I am pleased to present the Water Resources Center (WRC) Strategic Plan. This plan is the result of an extensive process with many contributors.

Let me begin by thanking those who made this plan possible. I am grateful to my fellow members of the WRC strategic planning team, Ann Lewandowski, Faye Sleeper, and Joel Larson, for their many hours of thought and discussion. Our progress depended on the efforts of talented consultants including Emily Goff and the team from the University of Minnesota's Leadership and Talent Development Office, for which we are most thankful. I know those who worked on this plan share my gratitude for the input that shaped it, from our WRC staff and University collaborators to numerous thought leaders across the state.

Stated or not, a theory of change underlies any worthwhile plan. If you are familiar with the University of Minnesota system, you will probably know that we see ourselves as change agents through interwoven engagement, research, and education. An engaged university responds to stakeholder needs and resource conditions, conducting research that finds innovative solutions and creates relevant knowledge. Our educators transfer that knowledge, along with the right skills and tools, to help build a workforce that can implement solutions and become catalysts for behavioral change. Those changes bring about new conditions that expose another set of important questions, beginning the cycle again.

This theory in mind, we challenged ourselves with a basic question: Given our unique capabilities and relationships, how can the WRC focus our efforts for the greatest impact? Our plan answers that question in two ways.

First, we articulate goals and strategies for our core functions, which serve as our leverage points to bring about change. Our research goals are about our role in generating new scientific knowledge, while our training and outreach goals focus on building the capacity of current and future generations of water resources professionals. We also identify goals in additional cross-cutting areas, recognizing WRC’s hallmark roles as a convener of diverse audiences and as a communicator of scientific content.

A second way to answer our question is to identify the problems we are especially well positioned to address. The WRC specializes in problems where water resources are intricately connected to the surrounding landscape and its people. While the problems we address at this nexus may evolve over time, our current focus areas include agriculture, urban stormwater, decentralized wastewater, groundwater, and aquatic ecosystems. These areas define our unique position to contribute. We are excited to have this plan to help guide or work, measure our progress, and identify opportunities to work with our cooperators.

Jeffrey Peterson
Director
OUR MISSION:
To advance the science of clean water for Minnesotans through innovation, workforce development, and knowledge exchange.

OUR VALUES:

Excellence: Passion, Scientific Rigor, Integrity, Trusted Unbiased Broker of Information

Creativity: Adaptability, Innovation

Partnership: Strategic Alliances, Community Partnerships, Collaborative Approach

Teamwork: Cooperation, Respect, Accountability, Internal Communication

Results: Goal Orientation, Long Term Growth, Improvement

OUR WORK

Our current expertise falls into five topic areas, each of which focuses on the intersection of land, water, and people. In the pages that follow, we articulate our goals and highlight specific programs and projects using these icons:

Urban Stormwater
Agriculture and Rural Watersheds
Decentralized Wastewater
Groundwater and Drinking Water
Surface Water and Aquatic Ecosystems
As a member of the National Institutes for Water Resources, the WRC is charged with conducting and supporting peer-reviewed research that responds to pressing water resources issues. The WRC has supported dozens of projects to help Minnesota researchers launch new lines of work, training the next generation of water scientists in the process. As an interdisciplinary institute, a core function of the WRC is to assemble and coordinate cross-cutting teams of experts to address multifaceted problems. These collaborations of WRC scientists, University of Minnesota faculty and research staff, and outside partners have earned major support from sponsors such as the National Science Foundation.

**Key Strategies**
- Leverage the WRC’s location within the University of Minnesota system to prioritize multidisciplinary research that supports practice and policy
- Connect researchers with complementary expertise to pursue compelling opportunities
- Channel funding streams to develop lasting, high impact collaborations involving WRC researchers and University faculty
- Develop and deploy research-enabling capabilities, such as project and data management

**Metrics**
- Number of affiliated research faculty and scientists
- Diversity and quantity of research collaborations
- Publications and grants
- Citations of WRC researchers

**Selected Programs and Projects**
- Stormwater Research and Technology Projects
- Assessment of Stormwater Best Management Practices
- Sustainable Food Energy and Water Systems in Cultivated Regions
- Minnesota Office for Soil Health
- Onsite Sewage Treatment Program
- Contaminants of Emerging Concern Risk Assessment and Management
- Remote Sensing of Water Quality
- Harmful Algal Blooms and Lake Health
Leverage the WRC’s location within the University of Minnesota system to disseminate high quality scientific information to support practice and policy. Build the capacity of researchers and educators to clearly and effectively share scientific information with end users. Expand collaborations and improve coordination among water-related Extension activities to provide high-quality programs across the state.

Key Strategies
- Leverage the WRC’s location within the University of Minnesota system to disseminate high quality scientific information to support practice and policy.
- Build the capacity of researchers and educators to clearly and effectively share scientific information with end users.
- Expand collaborations and improve coordination among water-related Extension activities to provide high-quality programs across the state.

Metrics
- Number and diversity of water-related Extension activities and collaborations
- Website and social media analytics
- Feedback from participants and users of WRC products
- Number of publications for practitioners
- Citations of publications for practitioners

Selected Programs and Projects
- Fields to Stream Handbook
- Watershed Education Program
- Non-point Education for Municipal Officials
- Agricultural Conservation Planning Framework: Training and Evaluation Projects
- Minnesota Office for Soil Health
- Conservation Drainage Projects
- Stormwater U
- Harmful Algal Blooms and Lake Health
A diverse range of professionals are responsible for Minnesota water resources, including researchers and educators; private engineers, consultants, and lawyers; local government planners, technicians, and managers; farmers and other land managers; and utility managers ranging from private septic system installers to city drinking water suppliers. All of these people need high quality and ongoing training. The Water Resources Center is a premier provider of training, certification, and education programs for audiences within Minnesota and across the country. Through the Onsite Sewage Treatment Program, Wetlands Delineation Certification Program, Watershed Specialists Training, and Extension programming, the Center offers a range of research-based workshops, curriculum, and outreach to professionals, communities, and other individuals. The WRC also administers the Water Resources Science graduate program, the largest interdisciplinary program at the University of Minnesota.

**Key Strategies**

- Expand and foster innovation in research-based training, certification, and Extension programs through new modes of delivery and increased coordination with external partners
- Create professional development opportunities for students and build relationships with potential employers
- Support the WRS program through funding for student fellowships and research

**Metrics**

- Number and diversity of training participants
- Participation by WRS students and WRC staff in professional development activities
- Number of students with WRC support for research or fellowships
- Placement rate of WRS graduates

**Selected Programs and Projects**

- Onsite Sewage Treatment Program
- Wetland Delineator Certification Program
- Watershed Specialist Training Program
- Minnesota Office for Soil Health
- Conservation Applications of LiDAR
- MASWCD Webinars
- Minnesota Water Resources Conference
Addressing the complexity of water issues demands diverse approaches and a strong, inclusive network of relationships. The WRC fosters connections across disciplines and communities by sponsoring the annual Minnesota Water Resources Conference, which recently brought together 700 practitioners and researchers from across the state. Further connections are forged each year through numerous WRC-sponsored events including conferences, symposia, and lectures. Beyond events, we connect stakeholders through efforts such as the Minnesota Office for Soil Health and the Minnesota Stormwater Research Council. Through these events and organizations, we build stronger connections across the state, bringing together diverse audiences from a range of backgrounds: rural and urban, agricultural and natural resources, and beyond.

Key Strategies
- Continue to strengthen and promote the annual Minnesota Water Resources Conference
- Engage underrepresented Minnesotans in water issues
- Formalize partnerships and expand connections within the University across its research, education, outreach, and Extension activities
- Increase collaboration and capacity building with external organizations that reflect a range of water users and sectors

Metrics
- Number and diversity of collaborations facilitated by the WRC
- Number of WRC sponsored events and attendance
- Diversity of content and attendance at WRC-sponsored events
- Feedback from event attendees

Selected Programs and Projects
- Minnesota Water Resources Conference
- Minnesota Office for Soil Health
- Minnesota Stormwater Research Council
- Contaminants of Emerging Concern Risk Assessment and Management
- Watershed Education Program
- Non-point Education for Municipal Officials
- Climate Adaptation Conference
- Water Resources Assembly and Research Symposium
Key Strategies

- Proactively communicate the scope, activities, and value of the WRC to key constituencies
- Amplify water-related research, outcomes, and activities at the University
- Increase the visibility of student work

Metrics

- Website and social media analytics
- Media mentions
- Newsletter subscribers
- Participation in state and national policy discussions
- Funding from new sources
- Incoming requests for information

Selected Programs and Projects

Confluence
Minnegram
Water Resources Assembly and Research Symposium
WRC Reports