



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: 07/26/2023

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** (05/10/23), Henderson had an average orthophosphate residual of 1.19 mg/L, total phosphate level of 3.49 mg/L, and pH of 7.6.

In this **current quarter**, Henderson had an average orthophosphate residual of 2.02 mg/L, total phosphate level of 5.7 mg/L, and pH of 7.5.

Currently, no further changes to the corrosion control treatment are needed for these parameters.

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)



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: 07/26/23 09:53
Rep. Temp. (°C): 8.1

Collector Name: James Kroehler
Collector ID: None

MDH Sample Number: 23G1710-01

Location ID: 00024
Sampling Point: D-001

Collect Date: 07/26/23
Collect Time: 08:00
Matrix: Drinking Water

Field Residual Chlorine Result: None
Field Fluoride Result: None
Field pH Result: 7.5
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	2.07	0.015	mg/L	B3G1580	07/26/23 13:37	07/26/23 15:59	INB	EPA 365.1	

MDH Sample Number: 23G1710-01RE1

Location ID: 00024
Sampling Point: D-001

Collect Date: 07/26/23
Collect Time: 08:00
Matrix: Drinking Water

Field Residual Chlorine Result: None
Field Fluoride Result: None
Field pH Result: 7.5
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	5.87	0.054	mg/L	B3H1493	08/17/23 09:53	08/18/23 12:43	JNO	EPA 365.1	D2

FINAL REPORT

Report ID: 08232023103414

Generated: 8/23/2023 10:33:51AM

Authorized by:

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

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PWSID: 1720006

MDH Sample Number: 23G1710-02

Location ID: 00025
 Sampling Point: D-002

Collect Date: 07/26/23
 Collect Time: 08:10
 Matrix: Drinking Water

Field Residual Chlorine Result: None
 Field Fluoride Result: None
 Field pH Result: 7.6
 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	2.06	0.015	mg/L	B3G1580	07/26/23 13:37	07/26/23 16:01	INB	EPA 365.1	

MDH Sample Number: 23G1710-02RE1

Location ID: 00025
 Sampling Point: D-002

Collect Date: 07/26/23
 Collect Time: 08:10
 Matrix: Drinking Water

Field Residual Chlorine Result: None
 Field Fluoride Result: None
 Field pH Result: 7.6
 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	5.64	0.054	mg/L	B3H1493	08/17/23 09:53	08/18/23 12:45	JNO	EPA 365.1	D2

MDH Sample Number: 23G1710-03

Location ID: 00026
 Sampling Point: D-003

Collect Date: 07/26/23
 Collect Time: 08:16
 Matrix: Drinking Water

Field Residual Chlorine Result: None
 Field Fluoride Result: None
 Field pH Result: 7.5
 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	1.93	0.015	mg/L	B3G1580	07/26/23 13:37	07/26/23 16:02	INB	EPA 365.1	

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PWSID: 1720006

MDH Sample Number: 23G1710-03RE1

Location ID: 00026
Sampling Point: D-003

Collect Date: 07/26/23
Collect Time: 08:16
Matrix: Drinking Water

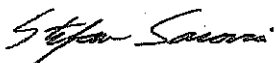
Field Residual Chlorine Result: None
Field Fluoride Result: None
Field pH Result: 7.5
Field PO₄ Result: None

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General Chemistry Parameters

Analyte	Result	Reporting Limit	Units	Batch	Prepared	Analyzed	Init.	Method	Qualifiers
Phosphorus as Phosphate, Total	5.59	0.054	mg/L	B3H1493	08/17/23 09:53	08/18/23 12:47	JNO	EPA 365.1	D2

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Batch B3G1580 - Orthophosphate Prep

Blank (B3G1580-BLK1) Prepared: 07/26/23 13:37 Analyzed: 07/26/23 15:56

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 (B3G1580-BS1) Prepared: 07/26/23 13:37 Analyzed: 07/26/23 15:57

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Orthophosphate Phosphate	1.59	0.015	mg/L	1.5		106	90-110			INB	

Duplicate (B3G1580-DUP1) Prepared: 07/26/23 13:37 Analyzed: 07/26/23 15:59
 Source: 23G1705-02

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Orthophosphate Phosphate	2.60	0.015	mg/L		2.60			0.1	10	INB	

Matrix Spike (B3G1580-MS1) Prepared: 07/26/23 13:37 Analyzed: 07/26/23 16:00
 Source: 23G1710-01

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Orthophosphate Phosphate	3.69	0.015	mg/L	1.5	2.07	108	90-110			INB	

Batch B3H1493 - Phosphorus, Total Prep

Blank (B3H1493-BLK1) Prepared: 08/17/23 09:53 Analyzed: 08/18/23 11:03

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 (B3H1493-BS1) Prepared: 08/17/23 09:53 Analyzed: 08/18/23 11:04

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Phosphorus as Phosphate, Total	0.627	0.009	mg/L	0.6		104	90-110			JNO	

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Batch B3H1493 - Phosphorus, Total Prep

Duplicate (B3H1493-DUP2) Source: 23G1710-01RE1 Prepared: 08/17/23 09:53 Analyzed: 08/18/23 12:44

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Phosphorus as Phosphate, Total	5.84	0.054	mg/L		5.87			0.6	20	JNO	D2

Matrix Spike (B3H1493-MS2) Source: 23H0024-01 Prepared: 08/17/23 09:53 Analyzed: 08/18/23 11:22

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Phosphorus as Phosphate, Total	2.73	0.027	mg/L	1.79	0.852	105	90-110			JNO	D2

Matrix Spike (B3H1493-MS3) Source: 23G1710-02RE1 Prepared: 08/17/23 09:53 Analyzed: 08/18/23 12:46

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Init.	Qualifiers
Phosphorus as Phosphate, Total	7.34	0.054	mg/L	1.79	5.64	95	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.

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