



Request for Proposal

Land and Water Resource Management Plan

Agriculture

County Cost-share Program

Nutrient Management

Invasive Species Program

Nonmetallic Mine Reclamation

Wildlife Damage Program

Groundwater

Surface water

Ordinances/Policies

Door County Plat Books

Publications

LiDAR OnlineViewer

Conservation Seed Drill Rental



Soil and Water Conservation

Mission Statement

The Door County Soil and Water Conservation Department is created under the authority of Chapter 92 of Wisconsin Statutes. Chapter 92 gives the SWCD the responsibility of the administration of the County soil and water conservation program and the authority to exercise the powers granted to the <u>Land</u> <u>Conservation Committee</u>. The legislative declared policy of the State in Chapter 92 is to halt and reverse the depletion of the State's soil resources and pollution of its waters. The SWCD has a responsibility, and directive under Chapter 92, to promote land uses and programs which advance conservation and the protection of Door County's natural resources. The mission of conservation and environmental advocacy is the standard by which SWCD programs are developed and implemented.

2023 SWCD Annual Report (PDF)

2022 SWCD Annual Report (PDF) 2021 SWCD Annual Report (PDF)

2020 SWCD Annual Report (PDF) 2019 SWCD Annual Report (PDF)

2018 SWCD Annual Report (PDF)

Wis. Stats. Chapter 92



County Conservationist: Greg Coulthurst

Government Center 421 Nebraska Street Sturgeon Bay, WI 54235

Phone: (920)746-2214 Fax: (920)746-2369

Email: Email Soil & Water Conservation Department

Hours: Monday thru Thursday 7:00 a.m. to 4:30 p.m. Friday

7:00 a.m. to 1100 a.m.

<u>Closed Holidays</u>















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Purpose of Study

- History of groundwater quality impacts
- Primary source of drinking water
- Emerging contaminants:
 - Not regularly monitored
 - Lack of published standards
 - Known/suspected health effects

Fall 2023 Selected Wells

- 89 Selected (sampled 9/25/23 10/12/2023)
- All wells were sampled for:
 - PFAS (PFOA and PFOS)
 - Bacteria (Coliform and E-Coli)
 - Nitrate
 - Chloride
- Select wells were sampled for:
 - · DACT screening for pesticides
 - Arsenic
 - Volatile organic compounds (VOCs)
 - Polycyclic aromatic hydrocarbons (PAHs)

MUNICIPALITY	NO. OF VOLUNTEERS	MUNICIPALITY	NO. OF VOLUNTEERS
CLAY BANKS	2	EGG HARBOR	9
FORESTVILLE	4	JACKSONPORT	9
BRUSSELS	2	BAILEYS HARBOR	9
UNION	1	GIBRALTAR	4
GARDNER	2	EPHRAIM	2
NASEWAUPEE	4	SISTERS BAY	1
STURGEON BAY	5	LIBERTY GROVE	14
SEVASTOPOL	15	WASHINGTON	4

Door County Emerging contaminant Report Jan 2024 GZA report of samples collected October 2023

Overall county results were better than expected but future studies over the next three years, focusing on different criteria and locations still need to be done.

Here are GZA result maps. Jacksonport township (black outline) and the Clark Lake watershed (red outline) are superimposed. These boundaries relative to the actual location of wells is just a rough estimate .

Analyte	Target	Jacksonport (9) Target	Clark Lake (6) Target	Jacksonport >Target <critical< th=""><th>Clark Lake >target<critical< th=""><th>Jacksonport critical</th><th>Clark Lake critical</th></critical<></th></critical<>	Clark Lake >target <critical< th=""><th>Jacksonport critical</th><th>Clark Lake critical</th></critical<>	Jacksonport critical	Clark Lake critical
PFAs	< 4 total	9	6	0	0	0	0
NITRATES	<2	8	5	0	1	1	0
BACTERIA	0	7	4	2	2	0	0
ARSENIC	1 or 2*	2	1	1**	1**	0	0
CHLORIDE	<125	9	6	0	0	0	0
DACT	< 0.3	7	6	0	0	0	0
VOC	0.5	1	n/a	0	n/a	0	0

Some of the tests were not done on all of the wells depending on their location and risk factors.

PFAs included both PFOA and PFOS. The current WI drinking water standard (the value of both added together) is under 20 but the Federal is under 4 and will probably soon be adopted by WI so federal target was used.

DACT is a metabolite used for assessing atrazine pesticide presence.

VOC =volatile organic compounds; only one ,methylene chloride, was identified in the entire county at one site.

For those familiar with the UW-O well water maps, the purple and blue on the GZA maps would all be green on the UW-O maps so I used that coloration for the table.

*UWO target. ** below UWO target.

PFAs

Per- and poly-fluorinated Alkyl substances. Manmade organic chemicals introduced in the 1940's.(Teflon)

Commercial products include: Teflon, scotch guard, food wrappers (wax alternative) especially fast food containers and wraps; chrome plating, cosmetics (lip stick); Dental floss, External coating for storage bins, Flame retardant fabrics on furniture (clothing?), and Fire-fighting foam.

The foam used at airports to coat the runway during a crash landing are PFAs.

EPA target industries

Waste facilities for both water and solid waste are a target sites. Carpet and upholstery cleaners and repair Fire training sites Airports

Ingestion of PFAs is associated with an increased of risk of some cancers(thyroid) elevated cholesterol, impaired response to vaccines, etc. There doesn't seem to be much dermal absorption.

There are a multitude of PFAs but the two most discussed are each 8 carbon atom tails: **PFOA** has a CO2 head; **PFOS** has a SO3 head

Since these compounds have been used extensively they are found almost everywhere. The sensitivity of testing has increased so that now some sites first thought clear are now being found to have PFAs

PFA levels in US populations have stabilized or are falling since the manufacture and use of PFAs in the United States has markedly declined. There are ways to filter and isolate PFAs but there is no current process to destroy existing PFAs.



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ARSENIC	1 or 2*	2	1	1**	1**	0	0
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DCAT is a metabolite of Pesticides containing Atrazine



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NITRATES	<2	8	5 0 1		1	1	0
BACTERIA	0	7	4	2	2 2		0
ARSENIC	1 or 2*	2	1	1**	1**	0	0
CHLORIDE	<125	9	6	0	0	0	0
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VOC	0.5	1	n/a	0	n/a	0	0

*UWO target. ** below UWO target. Well DC-55 level was just 1ug/L so wold have been in the green for UWO reports.



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Community Resources How Do I... **Our County** Services



Well Water Quality Viewer

Well Abandonment

DOOR COUNTY

Well Data

Door County Private Well Monitoring Program

Home > Our County > Departments > Soil and Water Conservation > Groundwate

Select Language

Groundwater

Door County Groundwater

Although Door County is surrounded by the waters of Lake Michigan and Green Bay, the primary source of drinking water for nearly all county residents and visitors is groundwater. Due to the geology of the county, groundwater resources are readily impacted by land use and surface activities.

Door County's bedrock is made up of what is referred to as a karst landscape, this is limestone-based bedrock that has been highly modified by water over thousands of years creating solution features such as crevices, sinkholes and caves. The result is a highly fractured bedrock aquifer, the 'container' that holds our drinking water. This cracked and creviced bedrock, coupled with a very thin layer of soil to provide a 'buffer' from surface activities, results in a very underchied activities of thomas of thourands of provide solution. vulnerable resource that tens of thousands of people rely on



Emerging Contaminants January 23, 2024 County Board Presentation (PDF)

Publications

- Arsenic in Drinking Water (PDF)
- Bacteriological Contamination of Drinking Water Wells (PDF)
- <u>Choosing a Water Treatment Devise</u> Hine's Emerald Dragonfly - Areas Supporting (PDF)
- Hine's Emerald Dragonfly Groundwater Brochure (PDF)
- Interpreting the Results of Your Diaminochlorotriazine (DACP) Screen (PDF)
- Interpreting Well Water Quality Results: Homeowner Package(PDF)
- Interpreting Well Water Qualtity Results: Metals Package (PDF)
- Nitrate Health Effects (PDF)
- Nitrates in Drinking Water (PDF)
- Pesticides in Drinking Water (PDF)
- Protect the Water You Drink (PDF)
- Wellhead Protection Plan (PDF)

Well Water Test Kits

"An estimated 34 million Americans get their water from private ground water wells, which are not subject to EPA regulations. Private ground water wells can provide safe, clean water. However, contamination that can cause sickness also can occur in well water.

If you have a well, you should take steps to protect it and have the water tested annually to make sure your water is safe." - Centers for Disease Control (CDC)

Click on Well Water Test Kit link on the left for more information.

Well Data

Link to the Wisconsin Department of Natural Resources well data information.

Well Water Quality Viewer

Link to the UW-Stev ens Point Well Water Quality Viewer - Private Well Data for Wisconsin









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Well Water Quality Viewer

Well Abandonment

Door County Private Well Monitoring Program

Well Data

Home > Our County > Departments > Soil and Water Conservation > Groundwater > Door County Private Well Monitoring Program

Select Language 🗸

Door County Private Well Monitoring Program

Past Testing Results

The common contaminants that are tested for in the study have been bacteria in the form of Total Coliform and E. coli and Nitrate. The following table summarizes the results from 2019 - 2023. The numbers displayed show the percentage of Door County wells indicating various levels of contaminants compared to Wisconsin averages.

Water Quality Standard (Level Detected)	Fall 2023 (162	Spring 2023 (195 wells)	Fall 2022 (196	Spring 2022 (260	2021 (217 wells)	2020 (295 wells)	2019 (148 wells)	Wisconsin Average
	wells)	050	wells)	weits)	760	0.6.0.	0.40	
ml)	88%	95%	92%	90%	/6%	86%	84%	
Total Coliform (1-10 MPN/100 ml)	6%	5%	6%	6%	14%	9%	10%	17%
Total Coliform (10-100 MPN/100 ml)	4%	0%	2%	3%	6%	3%	4%	(>0 MPN/ 100 ml)
Total Coliform (>100 MPN/100 ml)	2%	<1%	1%	1%	3%	1%	1%	
E.coli (0 MPN/100 ml)	98%	100%	100%	99%	98%	99%	100%	
E.coli (1-10 MPN/100 ml)	1%	0%	0%	<1%	1%	1%	0%	5%
E.coli (10-100 MPN/100 ml)	1%	0%	0%	0%	<1%	0%	0%	(>0 MPN/ 100 ml)
E.coli (>100 MPN/100ml)	0%	0%	0%	0%	0%	0%	0%	
Nitrate (0 mg/L)	72%	77%	74%	80%	75%	72%	71%	
Nitrate (2-5 mg/L)	18%	16%	18%	16%	11%	16%	16%	001
Nitrate (5-10 mg/L)(>10 mg/L)	8%	5%	7%	4%	12%	12%	11%	8% (>10 mg/L)
Nitrate (>10 mg/L)	2%	3%	1%	0%	2%	<1%	2%	
Arsenic (<2 µg/L)	91%	89%	92%	88%	89%	90%	99%	
Arsenic (2-5 µg/L)	5%	10%	7%	11%	9%	6%	1%	5%
Arsenic (5-10 µg/L)	4%	0%	1%	1%	1%	3%	0%	(>10 µg/L)
Arsenic (>10 µg/L)	0%	<1%	0%	0%	1%	<1%	0%	

2024 Spring UW-Oshkosh Presentation of the Door County Well Monitoring Program (pdf) 2024 Spring UW-Oshkosh Recorded Presentation of the Door County Well Monitoring Program

2023 Fall UW-Oshkosh Presentation of the Door County Well Monitoring Program (pdf) 2023 Spring UW-Oshkosh Presentation of the Door County Well Monitoring Program (pdf) 2023 Spring UW-Ohskosh Recorded presentation of the Door County Well Monitoring Program

2022 Fall UW-Oshkosh Presentation of the Door County Well Monitoring Program (pdf) 2022 Fall UW-Oshkosh Recorded Presentation of the Door County Well Monitoring Program

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2021 UW-Oshkosh Presentation of the Door County Well Monitoring Program (pdf) 2021 UW-Oshkosh Recorded Presentation of the Door County Well Monitoring Program

2020 UW-Oshkosh Presentation of the Door County Well Monitoring Program (pdf) 2020 UW-Oshkosh Door County Well Monitoring Final Report (pdf) 2020 UW-Oshkosh Recorded Presentation of the Door County Well Monitoring Program

2019 UW-Oshkosh Presentation of the Door County Well Monitoring Program (pdf)

2024 Private Well Monitoring Program Registration for the fall 2024 study coming soon!











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Section	UWSP	2019 (Fall)	2020 (Fall)	2021 (Fall)	2022 (Spring)	2022(Fall)	2023 (Spring)	2023 (Fall)	2024 Spring tested		
1	1.11										
2	1.7										
3	0										
4	4.71333				2.1_5*1						
5										Lea	end
6	0.925									5	
7	0.66									Nitra	te as N
8	6.0266/									(mg/l	_)
10	$\frac{3.783}{2.20272}$									•	0-2.0
10	2.30273									0	2150
11	0									<u> </u>	2.1-5.0
13	0									0	5.1-10
14	0									•	10+
15	1.25										
16	1.5										
17	0.695										
18											
19	3.16667										
20	0.75										
21	0.07										
22	0.54142				2.1_5*1						
23	0.16571				2.1_5*1				2.1_5*1		
24	n/a	n/a	n/a	n/a					lake		
25	n/a	n/a	n/a	n/a					lake		
26	0.17857										
27											
28											
29	0.095										
30	0.41666										
	0.41666										
32	2.8575				21 - 5 + 1						
33	0.01111				<u>2.1_3*1</u>						
25	0.01111										
33	0										

