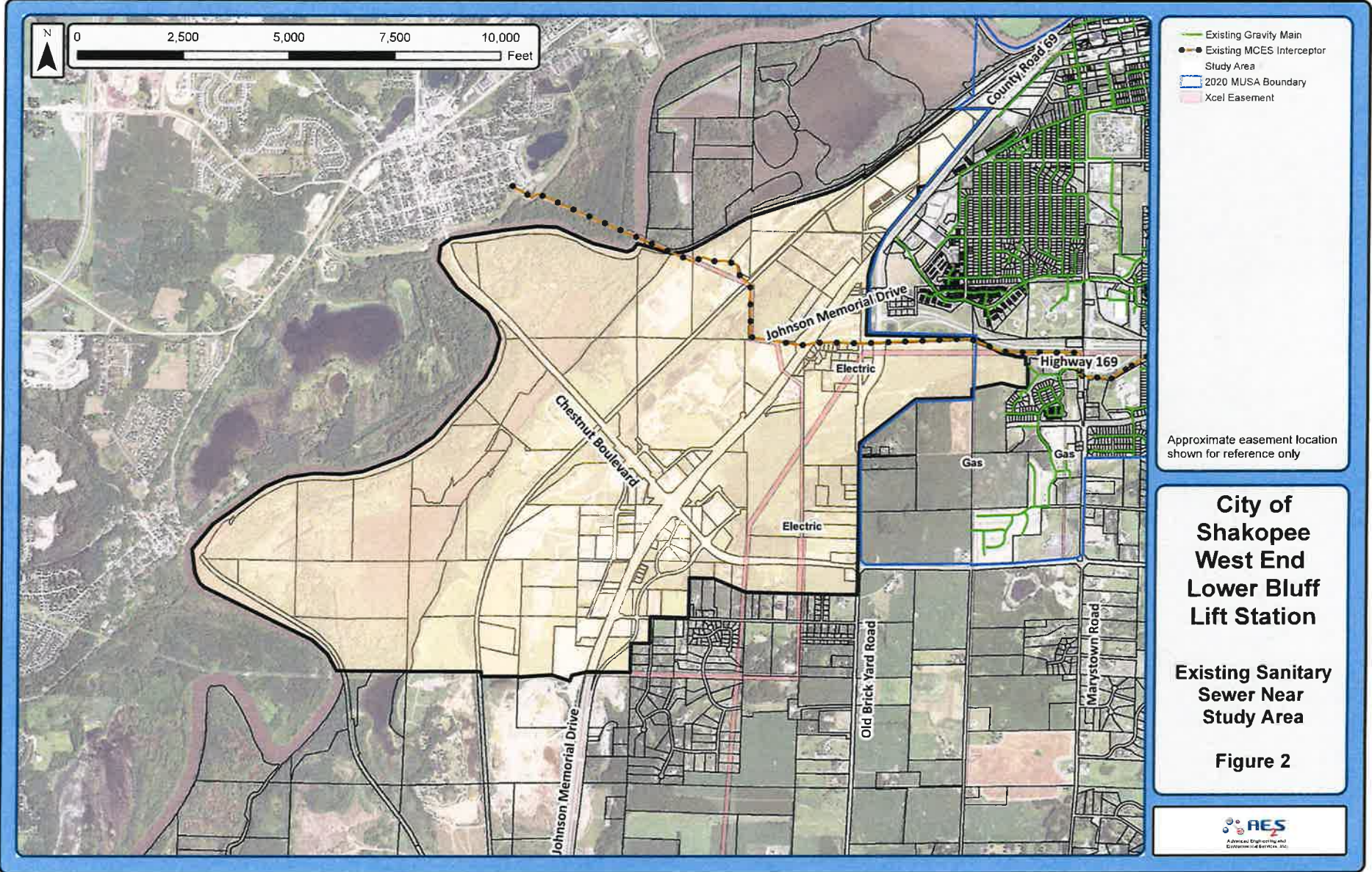
**Figure 7 - Alternate No. 2a Overview**

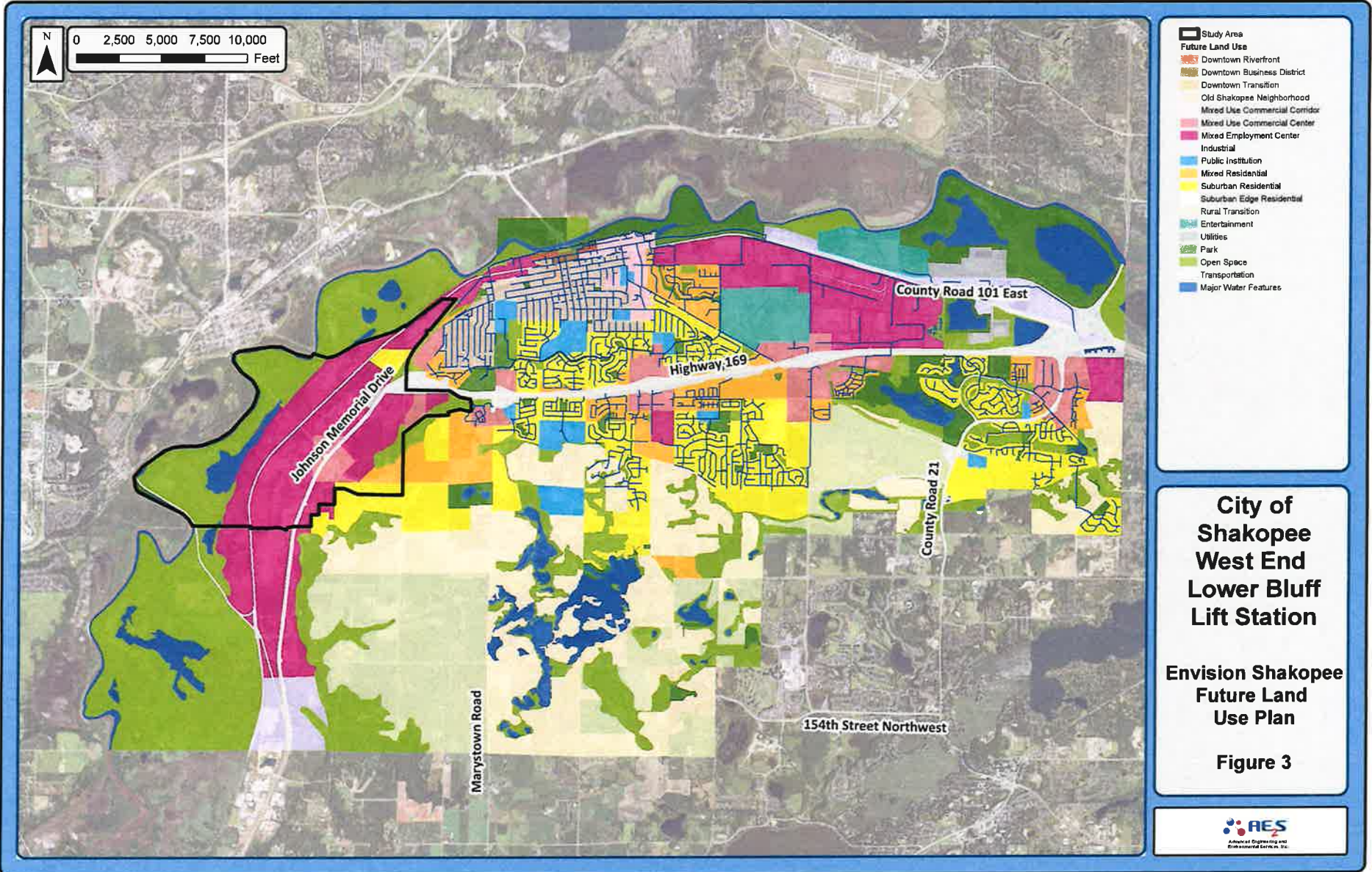
**Figure 8 - Alternate No. 2b Overview**

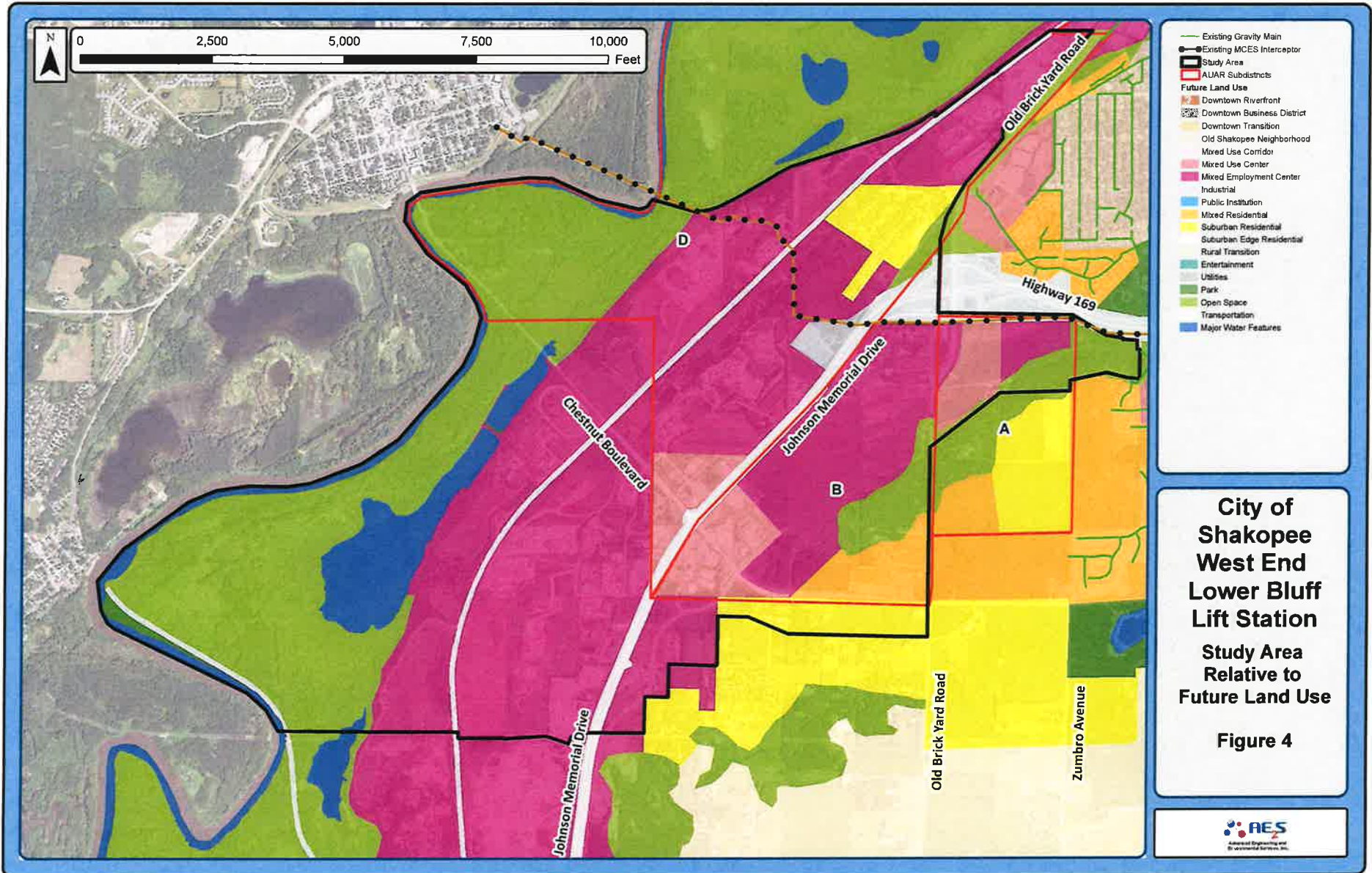
**Figure 9 - Potential Development Scenarios**

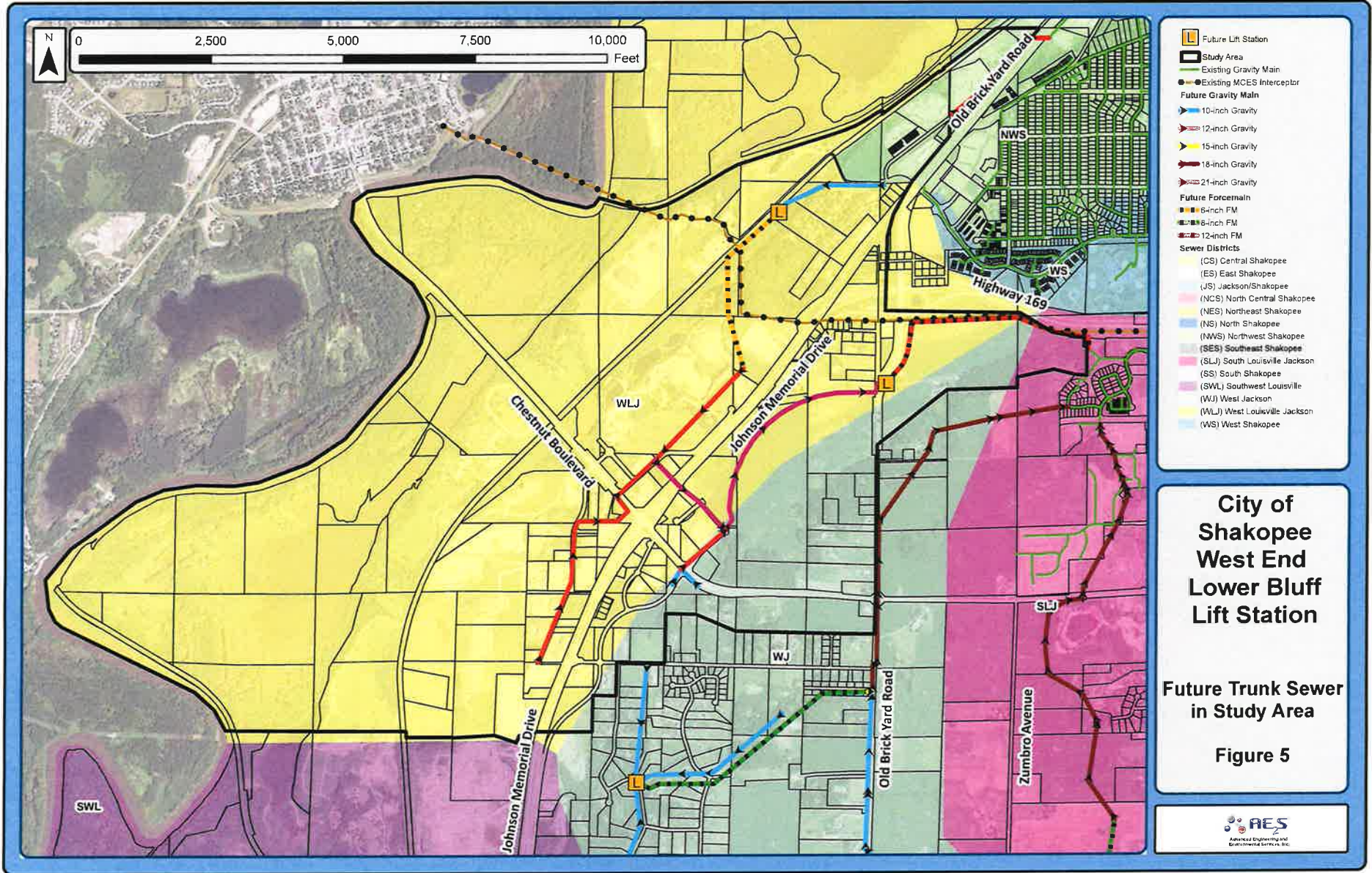










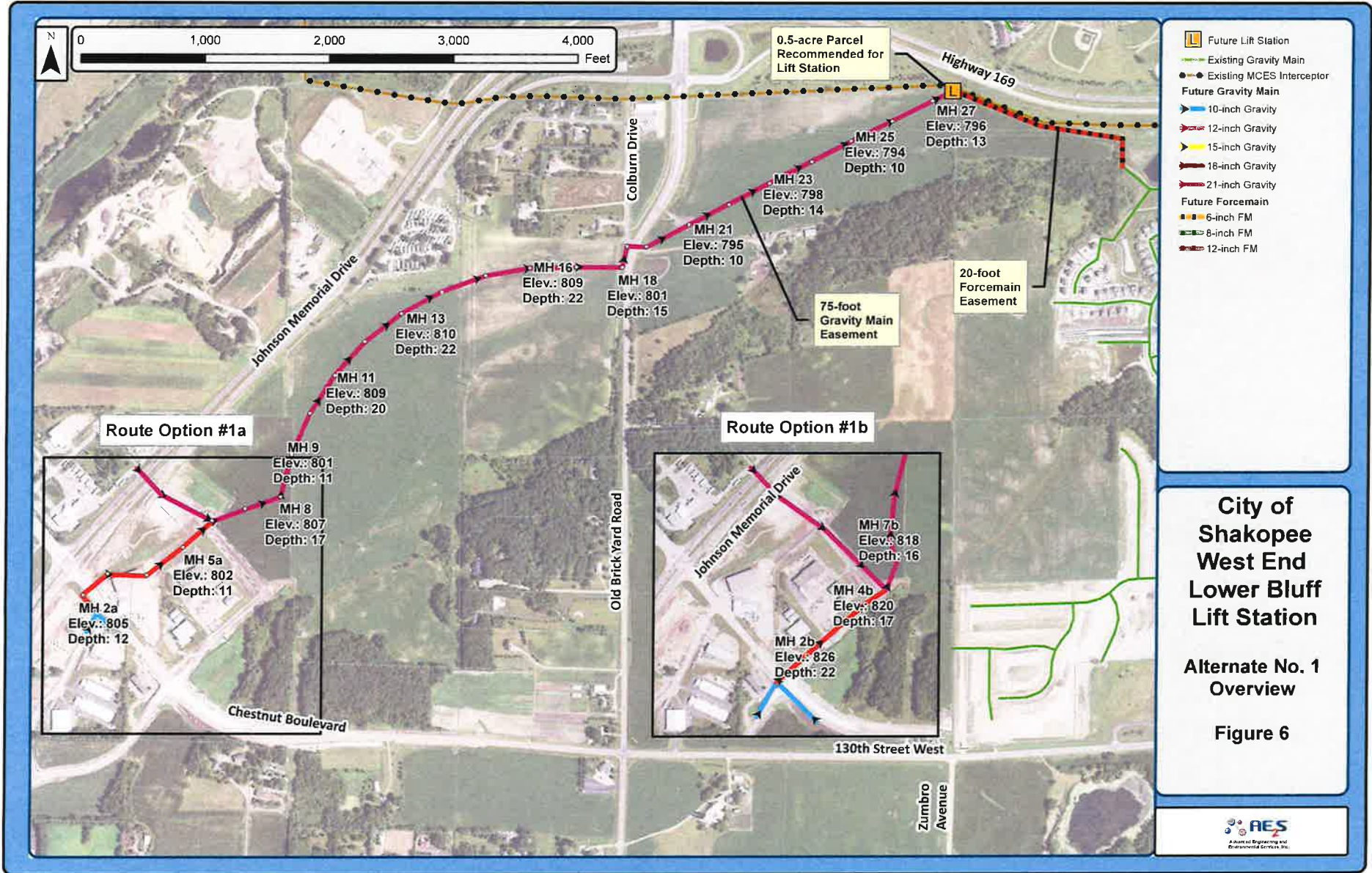


**City of  
Shakopee  
West End  
Lower Bluff  
Lift Station**

**Future Trunk Sewer  
in Study Area**

**Figure 5**

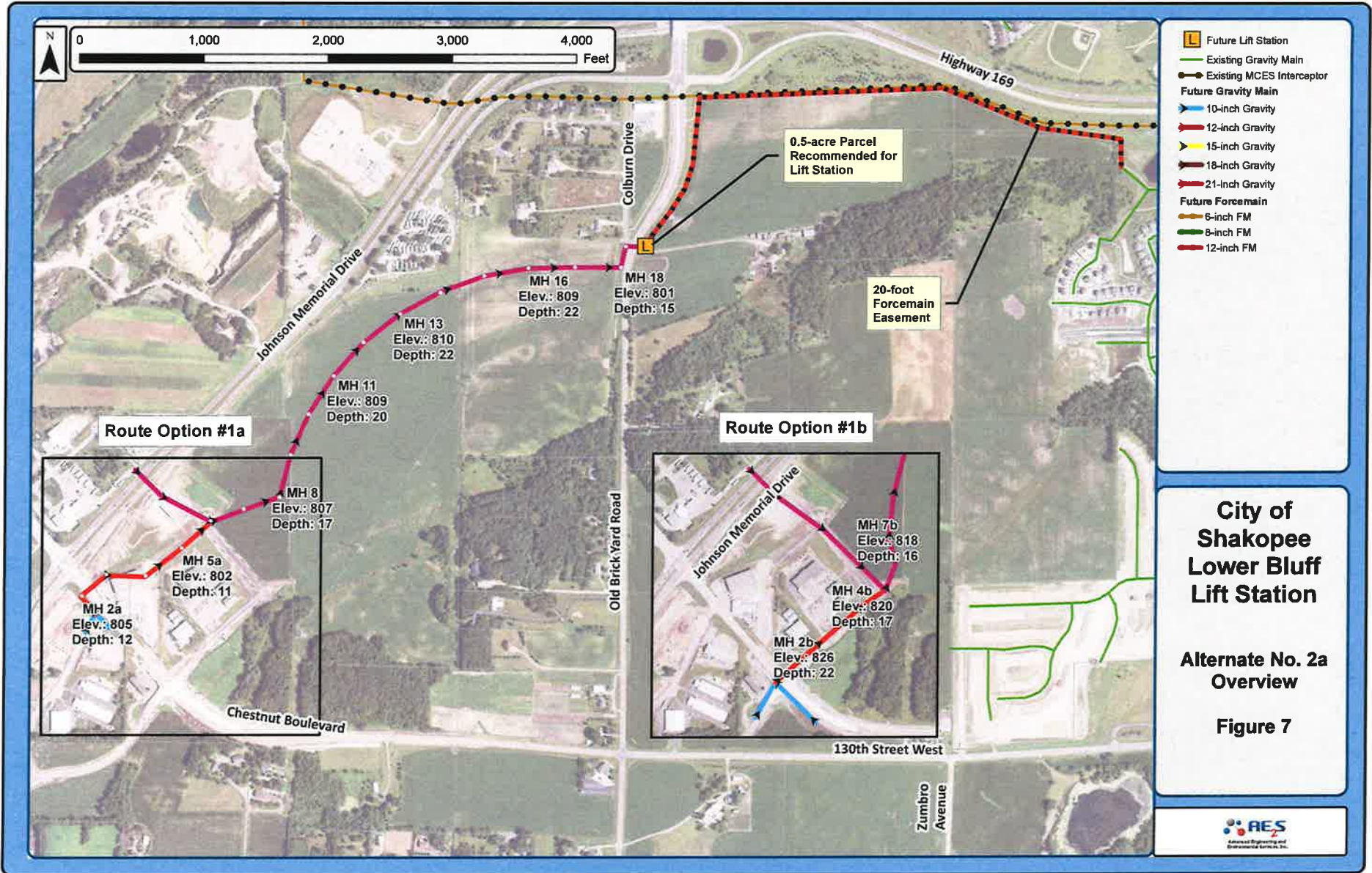
- Future Lift Station
- Study Area
- Existing Gravity Main
- Existing MCES Interceptor
- Future Gravity Main**
- 10-inch Gravity
- 12-inch Gravity
- 15-inch Gravity
- 18-inch Gravity
- 21-inch Gravity
- Future Forcemain**
- 6-inch FM
- 8-inch FM
- 12-inch FM
- Sewer Districts**
- (CS) Central Shakopee
- (ES) East Shakopee
- (JS) Jackson/Shakopee
- (NCS) North Central Shakopee
- (NES) Northeast Shakopee
- (NS) North Shakopee
- (NWS) Northwest Shakopee
- (SES) Southeast Shakopee
- (SLJ) South Louisville Jackson
- (SS) South Shakopee
- (SWL) Southwest Louisville
- (WJ) West Jackson
- (WLJ) West Louisville Jackson
- (WS) West Shakopee



**City of  
Shakopee  
West End  
Lower Bluff  
Lift Station**

**Alternate No. 1  
Overview**

**Figure 6**

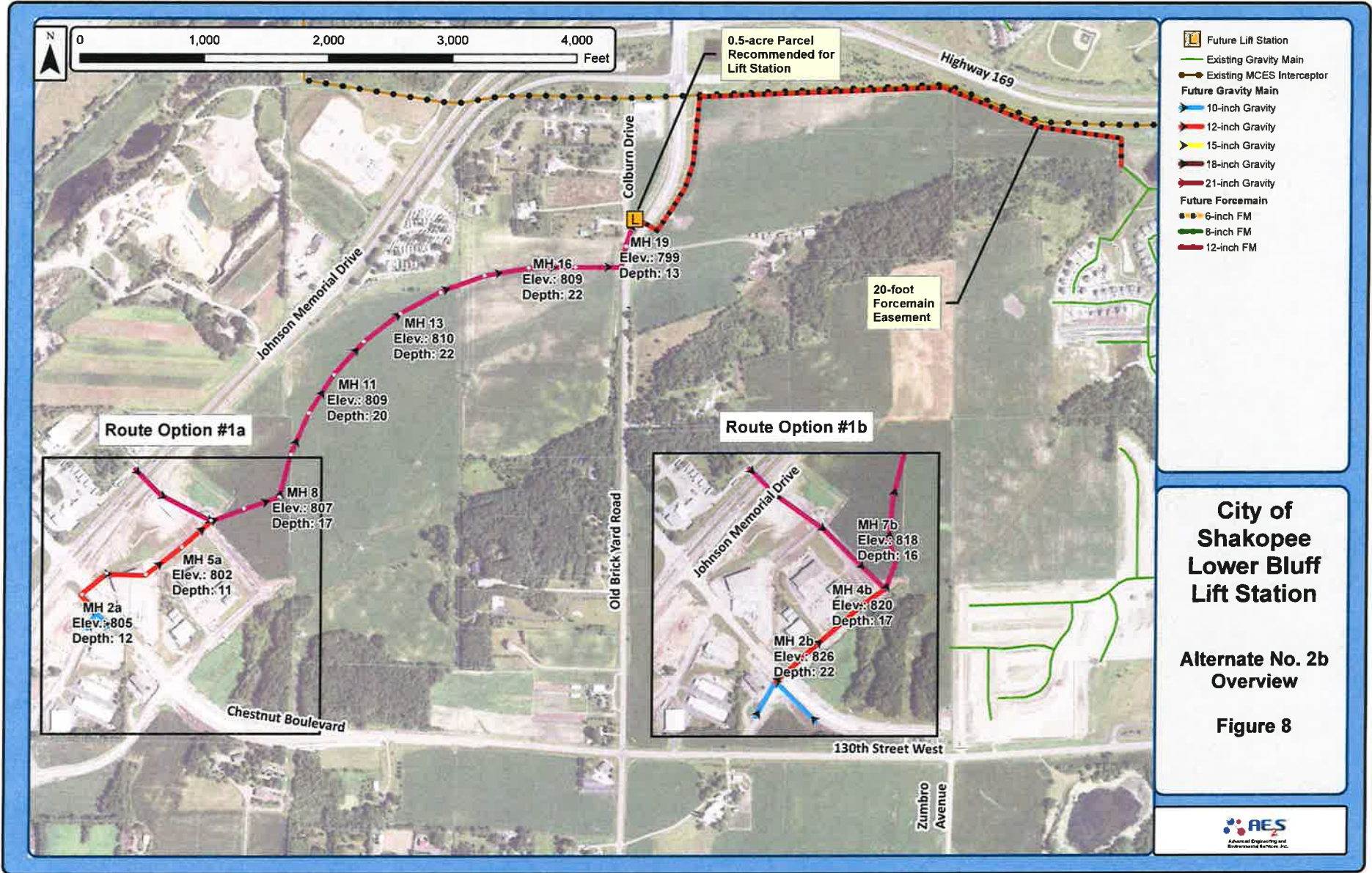


**City of  
Shakopee  
Lower Bluff  
Lift Station**

**Alternate No. 2a  
Overview**

**Figure 7**



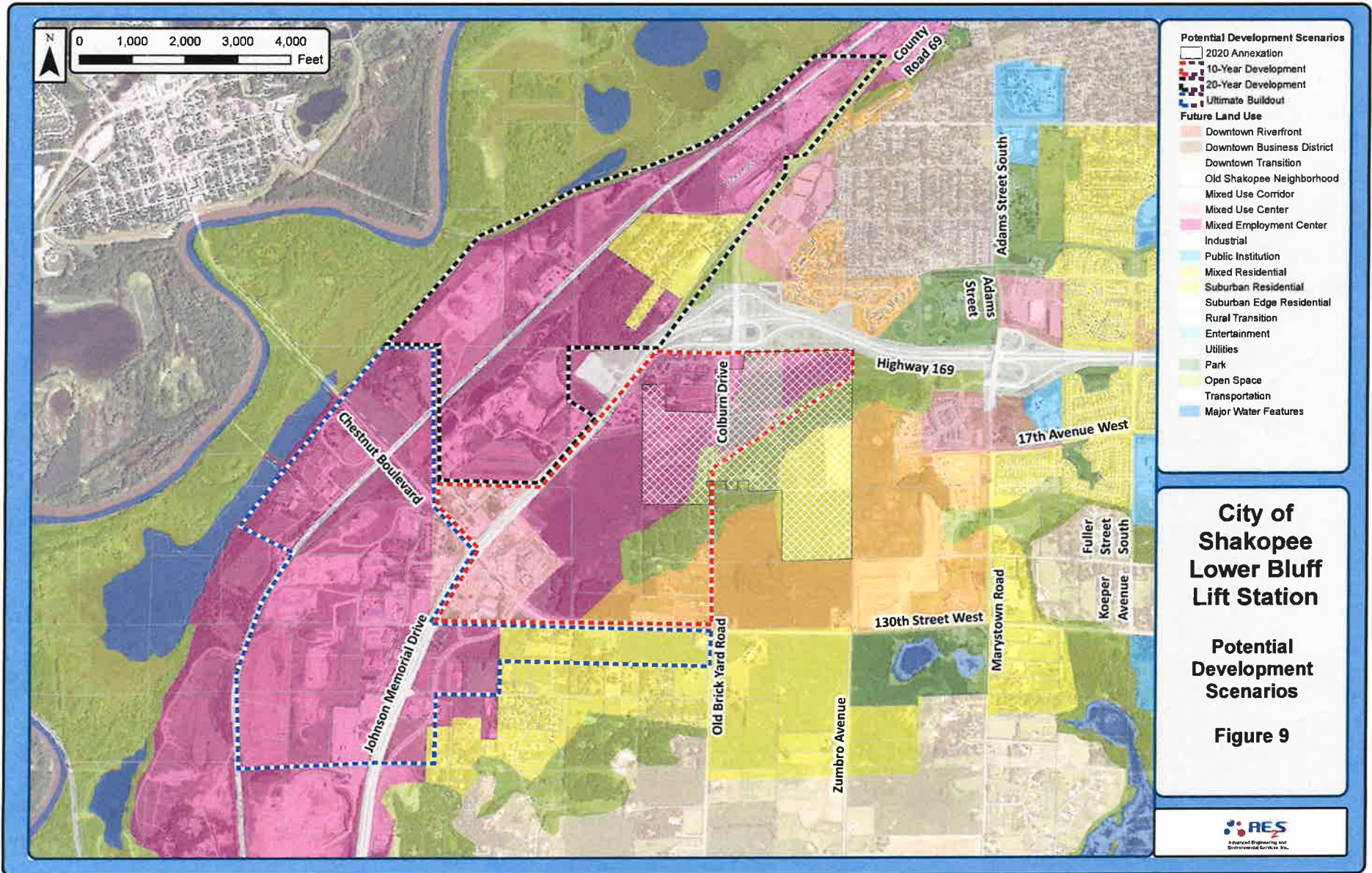


**City of  
Shakopee  
Lower Bluff  
Lift Station**

**Alternate No. 2b  
Overview**

**Figure 8**





**Appendix A**  
**Opinion of Probable Construction Cost**

**West End Lower Bluff Trunk Sewer & Lift Station**  
**Opinions of Probable Construction Cost**  
**West Side of CR 69 to Windermere**

Feb-21

**Alternate #1**

Item	Unit	Unit Price	10-Year Scenario		20-Year Scenario		Ultimate Buildout	
			Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
21-inch PVC Sewer	LF	\$140.00	2900	\$406,000.00	2900	\$406,000.00	2900	\$406,000.00
Jack & Bore 36-inch Steel Casing*	LF	\$1,000.00	200	\$200,000.00	200	\$200,000.00	200	\$200,000.00
Lift Station	LS	\$225,000.00	1	\$225,000.00	1.555556	\$350,000.00	2.444444	\$550,000.00
8-inch PVC Forcemain	LF	\$55.00	1670	\$91,850.00	0	\$0.00	0	\$0.00
12-inch PVC Forcemain	LF	\$75.00	0	\$0.00	1670	\$125,250.00	1670	\$125,250.00
<b>Totals</b>				\$922,850.00		\$1,081,250.00		\$1,281,250.00
Plus 10% Construction Contingency				\$92,285.00		\$108,125.00		\$128,125.00
Plus 25% for ELA				\$230,712.50		\$270,312.50		\$320,312.50
<b>Grand Totals</b>				<b>\$1,245,847.50</b>		<b>\$1,459,687.50</b>		<b>\$1,729,687.50</b>

\* Trunk Sewer Crossing of CR 69

**Alternate #2a**

Item	Unit	Unit Price	10-Year Scenario		20-Year Scenario		Ultimate Buildout	
			Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
21-inch PVC Sewer	LF	\$140.00	250	\$35,000.00	250	\$35,000.00	250	\$35,000.00
Jack & Bore 36-inch Steel Casing*	LF	\$1,000.00	200	\$200,000.00	200	\$200,000.00	200	\$200,000.00
Lift Station	LS	\$225,000.00	1	\$225,000.00	1.555556	\$350,000.00	2.444444	\$550,000.00
8-inch PVC Forcemain	LF	\$55.00	4980	\$273,900.00	0	\$0.00	0	\$0.00
12-inch PVC Forcemain	LF	\$75.00	0	\$0.00	4980	\$373,500.00	4980	\$373,500.00
<b>Totals</b>				\$733,900.00		\$958,500.00		\$1,158,500.00
Plus 10% Construction Contingency				\$73,390.00		\$95,850.00		\$115,850.00
Plus 25% for ELA				\$183,475.00		\$239,625.00		\$289,625.00
<b>Grand Totals</b>				<b>\$990,765.00</b>		<b>\$1,293,975.00</b>		<b>\$1,563,975.00</b>

\* Trunk Sewer Crossing of CR 69

**West End Lower Bluff Trunk Sewer & Lift Station**  
**Opinions of Probable Construction Cost**  
**West Side of CR 69 to Windermere**

Feb-21

**Alternate #2b**

Item	Unit	Unit Price	10-Year Scenario		20-Year Scenario		Ultimate Buildout	
			Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
21-inch PVC Sewer	LF	\$140.00	50	\$7,000.00	50	\$7,000.00	50	\$7,000.00
Jack & Bore 20-inch Steel Casing*	LF	\$500.00	200	\$100,000.00		\$0.00		\$0.00
Jack & Bore 24-inch Steel Casing**	LF	\$600.00		\$0.00	200	\$120,000.00	200	\$120,000.00
Jack & Bore 20-inch Steel Casing***	LF	\$500.00	200	\$100,000.00	200	\$100,000.00	200	\$100,000.00
Lift Station	LS	\$225,000.00	1	\$225,000.00	1.555556	\$350,000.00	2.444444	\$550,000.00
8-inch PVC Forcemain	LF	\$55.00	5130	\$282,150.00	0	\$0.00	0	\$0.00
12-inch PVC Forcemain	LF	\$75.00	0	\$0.00	5130	\$384,750.00	5130	\$384,750.00
Totals				\$714,150.00		\$961,750.00		\$1,161,750.00
Plus 10% Construction Contingency				\$71,415.00		\$96,175.00		\$116,175.00
Plus 25% for ELA				\$178,537.50		\$240,437.50		\$290,437.50
<b>Grand Totals</b>				<b>\$964,102.50</b>		<b>\$1,298,362.50</b>		<b>\$1,568,362.50</b>

\* 8-inch Force Main Crossing of CR 69

\*\* 12-inch Force Main Crossing of CR 69

\*\*\* 8-inch Gravity Sewer Crossing of CR 69

**West End Lower Bluff Trunk Sewer & Lift Station**  
**Opinion of Probable Construction Cost**  
**Includes Trunk Sewer to US 169 / TH 41**

Feb-21

**Alternate #1a (westerly route at Chestnut Blvd)**

Item	Unit	Unit Price	10-Year Scenario		20-Year Scenario		Ultimate Buildout	
			Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
12-inch PVC Sewer	LF	\$75.00	1270	\$95,250.00	1270	\$95,250.00	1270	\$95,250.00
21-inch PVC Sewer	LF	\$140.00	8089	\$1,132,460.00	8089	\$1,132,460.00	8089	\$1,132,460.00
Jack & Bore 20-inch Steel Casing	LF	\$500.00	0	\$0.00	0	\$0.00	0	\$0.00
Jack & Bore 24-inch Steel Casing	LF	\$600.00	200	\$120,000.00	200	\$120,000.00	200	\$120,000.00
Jack & Bore 30-inch Steel Casing	LF	\$750.00	300	\$225,000.00	300	\$225,000.00	300	\$225,000.00
Jack & Bore 36-inch Steel Casing	LF	\$1,000.00	200	\$200,000.00	200	\$200,000.00	200	\$200,000.00
Lift Station	LS	\$225,000.00	1	\$225,000.00	1.555556	\$350,000.00	2.444444	\$550,000.00
8-inch PVC Forcemain	LF	\$55.00	1670	\$91,850.00	0	\$0.00	0	\$0.00
12-inch PVC Forcemain	LF	\$75.00	0	\$0.00	1670	\$125,250.00	1670	\$125,250.00
<b>Totals</b>				\$2,089,560.00		\$2,247,960.00		\$2,447,960.00
Plus 10% Construction Contingency				\$208,956.00		\$224,796.00		\$244,796.00
Plus 25% for ELA				\$522,390.00		\$561,990.00		\$611,990.00
<b>Grand Totals</b>				<b>\$2,820,906.00</b>		<b>\$3,034,746.00</b>		<b>\$3,304,746.00</b>

**Alternate #1b (easterly route at Chestnut Blvd)**

Item	Unit	Unit Price	10-Year Scenario		20-Year Scenario		Ultimate Buildout	
			Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
12-inch PVC Sewer	LF	\$75.00	1150	\$86,250.00	1150	\$86,250.00	1150	\$86,250.00
21-inch PVC Sewer	LF	\$140.00	9047	\$1,266,580.00	9047	\$1,266,580.00	9047	\$1,266,580.00
Jack & Bore 20-inch Steel Casing	LF	\$500.00	0	\$0.00	0	\$0.00	0	\$0.00
Jack & Bore 24-inch Steel Casing	LF	\$600.00	200	\$120,000.00	200	\$120,000.00	200	\$120,000.00
Jack & Bore 30-inch Steel Casing	LF	\$750.00	300	\$225,000.00	300	\$225,000.00	300	\$225,000.00
Jack & Bore 36-inch Steel Casing	LF	\$1,000.00	200	\$200,000.00	200	\$200,000.00	200	\$200,000.00
Lift Station	LS	\$225,000.00	1	\$225,000.00	1.555556	\$350,000.00	2.444444	\$550,000.00
8-inch PVC Forcemain	LF	\$55.00	1670	\$91,850.00	0	\$0.00	0	\$0.00
12-inch PVC Forcemain	LF	\$75.00	0	\$0.00	1670	\$125,250.00	1670	\$125,250.00
<b>Totals</b>				\$2,214,680.00		\$2,373,080.00		\$2,573,080.00
Plus 10% Construction Contingency				\$221,468.00		\$237,308.00		\$257,308.00
Plus 25% for ELA				\$553,670.00		\$593,270.00		\$643,270.00
<b>Grand Totals</b>				<b>\$2,989,818.00</b>		<b>\$3,203,658.00</b>		<b>\$3,473,658.00</b>

**West End Lower Bluff Trunk Sewer & Lift Station**

**Opinion of Probable Construction Cost**

**Includes Trunk Sewer to US 169 / TH 41**

Feb-21

**Alternate #2a**

Item	Unit	Unit Price	10-Year Scenario		20-Year Scenario		Ultimate Buildout	
			Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
12-inch PVC Sewer	LF	\$75.00	1270	\$95,250.00	1270	\$95,250.00	1270	\$95,250.00
21-inch PVC Sewer	LF	\$140.00	5348	\$748,720.00	5348	\$748,720.00	5348	\$748,720.00
Jack & Bore 24-inch Steel Casing	LF	\$600.00	200	\$120,000.00	200	\$120,000.00	200	\$120,000.00
Jack & Bore 30-inch Steel Casing	LF	\$750.00	300	\$225,000.00	300	\$225,000.00	300	\$225,000.00
Jack & Bore 36-inch Steel Casing	LF	\$1,000.00	200	\$200,000.00	200	\$200,000.00	200	\$200,000.00
Lift Station	LS	\$225,000.00	1	\$225,000.00	1.555556	\$350,000.00	2.444444	\$550,000.00
8-inch PVC Forcemain	LF	\$55.00	4974	\$273,570.00	0	\$0.00	0	\$0.00
12-inch PVC Forcemain	LF	\$75.00	0	\$0.00	4974	\$373,050.00	4974	\$373,050.00
Totals				\$1,887,540.00		\$2,112,020.00		\$2,312,020.00
Plus 10% Construction Contingency				\$188,754.00		\$211,202.00		\$231,202.00
Plus 25% for ELA				\$471,885.00		\$528,005.00		\$578,005.00
<b>Grand Totals</b>				<b>\$2,548,179.00</b>		<b>\$2,851,227.00</b>		<b>\$3,121,227.00</b>

**Alternate #2b**

Item	Unit	Unit Price	10-Year Scenario		20-Year Scenario		Ultimate Buildout	
			Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
12-inch PVC Sewer	LF	\$75.00	1270	\$95,250.00	1270	\$95,250.00	1270	\$95,250.00
21-inch PVC Sewer	LF	\$140.00	5378	\$752,920.00	5378	\$752,920.00	5378	\$752,920.00
Jack & Bore 20-inch Steel Casing	LF	\$500.00	200	\$100,000.00	200	\$100,000.00	200	\$100,000.00
Jack & Bore 24-inch Steel Casing	LF	\$600.00	200	\$120,000.00	200	\$120,000.00	200	\$120,000.00
Jack & Bore 30-inch Steel Casing	LF	\$750.00	300	\$225,000.00	300	\$225,000.00	300	\$225,000.00
Jack & Bore 36-inch Steel Casing	LF	\$1,000.00	0	\$0.00	0	\$0.00	0	\$0.00
Lift Station	LS	\$225,000.00	1	\$225,000.00	1.555556	\$350,000.00	2.444444	\$550,000.00
8-inch PVC Forcemain	LF	\$55.00	5128	\$282,040.00	0	\$0.00	0	\$0.00
12-inch PVC Forcemain	LF	\$75.00	0	\$0.00	5128	\$384,600.00	5128	\$384,600.00
Totals				\$1,800,210.00		\$2,027,770.00		\$2,227,770.00
Plus 10% Construction Contingency				\$180,021.00		\$202,777.00		\$222,777.00
Plus 25% for ELA				\$450,052.50		\$506,942.50		\$556,942.50
<b>Grand Totals</b>				<b>\$2,430,283.50</b>		<b>\$2,737,489.50</b>		<b>\$3,007,489.50</b>

## Appendix B

### Potential Funding and Fees Collected Tables

Funding for Alternative 1A - Trunk Sewer Required to Bypass Breeggemann Property (Ultimate Buildout)

	Sanitary Sewer (Trunk Oversizing) <sup>1</sup>	Sanitary Sewer (8" equivalent) <sup>2</sup>	Sanitary Sewer (Lift Station) <sup>1</sup>	Sanitary Sewer (Forcemain Oversizing) <sup>1</sup>	Sanitary Sewer (8" Equivalent length of FM) <sup>3</sup>	Estimated Total
<b>Estimated Expenditures</b>						
Estimated Construction Cost	\$490,000.00	\$116,000.00	\$550,000.00	\$58,450.00	\$66,800.00	\$1,281,250.00
Contingencies (10%)	\$49,000.00	\$11,600.00	\$55,000.00	\$5,845.00	\$6,680.00	\$128,125.00
Administration, Engineering, Legal (25%)	\$122,500.00	\$29,000.00	\$137,500.00	\$14,612.50	\$16,700.00	\$320,312.50
<b>Total Estimated Project Costs (Feasibility)</b>	\$661,500.00	\$156,600.00	\$742,500.00	\$78,907.50	\$90,180.00	\$1,729,687.50
<b>Estimated Revenue</b>						
Sanitary Sewer Fund	\$661,500.00	\$156,600.00	\$742,500.00	\$78,907.50	\$90,180.00	\$1,729,687.50
<b>Total Estimated Revenue</b>						\$1,729,687.50

Notes:

1. Paid for by the Trunk Sanitary Sewer Charge, which is collected prior to releasing the plat for recording.
2. Paid for by Lateral Sanitary Sewer Connection Charge. This fee will be shown in the City's fee schedule and will apply to the Breeggemann property only.
3. Paid for by Lateral Sanitary Sewer Connection Charge. This fee will be shown in the City's fee schedule and will apply to all developments that are served by the lift station.



Funding for Alternative 1B - Trunk Sewer not Required to Bypass Breeggemann Property (Property develops first)

	Sanitary Sewer (Lift Station) <sup>1</sup>	Sanitary Sewer (Forcemain Oversizing) <sup>1</sup>	Sanitary Sewer (8" Equivalent length of FM) <sup>2</sup>	Estimated Total
<b>Estimated Expenditures</b>				
Estimated Construction Cost	\$550,000.00	\$58,450.00	\$66,800.00	\$675,250.00
Contingencies (10%)	\$55,000.00	\$5,845.00	\$6,680.00	\$67,525.00
Administration, Engineering, Legal (25%)	\$137,500.00	\$14,612.50	\$16,700.00	\$168,812.50
<b>Total Estimated Project Costs (Feasibility)</b>	\$742,500.00	\$78,907.50	\$90,180.00	\$911,587.50
<b>Estimated Revenue</b>				
Sanitary Sewer Fund	\$742,500.00	\$78,907.50	\$90,180.00	\$911,587.50
<b>Total Estimated Revenue</b>				\$911,587.50

Notes:

1. Paid for by the Trunk Sanitary Sewer Charge, which is collected prior to releasing the plat for recording.
2. Paid for by Lateral Sanitary Sewer Connection Charge. This fee will be shown in the City's fee schedule and will apply to all developments that are served by the lift station.

**Funding for Alternative 2 using Ultimate Buildout Scenario**

	<b>Sanitary Sewer (Lift Station)<sup>1</sup></b>	<b>Sanitary Sewer (Forcemain Oversizing)<sup>1</sup></b>	<b>Sanitary Sewer (8" Equivalent length of FM)<sup>2</sup></b>	<b>Estimated Total</b>
<b>Estimated Expenditures</b>				
Estimated Construction Cost	\$550,000.00	\$174,300.00	\$199,200.00	\$923,500.00
Contingencies (10%)	\$55,000.00	\$17,430.00	\$19,920.00	\$92,350.00
Administration, Engineering, Legal (25%)	\$137,500.00	\$43,575.00	\$49,800.00	\$230,875.00
<b>Total Estimated Project Costs (Feasibility)</b>	\$742,500.00	\$235,305.00	\$268,920.00	\$1,246,725.00
<b>Estimated Revenue</b>				
Sanitary Sewer Fund	\$742,500.00	\$235,305.00	\$268,920.00	\$1,246,725.00
<b>Total Estimated Revenue</b>				\$1,246,725.00

**Notes:**

1. Paid for by the Trunk Sanitary Sewer Charge, which is collected prior to releasing the plat for recording.
2. Paid for by Lateral Sanitary Sewer Connection Charge. This fee will be shown in the City's fee schedule and will apply to all developments that are served by the lift station.

Alternative 1A - Fees Collected For this Project			
Lateral Sanitary Sewer Connection Charge	Served by LS	\$78.15	Developable Acre
	Served by Trunk	\$2,796.43	Developable Acre
Trunk Sanitary Sewer Charge		\$2,982.00	Developable Acre
City Sewer Availability Charge		\$515.00	SAC Unit

Revenue Generated from Fees		
Lateral Sanitary Sewer Connection Charge	Served by LS	\$90,180.00
	Served by Trunk	\$156,600.00
Trunk Sanitary Sewer Charge		\$3,441,228.00
City Sewer Availability Charge		\$1,879,750.00

<b>Alternative 1B - Fees Collected For this Project</b>		
Lateral Sanitary Sewer Connection Charge (served by Lift Station)	\$78.15	Developable Acre
Trunk Sanitary Sewer Charge	\$2,982.00	Developable Acre
City Sewer Availability Charge	\$515.00	SAC Unit

<b>Revenue Generated from Fees</b>	
Lateral Sanitary Sewer Connection Charge	\$90,180.00
Trunk Sanitary Sewer Charge	\$3,441,228.00
City Sewer Availability Charge	\$1,879,750.00

<b>Alternative 2 - Fees Collected For this Project</b>		
Lateral Sanitary Sewer Connection Charge (served by Lift Station)	\$78.15	Developable Acre
Trunk Sanitary Sewer Charge	\$2,982.00	Developable Acre
City Sewer Availability Charge	\$515.00	SAC Unit

<b>Revenue Generated from Fees</b>	
Lateral Sanitary Sewer Connection Charge	\$90,180.00
Trunk Sanitary Sewer Charge	\$3,441,228.00
City Sewer Availability Charge	\$1,879,750.00

## MCGRANN SHEA CARNIVAL STRAUGHN &amp; LAMB, CHARTERED

MEMORANDUM

To: Shakopee Public Utilities Commissioners  
From: Kaela Brennan  
Date: October 14, 2021  
Re: City of Prior Lake Franchise Fee

---

Question Presented

The City of Prior Lake recently passed an ordinance to increase its franchise fee regarding electric service. Should SPU continue to preserve its objections about the authority to impose a franchise on a separate municipal utility, as it did initially in 2006, and in light of a recent decision by the Minnesota Court of Appeals?

Background

The City of Prior Lake adopted a franchise ordinance and franchise fee in 2006. As part of that process, SPU noted its question as to whether a city had the statutory authority to impose a franchise fee on an outside municipal utilities commission. In the end, SPU approved the franchise by resolution, but preserved its arguments in separate correspondence to the City of Prior Lake. A copy of these materials from 2006 is enclosed.

In 2019, the Minnesota Court of Appeals analyzed various statutes concerning franchises and concluded that the City of Baxter lacked statutory authority to impose a franchise fee on Brainerd Public Utilities Commission, a municipal utilities commission within the City of Brainerd. A copy of the *City of Baxter v. City of Brainerd* decision is enclosed.

The City of Prior Lake intends to implement the increase in franchise fees effective January 1, 2022. The ordinance states that it will take effect 60 days after sending written notice to utility providers. The notice to SPU was dated September 9, 2021.

To be consistent with the action taken in 2006, SPU may wish to preserve its concerns as to the statutory authority under these circumstances, and to provide a copy of the recent decision to Prior Lake. A draft letter to this effect is enclosed.

Recommendation

It is recommended that the Commission continue to preserve its arguments as to the authority of Prior Lake to impose a franchise fee on SPU by authorizing the proposed correspondence.



**CAMPBELL KNUTSON**  
PROFESSIONAL ♦ ASSOCIATION

September 9, 2021

Elliott B. Knetsch  
Joel J. Jamnik  
Andrea McDowell Poehler  
Soren M. Mattick  
David S. Kendall  
Henry A. Schaeffer, III  
Alina Schwartz  
Shana N. Conklin  
James J. Mongé, III  
Jerome M. Porter  
Leah C.M. Koch  
Meagan K. Kelley  
Benjamin J. Colburn  
Jared D. Shepherd

Thomas J. Campbell\*  
Roger N. Knutson\*  
\*Retired

Greg Drent  
Electric Superintendent and General Manager  
Shakopee Public Utilities  
P.O. Box 470  
Shakopee, M 55379

**Re: Franchise Fee Increase**

Dear Mr. Drent:

This office serves as the City Attorney for the City of Prior Lake.

Please see enclosed for the City's formal notice pursuant to its franchise ordinance. If you have any questions or concerns, please feel free to contact me directly at 651-234-6203.

Very truly yours,

**CAMPBELL KNUTSON**  
*Professional Association*

Shana N. Conklin  
Prior Lake City Attorney

SNC/jmo

Enclosures

Grand Oak Office Center I  
860 Blue Gentian Road  
Suite 290  
Eagan, Minnesota 55121  
Main: 651-452-5000  
Fax: 651-234-6237  
www.ck-law.com





4646 Dakota Street SE | Prior Lake, MN 55372  
952.447.9800 | [www.cityofpriorlake.com](http://www.cityofpriorlake.com)

Greg Drent  
Electric Superintendent and General Manager  
Shakopee Public Utilities  
P.O. Box 470  
Shakopee, MN 55379

September 8, 2021

**RE: Adoption of Ordinance - Franchise Fee Increase**

Dear Mr. Drent:

On September 7, 2021, the Prior Lake City Council adopted an ordinance increasing the City's gas and electric franchise fees in order to fund the City's pavement management program. Enclosed please find a copy of the adopted ordinance.

The City anticipates that the new fees will start to be collected beginning January 1, 2022. Let me know if you have any questions.

Sincerely,

Cathy Erickson  
Finance Director





4646 Dakota Street SE  
Prior Lake, MN 55372

**CITY OF PRIOR LAKE  
ORDINANCE NO. 121-112**

AN ORDINANCE AMENDING CHAPTER 3, SECTION 314 OF THE PRIOR LAKE CITY CODE  
RELATED TO GAS AND ELECTRIC FRANCHISE FEES

The City Council of the City of Prior Lake, Minnesota, does hereby ordain that:

Section 1. City Code Chapter 3, Section 314 is amended by deleting subsection 314.500 in its entirety and replacing it with the following:

**314.500 ELECTRIC FEE SCHEDULE**

<u>Class</u>	<u>Monthly Account Fee</u>
Residential	\$5.00
Sm C & I – Non-Dem	\$15.00
Sm C & I – Demand	\$30.00
Large C & I	\$150.00

Franchise fees are to be collected by the utility in the amounts set forth in the above schedule, and submitted to the City on a quarterly basis as follows:

January – March collections due by April 30.

April – June collections due by July 31.

July – September collections due by October 31.

October – December collections due by January 31.

Section 2. City Code Chapter 3, Section 314 is amended by deleting subsection 314.600 in its entirety and replacing it with the following:

**314.600 GAS FEE SCHEDULE**

<u>Class</u>	<u>Monthly Account Fee</u>
Residential	\$5.00
Comm-A	\$5.00
Comm/Ind-B	\$10.00
Comm/Ind-C	\$15.00
SVDF-A	\$30.00
SVDF-B	\$30.00
LVDF	\$150.00

Franchise fees are to be collected by the utility in the amounts set forth in the above schedule, and submitted to the City on a quarterly basis as follows:

January – March collections due by April 30.

April – June collections due by July 31.

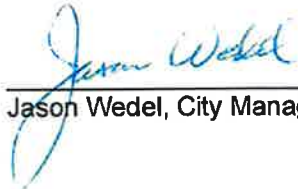
July – September collections due by October 31.  
October – December collections due by January 31.

Section 3. City Code Chapter 3, Section 314 is amended by deleting subsection 314.900 in its entirety and replacing it with the following:

**314.900**      **EFFECTIVE DATE OF FRANCHISE FEE**  
The effective date of this ordinance shall be after its publication and sixty (60) days after the sending of written notice enclosing a copy of this adopted Ordinance to the Gas and/or Electric Utility Company by certified mail. Collection of the fee shall commence with the bills for the month of January 2022.

Passed and adopted by the Prior Lake City Council this 7th day of September 2021.

ATTEST:

  
\_\_\_\_\_  
Jason Wedel, City Manager

  
\_\_\_\_\_  
Kirt Briggs, Mayor

A summary of this ordinance to be published in the Prior Lake American on the 18th day of September 2021.



4646 Dakota Street SE  
Prior Lake, MN 55372

## RESOLUTION 21-135

### A RESOLUTION APPROVING THE SUMMARY OF ORDINANCE NO. 121-112 AND ORDERING THE PUBLICATION OF SAID SUMMARY

Motion By: Braid Second By: Churchill

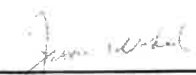
- WHEREAS,** On September 7, 2021 the City Council adopted Ordinance No. 121-112 amending Chapter 3, Section 314 of the Prior Lake City Code related to gas and electric franchise fees; and
- WHEREAS,** Minnesota Statutes requires publication of an ordinance in the official newspaper before it becomes effective; and
- WHEREAS,** Minnesota Statutes also allows the publication of a summary of an ordinance if the Council finds that the summary is an accurate representation of the ordinance; and
- WHEREAS,** The City Council desires to publish a summary of the amendments to Chapter 3 of the Prior Lake City Code and has determined the publication of a summary of this ordinance will meet the intent of the statute.
- WHEREAS,** The 2022 General Fund budget includes gas and electric franchise fee revenue of \$414,000 to support General Fund street department expenditures. The additional franchise fee revenue received above \$414,000 will be dedicated to the city's pavement management program.

**NOW THEREFORE, BE IT HEREBY RESOLVED BY THE CITY COUNCIL OF PRIOR LAKE, MINNESOTA** as follows:

1. The recitals set forth above are incorporated herein.
2. Ordinance No. 121-112 is lengthy.
3. The text of summary of Ordinance No. 121-112, attached hereto as Exhibit A, conforms to M.S. § 331A.01, Subd. 10, and is approved, and publication of the title and summary of the Ordinance will clearly inform the public of the intent and effect of the Ordinance.
4. The title and summary shall be published once in the Prior Lake American in a body type no smaller than brevier or eight-point type.
5. A complete text of the newly amended City Code will be available for inspection at City Hall or in the Document Center on the City of Prior Lake Website after September 25, 2021.
6. Franchise fee revenue above the General Fund budgeted amount that supports the Street department budget will be dedicated to the city's pavement management funds (Fund 450/street overlay and Fund 501/street construction) and allocated to these funds by the city's Finance Director.

PASSED AND ADOPTED THIS 7<sup>th</sup> DAY OF SEPTEMBER 2021.

VOTE	Briggs	Thompson	Burkart	Braid	Churchill
Aye	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Nay	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Abstain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Absent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

---

Jason Wedel, City Manager

Exhibit A

**SUMMARY ORDINANCE NO. 121-112**

**CITY OF PRIOR LAKE  
ORDINANCE NO. 121-112**

AN ORDINANCE AMENDING CHAPTER 3, SECTION 314 OF THE PRIOR LAKE CITY CODE  
RELATED TO GAS AND ELECTRIC FRANCHISE FEES


The following is only a summary of Ordinance No. 121-112. The full text will be available for public inspection after September 25, 2021 by any person during regular office hours at City Hall or in the Document Center on the City of Prior Lake Website.

**SUMMARY:** The Ordinance amends Chapter 3, Section 314 of the Prior Lake City Code related to gas and electric franchise fees. The ordinance updates the franchise fees to be charged by the gas and electric companies in the City.

The effective date of this ordinance shall be after its publication and sixty (60) days after the sending of written notice enclosing a copy of this adopted Ordinance to the Gas and/or Electric Utility Company by certified mail. Collection of the fee shall commence with the bills for the month of January 2022.

Passed by the City Council of the City of Prior Lake this 7<sup>th</sup> day of September 2021.

ATTEST:

  
\_\_\_\_\_  
Jason Wedel, City Manager

  
\_\_\_\_\_  
Kirt Briggs, Mayor

Summary published in the Prior Lake American on the 18<sup>th</sup> day of September, 2021.

**McGRANN SHEA CARNIVAL STRAUGHN & LAMB, CHARTERED**

**ATTORNEYS AT LAW**

WILLIAM R. MCGRANN  
DOUGLAS M. CARNIVAL  
KATHLEEN M. LAMB  
JOHN R. SCHULZ  
BRIAN L. SOBOL  
SCOTT B. CROSSMAN  
CARLA J. PEDERSEN

ROGER J. STELLJES  
JEFFREY C. URBAN  
KATHLEEN MICHAELA BRENNAN  
CARL S. WOSMEK  
AMY L. COURT  
CHRISTY E. LAWRIE

CURT N. TRISKO  
  
OF COUNSEL  
ROBERT O. STRAUGHN  
PETER L. COOPER  
  
ANDREW J. SHEA  
(1938-2018)

September 29, 2021

Shana N. Conklin  
Campbell Knutson, PA  
Grand Oak Office Center 1  
860 Blue Gentian Road, Suite 290  
Eagan, MN 55121

Re: City of Prior Lake Franchise Ordinance  
Our File No.: 13889-0067

Dear Ms. Conklin:

My firm represents the Shakopee Public Utilities Commission (SPU), and your letter dated September 9, 2021 has been forwarded to me for response. As you may know, when the City of Prior Lake first adopted a franchise ordinance, SPU noted concerns about the authority to impose a franchise on SPU, a separate municipal utility, and preserved its arguments.

The current franchise seems to be inconsistent with the recent decision in the *City of Baxter v. City of Brainerd* matter. SPU wanted to be sure that the City is aware of this decision, and I enclose a copy for your convenience. SPU appreciates the City reviewing this decision, and reconsidering its approach to the franchise.

Sincerely,

Kaela Brennan

Enclosure  
cc: Greg Drent

932 N.W.2d 477

**CITY OF BAXTER, Respondent,**  
v.  
**CITY OF BRAINERD, et al., Appellants.**

**A19-0097**

**Court of Appeals of Minnesota.**

**Filed July 15, 2019**

**Review Denied September 25, 2019**

George C. Hoff, Jared D. Shepherd, Hoff Barry,  
P.A., Eden Prairie, Minnesota (for respondent)

John M. Baker, Holley C. Horrell, Greene Espel  
PLLP, Minneapolis, Minnesota (for appellants)

Considered and decided by Larkin, Presiding  
Judge; Bratvold, Judge; and Slieter, Judge.

SLIETER, Judge

The City of Brainerd and Brainerd Public Utilities Commission (BPUC) challenge the district court's determination that the City of Baxter may impose a revenue-raising franchise fee on a municipally-owned utility. Because Baxter does not have statutory authority to impose its franchise fee on BPUC, we reverse and remand.

## FACTS

Baxter, a statutory city,<sup>1</sup> adopted an ordinance (ordinance 2016-023<sup>2</sup>) that imposed a revenue-raising franchise fee solely on BPUC to fund Baxter's pavement management and street- and traffic-lighting

[932 N.W.2d 480]

activities.<sup>3</sup> Baxter sought to enforce ordinance 2016-023 on Brainerd and BPUC by an action for: (1) a declaratory judgment pursuant to Minn. Stat. § 550.02 (2018), (2) an accounting, and (3) unjust enrichment. On cross-motions for summary judgment, the district court ruled that Baxter permissibly applied ordinance 2016-023 against BPUC in accordance with Baxter's

statutory authority. The parties stipulated to entry of final judgment, and Brainerd and BPUC appealed. The issues before this court are purely legal questions, and the facts are undisputed.

In 1892, Brainerd established a utility to provide light and power. Via Brainerd's 1908 city charter, it operated the utility as the Brainerd Water and Light Department (BWLD) with a three-member board. In 1935, the BWLD extended its utility service into an area that incorporated as Baxter four years later.

On May 17, 1975, the Minnesota Public Service Commission, now known as the Minnesota Public Utilities Commission (MPUC), assigned BWLD to be one of the exclusive providers of retail electric services to customers in Crow Wing County.<sup>4</sup> This assignment order established an ongoing obligation that BWLD, and its successor BPUC, provide electricity in the northeastern portion of Baxter adjacent to Brainerd, both of which are in Crow Wing County.<sup>5</sup>

In 1985, Brainerd amended its city charter to establish BPUC and provided BPUC the responsibilities of the BWLD. Brainerd authorized BPUC to control, operate and manage its electrical service within the city. BPUC has the power to institute, prosecute and defend, in the name of Brainerd as it deems appropriate.

In 2013, Baxter commissioned a Pavement Management Plan study (PMP) about maintenance and funding of its city streets. The PMP determined Baxter needed to increase its maintenance budget for road infrastructure, and it identified utility-franchise fees as a possible funding source. Baxter requested that BPUC enter into a franchise agreement for BPUC's occupation and use of Baxter's right-of-way and BPUC's utility service to Baxter residents. BPUC never consented to a franchise agreement.

Baxter notified BPUC of its intention to adopt a franchise-fee ordinance pursuant to Minn. Stat. §§ 216B.02, and .36 (2018). Baxter identified its intent to use the franchise-fee funds for pavement



management and street- and traffic-lighting activities.

After multiple city council meetings, Baxter adopted ordinance 2016-023, imposing its franchise fee on BPUC. The purpose section of ordinance 2016-023 provides:

[932 N.W.2d 481]

The Baxter City Council has determined that it is in the best interest of the City to impose a franchise fee on those public utility companies that provide electric energy services within the City of Baxter to fund pavement management related and street and traffic lighting related activities.

Baxter's ordinance 2016-023 identified Minn. Stat. § 301B.01 (2018), as its statutory authority to impose the franchise fee on BPUC. The franchise fee imposed on BPUC was determined by applying the following schedule per customer premise/per month for metered service within Baxter:

**Class: Monthly Fee:**

Residential	\$3.00
Commercial	\$13.00
Demand	\$52.00
Large Power	\$138.00

Ordinance 2016-023 does not identify that Baxter is requiring a franchise from appellants. In a letter dated June 9, 2016, Baxter provided ordinance 2016-023 to BPUC noting the ordinance became effective 60 days after receipt. On August 8, 2016, ordinance 2016-023 became effective.

BPUC began to collect the franchise fee from their customers in accordance with ordinance 2016-023. BPUC made payment to Baxter, but Baxter

determined the payments did not satisfy the amount owed.

On December 14, 2017, Baxter filed a complaint in Crow Wing County District Court against Brainerd and BPUC seeking enforcement of the franchise fee. Brainerd and BPUC argued Baxter lacks statutory authority to enforce ordinance 2016-023. Baxter cited Minn. Stat. §§ 216B.36, 222.37, subd. 1, 301B.01, and the district court denied Brainerd and BPUC's motion for summary judgment, and it granted Baxter's motion for partial summary judgment, declaring that Baxter may impose a franchise fee pursuant to Minn. Stat. §§ 216B.36, 301B.01, or 412.321, subd. 3.<sup>6</sup> The parties stipulated to entry of final judgment. This appeal follows.

**ISSUE**

Did the district court err by concluding that the franchise fee is authorized?

**ANALYSIS**

"We review the grant of summary judgment de novo to determine whether there are genuine issues of material fact and whether the district court erred in its application of the law." *Montemayor v. Sebright Prods., Inc.*, 898 N.W.2d 623, 628 (Minn. 2017) (quotation omitted); see also *Hanbury v. Am. Family Mut. Ins. Co.*, 865 N.W.2d 83, 85-86 (Minn. App. 2015) (recognizing summary judgment based on undisputed facts creates a legal conclusion reviewed *de novo*), *review denied* (Minn. Aug. 25, 2015). "[W]e may affirm a grant of summary judgment if it can be sustained on any grounds." *John Doe 76C v. Archdiocese of St. Paul*, 817 N.W.2d 150, 163 (Minn. 2012). Matters of statutory interpretation are also reviewed *de novo*. *Cocchiarella v. Driggs*, 884 N.W.2d 621, 624 (Minn. 2016).

[932 N.W.2d 482]

A statutory city "has no inherent powers beyond those expressly conferred by statute or implied as necessary in aid of those powers which have been

expressly conferred." *Harstad v. City of Woodbury* , 916 N.W.2d 540, 545 (Minn. 2018) (quotation omitted). If no statutes provide authority for a statutory city to act in a particular way, the city's actions are improper. See *Mathews v. City of Village of Minnetonka Beach* , 899 N.W.2d 881, 883 (Minn. App. 2017) (reversing city's resolution for lack of statutory authority).

Baxter relies on four statutes as authority to impose its revenue-raising franchise fee on BPUC. When addressing statutory authority, "[t]he object of all interpretation and construction of laws is to ascertain and effectuate the intention of the legislature. Every law shall be construed, if possible, to give effect to all its provisions." Minn. Stat. § 645.16 (2018). "If the meaning of a statute is unambiguous, we interpret the statute's text according to its plain language." *Brua v. Minn. Joint Underwriting Ass'n* , 778 N.W.2d 294, 300 (Minn. 2010). We use Minn. Stat. § 645.08 (2018) to determine a statute's plain meaning. *Laase v. 2007 Chevrolet Tahoe* , 776 N.W.2d 431, 435 (Minn. 2009). We address each statute in turn.

### A. Chapter 216B

Baxter argues it has authority to enforce its franchise fee by ordinance pursuant to chapter 216B because: (1) a franchise fee may be imposed on a municipal utility providing service outside its border, and (2) BPUC is a separate entity from Brainerd and is therefore a "public utility." Baxter's theories are unavailing because they are inconsistent with the statute's plain language.

Pursuant to Minn. Stat. § 216B.36, a public utility that furnishes utility services to a municipality "may be required to obtain a license, permit, right, or franchise in accordance with the terms, conditions, and limitations of regulatory acts of the municipality, including the placing of distribution lines and facilities underground." This requirement may include that the public utility "pay to the municipality fees to raise revenue or defray increased municipal costs accruing as a result of utility operations, or both." Minn. Stat. § 216B.36.

The legislature included a specific definition for "public utility" in chapter 216B applicable to section 216B.36, and that definition excludes municipalities. See Minn. Stat. § 216B.02, subs. 1, 4 (defining "public utility" as "not includ[ing] ... a municipality"). We have concluded that the statute's language, on its face, "mandates that municipal utilities are excepted from regulation under chapter 216B, 'except as specifically provided herein.'" *In re Comm'n's Jurisdiction Over Hutchinson's Intrastate Nat. Gas Pipeline* , 707 N.W.2d 223, 227 (Minn. App. 2005) (*Hutchinson* ) (quoting Minn. Stat. § 216B.01 ) , *review denied* (Minn. Mar. 14, 2006); cf. *N. Nat. Gas Co. v. Minn. Pub. Serv. Comm'n* , 292 N.W.2d 759, 763-64 (Minn. 1980) (recognizing the "broad public purpose" of section 216B.01 and the "specific language of section 216B.02, subd. 4," provides that, absent a listed exception, an entity constitutes a public utility for regulating under chapter 216B).

Baxter acknowledges that the legislature excluded municipal utilities from regulation under chapter 216B but asserts two grounds for this court to extend the scope of the statute to permit the revenue-raising fee pursuant to chapter 216B: (1) BPUC is operating its utility outside its municipality's border, and (2) BPUC should not be recognized as a municipal utility.

[932 N.W.2d 483]

Baxter's first theory—which challenges the legislature's policy decision—does not have support in the statute's language. "[T]his court cannot add to a statute what the legislature has either purposefully omitted or inadvertently overlooked." *Christiansen v. Univ. of Minn. Bd. of Regents* , 733 N.W.2d 156, 159 (Minn. App. 2007), *review denied* (Minn. Aug. 21, 2007). It is the duty of the judiciary to "interpret the policy that the Legislature has already determined in the statutory language at issue." *In re Guardianship of Tschumy* , 853 N.W.2d 728, 741 n.10 (Minn. 2014). This court is limited to "correcting errors" and not creating public policy. *LaChapelle v. Mitten* , 607 N.W.2d 151, 159 (Minn. App. 2000), *review denied* (Minn. May 16, 2000). Any change

to a statute's language "must come from the legislature." *Martinco v. Hastings* , 265 Minn. 490, 122 N.W.2d 631, 638 (1963). The plain language of Minn. Stat. §§ 216B.02, subd. 4, and .36 unambiguously does not authorize the revenue-raising franchise fee imposed by Baxter in ordinance 2016-023 because BPUC is excluded from the definition of public utility by operation of section 216B.02, subdivision 4. See *Hutchinson* , 707 N.W.2d at 227 (holding municipalities are exempt from application of chapter 216B unless an exception applies).

Second, Baxter asserts that Brainerd's establishment of BPUC as an independent commission deprives BPUC of a municipal-utility status. The undisputed facts show that Brainerd established BPUC to control, operate and manage the electric system. Although BPUC can act on its own to institute, prosecute, and defend on behalf of Brainerd, Brainerd continues to exercise control over BPUC. The Brainerd treasury retains revenue from BPUC's operation, the Brainerd city council approves BPUC's exercise of power to appoint and employ individuals to perform BPUC's duties, and the Brainerd city council exercises authority to approve BPUC's budget. Given the manner by which Brainerd controls BPUC, its existence as a separate entity does not deprive its status as a municipal utility. See *Johnson v. Princeton Pub. Utils. Comm'n* , 899 N.W.2d 860, 866-67 (Minn. App. 2017) (recognizing a municipal utility is a "political subdivision" for application of preverdict interest rate under Minn. Stat. § 549.09, subd. 1(c)(1)(i) (2016) ). Baxter, therefore, cannot impose its revenue-raising franchise fee on Brainerd and BPUC by relying on chapter 216B because that act, by its plain language, excludes BPUC.

#### **B. Minn. Stat. § 222.37, subd. 1**

Baxter contends that section 222.37, subdivision 1, requires Brainerd and BPUC to receive Baxter's consent to operate within Baxter's right-of-way and authorizes its franchise fee. This argument is also unavailing due to the preexisting nature of BPUC providing service within Baxter and

because Baxter is not regulating but, instead, raising revenue.

Pursuant to Minn. Stat. § 222.37, subd. 1, the legislature subjected utilities to municipal regulation. *N. States Power Co. v. City of Oakdale* , 588 N.W.2d 534, 539 (Minn. App. 1999). This statute provides that an electric power company "may use public roads for the purpose of constructing, using, operating, and maintaining lines, ... [or] conduits ... for their business, but such lines shall be so located as in no way to interfere with the safety and convenience of ordinary travel along or over the same." Minn. Stat. § 222.37, subd. 1. An electric power company "shall be subject to all reasonable regulations imposed by the governing body of any county, town or city in which such public road may be[ ]" when constructing and maintaining

[932 N.W.2d 484]

its lines or conduit. *Id.* The statute, moreover, provides:

Nothing herein shall be construed to grant to any person<sup>[z]</sup> any rights for the maintenance of a ... light, heat, power system, ... within the corporate limits of any city until such person shall have obtained the right to maintain such system within such city or for a period beyond that for which the right to operate such system is granted by such city.

*Id.*

Baxter acknowledges that, by the wording of its ordinance, it is not seeking to regulate BPUC but, instead, to raise revenue. Ordinance 2016-023's express purpose is:

The Baxter City Council has determined that it is in the best interest of the City to impose a franchise fee on those public utility companies that provide electric

services within the City of Baxter to fund pavement management related and street and traffic lighting related activities.

Baxter does not identify, and this court cannot find, any provision in ordinance 2016-023 that ties the franchise fee payment to allow BPUC to operate in the city. Thus, Minn. Stat. § 222.37, subd. 1, does not confer authority on Baxter to impose its revenue-raising fee upon BPUC.

Baxter also relies on this court's language in *U S W. Commc'ns, Inc. v. City of Redwood Falls*, 558 N.W.2d 512, 515 (Minn. App. 1997) (*Redwood Falls*), review denied (Minn. Apr. 15, 1997), in support of its assertion that section 222.37, subdivision 1, permits its franchise fee. In that case, we held that the city lacked authority to impose a fee because specific provisions in a different chapter "evidence[d] a legislative intent to abolish the right of municipalities to require a franchise from a telephone company." *Redwood Falls*, 558 N.W.2d at 516. Although gas and electric utilities were not at issue, this court noted "the legislature never repealed sections 300.03, 300.04, and 222.37, which purportedly continue to authorize municipal franchising and regulation of public corporations."<sup>3</sup> *Id.* at 515 (emphasis added). It is this latter language which Baxter claims supports its imposition of a franchise fee based upon this statute. We disagree.

Although *Redwood Falls* references the purported authority granted under Minn. Stat. § 222.37, subd. 1, to authorize municipal franchising, this court had not been asked to define the scope of the statute. The statute's language determines the scope of Baxter's authority.

This unambiguous statute does not include language that would permit Baxter to impose a revenue-raising franchise fee on BPUC. Baxter relies on Minn. Stat. § 222.37, subd. 1, to support its franchise fee because it permits municipalities to impose regulations when a utility uses the city's right-of-ways and requires a right to operate in a city.

Beginning with Baxter's assertion that its franchise fee is a regulation—which is specifically authorized by this statute—we are not convinced. The statute does not define the nature of regulations authorized. "In the absence of a statutory definition, we generally give statutory terms their common meaning."

[932 N.W.2d 485]

*Nelson v. Schlener*, 859 N.W.2d 288, 293 (Minn. 2015); see also Minn. Stat. § 645.08(1) (stating that "words and phrases are construed according to the rules of grammar and according to their common and approved usage[ ]"). We may "consider[ ] dictionary definitions as a helpful tool in determining plain and ordinary meaning." See *Shire v. Rosemount, Inc.*, 875 N.W.2d 289, 297 (Minn. 2016).

A regulation is the ability to exercise "[c]ontrol over something by rule or restriction." *Black's Law Dictionary* 1475 (10th ed. 2014); see also *American Heritage Dictionary of the English Language* 1481 (5d ed. 2011) (defining "regulation" as "[a] principle, rule, or law designed to control or govern conduct"). Rather than controlling BPUC's use of Baxter's right-of-ways, Baxter seeks to extract a fee from the utility based on its service to any Baxter residents. Ordinance 2016-023 identifies its purpose as a funding source for its pavement management, and street- and traffic-lighting activities which disconnects the fee from regulating the city's right-of-ways. Baxter's fee, accordingly, exceeds the statute's authority for the city to regulate actions that use the city's right-of-ways.

Baxter, alternatively, argues that its fee functions as a requirement for BPUC to operate in the city. Baxter's asserted authority is not supported by the plain meaning of the statute.

The statute's language requires a power company to obtain a "right to operate" from the city. Minn. Stat. § 222.37, subd. 1. The legislature's choice of "right to operate" is notably different from the language in Minn. Stat. § 216B.36, which expressly allows a revenue-raising fee to be

imposed on qualifying public utilities. The plain meaning of "right to operate" in section 222.37, subdivision 1, is that a city grants permission to the utility to service the area. For example, the City of Redwood Falls imposed fees on the utility for installing telephone lines in the right-of-ways and for an easement for the location of the lines. *Redwood Falls*, 558 N.W.2d at 514. The City of Redwood Falls's fees related to operation of the utility. Even if BPUC had not been a preexisting utility within Baxter such that it needed the consent of Baxter to provide the service, Baxter's argument fails because its requested fees do not correspond to BPUC's operation in the right-of-ways.

The supreme court's recent decision in *Harstad*, although it analyzed a different statute, supports our interpretation of section 222.37, subd. 1, and its reasoning is instructive. 916 N.W.2d at 547-48. In *Harstad*, the supreme court held that a statutory city's imposition of a fee pursuant to Minn. Stat. § 462.358, subd. 2a (2016), exceeded the city's authority because the legislature did not use the precise terms required to permit the city's actions. *Id.* at 543, 547-48. The City of Woodbury imposed an infrastructure charge on Harstad, a developer, to offset costs to the city resulting from additional traffic generated by a residential development in the city. *Id.* at 543. The City of Woodbury relied on Minn. Stat. § 462.358, subd. 2a, which allows a city to condition approval of a subdivision development application "on the developer (a) constructing or installing the improvements or (b) providing a form of financial security that is sufficient to assure the city that the improvements will be constructed or installed according to the specifications of the city." *Id.* at 546 (quotation marks and quotation omitted). The city asserted that the infrastructure charge constituted financial security as permitted by the statute. *Id.* at 546-47.

The supreme court, however, held the statute did not permit imposition of the charge for road construction because the

[932 N.W.2d 486]

statute was not "designed to provide [the city] with financial security." *Id.* at 548.

Had the Legislature intended to authorize a city to condition subdivision approval on a cash fee for infrastructure improvements, it would have used those precise terms, in subdivision 2a, as it did in subdivision 2b. The Legislature did not do so. Instead, it used financial security terms such as cash deposit and certified check.

*Id.* at 547-48 (quotation marks omitted).

Like the statute at issue in *Harstad*, Minn. Stat. § 222.37, subd. 1, does not include language permitting Baxter to impose a revenue-raising fee on a utility as part of a right to continue operation. Had the legislature intended to permit the use of section 222.37, subdivision 1, to allow for a revenue-raising fee, that language would appear in the statute. Unlike in Minn. Stat. § 216B.36, where the legislature permitted a revenue-raising fee on qualifying public utilities, the legislature chose not to include similar language in Minn. Stat. § 222.37, subd. 1, and we must not add language to the statute.

### C. Minn. Stat. § 301B.01

Baxter asserts that section 301B.01 confers authorization to impose a revenue-raising franchise fee, relying on the Minnesota Supreme Court's decision in *Village of Blaine v. Indep. Sch. Dist. No. 12*, 272 Minn. 343, 138 N.W.2d 32, 44-45 (1965). We conclude that the facts in this case are distinguishable from those in *Village of Blaine*, and that the fee imposed by Baxter does not constitute compensation in accordance with the statute.<sup>9</sup> Specifically, the critical fact distinction is the preexistence of BPUC as an operating utility within the area that came to be within Baxter.

Pursuant to Minn. Stat. § 301B.01, a corporation cannot furnish power for public use "without first obtaining a franchise from the city conferring this right and compensating the city for it." *City of*

*Cohasset v. Minn. Power*, 798 N.W.2d 50, 54 (Minn. 2011) (quotation omitted). The statute provides:

A corporation may be organized to construct, acquire, maintain, or operate internal improvements, including ... to furnish power for public use, and any work for supplying the public, by whatever means, with water, light, heat, or power, including all requisite subways, pipes, and other conduits, and tunnels for transportation of pedestrians.

Minn. Stat. § 301B.01. A corporation furnishing power in this manner cannot "construct, maintain, or operate a ... conduit, ... upon a street, alley, or other public ground of a city, *without first obtaining from the city a franchise conferring this right and compensating the city for it.*" *Id.* (emphasis added). "The corporation obtaining a franchise from a city is subject to conditions and restrictions as from time to time are imposed upon it by the city." Minn. Stat. § 301B.02 (2018).

[932 N.W.2d 487]

The language of the statute imposes a requirement that a corporation must first obtain a franchise from the city to operate. BPUC has provided electrical service to a portion of what would become Baxter since 1935. When BPUC extended its electrical service, Baxter did not exist as an entity that could authorize a utility to operate. Baxter asserts that BPUC now needs to pay a franchise fee to operate as a preexisting utility in Baxter.

Baxter relies on the supreme court's decision in *Village of Blaine* to argue that a municipality may exclude a utility from operating in its locality when it did not have a franchise and, therefore, Baxter may impose its revenue-raising fee at issue. 138 N.W.2d at 44-45. There, Blaine adopted an ordinance that permitted a particular gas utility to provide for the city but Independent

School District No. 12 (ISD 12)—located within the Village of Blaine—sought bids from other gas utilities. *Id.* at 35-36. ISD 12 executed an agreement with the Circle Pines Utility Commission to provide gas to the school. *Id.* at 36. The supreme court recognized "the type of utilities here involved may not operate in cities and villages without franchises from those cities and villages." *Id.* at 38. "Our statutes prohibit unfranchised utilities from operating competitively in any city or village in this state and thereby [circumventing] governmental control of these essential services." *Id.* at 39. Because Circle Pines' natural gas system would be operating in Blaine if used by ISD 12, the supreme court held Blaine's refusal to provide a franchise to Circle Pines prohibited the gas operation. *Id.* at 44.

*Village of Blaine* is factually distinguishable from this case. Minn. Stat. § 301B.01 requires that a corporation—before operating—obtain a franchise from the city. Baxter did not exist at the time BPUC began to provide its electric utility to the area of Baxter. BPUC did not operate "upon a street, alley, or other public ground of a city" because no city existed at the time. This extension of service did not require a franchise from any city, and no city could have granted such authority. Since 1939, when Baxter incorporated, BPUC has continued to provide electrical service. The statute's plain meaning does not require BPUC to obtain an operating right when the city incorporated an area within which BPUC was already providing electrical service. Further, unlike in *Village of Blaine* where the city refused to permit Circle Pines to begin providing service, Baxter does not assert it is disallowing BPUC to operate without paying the franchise fee. Rather, Baxter demands payment from the utility. Therefore, the BPUC's preexisting operation in Baxter does not implicate the statutory framework in Minn. Stat. § 301B.01.

In addition to the statute not being implicated in this context, Minn. Stat. § 301B.01 provides that a city may require compensation from the corporation serving as its electrical utility. The statute's language provides that a corporation

formed to supply or furnish power for the public use cannot "construct, maintain, or operate a ... conduit, ... in or upon a street, alley, or other public ground of a city, without first obtaining from the city a franchise conferring this right and compensating the city for it." Minn. Stat. § 301B.01. Brainerd and BPUC argue that the statute authorizes a compensation requirement only as it relates to the construction, maintenance, or operation of the electrical system.

Baxter again relies on *Village of Blaine* to assert the permissible scope of a franchise fee. The supreme court in *Village of Blaine* expressed that "[t]he grant of a right to maintain public utilities within the

[932 N.W.2d 488]

municipality and to exact compensation thereof is a franchise." 138 N.W.2d at 39. This broad language, however, does not define the nature of the compensation requirement authorized by section 301B.01. *Village of Blaine* did not address the nature of a franchise fee. It analyzed whether an entity, ISD 12, could contract with a third-party utility to provide service within the locality without permission from the municipality for that utility to operate.

We, therefore, must consider the term "compensating" in the context of the statute to determine whether Baxter's franchise fee functions as compensation. See *In re Reynolds' Estate*, 219 Minn. 449, 18 N.W.2d 238, 241 (1945) ("We are required to look beyond mere words and inquire into the operation of the statute."). The term "compensation" means payments for a service or loss. See *American Heritage Dictionary of the English Language* at 376 (defining "compensation" as "[t]he act of compensating or the state of being compensated;" and "[s]omething, such as money, given or received as payment or reparations, as for a service or loss"); *Black's Law Dictionary* at 342 (defining "compensation" as "[r]emuneration and other benefits received in return for services rendered; esp. salary or wages"). Section 301B.01

provides such that a "corporation ... may construct, maintain, or operate" within a city only after first obtaining the right and compensating the city for it. Compensation, within this context, is tied to the three enumerated categories where the corporation affects the city's streets, alleys, or public grounds through its operation. Minn. Stat. § 301B.01. We disagree with Baxter's interpretation of section 301B.01 because it detaches the meaning of compensation from the statute's context, which is contrary to our principles of statutory construction. Ordinance 2016-023 does not seek compensation for constructing, maintaining, or operating the utility, rather Baxter identified its purpose as funding pavement management and street- and traffic-lighting related activities. Accordingly, the fee is not authorized by section 301B.01.

#### D. Minn. Stat. § 412.321, subd. 3

Baxter contends that it has authority to impose a revenue-raising franchise fee pursuant to section 412.321, subdivision 3, because BPUC extended its service into the area that eventually incorporated as Baxter. The undisputed facts are that BPUC extended its service prior to Baxter's incorporation, and we do not find any language in the statute to require a preexisting utility to retrospectively seek consent from the municipality to operate its service.<sup>10</sup>

When a municipal utility extends its service beyond its limits, that utility implicates Minn. Stat. § 412.321, subd. 3, which provides:

Any city may, except as otherwise restricted by this section, extend any such public utility outside its limits and furnish service to consumers in such area at such rates and upon such terms as the council or utility commission, if there is one, shall determine; but no such extension shall be made into any incorporated municipality without its consent.

[932 N.W.2d 489]

The sale of electricity, other than surplus, outside the limits of the city shall be subject to the restriction of section 455.29.

The operative language at issue here is that "no such extension shall be made into any incorporated municipality without its consent." Minn. Stat. § 412.321, subd. 3. This language is clear that it disallows a municipal utility to extend its service without acquiring consent. The statute did not apply to BPUC's extension in 1935, and Baxter cannot rely on it as a basis to require BPUC to be subject to its revenue-raising fee. Nothing in the language of section 412.321, subdivision 3, requires retrospective consent for an extension which preexisted the creation of the city. Based on the undisputed factual circumstances in this case, we conclude that Minn. Stat. § 412.321, subd. 3, does not authorize Baxter's revenue-raising franchise fee.

## DECISION

Because Baxter lacked authority to impose a revenue-raising franchise fee on BPUC, we reverse and remand for the district court to enter judgment in favor of Brainerd and BPUC.

## Reversed and remanded.

Notes:

<sup>1</sup> "The term 'statutory city' means any city which has not adopted a home rule charter ...." Minn. Stat. § 410.015 (2018).

<sup>2</sup> Baxter did not codify ordinance 2016-023; accordingly, the ordinance does not appear in the Minnesota Code of Ordinances.

<sup>3</sup> Baxter imposed similar franchise-fee ordinances on private companies and the cooperative association serving its area. The other utilities did not join in this litigation.

<sup>4</sup> Pursuant to Minn. Stat. § 216B.39, subd. 2 (2018): "[T]he [MPUC] shall after notice and

hearing establish the assigned service area or areas of each electric utility and shall prepare or cause to be prepared a map or maps to accurately and clearly show the boundaries of the assigned service area of each electric utility."

<sup>5</sup> Minnesota is divided into retail electric service areas designated by the MPUC and "a specified electric utility shall provide electric service to customers on an exclusive basis." Minn. Stat. § 216B.37 (2018). The MPUC may alter a utility's service area if the change would result in a more efficient, reliable, and cost-effective service, or if it would serve the public interest. *In re City of White Bear Lake's Request for an Elec. Util. Serv. Area Change within Its City Limits*, 443 N.W.2d 204, 206-08 (Minn. App. 1989), review denied (Minn. Sept. 21, 1989).

<sup>6</sup> The district court also held that the revenue-raising fee was not preempted by Minn. Stat. § 216B.01 -.82 (2018). Because we conclude that Baxter lacks authority to impose the revenue-raising fee at issue in this case, we do not address the preemption issue.

<sup>7</sup> Pursuant to Minn. Stat. § 645.44, subd. 7 (2018): " 'Person' may extend and be applied to bodies politic and corporate, and to partnerships and other unincorporated associations."

<sup>8</sup> Minn. Stat. §§ 300.03 -.04 (1996) contains language now referenced in Minn. Stat. §§ 301B.01 -.02 (2018). 2005 Minn. Laws ch. 69, art. 1, § 21, at 372-73 (renumbering Minn. Stat. §§ 300.03 -.04 (2004) to Minn. Stat. §§ 301B.01 -.02 (2006)).

<sup>9</sup> We acknowledge appellants also challenge application of section 301B.01 based on the use of the term "corporation." Brainerd and BPUC argue BPUC is a municipal corporation and pursuant to *Poynter v. Otter Tail County*, 223 Minn. 121, 25 N.W.2d 708, 716 (1947), it is presumed the legislature would use additional language to clarify that the term "corporation" includes municipal corporations. Baxter relies on the supreme court's decision in *Abrahamson v. St. Louis Cty. Sch. Dist.*, 819 N.W.2d 129, 134 (Minn. 2012), which held the legislature's use of the term



"corporation" without any limitation to its scope is indicative of an intent to encompass all forms of corporations, including public corporations. Because this matter is resolved on other grounds, we do not address this apparent conflict.

<sup>10</sup> An additional concern raised by appellants is that the statute does not identify that an incorporated municipality may impose a financial condition on its consent for a utility to extend its service into the area. Appellants present this claim in light of the supreme court's recent decision in *Harstad*. See 916 N.W.2d at 547-48. Because this matter is addressed by interpreting the language of the statute as requiring consent before extending service, which could not occur on the facts of this case, we do not address the language of the statute regarding a financial obligation that may or may not be imposed.

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PAMELA HODGES NISSEN  
KATHLEEN MICHAELA BRENNAN  
JOSEPH T. BAGNOLI

April 28, 2006

**VIA E-MAIL AND U.S. MAIL**

Lou Van Hout  
Shakopee Public Utilities Commission

Re: Prior Lake Franchise  
Our File No.: 13889-038

Dear Mr. Van Hout:

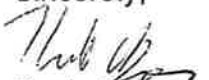
As we discussed, I have reviewed the final ordinance and franchise agreement from the City of Prior Lake. I also spoke with counsel for Xcel, who confirmed that Xcel did negotiate with Prior Lake to address its concerns before the franchise was adopted by the city council, but it has not negotiated a separate agreement from the "standard" franchise agreement in the ordinance.

I continue to recommend reserving the right to challenge the authority of a municipality to impose a franchise on another municipal utilities commission. Nevertheless, given the position of the Shakopee Public Utilities Commission, I recommend reserving the issue, rather than challenging it outright at this stage. I have therefore drafted a letter to the City of Prior Lake reserving this issue. I enclose a copy of the draft letter.

Please note that the franchise is drafted so that it is effective immediately, and utilities within the city must provide a signed franchise agreement within 60 days of the ordinance (which I believe occurred on March 20, 2006), or else the franchise may be revoked.

As always, please contact me if you have any questions or need any additional information.

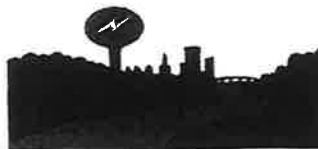
Sincerely,

  
Kaela Brennan

Enclosure

SHAKOPEE PUBLIC UTILITIES COMMISSION

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May 16, 2006

Ralph Teschner  
Finance Director  
City of Prior Lake

Dear Mr. Teschner:

On behalf of the Shakopee Public Utilities Commission, I enclose an executed electric franchise agreement with the City of Prior Lake; along with 3 executed agreement cover pages (1st page) and signature pages, out of which one of each is intended for your files per your March 23 letter.

If you would return to us that one fully executed agreement plus the additional 2 cover and signature pages beyond that one you need for your records (again, per your March 23 letter), I would appreciate it.

Please note that SPUC has an on-going concern about the apparent lack of statutory authority for a municipality to impose a franchise upon a municipal utilities commission, and SPUC reserves the right to challenge this issue in the future. Nevertheless, at this time, in the interests of efficiency and timing, SPUC has authorized signature of the franchise agreement.

Please contact me if you have any questions.

Sincerely yours,

Lou Van Hout  
Utilities Manager  
Shakopee Public Utilities Commission

c.c. Kathleen Brennan, McGrann Shea et.al.

P.O. Box 470 • 255 Sarazin Street • Shakopee, Minnesota 55379-1899  
(952) 445-1988 Fax (952) 445-7767

RESOLUTION #843

A RESOLUTION AUTHORIZING THE EXECUTION OF CERTAIN DOCUMENTS  
REQUIRED BY THE CITY OF PRIOR LAKE ACCORDING TO ITS ELECTRIC  
FRANCHISE ORDINANCE

NOW THEREFORE BE IT RESOLVED, by the Public Utilities Commission of the City of Shakopee:

Section 1. It is hereby found , determined and declared that:

A. The City of Prior Lake has enacted electric franchise ordinance 106-03, which grants an electric franchise to each entity providing electric service within the city, effective from the date of passage, and which requires each entity to submit a written filing of the Standard Electric Franchise Agreement within 60 days of the date of publication of the ordinance or else the city may revoke the franchise.

B. The Commission has approved the payment of electric franchise fees to the City of Prior Lake according to its electric franchise ordinance.

C. The Commission does not intend to contest or concede any issues concerning the City of Prior Lake's electric franchise ordinance or Standard Electric Franchise Agreement.

Section 2. The Commission does hereby authorize and direct staff and such other appropriate officials of the Commission, working with counsel, to execute the Standard Electric Franchise Agreement and to submit such written filing as may be appropriate to the City of Prior Lake, to cause their delivery to the City of Prior Lake, and to take such other reasonable and appropriate actions as may be necessary to fulfill the purposes of this resolution.

Passed in regular session of the Shakopee Public Utilities Commission, this 15<sup>th</sup> day of May, 2006.


\_\_\_\_\_  
Commission President: John Engler

ATTEST:

\_\_\_\_\_  
Commission Secretary: Kent Archerd



PO Box 470 • 255 Sarazin Street  
Shakopee, Minnesota 55379  
Main 952.445-1988 • Fax 952.445-7767  
www.shakopeeutilities.com

DATE: October 15, 2021  
TO: SPU Commissioners  
FROM: Greg Drent, General Manager   
Subject: Residential Renewals to 100 percent

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**Background:**

As part of the 2022 budget, we are exploring options to supply 100 percent renewable energy for our residential customers by 2024. Currently, our customers receive 20 percent renewable energy from our wholesale power supplier (MMPA). SPU residential customers have the option to purchase additional renewable energy above the state-mandated renewable energy of 20 percent. For an additional \$1.00 per month on the customer's bill, they could be 50 percent renewable, \$2.00 for 75 percent, and \$3.00 to be 100 percent renewable. SPU currently has 471 customers that participate in the program.

SPU is working on a rate study and wanted some direction from the Commission on if they would like to explore additional renewable energy for residential customers. SPU currently has approximately 17,000 residential electric customers. Should a decision be made to move forward and supply 100 percent renewable energy for our residential customers, the impact on the budget would be \$612,000.00.

**Action:**

**Option 1:** Leave the program as-is and, in 2022, promote the program more to get additional customers on renewable energy.

**Option 2:** Residential customers to 50 percent renewable and add \$1.00 to the customer charge starting in 2022. Move to 75 percent in 2023 for an additional \$1.00 for 100 percent in 2024.

**Option 3:** Residential customers to 75 percent renewable and add \$2.00 to the customer charge starting in 2022. Move to 100 percent in 2023 for an additional \$1.00 on the customer charge.

**Option 4:** Residential customers to 100 percent renewable in 2022 and add \$3.00 to the customer charge starting in 2022.