



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 Michael Bourland at 651-201-5928, or your Department of Health district engineer.

Bemidji

Todd Johnson 218/308-2110

Eric Weller 218/308-2107

Duluth

Mike Luhrsen 218/302-6178

Fergus Falls

Lucas Hoffman 218/332-5146

Mankato

Amy Lynch 507/344-2713

Marshall

John Blomme 507/476-4238

Rochester

Kate Novy 507/206-2724

St. Cloud

Hunter Blommer 320/223-7339

Kim Larsen 320/223-7330

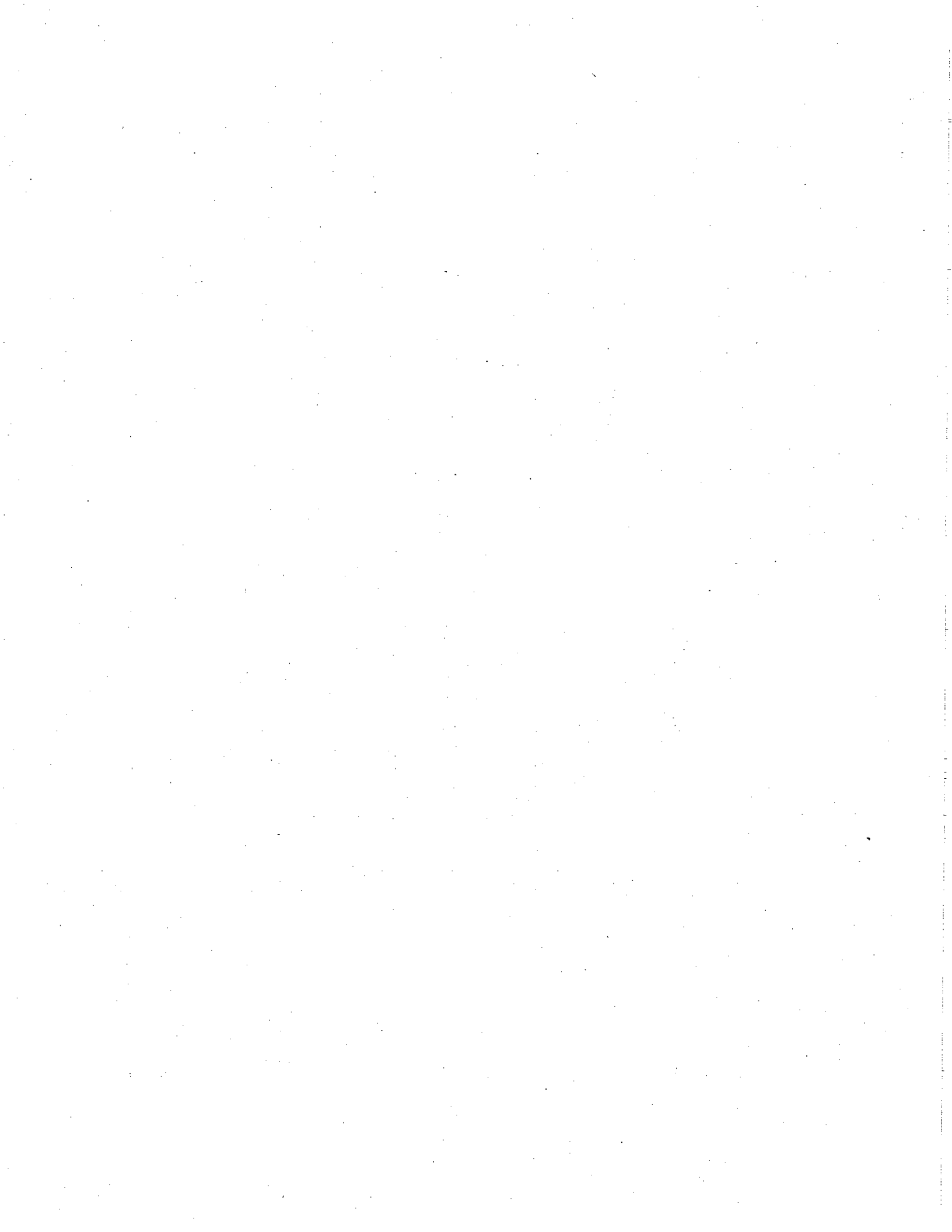
Jennifer Soltys 320/223-7340

St. Paul

Lucas Martin 651/201-4144

Brian Noma 651/201-3971

Jessie Kolar 651/201-4562





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

Program Code: HZ

Type: B

Date Received: 03/29/23 09:21
Rep. Temp. (°C): 3.9

Collector Name: James Kroehler
Collector ID: None

MDH Sample Number: 23C1305-01

Location ID: 00024
Sampling Point: D-001

Collect Date: 03/29/23
Collect Time: 08:00
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
Orthophosphate Phosphate	0.786	0.015	mg/L	B3C0852	03/29/23 13:15	03/29/23 14:36	INB	EPA 365.1	
Phosphorus as Phosphate, Total	3.04	0.027	mg/L	B3D0643	04/05/23 08:33	04/06/23 11:10	JNO	EPA 365.1	D2

MDH Sample Number: 23C1305-02

Location ID: 00025
Sampling Point: D-002

Collect Date: 03/29/23
Collect Time: 08:10
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	0.945	0.015	mg/L	B3C0852	03/29/23 13:15	03/29/23 14:38	INB	EPA 365.1	
Phosphorus as Phosphate, Total	3.32	0.027	mg/L	B3D0643	04/05/23 08:33	04/06/23 11:11	JNO	EPA 365.1	D2

FINAL REPORT

Report ID: 04122023 93758

Generated: 4/12/2023 9:37:42AM

Authorized by:

*The results in this report apply only to the samples analyzed.
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Stefan Saravia, Environmental Laboratory Manager
Public Health Laboratory, Minnesota Department of Health



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: 23C1305-03

Location ID: 00026
Sampling Point: D-003

Collect Date: 03/29/23
Collect Time: 08:15
Matrix: Drinking Water

Field Residual Chlorine Result: None
Field Fluoride Result: None
Field pH Result: 7.2
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	1.18	0.015	mg/L	B3C0852	03/29/23 13:15	03/29/23 14:39	INB	EPA 365.1	
Phosphorus as Phosphate, Total	3.99	0.027	mg/L	B3D0643	04/05/23 08:33	04/06/23 11:12	JNO	EPA 365.1	D2

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Public Health Laboratory, Minnesota Department of Health



Final Report

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 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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Batch B3C0852 - Orthophosphate Prep

Blank (B3C0852-BLK1)

Prepared: 03/29/23 13:15 Analyzed: 03/29/23 14:34

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Orthophosphate Phosphate	<	0.015	mg/L							INB	

LCS (B3C0852-BS1)

Prepared: 03/29/23 13:15 Analyzed: 03/29/23 14:35

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Orthophosphate Phosphate	1.52	0.015	mg/L	1.5		101	90-110			INB	

Duplicate (B3C0852-DUP1)

Source: 23C1305-01

Prepared: 03/29/23 13:15 Analyzed: 03/29/23 14:37

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Orthophosphate Phosphate	0.786	0.015	mg/L		0.786			0	10	INB	

Matrix Spike (B3C0852-MS1)

Source: 23C1305-02

Prepared: 03/29/23 13:15 Analyzed: 03/29/23 14:38

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Orthophosphate Phosphate	2.46	0.015	mg/L	1.5	0.945	101	90-110			INB	

Batch B3D0643 - Phosphorus, Total Prep

Blank (B3D0643-BLK1)

Prepared: 04/05/23 08:33 Analyzed: 04/06/23 10:58

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Phosphorus as Phosphate, Total	<	0.009	mg/L							JNO	

LCS (B3D0643-BS1)

Prepared: 04/05/23 08:33 Analyzed: 04/06/23 10:59

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Phosphorus as Phosphate, Total	0.642	0.009	mg/L	0.6		107	90-110			JNO	

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 Public Health Laboratory, Minnesota Department of Health

PWSID: 1720006

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Batch B3D0643 - Phosphorus, Total Prep

Duplicate (B3D0643-DUP1)		Source: 23C1257-01			Prepared: 04/05/23 08:33 Analyzed: 04/06/23 11:01						
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Phosphorus as Phosphate, Total	1.28	0.027	mg/L		1.25			2	20	JNO	D2

Matrix Spike (B3D0643-MS1)		Source: 23C1257-02			Prepared: 04/05/23 08:33 Analyzed: 04/06/23 11:03						
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Phosphorus as Phosphate, Total	3.09	0.027	mg/L	1.79	1.30	100	90-110			JNO	D2

Matrix Spike (B3D0643-MS2)		Source: 23D0043-02			Prepared: 04/05/23 08:33 Analyzed: 04/06/23 11:18						
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Phosphorus as Phosphate, Total	2.70	0.027	mg/L	1.79	0.866	103	90-110			JNO	D2

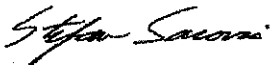
Data Qualifiers and Definitions

D2 Sample required dilution due to high concentration of target analyte(s). Reporting limit has been raised.

Work Order Comments

Samples were received in proper condition.

Authorized by:



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

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04/24/2023

PWSID 1720006

PWS NAME: Henderson

Subject: Water Quality Parameters

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

The most recent water quality parameter (WQP) results show an average orthophosphate level of 0.97 mg/L, and an average total phosphate level of 3.45 mg/L, and an average pH level of 7.3. Henderson should review and calibrate its chemical feed to increase its phosphate levels to meet the minimum recommendation throughout the distribution.

Please contact your Compliance Engineer, Michael Bourland at 651-201-5928 with questions on corrosion control treatment and pre-notify him of any treatment modifications or changes by emailing him at michael.bourland@state.mn.us

