

Protecting, Maintaining and Improving the Health of All Minnesotans

To: Community Water Supply Owner/Operator

From: Community Water Supply Unit

Section of Drinking Water Protection

Subject: Sample Analysis Results for your Public Water Supply (PWS)

Your PWS is required by the Lead and Copper Rule of the Safe Drinking Water Act to monitor for Water Quality Parameters. Enclosed are the results of analyses performed on water samples collected from your PWS. These results must be kept in your files for a minimum of ten (10) years.

If you have any questions concerning these results, please contact Tareq Bastawisy at 651-368-1235, or your Department of Health district engineer.

Bemidji Eric Weller	218/308-2107	Rochester Kate Novy	507/206-2724
Duluth Jennifer Showers	320/223-7340	St. Cloud Hunter Blommer Collin Fetters	320/223-7339 320/470-8033
Fergus Falls Lucas Hoffman	218/332-5146	St. Paul	·
	210/332 3140	Lucas Martin	651/201-4144
Mankato Amy Lynch	507/344-2713	Brian Noma Andrew Karp	651/201-3971 320/428-5249
Marshall			
Kim Larsen	320/223-7330		



Final Report

Minnesota Department of Health Public Health Laboratory **Environmental Laboratory Section** 601 Robert St. N., P.O. Box 64899 St. Paul, MN 55164-0899 651-201-5300

PWSID:

1720006

System Name:

Henderson

City:

Henderson

Date Received:

11/14/23 08:29

Rep. Temp. (°C):

10.0

Program Code:

Type: B

Collector Name:

James Kroehler

Collector ID:

MDH Sample Number: 23K0625-01

Location ID: 00024

Sampling Point: D-001

Collect Date: 11/14/23

Collect Time: 07:00

Matrix: Drinking Water

Field Residual Chlorine Result: None

Field Fluoride Result: None

Field pH Result: 7.4

Field PO4 Result: None

Results were produced by the Minnesota Department of Health, except where noted.

General Chemistry Parameters

Analyte	Result	Reporting Limit	Units	Batch	Prepared	Analyzed	Init.	Method	Qualifiers
Orthophosphate Phosphate	1.27	0.015	mg/L	B3K0777	11/14/23 13:18	11/14/23 16:48	INB	EPA 365.1	
Phosphorus as Phosphate, Total	3.80	0.027	mg/L	B3K0987	11/27/23 12:31	11/28/23 11:39	JNO	EPA 365.1	D2

MDH Sample Number: 23K0625-02RE1

Location ID: 00025

Sampling Point: D-002

Collect Date: 11/14/23

Collect Time: 06:30 Matrix: Drinking Water Field Residual Chlorine Result: None

Field Fluoride Result: None

Field pH Result: 7.3 Field PO4 Result: None

Results were produced by the Minnesota Department of Health, except where noted.

General Chemistry Parameters

Analyte	Result	Reporting Limit	Units	Batch	Prepared	Analyzed	Init.	Method	Qualifiers
Phosphorus as Phosphate, Total	16.8	0.269	mg/L	B3K0987	11/27/23 12:31	11/28/23 12:51	JNO	EPA 365.1	D2

FINAL REPORT

Report ID: 12072023121936

Generated: 12/7/2023 12:19:33PM

Authorized by:

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Stefan Saravia, Environmental Laboratory Manager Public Health Laboratory, Minnesota Department of Health

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Final Report

Minnesota Department of Health Public Health Laboratory Environmental Laboratory Section 601 Robert St. N., P.O. Box 64899 St. Paul, MN 55164-0899 651-201-5300

PWSID: 1720006

MDH Sample Number: 23K0625-02RE3

Location ID: 00025

Collect Date: 11/14/23

Field Residual Chlorine Result: None

Sampling Point: D-002

Collect Time: 06:30 Matrix: Drinking Water Field Fluoride Result: None

Field pH Result: 7.3
Field PO4 Result: None

Results were produced by the Minnesota Department of Health, except where noted.

General Chemistry Parameters

Reporting Result Units Batch Prepared Analyzed Init. Method Qualifiers Analyte Limit B3K0777 11/14/23 13:18 11/14/23 18:24 INB EPA 365.1 Orthophosphate Phosphate 7.02 0.030 mg/L D2

MDH Sample Number: 23K0625-03

Location ID: 00026

Collect Date: 11/14/23

Field Residual Chlorine Result: None

Sampling Point: D-003

Collect Time: 06:45 Matrix: Drinking Water

Field Fluoride Result: None

.

Field pH Result: 7.4
Field PO4 Result: None

Results were produced by the Minnesota Department of Health, except where noted.

General Chemistry Parameters

Analyte	Result	Reporting Limit	Units	Batch	Prepared	Analyzed	Init.	Method	Qualifiers
Orthophosphate Phosphate	0.873	0.015	mg/L	B3K0777	11/14/23 13:18	11/14/23 16:52	INB	EPA 365.1	
Phosphorus as Phosphate, Total	1.26	0.027	ma/L	B3K0987	11/27/23 12:31	11/28/23 11:41	JNO	EPA 365.1	D2

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Final Report

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PWSID: 1720006

Batch B3K0777 - Orthophos	lts were produc						ini, exoopt ii			·	
										, <u> </u>	
Blank (B3K0777-BLK1)	•	Donastina		0-!!-		d: 11/14	/23 13:18 Analy2	zed: 11/1			
Analyte	Result	Reporting Limit	Units	Spike L e ve		%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Orthophosphate Phosphate	<	0.015	mg/L							INB	
•				•							
CS (D2V0777 DC4)											•
LCS (B3K0777-BS1)		Reporting		Spike		d: 11/14/	23 13:18 Analyz	ed: 11/14	1/23 16:47 RPD		
Analyte	Result	Limit	Units	Level		%REC	%REC Limits	RPD	Limit	Init.	Qualifiers
Orthophosphate Phosphate	1.52	0.015	· mg/L	1.5		101	90-110			INB	
Puplicate (B3K0777-DUP1)		Source: 23	K0625-01		Prenare	d• 11/14/1	23 13:18 Analyz	od: 11/1 <i>4</i>	122 48,40		
nalyte	Result	Reporting		Spike	Source	%REC	%REC Limits		RPD	lets.	O"5
rthophosphate Phosphate	1.24	<u>Limit</u> 0.015	Units mg/L	Level	Result 1.27	76REC	%REC LIMITS	RPD 2	Limit 10	Init.	Qualifiers
			_						10	IIID	
atrix Spike (B3K0777-MS2)		Source: 23	K0631-03		Prepare	i: 11/14/2	3 13:18 Analyze	ed: 11/14/	/23 17:01		
nalyte	Result	Reporting	Units	Spike	Source	%REC	%REC Limits	RPD	RPD	Init.	Qualifiers
rthophosphate Phosphate	3.45	<u>Limit</u> 0.015	mg/L	Level 1.5	Result 1.93	101	90-110	KFD	Limit	INB	Qualifiers
·									·		
atrix Spike (B3K0777-MS5)		Source: 23l	(0625-02F	RE3	Prepared	: 11/14/2	3 13:18 Analyze	d: 11/14/	23 18:25		
nalyte	Result	Reporting Limit	Units	Spike Level	Source	%REC	%REC Limits	RPD	RPD	init.	Qualifiers
thophosphate Phosphate	9.96	0.030	mg/L	3	Result 7.02	98	90-110	1112	Llmit	INB	D2
•											
atch B3K0987 - Phosphorus	, Total Prep		<u> </u>								
ank (B3K0987-BLK1)		_			D	44.07.00					
	F	Reporting		Spike	Source		3 12:31 Analyze	d: 11/28/2	23 11:16 RPD		
nalyte nosphorus as Phosphate, Total	Result	Limit	Units mg/l	Level	Result	%REC	%REC Limits	RPD	Limit	Init.	Qualifiers
ospilotus as Pilospilaie, lotai	<	0.009	mg/L							JNO	
				٠							
INAL REPORT	-	·	Report ID): 120720	2312193	3		Gener	ated: 12/7	7/2023 12	::19:33PM
Authorized by:	·					7	he results in this	report ap	ply only to	the samo	les analvzed
			This repo	ort must i	not be rep	roduced,	except in full, wit	hout the	written app	roval of th	e laboratory.
Gtfan Sarani											

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Minnesota Department of Health Public Health Laboratory Environmental Laboratory Section 601 Robert St. N., P.O. Box 64899 St. Paul, MN 55164-0899 651-201-5300

PWSID: 1720006

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LCS (B3K0987-BS1)					Prepare	d: 11/27/2	23 12:31 Analyz	ed: 11/28/	/23 11:17		
	Result	Reporting	Units	Spike	Source	%REC	%REC Limits	RPD	RPD	init.	Qualifiers
Analyte		LIIIII	mg/L	Level 0.6	Result	103	90-110	KPD	Limit		Qualificis
Phosphorus as Phosphate, Total	0.618	0.009	mg/L	0.0		(00	90-110		•	JNO	
Duplicate (B3K0987-DUP1)		Source: 23	K0469-01		Prepare	d: 11/27/2	23 12:31 Analyz	ed: 11/28/	23 11:19		
Analyte	Result	Reporting Limit	Units	Spike - Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Phosphorus as Phosphate, Total	1.67	0.027	mg/L	LCVCI	1.64			2	20	JNO	D2
Matrix Spike (B3K0987-MS1)	٠	Source: 23	K0469-02		Prepare	d: 11/27/2	3 12:31 Analyz	ed: 11/28/	23 11:21		
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Phosphorus as Phosphate, Total	3.56	0.027	mg/L	1.79	1.76	100	90-110		En HIS	JNO	D2
									•		
Matrix Spike (B3K0987-MS2)		Source: 23l	K0500-03		Prepare	1: 11/27/2	3 12:31 Analyze	ed: 11/28/	23 11:34		
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Phosphorus as Phosphate, Total	3.30	0.027	mg/L	1.79	1.43	104	90-110		ши	JNO	D2
· ·											
Data Coulifican and Daffalklana											
Data Qualifiers and Definitions					•						
	high conce	ntration of ta	rget analyt	e(s). Rep	oorting lin	nit has be	en raised.				
O2 Sample required dilution due to											
O2 Sample required dilution due to											
, .	·		·	٠							
Work Order Comments	· · ·						·				
Work Order Comments	· · · · · · · · · · · · · · · · · · ·										
Work Order Comments											
Work Order Comments	·			· 			<u> </u>				
Work Order Comments	· · · · · · · · · · · · · · · · · · ·										 .
Work Order Comments											
Work Order Comments											
Work Order Comments Samples were received in proper condition.			Report II						rated: 12/		

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Stefan Saravia, Environmental Laboratory Manager Public Health Laboratory, Minnesota Department of Health

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Minnesota Department of Health
Drinking Water Protection
Community Public Water Supply Section
625 Robert St. N.
St. Paul, MN 55155

Subject: Water Quality Parameters

Date: 12/19/2023

PWSID: 1720006

System Name: Henderson

The system is responsible for providing consistent orthophosphate residuals within the distribution system to maintain its corrosion control program. Currently, Henderson uses blended phosphate treatment for corrosion control and sequestration. Minnesota Department of Health (MDH) had recommended the system maintain a minimum orthophosphate residual level of 1.0 mg/L for optimal corrosion control treatment.

In the **previous quarter (Quarter 3)**, Henderson had an average orthophosphate residual of 2.02 mg/L, total phosphate level of 5.7 mg/L, and pH of 7.5.

In this **current quarter (Quarter 4)**, Henderson had an average orthophosphate residual of 3.05 mg/L, total phosphate level of 7.3 mg/L, and pH of 7.4.

It is to be noted, one of the sites (D-002), had drastically higher orthophosphate levels (7.02 mg/L) and the total phosphates exceeded the state standard of 10 mg/L (16.8 mg/L). MDH recommends the system to ensure the orthophosphate residual levels are consistent throughout the system and that the total phosphate levels remain below 10 mg/L to maintain the 10-state standard policy.

Please contact the Compliance Engineer with questions regarding corrosion control treatment and pre-notify them of any treatment modifications or changes. Thank you.

Tareq Bastawisy (Phone: 651-368-1235 | Email: tareq.bastawisy@state.mn.us)