



ALUMNI**PROFILE**

BERNIE BULLERT
(BCE 1968, MBA 1977)

BERNIE BULLERT STRONGLY BELIEVES THAT WATER RESEARCH HAS AN ESSENTIAL ROLE TO PLAY IN THE FUTURE OF OUR CITIES, STATES, AND NATION.

Water quality is in the news a lot lately. It seems to be in everyone's best interest to preserve water quality, but the problems seem big, complex, and confusing. Management of our precious water resources must encompass the quality of our streams and lakes, the cleanliness of our water supply, the treatment of wastewater, the management of storm water, and the infrastructure necessary

to make all those pieces work together. What can be done?

One man—who understands more than most of us about what it takes to sustain a clean water supply—has an idea to effect wide-ranging, long-term solutions. Bernie Bullert has a vision to start a water research center at the University of Minnesota.

Why Research? Why Minnesota?

Bullert has long had a penchant for research. Early in his career he saw the benefits that come from scientific study and careful application of results. So Bullert is proud of the work he did to initiate research programs during his time as a leader in the water utility departments of both St. Paul and Minneapolis. The Metropolitan Council also began sponsoring research, partly due to Bullert's influence.

BERNIE BULLERT CONT...

After a long and successful career devoted to making sure the cities have safe drinking water, Bullert might be expected to retire and use his free time to pursue his interests in cars, Corgi show dogs, public art, or travel. But this crusader is not yet satisfied.

“That still leaves the rest of the state of Minnesota!” says Bullert, “Outside the Twin Cities, communities still face water problems that need solutions. In rural Minnesota, communities are smaller and don’t have the money or the set-up for research, yet small towns need solutions, too.”

Bullert is convinced of the importance of research that continuously pulls Minnesota and water resource management forward: “Water is a fluid business. We cannot allow our knowledge, technologies, or management practices to become stagnant. One way to help ensure that Minnesota and all Minnesota’s citizens benefit from our latest knowledge of water resource management, is to establish a state-wide center for water research.”

Minnesota is doing great research in the areas related to water resources. Bullert wants to build on that foundation and to ensure that needs of outstate Minnesota are met. He also sees that Minnesota could contribute some unique knowledge based on our northern, water-rich location.

Through his work, Bullert is recognized as a thoughtful and respected leader in the water/wastewater industry. He spent most of his career in the public sector. Bullert worked for Saint Paul Regional Water Services for 35 years. That system serves over 400,000 people. For twelve of those years Bullert was the General Manager of the utility, with a budget at that time of about \$40 million. In 2003, Bullert stepped into the private sector, performing water system engineering work

for TKDA, an engineering, architectural, and planning firm based in Saint Paul, Minnesota. He transitioned back to the public side in 2009, taking on his role as Director of Water Treatment and Distribution Services for the City of Minneapolis, where he served until 2013. During his tenure in Minneapolis, Bullert managed an annual budget of \$75 million, improved the quality of drinking water, strengthened the effectiveness of the organization, and reduced water losses within the system. He returned to TKDA where he served for several years as Group Manager of the Water/ Wastewater Division. Today, he continues to work as a consultant with TKDA, in addition to his other activities.

Bullert has been an active member in several water-related organizations. The Minnesota Chapter of the American Public Works Association (APWA-MN) honored Bullert with the 2011 Director of the Year Award, recognizing his leadership and ability to effectively manage the Minneapolis water system. Bullert served on the American Water Works Association (AWWA) Standards Council, the Water Utility Council, and the Manufacturer’s Associates Council. He is a past Director of the AWWA and has received several awards including the Fuller Award, Leonard Thompson Award, and in 2014, AWWA’s Honorary Member Award for his passion to improve water quality and access to potable water worldwide. In 2001, Bullert received the Association of Metropolitan Water Agencies’ (AMWA) President’s Award for his service as AMWA’s representative on the EPA’s Children’s Health Protection Advisory Committee.

His experience, both as a professional and as a volunteer, is one indication of the breadth of his knowledge and passion for sustainable water systems. Bullert attributes his success to

his love of and commitment to clean water. “It’s good to enjoy what you do. When you enjoy what you do, you’ll be successful,” says Bullert.

To accomplish his latest vision, Bullert has “enjoyed” himself a lot—enjoyed meaning he has done a lot of work! He has been making connections and promoting his idea among industry and political leaders, state legislators, water industry leaders, and researchers at the University of Minnesota.

Bullert indicated his commitment to this cause by establishing the Minnesota Water Research Fund at the University of Minnesota. While a state-based research center will require much more than his individual contribution, Bullert believes the fund will be a catalyst. By leading the way, he hopes to stimulate discussion about water resources and motivate others to get involved and contribute to making a Minnesota water research center a reality.

The Vision

The proposed water research center would work to preserve and improve water quality by promoting sustainable water management and treatment. The center would perform research aimed at solving current and emerging water quality problems; would train engineers and scientists to work in water management and treatment industries, thus building the State’s technical capacity; and would educate water industry professionals and the general public about water issues. Changing people’s habits and behavior can be a huge challenge. “People need information and motivation to make changes that may not have an immediate or personal impact. It is difficult but important,” says Bullert, “to adjust our priorities and move toward long-term thinking about our water resources.”

The proposed center could also cultivate industry partners to collaborate on development of water technologies, which could stimulate economic development.

A Minnesota-based water research center could capitalize on the state's northern location to address some unique issues affecting cold-water treatment systems. For instance, when lakes and rivers become ice-covered in the winter, oxygen in the water is depleted and water quality can change. Frozen ground hinders infiltration of rainwater and snowmelt into the ground. Cold water has an increased viscosity that adversely affects treatment processes such as filtration and sedimentation. Seasonal changes vary the concentration of natural organic matter in water, and that impacts drinking water treatment. Biokinetic rates can be significantly decreased in cold water resulting in less efficient wastewater treatment. Deicing salts used for roads run into the rivers and lakes and increase chloride levels in the water coming into the treatment plants. All these issues affect water treatment systems, and Minnesota provides a natural setting in which to study these issues. Research on these issues could significantly affect water quality—not only of cold-weather cities and watersheds, but also of communities and lakes downstream along the Mississippi.

The proposed center could help guide critical water infrastructure decisions



and investments throughout the state, particularly in those small communities where funds for research, training, and education are scarce.

These big ideas are grounded in applicable research with the goal of offering practical solutions for watersheds throughout Minnesota and beyond.

Bullert is working hard to enlist partners and visionaries to make this dream a reality for Minnesota. “We have some start-up funding, and we are looking at models for permanent funding, trying to determine which could work best for this situation.”

“Everyone needs clean water to survive,” says Bullert. “We need to convince today’s decision makers how critical our water infrastructure is to keeping our society successful.”

The envisioned center would establish a commitment to long-term, ongoing water research. Acting on our best knowledge of water resources should enhance our state’s outlook for economic robustness and the health of Minnesota’s citizens, now and in future generations.

Are you ready to take action that will help Minnesota preserve our water resources?

If you are interested in contributing to the Minnesota Water Research Fund, contact Shannon Wolkerstorfer, External Relations, at **612-625-6035** or **swolkers@umn.edu**.