AGENDA
SHAKOPEE PUBLIC UTILITIES COMMISSION
REGULAR MEETING
January 3, 2023 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
   1a) Roll Call (KM)

2. **Communications**

3. **Consent Agenda**
   C=> 3a) Approval of December 5, 2022 Minutes (GD)
   C=> 3b) Approval of January 3, 2023 Agenda (KM)
   C=> 3c) December 19, 2022 Warrant List (KW)
   C=> 3d) January 3, 2023 Warrant List (KW)
   C=> 3e) Monthly Dashboard (November 2022) (LS)
   C=> 3f) Nitrate Results (LS)
   C=> 3g) PFAS Results (LS)
   C=> 3h) DNR Water Appropriation Permit Increase (LS)
   C=> 3i) MMPA November 2022 Meeting (GD)
   C=> 3j) Res #2023-01 Resolution Adjusting Fees Applied Under the Water Capacity Charge Policy (JA)
   C=> 3k) Res #2023-02 A Resolution Clarifying the Provisions of Resolution #815 A Resolution for the Equivalent Lateral Water Main Portion of a Trunk Water Project (JA)

4. **Liaison Report** – Vacant

5. **Public Comment Period.** Please step up to the table and state your name and address for the record.

6. **Reports: Water Items**
   6a) Water System Operations Report – Verbal (DH)

7. **Reports: Electric Items**
   7a) Electric System Operations Report – Verbal (BC)

8. **Reports: Human Resources**

9. **Reports: General**
   9a) Marketing/Key Accounts Report – Verbal (SW)
   9b) General Manager Report – Verbal (GD)
   9c) Organization Chart Version 9 (GD)
   9d) 2023 Commission Meeting Schedule (GD)
   9e) Land Purchases Status (JA)
   Water Treatment Plant Site Update & East Shakopee Substation Site (JA) **

** A portion of this meeting may be closed under Minnesota Statutes, Section 13D.05, subdivision 3(c) to review confidential or protected nonpublic appraisal data and to develop or consider offers or counteroffers for the purchase of properties located at 3650 Eagle Creek Boulevard and 1462 Maras Street.

10. **Items for Future Agendas**

11. **Tentative Dates for Upcoming Meetings**
   - January 17, 2023 – Tuesday (Depending on Commission decision)
   - February 6, 2023

12. **Adjournment**

MINUTES OF THE
SHAKOPEE PUBLIC UTILITIES COMMISSION
December 5, 2022
Regular Meeting

1. Call to Order. President Mocol called the December 5, 2022 meeting of the Shakopee Public Utilities Commission to order at 5:00 PM. President Mocol, Vice President Krieg, Commissioner Brennan, and Commissioner Letourneau were present.

2. Communications. President Mocol noted that she received an email concerning the Cold Weather Rule. General Manager Greg Drent will address this topic in his General Manager report.

3. Approval of Consent Agenda. Joseph Adams, Planning and Engineering Director, noted that item (3h) Res#2022-28 Resolution Adjusting Fees Applied Under the Water Capacity Charge Policy included the incorrect year in the packet. Commissioner Brennan moved approval of the consent agenda, removing item (3h): (3a) November 21, 2022 minutes; (3b) December 5, 2022 agenda; (3c) December 5, 2022 Warrant List; (3d) Res #2022-24 Resolution of Appreciation for Edward Zambrano; (3e) Res #2022-25 Resolution Establishing Water Meter and Installation Fees; and (3f) Res #2022-26 Resolution Designating an Official Means of Publication; (3g) Res#2022-27 Resolution Designating Official Depositories of the Shakopee Public Utilities Commission; (3i) Res #2022-29 Resolution Adjusting Fees Applied Under the Trunk Water Charge; (3j) Res #2022-30 Resolution Adopting Fees and Charges for 2023; (3k) Res #2022-31 Resolution Approving Payment for the Pipe Oversizing Costs on the Watermain Project: Windermere South 6th Addition; (3l) Res #2022-32 Resolution Regulating Wage Ranges. Commissioner Letourneau seconded the motion. Ayes: Mocol, Krieg, Brennan, and Letourneau. Nays: None. Motion carried.

4. Liaison Report. Commissioner Brennan noted that this is her last meeting as a Commissioner. She thanked SPU staff for their professionalism and the Commission for its vision for the organization.

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

6. General Manager Report. Mr. Drent provided an update on current projects, including the 2023 budget, AMI contract, fee schedules, and solar with Greystone. Mr. Drent reported that SPU and the City are working on a Master Plan for 3690 Eagle Creek Boulevard and have engaged RSP Architects for under $25,000 to prepare site options. He provided an update on the final billing for the Prior Lake customers transferred to MVEC. He noted that SPU sent letters to approximately 100 customers requesting that if they incurred any charges because of the final bill to contact SPU. Mr. Drent noted that one customer contacted President Mocol on the Cold Weather Rule. He explained that the statute includes certain criteria, including income

requirements and that the customer enters into and makes reasonable timely payments under a payment agreement. He notes that SPU goes beyond the requirements by calling customers before disconnecting. Finally, Mr. Drent noted that the December 19, 2022 Commission meeting will be canceled, unless something arises that requires Commission action.

7. Water Report. Lon Schemel, Water Superintendent, reported that the Minnesota Department of Health sent the PFAS test results from the August 17, 2022 samples. He explained that the State has a health risk index in which 1 means not expected to cause health impacts. SPU's results were well below that level; the highest level was .36. He will prepare reports with this information.

8. Electric Report. Brad Carlson, Electric Superintendent, provided an update of electric projects, including the first connection of the SPU building to the Scott County fiber loop and installing station power transformer at the West Shakopee Substation. He reported that on November 28th SPU transferred additional MVEC customers to SPU; SPU continues to work on the manufactured home parks. Mr. Carlson reported three outages since the last Commission meeting. One concerned a switch failure at Eagle Creek and Pike Lake Road, affecting 470 customers for 120 minutes.

9. Marketing/Key Accounts Report. Sharon Walsh, Director of Key Accounts/Marketing/Special Projects, reported meeting with a large customer on EV charging and Clean Energy Choice. She reported completing a conservation project with a large multi-family building on the east end of town. She noted that the AMI contract negotiations continue. Ms. Walsh noted a successful event at the Holiday Fest with customers. She posted a blog about the Jackson Township customers who have joined SPU. She is working on refining the communication concerning the lateral watermain connection charges. Ms. Walsh noted that SPU and MVEC staff plan to hold a joint meeting to discuss the transfer, what went well, and what was learned.

10. 2023 – 2027 Capital Improvement Plans. Mr. Adams presented the final proposed Capital Improvement Plan and explained the revisions. Commissioner Letourneau moved to accept the 2023 – 2027 Capital Improvement Plan. Vice President Krieg seconded the motion. Ayes: Mocol, Krieg, Brennan, and Letourneau. Nays: None. Motion carried.

11. 2023 Administrative, Electric and Water Capital Projects & Equipment. Mr. Adams presented the 2023 Capital Project & Equipment Plan. Commissioner Brennan moved to approve the 2023 Administrative, Electric, and Water Capital Improvement Projects and Equipment as presented. Vice President Krieg seconded the motion. Ayes: Mocol, Krieg, Brennan, and Letourneau. Nays: None.

12. 2023 Final Budget. Kelley Willemssen, Director of Finance and Administration, presented the final budget and explained the few changes to the budget presented on November 7th.

Commissioner Letourneau moved approval of the 2023 budget. Vice President Krieg seconded the motion. Ayes: Mocol, Krieg, Brennan, and Letourneau. Nays: None.

13. Res #2022-33 Resolution Establishing Electric Rates for Customers Served by Shakopee Public Utilities. Commissioner Brennan moved to approve Res #2022-33 Resolution Establishing Electric Rates for Customers Served by Shakopee Public Utilities; Commissioner Letourneau seconded the motion. Ayes: Mocol, Krieg, Brennan, and Letourneau. Nays: None.

14. Res #2022-34 Resolution Establishing Water Rates in and for the City of Shakopee. Commissioner Letourneau moved approval of Res #2022-34 Resolution Establishing Water Rates in and for the City of Shakopee. Vice President Krieg seconded the motion. Ayes: Mocol, Krieg, Brennan, and Letourneau. Nays: None.

15. Res #2022-35 Resolution Establishing the Power Cost Adjustment Charge, Setting the Power Cost Adjustment Base and other Terms. Commissioner Brennan moved to approve Res #2022-35 Resolution Establishing the Power Cost Adjustment Charge, Setting the Power Cost Adjustment Base and other Terms. Commissioner Letourneau seconded the motion. Ayes: Mocol, Krieg, Brennan, and Letourneau. Nays: None.

16. Res #2022-36 Resolution Adjusting Fees Applied Under the Installation of Underground Electric Distribution Systems Policy. Mr. Adams explained the current policy of recovering additional costs of undergrounding facilities, and that SPU plans to evaluate the cost-effectiveness of this policy and explore alternatives. He also noted that SPU is reviewing the joint trenching procedure considering statutory requirements and will return to the Commission for approval. Commissioner Letourneau moved to approve Res #2022-36 Resolution Adjusting Fees Applied Under the Installation of Underground Electric Distribution Systems Policy. Vice President Krieg seconded the motion. Ayes: Mocol, Krieg, Brennan, and Letourneau. Nays: None.

17. East Shakopee Substation Site and Water Treatment Plant Site Update. Commissioner Brennan moved, seconded by Commissioner Letourneau, that the Commission go into closed session under Minnesota Statutes, Section 13D.05, subdivision 3(c) to review confidential or protected nonpublic appraisal data and to develop or consider offers or counteroffers for the purchase of property described as 1462 Maras Street and 3650 Eagle Creek Boulevard. Ayes: Mocol, Brennan, Krieg, and Letourneau. Nays: None. In open session, President Mocol noted that the Commission gave direction to staff.

18. Adjourn. Motion by Commissioner Letourneau, seconded by Vice President Krieg, to adjourn to the January 3, 2023 meeting. Ayes: Mocol, Krieg, Brennan, and Letourneau. Nays: None.

_____

Greg Drent, Commission Secretary

Proposed As Consent Item **3b**

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Proposed As Consent Item

3c

SHAKOPEE PUBLIC UTILITIES COMMISSION

WARRANT LISTING

December 19, 2022

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 LLP	$3,955.00
JESSY ABRAHAM	$125.00
ALL ABOUT EROSION CONTROL	$346.43
INC ALLSTREAM BUSINESS U	$2,479.77
INC ALTEC INDUSTRIES	$426.26
AMARIL UNIFORM CO.	$576.25
THEOPHILUS AMEGATCHER	$350.00
AMERICAN NATL BANK_MASTERCARD_ACH	$14,277.27
ANNETTE STANEK	$593.75
APPLE FORD OF SHAKOPEE	$1,806.38
ARAMARK REFRESHMENT SERVICES INC	$118.51
ARROW ACE HARDWARE	$181.67
B & L TRUCK REPAIR INC	$17,585.52
BERGERSON-CASWELL INC	$29,545.00
ROBERT BERNDTSON	$413.13
BEST BUY BUSINESS ADVANTAGE ACCOUNT	$139.91
INC BOLTON & MENK	$11,858.00
BORDER STATES ELECTRIC SUPPLY	$8,516.21
INC BOYER FORD TRUCKS	$41,906.90
JILL AND ERIC BRANWALL	$500.00
CHRISTOPHER BREIMHORST	$350.00
JEFF BROSZ	$75.00
INC. CALDWELL TANK	$222,599.22
CANTERBURY PARK	$26,399.00
KEVIN CHANT	$85.00
SIEW KIN CHOW	$75.00
CINTAS CORP. #754	$977.25
CITY OF SAVAGE	$2.11
CITY OF SHAKOPEE	$31,862.63
CITY OF SHAKOPEE	$484,386.40
INC. COMCAST CABLE COMMUN	$2.25
CONCRETE CUTTING & CORING INC	$467.26
CORE & MAIN LP	$7,980.50
STEVEN CROOKS	$350.00
CUSTOMER CONTACT SERVICES	$810.46
INC. D G WELDING & MFG.	$7,049.00
D R HORTON INC	$75,859.36
INC. DAILY PRINTING	$895.00
DAKOTA ELECTRIC ASSOCIATION	$1,028.40
AMY DELOYSKI	$50.00
DGR ENGINEERING	$1,634.63
DIVERSIFIED ADJUSTMENT SERVICES INC	$122.68
DSI/LSI	$364.37
E H RENNER & SONS INC	$16,450.00
ENERGY MANAGEMENT COLLABORATIVE	$6,981.00
INC. FERGUSON US HOLDINGS	$19,097.66
FLYTE HCM LLC	$40.50
GRANT FRIENDSHUH	$210.00
INC. FRONTIER ENERGY	$17,258.21
GOPHER STATE ONE-CALL	$502.20
GRAINGER INC	$661.17

SHAKOPEE PUBLIC UTILITIES COMMISSION

WARRANT LISTING

December 19, 2022

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:

GNANA GURURAJ	$500.00
MELISSA HALLER	$150.00
HAWKINS INC	$3,780.54
HERMAN'S LANDSCAPE SUPPLIES INC.	$388.50
JAMILA HOFIUS	$50.00
SHANE HOFMAN	$1,000.00
DAVID A HOMOLKA	$175.00
INC. IMPACT MAILING OF MI	$15,902.94
INNOVATIVE OFFICE SOLUTIONS LLC	$1,430.89
INC INTEGRATED PROCESS S	$414.16
IRBY - STUART C IRBY CO	$4,720.76
ISD #720 - PEARSON	$15,817.00
ISD #720 - WEST JR. HIGH	$35,041.00
J R LARSON GROUNDS	$499.64
JACON LLC	$301.43
JASPER ENGINEERING & EQUIPMENT CO.	$2,040.00
BURT L JOHNSON	$500.00
INC. JOHNSON/ANDERSON & A	$32,143.00
JT SERVICES	$25,707.38
KATAMA TECHNOLOGIES, INC.	$2,437.50
JEFFREY KENDALL	$50.00
RICHARD KUCHEHEDE	$1,000.00
KWS SEEDS LLC	$27,061.00
SHIRLEY LUO	$125.00
TANNER LYDON	$500.00
INC MARK J TRAUT WELLS	$51,441.55
INC MATHESON TRI-GAS	$604.78
MCGRANN SHEA CARNIVAL	$31,814.80
MICHAEL MENDEN	$235.00
CINDY MENKE	$25.73
INC. MIDWEST SAFETY COUNS	$395.48
MIKE'S AUTO REPAIR INC	$150.72
MINN DEPT OF COMMERCE	$10,599.90
MINN VALLEY TESTING LABS INC	$236.74
MMUA	$5,940.00
MN DEPT. OF HEALTH	$32.00
TONY MYERS	$30.11
NAPA AUTO PARTS	$308.05
GERRY NEVILLE	$191.88
CINDY NICKOLAY	$323.76
NISC	$80,207.36
NORTHERN LINES CONTRACTING	$385.93
NORTHERN STATES POWER CO	$3,477.47
NPL CONSTRUCTION COMPANY	$5,000.00
IVAN PAKHNYUK	$125.00
IVAN PAKHNYUK	$50.00
PAYMENTUS CORPORATION - ACH	$65,968.35
MARY PETRICK	$500.00
POWERPLAN	$314.15
QUALTEK WIRELESS LLC	$6,200.00
RESCO	$57,904.44
RONALD RIZZO	$50.00

SHAKOPEE PUBLIC UTILITIES COMMISSION

WARRANT LISTING

December 19, 2022

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:

TYLER ROTH	$350.00
INC, LEIDOS ENG. LL RW BECK GROUP	$3,773.63
SAMBATEK	$8,810.50
MELANIE SAWYER	$225.00
ADAM SCHMITZ	$50.00
SCOTT COUNTY	$92.00
CARY SERYAKOV	$350.00
SHAKOPEE HOUSING GROUP LLA	$14,354.00
SHORT ELLIOTT HENDRICKSON INC	$15,303.52
SOUTHWEST NEWS MEDIA	$3,060.86
STAR ENERGY SERVICES	$74.50
STAR TRIBUNE	$582.30
GREG TRIPLETT	$350.02
LLC UTILITY LOGIC	$4,419.00
ERIK VANGSNESS	$175.00
VERIZON	$523.95
VERIZON WIRELESS	$106.87
JOHN WEBSTER	$75.00
WESCO RECEIVABLES CORP.	$5,237.60
SCOTT 6348 OXFORD WILTS	$125.00
MMPA	$2,805,976.32
PAYMENTUS CORPORATION - ACH	$30,829.45
FURTHER - ACH	$518.39
MN DEPT. OF REVENUE - ACH	$239,865.00
PAYMENTUS CORPORATION - ACH	$32,318.60
FURTHER - ACH	$218.00
PAYROLL FOR 12.16.22	$126,172.86
BENEFITS & TAXES FOR 12.16.22	$130,762.80
DECEMBER CREDIT REFUNDS	$19,988.76
	$4,999,265.09

Kelley Williamsson

Presented for approval by: Director of Finance & Administration

Approved by General Manager

Approved by Commission President

SHAKOPEE PUBLIC UTILITIES COMMISSION

WARRANT LISTING

January 3, 2023

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

AAR BUILDING SERVICE CO.	$4,051.43
APPLE FORD OF SHAKOPEE	$233.01
ARROW ACE HARDWARE	$45.16
B & L TRUCK REPAIR INC	$923.24
LLC BADGER STATE INSPECT	$5,493.00
BARNUM GATE SERVICES INC	$282.50
LEONARD & JANICE BASTYR	$500.00
BORDER STATES ELECTRIC SUPPLY	$515.83
CDW GOVERNMENT LLC	$384.33
CITY OF SHAKOPEE	$318,000.00
CITY OF SHAKOPEE	$1,031.08
CONCRETE CUTTING & CORING INC	$440.84
JONATHAN CRIST	$50.00
CSK AUTO	$37.00
INC. DAILY PRINTING	$897.00
SARA DALIDA	$1,000.00
DITCHWITCH OF MINNESOTA	$292.55
DLT SOLUTIONS LLC	$4,370.91
ELECTRICAL PRODUCTION SERVICES	$2,289.00
JAYSON GALLUS	$50.00
GRAINGER INC	$59.04
GREYSTONE CONSTRUCTION CO	$434.82
MATTHEW GRIEBEL	$481.89
HACH COMPANY	$601.95
HAWKINS INC	$6,349.00
HEALTHPARTNERS	$72,068.54
INC. HENNEN'S AUTO SERVIC	$102.10
BRIAN HOFER	$500.00
INC. IMPACT MAILING OF MI	$11,986.27
INC INTEGRATED PROCESS S	$3,979.64
INC INTEGRATED PROCESS S	$571.50
IRBY TOOLS - STUART C IRBY CO	$1,604.27
JT SERVICES	$313.74
ERIC KING	$206.50
INC LARKSTUR ENGINEERING	$79.71
ROBERT MAHON	$1,000.00
MCGRANN SHEA CARNIVAL	$158.75
MID AMERICA METER INC	$2,669.00
INC. MILSOFT UTILITY SOLU	$5,327.44
MINN VALLEY TESTING LABS INC	$1,062.66
MMUA	$600.00
MRA-THE MANAGEMENT ASSOCIATION	$1,225.00
TONY MYERS	$30.11
NAPA AUTO PARTS	$12.87
NARDINI FIRE EQUIPMENT CO INC	$559.89
NCPERS GROUP LIFE INS.	$208.00
TYLER O'BRIEN	$230.00
POMP'S TIRE SERVICE INC	$79.00
PRINCIPAL LIFE INS. COMPANY	$4,001.38
RESCO	$4,831.88
LISA ROBYN	$500.00
JACK SCHINTZ	$166.50
DAVE SCHLEPER	$50.00
ELLE SEAVER	$166.50
JAMES STANTON	$425.00
JORDAN STOCKER	$406.50
UPS STORE # 4009	$73.98
LLC VISION METERING	$650.00
MIKE WADSTEN	$125.00
WESCO RECEIVABLES CORP.	$11,033.54

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WARRANT LISTING

January 3, 2023

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

INC. WSB & ASSOCIATES	$7,955.00
XCEL ENERGY	$3,080.16
CENTERPOINT ENERGY - ACH	$3,323.88
FURTHER - ACH	$114.59
	$490,292.48

Kelley Williamson

Presented for approval by: Director of Finance & Administration

Approved by General Manager

Approved by Commission President

Monthly Water Dashboard

As of: November 2022

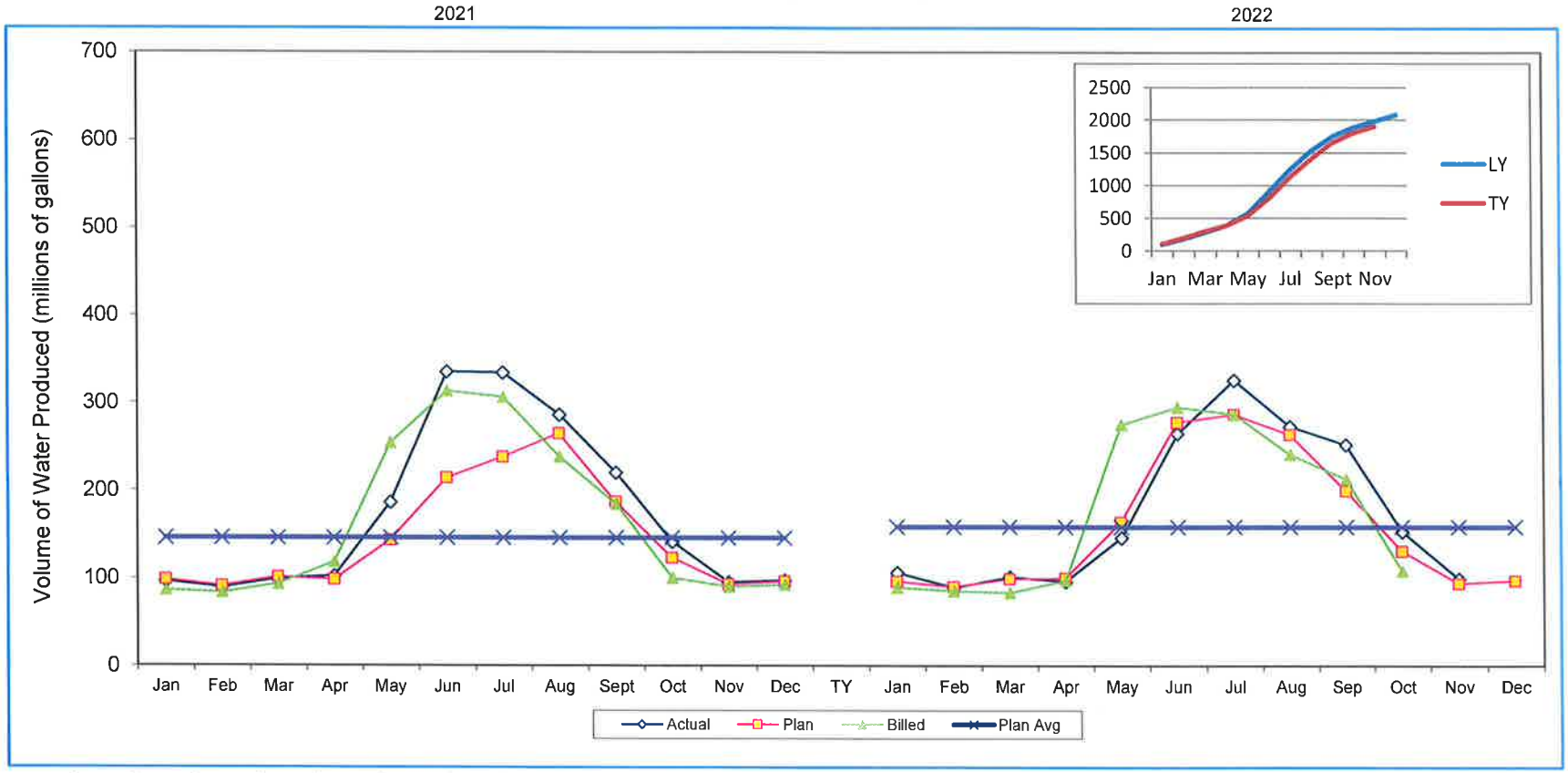
Shakopee Public Utilities Commission

ALL VALUES IN MILLIONS OF GALLONS

Element/Measure — Water Pumped/Metered

Last 6 months actuals	265	326	273	252	153	99	326

Monthly Avg
2019 139
2020 150
2021 173



LY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Actual	96	89	99	102	186	335	334	286	220	141	95	97
Plan	98	91	101	98	143	214	238	265	187	123	93	96
YTD % *												
Billed	86	83	93	118	254	313	306	238	184	100	90	92

TY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	106	89	101	96	146	265	326	273	252	153	99	
	96	90	99	100	164	278	287	264	200	131	94	97
	110%	105%	104%	102%	98%	97%	101%	102%	105%	106%	106%	
	89	85	83	97	275	295	287	241	213	108		

* Actual gallons pumped vs. Plan

Proposed As Consent Item 3f

SPU
Shakopee Public Utilities

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: Lon R. Schemel, Water Superintendent

SUBJECT: Nitrate Results -- Advisory

DATE: December 14, 2022

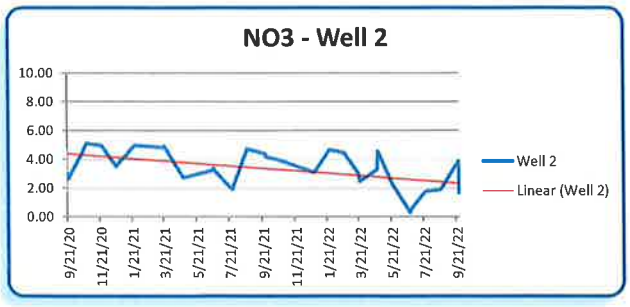
Attached are the latest nitrate test results for our production wells. The analyses provided are for the prior 2 years of data collected with trend graphs.

RP3

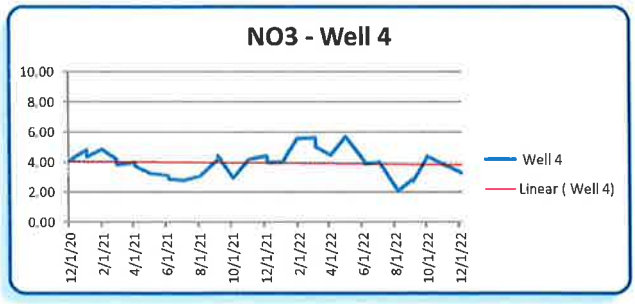
MN Department of Health
800-818-9318

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

Location	Sample Collected	Results Received	Results	Lab
2	9/21/20	11/25/20	3.00	MDH
2	9/22/20	9/24/20	2.65	MVTL
2	10/27/20	11/25/20	5.10	MVTL
2	11/24/20	12/9/20	4.97	MVTL
2	12/22/20	12/28/20	3.52	MVTL
2	12/22/20	1/29/21	3.60	MDH
2	1/26/21	1/29/21	4.98	MVTL
2	2/23/21	3/23/21	4.91	MVTL
2	3/23/21	3/25/21	4.92	MVTL
2	3/22/21	5/24/21	4.80	MDH
2	4/27/21	5/12/21	2.76	MVTL
2	6/22/21	6/29/21	3.25	MVTL
2	6/22/21	7/12/21	3.40	MDH
2	6/22/21	8/2/21	3.30	MDH
2	7/27/21	8/12/21	1.92	MVTL
2	8/24/21	9/7/21	4.73	MVTL
2	9/27/21	11/8/21	4.40	MDH
2	9/28/21	10/4/21	4.19	MVTL
2	10/26/21	11/5/21	3.93	MVTL
2	12/27/21	1/31/22	3.10	MDH
2	12/28/21	1/10/22	3.13	MVTL
2	1/25/22	2/7/22	4.66	MVTL
2	2/22/22	3/4/22	4.47	MVTL
2	3/21/22	4/6/22	3.00	MDH
2	3/23/22	4/6/22	2.48	MVTL
2	4/25/22	5/23/22	3.30	MDH
2	4/26/22	4/28/22	4.59	MVTL
2	5/24/22	6/6/22	2.27	MVTL
2	6/27/22	8/16/22	0.30	MDH
2	6/28/22	7/11/22	0.52	MVTL
2	7/26/22	8/4/22	1.78	MVTL
2	8/23/22	9/9/22	1.90	MVTL
2	9/26/22	10/25/22	3.90	MDH
2	9/27/22	10/10/22	1.66	MVTL



4	12/1/20	12/9/20	4.06	MVTL
4	12/1/20	1/29/21	4.10	MDH
4	1/4/21	3/25/21	4.80	MDH
4	1/5/21	1/8/21	4.35	MVTL
4	2/2/21	2/8/21	4.85	MVTL
4	3/1/21	5/12/21	4.20	MDH
4	3/2/21	3/23/21	3.83	MVTL
4	4/5/21	5/12/21	4.00	MDH
4	4/6/21	5/12/21	3.73	MVTL
4	5/4/21	5/12/21	3.26	MVTL
4	6/7/21	1/31/22	3.10	MDH
4	6/8/21	6/16/21	2.87	MVTL
4	7/6/21	7/12/21	2.78	MVTL
4	8/3/21	8/11/21	3.04	MVTL
4	9/7/21	9/29/21	4.21	MVTL
4	9/7/21	9/30/21	4.40	MDH
4	10/5/21	10/14/21	2.94	MVTL
4	11/2/21	11/8/21	4.15	MVTL
4	12/6/21	7/11/22	4.40	MDH
4	12/7/21	12/15/21	3.99	MVTL
4	1/4/22	1/12/22	4.02	MVTL
4	2/1/22	2/28/22	5.56	MVTL
4	3/7/22	4/6/22	5.60	MDH
4	3/8/22	3/14/22	4.99	MVTL
4	4/5/22	4/12/22	4.46	MVTL
4	5/3/22	5/12/22	5.67	MVTL
4	6/6/22	7/11/22	4.10	MDH
4	6/7/22	6/9/22	3.89	MVTL
4	7/5/22	7/18/22	3.98	MVTL
4	7/5/22	7/18/22	4.00	MDH
4	8/9/22	8/18/22	2.09	MVTL
4	9/6/22	9/19/22	2.87	MVTL
4	9/6/22	10/25/22	2.70	MDH
4	10/4/22	10/11/22	4.38	MVTL
4	12/6/22	12/8/22	3.30	MVTL



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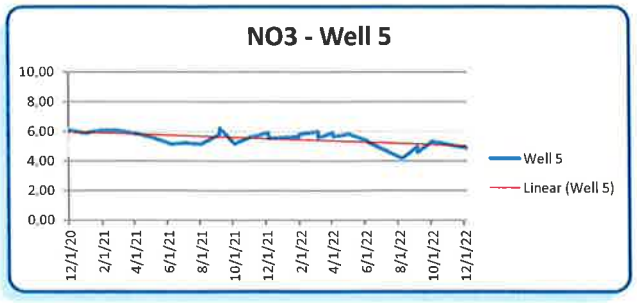
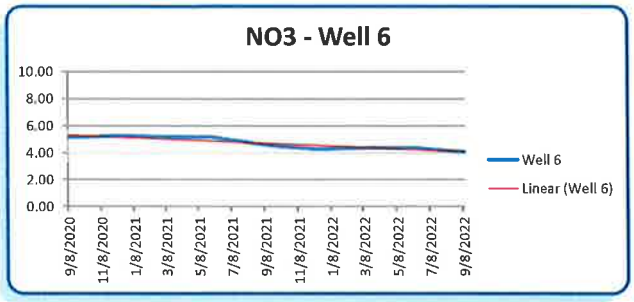
MN Department of Health
800-818-9318

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

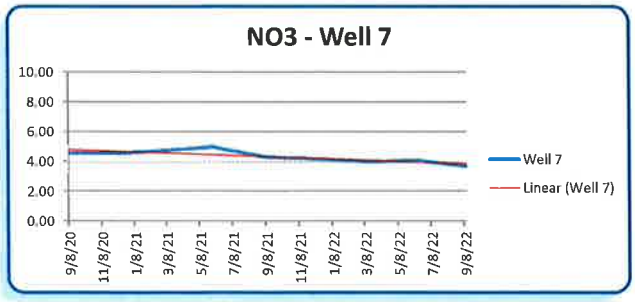
Location	Sample Collected	Results Received	Results	Lab
5	12/1/20	2/9/20	6.02	MVTL
5	12/1/20	1/29/21	6.10	MDH
5	1/4/21	3/25/21	5.90	MDH
5	1/5/21	1/8/21	5.96	MVTL
5	2/2/21	2/8/21	6.09	MVTL
5	3/1/21	5/12/21	6.10	MDH
5	3/2/21	3/23/21	6.07	MVTL
5	4/6/21	5/12/21	5.88	MVTL
5	5/4/21	5/12/21	5.62	MVTL
5	6/7/21	1/31/22	5.20	MDH
5	6/8/21	6/16/21	5.18	MVTL
5	7/6/21	7/12/21	5.25	MVTL
5	8/3/21	8/11/21	5.16	MVTL
5	9/7/21	9/29/21	5.83	MVTL
5	9/7/21	9/30/21	6.20	MDH
5	10/5/21	10/14/21	5.17	MVTL
5	11/2/21	11/8/21	5.62	MVTL
5	12/6/21	7/11/22	5.90	MDH
5	12/7/21	12/15/21	5.56	MVTL
5	1/4/22	1/12/22	5.58	MVTL
5	2/1/22	2/28/22	5.67	MVTL
5	2/1/22	3/14/22	5.80	MDH
5	3/7/22	4/6/22	6.00	MDH
5	3/8/22	3/14/22	5.58	MVTL
5	4/4/22	5/12/22	5.90	MDH
5	4/5/22	4/12/22	5.66	MVTL
5	5/3/22	5/12/22	5.83	MVTL
5	6/6/22	7/11/22	5.40	MDH
5	6/7/22	6/9/22	5.30	MVTL
5	8/9/22	8/18/22	4.18	MVTL
5	9/6/22	9/19/22	4.98	MVTL
5	9/6/22	10/25/22	4.60	MDH
5	10/4/22	10/11/22	5.35	MVTL
5	12/6/22	12/8/22	4.89	MVTL



Location	Sample Collected	Results Received	Results	Lab
6	9/8/2020	1/29/21	5.20	MDH
6	12/7/2020	1/29/21	5.30	MDH
6	6/1/2021	8/2/21	5.20	MDH
6	9/13/2021	9/29/21	4.60	MDH
6	12/13/2021	1/31/22	4.30	MDH
6	3/14/2022	4/6/22	4.40	MDH
6	6/13/2022	7/11/22	4.40	MDH
6	9/12/2022	10/25/22	4.10	MDH



Location	Sample Collected	Results Received	Results	Lab
7	9/8/20	1/29/21	4.60	MDH
7	12/22/20	1/29/21	4.60	MDH
7	6/1/21	8/2/21	5.00	MDH
7	9/13/21	9/29/21	4.30	MDH
7	12/13/21	1/31/22	4.20	MDH
7	3/14/22	4/6/22	4.00	MDH
7	6/13/22	7/11/22	4.10	MDH
7	9/12/22	10/25/22	3.70	MDH



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800-818-9318

Shakopee Public Utilities Commission
Water Department
Nitrate Results
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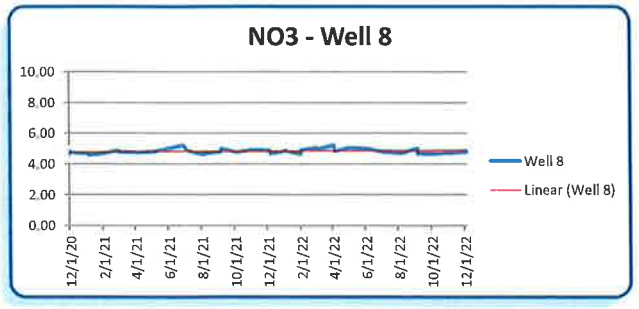
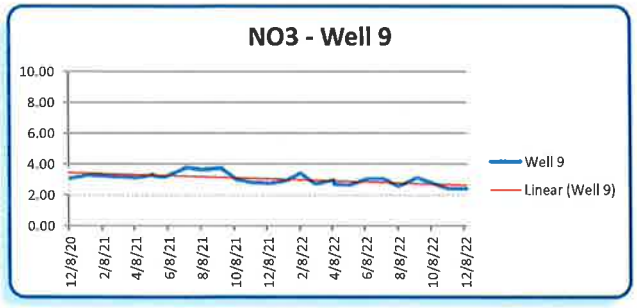
Location	Sample Collected	Results Received		Results	Lab
8	12/1/20	12/9/20		4.70	MVTL
8	12/1/20	1/29/21		4.80	MDH
8	1/4/21	3/25/21		4.70	MDH
8	1/5/21	1/8/21		4.60	MVTL
8	2/2/21	2/8/21		4.72	MVTL
8	3/1/21	5/12/21		4.90	MDH
8	3/2/21	3/23/21		4.82	MVTL
8	4/6/21	5/12/21		4.77	MVTL
8	5/4/21	5/12/21		4.82	MVTL
8	6/29/21	8/2/21		5.20	MDH
8	7/6/21	7/12/21		4.90	MVTL
8	8/3/21	8/11/21		4.68	MVTL
8	9/7/21	9/29/21		4.83	MVTL
8	9/7/21	9/30/21		5.00	MDH
8	10/5/21	10/14/21		4.80	MVTL
8	11/2/21	11/8/21		4.92	MVTL
8	12/6/21	7/11/22		4.90	MDH
8	12/7/21	12/15/21		4.70	MVTL
8	1/4/22	1/12/22		4.87	MVTL
8	2/1/22	2/28/22		4.67	MVTL
8	2/1/22	3/14/22		4.90	MDH
8	3/1/22	3/8/22		5.05	MVTL
8	3/8/22	4/6/22		5.00	MDH
8	4/4/22	5/12/22		5.20	MDH
8	4/5/22	4/12/22		4.85	MVTL
8	5/3/22	5/12/22		5.06	MVTL
8	6/6/22	7/11/22		5.00	MDH
8	6/7/22	6/9/22		4.99	MVTL
8	7/5/22	7/18/22		4.80	MVTL
8	7/5/22	11/8/22		4.80	MDH
8	8/9/22	8/18/22		4.74	MVTL
8	9/6/22	9/19/22		5.02	MVTL
8	9/6/22	10/25/22		4.70	MDH
8	10/4/22	10/11/22		4.69	MVTL
8	12/6/22	12/8/22		4.79	MVTL
9	12/8/20	12/28/20		3.09	MVTL
9	1/12/21	1/14/21		3.32	MVTL
9	4/13/21	4/26/21		3.16	MVTL
9	5/11/21	5/18/21		3.35	MVTL
9	5/11/21	5/24/21		3.30	MDH
9	6/1/21	6/7/21		3.19	MVTL
9	7/13/21	8/2/21		3.80	MVTL
9	8/10/21	8/27/21		3.66	MVTL
9	9/14/21	9/29/21		3.75	MVTL
9	10/12/21	10/20/21		3.03	MVTL
9	11/9/21	11/16/21		2.84	MVTL
9	12/14/21	12/27/21		2.79	MVTL
9	1/11/22	1/31/22		2.94	MVTL
9	2/8/22	2/23/22		3.43	MVTL
9	3/8/22	3/14/22		2.74	MVTL
9	4/11/22	4/26/22		3.00	MDH
9	4/12/22	4/22/22		2.72	MVTL
9	5/10/22	5/18/22		2.67	MVTL
9	6/14/22	6/23/22		3.10	MVTL
9	7/12/22	7/27/22		3.08	MVTL
9	8/9/22	8/18/22		2.60	MVTL
9	9/13/22	9/21/22		3.16	MVTL
9	11/8/22	11/10/22		2.44	MVTL
9	12/13/22	12/14/22		2.43	MVTL
10	4/17/12	4/20/12	<	1.00	TCWC
10	1/21/14	1/29/14	<	1.00	TCWC
10	3/25/14	4/1/14		3.61	MVTL
10	4/23/14	5/7/14	<	0.20	MVTL
10	4/23/14	6/16/14	<	0.05	MDH
10	6/16/15	6/26/15	<	0.05	MVTL
10	4/11/17	4/17/17	<	0.05	MVTL
10	1/8/19	1/14/19	<	0.05	MVTL
10	7/9/19	7/24/19	<	0.05	MVTL
10	10/12/21	10/20/21	<	0.05	MVTL





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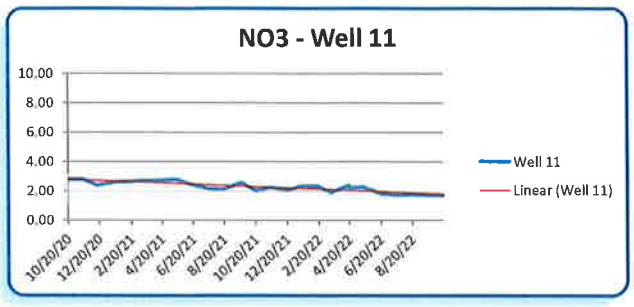
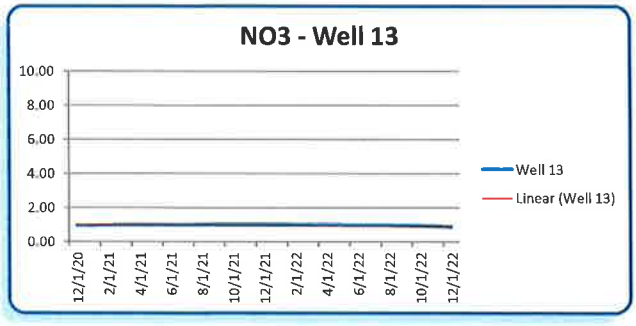
800-818-9318

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

Location	Sample Collected	Results Received		Results	Lab
11	10/20/20	11/25/20		2.81	MVTL
11	11/17/20	11/25/20		2.82	MVTL
11	12/15/20	12/18/20		2.41	MVTL
11	1/19/21	1/25/21		2.64	MVTL
11	4/20/21	4/26/21		2.75	MVTL
11	5/17/21	5/28/21		2.80	MDH
11	5/18/21	5/28/21		2.78	MVTL
11	6/15/21	6/29/21		2.48	MVTL
11	7/20/21	8/2/21		2.18	MVTL
11	8/17/21	8/27/21		2.14	MVTL
11	9/21/21	9/29/21		2.58	MVTL
11	10/19/21	11/8/21		2.06	MVTL
11	11/16/21	12/2/21		2.27	MVTL
11	12/21/21	12/30/21		2.10	MVTL
11	1/18/22	1/31/22		2.37	MVTL
11	2/15/22	2/28/22		2.36	MVTL
11	3/15/22	3/17/22		1.92	MVTL
11	4/18/22	5/12/22		2.40	MDH
11	4/19/22	4/28/22		2.25	MVTL
11	5/17/22	5/27/22		2.28	MVTL
11	6/21/22	6/23/22		1.82	MVTL
11	7/19/22	7/28/22		1.75	MVTL
11	8/16/22	8/30/22		1.78	MVTL
11	9/20/22	9/29/22		1.74	MVTL
11	10/18/22	10/21/22		1.71	MVTL
12	12/8/20	12/28/20		0.69	MVTL
12	3/9/21	3/23/21		0.60	MVTL
12	6/1/21	6/7/21		0.57	MVTL
12	9/14/21	9/29/21		0.59	MVTL
12	12/14/21	12/27/21		0.50	MVTL
12	3/23/22	4/6/22		0.48	MVTL
12	6/14/22	6/23/22		0.49	MVTL
12	9/13/22	9/21/22		0.46	MVTL
12	12/13/22	12/14/22		0.46	MVTL
13	12/1/20	12/9/20		0.98	MVTL
13	3/2/21	3/23/21		1.02	MVTL
13	12/7/21	12/15/21		1.03	MVTL
13	9/6/22	9/19/22		1.00	MVTL
13	12/6/22	12/8/22		0.89	MVTL
14	4/23/14	6/16/14	<	0.05	MDH
14	4/11/17	4/17/17	<	0.05	MVTL
14	9/5/17	9/26/17	<	0.05	MVTL
14	12/5/17	12/22/17	<	0.05	MVTL
14	3/6/18	3/26/18	<	0.05	MVTL
14	6/5/18	6/14/18	<	0.05	MVTL





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Water Department
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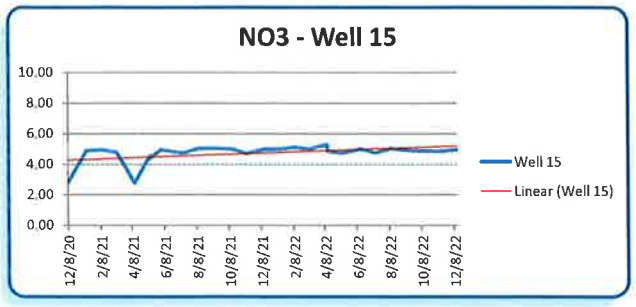
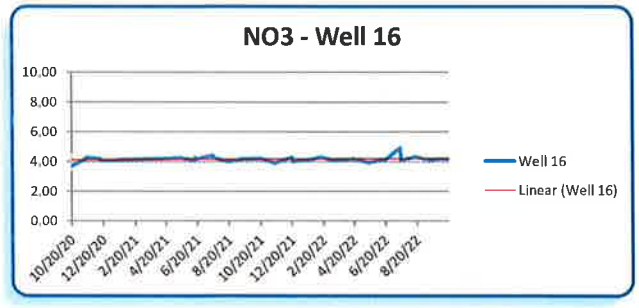
Location	Sample Collected	Results Received	Results	Lab
15	12/8/20	12/28/20	2.82	MVTL
15	1/12/21	1/14/21	4.92	MVTL
15	2/9/21	4/2/21	4.96	MVTL
15	3/9/21	3/23/21	4.81	MVTL
15	4/13/21	4/26/21	2.79	MVTL
15	5/11/21	5/18/21	4.56	MVTL
15	5/11/21	5/24/21	4.40	MDH
15	6/1/21	6/7/21	4.95	MVTL
15	7/13/21	8/2/21	4.76	MVTL
15	8/10/21	8/27/21	5.05	MVTL
15	9/21/21	9/29/21	5.04	MVTL
15	10/12/21	10/20/21	5.02	MVTL
15	11/9/21	11/16/21	4.72	MVTL
15	12/14/21	12/27/21	5.00	MVTL
15	1/11/22	1/31/22	5.02	MVTL
15	2/8/22	2/23/22	5.13	MVTL
15	3/8/22	3/14/22	5.00	MVTL
15	4/11/22	4/26/22	5.30	MDH
15	4/12/22	4/22/22	4.88	MVTL
15	5/10/22	5/18/22	4.76	MVTL
15	6/14/22	6/23/22	5.01	MVTL
15	7/12/22	7/27/22	4.76	MVTL
15	8/9/22	8/18/22	5.05	MVTL
15	9/13/22	9/21/22	4.92	MVTL
15	11/8/22	11/10/22	4.86	MVTL
15	12/13/22	12/14/22	4.96	MVTL



16	10/20/20	11/25/20	3.73	MVTL
16	11/17/20	11/25/20	4.21	MVTL
16	11/17/20	3/25/21	4.30	MDH
16	12/14/20	1/29/21	4.20	MDH
16	12/15/20	12/18/20	4.09	MVTL
16	6/17/21	8/2/21	4.20	MDH
16	5/18/21	5/28/21	4.26	MVTL
16	6/14/21	8/2/21	4.10	MDH
16	6/15/21	6/29/21	4.29	MVTL
16	7/19/21	8/12/21	4.40	MDH
16	7/20/21	8/2/21	4.29	MVTL
16	8/17/21	8/27/21	4.02	MVTL
16	9/20/21	11/8/21	4.20	MDH
16	9/21/21	9/29/21	4.18	MVTL
16	10/19/21	11/8/21	4.23	MVTL
16	11/16/21	12/2/21	3.93	MVTL
16	12/20/21	1/31/22	4.30	MDH
16	12/21/21	12/30/21	4.04	MVTL
16	1/18/22	1/31/22	4.12	MVTL
16	2/15/22	2/28/22	4.32	MVTL
16	3/15/22	3/17/22	4.07	MVTL
16	3/15/22	4/6/22	4.10	MDH
16	4/19/22	4/28/22	4.19	MVTL
16	5/17/22	5/27/22	3.97	MVTL
16	6/21/22	6/23/22	4.17	MVTL
16	6/21/22	7/11/22	4.20	MDH
16	7/18/22	8/16/22	4.90	MDH
16	7/19/22	7/28/22	4.13	MVTL
16	8/16/22	8/30/22	4.33	MVTL
16	9/19/22	10/25/22	4.10	MDH
16	9/20/22	9/29/22	4.19	MVTL
16	10/18/22	10/21/22	4.19	MVTL



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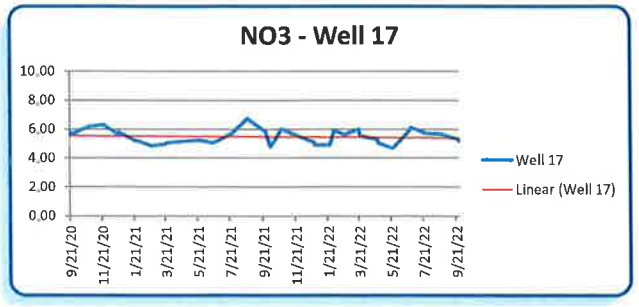
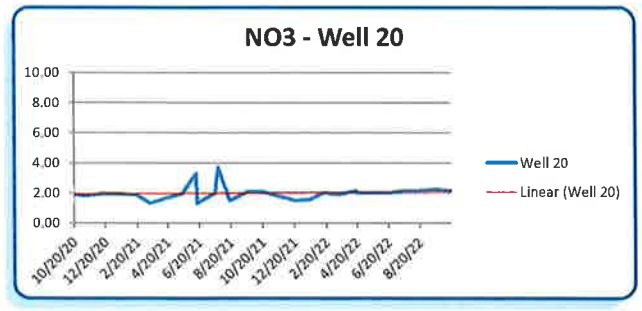
17	9/21/20	11/25/20	5.90	MDH
17	9/22/20	9/24/20	5.63	MVTL
17	10/27/20	11/25/20	6.17	MVTL
17	11/24/20	12/9/20	6.30	MVTL
17	12/22/20	12/28/20	5.67	MVTL
17	12/22/20	1/29/21	5.80	MDH
17	1/25/21	3/25/21	5.20	MDH
17	1/26/21	1/29/21	5.22	MVTL
17	2/23/21	3/23/21	4.86	MVTL
17	3/22/21	5/24/21	5.00	MDH
17	3/23/21	3/25/21	5.07	MVTL
17	5/25/21	6/1/21	5.27	MVTL
17	6/14/21	8/2/21	5.10	MDH
17	6/22/21	6/29/21	5.08	MVTL
17	7/27/21	8/12/21	5.75	MVTL
17	8/24/21	9/7/21	6.73	MVTL
17	9/27/21	11/8/21	5.80	MDH
17	9/28/21	10/4/21	5.60	MVTL
17	10/5/21	10/14/21	4.79	MVTL
17	10/26/21	11/5/21	5.98	MVTL
17	12/27/21	1/31/22	5.10	MDH
17	12/28/21	1/10/22	4.90	MVTL
17	1/25/22	2/7/22	4.91	MVTL
17	2/2/22	4/25/22	5.90	MDH
17	2/22/22	3/4/22	5.62	MVTL
17	3/21/22	4/6/22	6.00	MDH
17	3/23/22	4/6/22	5.56	MVTL
17	4/25/22	6/2/22	5.30	MDH
17	4/26/22	4/28/22	5.05	MVTL
17	5/24/22	6/6/22	4.70	MVTL
17	6/27/22	8/16/22	6.00	MDH
17	6/28/22	7/11/22	6.09	MVTL
17	7/26/22	8/4/22	5.71	MVTL
17	8/23/22	9/9/22	5.67	MVTL
17	9/26/22	10/25/22	5.30	MDH
17	9/27/22	10/10/22	5.16	MVTL



Location	Sample Collected	Results Received	Results	Lab
20	10/20/20	11/25/20	1.93	MVTL
20	11/10/20	11/25/20	1.85	MVTL
20	12/15/20	12/18/20	2.01	MVTL
20	1/19/21	1/25/21	1.98	MVTL
20	2/16/21	2/19/21	1.93	MVTL
20	3/16/21	3/23/21	1.36	MVTL
20	4/20/21	4/26/21	1.74	MVTL
20	5/17/21	5/28/21	2.00	MDH
20	5/18/21	5/28/21	2.05	MVTL
20	6/14/21	8/2/21	3.30	MDH
20	6/15/21	6/29/21	1.36	MVTL
20	7/20/21	8/2/21	2.03	MVTL
20	7/27/21	8/12/21	3.71	MVTL
20	8/17/21	8/27/21	1.53	MVTL
20	9/21/21	9/29/21	2.13	MVTL
20	10/19/21	11/8/21	2.13	MVTL
20	11/16/21	12/2/21	1.85	MVTL
20	12/21/21	12/30/21	1.54	MVTL
20	1/18/22	1/31/22	1.60	MVTL
20	2/15/22	2/28/22	2.06	MVTL
20	3/15/22	3/17/22	1.93	MVTL
20	4/18/22	5/12/22	2.20	MDH
20	4/19/22	4/28/22	2.05	MVTL
20	5/17/22	5/27/22	2.05	MVTL
20	6/21/22	6/23/22	2.05	MVTL
20	7/19/22	7/28/22	2.20	MVTL
20	8/16/22	8/30/22	2.20	MVTL
20	9/20/22	9/29/22	2.28	MVTL
20	10/18/22	10/21/22	2.20	MVTL

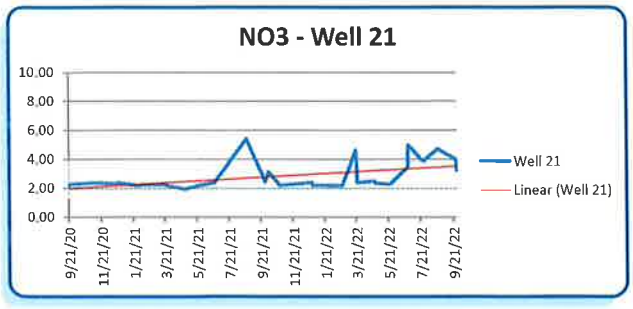


MVTL = Minnesota Valley Testing Laboratories
MDH = Minnesota Department of Health
TCWC = Twin City Water Clinic

MN Department of Health
800-818-9318

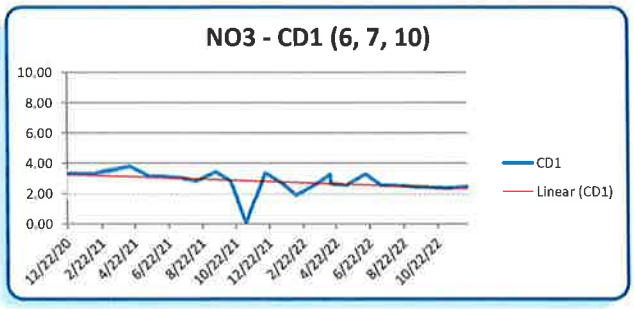
Shakopee Public Utilities Commission
Water Department
Nitrate Results
Reported in mg/L

Location	Sample Collected	Results Received		Results	Lab
21	9/21/20	11/25/20		2.20	MDH
21	9/22/20	9/24/20		2.30	MVTL
21	10/27/20	11/25/20		2.38	MVTL
21	11/24/20	12/9/20		2.37	MVTL
21	12/22/20	12/28/20		2.35	MVTL
21	12/22/20	1/29/21		2.40	MDH
21	1/26/21	1/29/21		2.24	MVTL
21	2/23/21	3/23/21		2.28	MVTL
21	3/23/21	3/25/21		2.24	MVTL
21	3/22/21	5/24/21		2.30	MDH
21	4/27/21	5/12/21		1.97	MVTL
21	5/25/21	6/1/21		2.22	MVTL
21	5/24/21	6/15/21		2.20	MDH
21	6/22/21	6/29/21		2.39	MVTL
21	8/24/21	9/7/21		5.39	MVTL
21	9/27/21	11/8/21		2.60	MDH
21	9/28/21	10/4/21		2.45	MVTL
21	10/5/21	10/14/21		3.12	MVTL
21	10/26/21	11/5/21		2.22	MVTL
21	12/27/21	1/31/22		2.40	MDH
21	12/28/21	1/10/22		2.22	MVTL
21	1/25/22	2/7/22		2.22	MVTL
21	2/22/22	3/4/22		2.20	MVTL
21	3/21/22	4/6/22		4.60	MDH
21	3/23/22	4/6/22		2.40	MVTL
21	4/25/22	5/23/22		2.50	MDH
21	4/26/22	4/28/22		2.36	MVTL
21	5/24/22	6/6/22		2.30	MVTL
21	6/27/22	8/16/22		3.50	MDH
21	6/28/22	7/11/22		4.97	MVTL
21	7/26/22	8/4/22		3.87	MVTL
21	8/23/22	9/9/22		4.70	MVTL
21	9/26/22	10/25/22		4.00	MDH
21	9/27/22	10/6/22		3.24	MVTL



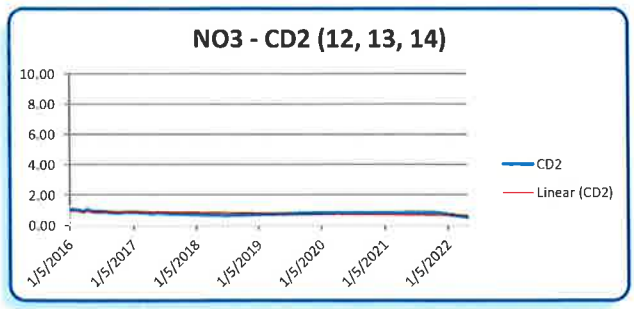
Combined Discharge - Wells 6-7-10

CD 1	12/22/20	12/28/20		3.38	MVTL
CD 1	2/9/21	4/2/21		3.39	MVTL
CD 1	4/13/21	4/26/21		3.80	MVTL
CD 1	5/17/21	5/28/21		3.20	MDH
CD 1	6/1/21	6/7/21		3.20	MVTL
CD 1	7/13/21	8/2/21		3.11	MVTL
CD 1	8/10/21	8/27/21		2.87	MVTL
CD 1	9/14/21	9/29/21		3.46	MVTL
CD 1	10/12/21	10/20/21		2.86	MVTL
CD 1	11/9/21	11/16/21	<	0.05	MVTL
CD 1	12/14/21	12/27/21		3.39	MVTL
CD 1	1/11/22	1/31/22		2.79	MVTL
CD 1	2/8/22	2/23/22		1.92	MVTL
CD 1	3/15/22	3/17/22		2.63	MVTL
CD 1	4/11/22	4/26/22		3.30	MDH
CD 1	4/12/22	4/22/22		2.69	MVTL
CD 1	5/10/22	5/18/22		2.60	MVTL
CD 1	6/14/22	6/23/22		3.33	MVTL
CD 1	7/12/22	7/27/22		2.57	MVTL
CD 1	8/9/22	8/18/22		2.57	MVTL
CD 1	9/13/22	9/21/22		2.49	MVTL
CD 1	11/8/22	11/10/22		2.42	MVTL
CD 1	12/13/22	12/14/22		2.50	MVTL



Combined Discharge - Wells 12-13-14

CD 2	1/5/2016	1/13/2016		1.08	MVTL
CD 2	2/23/2016	2/29/2016		1.03	MVTL
CD 2	3/22/2016	3/28/2016		0.96	MVTL
CD 2	4/12/2016	4/19/2016		1.07	MVTL
CD 2	5/10/2016	5/16/2016		0.98	MVTL
CD 2	5/10/2016	6/2/2016		0.97	MDH
CD 2	7/12/2016	7/18/2016		0.93	MVTL
CD 2	10/11/2016	10/17/2016		0.87	MVTL
CD 2	11/8/2016	11/17/2016		0.91	MVTL
CD 2	1/10/2017	1/20/2017		0.92	MVTL
CD 2	4/11/2017	4/17/2017		0.85	MVTL
CD 2	6/8/2017	6/28/2017		0.86	MDH
CD 2	6/22/2018	7/18/2018		0.67	MDH
CD 2	4/16/2019	5/1/2019		0.78	MDH
CD 2	4/27/2020	6/5/2020		0.86	MDH
CD 2	10/25/2021	11/15/2021		0.87	MDH
CD 2	4/25/2022	5/23/2022		0.66	MDH



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

Proposed As Consent Item 3g

Shakopee Public Utilities

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: Lon R. Schemel, Water Superintendent

SUBJECT: PFAS Results -- Advisory

DATE: December 21, 2022

Beginning with the August 17th, 2022 results, the Minnesota Department of Health will be conducting quarterly sampling of SPU's production wells. Sampling results will be presented at the Commission meeting immediately following the receipt of results. The first round of results was received 3 months after they were drawn.

The 6 PFAS compounds that are used in the Health Risk Index are graphed and the averages are calculated. From the Minnesota Department of Health website:

> *MDH has developed health-based guidance values to represent levels for several PFAS in drinking water. The guidance values are levels that MDH considers safe for all people to consume, including sensitive populations. The guidance values apply to short time periods as well as a lifetime of exposure. The table below shows the health-based guidance values (in parts per billion, or ppb) and parts per trillion (ppt) for six PFAS that MDH uses to evaluate sample results. Because the guidance values are low, they are often reported in parts per trillion (ppt). One ppb is 1,000 ppt.*

PFAS Detected in Minnesota	Drinking Water Guidance Value (ppb)
Perfluorobutane sulfonate (PFBS)	0.1 [same as 100 ppt]
Perfluorohexane sulfonate (PFHxS)	0.047 [same as 47 ppt]
Perfluorooctane sulfonate (PFOS)	0.015 [same as 15 ppt]
Perfluorobutanoic acid (PFBA)	7 [same as 7,000 ppt]
Perfluorohexanoic acid (PFHxA)	0.2 [same as 200 ppt]
Perfluorooctanoic acid (PFOA)	0.035 [same as 35 ppt]

Shakopee Public Utilities

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www.shakopeeutilities.com

The following calculation is used to determine the Health Risk Index using the sample result and the Water Guidance Value:
(PFOS/0.015)+(PFOA/0.035)+(PFBS/0.1)+(PFBA/7)+(PFHxS/0.047)+(PFHxA/0.2)

The following factors are why Minnesota Department of Health chose these 6 compounds:

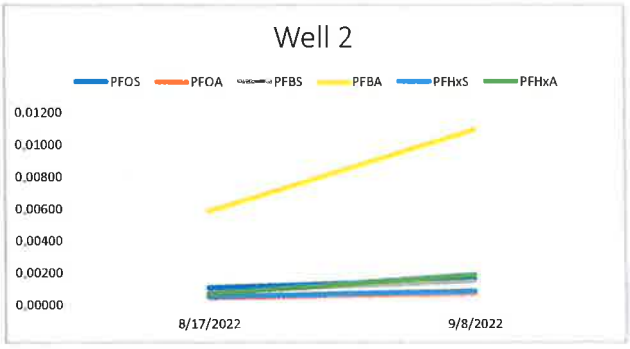
- Frequency of detection in Minnesota
- Available toxicological information on the compounds
- Similar health effects in the body

An HRI value of less than 1 is not expected to cause an adverse health effect.

Attached are the graphed testing results and the information sheets for each compound from the Minnesota Department of Health.

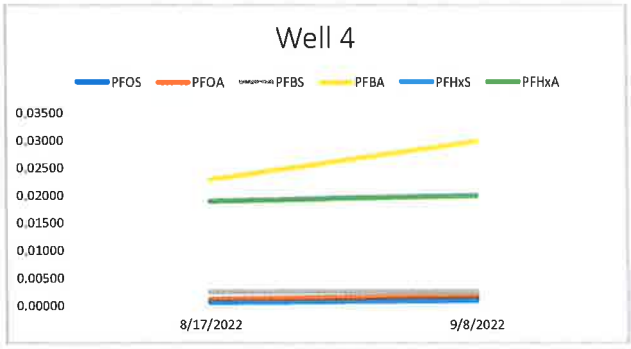
MDH - (651) 201-4562

Minnesota Department of Health
PFAS Testing Results



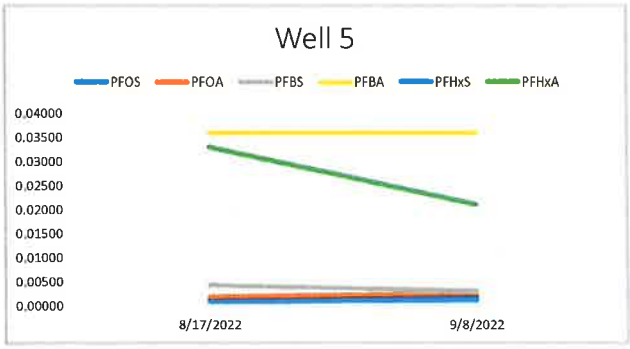
	PFOS	PFOA	PFBS	PFBA	PFHxS	PFHxA	HRI
8/17/2022	0.00110	0.00049	0.00083	0.00590	0.00054	0.00075	0.11
9/8/2022	0.00160	0.00079	0.00150	0.01100	0.00088	0.00190	0.17

HRI Average
0.14



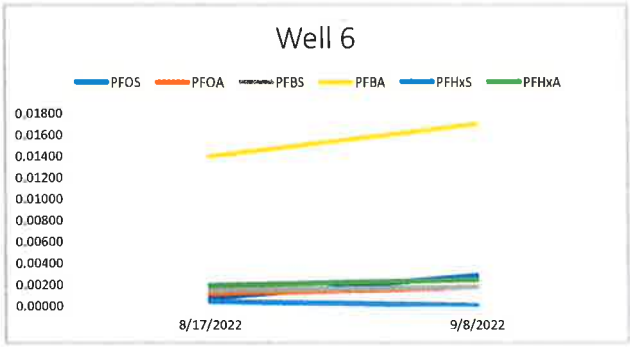
	PFOS	PFOA	PFBS	PFBA	PFHxS	PFHxA	HRI
8/17/2022	0.00077	0.00120	0.00250	0.02300	0.00058	0.01900	0.22
9/8/2022	0.00120	0.00200	0.00260	0.03000	0.00090	0.02000	0.29

HRI Average
0.25



	PFOS	PFOA	PFBS	PFBA	PFHxS	PFHxA	HRI
8/17/2022	0.00110	0.00190	0.00430	0.03600	0.00085	0.03300	0.36
9/8/2022	0.00180	0.00270	0.00310	0.03600	0.00120	0.02100	0.36

HRI Average
0.36



	PFOS	PFOA	PFBS	PFBA	PFHxS	PFHxA	HRI
8/17/2022	0.00068	0.00110	0.00150	0.01400	0.00040	0.00190	0.11
9/8/2022	0.00280	0.00170	0.00170	0.01700	0.00000	0.00240	0.27

HRI Average
0.19

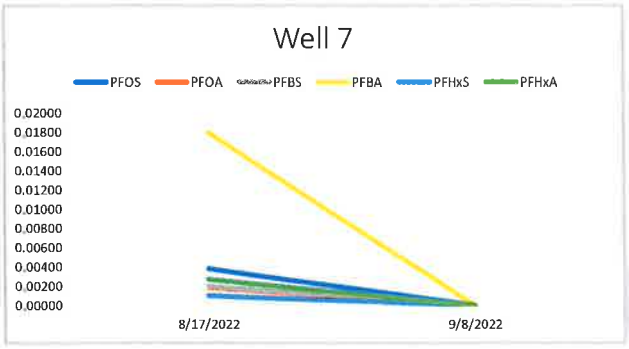
All values are in µg/L
A value of 0.00000 indicates that a compound is below detection.

PFAS Testing of Minnesota Community Water Systems

https://tinyurl.com/PFAS-MDH

MDH - (651) 201-4562

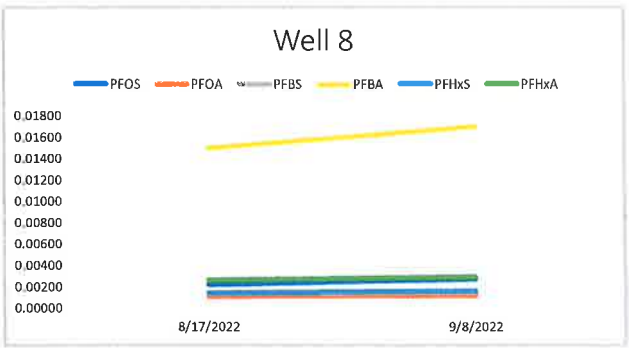
Minnesota Department of Health
PFAS Testing Results



		PFOS	PFOA	PFBS	PFBA	PFHxS	PFHxA	HRI
	8/17/2022	0.00380	0.00190	0.00200	0.01800	0.00100	0.00270	0.36
Sampled w/Well 6	9/8/2022	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00

HRI Average

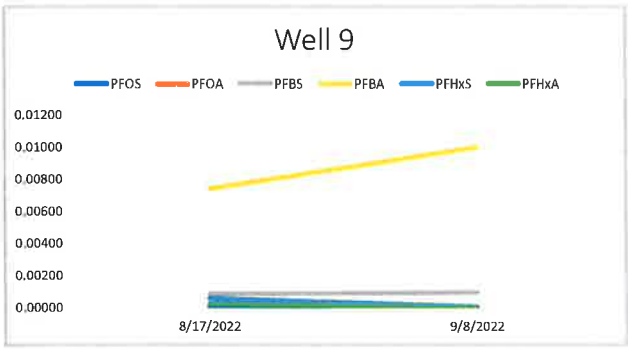
0.36



	PFOS	PFOA	PFBS	PFBA	PFHxS	PFHxA	HRI
8/17/2022	0.00220	0.00110	0.00140	0.01500	0.00140	0.00260	0.24
9/8/2022	0.00270	0.00120	0.00150	0.01700	0.00160	0.00290	0.28

HRI Average

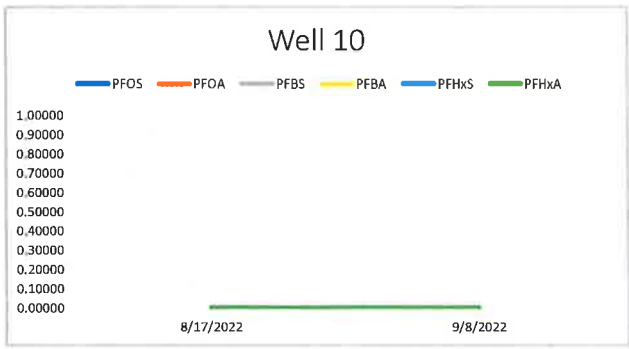
0.26



	PFOS	PFOA	PFBS	PFBA	PFHxS	PFHxA	HRI
8/17/2022	0.00000	0.00020	0.00083	0.00740	0.00054	0.00019	0.03
9/8/2022	0.00000	0.00000	0.00092	0.01000	0.00000	0.00000	0.01

HRI Average

0.02



	PFOS	PFOA	PFBS	PFBA	PFHxS	PFHxA	HRI
8/17/2022	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
9/8/2022	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00

HRI Average

0.00

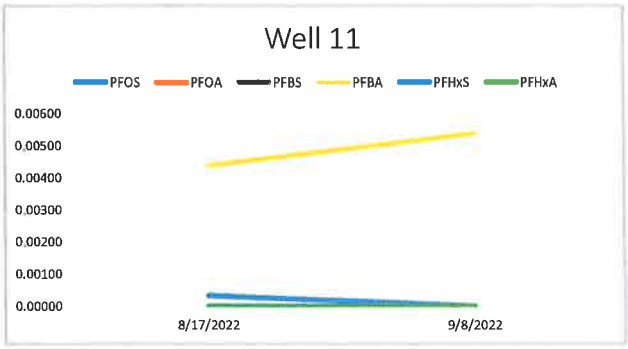
All values are in µg/L
A value of 0.00000 indicates that a compound is below detection.

PFAS Testing of Minnesota Community Water Systems

https://tinyurl.com/PFAS-MDH

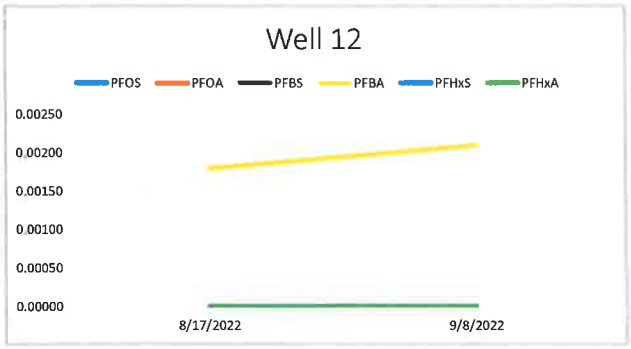
MDH - (651) 201-4562

Minnesota Department of Health
PFAS Testing Results



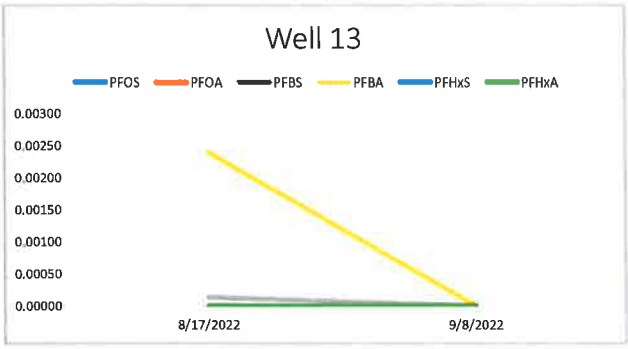
HRI Average
0.01

	PFOS	PFOA	PFBS	PFBA	PFHxS	PFHxA	HRI
8/17/2022	0.00000	0.00000	0.00030	0.00440	0.00033	0.00000	0.01
9/8/2022	0.00000	0.00000	0.00000	0.00540	0.00000	0.00000	0.00



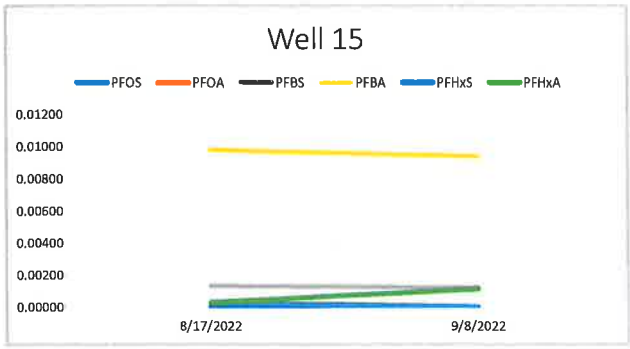
HRI Average
0.00

	PFOS	PFOA	PFBS	PFBA	PFHxS	PFHxA	HRI
8/17/2022	0.00000	0.00000	0.00000	0.00180	0.00000	0.00000	0.00
9/8/2022	0.00000	0.00000	0.00000	0.00210	0.00000	0.00000	0.00



HRI Average
0.00

	PFOS	PFOA	PFBS	PFBA	PFHxS	PFHxA	HRI
8/17/2022	0.00000	0.00000	0.00013	0.00240	0.00000	0.00000	0.00
9/8/2022	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00



HRI Average
0.02

	PFOS	PFOA	PFBS	PFBA	PFHxS	PFHxA	HRI
8/17/2022	0.00000	0.00026	0.00130	0.00980	0.00023	0.00027	0.03
9/8/2022	0.00000	0.00000	0.00120	0.00940	0.00000	0.00110	0.02

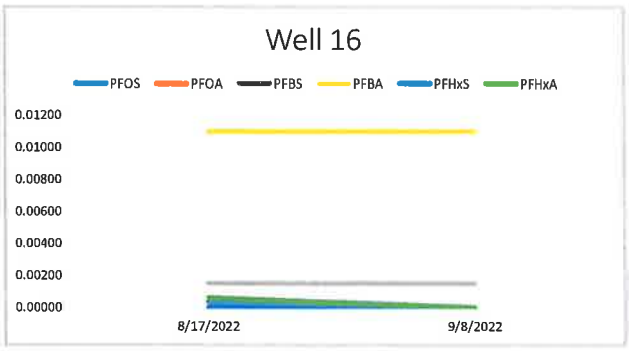
All values are in µg/L
A value of 0.00000 indicates that a compound is below detection.

PFAS Testing of Minnesota Community Water Systems

https://tinyurl.com/PFAS-MDH

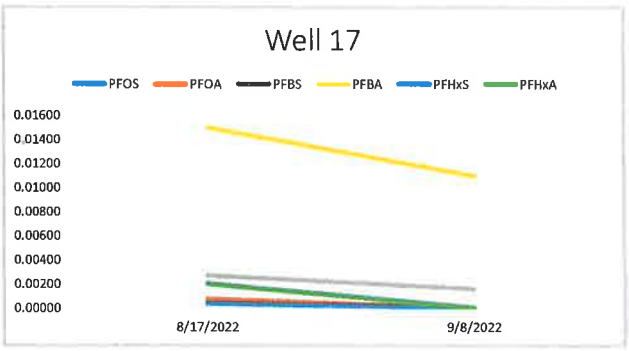
MDH - (651) 201-4562

Minnesota Department of Health
PFAS Testing Results



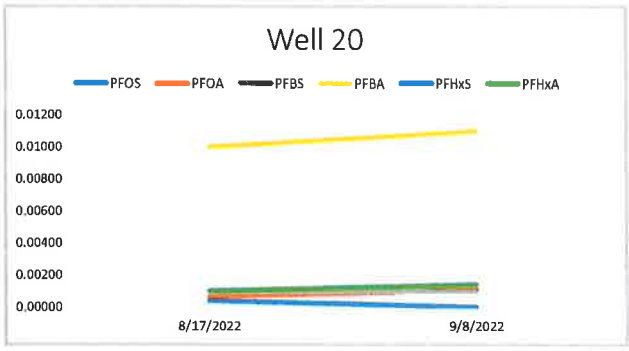
HRI Average
0.03

	PFOS	PFOA	PFBS	PFBA	PFHxS	PFHxA	HRI
8/17/2022	0.00000	0.00037	0.00150	0.01100	0.00031	0.00061	0.04
9/8/2022	0.00000	0.00000	0.00150	0.01100	0.00000	0.00000	0.02



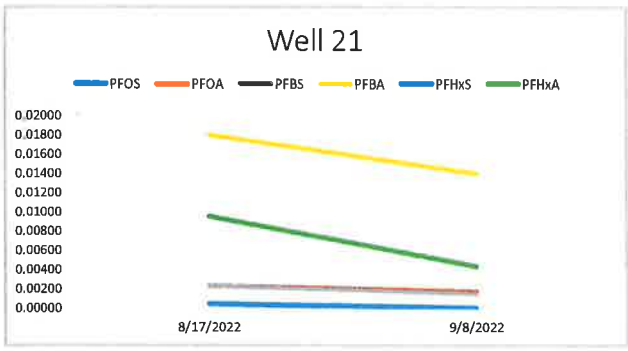
HRI Average
0.06

	PFOS	PFOA	PFBS	PFBA	PFHxS	PFHxA	HRI
8/17/2022	0.00038	0.00076	0.00270	0.01500	0.00039	0.00200	0.09
9/8/2022	0.00000	0.00000	0.00160	0.01100	0.00000	0.00000	0.02



HRI Average
0.06

	PFOS	PFOA	PFBS	PFBA	PFHxS	PFHxA	HRI
8/17/2022	0.00039	0.00069	0.00100	0.01000	0.00039	0.00100	0.07
9/8/2022	0.00000	0.00110	0.00100	0.01100	0.00000	0.00140	0.05



HRI Average
0.13

	PFOS	PFOA	PFBS	PFBA	PFHxS	PFHxA	HRI
8/17/2022	0.00043	0.00230	0.00230	0.01800	0.00041	0.00950	0.18
9/8/2022	0.00000	0.00170	0.00150	0.01400	0.00000	0.00430	0.09

All values are in µg/L
A value of 0.00000 indicates that a compound is below detection.

PFAS Testing of Minnesota Community Water Systems

https://tinyurl.com/PFAS-MDH

DEPARTMENT OF HEALTH

PFBS and Drinking Water

PFBS

Perfluorobutane sulfonate (PFBS) is one of a group of related chemicals known as per- and polyfluoroalkyl substances (PFAS). This group of chemicals is commonly used in non-stick and stain-resistant consumer products, food packaging, fire-fighting foam, and industrial processes.

PFBS has been used as a surfactant in industrial processes and in water-resistant or stain-resistant coatings on consumer products such as fabrics, carpets, and paper.[1,2] The 3M Company has been a major manufacturer of PFBS and products containing PFBS.

PFBS in Minnesota Waters

The Minnesota Pollution Control Agency (MPCA) has detected PFBS in Minnesota rivers that have been tested for PFAS. Most test locations were downstream from towns or cities and may be influenced by wastewater discharged into the river.[3,4,5]

PFBS has been detected in private drinking water wells and public drinking water systems in several parts of Minnesota where known industrial use or disposal of PFBS occurred in the past. PFBS has been detected in sources of public drinking water at levels up to 0.3 µg/L*.[6] MDH and MPCA routinely sample affected areas for PFBS and related chemicals.

*One microgram per liter (µg/L) is the same as one part per billion (ppb).

MDH Guidance Value

Based on available information, MDH developed a guidance value of 0.1 ppb for PFBS in drinking water. MDH guidance values are developed to protect people who are most vulnerable to the potentially harmful effects of a contaminant. MDH does not use guidance values to regulate water quality, but they may be useful for situations in which no regulations exist. A person drinking water at or below the guidance value would be at little or no risk for harmful health effects.

Potential Health Effects

In laboratory animal studies, effects of PFBS exposure included developmental effects (e.g., lower body weight, delayed development) and female reproductive effects in offspring of mothers exposed during pregnancy as well as changes in thyroid hormone levels and cellular changes to the kidneys. Studies of health effects from PFBS exposure in people are lacking.

Potential Exposure to PFBS

You can be exposed to PFBS if you use products containing PFBS or treated with stain-resistant coatings containing PFBS. PFBS is more easily eliminated from the body than some PFAS, such as PFOA and PFOS. As a result, the build-up in the body over time is much lower.

For people living in areas affected by PFAS release or disposal, drinking water may be a major source of PFBS exposure. Reverse osmosis and activated carbon filter treatment systems can reduce the levels of PFBS in drinking water in your home.

PFBS in the Environment

PFBS is persistent in the environment, meaning it does not break down easily in soil or water. Like other PFAS, PFBS can enter groundwater and move with the flow of groundwater, but it can also bind to soil and sediment.

Health Risk Assessment Unit

The MDH Health Risk Assessment Unit evaluates the health risks from contaminants in drinking water sources and develops health-based guidance values for drinking water. MDH works in collaboration with the Minnesota Pollution Control Agency and the Minnesota Department of Agriculture to understand the occurrence and environmental effects of contaminants in water.

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CLEAN WATER LAND & LEGACY AMENDMENT

MARCH 2022

To obtain this information in a different format, call: 651-201-4899.

Health Based Guidance for Water
Health Risk Assessment Unit, Environmental Health Division
651-201-4899

Web Publication Date: August 2020

Toxicological Summary for: Perfluorohexane sulfonate

CAS: 108427-53-8 (anion)
355-46-4 (acid)
3871-99-6 (potassium salt)

Synonyms: PFHxS; perfluorohexanesulfonic acid; 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluorohexane-1-sulfonate

Short-term, Subchronic and Chronic* Non-Cancer Health Based Value (nHBV) = 0.047 µg/L**

*Due to the highly bioaccumulative nature of PFHxS within the human body, serum concentrations are the most appropriate dose metric and the standard equation to derive the HBV is not appropriate. Short-term exposures have the potential to stay in the body for an extended period of time. In addition, accumulated maternal PFHxS is transferred to offspring (i.e., placental and breastmilk transfer). A single HBV has therefore been recommended for short-term, subchronic, and chronic durations. The HBV was derived using a toxicokinetic (TK) model previously developed by MDH (Goeden 2019). Model details and results are presented below.

**Relative Source Contribution (RSC): Using the most recent published biomonitoring results (CDC, accessed February 2019) and USEPA's Exposure Decision Tree (USEPA 2000) as outlined in MDH 2008, Section IV.E.1., an RSC of 0.5 (50%) was selected for the peak serum concentration during infancy. The RSC of 0.5 during infancy resulted in chronic (steady-state) serum concentrations at approximately 0.2 of the 'reference' serum concentration.

Intake Rate: In keeping with MDH's peer-reviewed and promulgated methodology, 95th percentile water intake rates (Table 3-1, 3-3 and 3-5, USEPA 2019) or upper percentile breastmilk intake rates (Table 15-1, USEPA 2011) were used. Breastmilk concentrations were calculated by multiplying the maternal serum concentration by a PFHxS breastmilk transfer factor of 1.4%. For the breast-fed infant exposure scenario, a period of exclusive breastfeeding for one year was used as representative of a reasonable maximum exposure scenario. [Note: "exclusively breast-fed" intake rates refers to infants whose sole source of milk comes from human breastmilk, with no other milk substitutes (USEPA 2011, page 15-2).]

A simple equation is typically used to calculate HBVs at the part per billion level with results rounded to one significant digit. However, the toxicokinetic model used to derive the HBV for PFHxS showed that serum concentrations are impacted by changes in water concentrations at the part per trillion level. As a result, the HBV contains two digits.

Reference Dose/Concentration:	HED/Total UF = 0.00292/300 = 0.0000097 mg/kg-d (or 9.7 ng/kg-d) (adult Sprague Dawley rats). [The corresponding serum concentration is 32.4/300 = 0.108 µg/mL. Note: this serum concentration is inappropriate to use for individual or clinical assessment.***]
Source of toxicity value:	Determined by MDH in 2019
Point of Departure (POD):	32.4 µg/mL (or mg/L) serum concentration (male rats - NTP 2018, MDH modeled $BMDL_{20\%}$)

Dose Adjustment Factor (DAF):	Toxicokinetic Adjustment based on Chemical-Specific Clearance Rate = Volume of Distribution (L/kg) x (Ln2/Half-life, days) = 0.25 L/kg x (0.693/1935 days) = 0.000090 L/kg-day. (Half-life from Li et al 2018)
Human Equivalent Dose (HED):	POD x DAF = 32.4 mg/L x 0.000090 L/kg-d = 0.00292 mg/kg-d
Total uncertainty factor (UF):	300
Uncertainty factor allocation:	3 for interspecies differences (for toxicodynamics), 10 for intraspecies variability, and 10 for database uncertainty to address concerns regarding early life sensitivity to decreased thyroxine (T4) levels as well as lack of 2 generation or immunotoxicity studies.
Critical effect(s):	decreased free T4
Co-critical effect(s):	decreased free and total T4, triiodothyronine (T3), and changes in cholesterol levels and increased hepatic focal necrosis
Additivity endpoint(s):	Hepatic (Liver) System and Thyroid (E)

***The serum concentration is useful for informing public health policy and interpreting population-based exposure potential. This value is based on population-based parameters and should not be used for clinical assessment or for interpreting serum levels in individuals.

Toxicokinetic Model Description (Goeden 2019):

PFHxS is well absorbed and is not metabolized. Serum concentrations can be calculated from the dose and clearance rate using the following equation.

$$Serum\ Concentration\ \left(\frac{mg}{L}\right) = \frac{Dose\left(\frac{mg}{kg \cdot day}\right)}{Clearance\ Rate\left(\frac{L}{kg \cdot day}\right)}$$

Where:

Dose (mg/kg-day) = Water or Breastmilk Intake (L/kg-day) x Water or Breastmilk Concentration (mg/L)
and
Clearance (L/kg-day) = Volume of distribution (L/kg) x (Ln 2/human half-life, days)

Two exposure scenarios were evaluated: 1) an infant fed formula reconstituted with contaminated water starting at birth and continuing ingestion of contaminated water through life; and 2) an infant exclusively breast-fed for 12 months, followed by drinking contaminated water. In both scenarios the simulated individuals began life with a pre-existing body burden through placental transfer of PFHxS (maternal serum concentration x 70%) based on median cord to maternal serum concentration ratios reported in the literature. The serum concentration of the mother at delivery was assumed to be at steady-state and was calculated by using the equation above with a time-weighted 95th percentile intake from birth to 30 years of age (0.048 L/kg-d). During lactation a 95th percentile water intake rate

of 47 mL/kg-d and a body weight of 65.1 kg ((USEPA 2019), Table 3-3) was used to calculate daily maternal serum concentrations.

Consistent with MDH methodology, 95th percentile water intake and upper percentile breastmilk intake rates were used to simulate a reasonable maximum exposed individual. A PFHxS breastmilk transfer factor of 1.4%, based on average breastmilk to maternal serum concentration ratios reported in the literature, was used to calculate breastmilk concentration. According to the 2016 Breastfeeding Report Card (CDC, 2016), nearly 66 percent of mothers in Minnesota report breastfeeding at six months, dropping to 41% at twelve months. MDH chose to use the breastmilk intake rates for exclusively breastfed infants, as reported in USEPA 2011, for one year for the breast-fed infant scenario.

Daily post-elimination serum concentration was calculated as:

$$Serum\ Conc.\left(\frac{mg}{L}\right) = \left[Prev.\ day\ Serum\ Conc.\left(\frac{mg}{L}\right) + \frac{Today's\ Intake(mg)}{V_d\left(\frac{L}{kg}\right) \times BW(kg)}\right] \times e^{-k}$$

To maintain mass balance, daily maternal serum concentrations and loss-of-chemical via transfer to the infant as well as excretion represented by the clearance rate, were calculated.

Summary of Reasonable Maximum Exposure (RME) Scenario Model Parameters

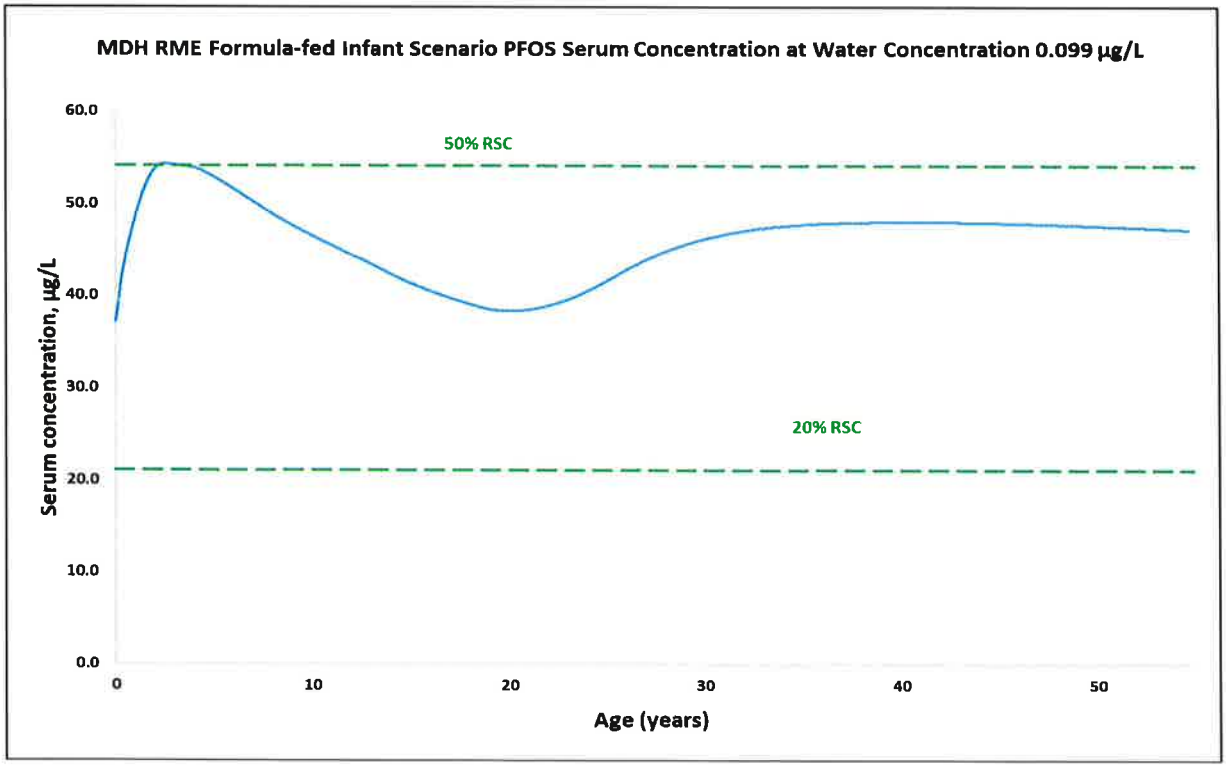
Model Parameter	Value Used
Volume of distribution (Vd)	0.25 L/kg (average of male (0.287) and female (0.213) nonhuman primate Vd, Sundstrom, 2012)
Vd Age Adjustment Factor	2.1 age 1-30 days decreasing to 1.2 age 5-10 years and 1.0 after age 10 years (Friis-Hansen 1961)
Half-life	1935 days (mean value for all ages, Li et al 2018) (5th to 95th percentile range: 1095 – 3358 days)
Elimination rate constant (k)	Calculated from Ln 2/half-life
Placental transfer factor *(% of maternal serum level)*	70% (mean of median paired maternal:cord blood ratios reported in the literature. Range of mean values 43 – 95%.) (Mean 95th percentile value 110%, range 69 – 168%.)
Breastmilk transfer factor *(% of maternal serum level)*	1.4% (mean of mean paired maternal serum:breastmilk ratios reported in the literature. Range of mean values 0.8 – 2%.) (No 95th percentile values reported in literature.)
Water Intake Rate (L/kg-d)	95th percentile consumers only (default values, MDH 2008) (Table 3-1 (for ages ≥ 2 yrs), 3-3 (for lactating women), and 3-5 (for ages < 2yr)) (USEPA 2019)
Breastmilk Intake Rate (L-kg-d)	Upper percentile exclusively breast-fed infants (Table 15-1, USEPA 2011)
Body weight (kg)	Calculated from water intake and breastmilk intake rate tables

A relative source contribution factor (RSC) is incorporated into the derivation of a health-based water guidance value to account for non-water exposures. MDH utilizes the Exposure Decision Tree process presented in USEPA 2000 to derive appropriate RSCs. Determination of an appropriate RSC must recognize the long elimination half-life of PFHxS, such that a person's serum concentration at any given age is not only the result of his or her current or recent exposures within the duration of concern, but also from exposure from years past.

Human biomonitoring data provide a quantitative description of the ongoing widespread exposure, but the serum data are not informative as to the specific pathways and exposure routes. The most recently reported 95th percentile serum concentrations from CDC (February 2019) range from 1.62 µg/L serum for young children to nearly 5 µg/L serum for older children and adults. This suggests that 'background' exposures, when compared to the 'reference' serum concentration (108 µg/L serum) would not represent significant sources of exposure. Using the most recent published biomonitoring results and USEPA's Exposure Decision Tree (USEPA 2000) as outlined in MDH 2008, an RSC of 0.5 (50%) was selected.

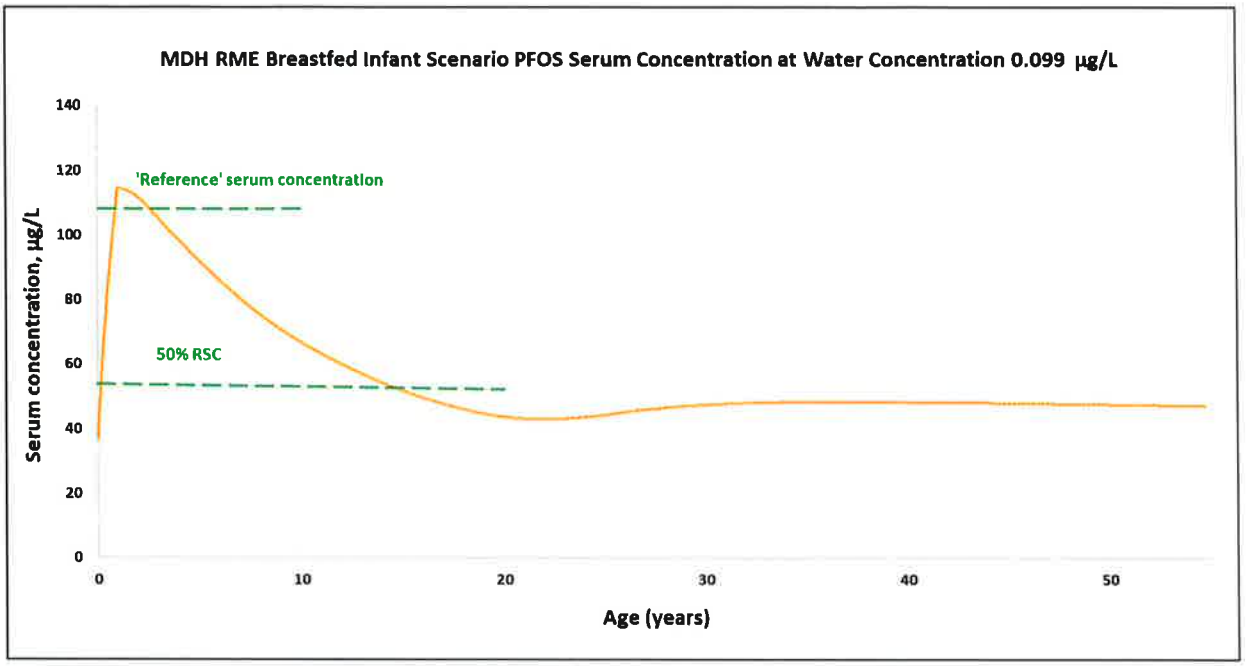
As mentioned above, two exposure scenarios were examined: 1) an infant fed formula reconstituted with PFHxS-contaminated water starting at birth and continuing ingestion of contaminated water throughout life; and 2) an infant exclusively breast-fed for 12 months, followed by drinking PFHxS-contaminated water throughout life. For the first scenario, the formula-fed infant, the water concentration that maintains a serum concentration attributable to drinking water at or below an RSC of 50% is 0.099 µg/L (Figure 1).

Figure 1. Exclusively formula-fed infant scenario serum concentrations over a lifetime, based on MDH's RME and an RSC of 50%.



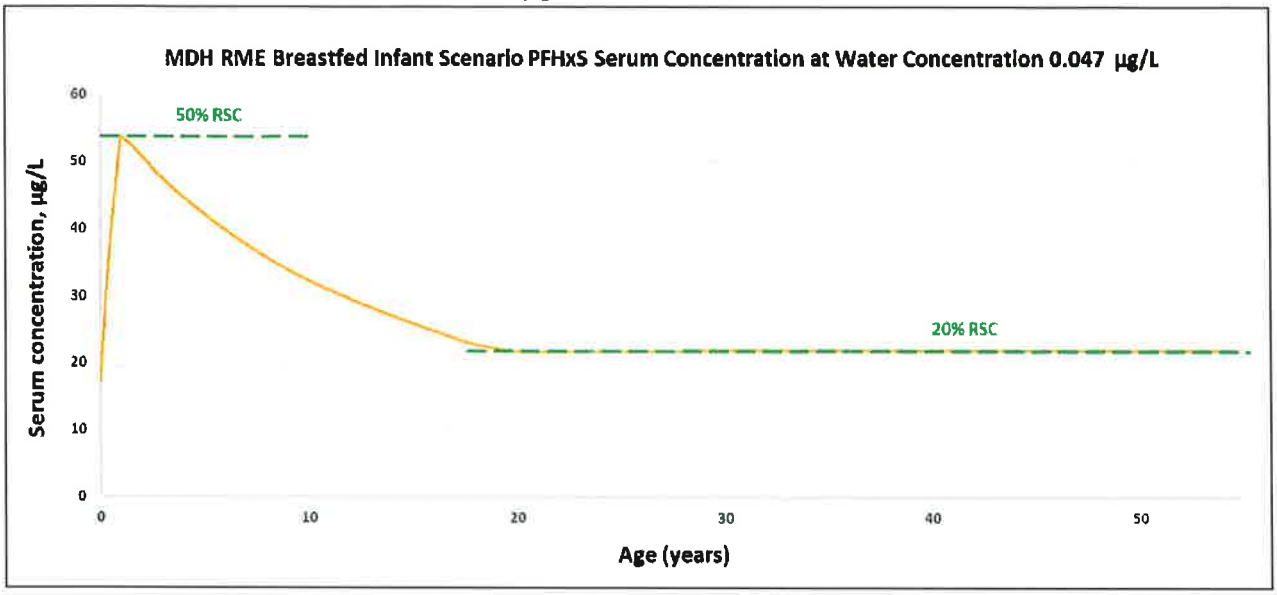
Applying this water concentration (0.099 µg/L) in the context of the breast-fed infant resulted in serum PFHxS concentrations exceeding the 'reference' serum concentration for nearly 2 years, and the 50% RSC threshold for nearly 14 years. See Figure 2.

Figure 2. Breast-fed infant scenario serum concentrations over a lifetime, based on MDH's RME and a water concentration of 0.099 µg/L.



In order to maintain serum concentrations at or below an RSC of 50% for breast-fed infants, the water concentration should not exceed 0.047 µg/L; see Figure 3. This water concentration also produces steady state serum concentrations at approximately 20% of the 'reference' serum concentration.

Figure 3. Exclusively breast-fed infant scenario serum concentrations over a lifetime, based on MDH's RME, and a water concentration of 0.047 µg/L.



To ensure protection of all segments of the population, the final health-based value for PFHxS is set at 0.047 µg/L.

Cancer Health Based Value (cHBV) = Not Applicable

Cancer classification:	Not Classified
Slope factor (SF):	Not Applicable
Source of cancer slope factor (SF):	Not Applicable
Tumor site(s):	Not Applicable

Volatile: Yes (moderate)

Summary of Guidance Value History:

MDH first reviewed PFHxS in 2009 and determined that there was insufficient data to derive a value. In 2013, MDH's Site Assessment and Consultation Unit began using the guidance value for PFOS as a surrogate to assess potential risks from exposure to PFHxS, in the absence of adequate chemical specific data. In 2018 additional toxicokinetic and toxicity information became available. In 2019, MDH derived a noncancer HBV (applicable to short-term, subchronic, and chronic durations) of 0.047 µg/L. In 2020 MDH incorporated updated water intake rates (US EPA 2019). Use of the updated intake rates did not result in changes to the 2018 value.

Summary of toxicity testing for health effects identified in the Health Standards Statute (144.0751):

Even if testing for a specific health effect was not conducted for this chemical, information about that effect might be available from studies conducted for other purposes. MDH has considered the following information in developing health protective guidance.

	Endocrine	Immunotoxicity	Development	Reproductive	Neurotoxicity
Tested for specific effect?	Yes	No	Yes	Yes	Yes
Effects observed?	Yes[1]	-[2]	No[3]	Yes[4]	No[5]

Comments on extent of testing or effects:

[1] Several human epidemiological studies have evaluated the possible association between serum PFHxS and alterations in thyroid hormone levels. Two studies found an association in women between serum PFHxS and thyroid hormone levels, however, other studies did not find this association. Two general population epidemiology studies have evaluated associations between PFHxS and reproductive hormones, finding no association.

Based on studies in laboratory animals, alterations in serum thyroid hormone levels, in particular thyroxine (T4), appear to be a sensitive effect. The POD is based on decreased serum T4 levels in adult male rats however, decreased serum T4 levels have also been reported in pregnant and lactating rats and pups. Unfortunately, serum PFHxS levels were not measured in pregnant or lactating rats or pups at the NOAEL and LOAEL dose levels, however, study results suggest that pups may be more sensitive than adult nonpregnant animals. A database uncertainty factor (DB UF) has been incorporated into the RfD derivation, in part, due to concerns that early life stages may be more sensitive.

Androgenic effects have also been evaluated in laboratory animals to a limited extent. No changes in adult male reproductive organ weights or sperm parameters were observed at serum levels up to ~600-fold higher than the 'reference' serum concentration. Androgenic activity was also evaluated in pups exposed in utero and through lactation. No significant effects were observed on anogenital distance, nipple retention, or reproductive organ weights at serum levels ~1300-fold higher than the 'reference' serum concentration.

[2] Several epidemiology studies have examined the potential association between PFHxS and suppression of the immune system. Inverse or no associations were observed in these studies. In general, available studies have not found an association between PFHxS and infectious disease resistance or with hypersensitivity outcomes.

Immunotoxicity has not been studied in laboratory animals. A DB UF has been incorporated into the RfD derivation, in part, to address this data gap.

[3] General population epidemiology studies have evaluated potential associations between maternal PFHxS and a variety of birth outcomes. A couple of studies have reported associations with birth weight or neurobehavioral outcome but others found no association.

Reproductive/developmental screening studies in rats and mice have not found treatment related changes in development outcome, including neurobehavioral effects, at serum levels ≥ ~900-fold higher than the 'reference' serum concentration. Neurobehavioral outcomes were also evaluated in a study using a single oral exposure to neonatal mice on postnatal day 10. No serum levels were measured and therefore, the results could not be quantitatively incorporated into MDH's assessment. No 2-generation study has been conducted. A DB UF has been incorporated into the RfD derivation, in part, to address this data gap.

[4] In general, epidemiology studies evaluating potential associations between PFHxS and reproductive measures have not found any associations. A small number of studies have reported associations with earlier menopause or time to pregnancy. However, since menstruation, childbirth, and lactation are potential elimination routes for women this could confound the associations.

Laboratory studies in rats did not find changes in reproductive parameters at serum levels ≥ ~1600-fold higher than the 'reference' serum concentration. A decrease in the number of pups per litter has been reported in mice, however the dose-response curve was flat and there was no difference in the number of pups born to the implant ratio. The 'reference' serum concentration is ~500-fold lower than the serum concentrations at which this effect occurs in mice, therefore the RfD is protective for this potential effect.

[5] Two epidemiology studies have evaluated association between PFHxS serum levels and self-reported memory loss or periods of confusion. One study reported a decrease in risk at the fifth quintile whereas the second study found no association.

Laboratory animal studies have evaluated neurotoxicity using the functional observation battery (FOB) and motor activity assessment. No effects were observed on adult rats and mice at serum concentrations ≥~600-fold higher than the 'reference' serum concentration. Potential neurological effects have also been evaluated in rat pups using these same evaluation tools. No effects were observed at serum concentrations up to ~800-fold higher than the 'reference' serum concentration. A neurotoxicity evaluation following a single oral dose to neonatal animals has also been conducted. See footnote #3 above.

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DEPARTMENT OF HEALTH

PFOS and Groundwater

PFOS

Perfluorooctane sulfonic acid (PFOS) is one of a group of related chemicals known as perfluorinated alkylated substances (PFAS). These are also called perfluorochemicals (PFCs). This group of chemicals is commonly used in a wide range of industrial processes and is found in many consumer products.

PFOS has been used in stain-resistant fabrics, fire-fighting foams, food packaging, and as a surfactant in industrial processes. The 3M Company was once a major manufacturer of PFOS and products containing PFOS, but production was phased out in 2002.[1] PFOS production has been phased out nationwide, but continues in other countries. Products containing PFOS may be imported into the United States.

PFOS in Minnesota Waters

PFOS has been detected in groundwater in private drinking water wells and public drinking water systems in several parts of Minnesota where known industrial use or disposal of PFOS occurred. PFOS has been detected in sources of public drinking water at levels up to 1.4 ppb.[2] MDH and MPCA routinely sample drinking water in affected areas for PFOS and other PFAS chemicals.

The Minnesota Pollution Control Agency (MPCA) has detected PFOS in surface waters around the state. PFOS has been detected in the Mississippi River in the Twin Cities metro area at levels up to 0.15 parts per billion (ppb).[3] Detections were more common at sites immediately downriver from an industrial facility with historical PFOS use or disposal.

MDH Guidance Value

Based on available information, MDH developed a guidance value of 0.015 ppb for PFOS in groundwater. A person drinking water at or below the guidance value would be at little or no risk for harmful health effects.

MDH does not use guidance values to regulate water quality, but they may be useful for situations in which no regulations exist. MDH develops guidance values to protect people who are most vulnerable to the potentially harmful effects of a contaminant, including those who may be exposed for long periods of time.

Potential Health Effects

Scientists continue to study health effects from PFOS and other PFAS in workers, people living in communities with PFOS in their drinking water, and the general public. In some studies, higher levels of PFOS in a person's body were associated with elevated cholesterol, changes to liver function, changes in thyroid hormone levels, and reduced immune response.

In laboratory animal studies, the most sensitive effects of PFOS exposure included reduced immune response and decreased hormone levels (thyroid) as well as developmental changes such as decreased body weight and changes in energy metabolism in young, developing animals. Changes in liver function and liver weight as well as adrenal gland weight and levels of associated hormones were observed in adult animals.

Potential Exposure to PFOS

Due to widespread use and persistence in the environment, almost everyone has a small amount of PFOS in their body, but this does not necessarily indicate a risk to your health. Large-scale biomonitoring programs show that PFOS levels in people's blood are declining.[4]

You can be exposed to PFOS through the use of consumer products, occupational exposure, eating contaminated food, or drinking contaminated water. PFOS can be present on food crops, in packaged food items, or in the fish people catch and eat. MDH provides guidelines for eating fish, including fish caught in areas affected by PFOS. Ingestion of household dust can also be a significant source of exposure, especially for infants and young children.

For people living in areas affected by PFAS releases or disposal, drinking water may be a major source of exposure. MDH and MPCA have studied a number of sites in Minnesota with known PFAS releases. For more information on those locations, please visit Perfluoroalkyl Substances (PFAS) Sites in Minnesota (https://www.health.state.mn.us/communities/environment/hazardous/topics/sites.html). If water is used to prepare infant formula by people living in affected areas, it should be prepared only with treated or bottled water. Reverse osmosis and activated carbon filter treatment systems can reduce the levels of PFOS in drinking water in your home. You may choose to use bottled water for drinking and cooking for a short time, but long-term bottled water use will be more expensive than installing a treatment system.

PFOS transfers from a mother to infant during pregnancy and to an infant through breastmilk. MDH recommends that women currently breastfeeding, and pregnant women who plan to breastfeed, continue to do so. Breastfeeding is important for the short and long term health of both a mother and infant and is recommended by doctors and other health professionals.

PFOS in the Environment

PFOS is persistent in the environment, meaning it does not break down easily in soil or water. How PFOS moves through soil is dependent on the makeup of the soil and its chemistry. In several areas of Minnesota, PFOS has moved into groundwater.

Health Risk Assessment Unit

The MDH Health Risk Assessment Unit evaluates the health risks from contaminants in drinking water sources and develops health-based guidance values for groundwater. MDH works in collaboration with the Minnesota Pollution Control Agency and the Minnesota Department of Agriculture to understand the occurrence and environmental effects of contaminants in water.

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CLEAN WATER LAND & LEGACY AMENDMENT

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DEPARTMENT OF HEALTH

Perfluorobutanoic acid (PFBA) and Water

PFBA

PFBA is one of a group of related chemicals known as per- and polyfluoroalkyl substances (PFAS). This group of chemicals is commonly used in non-stick and stain-resistant consumer products, food packaging, fire-fighting foam, and industrial processes.

PFBA is a breakdown product of other PFAS used in stain-resistant fabrics, paper food packaging, and carpets. PFBA was also used for manufacturing photographic film. The 3M Company was once a major manufacturer of PFBA and products containing PFBA but production was phased out in 1998.

PFBA in Minnesota Waters

The Minnesota Pollution Control Agency (MPCA) has detected PFBA in Minnesota rivers that have been tested for PFAS. Most test locations were downstream from towns or cities. PFBA was more commonly detected than other PFAS in those waters.[1,2]

PFBA has been detected in private drinking water wells and public drinking water systems in several parts of Minnesota where known industrial use or disposal of PFBA occurred in the past. PFBA has been detected in sources of public drinking water at levels up to 3.7 µg/L*.[3] MDH and MPCA routinely sample affected areas for PFBA and related chemicals.

*One microgram per liter (µg/L) is the same as one part per billion (ppb).

MDH Guidance Value

Based on available information, MDH developed a guidance value of 7 ppb for PFBA in drinking water. MDH guidance values are developed to protect people who are most vulnerable to the potentially harmful effects of a contaminant. MDH does not use guidance values to regulate water quality, but they may be useful for situations in which no regulations exist. MDH develops guidance values to protect people who are most vulnerable to the potentially harmful effects of a contaminant. A person drinking water at or below the guidance value would be at little or no risk for harmful health effects.

Potential Health Effects

In laboratory animal studies, exposure to high levels of PFBA resulted in thyroid and liver effects, such as increased thyroid and liver weight, changes in thyroid hormones, decreased cholesterol, and cellular changes in both organs. Other effects of PFBA exposure included delayed development and decreased red blood cells and hemoglobin. Studies of PFBA in people are lacking.

Potential Exposure to PFBA

PFBA has been detected in the blood of people exposed to PFAS, but is less common than other PFAS. The human body is able to eliminate PFBA faster than some other PFAS.[4]

For people living in areas affected by PFAS release or disposal, drinking water may be a major source of PFBA exposure. Reverse osmosis and activated carbon filter treatment systems can reduce the levels of PFBA in drinking water in your home.

PFBA in the Environment

While industrial production and use of PFBA has declined in recent years, PFBA can be formed in the environment as a breakdown product of related PFAS that are still in use. PFBA is persistent in the environment, meaning it does not break down easily in soil or water. PFBA more easily dissolves in water than other PFAS and does not stick to soil. This means it can move faster in the environment and may contaminate large areas of groundwater. In several large areas of Minnesota, PFBA has moved into groundwater over the course of many years.

Health Risk Assessment Unit

The MDH Health Risk Assessment Unit evaluates the health risks from contaminants in drinking water sources and develops health-based guidance values for drinking water. MDH works in collaboration with the Minnesota Pollution Control Agency and the Minnesota Department of Agriculture to understand the occurrence and environmental effects of contaminants in water.

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CLEAN WATER LAND & LEGACY AMENDMENT

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DEPARTMENT OF HEALTH

Health-Based Guidance for Water
Health Risk Assessment Unit, Environmental Health Division
651-201-4899

Web Publication Date: December 2021

Toxicological Summary for: Perfluorohexanoate

CAS: **92612-52-7 (anion)**
307-24-4 (free acid)
21615-47-4 (ammonium salt)
2923-26-4 (sodium salt)

Synonyms: PFHxA; Perfluorohexanoic acid

Acute Non-Cancer Health-Based Value ($nHBV_{Acute}$) = Not Derived (Insufficient Data)

Short-term Non-Cancer Health-Based Value ($nHBV_{Short\text{-}term}$) = 0.2 µg/L

$$\frac{\text{(Reference Dose, mg/kg-d) x (Relative Source Contribution) x (Conversion Factor)}}{\text{(Short-term Intake Rate, L/kg-d)}}$$

$$= \frac{\text{(0.00032 mg/kg-d) x (0.2)}^{*} \text{ x (1000 µg/mg)}}{\text{(0.290 L/kg-d)}^{**}}$$

= 0.22 rounded to **0.2 µg/L**

*MDH utilizes the EPA Exposure Decision Tree (EPA, 2000) to select appropriate RSCs. For PFHxA, an RSC of 0.2 was used for all exposure durations due to concerns about infant exposures from house dust and diet, potential exposures from the breakdown of precursor chemicals, and uncertainty about infant exposure levels.
**Intake Rate: MDH 2008, Section IV.E.1. and US EPA 2019, Exposure Factors Handbook, Tables 3-1, 3-3 and 3-5.

Reference Dose/Concentration:	HED/Total UF = 0.0958/300 = 0.00032 mg/kg-d (laboratory animal – SD rats)
Source of toxicity value:	Determined by MDH in 2021
Point of Departure (POD):	25.9 mg/kg-d (administered dose $BMDL_{1SD}$, NTP 2019)
Dose Adjustment Factor (DAF):	Chemical and Study-Specific Toxicokinetic Adjustment $Half\text{-}life_{MaleRat}/Half\text{-}life_{Human}$ = 2.87 hrs/ 768 hrs = 0.0037 (based on Dzierlenga et al 2020, for male rats, and Russell et al 2013, for humans)
Human Equivalent Dose (HED):	POD x DAF = 25.9 mg/kg-d x 0.0037 = 0.0958 mg/kg-d
Total uncertainty factor (UF):	300
Uncertainty factor allocation:	3 for interspecies differences (for toxicodynamics), 10 for intraspecies variability, and 10 for database uncertainty (e.g., lack of a 2-generation study, lack of thyroid hormone measurements or neurodevelopmental toxicity in young offspring in a development/reproductive study, and lack of immunotoxicity studies as well as evidence of pup body weight effects near the selected POD)

Critical effect(s):	Decreased total T4
Co-critical effect(s):	Decreased pup body weight
Additivity endpoint(s):	Developmental, Thyroid [E]

Subchronic Non-Cancer Health-Based Value ($nHBV_{Subchronic}$) = $nHBV_{Short\text{-}term}$ = 0.2 µg/L

$$\frac{\text{(Reference Dose, mg/kg-d) x (Relative Source Contribution) x (Conversion Factor)}}{\text{(Subchronic Intake Rate, L/kg-d)}}$$

$$= \frac{\text{(0.00015 mg/kg-d) x (0.2)}^{*} \text{ x (1000 µg/mg)}}{\text{(0.074 L/kg-d)}^{**}}$$

= 0.405 rounded to 0.4 µg/L

*Relative Source Contribution: MDH 2008, Section IV.E.1.
**Intake Rate: MDH 2008, Section IV.E.1. and US EPA 2019, Exposure Factors Handbook, Tables 3-1, 3-3 and 3-5.

Reference Dose/Concentration:	HED/Total UF = 0.045/300 = 0.00015 mg/kg-d (laboratory animal – SD rats)
Source of toxicity value:	Determined by MDH in 2021
Point of Departure (POD):	22.5 mg/kg-d (administered dose $BMDL_{10\%}$, Loveless et al 2009)
Dose Adjustment Factor (DAF):	Chemical and Study-Specific Toxicokinetic Adjustment $Half\text{-}life_{MaleRat}/Half\text{-}life_{Human}$ = 1.5 hrs/ 768 hrs = 0.0020 (based on Gannon et al 2011, for male rats, and Russell et al 2013, for humans)
Human Equivalent Dose (HED):	POD x DAF = 22.5 mg/kg-d x 0.0020 = 0.045 mg/kg-d
Total uncertainty factor (UF):	300
Uncertainty factor allocation:	3 for interspecies differences (for toxicodynamics), 10 for intraspecies variability, and 10 for database uncertainty (e.g., lack of a 2-generation study, lack of thyroid hormone measurements or neurodevelopmental toxicity in young offspring in a development/reproductive study, and lack of immunotoxicity studies as well as evidence of pup body weight effects near the selected POD)
Critical effect(s):	Nasal epithelium degeneration
Co-critical effect(s):	Decreased bilirubin
Additivity endpoint(s):	Hepatic (liver) system, Respiratory system

The Subchronic nHBV must be protective of shorter duration exposures that occur within the subchronic period and therefore, the Subchronic nHBV is set equal to the Short-term nHBV of 0.2 µg/L. Additivity endpoints: Developmental, Thyroid [E]

Chronic Non-Cancer Health-Based Value ($nHBV_{Chronic}$) = $nHBV_{Short\text{-}term}$ = 0.2 µg/L

$$\frac{\text{(Reference Dose, mg/kg-d) x (Relative Source Contribution) x (Conversion Factor)}}{\text{(Chronic Intake Rate, L/kg-d)}}$$

$$= \frac{\text{(0.00015 mg/kg-d)}^{***} \text{ x (0.2)}^{*} \text{ x (1000 µg/mg)}}{\text{(0.045 L/kg-d)}^{**}}$$

= 0.67 rounded to 0.7 µg/L

*Relative Source Contribution: MDH 2008, Section IV.E.1.
**Intake Rate: MDH 2008, Section IV.E.1. and US EPA 2019, Exposure Factors Handbook, Tables 3-1, 3-3 and 3-5.

***Reference Dose/Concentration: The calculated Chronic RfD was higher in magnitude than the Subchronic RfD. Therefore, the Chronic RfD is set to the Subchronic RfD, see information above for details on the RfD derivation.

The Chronic nHBV must be protective of shorter duration exposures that occur within the chronic period and therefore, the Chronic nHBV is set equal to the Short-term nHBV of 0.2 µg/L. Additivity endpoints: Developmental, Thyroid [E]

Cancer Health-Based Value (cHBV) = Not Applicable

Volatile: Nonvolatile

Summary of Guidance Value History:
There are no previous guidance values for PFHxA. The 2021 derived values represent new guidance.

Additional Information on the MDH TK model (Goeden et al., 2019):
PFHxA water guidance was calculated using MDH's standard equations shown above. The Goeden et al. (2019) toxicokinetic model previously used to calculate guidance for PFOA, PFOS, and PFHxS was evaluated during this review because PFHxA crosses the placenta and is found in breastmilk. The toxicokinetic data that the model requires are quite limited for PFHxA (e.g., no information on breastmilk:maternal serum ratio, limited information on half-life). As a result, the model was not used quantitatively to derive PFHxA water guidance. However, the PFHxA modelling results, using the best available information for model parameters, indicate that water guidance of 0.2 µg/L developed using the standard equation is adequately protective.

Summary of toxicity testing for health effects identified in the Health Standards Statute (144.0751):
Even if testing for a specific health effect was not conducted for this chemical, information about that effect might be available from studies conducted for other purposes. MDH has considered the following information in developing health protective guidance.

	Endocrine	Immunotoxicity	Development	Reproductive	Neurotoxicity
Tested for specific effect?	Yes	No	Yes	Yes	Yes

	Endocrine	Immunotoxicity	Development	Reproductive	Neurotoxicity
Effects observed?	Yes[1]	-[2]	Yes[3]	Yes[4]	Yes[5]

Comments on extent of testing or effects:

[1]A significant positive correlation between PFHxA exposure and TGAb (thyroglobin antibodies) and TMAb (thyroid microsomal antibody) was reported in an epidemiological study. Short-term studies in adult laboratory animals identified decreased serum thyroid hormone levels. These effects form the basis of the short-term RfD. A database uncertainty factor (DB UF) was incorporated into the RfD derivation, in part, to address the lack of thyroid evaluations in developing animals. Thyroid cellular hypertrophy in adult animals was also reported, but at doses ~3,000-fold higher than the Subchronic/Chronic RfD.

[2] No immunotoxicity studies have been conducted. Three general toxicity studies reported decreased thymus weight at dose levels ≥5800-fold higher than the Subchronic/Chronic RfD. At slightly higher dose levels atrophy and necrosis in spleen and thymus as well as a depletion of lymph nodes were observed.

[3]Decreases in pup body weight and increased pup mortality have been reported. These effects were observed at levels ~1500-fold higher than the Subchronic/Chronic RfD. A database uncertainty factor (DB UF) was incorporated into the RfD derivation, in part, to address the lack of a two-generation study.

[4] Significant decreases in maternal body weight gain during gestation and complete litter loss were reported at doses >3,000-fold higher than the Subchronic/Chronic RfD. Decreases in sperm count and seminiferous tubule spermatid retention were reported at doses 25,000-fold higher than the Subchronic/Chronic RfD.

[5] Acute studies reported ataxia and abnormal gait at dose levels ~1,000-fold higher than the Subchronic/Chronic RfD. No neurological changes, based on functional observation battery and locomotor activity evaluations, were reported in adult rats following 90 days of exposure at levels up to ~5,000-fold higher than the Subchronic/Chronic RfD.

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DEPARTMENT OF HEALTH

PFOA and Water

PFOA

Perfluorooctanoic acid (PFOA) is one of a group of related chemicals known as perfluorinated alkylated substances (PFAS). This group of chemicals is commonly used in non-stick and stain-resistant consumer products, food packaging, fire-fighting foam, and industrial processes.

PFOA has been used to manufacture chemicals used in non-stick and stain-resistant coatings, fire-fighting foams, and as a surfactant in industrial processes. The 3M Company was once a major manufacturer of PFOA and products containing PFOA, but production was phased out in 2002.[1] PFOA production has been phased out nationwide but continues in other countries. Products containing PFOA may be imported into the United States.

PFOA in Minnesota Waters

The Minnesota Pollution Control Agency (MPCA) has detected PFOA in the Mississippi River in the Twin Cities metro area at levels up to 0.22 µg/L*.[2] Detections were more common at sites immediately downriver from an industrial facility with historical PFOA use or disposal.

PFOA has been detected in private drinking water wells and public drinking water systems in several parts of Minnesota. PFOA has been detected in sources of public drinking water at levels up to 1 µg/L.[3] MDH and MPCA routinely sample affected areas for PFOA and related chemicals.

*One microgram per liter (µg/L) is the same as one part per billion (ppb).

MDH Guidance Value

Based on available information, MDH developed a guidance value of 0.035 ppb for PFOA in drinking water. MDH does not use guidance values to regulate water quality, but they may be useful for situations in which no regulations exist. MDH guidance values are developed to protect people who are most vulnerable to the potentially harmful effects of a contaminant. A person drinking water at or below the guidance value would be at little or no risk for harmful health effects.

Potential Health Effects

Scientists are still studying whether PFOA causes health problems in workers, people living in communities with PFOA in their drinking water, and the general public. In some studies, higher levels of PFOA in a person's body were associated with higher cholesterol, changes to liver function, reduced immune response, thyroid disease, and increased kidney and testicular cancer.

In laboratory animal studies, effects of PFOA exposure included developmental changes such as delayed bone growth, delayed mammary gland development, and accelerated male sexual development. Other effects of PFOA exposure included changes to the liver, reduced immune response, decreases in thyroid hormone levels, and increased kidney weight. Increased incidence of Leydig cell tumors in the testes of male rats has been reported, but it is unclear whether this type of tumor is relevant to humans. Increased pancreatic tumors have also been observed in male rats. Based on studies in laboratory animals, MDH considers PFOA likely to be carcinogenic at high doses, but not lower doses. MDH considers the noncancer-based guidance value to be protective for potential cancer effects since it protects against the potential key events for tumor formation.

Potential Exposure to PFOA

Almost everyone is exposed to small amounts of PFOA, but this does not necessarily indicate a risk to your health. Large-scale biomonitoring programs show that PFOA levels in people's blood are declining.[4] For most people, the main route of exposure to PFOA is through the foods they eat. PFOA can be present on food crops due to environmental exposures and some food packaging may transfer PFOA to packaged food items. Ingestion of household dust can also be a significant route of exposure, especially for infants and young children.

For people living in areas affected by PFAS releases or disposal, drinking water may be a major source of exposure to PFOA. MDH and MPCA have studied a number of sites in Minnesota with known PFAS releases. For more information on those locations, please visit Perfluoroalkyl Substances (PFAS) in Minnesota (https://www.health.state.mn.us/communities/environment/hazardous/topics/sites.html). Reverse osmosis and activated carbon filter treatment systems can reduce the levels of PFOA in drinking water in your home. You may choose to use bottled water for drinking and cooking for a short time, but long-term bottled water use will be more expensive than installing a treatment system.

In addition to exposure from drinking formula mixed with contaminated water, PFOA can pass from a mother to infant during pregnancy and to an infant through breastmilk. Breastfeeding is important for the short and long term health of both a mother and infant. MDH recommends that women currently breastfeeding, and pregnant women who plan to breastfeed, continue to do so. Exclusive breastfeeding is recommended by doctors and other health professionals. If formula is used by those living in affected areas, it should be prepared only with treated or bottled water.

PFOA in the Environment

PFOA use has declined in recent years, so new releases of PFOA into the environment are rare. PFOA is persistent in the environment, meaning it does not break down easily in soil or water. How PFOA moves through soil is dependent on the makeup of the soil and its chemistry. In several large areas of Minnesota, PFOA has moved into groundwater over the course of many years. For more information, see Perfluoroalkyl Substances (PFAS) (https://www.health.state.mn.us/communities/environment/hazardous/topics/pfcs.html)

Health Risk Assessment Unit

The MDH Health Risk Assessment Unit evaluates the health risks from contaminants in drinking water sources and develops health-based guidance values for drinking water. MDH works in collaboration with the Minnesota Pollution Control Agency and the Minnesota Department of Agriculture to understand the occurrence and environmental effects of contaminants in water.

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Minnesota Department of Health
Health Risk Assessment Unit
health.risk@state.mn.us
www.health.state.mn.us

CLEAN WATER LAND & LEGACY AMENDMENT

APRIL 2022

To obtain this information in a different format, call: 651-201-4899.

Proposed As Consent Item 3h

Shakopee Public Utilities

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Main 952.445-1988 • Fax 952.445-7767
www.shakopeeutilities.com

TO: Greg Drent, General Manager

FROM: Lon R. Schemel, Water Superintendent

SUBJECT: DNR Water Appropriation Permit Increase

DATE: 12/28/2022

As of 12/27/2022, our water appropriation permit from the DNR was increased from 2.159 billion gallons to 2.252 billion gallons. This is our first increase since 2008. The closest we have gotten to our appropriation limit was 2021 with a pumpage of 2.080 billion gallons. 2022 is expected to barely break 2 billion gallons. Permit increases are by request and the amounts of the increases are defined in the Water Supply Plan that was submitted to DNR in October 2017.

Proposed As Consent Item 3i

SPU
Shakopee Public Utilities

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To: SPU Commissioners

From: Greg Drent, General Manager

Date: December 6, 2022

Subject: MMPA November Meeting Update

The Board of Directors of the Minnesota Municipal Power Agency (MMPA) met on November 22, 2022, at Chaska City Hall in Chaska, Minnesota and via videoconference.

The Board reviewed the Agency's financial and operating performance for October 2022.

It was announced that Fitch Ratings had upgraded MMPA's bond rating from A+ to AA-. Fitch cited MMPA's strong financial performance, competitive rates, and strong member credit quality as reasons for the upgrade.

The Board discussed the current business environment.

The Board discussed the status of renewable projects the Agency is pursuing.

It was reported that ten of 12 MMPA members have extended their power sales agreements with MMPA through 2060. The ten that have extended represent approximately 95% of MMPA's energy sales.

Customer penetration for the residential Clean Energy Choice program increased to 4.2%. There was an increase of 51 customers participating in the residential Clean Energy Choice program from September to October.

RESOLUTION #2023-01

A RESOLUTION ADJUSTING FEES APPLIED UNDER
THE WATER CAPACITY CHARGE (FKA WATER CONNECTION CHARGE)
POLICY RESOLUTION

WHEREAS, the Shakopee Public Utilities Commission operates and maintains the municipal water system of the City of Shakopee, such system consisting of a ("blended") complex of water production, treatment, storage, and delivery facilities interconnected across multiple service districts or pressure zones via a network of trunk and lateral watermains, and

WHEREAS, the water capacity charge fees are a component of water availability charges, and

WHEREAS, the fees established in Resolution #261, which Resolution established the Water Connection Charge Policy, and Resolution #902, which Resolution adjusted said fees, are intended to be adjusted on the first day of January each year, and

WHEREAS, the water capacity charge fees last were adjusted in 2021 by Resolution #2021-27 to $5,581.00 per equivalent SAC unit for all service, plus 13.0 cents per square foot for industrial use only, and

WHEREAS, the Shakopee Public Utilities Commission has received a report by Ehlers Public Finance Advisors dated December 3, 2020, and

WHEREAS, the Shakopee Public Utilities Commission determines an increase of 1% in the water capacity charge is warranted at this time to provide adequate funding for the planned water production, treatment and storage facilities necessary to serve developing properties with the Commission's standard of level "A" service (i.e. a robust, redundant, looped water supply and distribution system capable of supplying water safe for human consumption at adequate pressure for domestic and fire protection uses), and

WHEREAS, the Shakopee Public Utilities Commission determines water usage in multi-family residences is lower than single-family residences.

NOW THEREFORE, BE IT RESOLVED that the water capacity charge fees be increased effective immediately as follows:

> $5,637.00 per equivalent SAC unit for all service, plus 13.0 cents per square foot for industrial use only (equivalent SAC units to be computed according to the Metropolitan Council Availability Charge Criteria, but applied to all municipal water usage whether discharged to sewer or not).

BE IT FURTHER RESOLVED, that multi-family residential units be assigned a prorated equivalent unit of 0.80 for apartment units and 0.90 for townhome and condo units.

BE IT FURTHER RESOLVED, that future increases in the water capacity charge fees shall be based on the Ehlers Report until a further updated study is performed.

BE IT FURTHER RESOLVED, that the water capacity charges shall be applied to all water connections made to, or newly drawing water from, the City of Shakopee water system;

and that the capacity charges shall also be applied to all instances where increased water usage is indicated by an increase in SAC units or by other means, i.e., metering.

BE IT FURTHER RESOLVED, that the funds collected from the water capacity charges will be set aside by the Utility and used to pay for construction of water production, treatment and storage facilities.

BE IT FURTHER RESOLVED, that water availability shall not be granted until the acceptance by the Utility of payment of all standard water fees requisite by this resolution and by compliance with all other Shakopee Public Utilities Commission resolutions applicable to new services.

BE IT FURTHER RESOLVED, that in the case of large water users, specific authorization by Shakopee Public Utilities Commission is also a prerequisite to water availability.

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

Passed in regular session of the Shakopee Public Utilities Commission, this 3rd day of January 2023.

_____

Commission President: Kathi Mocol

ATTEST:

_____

Commission Secretary: Greg Drent

RESOLUTION #2023-02

A RESOLUTION CLARIFYING THE PROVISIONS OF
RESOLUTION #815 A RESOLUTION
AUTHORIZING AND ESTABLISHING A FEE
FOR THE EQUIVALENT LATERAL WATER MAIN PORTION
OF A TRUNK WATER MAIN PROJECT

WHEREAS, the Shakopee Public Utilities Commission adopted Resolution #815 on the 1st of August 2005, and;

WHEREAS, Resolution #815 established a policy to ensure that the fees for providing lateral water main installations are just and equitable, and;

WHEREAS, Resolution #815 resolved amongst other requirements "the (Lateral Water Main) fee shall be indexed on an annual basis" but did not specify what index to use.

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 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 using the US Department of Treasury Daily Long-Term Rate – LT COMPOSITE (>10yrs.) 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.

4. The lateral water main fees established by all resolutions pre-dating this resolution shall be indexed beginning July 1, 2023 forward, providing a one-time opportunity to property owners for their original established fee to be paid without adjustment provided it is paid in full prior to July 1, 2023. After July 1, 2023 all lateral water main fees shall be adjusted using the index identified above from the time of adoption until the fees are fully paid.

Passed in regular session of the Shakopee Public Utilities Commission, this 3rd day of January, 2023.

_____

Commission President: Kathi Mocol

ATTEST:

_____

Commission Secretary: Greg Drent

COPY

RESOLUTION #815

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 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 1st day of August, 2005.

John Engler
Commission President: John Engler

ATTEST:
Kent Archerd
Commission Secretary: Kent Archerd

Shakopee Public Utilities

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DATE: December 27, 2022

TO: Commissioners

FROM: Greg Drent, General Manager

Subject: Organization chart Version 9

BACKGROUND:

As Shakopee Public Utilities continues to grow and evolve as an organization, we continue to consider new ways to serve our customers. SPU currently has an engineering technician position opening, and there have been some struggles in filling this position. To date, we have only received two applicants, and neither of these candidates would be a good fit for SPU. Joe Adams and I have met to discuss our options for filling this position and how we can continue strengthening our internal processes in the planning and engineering department.

SPU has done a great job having electrical engineers on staff; however, up until now, we have yet to consider what the organization would look like with a civil engineer on staff at SPU. A civil engineer on staff would expand support from the engineering department to the water department and assist in water infrastructure needs. Joe and I discussed how hiring a civil engineer versus an engineering technician at this time could support SPU and its customers. A civil engineer on staff can support the planning and engineering director to ensure all the requirements are met while also assisting with designing the water system. Many requirements are in place to keep the SPU water system safe and robust; having another engineer on staff will make this even better. Our CIP includes new wells, an elevated storage tank, and infrastructure needs. A civil engineer on staff can save SPU money while working on these projects and keeping them moving forward efficiently. As we evaluate the need for water treatment in the future, we continue to look at planning and developing new raw water lines to multiple treatment sites. These efforts will take time, either with a consultant or mostly in-house if approved by the commission.

The current engineering supervisor, a degreed electrical engineer, oversees and reviews both water and electric projects. Because of the continual growth in Shakopee and the improvements that SPU is currently making to the system with the AMI project scheduled to start next year, some additional responsibilities and requirements have been added to the engineering department and the engineering supervisor. Some extra work includes circuit analysis, transformer loading, and proper system protections. SPU will have separate electric and water engineering supervisors if the proposed organizational chart is approved. With this change, SPU will have more time to complete these projects and save money on outside consultant expenses.

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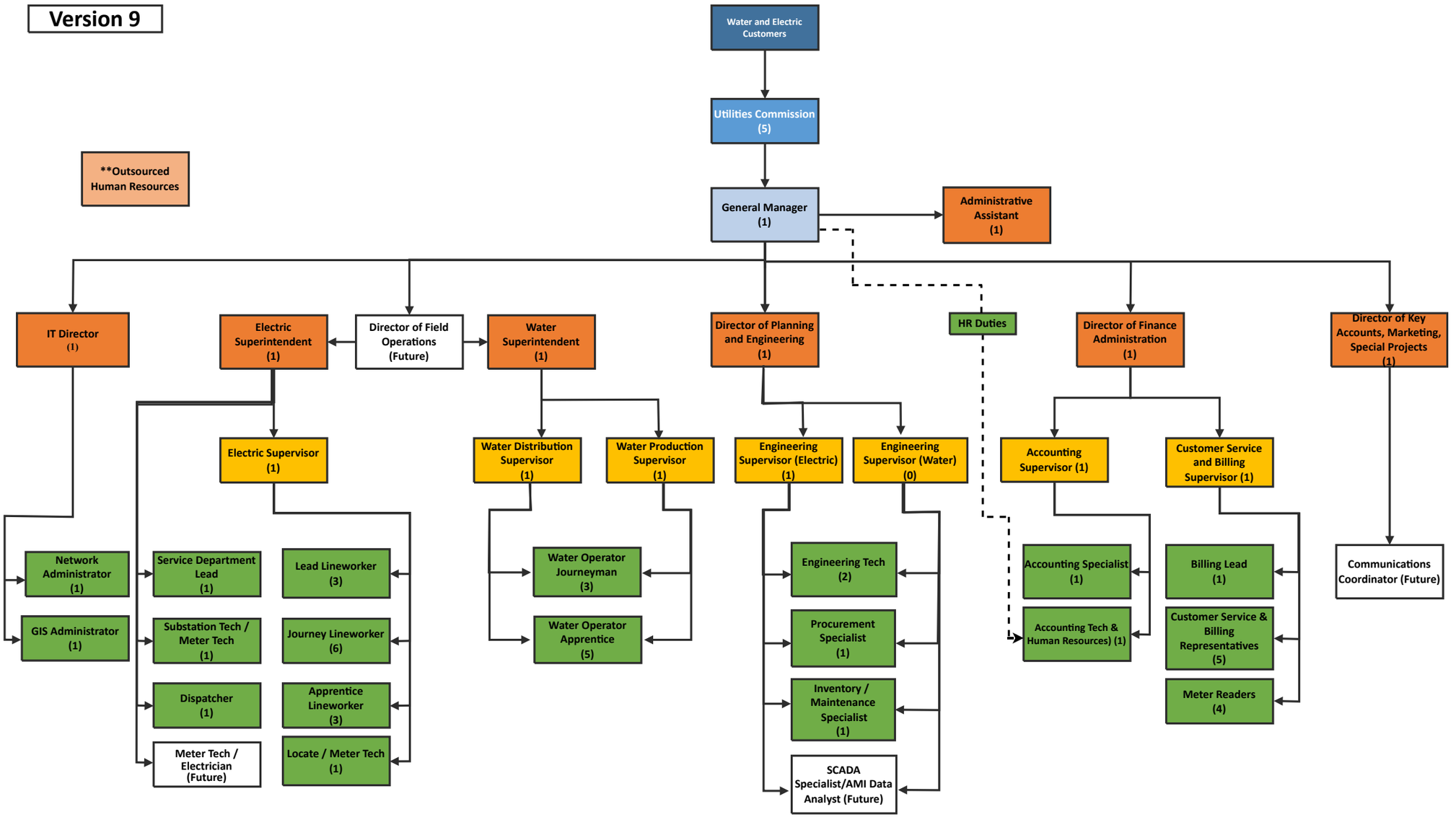
As the GM, I have also begun looking at succession planning and feel this is a significant step for strengthening the utility for the future.

There is no budget impact with the change to the organizational chart and new position. Most of the salary will be covered by not filling the engineering technician position at this time, and the difference will be covered by postponing the hiring of the director of field operations.

Attached is the proposed org chart
Attached is the job description for an engineering supervisor (Water).
Attached is the job description for the engineering supervisor (Electric)

Recommendation:

Approve SPU version 9 Organization Chart.


Version 9
Water and Electric Customers
Utilities Commission (5)
**Outsourced Human Resources
General Manager (1)
Administrative Assistant (1)
IT Director (1)
Electric Superintendent (1)
Director of Field Operations (Future)
Water Superintendent (1)
Director of Planning and Engineering (1)
HR Duties
Director of Finance Administration (1)
Director of Key Accounts, Marketing, Special Projects (1)
Electric Supervisor (1)
Water Distribution Supervisor (1)
Water Production Supervisor (1)
Engineering Supervisor (Electric) (1)
Engineering Supervisor (Water) (0)
Accounting Supervisor (1)
Customer Service and Billing Supervisor (1)
Network Administrator (1)
GIS Administrator (1)
Service Department Lead (1)
Substation Tech / Meter Tech (1)
Dispatcher (1)
Meter Tech / Electrician (Future)
Lead Lineworker (3)
Journey Lineworker (6)
Apprentice Lineworker (3)
Locate / Meter Tech (1)
Water Operator Journeyman (3)
Water Operator Apprentice (5)
Engineering Tech (2)
Procurement Specialist (1)
Inventory / Maintenance Specialist (1)
SCADA Specialist/AMI Data Analyst (Future)
Accounting Specialist (1)
Accounting Tech & Human Resources) (1)
Billing Lead (1)
Customer Service & Billing Representatives (5)
Meter Readers (4)
Communications Coordinator (Future)

SHAKOPEE PUBLIC UTILITIES
POSITION GUIDE

December 2022

Position Title: Engineering Supervisor (Electric)
FLSA Status: Exempt
Organizational Relationship:
Reports to: Director of Planning and Engineering
Supervises: Direct – Engineering Technicians, Purchasing Specialist, Inventory & Maintenance Specialist

Position Summary:
Under limited direction of the Director of Planning and Engineering, manages the construction and maintenance of the electric systems by providing engineering, design, and project management. Plays a critical role in partnering with the utility's management team in strategic decision making and operations to fulfill the utility's mission.

Essential Duties and Responsibilities:
- Manage system design of new electric systems including reviewing engineering specifications, sketches and supporting documents; overseeing or drafting plans and maps using computer-aided and manual drafting methods; preparing necessary engineering documents; confirming adherence to utility specifications and safety standards; and discussing and requesting approval of component design with the planning/engineering director and electric superintendent.
- Manage electric system construction projects including preparing and reviewing construction project estimates; drafting and filing easements; staking and surveying; assists with the permitting and scheduling process; tracking project status and inputting information into the project database; coordinating construction design and approval; providing liaison with developer and contractor management and engineering staff; managing engineering services contracts; approving completed construction work by inspecting system construction for compliance with design specifications and standards; review design-related project issues with the planning/engineering director; and approving payment of contractors and ensuring adherence to contract terms.
- Supervise Engineering Technicians to ensure quality of design work including reviewing project work of engineering technicians; ensuring updates to system mapping are submitted to IT; and assigned and completed; reviewing materials reporting from the field.
- Ensures completion of work orders including providing liaison with finance department to close out work orders upon job completion; maintain the work order system under the direction of the planning/engineering director.
- Maintain utility electrical system project documentation including filing proposed, in-progress and completed project plans, maps, and cost estimates in an orderly and timely manner; maintains the system projects database, and coordinate or review the modification of staking sheets or job layouts.
- Maintains technical knowledge including remaining current on modern engineering and drafting techniques; attending educational workshops; reviewing technical publications; and establishing professional networks.
- Contributes to team effort including serving as an integral part of the planning/engineering team; and providing support to the Director Planning and Engineering and other departments; and accomplishing related results as needed.
- Works closely with Planning & Engineering Director, Electric Superintendent and Electric Supervisor.
- Other duties as may be required.

Competencies:
Analytical – Synthesizes complex or diverse information. Collects and researches data. Uses intuition and experience to complement data. Designs workflows and procedures.

Project Management – Develops project plans. Coordinates projects. Communicates changes and progress. Completes projects on time and budget. Manages project team activities.
Leadership – Inspires and motivates others to perform well. Inspires respect and trust. Accepts feedback from others. Provides vision and inspiration to peers and subordinates. Gives appropriate recognition to others. Displays passion and optimism. Mobilizes others to fulfill the vision.

Managing People – Includes others in planning, decision-making, facilitating, and process improvement. Takes responsibility for subordinates' activities. Makes self-available to others. Provides regular performance feedback. Develops subordinates' skills and encourages growth. Fosters quality focus in others. Improves processes, products, and services.

Business Acumen – Understand business implications of decisions. Displays orientation to profitability. Aligns work with strategic goals.

Strategic Thinking – Develops strategies to achieve organizational goals. Understands organization's strengths & weaknesses. Identifies external threats and opportunities. Adapts strategy to changing conditions.

Results – Able to articulate and drive need for timely, high-quality results. Motivates by personal example of hard work, dedicated to results. Internally driven to achieve; sets high personal standards. Institutes systems to monitor progress, assure sustainable results. Anticipates, diagnoses, works through roadblocks. Continually seeks to improve work results and methods.

Qualifications:
To perform this job successfully, an individual must be able to perform each essential duty satisfactory. The requirements listed below are representative of the knowledge, skills, and/or abilities required. Reasonable accommodation may be made to enable individuals with disabilities to perform the essential functions.

Education: Bachelor's Degree in in Electric Engineering, or other related field.

Experience: Five (5) years of experience in engineering and project management preferably in an electric distribution system environment plus MN Professional Engineering License (PE); or eight (8) years' experience plus the EIT (Engineer in Training Certification) and ability to obtain MN Professional Engineering License within 1 year; or Ten (10) years of experience and ability to obtain EIT and PE within two (2) years.

Other: Familiarity with water utility production, storage and distribution systems, equipment, and American Water Works Association (A.W.W.A.) standards preferred. Effective written and verbal communication skills. Valid Minnesota Driver's License,

Position Essential Physical Requirements:
The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.
While performing the duties of this job, the employee is required to sit and/or stand more than 2/3 of the work day.

SHAKOPEE PUBLIC UTILITIES
POSITION GUIDE

December 2022

Position Title: Engineering Supervisor (Water)
FLSA Status: Exempt
Organizational Relationship:
Reports to: Director of Planning and Engineering
Supervises: Direct – Engineering Technicians, Purchasing Specialist, Inventory & Maintenance Specialist

Position Summary:
Under limited direction of the Director of Planning and Engineering, manages the construction and maintenance of the water systems by providing engineering, design, and project management. Plays a critical role in partnering with the utility's management team in strategic decision making and operations to fulfill the utility's mission.

Essential Duties and Responsibilities:
- Manage system design of new water systems including reviewing engineering specifications, sketches and supporting documents; overseeing or drafting plans and maps using computer-aided and manual drafting methods; preparing necessary engineering documents; confirming adherence to utility specifications and safety standards; and discussing and requesting approval of component design with the planning/engineering director, and water superintendent.
- Manage the water system construction projects including preparing and reviewing construction project estimates; drafting and filing easements; staking and surveying; assists with the permitting and scheduling process; tracking project status and inputting information into the project database; coordinating construction design and approval; providing liaison with developer and contractor management and engineering staff; managing engineering services contracts; approving completed construction work by inspecting system construction for compliance with design specifications and standards; review design-related project issues with the planning/engineering director; and approving payment of contractors and ensuring adherence to contract terms.
- Review and recommends approval of new public water main additions; checks to ensure adherence with SPU design criteria and all applicable fees are paid and manages trunk water main with oversizing policy applied.
- Review and recommends approval of private water services for Commercial/Industrial developments.
- Coordinates water infrastructure projects including new water supply wells; new pumphouses and control houses; new booster stations; new trunk water mains; new water treatment facilities; new water pressure tanks/towers; plus, replacement/retrofit of all the above.
- Supervise Engineering Technicians to ensure quality of design work including reviewing project work of engineering technicians; ensuring updates to system mapping are submitted to IT; and assigned and completed; reviewing materials reporting from the field.
- Ensures completion of work orders including providing liaison with finance department to close out work orders upon job completion; maintain the work order system under the direction of the planning/engineering director.
- Maintain utility water system project documentation including filing proposed, in-progress and completed project plans, maps, and cost estimates in an orderly and timely manner; maintains the system projects database, and coordinate or review the modification of staking sheets or job layouts.
- Maintains technical knowledge including remaining current on modern engineering and drafting techniques; attending educational workshops; reviewing technical publications; and establishing professional networks.
- Contributes to team effort including serving as an integral part of the planning/engineering team; and providing support to the Director Planning and Engineering and other departments; and accomplishing related results as needed.

- Works closely with Planning & Engineering Director, Water Distribution Supervisor, Water Production Supervisor and Water Superintendent.
- Other duties as may be required.

Competencies:
Analytical – Synthesizes complex or diverse information. Collects and researches data. Uses intuition and experience to complement data. Designs workflows and procedures.

Project Management – Develops project plans. Coordinates projects. Communicates changes and progress. Completes projects on time and budget. Manages project team activities.
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Managing People – Includes others in planning, decision-making, facilitating, and process improvement. Takes responsibility for subordinates' activities. Makes self-available to others. Provides regular performance feedback. Develops subordinates' skills and encourages growth. Fosters quality focus in others. Improves processes, products, and services.

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Strategic Thinking – Develops strategies to achieve organizational goals. Understands organization's strengths & weaknesses. Identifies external threats and opportunities. Adapts strategy to changing conditions.

Results – Able to articulate and drive need for timely, high-quality results. Motivates by personal example of hard work, dedicated to results. Internally driven to achieve; sets high personal standards. Institutes systems to monitor progress, assure sustainable results. Anticipates, diagnoses, works through roadblocks. Continually seeks to improve work results and methods.

Qualifications:
To perform this job successfully, an individual must be able to perform each essential duty satisfactory. The requirements listed below are representative of the knowledge, skills, and/or abilities required. Reasonable accommodation may be made to enable individuals with disabilities to perform the essential functions.

Education: Bachelor's Degree in in Civil Engineering, or other related field.

Experience: Five (5) years of experience in civil engineering and project management preferably in a water distribution system environment plus MN Professional Engineering License (PE); or eight (8) years' experience plus the EIT (Engineer in Training Certification) and ability to obtain MN Professional Engineering License within 1 year; or Ten (10) years of experience and ability to obtain EIT and PE within two (2) years.

Other: Familiarity with electric distribution utility systems, equipment, and standards preferred. Effective written and verbal communication skills. Valid Minnesota Driver's License,

Position Essential Physical Requirements:
The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.
While performing the duties of this job, the employee is required to sit and/or stand more than 2/3 of the work day.

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DATE: December 29, 2022

TO: Commissioners

FROM: Greg Drent, General Manager

Subject: 2023 Commission Meeting Schedule

Background:

At this time every year, we decide on the 2023 SPU Commission meeting schedule. It is easy to see while looking into 2023 that there are many projects currently underway, and SPU staff is feeling added pressure to manage day-to-day business processes, multiple projects, and preparation for two monthly commission meetings. A few ongoing projects that SPU staff is working on into 2023 are AMI, NISC finance and billing conversion, fiber network, security, West Substation, Pumphouse 23, elevated storage tank, and land purchases.

With all of this in mind, I propose that the commission consider having a hybrid approach for commission meetings, having one regular meeting per month on the first Monday of each month and four workshops throughout the year. The workshops would be scheduled on the third Monday of February, May, August, and November. In 2023 the workshop topics would include IT, Electric, Finance, and Water.

I contacted a few other municipalities and co-ops in the area to see how many commission/board meetings each had. Most other municipal utilities have one monthly meeting, including Elk River, Austin, Owatonna, Glencoe, New Ulm, Madelia, and Delano. Most co-ops have one monthly meeting, with some meetings every other month.

Regular commission meetings will be recorded and have minutes. Workshops are required to be open to the public. All meetings will be held on a Monday unless that day is an observed holiday for SPU; then, the meeting will be held on Tuesday.

Request:

Approve 2023 Commission meetings and workshops as follows:

Regular commission meetings will be held the first Monday of each month
Workshops will be the third Monday meeting of February, May, August, and November

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TO: Greg Drent, General Manager

FROM: Joseph D. Adams, Planning & Engineering Director

SUBJECT: Land Purchases Status

DATE: December 28, 2022

ISSUE

Staff would like to update the Utilities Commission on the current state of negotiations.

BACKGROUND

SPU is pursuing three properties for future facilities. Two of the properties are located along Eagle Creek Boulevard and are planned for a future water treatment plant site. The third site is along Hansen Avenue at Maras Street and is planned for a future electric substation.

DISCUSSION

Staff has received a counter proposal for the parcel located at 3650 Eagle Creek Boulevard. On the parcel located at 3690 Eagle Creek Boulevard staff has met twice with the city and their land use consultant to discuss a draft of the master plan for the parcel's eventual development. The master plan is expected to be completed sometime in January. Then the Commission's land appraiser will evaluate its effect on the land valuation report and make any necessary revisions.

Staff attended a review meeting by the local Technical Advisory Panel for the MN Wetland Conservation Act (WCA). Historical aerial photographs were reviewed and discussed during the meeting. A 1999 letter declaring no wetlands under the WCA on the subject parcel was discovered in the files by the city. This appears to put to rest the wetland concerns, although forms must be submitted for official determination as part of the development review process.

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RECOMMENDATIONS

Staff requests the Commission consider the terms of the counter proposal from the property owner at 3650 Eagle Creek Boulevard.

Staff will bring the master plan and the revised land valuation report for the parcel located at 3690 Eagle Creek Boulevard to the Commission at a future date.

For the substation site, staff would like to renew pursuit of a final purchase agreement with the property owner.

REQUESTED ACTION

The Commission may want to go into closed session under Minnesota Statutes, Section 13D.05, subdivision 3(c) to review confidential or protected nonpublic appraisal data and to develop or consider offers or counteroffers for the purchase of properties located at 3650 Eagle Creek Boulevard and 1462 Maras Street.