

## **University of Wisconsin-Stevens Point Standard Research Agreement**

This research agreement is entered into on January 16, 2025 between the Board of Regents of the University of Wisconsin System on behalf of the University of Wisconsin-Stevens Point, a public educational institution of the State of Wisconsin, hereinafter referred to as "the University," and Sauk County, existing under the laws of the State of Wisconsin, hereinafter referred to as "the Sponsor."

Whereas the research program contemplated by this agreement is of mutual interest and benefit to the University and to the Sponsor and will further the University's instructional and research objectives in a manner consistent with its status as a non-profit, tax-exempt, educational institution;

Now therefore, the parties hereto agree as follows:

### **1. Statement of Work**

The Sponsor desires to have the University undertake a research project titled "Sauk County Groundwater Quality Trend Data - FY25 & FY26" in accordance with the scope of work described in Exhibit A. The University agrees to use reasonable efforts to perform the research project described in Exhibit A ("the Research"). The Sponsor acknowledges that the University makes no expressed or implied warranties for results of the research.

### **2. Principal Investigator**

The Research will be supervised by Kevin Masarik ("Principal Investigator"). If for any reason the individual is unable to continue to serve as principal investigator and a successor acceptable to both the University and the Sponsor is not available, this agreement shall be terminated as provided in Article 6.

### **3. Period of Performance**

This Research will be conducted during the period December 15, 2024 through June 30, 2026 and may be extended by mutual agreement of the parties.

### **4. Reimbursement of Costs**

The University shall be reimbursed by the Sponsor for all direct and indirect costs incurred in connection with the Research up to the amount of \$54,983.28 (Budget is attached as Exhibit B). While it is estimated that this amount is sufficient to conduct the Research, the University may submit to the Sponsor a revised budget requesting additional funds. The Sponsor is not liable for any cost in excess of the amount specified herein without written authorization from the Sponsor.

## 5. Payment Schedule

(Choose one of the following options by placing an "x" by the appropriate option)

\_\_\_ Option a:

This is a fixed-price agreement. Upon execution of this Agreement, the University will submit an invoice for full payment due within thirty (30) days from receipt of the invoice.

\_\_\_ Option b:

This is a fixed-price agreement. Upon execution of this Agreement, the University will submit invoices for payment due within thirty (30) days from receipt of the invoice in accordance with the following schedule:

60% is due upon execution of the agreement,  
30% is due 90 days after the start date of the project, and  
10% is due 30 days after the period of performance ends.

X Option c:

This is a cost reimbursable agreement. The University will submit invoices quarterly. Payments are due within thirty (30) days from receipt of the invoice.

**Checks shall be made payable to the University of Wisconsin-Stevens Point (ID #39-1805963) and sent to:**

**University of Wisconsin-Stevens Point  
003 Student Services Center  
1108 Fremont St.  
Stevens Point, WI 54481**

For identification purposes, each payment shall include the invoice number and account number as referenced on the invoice.

## 6. Termination

Performance under this Agreement may be terminated by the Sponsor upon sixty (60) days written notice; performance may be terminated by the University if circumstances beyond its control preclude continuation of the Research. Upon termination, the University will be reimbursed for all costs and non-cancelable commitments incurred in the performance of the Research and not yet paid for, such reimbursement together with other payments not to exceed the total estimated project cost specified in Article 4.

In the event that either party hereto shall commit any breach of or default in any of the terms or conditions of this Agreement, and also shall fail to remedy such default or breach within thirty (30) days after receipt of written notice thereof from the other party hereto, the party giving notice may, at its option and in addition to any other remedies which it may have at law or in equity, terminate this Agreement by sending notice of termination in writing to the other party to such effect, and such termination shall be effective as of the date of the receipt of such notice.

## **7. Intellectual Property Rights**

Unless otherwise specifically provided, the Sponsor does not obtain any rights in intellectual property created or developed under this Agreement.

## **8. Publication**

The University and its employees shall have the right, at their discretion, to release information or to publish any data, writings, or material resulting from the Research or to use such in any way for its educational and research purposes. The University shall furnish the Sponsor with a copy of any proposed publication in advance of the proposed publication date and grant the Sponsor thirty (30) days for review and comment. Such delay shall not, however, be imposed on the filing of any student thesis or dissertation.

## **9. Consultation**

Selected personnel of the Sponsor, designated by the Sponsor to the University, shall have the right to confer with the Principal Investigator and his/her associates for such reasonable periods and at such times as are mutually convenient.

## **10. Publicity**

The Sponsor shall not use the name of the University, nor any member of the University's staff in connection with any products, promotion, or advertising without the prior written approval of the University.

## **11. Reports**

The University shall furnish to the Sponsor letter reports during the term of this Agreement summarizing the program activities being conducted according to the following schedule (if required): Annual report to be submitted to Sauk County within 30 days after the last day of each fiscal year (June 30). A final report setting forth the accomplishments and significant program activities findings shall be prepared by the University and submitted to the Sponsor within 30 days after the expiration of this Agreement.

## **12. Proprietary Data**

Unless otherwise required by law, the University will exercise reasonable efforts to maintain in confidence proprietary or trade-secret information disclosed or submitted to the University by the Sponsor that is designated in writing as confidential information at the time of disclosure ("Confidential Information"). Confidential Information does not include information which:

- is generally available in the public domain or becomes available to the public through no act of the University; or
- is independently known prior to receipt thereof or is discovered independently by an employee of the University who had no access to the information supplied by the Sponsor under this Agreement; or
- is made available to the University as a matter of lawful right by a third party.

The University retains the right to refuse to accept any such information which is not considered to be essential to the completion of the Research. The obligations of the University under this paragraph shall survive and continue for one (1) year after this Agreement ends.

### **13. Human Subjects Protections**

In the event that the Scope of Work involves the use of humans as research subjects, the University will conduct such research in accordance with the written protocol approved by the appropriate Institutional Review Board, applicable law, and the University's ethical standards.

### **14. Liability**

The Sponsor agrees to hold the University, its officers, employees, or agents, harmless from any loss, claim, damage, or liability of any kind involving an officer, employee, or agent of the Sponsor arising out of or in connection with this Agreement, except to the extent that such loss, claim, damage, or liability is founded upon or grows out of the acts or omissions of any of the officers, employees, or agents of the University while acting within the scope of their employment where protection is afforded by ss. 893.82 and 895.46(1), Wis. Stats.

### **15. Warranties**

The university makes no warranties, expressed or implied, as to any matter whatsoever, including, without limitation, the condition of the research or any invention(s) or product(s), whether tangible or intangible, conceived, discovered, or developed under this agreement; or the ownership, merchantability, or fitness for a particular purpose of the research or any such invention or product. The University shall not be liable for any direct, indirect, consequential, special or other damages suffered by any licensee or any others resulting from the use of the research or any such invention or product.

### **16. Equipment**

Title to any equipment or supplies purchased or manufactured in the performance of the work funded under this Agreement shall vest in the University upon acquisition.

### **17. Assignment**

Neither party shall assign this Agreement to another without the prior written consent of the other party; however, the Sponsor may assign this Agreement to a successor in ownership of all or substantially all its business assets, provided that such successor shall expressly assume in writing the obligation to perform in accordance with the terms and conditions of this Agreement. Any other purported assignment shall be void.

### **18. Independent Inquiry**

Nothing in this Agreement shall be construed to limit the freedom of researchers who are participants in this Agreement, whether paid under this Agreement or not, from engaging in similar research inquiries made independently under other grants, contracts or agreements with parties other than the Sponsor.

### **19. Independent Contractor**

In the performances of all services under this Agreement:

- Each party and its personnel shall be deemed to be and shall be an independent contractor and, as such, shall not be entitled to any benefits applicable to employees of the other party;
- Neither party is authorized or empowered to act as agent for the other for any purpose and shall not on behalf of the other enter into any contract, warranty, or representation as to any matter. Neither party shall be bound by the acts or conduct of the other.

## **20. Insurance**

The University warrants and represents that it has adequate liability coverage, such protection being applicable to officers, employees, and agents while acting within the scope of their employment by the University. The University has no liability insurance policy as such that can extend protection to any other person.

Each party hereby assumes any and all risks of personal injury and property damage attributable to the negligent acts or omissions of that party and the officers, employees, and agents thereof.

## **21. Notices**

Notices and communications hereunder shall be deemed made if given by registered or certified envelope, postage prepaid, and addressed to the party to receive such notice, invoice, or communication at the address given below, or such other addresses as may hereafter be designated by notice in writing.

### ***If to the Sponsor:***

#### **Technical Matters:**

Melissa Schlupp  
[melissa.schlupp@saukcountywi.gov](mailto:melissa.schlupp@saukcountywi.gov)  
Sauk Co. Land Resources & Environment,  
505 Broadway  
Baraboo, WI 53913

#### **Administrative Matters:**

Lisa Wilson  
[lisa.wilson@saukcountywi.gov](mailto:lisa.wilson@saukcountywi.gov)  
Sauk Co. Land Resources & Environment,  
505 Broadway  
Baraboo, WI 53913

#### **Email invoices to:**

Lisa Wilson: [lisa.wilson@saukcountywi.gov](mailto:lisa.wilson@saukcountywi.gov)

### ***If to the University:***

#### **Technical Matters:**

Kevin Masarik  
[kmasarik@uwsp.edu](mailto:kmasarik@uwsp.edu)  
University of Wisconsin-Stevens Point  
800 Reserve St., 224 TNR  
Stevens Point, WI 54481

#### **Administrative Matters:**

Katherine P. Jore, Assoc. Vice Chancellor  
[kjore@uwsp.edu](mailto:kjore@uwsp.edu)  
University of Wisconsin-Stevens Point  
2100 Main St., 202A Old Main  
Stevens Point, WI 54481-3897

## **22. Governing Law**

This Agreement shall be governed by the laws of the State of Wisconsin.

## **23. Entire Agreement**

Unless otherwise specifically provided, this Agreement embodies the entire understanding between the University and the Sponsor for this project, and any prior or contemporaneous representations, either oral or written, are superseded. No amendments or changes to this Agreement, including without limitation, changes in the statement of work, total estimated cost, and period of performance, shall be effective unless made in writing and signed by authorized representatives of the parties.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in duplicate by proper persons duly authorized.

**Sponsor Agency**    Sauk County

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

EIN #: \_\_\_\_\_  
(Employer Identification Number)

**University of Wisconsin-Stevens Point**

Name:                Katherine P. Jore

Title:                Associate Vice Chancellor

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

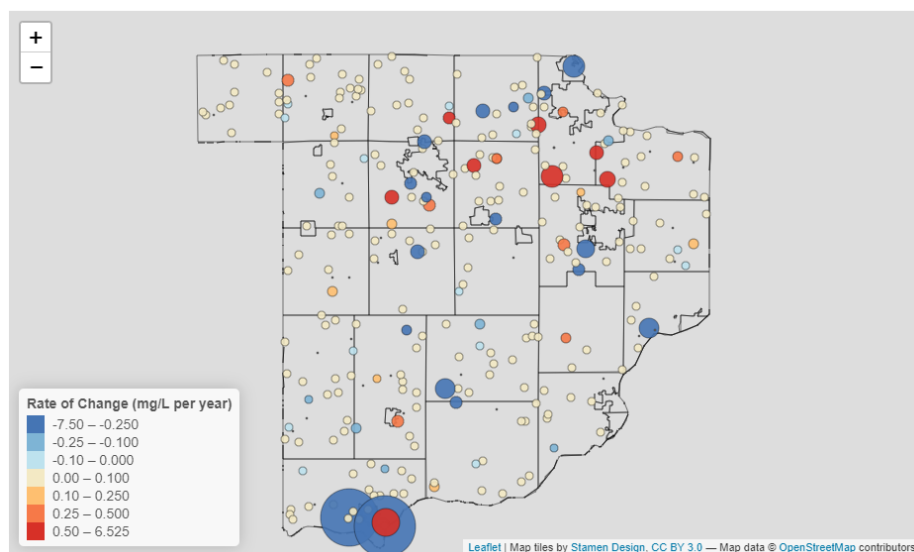
# Groundwater Quality Trend Data (2 Year Continuation)

## PURPOSE OF TRACKING GROUNDWATER QUALITY TREND DATA

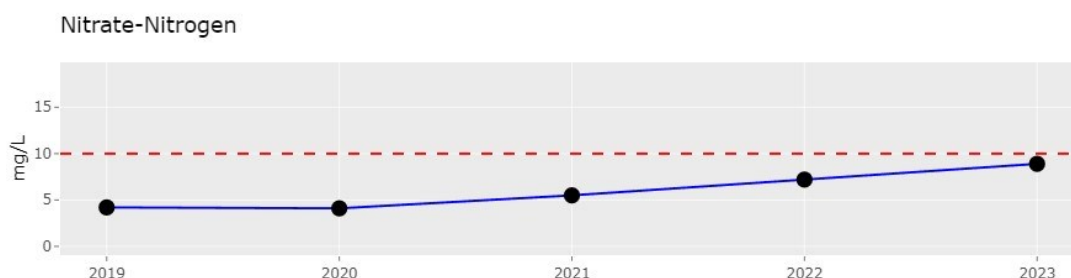
Sauk County has been partnering with the Center for Watershed Science and Education to monitor 300 wells annually as part of a community driven data collection effort to learn more about well water quality. Few communities have the ability to track trends in well water quality; establishing this network of private well owners has aided our understanding of how groundwater quality is changing over time and contributes to learning about potential causes of observed change.

Analysis of the nearby land use and well construction of private wells with long-term data can help identify which factors may be contributing to declining or improving groundwater quality. This information is useful for informing of conservation efforts, well construction guidelines, and well water outreach efforts in Sauk County. What is learned from monitoring this network of wells can then be applied more generally to Sauk County groundwater as a whole.

Participants were previously selected to ensure wells are representative of Sauk County geology, land cover, and rural well density. We successfully sampled more than 300 wells in each of the 5 years. Multiple years of data from the same wells increases our ability to understand whether increases or decreases represent a true trend or simply a change in concentration between two points in time. Five years was the minimum number of years recommended for this project. We propose collecting an additional two years of data to provide confidence in trend data and provide a longer record for potential correlation of trends to climatic and/or annual land cover data.



**Figure 1. Data on trends in the 301 wells that submitted samples for the past 5 years. Red symbols represent increasing trends (9%), blue decreasing (13%), and yellow indicate no trend (79%). The larger the symbol, the greater the rate of change.**



**Figure 2. Example of a well participating in the project that displays an increasing trend.**

## METHODOLOGY & TIMELINE

### *Timeline*

The proposed contract extends the sampling for an additional two years of monitoring. The project activities in each year include the following

- Mail Sample Kits (December)
- Testing (January-February)
- Mail Results (January-February)
- Update Dashboard/Educational program (February-May)
- Annual Report (June)

### *Tests*

Confidence in this trend data enables isolating areas where nitrate and/or chloride are increasing or decreasing. Additional parameters allow us to understand water quality changes are related to land use or other factors that may be influencing measurements such as weather/climate, add confidence to results, and provide important information about other water quality characteristics.

### Nitrate

Nitrate is an important test for private well owners. Levels greater than 10 mg/L nitrate-nitrogen should not be consumed by infants, women who are or trying to become pregnant. Everyone is encouraged to avoid long-term consumption of nitrate greater than 10 mg/L.

Nitrate is a chemical commonly found in agricultural and lawn fertilizer. It is also produced when organic rich materials such as manure, bio-solids, septic system effluent, etc. decompose. Nitrate is a very soluble form of nitrogen and can easily leach past the root zone of plants into our groundwater. Levels of nitrate in groundwater are generally less than 1 mg/L in natural or areas of little human influence. Elevated levels generally occur in areas of agricultural activity or areas of dense rural development (i.e. small lot sizes with septic systems, lawn fertilizers, etc.). Soils and geology make certain areas more prone to nitrate losses to groundwater. For these reasons, nitrate is a good test to perform if trying to understanding the impacts of land use on groundwater quality as well as trends over time.

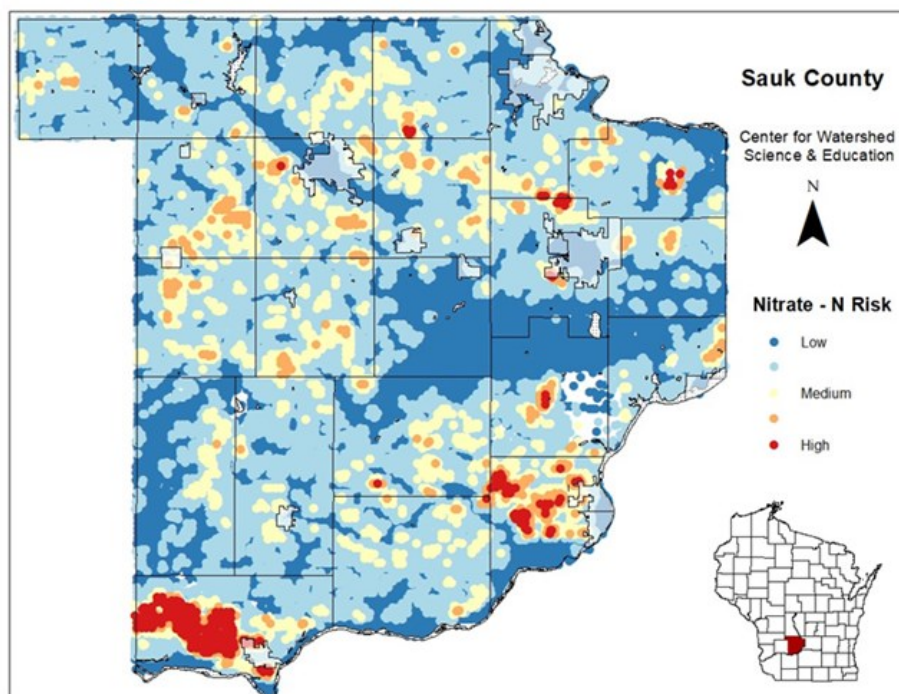
### Chloride

Like nitrate, chloride is a useful tool for understanding the impacts of land use. Major sources of chloride to groundwater include fertilizer, road salting and septic system drainfields. Potash is used to add potassium to soil. The most common form of potash is potassium chloride; the chloride is susceptible to leaching. Road salt (usually sodium chloride) helps in deicing roads, but is then washed off roads into ditches or other



## Exhibit A

pervious areas where it soaks into the soil and can eventually leach to groundwater. Septic system drain fields dispose of wastewater which contains chloride from human waste and water softener salt.



**Figure 3. Map showing the risk of a well encountering elevated nitrate based on a statistical model that was applied to each parcel in Sauk County. Red indicates higher risk and blue lower risk. Statistical model was developed using data from first 5 years of the project**

### Alkalinity

Alkalinity is a measure of water's ability to neutralize acid. It is generated by the dissolution of carbonate minerals common to Wisconsin. Groundwater alkalinity measurements are relatively stable from one year to the next. Testing for alkalinity may help in understanding whether weather variability is influencing particular water samples since alkalinity should be relatively consistent under normal conditions.

### Conductivity

Conductivity is a measure of the amount of total dissolved ions in water but does not give an indication of which minerals are present. In most uncontaminated waters however, conductivity is about twice the total hardness value in an unsoftened water source. Changes in conductivity over time may indicate changes in overall water quality. There are no health concerns at levels of conductivity found in Wisconsin's groundwater.

### Hardness

Hardness measures the amount of calcium and magnesium in water. Hard water can cause scale deposits on fixtures, in pipes or water heaters. Water that is naturally low in hardness is often referred to as soft and can be corrosive. There are no health concerns associated with drinking hard water. Water less than 150 mg/L is considered soft while values greater than 200 mg/L are considered hard. *Concentrations are expressed as mg/L as CaCO<sub>3</sub>.*

### pH

The pH test is a measure of acidity. The lower the pH, the more corrosive the water. There is no health standard for pH, however corrosion of metal plumbing or fixtures is more likely to occur when pH levels are less than 7. Water greater than 7 is more likely to result in scaling. Low pH water may be more likely to result in elevated levels of copper and/or lead if those elements are included in your plumbing system.

***Well Testing***

Sample kits will be mailed to all participants who have remained with the program for all 5 years. For 2024, this represents 300 test kits. We anticipate sending kits to 280 participants in 2025 because of attrition. Participants will collect their sample and send back to the laboratory using a pre-paid mailer. Samples will be analyzed at the Water and Environmental Analysis Laboratory at UW-Stevens Point, which is state-certified to perform the tests of interest. Following sample analysis participants will be mailed a copy of their individual result along with interpretive information.

***Reporting & Education***

An annual summary of results will be generated for Sauk County that provides an overview, summary data, and interpretation of results. Important metrics that we would typically report on: average, median, minimum, maximum concentrations by county, towns, aquifer category, land use, and casing depth. Percentage of wells increasing/decreasing. Maps will be generated to provide understanding of water quality across Sauk County. Our intent is not to display or share the data at a parcel level but provide a general idea of groundwater quality spatially. As a result, we plan to map display data at a county-wide scale to the centroid of a section (1 square mile area). The project dashboard will be updated annually to reflect additional years of individual parameters, trends over time, and historical data. The current dashboard can be found here: <http://68.183.123.75/wisconsinwater/County-Apps/Sauk/>

***Data & Project Deliverables***

This work will result in the following project deliverables:

1. An annual in-person update and educational session/open house event.
2. An annual report will be provided to Sauk County at the completion of each year summarizing results from the annual testing.
3. After each well test, each well owner will receive a copy of their individual test results along with interpretive information.
4. The Sauk County online interactive data visualization tool will be updated to catalogue data and make available to the public and county for outreach/educational purposes.
5. Data will be archived in the Center for Watershed Science and Education database and integrated into the WI Well Water Viewer. The viewer aggregates well water data to a 1 square mile area.
6. Any databases, raw data files, or other electronic files generated as a result of this project will be provided via preferred format to Sauk County.

***Expectations from Sauk County***

In order for the Center for Watershed Science and Education to carry out the project, the following support from Sauk County departments is anticipated:

1. Assistance arranging open houses or outreach events for participants to learn about the project and project results (Sauk County Extension).
2. Access to parcel level data and geographic information system support with names/addresses of residents for the purposes of identifying potential participants (Sauk County Land Information/GIS).
3. Communication of project results with county officials and county departments (UW-Madison Extension Sauk County, Sauk County Land Resources & Environment, Sauk County Department of Health)
4. Provide review of any recruitment materials, outreach materials, or other communication materials that result from this project (UW-Madison Extension Sauk County, Sauk County Land Resources & Environment, Sauk County Department of Health)

**BUDGET JUSTIFICATION****Budget for December 15, 2024 – June 30, 2025 (FY25)**

<b>Water Testing for 300 Samples</b> <ul style="list-style-type: none"> <li>Center for Watershed Science will be responsible for mailing/receiving test kits. Samples will be analyzed at the Water and Environmental Analysis Lab.</li> <li>\$60/sample.</li> <li>This includes a follow-up mailing of individual results to participating households.</li> </ul>		\$18,000
<b>Mailings</b>		
	Mailing cost for kits to households (\$5/sample x 300 samples).	\$1,500
	Mailing cost for samples back to the lab (\$8/sample x 300 samples).	\$2,400
<b>Research Associate Staff Time</b> <ul style="list-style-type: none"> <li>Academic Staff (0.075 FTE salary (\$2,897.08) + fringe (\$1,376.11) This person will be responsible for coordinating of sampling efforts, updating dashboard, and annual report writing.</li> </ul>		\$4,273.19
<b>Total for FY25</b>		\$26,173.19

**Budget for July 1, 2025 – June 30, 2026 (FY26)**

<b>Water Testing for 280 Samples</b> <ul style="list-style-type: none"> <li>Center for Watershed Science will be responsible for mailing/receiving test kits. Samples will be analyzed at the Water and Environmental Analysis Lab.</li> <li>\$63/sample.</li> <li>This includes a follow-up mailing of individual results to participating households.</li> </ul>		\$17,640
<b>Mailings</b>		
	Mailing cost for kits to households (\$5/sample x 280 samples).	\$1,400
	Mailing cost for samples back to the lab (\$8/sample x 280 samples).	\$2,240
<b>Research Associate Staff Time</b> <ul style="list-style-type: none"> <li>Academic Staff (0.075 FTE salary (\$5,214.75) + fringe (\$2,315.35) This person will be responsible for coordinating of sampling efforts, updating dashboard, and annual report writing.</li> </ul>		\$7,530.09
<b>Total for FY26</b>		\$28,810.09

\*\*Sauk County has a policy of not paying indirect costs on outside service contracts with public institutions (documentation attached)