Memorial Resolution of the Faculty of the University of Wisconsin-Madison
On the Death of Professor Emeritus Fred Madison

Professor Fred Madison, Dr. Dirt as his license plate proudly proclaimed, was one of a kind. Through his drooping mustache came a gravelly but kind voice that loved to help people understand the diverse landscapes of Wisconsin and its thin veneer of life-giving soil. Inspired by early life acquaintance with the Boundary Waters and Quetico Wilderness areas, he was passionate about protecting natural resources through education, research, and advocacy throughout his career, and inspired many people along the way.

Fred was Wisconsin-born, in 1937. He is a product of the University of Wisconsin-Madison, receiving a B.A. in Geology in 1961 and M.S. and Ph.D. in Soil Science in 1963 and 1972. Between M.S. and Ph.D., Fred was appointed by the Peace Corps’ first director, Sargent Shriver, as the Director of the Midwest Regional Recruiting Office, and then served as Legislative Assistant to Senator Gaylord Nelson. In that capacity, he was instrumental in the creation of the Wild and Scenic Rivers Act. As a bookend in his professional life, Fred was Chair of the Lower Wisconsin Riverway Board until last year; the Lower Wisconsin was specifically named in the Rivers Act as an example of a scenic river.

After completing his Ph.D., Fred continued to work at UW. In 1978, he was appointed as an assistant professor in Soil Science and as an Extension state specialist with the Wisconsin Geological and Natural History Survey (WGNHS). He received tenure in 1984 and was promoted to professor in 1991. A few highlights of his university research and outreach career include:

- Evaluation of seepage from earthen-lined animal waste storage pits. These studies demonstrated that most pits leaked contaminants at unacceptable rates within a few years of construction, leading to changes in construction technical standards, stepped up local monitoring, and new state rules governing animal waste permitting.
- Establishment of routine County Drinking Water Inventories to monitor long term trends in groundwater quality and quantity for resource policy evaluation and land use planning. This information was also used in his WGNHS work, where he authored or co-authored 7 reports and 15 maps.
- Guidance and technical support for the establishment of the Nutrient and Pest Management Program, which helps farmers use agricultural chemicals more efficiently and carefully.
- Promotion and leadership of USDA’s Sustainable Agriculture Research and Education (SARE) program, serving several terms on its national Administrative Council and as Wisconsin’s representative to North Central SARE.
- Co-founder of University of Wisconsin-Extension Discovery Farms, which provides on-farm research and demonstration of best practices in soil, water, and nutrient management.

Prior to his retirement in 2011, Fred turned some of his attention to two emerging issues in Wisconsin – understanding the “unlithified materials” under soils in Wisconsin’s Driftless Area which can become conduits for groundwater contamination and understanding the natural resource impacts of and adaptation to climate change, particularly in Wisconsin’s Central Sands.

The groundwater table in the Central Sands has dropped considerably in the last two decades. Fred tried to bring the best science to the ensuing controversy, sorting through what can be attributed to irrigation, to land use change, and to climate change. As always, he brought passion for resource protection together with integrity of relevant science. As noted by then Soil Science chair Robin Harris and then WGNHS director Jamie Robertson, in their nomination of Fred for the Wisconsin Idea Award in Natural Resource Policy (which he received in 1994),

“Fred has chosen to make his contributions in a manner that defies a conventional typology. Behind his informal and gregarious style is a deep commitment to participatory and consensus driven approaches to resource policy and management. He has successfully used his web of contacts to broker ideas and facilitate emergence of technically sound and socially acceptable [solutions].”
Fred also enjoyed teaching, particularly in the field. For many years, he led the Soils 601 (Soil-Landscapes and Use) field trip, affectionately known by hundreds of students that benefited from his shared wisdom as the tour of Wisconsin soils and supper clubs. From 2006-2018, he co-led the field trip portion of the Environmental Studies 901, receiving similar appreciation by many students in the Nelson Institute’s graduate programs.

Fred was the chair of the Water Resources Management (WRM) professional M.S. program from 1999-2004. WRM students have a required practicum where they work as a group to evaluate contemporary water-related issues and provide solutions. Fred was the leader of several practicums and a frequently consulted for others. Two of the workshops Fred led have had long-term implications. For several years, farmers needing financial assistance for animal waste management infrastructure benefited from the Farmers’ Fund Program, the result of a 1985 practicum. The concepts were adopted by the legislature soon after. In 1989, another practicum studying the Rattlesnake Creek Watershed devised FARM*A*SYST, a tool that farmers and resource managers still use to assess the impact of farm operations on groundwater quality.

Over a 35-year period (1979 – 2014) Fred advised graduate students in WRM (12), Land Resources (2), Conservation Biology & Sustainable Development (1), and Soil Science (4). Over that same time frame, he served on graduate committees for more than 50 students in the Nelson Institute and Department of Soil Science.

Frederick William Madison passed away June 3, 2019. As Nelson Institute senior student services coordinator and frequent field trip companion Jim Miller said, “We were all the better off for knowing Fred and having him in our circle. I’d like to say that everybody should have someone like Fred in their life. The problem is that he was one-of-kind…”

Memorial Resolution Committee:
Birl Lowery, emeritus professor of Soil Science and former executive dean of College of Agriculture and Life Sciences
Jim Miller, Senior Student Services Coordinator, Nelson Institute for Environmental Studies
Ken Bradbury, Director, Wisconsin Geological and Natural History Survey
Steve Ventura, Professor of Environmental Studies and Soil Science