Chippewa County Community Well Drilling Ad Hoc Committee
September 12, 2023

The meeting was called to order by L. Schweikert (LCFM) at 12:00 p.m. Ad Hoc Committee members present were A. Droske (Town of Wheaton Supervisor), K. Miller (DNR), K. Masarik (UWSP & UWEX – via Webex), M. Muldoon (WGNHS– via Webex), and Amy Wiersma (WGNHS– via Webex).

Agency staff advisors present were L. Richardson, L. Schweikert (LCFM), and J. Schemenauer (Recorder) – (LCFM).

K. Schmitt, Chair of LCFM Committee, was present.

Others present, as identified, were C. Kaiser and P. Popple.

Item #1 – Recap of 04/27/2023 meeting

L. Schweikert provided a recap of the 4/27/23 meeting and presented a report titled: Community Well Drilling Ad Hoc Committee Report, (LCFM 8/25/23 –copy on file & attached). The report presented the findings and recommendations of the Committee.

Item #2 – Recap of Chippewa County Water Study

K. Masarik presented several maps to the Committee, which were to be presented at the Chippewa County Board 9/12/23 meeting that evening. The maps show trend monitoring and modeling nitrate risk.

There was a general discussion. Discussion focused on:

1. Well testing process and well selection for testing nitrate source occurrence.

2. Trending nitrates with available study data.

3. Tracking data that could affect test results (weather, land use).

3. Use of water sensors in wells being testing annually.

Item #3 – Proposed Structure

L. Schweikert presented and the Committee reviewed a section from the report titled: Community Well Drilling Ad Hoc Committee Report which showed the bottle filling station to be installed in the Town of Wheaton, anticipated equipment needed, and product specifications.

There was general discussion. Discussion focused on:

1. The proposed structure to be built around the bottle filler.

2. If lights are needed and if so, running electricity to the structure.

Item #4 - Testing Results

L. Schweikert presented and the Committee reviewed a section from the report titled: Community Well Drilling Ad Hoc Committee Report which showed the testing results from 2012 to the present (Coliform Bacteria, Nitrate, Atrazine, and PFAS) from the Wheaton Ball Field well.

There was general discussion.

Item #5 – Proposed Authorization of Use

L. Schweikert reported to the Committee that Corporation Counsel is developing an authorization of use between the County and the Town of Wheaton regarding the bottler filler project and outlining each party's responsibilities.

Item #6 - Wellhead Protection Update

L. Richardson presented maps of the wells for Wheaton Ballfields/Fire Department with the UW-Extension groundwater table contours from that area (copy on file & attached).

There was a general discussion.

Item #7 – Measures of Success

L. Schweikert reported to the Committee that she will be presenting a report to the County Board of Supervisors that evening (9/12/23), regarding the current status of the project and Committee recommendations.

Item #8 – Next Steps

L. Schweikert reported to the Committee that a kiosk or signs will be set up on the bottler filler structure to provide information and education on the Town of Wheaton bottle filler project, well water testing, ARPA compensation grants, groundwater, and websites for more information on water testing. She also reported she will be going to other towns this winter to inform them of this project and the possibility of them participating as well.

Item #9 – Set Date and Time for Future Meetings

L. Schweikert will reach out with the future meeting date and time.

Item #10 – Adjourn.

The meeting was adjourned at 1:15 p.m.

Community Well Drilling Ad Hoc Committee Report

Version 23_08_25_01

Purpose:

The Chippewa County Land Conservation & Forest Management (LCFM) Department is looking at the feasibility of utilizing existing public wells, or drilling new wells, to provide a safe source of drinking/cooking water for residents in areas testing above 10 mg/l for Nitrates. In order to ensure we are locating these refill stations in areas the public will most benefit from, the Chippewa County Community Well Ad Hoc Committee has been formed. The Chippewa County Community Well Ad Hoc Committee is comprised of local and state professionals who work closely with the nitrate issues in WI.

According to WI Dept Health Services, the health standard for nitrates in the drinking water is 10 ppm. The percentage of the wells tested in Chippewa County are testing at this rate or higher is 14%. In addition, some wells that are currently below the groundwater standard have been trending upwards in annual testing. Finding practical ways to prevent nitrates from leaching into the groundwater is an ongoing process. In the interim, we are looking at alternative drinking/cooking water sources for those affected by the issue.

The Chippewa County Community Well Ad Hoc Committee is working to find ways to identify areas in need of nitrate remediation. In those areas, they will identify existing community wells and the possibility of utilizing them as refill stations. If existing wells are not available, the workgroup will identify areas to drill new wells that will have the least risk of containing nitrate in the groundwater. In addition to that, they will develop processes and supplies needed to provide to users of the resource.

Schedule

Meetings were held:

February 9th, 2023- Initial meeting to discuss the purpose of the project and strategize information needed to make the above decisions.

March 15th, 2023-

Discussion on Municipalities that test for NN/TN – A. Mares
- Identify priority areas to target for refill stations – L. Schweikert
- Wheaton/Eagle Point Comments – A. Droske/R. Bowe
- Identify criteria needed to locate refill stations – M. Parsen
- Discussion on additional sampling needs – K. Masarik

April 27th, 2023 –

- Chippewa County Map Update – K. Masarik
- Testing Protocol at Possible Refill Sites – K. Walters
- Wellhead Protection Discussion – L. Richardson
- Chippewa County Groundwater Modeling Update – M. Parson/K. Clow

Fall of 2023 - Once locations are identified, we will reach out to communities to assist with the development of the project. Existing wells will be upgraded for the project and new wells will be bid out for drilling. Follow up meetings may be needed to discuss any issues that arise in the project. A final meeting will be held after the project has been completed to summarize the processes and assess the process, and apply any improvements of the project that need to be made.

Ad Hoc Committee Members

Current Members:

Alice Droske, Town of Wheaton Supervisor

Anna Mares, DNR, Water Supply Specialist

Kevin Masarik, UW-Stevens Point, Groundwater Education Specialist

Maureen Muldoon, WI Geological and Natural History Survey, Hydrogeologist

Amy Wiersma, WI Geological and Natural History Survey, Hydrogeologist

Kristen Walters, Chippewa County Dept. of Public Health, Environmental Health Specialist

Ketty Clow, Chippewa County Dept. of Land Conservation & Forest Management, Environmental Engineer

Lisa Richardson, Chippewa County Dept. of Land Conservation & Forest Management, Conservation Specialist

Lynda Schweikert, Chippewa County Dept. of Land Conservation & Forest Management, Director

Past Members:

Lawrence Frazer, Town of Eagle Point Supervisor

Rick Bowe, Former Town of Eagle Point Supervisor

Michael Parsen, WI Geological and Natural History Survey, Hydrogeologist

Deliverables

Focus Area for Community Refill Stations

The Ad Hoc Committee decided to focus on existing public wells due to their long-term testing data. This data was used to identify wells that historically test low in nitrates. To identify additional focus areas for the Ad Hoc Committee, several data sets were utilized. The first was to locate the nitrate sensitive soils in the county. (See Figure 1. WI DNR Nitrogen Restriction Area Map Viewer.)

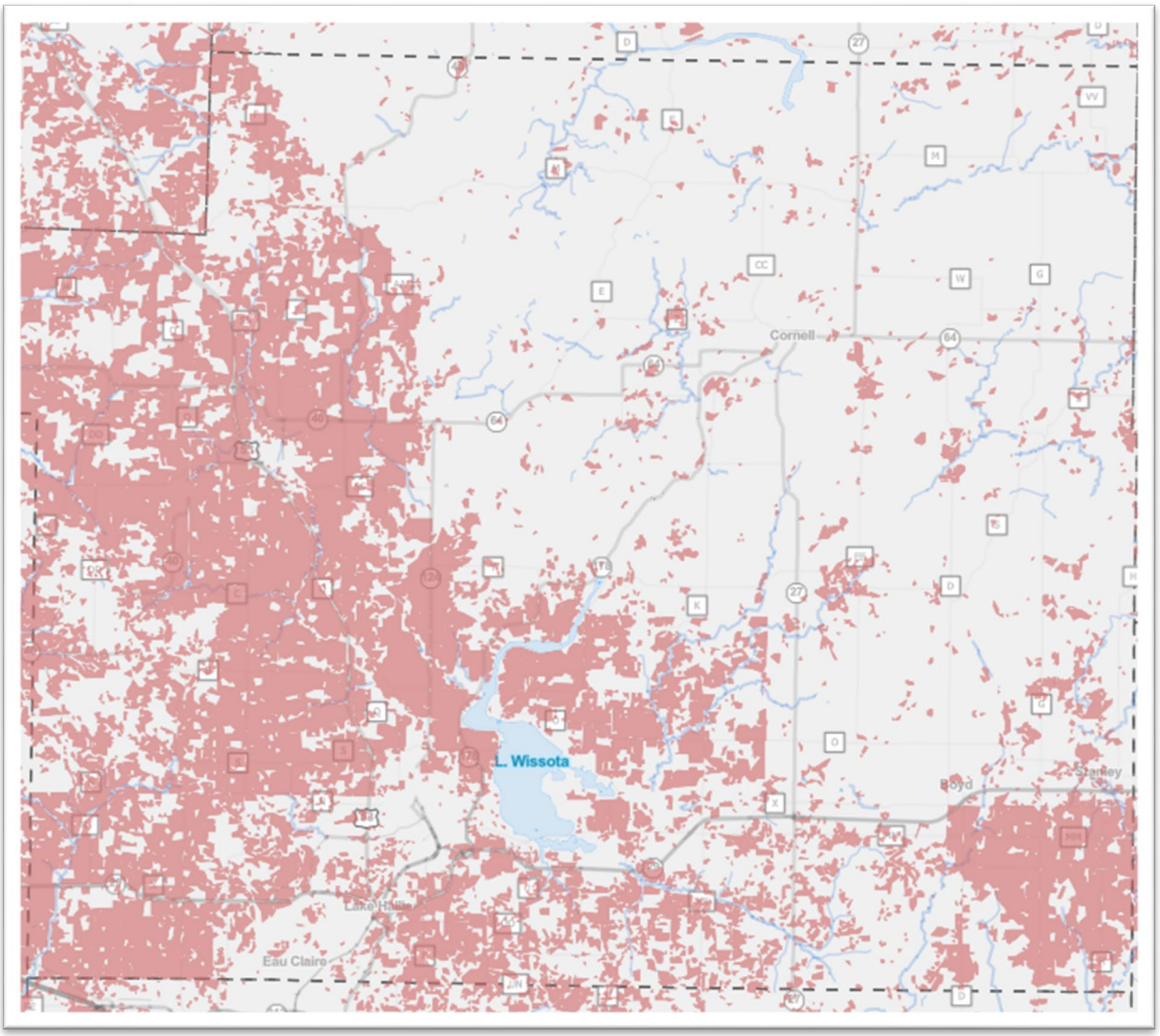


Figure 1. WI DNR Nitrogen Restriction Area Map Viewer. Red areas of map indicate high risk of nitrate contamination due to soils that are susceptible to nitrate leaching to groundwater

The next step was to utilize existing groundwater testing data to refine the areas of concern. Data was mainly gathered from the comprehensive nitrate testing performed in 2016 and N Inverse Distance Weighting applied. (See Figure 2. Center of Watershed Science and Education 2016 Nitrate-N Inverse Distance Weighting.)

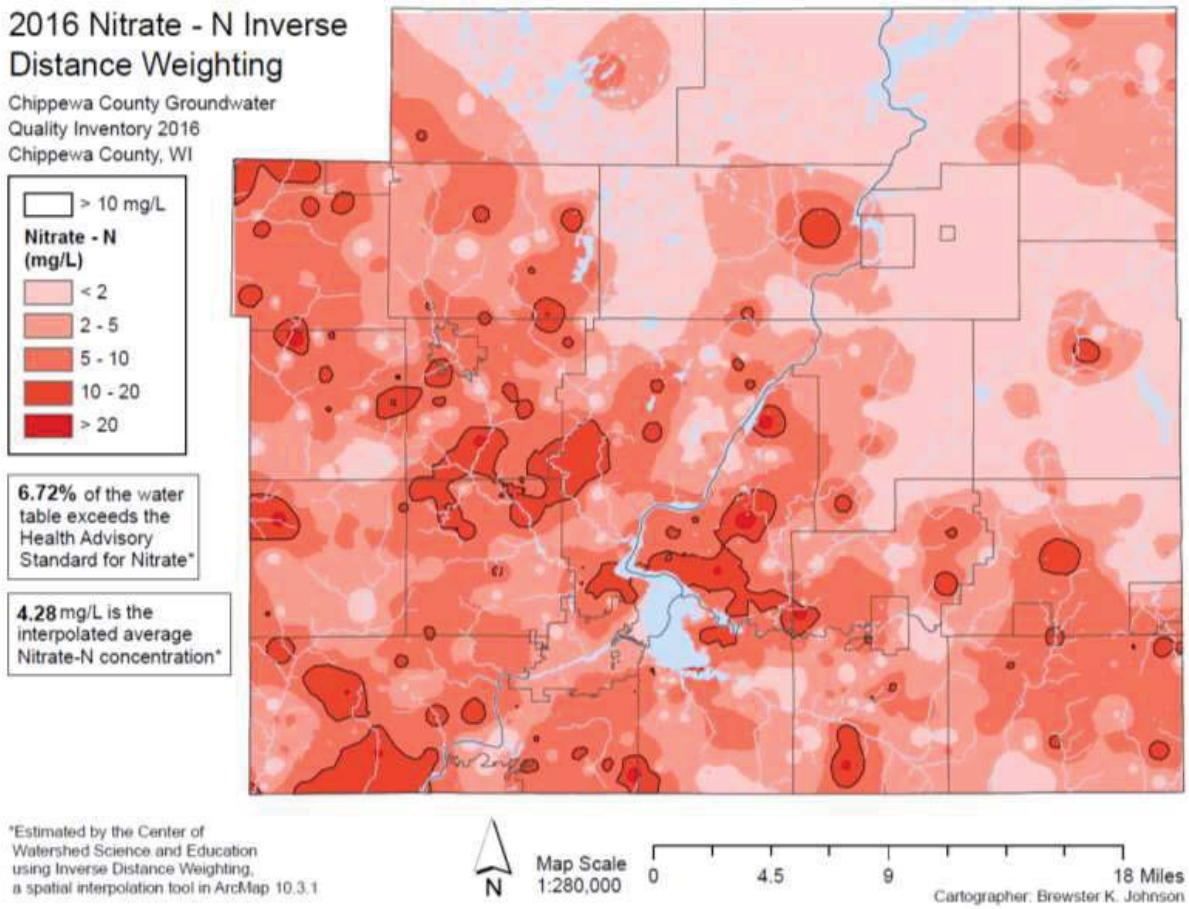


Figure 2: Center for Watershed Science and Education 2016 Nitrate-N Inverse Distance Weighting. The darker the red color the higher the risk of nitrate leaching to groundwater.

Locations of existing public wells were then identified, with the help of the WI DNR. These wells have a history of groundwater testing and would be a good indicator if the well would provide a safe drinking water resource. (See Figure 3 - Transient Non-Community Well Locations) This list was then compared to the high nitrate risk areas.

The townships located in areas where well tests showed higher than 10 ppm nitrates were also invited to be on the Community Well Drilling Ad Hoc Committee, however only Wheaton and Eagle Point sent representatives. Wheaton Ball Field and Eagle Point Town Hall were identified as potential locations.

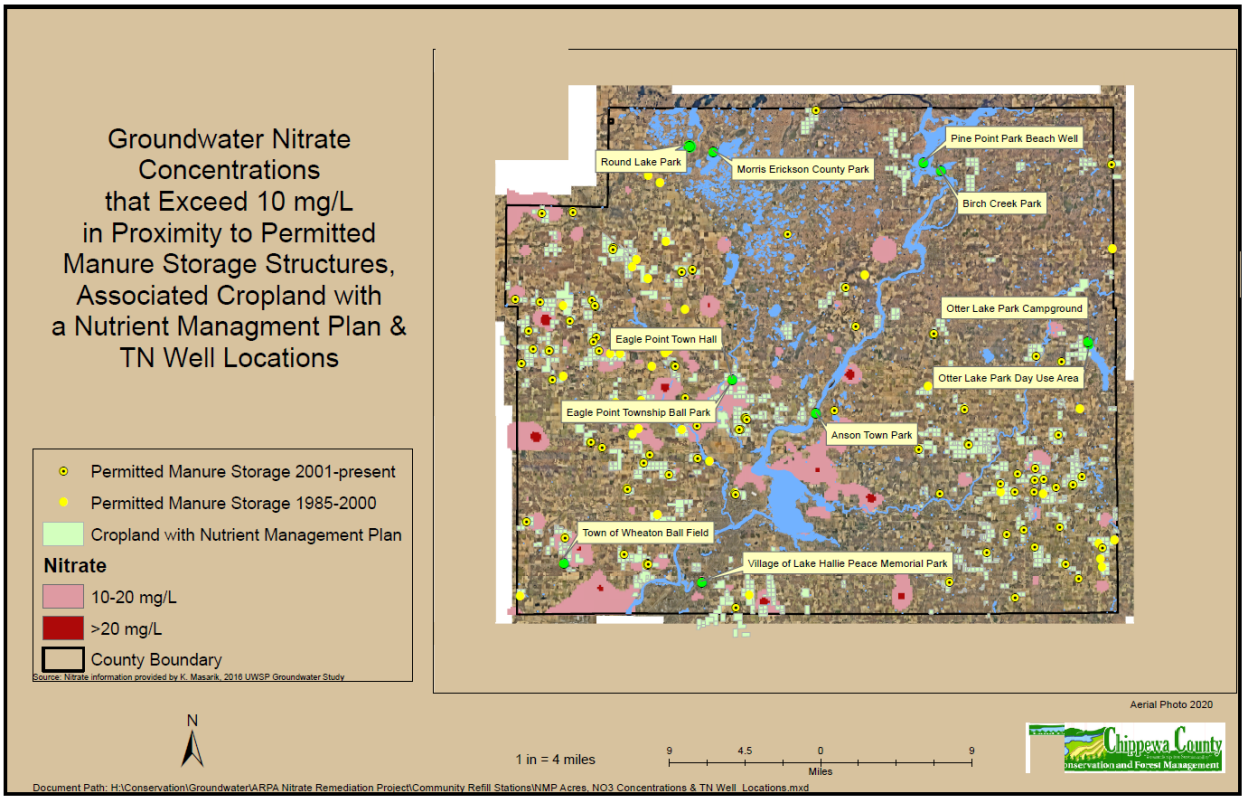


Figure 3: Transient Non-Community Well Locations

Proposed drilling locations

Kevin Masarik, Groundwater Education Specialist, University of Wisconsin Stevens Point, created a Nitrate Risk Map. (See Figure 4 - Nitrate-N Risk Map, Center for Watershed Science & Education.) This map utilizes historic water testing results, soil types, and land uses to visually represent the risk of encountering nitrates in the groundwater. It was recommended that if wells were drilled to establish refill stations, focus should be on areas of low risk for their locations.

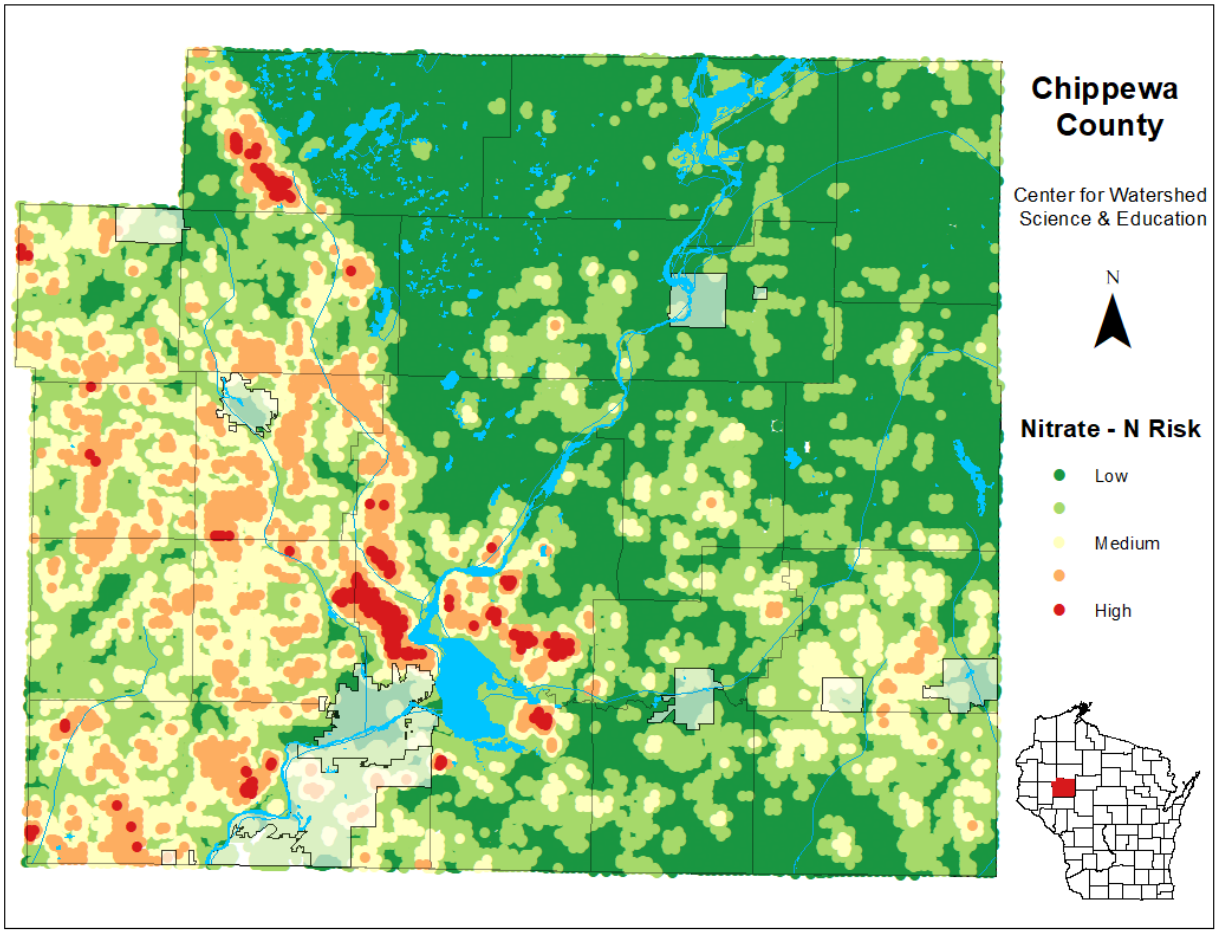


Figure 4: Nitrate-N Risk Map, Center for Watershed Science & Education

Equipment needed for refill stations

- Exterior freeze resistant bottle filling station
- Governor for water flow
- Water Meter
- Reusable water containers
- Information/Education Kiosk

MOUNTING INSTRUCTIONS and PLUMBING CONNECTIONS

Site and drainage excavation is required for fountain installation. Refer to owner's manual for site preparation details. Provide solid, well-drained smooth, flat, finished surface to mount pedestal fountain (concrete pad recommended) with adequate support (300 lb. load minimum). (6) 3/8" minimum fasteners (not included) should be attached securely to mounting surface in order to secure fountain, (Refer to rough-in diagram), and be sure to allow an opening for the freeze-resistant valve in the ground as shown in the installation instructions that accompany the fountain. (Refer to the rough-in diagram below). Refer to local codes for any additional requirements.

Locate and install plumbing through ground as required. Assemble fountain to prepared site and mounting pad.

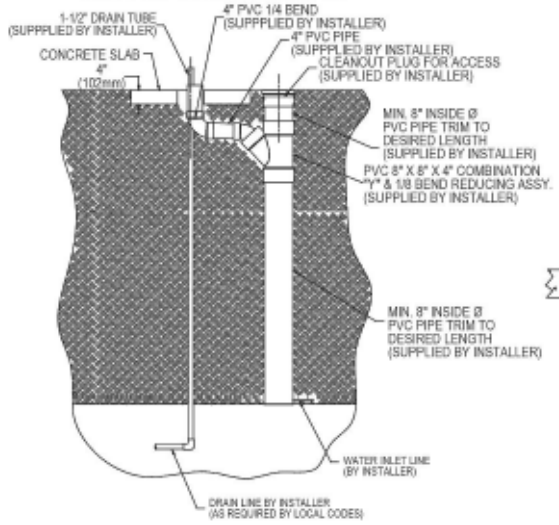
Locate and install plumbing through ground as required.

NOTE: Unit is not furnished with service valve.

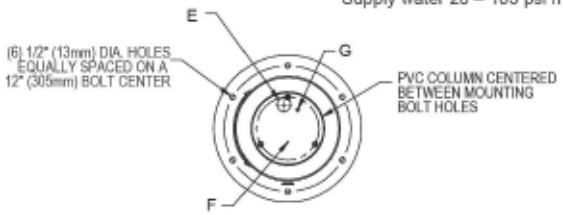
Position pedestal over plumbing and secure base to fasteners. Remove access panels and connect supply and water lines. Turn on water supply and check for leaks. Reassemble access panels to pedestal.

Trap and service stop not included.

SANITARY FREEZE-RESISTANT VALVE GROUND INSTALL DETAIL

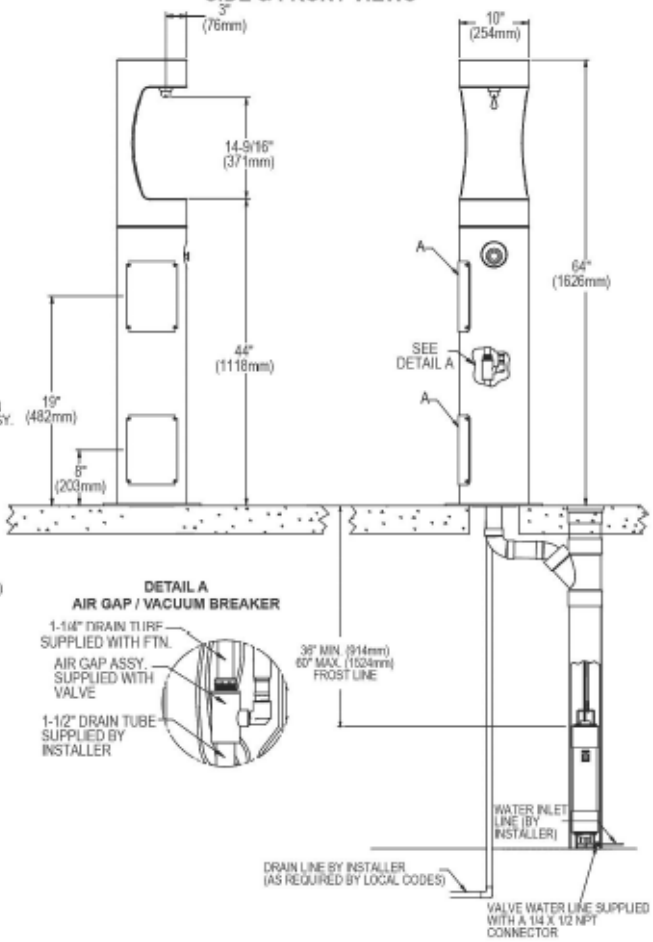


TOP VIEW



OPERATING PRESSURES:
Supply water 20 – 105 psi maximum

SIDE & FRONT VIEWS



LEGEND
A = Access panel (8" X 10")

Testing schedule for established wells

WI DNR has categorized the refill stations as Transient Non-Community Wells, and the annual testing required is for Bacteria and Nitrates. Because of new and emergent analytes, the Ad Hoc Committee recommends annual testing for Non-transient Non-community standards. (See Figure 5 - Testing requirements for Non-transient Non-community Wells.)

Sample type	Cost estimate per sample	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
Bacteria (coliform and E. coli)	$0-20	4 x $20 = $80	80	80	80	80	80	80	80	80
Nitrate/Nitrite	$19-30		19	19		19	19		19	19
Volatile Organic Compounds	$170-350	4 x $170 = $680	170	170	170			170		
Synthetic Organic Compounds	$640-1,045	$640-1,045			$640			$640		
Inorganic Compounds	$350-500	350			350			350		
Lead and Copper	$37-50	370	185	185	185	185	185	185		
	Yearly total	2230	454	454	1425	284	284	1425	99	99
	~Grand total for 9 years									$6,754
bacteria samples are free if sent to the state lab of hygiene but you have to pay shipping										

Figure 5: Testing requirements for Non-transient Non-community Wells

Wheaton Ball Field #PX472

Coliform Bacteria Test

Sample ID	Sample Date	Type	# Samples	Coliform Detect	Fecal Detect	Source	Collector	Lab ID	Lab
051623-08	5/16/2023	Distribution	1	No	No	Distribution System	K WALTERS	482	RUSK COUNTY HEALTH AND HUMAN SERVICES
22-C8332	9/1/2022	Distribution	1	No	No	Distribution System	A DROSKE	617013980	Commercial Testing Laboratory Inc.
563510001	5/25/2021	Distribution	1	No	No	Distribution System	GREG GRUNA	113133790	Wisconsin State Laboratory of Hygiene
520963001	8/19/2020	Distribution	1	No	No	Distribution System	GREG GRUNA	113133790	Wisconsin State Laboratory of Hygiene
447584001	5/22/2019	Distribution	1	No	No	Distribution System	GREG GRUNA	113133790	Wisconsin State Laboratory of Hygiene
384274001	5/23/2018	Distribution	1	No	No	Distribution System	HAILLIE PASSO	113133790	Wisconsin State Laboratory of Hygiene
320594001	6/8/2017	Distribution	1	No	No	Distribution System	GREG GRUNA	113133790	Wisconsin State Laboratory of Hygiene
252084001	5/3/2016	Distribution	1	No	No	Distribution System	GREG GRUNA	113133790	Wisconsin State Laboratory of Hygiene
190353001	4/29/2015	Distribution	1	No	No	Distribution System	GREG GRUNA	113133790	Wisconsin State Laboratory of Hygiene
131194001	5/7/2014	Distribution	1	No	No	Distribution System	GREG GRUNA	113133790	Wisconsin State Laboratory of Hygiene
93540001	8/22/2013	Distribution	1	No	No	Distribution System	GREG GRUNA	113133790	Wisconsin State Laboratory of Hygiene
29659001	7/11/2012	Distribution	1	No	No	Distribution System	GREG GRUNA	113133790	Wisconsin State Laboratory of Hygiene

Nitrate

Sample ID	Sample Date	Sample Type	# Samples	# Results	Sample Group	Source	Collector	Lab ID	Lab
23-D1028	5/16/2023	Compliance	1	2.9	Nitrate	Entry Point	K WALTERS	617013980	Commercial Testing Laboratory Inc.
22-D2154	9/1/2022	Compliance	1	3.2	Nitrate	Entry Point	A DROSKE	617013980	Commercial Testing Laboratory Inc.
21-D1426	5/25/2021	Compliance	1	2.7	Nitrate	Entry Point	G GRUNA	617013980	Commercial Testing Laboratory Inc.
20-D1985	8/19/2020	Compliance	1	2.7	Nitrate	Entry Point	G GRUNA	617013980	Commercial Testing Laboratory Inc.
19-D855	5/22/2019	Compliance	1	2.7	Nitrate	Entry Point	G GRUNA	617013980	Commercial Testing Laboratory Inc.
18-D1116	5/23/2018	Compliance	1	3	Nitrate	Entry Point	H PASSOW	617013980	Commercial Testing Laboratory Inc.
17-D1484	6/8/2017	Compliance	1	2.5	Nitrate	Entry Point	G GRUNA	617013980	Commercial Testing Laboratory Inc.
16-D903	5/3/2016	Compliance	1	2.8	Nitrate	Entry Point	G GRUNA	617013980	Commercial Testing Laboratory Inc.
15-D693	4/29/2015	Compliance	1	2.7	Nitrate	Entry Point	G GRUNA	617013980	Commercial Testing Laboratory Inc.
14-D571	5/7/2014	Compliance	1	2.8	Nitrate	Entry Point	G GRUNA	617013980	Commercial Testing Laboratory Inc.
13-D2017	8/22/2013	Compliance	1	2.8	Nitrate	Entry Point	G GRUNA	617013980	Commercial Testing Laboratory Inc.

Atrazine

Sample Date	Results	Sample Group	Source	Collector	Lab ID	Lab
6/29/2023	None Detected	Atrazine	Drinking Water	K WALTERS	684594001	Wisconsin State Laboratory of Hygiene

PFAS

Sample Date	Analyte	Result	Units	Health Standard	Collector	Lab ID	Lab
6/19/2023	PFBS (375-73-5)	0.232	ng/L	450000 ng/L	K WALTERS	684592001	Wisconsin State Laboratory of Hygiene
6/19/2023	PFHxS (355-46-4)	0.252	ng/L	40 ng/L	K WALTERS	684592001	Wisconsin State Laboratory of Hygiene
6/19/2023	FOSA (754-91-6)	0.22	ng/L	NA	K WALTERS	684592001	Wisconsin State Laboratory of Hygiene

Long-term maintenance schedule

Annually, each of the refill stations will be inspected for damage, wear and tear, and kiosks updated with new information. A maintenance fund will need to be established for repairs and replacement to account for the lifespan of the equipment.

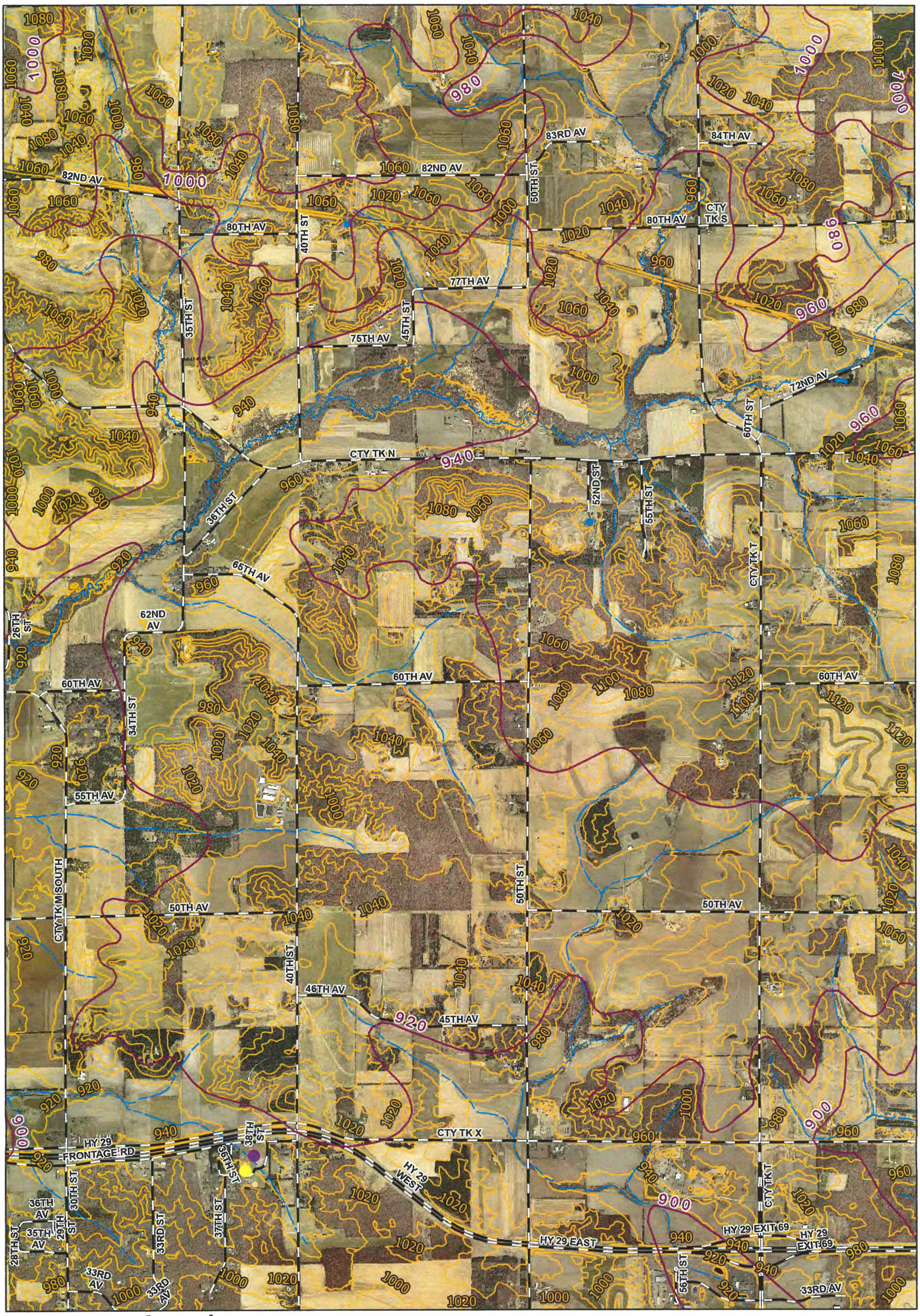
Depending on how the structures weather the winter, winterizing may need to be accomplished prior to extreme weather or construction of a shelter to prevent freezing.

Measures of Success

Primary measures of success will be local communities allowing existing community wells to be developed into refill stations, locating and drilling new wells that produce water free of contamination, and homeowners with high nitrates in their wells utilizing the facilities.

- Number of homeowners participating in program
- Gallons of water dispensed
- Number of receptacles handed out to residents
- Anecdotal evidence from users
- Increased number of homeowners requesting water tests due to kiosk educational information and word of mouth from participants

H:\Conservation\Groundwater\ARPA Nitrate Remediation Project\Community Refill Stations\Documents



Legend

- WATER_TABLE
- Roads
- LAKES
- 20 Foot Contours
- Ball Field
- Town Hall

Streams

HYDROCODE

- Perennial
- Intermittent
- Fluctuating

1 0.5 0 1 Miles

Town Of Wheaton

N

46TH AV

40TH ST

CTY TK X

HY 29 WEST

HY 29 EAST

HY 29 FRONTAGE RD

38TH ST

37TH ST

191ST

Legend

- WATER_TABLE
- Roads
- LAKES
- 2 Foot Contours
- Ball Field
- ~~Town Hall~~ Fire Station

Streams

HYDROCODE

- Perennial
- Intermittent
- Fluctuating

0.1 0.1 0 0.1 Miles

Town Of Wheaton

N