Protecting, maintaining and improving the health of all Minnesotans

April 29, 2021

Princeton Public Utilities Commission
907 First Street
P.O. Box 218
Princeton, Minnesota 55371

Gentlemen/Ladies:

SUBJECT: Sanitary Survey Report for Princeton Public Water System (PWS), Mille Lacs County, PWSID 1480008

Enclosed is a copy of the sanitary survey report summarizing an on-site inspection of your Community Public Water System. This report includes a review of the system's water source, facilities, equipment, operation, maintenance, and monitoring compliance for the purpose of evaluating the adequacy of the facilities for producing and distributing safe drinking water. Technical and management information regarding the operation of the system may also be provided. Conducting sanitary surveys on a regular basis is an important element in preventing contamination of drinking water supplies and in maintaining compliance with the National Primary Drinking Water Standards. Paul Parsons was present during this inspection.

Please take appropriate action to address any deficiencies or recommendations identified within this report. A deficiency may lead to a contamination of the water supply or failure of the system to be in compliance with the Safe Drinking Water Act. The enclosed report must be kept on file and made available for public review for not less than ten (10) years.

The Minnesota Department of Health (MDH) continues to monitor your PWS for contaminants identified by state and federal drinking water regulations. The results of such monitoring are not part of this report. They are sent to you under separate cover as they become available.

If you have questions concerning the information contained in the report, please contact me at 320/223-7340.

Sincerely,

Jennifer Soltys

Digitally signed by Jennifer Soltys
Date: 2021.04.29 15:19:09 -05'00'

Jennifer Soltys
Drinking Water Protection
Midtown Square
3333 West Division Street, Suite 212
St. Cloud, Minnesota 56301-4557

Protecting, maintaining and improving the health of all Minnesotans

JS
Enclosures
cc: Water Superintendent

MINNESOTA DEPARTMENT OF HEALTH
SECTION OF DRINKING WATER PROTECTION
Public Water Supply Inventory Report

System Name: **Princeton**
PWSID: **1480008**
System Contact: **Scott Daniels**

Survey Date: **04/19/2021**
Surveyor: **Jennifer Soltys**
PWS Type: **Community**

Contact Information

Name	Address	Phone/Email	
Contact			
Scott Daniels	907 First Street P.O.Box 218 Princeton, MN 55371	Business Fax Business Phone 1 Email	763/389-2273 612/839-5344 sdaniels@princetonutilities.com
Owner/Responsible Party			
Princeton Public Utilities Commission	907 First Street P.O. Box 218 Princeton, MN 55371	Business Phone 1 Email	763/389-2252 kbutcher@princetonutilities.com
Financial			
Princeton Public Utilities	c/o Keith Butcher, Manager P.O. Box 218 Princeton, MN 55371	Email	kbutcher@princetonutilities.com
Sample Bottles/General Correspondence			
Princeton Public Utilities Commission	907 First Street P.O. Box 218 Princeton, MN 55371	Business Fax Business Phone 1 Email	763/389-2273 763/389-2252 sdaniels@princetonutilities.com
Water Superintendent			
Scott Daniels		Business Phone 1 Email	612/839-5344 sdaniels@princetonutilities.com
Consumer Confidence Report			
Keith Butcher		Business Phone 1 Email	763/389-2252 kbutcher@princetonutilities.com

Classification Information

Owner Type:	Municipal	Population:	4727
System Class:	C	Service Connections:	1699
Service Area Characteristics:	Municipal	Class Points:	40

Certified Operators

Name	Class	Expiration Date	Name	Class	Expiration Date
Daniels, Scott T.	B	04/30/2022	Hall, Tyler T.	C	05/31/2022
Parsons, Paul T.	C	04/30/2024	Schmit, Scott B.	C	11/30/2023

Production Totals

Design Capacity:	1,500	Gallons per Minute	Emergency Capacity:	750	Gallons per Minute
Average Daily:	512,633	Gallons	Storage Capacity:	800,000	Gallons
Highest Daily:	1,065,000	Gallons			

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Source Information

Well #7

Unique Well No.:	00578949	Source Type:	Groundwater
Type:	Well	Pump Capacity (gpm):	750
Status:	Active	Pumping Rate (gpm):	675
Availability:	Primary	Emergency Capacity:	750 Gallons per Minute
Year Constructed:	1998	Static Depth (ft):	31
Well Depth (ft):	169	Drawdown (ft):	13
Casing Depth (ft):	137	Pump Type:	Vertical Turbine VFD
Casing Diameter (in):	14	Vulnerable:	Yes
Screen Length (ft):	40		
Aquifer:	Quaternary Buried Artesian Aqui		

Well #8

Unique Well No.:	00751504	Source Type:	Groundwater
Type:	Well	Pump Capacity (gpm):	750
Status:	Active	Pumping Rate (gpm):	750
Availability:	Primary	Emergency Capacity:	
Year Constructed:	2007	Static Depth (ft):	20
Well Depth (ft):	139	Drawdown (ft):	50
Casing Depth (ft):	104	Pump Type:	Submersible VFD
Casing Diameter (in):	18	Vulnerable:	Yes
Screen Length (ft):	41		
Aquifer:	Quaternary Buried Artesian Aqui		

Well #9

Unique Well No.:	00749848	Source Type:	Groundwater
Type:	Well	Pump Capacity (gpm):	750
Status:	Active	Pumping Rate (gpm):	750
Availability:	Primary	Emergency Capacity:	
Year Constructed:	2007	Static Depth (ft):	22
Well Depth (ft):	160	Drawdown (ft):	52
Casing Depth (ft):	135	Pump Type:	Submersible VFD
Casing Diameter (in):	18	Vulnerable:	Yes
Screen Length (ft):	30		
Aquifer:	Quaternary Water Table Aquifer		

MINNESOTA DEPARTMENT OF HEALTH
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Treatment Information

TREATMENT PLANT #1

Type: Treatment Plant
Status: Active
Availability: Primary

Source Water: Groundwater
Design Capacity: 750 Gallons per Minute
Emergency Capacity: 750 Gallons per Minute
Operating Rate: 750 Gallons per Minute

Treatment Objective	Treatment Process Mechanism
Disinfection	Chlorine/Sodium hypochlorite
Fluoridation	Fluoridation/Hydrofluosilicic acid
Iron/Manganese Removal	Filtration (Pressure)/Anthracite/Greensand
	Oxidation - chemical/Chlorine
	Oxidation - chemical/Sodium permanganate
Lead/Copper Corrosion Control	Stabilization/Inhibitors/Polyphosphates

TREATMENT PLANT #2

Type: Treatment Plant
Status: Active
Availability: Primary

Source Water: Groundwater
Design Capacity: 1,500 Gallons per Minute
Emergency Capacity:
Operating Rate: 750 Gallons per Minute

Treatment Objective	Treatment Process Mechanism
Disinfection	Chlorine/Sodium hypochlorite
Fluoridation	Fluoridation/Hydrofluosilicic acid
Iron/Manganese Removal	Filtration (Pressure)/Anthracite/Greensand
	Oxidation - chemical/Chlorine
	Oxidation - chemical/Sodium permanganate
Lead/Copper Corrosion Control	Stabilization/Inhibitors/Blended phosphates

Storage Information

Elevated 250000 - Middle

Type: Storage-Elevated
Status: Active

Capacity: 250,000 Gallons
Availability: Primary
Chlorination: ☐

Specific Storage Notes: Mixer installed 2016

Elevated 250000 - North

Type: Storage-Elevated
Status: Active

Capacity: 250,000 Gallons
Availability: Primary
Chlorination: ☐

Specific Storage Notes: Mixer installed 2016

Elevated 300000 - South

Type: Storage-Elevated
Status: Active

Capacity: 300,000 Gallons
Availability: Primary
Chlorination: ☐

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Bacteriological Sample Site Plan

Distribution

Sample Site ID	Sample Location	Status	Notes
01	Casey's North 810 N Rum River Drive	Active	
02	Casey's South 501 S. Rum River Drive	Active	
03	City Shop	Active	
04	Hospital	Active	
05	131 North Rum River Drive	Active	
06	802 1st Street	Active	
07	205 North Rum River Driver	Active	
08	701 1st Street	Active	
09	1400 North 15thh Avenue	Active	
10	1616 South 10th Street	Active	
11	1224 Oak Lane	Active	
12	919 Northland Drive	Active	

MINNESOTA DEPARTMENT OF HEALTH
Section of Drinking Water Protection
Sanitary Survey Report

System Name: **Princeton**
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PWS Type: **Community**

Requirements and Recommendations

Water Source

As a reminder, it is required that a well for a community public water supply be located according to distances specified in Minn.Rules 4725.4450, including not less than 50 feet from a source of contamination including buried sewers (except as specified in Minn. Rules 4725.5850).

Pumps/Pump Facilities and Controls

To ensure continuous service when the primary power has been interrupted, it is recommended that a standby power source be provided through: 1. a direct connection to at least two independent public power sources, or 2. dedicated portable or in-place auxiliary power of adequate supply and connectivity. [Minn. Rules 4720.3927]

Treatment

As a reminder, changes in treatment are required to be approved by the Minnesota Department of Health before they are implemented. [Minn. Rules 4720.0010]

Water Storage

It is recommended that the community water storage tank be internally inspected on a regular basis. Tank cleaning should take place every 2 to 5 years based on tank sediments, decline of chlorine residuals within the tank or other indicators of a decrease in water quality.

Distribution

It is recommended that a valve exercising and replacement program be initiated to ensure valves are in working condition. This will minimize sanitary hazards and inconvenience to the customer when working on the distribution system. [AWWA Standards Distribution Systems Operation and Management, Section 4]

It is recommended that dead ends in the distribution system be minimized by looping. If looping is not feasible, a fire hydrant, approved flushing hydrant or blow off for flushing purposes must be used at the dead ends to maintain water quality and/or chlorine residual. [Recommended Standards for Water Works 8.0]

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Requirements and Recommendations

Monitoring/Reporting Data Verification

The following applicable records are required to be maintained by the water supply system:
a. Coliform bacteria results - 5 years
b. Chlorine residual results - 5 years
c. Chemical results - 10 years
d. Sanitary survey reports - 10 years
e. All lead and copper materials - 12 years
f. Consumer confidence reports - 3 years
g. Public Notices - 3 years
h. Fluoride quarterly results and monthly reports - 1 year
i.Turbidity results - 3 years
[Minn. Rules 4720.0350]

It is recommended that the static and drawdown water levels be taken at least monthly and permanently recorded.

Water System Management/Operation

As a reminder, engineering plans for new, modifications to, or additions to the water supply system, including watermains, are required to be properly submitted to the Minnesota Department of Health for review. All plans must be approved prior to the start of construction. [Minn. Rules 4720.0010]

It is recommended that a comprehensive program of cross-connection surveillance be instituted to protect the water supply. This includes:
a. The detection and correction of cross-connections to unsafe water supplies.
b. The education of the public on the dangers of cross-connections.
c. The installation of vacuum breakers on all threaded hose bibbs in new and old buildings.
d. The replacement of defective plumbing in older buildings.
e. Periodic cross-connection inspections of potentially hazardous industries and commercial establishments.
f. The education of the employees on the dangers of cross-connections.

To ensure security, it is recommended that a daily check of critical system components be conducted, including confirmation that all doors and access hatches are locked.

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Requirements and Recommendations

Operator Compliance with State Requirements

The certified operators are required to qualify themselves by attending waterworks operators training seminars offered throughout the state. Continuing education is valuable experience for anyone engaged in this field. The required contact hours in the previous 3 years for certification renewal are:
Class A 32 contact hours
Class B 24 contact hours
Class C 16 contact hours
Class D 8 contact hours
Class E 4 contact hours
[Minn. Rules 9400.1200]

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Section of Drinking Water Protection
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Bacteriological Results and Chlorine Residuals

Date	Sampling Location	Chlorine Residual Free / Total (mg/L)	Coliform Bacteria	E.Coli
04/19/2021	Well #9	/	Absent	
04/19/2021	Well #8	/	Absent	
04/19/2021	Well #7	/	Absent	
04/19/2021	Treatment Plant #2	/	Absent	
04/19/2021	Treatment Plant #1	/	Absent	
04/19/2021	Power Plant	0.49 / 0.67	Absent	
04/19/2021	D&N Trucking	0.16 / 0.29	Absent	