State of Wisconsin Groundwater Research and Monitoring Program FY26 Request for Proposals

Joint Solicitation

July 1, 2025 – June 30, 2026

Facilitated by:
Wisconsin Groundwater Coordinating Council and University of Wisconsin Water Resources Institute

Participating state organizations:
Universities of Wisconsin / Wisconsin Department of Natural Resources / Wisconsin Department of Agriculture, Trade and Consumer Protection / Wisconsin Department of Safety and Professional Services

Proposal Submission Deadline:
3 p.m. CDT, Friday, November 1, 2024

An informational webinar for prospective investigators will be from 12-1 p.m. CDT on September 6, 2024, with connection information here: https://uwmadison.zoom.us/j/98941862699?pwd=L2JDaUh6N0cwY0F3TTB4QUlNS3JFZz09
Meeting ID: 989 4186 2699, Passcode: 624976. We will record the meeting.

To SUBSCRIBE to the RFP notification email list, send an email to: jennifer.hauxwell@aqua.wisc.edu

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Date: June 26, 2024

To: Interested Researchers
From: James Zellmer, Groundwater Coordinating Council
Christy Remucal, University of Wisconsin Water Resources Institute
Subject: Joint Solicitation for Groundwater Research and Monitoring

We are pleased to announce the state of Wisconsin Joint Solicitation for Groundwater Research and Monitoring for Wisconsin Fiscal Year 2026. Complete instructions for proposal submission are enclosed. The goal of this solicitation is to identify and support scientific research that will answer key scientific questions and will advance our understanding and effective management of groundwater in Wisconsin.

The solicitation is a coordinated effort of the Universities of Wisconsin and the Wisconsin departments of Natural Resources; Agriculture, Trade and Consumer Protection; and Safety and Professional Services. This cooperative solicitation allows interested individuals to prepare project proposals that can be submitted to several different funding sources simultaneously and eliminates the need to submit similar proposals several times for different solicitation efforts. It is our intent that this joint solicitation will make it easier for interested researchers to prepare proposals, promote coordination among state organizations and researchers, and enhance the ability of state agencies and the Universities of Wisconsin to meet their objectives.

Funding is available for new research or monitoring to meet specific state program needs and objectives. Up to $290,000 will be available for new groundwater projects in Fiscal Year 2026.

You are invited to review the enclosed materials and decide if you wish to submit a proposal. **The deadline for submittals is 3 p.m. CDT, Friday, November 1, 2024**. Investigators are required to submit proposals using *eDrop*, a web-based proposal submission system that is now open for registration. Please visit the WRI Joint Solicitation web page for more information.

Wisconsin Groundwater Research and Monitoring Program – FY26 Request for Proposals

OVERVIEW

The Universities of Wisconsin (UW) and the Wisconsin departments of Natural Resources (DNR); Agriculture, Trade and Consumer Protection (DATCP); and Safety and Professional Services (DSPS) annually participate in a joint solicitation for research and monitoring proposals dealing with groundwater, pesticides and/or on-site wastewater treatment systems. Collectively, since its inception and through state fiscal year 2025 (July 1, 2024 - June 30, 2025), this annual joint solicitation has funded 515 groundwater research and monitoring projects and has helped establish Wisconsin as an international leader in groundwater research. Up to $290,000 will be available for groundwater-related monitoring and research in fiscal year 2026 (FY26) (July 1, 2025 - June 30, 2026) for new projects. The four programs, collectively called the Wisconsin Groundwater Research and Monitoring Program (WGRMP), are summarized as follows:

UW Groundwater Research - The UW, through its Water Resources Institute (WRI), has received funding since FY90 for groundwater research. Projects may be of a fundamental or applied nature on selected aspects of groundwater research in the natural sciences, engineering, social sciences or law. Through FY25, the UW will have invested $9.5 million on 214 groundwater research projects. Several projects have been co-funded with the DNR, DSPS and/or DATCP, and 28 were co-funded through the National Institutes for Water Resources program (U.S. Geological Survey). WRI has also invested $382,000 on seven additional water-climate projects funded through the National Institutes for Water Resources/USGS. Projects funded in past cycles are listed on the WRI website and FY25 projects are featured here. *After accounting for commitments to ongoing projects, the UW will have up to $127,000 in FY26 and anticipates funding two to three new projects.*

DNR Groundwater Monitoring and Research - The DNR has been funding groundwater management evaluation monitoring projects since FY86. The intent of these studies is to identify appropriate management practices to reduce the risk from potential sources of contamination. Through FY25, the DNR will have spent approximately $10.1 million on 242 monitoring and research projects. Several of these projects have been co-funded with DATCP, DSPS and/or UW. DNR was originally legislatively funded through a segregated account at $200,000 per year, however, this amount was reduced through legislative action in the late 1990s and early 2000s and now stands at roughly $91,000 per year. In response, the DNR has often been able to find alternative state and federal funding to target specific issues of concern. For the next several years, the DNR is committing to supplementing the segregated groundwater research account ($91,000) with an additional $200,000 per year. *With this additional funding the DNR anticipates having up to $163,000 to support new groundwater research and monitoring studies in FY26*. However, the additional funding sources are targeted for projects relating to public water supplies and source water protection issues. Source water protection of groundwater water supplies includes research into the occurrence, fate and transport of both anthropogenic and naturally occurring contaminants, development of methods and techniques that can be used to delineate wellhead capture/contribution zones and development of best management practices for agriculture activities, industrial operations and stormwater control facilities to minimize groundwater impacts and prevent contamination.

DATCP Pesticide Research - From 1989 to 2002, and again since 2017, DATCP has provided funding for research on pesticide issues of regulatory importance. Through FY25, DATCP will have spent about $2.7 million on 45 pesticide projects. Some of these projects were co-funded with DNR and/or UW. *For FY26, DATCP will not provide funding for new research projects.* DATCP will, however, be invited to take part in the proposal review process.

DSPS On-site Wastewater Treatment System Research - The Division of Industry Services (formerly the Division of Safety and Buildings within the Department of Commerce and the Department of Industry, Labor and Human Relations) received an annual appropriation of $50,000 from 1990 to 1993 to fund research on alternatives to current private sewage-system technology. In 1994, when the appropriation expired, $75,000 generated through plan review and licensing fees became available each year for research on private sewage systems. Through FY25, approximately $600,000 will have been spent on eight projects. Two projects were co-funded with DNR and UW. *DSPS will not provide funding for research projects in FY26*. DSPS will, however, be invited to take part in the proposal review process.

The Wisconsin Groundwater Coordinating Council (GCC) provides consistency and coordination among the four state entities in funding groundwater monitoring and research to meet state needs. This solicitation is coordinated jointly to facilitate proposal writing, streamline the review process, curtail duplication, improve coordination among state programs and researchers, and enhance communication among state programs and among principal investigators. Joint funding of some projects may be appropriate, but joint funding is not the purpose of this solicitation, as each state organization has its own designated mission and priorities. Although all proposals received will be distributed to each organization, lead investigators are asked to identify the state program whose mission and priorities best match their projects.

Please read the solicitation carefully; it contains a description of the priorities for each state program and other pertinent information, including the online proposal submission process. Please note that each organization has separate requirements for eligibility for WGRMP projects. Review the program-specific sections carefully. Investigators who are new to this opportunity are encouraged to solicit an example proposal from the contacts listed below.

If you have any questions related to university or agency priorities, please contact:

Jennifer Hauxwell, UW, jennifer.hauxwell@aqua.wisc.edu
William L. Phelps, DNR, William.Phelps@wisconsin.gov
Carla Romano, DATCP, carla.romano@wisconsin.gov
Brad Johnson, DSPS, Bradley.Johnson@wisconsin.gov

FUNDING PRIORITIES

The Wisconsin Groundwater Coordinating Council strongly encourages proposals that:

- Support students in becoming strong scientists and provide opportunities to practice community engagement and actionable science.
- Engage partners and communities throughout all phases of a research study, including the early idea stages when defining the question to be addressed.
- Connect with agency or university outreach and communications staff to more effectively communicate work and associated products to relevant audiences.

- Strive to promote the ideals of justice, equity, diversity and inclusion. For example, we encourage applicants to welcome students from underrepresented groups, individuals with disabilities and individuals from economically or educationally disadvantaged backgrounds that have inhibited their ability to pursue a career in STEM. In addition, we encourage applicants to clearly identify how this research will have broader societal impacts on Wisconsin communities, including collaborators/partners from underrepresented or underserved communities.

In addition to these overarching priorities, specific university and agency priorities are summarized in the sections below.

UW Groundwater Research Program

The Universities of Wisconsin (UW), through its Water Resources Institute (WRI) and its Groundwater Research Advisory Council (GRAC), seeks projects of a fundamental or applied nature on any aspect of groundwater research in the natural sciences, engineering, social sciences, economics or law. For the purposes of this solicitation, "groundwater research" is defined as research that advances the understanding, protection or management of the groundwater resource. Projects that are primarily focused on wastewater or drinking water treatment technologies, surface water protection or soil science must make a clear link to current groundwater science.

The UW Groundwater Research Priorities for Wisconsin were developed by the GRAC, whose council members have statewide expertise in groundwater research and policy. UW funding for groundwater research is administered through the WRI, which is an active member of the National Institutes for Water Resources (NIWR). The National Institutes were established to implement the provisions of the Water Resources Research Act of 1984 (Public Law 98-242) through the collective activities of the 54 member institutes. The strategic plan for NIWR contains three objectives designed to "provide relevant and timely information that can assist the nation's water resource managers in their development and implementation of programs aimed at providing a sustainable water supply." These national objectives align well with the UW Groundwater Research Priorities and were used as a framework to organize the list below. This synergy between local and national goals highlights Wisconsin's leadership in groundwater research and protection.

The UW will have up to $127,000 in FY26 and anticipates funding two to three new projects. UW priorities include:

1) **Maintain or enhance *groundwater quality***
    - Identification and characterization of chemical pollutants in groundwater systems, including emerging contaminants and nitrogen, and their threats to ecosystems and human health, including the type, toxicity and persistence of degradation products.
    - Occurrence of viruses and bacteria in groundwater and significance and implications to human health.
    - Occurrence of metals and radionuclides in groundwater and their effect on human health.
    - Effects of environmental conditions and variability on groundwater quality.
    - Impact of land-use practices on groundwater quality, including the effects of agricultural, industrial, municipal, residential or waste management activities with

infiltration to groundwater.
- Interactions of groundwater and surface water, including chemical transformations in the hyporheic zone; impacts of groundwater withdrawal on groundwater and surface water chemistry; influence of groundwater discharge on surface-water quality; and wetland impacts on groundwater.
- Strategies for ensuring high-quality groundwater under a changing climate.
- Controls on pollutant transport in groundwater, including the development or validation of predictive models.
- Impacts of contaminated groundwater on Wisconsin families, including human health effects in such areas as reproduction, development and chronic disease; or on economic losses attributable to groundwater contamination.

2) Maintain or enhance *groundwater quantity*
- Assessments of water availability and the impacts of human water use on groundwater levels, groundwater storage, surface water features and ecological features.
- Climatic effects on groundwater levels, flow patterns and quantity.
- Impact of land-use practices on groundwater quantity, including the effects of agricultural, industrial, municipal, residential or waste management activities with infiltration to groundwater.
- Strategies for maintaining and enhancing groundwater availability.
- Economic valuation of the costs and benefits and/or impacts of groundwater withdrawals on Wisconsin and the region.

3) Maintain or enhance *groundwater management*
- Investigations into the best methods for optimizing groundwater use for human and environmental needs in Wisconsin.
- Development and evaluation of tools or protocols designed to evaluate the environmental impacts of high-capacity wells or other types of withdrawals.
- Development and use of new technologies for groundwater characterization or management.
- Management of groundwater data, including informatics, visualization, access and maintenance.
- Analysis of policy alternatives associated with groundwater management.
- Economics of groundwater use or management.
- Implications of changing environmental conditions on groundwater management.
- Effectiveness of drinking water advisories, including strategies to make them more effective.

4) Improve water equity
- Research that examines the causes and impacts of groundwater-related disparities in general and/or related to any of the topics above, evaluates strategies to improve water equity or provides scientific information relevant for underserved or underrepresented communities.

DNR Groundwater Monitoring and Research Program

The Wisconsin Department of Natural Resources (DNR) supports monitoring and research to answer key questions and evaluate management practices for decisions leading to safe and

reliable groundwater supplies. Funding comes from a variety of state and federal sources.

The DNR anticipates having up to $163,000 to support new groundwater research and monitoring studies in FY26. A significant portion of this funding is targeted for projects related to public water supply source water protection. Source water protection of groundwater drinking water supplies includes research into the occurrence, fate and transport of both anthropogenic and naturally occurring contaminants, development of methods and techniques that can be used to delineate wellhead capture/contribution zones and development of best management practices for agriculture activities, industrial operations and stormwater control facilities to minimize groundwater impacts and prevent contamination. The DNR has identified the following key needs for groundwater monitoring and research.

1) **Evaluation of Nitrogen Fertilizer Management Systems for Protection of Groundwater and Drinking Water Wells**
   Nitrogen and bacteria are leading causes of drinking water well contamination in Wisconsin. Research is needed to determine effective management practices and site characteristics for nitrogen fertilizer application that are protective of drinking water wells and groundwater. Projects should address acute and/or chronic impacts to groundwater and may focus on developing and/or evaluating one or more of the following:
   - Assessment and decision support tools to help agricultural producers cost effectively apply nitrogen fertilizers while reducing the potential for groundwater contamination.
   - Studies to better quantify and reduce uncertainty around nitrogen cycling. Calibrate models or mass balance accounting analysis for common crops under optimized nitrogen fertilizer management, including quantification for all nitrogen inputs (applied, air deposition, irrigation water, and especially that contributed by soils throughout the season under varied environmental conditions) and exports (harvest, soil residual, leaching to groundwater, volatilization).
   - Quantification of nitrogen loss reductions from existing or novel conservation practices, including associated costs and benefits, including crop performance.

2) **Information to Evaluate the Risk from Microbial Pathogens in Groundwater**
   Public water systems and private water supply wells are at risk from microbial pathogens in groundwater. Work is needed to:
   - Evaluate well construction methods for susceptibility to microbial pathogens.
   - Evaluate the fate and transport of microbial pathogens in the vadose zone and in aquifer systems, and the specific factors that influence microbial survival and transport in the subsurface.
   - Investigate the anthropogenic and environmental sources that could potentially contribute microbial pathogens to groundwater.
   - Evaluate the ability of various microbial detection methods, such as cell culture and polymerase chain reaction (PCR), to detect viable infectious microbial pathogens in environmental water samples.
   - Evaluate the effectiveness of Wisconsin state soil treatment requirements (minimum separation distances, soil specifications, etc.) at reducing microbial pathogens in groundwater at regulated waste land application/disposal sites.
   - Research pathogen types and occurrence in groundwater, routes of exposure, potentially affected populations of people and drinking water implications.

3) **Information to Support Management of Water Use to Protect Groundwater and Surface Water Supplies**

To carry out existing state laws protecting public utility wells, springs or groundwater protection areas and addressing water loss greater than 95%, the DNR needs additional data and information on the following topics:

- Achieving sustainable water use (methods to predict, evaluate and mitigate impacts of groundwater pumping to determine sustainable pumping levels).
- Evaluating impacts of individual high-capacity wells (refine our understanding of groundwater-surface water interaction, e.g., streambed conductance, stream-flow depletion, recharge area identification, assessment of irrigation practices and consumptive use coefficients for agricultural applications, and evaluation of land-use change impacts).
- Other groundwater quantity goals needing support from monitoring and research include:
    - Improving understanding of water budget components, particularly evapotranspiration and recharge.
    - Identification of groundwater recharge areas and enhancement of natural recharge.
    - Assessment of extent of stormwater contaminant conveyance to groundwater.
    - Relationship between high groundwater use and changes in groundwater quality.
    - Development of basin-scale groundwater budgets.

4) Source Water Protection Tools

Research is needed on the following topics to help communities protect their drinking water sources:

- Hydrogeologic methods to characterize the vulnerability of municipal drinking water systems to contaminants and to set priorities and strategies for managing contaminant sources.
- Economic analysis tools to help communities and decision makers evaluate investments in groundwater protection as compared to water treatment or well replacement.
- Assessments of the extent and effectiveness of source water protection efforts, including evaluation of local protection mechanisms, local or county level mechanisms that could be effective but not widely utilized, and training and professional outreach programs.

5) Prevalence of PFAS in Wisconsin's Groundwater

The research and regulatory communities are only beginning to understand the prevalence of PFAS (per-and polyfluoroalkyl substances) in ambient groundwater (i.e., away from known sites of release of large quantities), including in Wisconsin's groundwater resources. Groundwater monitoring studies are needed to help to understand relationships between occurrence of PFAS in soil and groundwater and potential point and non-point sources. For most topics, sites selected for research should be ones that avoid overlap with work that is already regulatorily required. Proposals that present a technically sound plan to collect a robust data set will be given preference, and it is therefore understood that laboratory analytical costs will constitute a substantial portion of the proposed budget. Field studies are generally preferred over laboratory studies, but if laboratory studies are proposed, they should include concentrations typical of (potential) secondary sources, such as biosolids, landfills, septic systems and precipitation. Proposals may focus on one or more of the following:

- Characterization of PFAS in septic system effluent and/or septage.
- Impact of historical land spreading of wastes on PFAS in groundwater.

- Transport in the vadose zone, including the role of water table fluctuations and colloid facilitated transport in overall PFAS mobility to groundwater.
- Identification and/or estimation of PFAS loading to surface water via groundwater discharge. Studies could consider factors such as groundwater recharge rate, land use, soil/aquifer material properties and observance of foam on surface water.
- Environmental end products in relation to source materials. Many C4 – C14 perfluoroalkyl acids are well-known environmental end products and commonly analyzed; therefore, studies are needed to determine if common analyte lists capture a large portion of the environmental end products, or if potentially important ones (e.g., other PFAS acid forms, <C4 perfluoroalkyl acids) are missed. Such studies could utilize a conventional targeted analysis method, non-targeted analysis by high-resolution mass spectrometry, and/or other PFAS-related analytical methods.
- Source tracers or ratios of tracers capable of distinguishing between septic system liquid effluent, land applied septage and land applied municipal wastewater sludge (biosolids) [not specific to PFAS – relevant to nitrate and pathogenic bacteria also]
- Do private well and/or home plumbing system components add PFAS to water from private wells? A possible approach would be to collect first-draw and post-flush samples at residences with private wells. Study should be designed to address statistical significance of any decreases in PFAS concentrations in the post-flush samples.

6) Additional Ongoing Needs

While the department will give preference to proposals that meet the priorities above, the following important ongoing needs will also be considered:

- **Occurrence of Groundwater Contaminants** – Refined information is needed about the extent, causes and forecasting of elevated nitrate, pathogens, arsenic, radium and organic contaminants and the geochemical conditions affecting their mobility in groundwater in order to advise public water systems, well-drilling and water industry professionals, and private well owners.
- **Health Effects of Groundwater Contaminants** – Research is needed to better characterize risks posed by contaminated groundwater to public health.
- **Emerging Groundwater Contaminants** – Research is needed to determine whether certain emerging substances (pharmaceuticals, antibiotics, hormones, pesticide breakdown products, viruses, prions and other microbial agents) pose a threat to our groundwater resources and to human health.
- **Protecting Groundwater from Impacts by Stormwater Infiltration** – Research is needed to evaluate the impacts of stormwater management practices in areas susceptible to groundwater contamination to assess the extent of impacts and to develop and demonstrate innovative techniques to minimize potential contamination.
- **Groundwater Monitoring and Data Analysis** – Development of a process for routine analysis of currently gathered data (Groundwater Retrieval Network, DATCP, Wisconsin Groundwater Center and others) needed to detect emerging trends and proactively address groundwater and drinking water contamination issues.

DATCP Pesticide Research Program

The Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP) Pesticide Research Program is administered by the Agricultural Resource Management Division.

DATCP will not have funding available in FY26. In general, the focus of the DATCP program is on pesticide research, which includes but is not limited to groundwater issues. Proposals for DATCP funds are typically one to two years in duration. The agency may agree to fund longer-duration studies. Research proposals may be submitted to meet the following general or specific areas of DATCP interest listed below. Proposals submitted to address specific interests may gain agency preference over those addressing general interests.

General interests include:

1) Evaluating pesticide management practices on water quality - The extent to which pesticide management practices affect the quality of groundwater and surface water, and the methods to enhance these practices and alleviate their impact on water resources, remain unclear. Further research is necessary to assess the effects of pesticide management practices on groundwater or surface water quality. Examples of pesticides of interest are atrazine and atrazine metabolites, and neonicotinoids.

2) Evaluating factors influencing the patterns of groundwater contamination by pesticides and pesticide metabolites in Wisconsin - Falling under this category are studies that explore the impact of factors such as soil composition, land use patterns, and aquifer characteristics, on the short and long-term fate and transport of pesticides in groundwater. Studies that focus on regions within the state of Wisconsin that are recognized to be highly susceptible to groundwater contamination are encouraged.

Specific interests for FY26 include:

1) **Evaluating management strategies to reduce the occurrence of imidacloprid in groundwater** - Imidacloprid, an insecticide extensively utilized in agricultural and urban settings across Wisconsin, has been detected in various regions of the state by DATCP. In several instances, imidacloprid concentrations exceeded the recommended groundwater standard or health advisory level of 0.2 µg/L. To address this concern, it is crucial to conduct monitoring and/or modeling studies to facilitate the development of management practices that effectively reduce the occurrence and concentration of imidacloprid in groundwater, ensuring that levels consistently remain below the established health advisory threshold.

2) **Advanced statistical models of pesticides in groundwater** - The proposed studies should focus on developing advanced statistical models and algorithms capable of analyzing large datasets of groundwater samples and associated pesticide concentrations. Emphasis should be placed on identifying patterns, trends, and potential correlations between land use, hydrogeology, well characteristics, environmental factors, and groundwater contamination. Additionally, proposals that highlight the development of predictive models to forecast future pesticide concentrations in groundwater based on historical data will be given special consideration. The incorporation of spatial and temporal variables is also encouraged to capture the complex dynamics of pesticide contamination in different regions of Wisconsin, and seasons. Multi-decade pesticide data from DATCP can be obtained upon request.

3) **Assessing the impact of high capacity wells on spatial variability of pesticides in groundwater** - High capacity wells can impact the spatial variability of pesticides in groundwater. The pumping rates associated with high capacity wells can alter the natural flow patterns of groundwater, resulting in localized variations in pesticide

concentration. Understanding and monitoring the spatial distribution of pesticides in groundwater in areas where high capacity wells are found is crucial for assessing the potential risks associated with pesticides in groundwater and for ensuring the protection of water resources. For further insights, multi-decade pesticide data from DATCP can be obtained upon request.

4) **Multi-decade modeling study on atrazine transport and fate in groundwater** - Wisconsin regulations restrict atrazine use beyond federal product label restrictions. In certain regions of Wisconsin, the use of atrazine has been discontinued or reduced since the late 1990s. Despite these measures, traces of atrazine and its metabolites continue to be detected in some of these areas. To gain a deeper understanding of the long-term behavior of atrazine in groundwater, there is a pressing need for the development of multi-decade modeling studies. Conducting such studies would greatly enhance the interpretation of monitoring data collected by DATCP. For further insights, multi-decade atrazine data from DATCP can be obtained upon request.

5) **Monitoring studies on leaching of neonicotinoids in groundwater** - Neonicotinoids are a class of insecticides widely used in Wisconsin. Their water solubility and persistence make them prone to leaching through the soil into groundwater, posing a potential risk to drinking water supplies and aquatic ecosystems. Multi-season continuous tile-drain, groundwater and/or lysimetric monitoring studies are needed to evaluate the loss of neonicotinoids applied to major Wisconsin crops, such as corn, soybeans, beans, potatoes, small grains, vegetables, fruit crops, and more. Studies focused on regions of Wisconsin with coarse and medium-grained soil and shallow groundwater are encouraged.

DSPS On-Site Wastewater Treatment System Research Objectives

The Department of Safety and Professional Services (DSPS) has supported research focused on the performance of on-site sewage system designs, products and management practices that can be incorporated into the administrative rules regulating on-site sewage systems. These designs, products or management practices must be 1) directed toward protecting public health, groundwater and surface water quality; 2) result in on-site sewage treatment that is consistent with the provisions of the Groundwater Protection Law; 3) affordable by the average owner of an on-site sewage system; and 4) practical for the climate and soils of Wisconsin. The department also intends to monitor, on an ongoing basis, the performance of various on-site sewage system methods and technologies. The purpose of the performance monitoring is to provide additional information on the long-term performance of the various on-site sewage system methods and technologies to confirm their reliability, to provide data for improvements and to monitor long-term compliance with the groundwater standards. The DSPS is currently interested in the long-term performance of various mechanical pretreatment devices commonly referred to as aerobic treatment units and their treatment of common nutrients in wastewater (total suspended solids; biochemical oxygen demand; fats, oils and grease; and nitrates) in private onsite wastewater treatment systems. Systems with design flows greater than 12,000 gallons per day in the state are jointly regulated by the DSPS and the DNR.

DSPS will not have funding available in FY26. However, the department will be invited to participate in the review of proposals and make recommendations to the other organizations participating in the solicitation to help meet department priorities.

APPLICANT AND PROJECT REQUIREMENTS

Eligibility

Eligibility requirements for principal investigators are listed below:

UW	**Funds are restricted for use by faculty within the Universities of Wisconsin or by academic staff who have achieved principal investigator status. Non-UW researchers may be included as associate investigators.**
DNR	**Funds are restricted for use by faculty within the Universities of Wisconsin or by academic staff who have achieved principal investigator status, and by state and local agencies with demonstrated capacity for applicable research or monitoring. Others may submit proposals by collaborating with a UW, state or local co-investigator. The DNR encourages applicants to include a UW-eligible principal investigator to maximize funding eligibility options.**

Projects that appear to be continuations of previously funded projects with two years of support and projects that have been submitted with minimal modification and twice rejected (unless otherwise encouraged) will not be considered. The UW and DNR also strive to avoid funding situations in which the name of a principal investigator or co-principal investigator appears on more than two projects during any given fiscal year.

Principal investigators who are significantly overdue with completed final reports to this program will not be eligible for new funding. Reports are considered significantly overdue six months after project completion dates. Funding organizations may consider extenuating circumstances on a case-by-case basis.

Budget Requirements and Considerations

Please keep in mind the following budget considerations that may affect eligibility and/or be important aspects for project selection:

- Budget items should include personnel costs, supplies, equipment and necessary travel.
- Budget should include fringe, but note that fringe will not apply for some funding sources.
- At this stage, do not include overhead or indirect costs, but note that some funding sources may require a revised budget if proposal selected.
- Projects will not be approved in any one budget cycle for a period of more than two years.
- Contracts will be approved on an annual basis.
- Second-year funding will be contingent on satisfactory progress and budget availability
- In general, combined faculty/staff salaries and fringe benefits to be paid from any project should not exceed 10 percent of the total individual grant, but if needed, please provide justification.
- In general, budget categories “Supplies” and “Other Costs” together should not exceed 20 percent of the total individual grant,[*] but if needed, please provide justification.
- No capital equipment (more than $5,000 per item) may be purchased.
- Travel for attendance at scientific conferences will not be accepted.

[*] DNR-targeted proposals may allow for flexibility on these costs. Consult with agency contacts prior to submitting a proposal.

- Project cost/value will be a factor in selection.
- Preference may be given to projects that support and/or incorporate graduate and undergraduate students and projects that promote the ideals of justice, equity, diversity and inclusion.

Contractual Requirements

Projects must meet all departmental requirements and guidelines related to groundwater monitoring wells (installation, documentation and abandonment/filling and sealing), sampling, laboratory analysis and data management. See chapters NR 141 and 149, Wis. Adm. Code, for more information.

PROJECT SELECTION

Review of Proposals

The two most important considerations for the reviewers are 1) whether the proposal meets state program priorities as outlined in this solicitation and 2) whether the proposal is well written and scientifically sound. Other criteria include project cost, proposed timeline, whether the proposed project methodology meets the stated objectives, whether the resources requested meet eligibility requirements and are adequate to carry out the project, whether the project investigators have the abilities to complete the proposed project, whether the proposal incorporates and/or supports graduate and undergraduate students, and, if applicable, how the proposed project relates to past WGRMP-funded projects and how it may extend our knowledge. Proposals should contain a clear discussion of the expected practical application of the project results and include an outreach plan that describes how researchers will engage with potential partners and users of project results. This will help the reviewers understand the importance of the proposed research and will ensure that the researcher designs the project with the practical application of results in mind.

All proposals received through the WGRMP joint solicitation process receive reviews from the following four groups:

1) External peer review – The WRI solicits and obtains a minimum of three external peer reviews of all proposals from national and international experts in the field, with a focus

1. **Rationale:** Please evaluate the degree to which the proposed activity addresses an important issue, problem or opportunity in development, use or management of groundwater resources.
2. **Scientific Merit:** Please evaluate the degree to which the activity will advance the state of the science or discipline.
3. **Clarity of Objectives and Feasibility:** Are the objectives of the proposed research clearly presented and is the proposed research feasible as written?
4. **Qualification and Past Record of Investigators:** Please evaluate the degree to which investigators are qualified by education, training and/or experience to execute the proposed activity; record of achievement with previous funding.
5. **Anticipated Outcomes and Engagement:** What are the likely outcomes or impacts (environmental, educational, social, economic, etc.) that could result from the project? Did investigators identify potential users of project results (e.g., communities, underrepresented and/or underserved communities, state and federal government agencies, specific businesses, industries, etc.?). Are partners and populations served by the project engaged in the process and potential outcomes associated with the proposed work?
6. **Budget/Value:** Please evaluate the degree to which the budget will adequately (but not excessively) support the project.
7. **Overall Summary:** Is the project worthy of funding? Please provide a brief summary of and rating for your evaluation of the overall merit of this proposal.

on the technical merits of the proposal. Reviewers are asked to comment on and rate each of the following aspects of the proposal ranging from excellent (5) to poor (1):

2) The Research and Monitoring Subcommittee of the GCC – This group reviews proposals for technical merit and relevance to stated priorities as well as applicability for target funding organizations.
3) The Groundwater Research Advisory Council for UW – Provided with the external peer reviews and the GCC subcommittee recommendations, this group reviews proposals for technical merit and relevance to stated priorities.
4) Staff from the funding organizations.

Final Decision-Making

Further details on UW and DNR decision-making processes are outlined below:

UW: The GRAC, which consists of university, state and federal agency and public representatives, meets as a body to discuss the results of the review process. The GRAC pays close attention to UW priorities and direct relevance to groundwater issues in its deliberations. The GRAC recommends a priority list of projects that the UW should strive to fund in accordance with budgetary resources. A suitable UW Groundwater Research Program is then assembled by the WRI and submitted to the GCC, which advises the Department of Administration on the release of UW research funds upon passage of a state budget.

DNR: DNR staff and managers from groundwater-related programs review proposals to evaluate expected practical application of the project results. In making final funding decisions, the Bureau of Drinking Water and Groundwater will formulate its recommendations based on input from all project reviewers and available funds. Considering input from all reviewers and extent of available funds, the DNR secretary's GCC designee makes the final selection of projects to receive funding from DNR sources.

Funding decisions will be made by the end of March. Proposals that are not chosen for funding through this solicitation may be referred to other funding sources for their consideration with permission of the investigators. Likewise, other funding organizations may refer proposals to the funding programs involved in this solicitation.

PROJECT ADMINISTRATION AND REPORTING

Proposals that are funded become the property of the granting Wisconsin state organization. Please note that each organization has separate mechanisms for administering funds and separate requirements for reporting described below. All investigators will be asked to make a copy of the final report available to the Wisconsin Water Library, housed at WRI.

The Wisconsin Water Library catalogs all WRI research reports into WorldCat and MadCat, two library indexing tools that provide worldwide access to the research. By having this information permanently indexed, the results are easily available to other scientists, policy makers and stakeholders. The library has also partnered with the University of Wisconsin-Madison Ecology and Natural Resources Digital Collection to make full-text reports available.

Additional reporting details for the funding organizations are below:

UW: Principal investigators on awarded projects shall submit a progress report at the end of each project year in July using WRI's online project reporting system. A 15-page final scientific report and a two-page project summary shall be submitted through the reporting system within 60 days after the project end date.

DNR: The project investigator shall submit brief quarterly project status reports to the DNR project manager within 30 days of the end of each quarter. A final report and a two-page project summary shall be submitted to the project manager within 60 days of the end of the contract period. The final report must contain thorough documentation of methods, all the data collected, and a discussion of how the results of the project can be used by decision makers.

PROPOSAL SUBMISSION

WGRMP proposals will be submitted via *eDrop*, a web-based proposal submission system located at https://edrop.aqua.wisc.edu/. The *eDrop* system is open for registration and submittal of proposals.

Applicants should contact Tom Xiong (WRI) at tomxiong@aqua.wisc.edu with any difficulties associated with the proposal submission process using *eDrop*.

Investigators will be required to provide the following information when submitting proposals:

1) A title, an abstract, location of the research, list of investigators (please note the *eligibility* requirements on page 9) and 2-page curriculum vitaes, target funding organizations, the name of the department and the administrator(s) responsible for financial management of the project if funded, year 1 and year 2 total budget requests, and five suggested reviewers and their areas of expertise (note - suggested reviewers must be from outside Wisconsin). Investigators will enter this information directly into *eDrop*.
   In addition, researchers will upload a Word document containing similar information as a proposal cover sheet. A Microsoft Word template for the proposal cover sheet is available for download from the WRI Joint Solicitation web page.
2) A proposal narrative in Adobe Portable Document File (PDF) format. A Microsoft Word template for the proposal narrative is available for download from the WRI Joint Solicitation web page.
3) A budget spreadsheet in Microsoft Excel format. An Excel template for the budget spreadsheet is available for download from the WRI Joint Solicitation web page. Please note the *Budget Requirements and Considerations* on page 10.
4) Letters of support from collaborators or stakeholders (optional, but strongly encouraged).
5) Administrative approval from an official authorized to sign proposal submissions.

All components of proposals must be submitted by the submission deadline of 3 p.m. CDT on Friday, November 1, 2024, to be considered. The web-based submission system (eDrop) will close promptly at 3 p.m.

Detailed step-by-step guidelines for proposal submission follow, and a checklist is available for download on the WRI Joint Solicitation web page. All proposals must be submitted using these

instructions.

Step-by-Step Guidelines for Proposal Submission

The steps for entering information and uploading a proposal are relatively simple. The overall proposal format is similar to that of previous years, but please read closely. There are 13 steps in the full proposal assembly process, and we recommend that investigators concentrate on steps one through four prior to submitting online.

Please adhere to the page limits for certain sections that are listed below. All pages should be 8.5 x 11 inches, all margins should be no less than 0.75 inches, and all sections use no smaller than 11-point type. The project summary, project description, references, and current and pending support pages should each start on a new page. The project summary and project description should have at least 1.5 line spacing (except for figure and table legends). The proposal must be consecutively paginated on the bottom of the page. Any section of a proposal that exceeds the specified maximum page limits will be grounds for returning the proposal to the author.

STEP 1: Prepare proposal cover sheet. Please use the Microsoft Word template titled "Proposal Cover Sheet Template" that can be downloaded from the WRI Joint Solicitation web page. The proposal cover sheet is the only element of the proposal that will be shared with potential reviewers when they are initially invited to conduct a review of the proposal and will consist of the following items:

A. Title (100 characters maximum)
B. Abstract (**not to exceed 300 words**, this is a condensed version of the 2-page project summary as described in the proposal narrative below)
C. Principal Investigator(s) & Affiliation (Department and Organization)
    1. Lead Principal Investigator
    2. Co-Investigator(s)
    3. Associate Investigator(s) & Affiliation (Department and Organization)
D. Location of Research
E. Budget
    1. Year 1 Request
    2. Year 2 Request

After the proposal cover sheet is prepared, save it on your local computer or network. When you submit your proposal package online you will be uploading this **Word** file. Do NOT convert the Word file to PDF. In addition, several items prepared for the cover sheet will be entered directly into *eDrop* as described in Step 8 below.

STEP 2: Prepare proposal narrative. Please use the Microsoft Word template titled "Proposal Narrative Template" that can be downloaded from the WRI Joint Solicitation web page. The proposal narrative will consist of the following items:

A. Title, Investigators, Affiliations of Investigators (top of first page)
B. Project Summary (begin on same page; **not to exceed 2 pages**; minimum of 11-point font and 1.5 line spacing)
    1. Specific groundwater or related problem addressed by research/monitoring proposal.
    2. How will findings contribute to understanding or solving the problem? Describe expected practical application of the project results.
    3. Project objectives.
    4. Project approach to achieve objectives, including methods and procedures.
    5. Potential communities served or users of project findings.

C. Project Description (begin on new page; **not to exceed 10 pages**; minimum of 11-point font and 1.5 line spacing)
   1. Objectives.
   2. Background information describing prior research/monitoring relevant to objectives and, if applicable, relationships to other projects funded through the WGRMP; references to past and ongoing projects and how they relate to the proposed investigation; information gaps that will be filled by the proposed project.*
   3. Project plan outlining experimental design and schedule.
   4. Methods detailed enough to convince the reviewer that the investigators are using modern techniques; a general statement alluding to techniques is not acceptable.
   5. Relevance to groundwater-related problems and state agency/UW priorities and potential societal (environmental, educational, social, economic, etc.) outcomes or impacts.
   6. Training support (if any) provided by the project, including a description of how students would be supported or incorporated.
   7. Engagement/outreach plan that describes how researchers will engage with potential users of project results (e.g., communities, underrepresented and/or underserved communities, state and federal government agencies, specific businesses, industries, etc.). Describe how partners and populations served by the project are engaged in the process and potential outcomes associated with the proposed work. [Suggestions and tools can be found at the Wisconsin Sea Grant "Actionable Science" website.]
   8. Brief budget justification (paragraph or less), including details for any funding designated for outside of the UW and any funding items that exceed recommendations described in the "Budget Requirements and Considerations" section of the RFP.
   9. Brief description of each investigator's role on the project and the percentage of time that each will spend on the project (whether funding is requested for that individual or not).

D. References Cited (begin on new page; **no specified page limit;** minimum of 11-point font)

E. Current and Pending Support (PI and all Co-Investigators) (begin on new page; **no specified page limit;** minimum of 11-point font)

After the proposal narrative is prepared, delete all of the italicized instructional text in the section headings, convert it to Adobe PDF format (.pdf), and save it on your local computer or network. The system requires that the proposal be in Adobe Acrobat PDF format (.pdf) in order to submit it as described in Step 9 below.

STEP 3: Prepare budget. Please use the Microsoft Excel budget spreadsheet titled "Budget Template" that can be downloaded from the WRI Joint Solicitation web page. The budget will consist of the following items:

A. Salaries and Wages
B. Fringe Benefits
C. Tuition Remission Charges (if applicable)
D. Supplies and Publication Costs (list office, lab, computer and field supplies separately)
E. Travel (to support completion of the project only; travel for conferences is not allowed)
F. Other Costs (e.g., equipment maintenance and fabrication, subcontracts, rentals, etc.)

* Applicants are encouraged to review past projects funded through the WGRMP at the Wisconsin Groundwater Coordinating Council website and at the WGRMP Report Repository when preparing their proposal.

- If you have a subcontract with another institution, please a) provide a budget workbook using the Budget Template for your year 1 and 2 budgets overall (including the subaward totals on the "Other Costs" line, and b) provide an additional budget workbook using an additional Budget Template for years 1 and 2 of the subcontract only that details how the subcontract will be allocated across budget lines. In summary, if including a subcontract, submit two workbooks with a naming convention that makes it clear that one is the overall and one is for the subcontract. You are able to upload more than one file in Step 10 below.

Please note: At the point of submission, the funding source should be considered State of Wisconsin General Program Revenue funds, and *campus fringe and indirect costs would not apply.* In the event a proposal from a UW campus is selected for funding by the DNR, the budget may need to be updated to include the campus' fringe rates and indirect costs, depending on the source of the funding the agency uses to fund the proposal. As you develop your proposal budget, please include the appropriate fringe rate, but do not include indirect costs at this stage. Note also, an example budget is provided on the "Instructions and Example Budget" tab of the workbook that demonstrates the level of detail requested for each budget item.

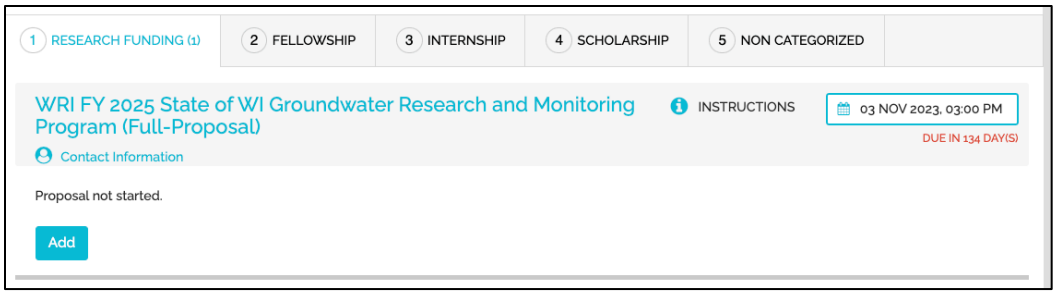
Save the Excel budget file on your local computer or network as you work on it. When you submit your proposal package online you will be uploading this Excel file as described in Step 10 below. Do NOT convert the Excel file to PDF.

STEP 4: Prepare curriculum vitae of principal and associate investigators. Upload a PDF of the curriculum vitae (including recent publications) for each investigator under the appropriate section in Step 7 below (**not to exceed 2 pages per person**; minimum of 11-point font).

STEP 5: Log in or register in *eDrop*. Investigators must log in (previous users) or register (new users) online (https://edrop.aqua.wisc.edu/) before submitting proposals. Instructions on the site will assist you in entering your proposal package. Note to new users – the registration process involves a two-step verification, requiring you enter both an email address (step one) and phone number (step two) to receive two different verification codes that you must enter in order to complete the registration.

STEP 6: Select the RFP associated with this request for proposals in *eDrop*.
After you login to eDrop, you may choose between two dashboard "viewers," and the instructions below vary depending on which viewer you are using. To determine which one you are using, look to the top right of the screen under your name. "Switch to old Dashboard" indicates you are currently using the new dashboard and vice versa.

If using the **New dashboard**:
Once you login, you will see several tabs. Select the "Funding Opportunities" tab. Within the task pane associated with "WRI FY 2026 State of WI Groundwater Research and Monitoring Program (Full-Proposal)" → Select "Add" to begin.



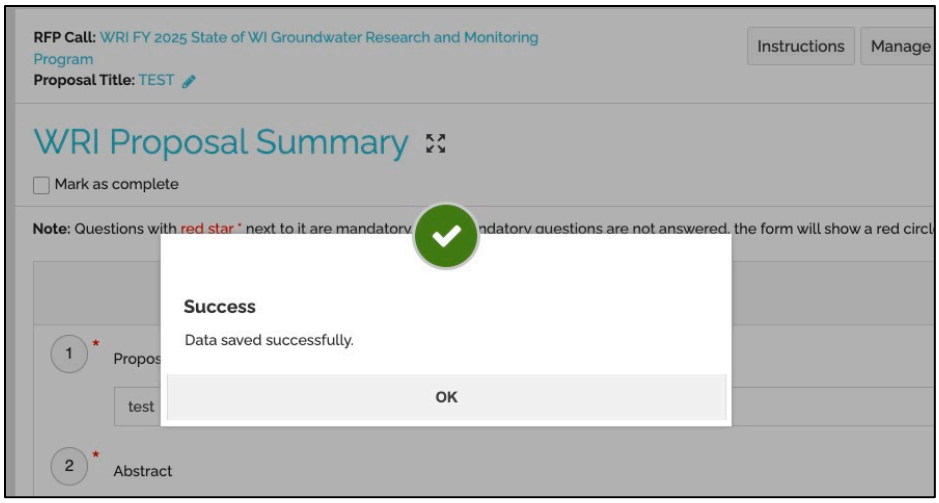
- Or –

If using the **Old dashboard**:
Once you login, you will see one or more “task panes” in the center of the screen. Select “Current Tasks.” Within the task pane associated with the “Request for Proposals (RFP), WRI FY 2026 State of WI Groundwater Research and Monitoring Program (Full-Proposal)” → Select “Add Proposal” to begin.

Next, in the dialog box that appears, enter a title for your proposal and click “Continue.” You may edit the title if necessary, by using the small edit (pencil) icon that appears following the Proposal title field near the top of the screen.

Clicking continue will activate a list of entry forms that will appear in the left side panel (e.g., “Proposal Summary,“ “WRI Principal Investigator,” “WRI Co-Principal Investigator,” etc., through “Administrative Approval") The list of forms will be visible whenever you are in the WRI FY 2026 State of WI Groundwater Research and Monitoring Program (Full-Proposal) task pane.

STEPS 7 through 13 (below) may be completed separately.
You do not need to upload your entire proposal package in a single session; however, you must hit the “SAVE” button to avoid losing anything you enter AND as you navigate between pages in *eDrop*. Do not hit the “NEXT” button until you have successfully saved your information. We encourage you to frequently SAVE your updates. If you exceed word limits, SAVEs will not be successful, and you can lose data. A successful SAVE is indicated by this prompt:



Your account will remain active through the submission deadline, and you may edit each section until your proposal is officially submitted (see Step 13). If you log out of a session, click on "Current Tasks" to resume working on your proposal.
Once you have completed a section, click on the "Mark as complete" box in the upper left of the screen.

Note: Your proposal is not officially submitted until you click on the "SUBMIT" button in the "Submission Preview" tab.

STEP 7: Enter basic information about the proposal. Once you have entered a project title (Step 6 above), you will see a list of proposal sections/tabs on the left side of the screen. Work your way down the list of tabs, being sure to click "SAVE" at the top of each page. You can select any category or modify any section at any time before you submit your entire proposal. Note, you only need to enter the required information indicated by an * in each section.

WRI Proposal Summary	Enter proposal title, abstract, location of research, budget (total year 1 and year 2 request), and keywords
WRI Principal Investigator	Enter information about the principal investigator (including uploading a PDF of a 2-page curriculum vitae)
WRI Co-Principal Investigators	Enter information about co-principal investigator(s) (including uploading a PDF of a 2-page curriculum vitae)
WRI Associate Investigator	Enter information about associate investigator(s) (optional - including uploading a PDF of a 2-page curriculum vitae)
WRI Target Agencies	Enter/prioritize funding agencies
WRI Financial Contact	Enter financial contact and department/organization where project would be administered
WRI Suggested Reviewers	Enter names, affiliations and email addresses for five qualified reviewers currently working outside Wisconsin

STEP 8: Upload the Word file of the proposal cover sheet into the online system. This is the file that you prepared in Step 1. ("WRI Proposal Cover Sheet File Upload" tab)

STEP 9: Upload the PDF file of the proposal narrative into the online system. This is the file that you prepared in Step 2. ("WRI Proposal Narrative File Upload" tab)

STEP 10: Upload Excel file of the budget into the online system. This is the file that you prepared in Step 3 or multiple files if you included a subcontract. ("WRI Budget File Upload" tab)

STEP 11: Upload PDF file(s) for letters of support. Investigators may upload letters of support from collaborators or stakeholders. This step is optional but encouraged. ("WRI Letters of Support File Upload" tab)

STEP 12: Provide administrative approval. All proposal submissions require administrative approvals and clearances before they can be considered, including for subawards. Please refer administrative staff reviewing your submission to Step 3 of these guidelines, "Prepare budget," for details about the source of funds used for this competition.

All Proposal Submissions: An email stating that the proposal has received all required approvals and clearances must be sent to Melissa Boyce (maboyce@wisc.edu) with the following requirements:

- The email must come from a campus official who is authorized to approve extramural grant applications (for UW-Madison proposals, this would be your dean's office)
    - (Attachment of official transmittal documents or electronically routed authorization forms are also acceptable from non-officials, as long as they demonstrate the required institutional approvals and also comply with the requested items below.)
- The subject line of the email should be "WGRMP FY26." If one PI is submitting multiple proposals, please use WGRMP FY26-1, -2, etc.
- The body of the email must identify the:
    - Name of the principal investigator
    - Title of the proposal
    - Approved budget amount for each year and total
    - Name of the submitting institution

When this step is completed, or if you are certain it will be completed by the submission deadline, check the box corresponding with this tab in eDrop. **This administrative approval must be sent by the submission deadline.**

STEP 13: Submit your proposal. Click on the "Submission Preview" tab. Please review the accuracy of the information provided before submitting your proposal. **To formally submit your proposal package, select the "SUBMIT" button at the top right of your screen. This step MUST be done by the submission deadline.**