

O.E. MEINZER AWARD

Hydrogeology Division

The Geological Society of America

The O.E. Meinzer Award is presented annually to the author or authors of a published paper or body of papers of distinction that advance the science of hydrogeology or some closely related field.

PAST RECIPIENTS

2024	D Kip Solomon	1991	Christopher E. Neuzil
2023	Jiu Jimmy Jiao	1990	John D. Hem
2022	Beth Louise Parker	1989	Stanley N. Davis
2021	Mark Person	1988	Isaac J. Winograd
2020	William Woessner	1987	Lynn W. Gelhar
2019	Bridget Scanlon	1986	T.N. Narasimhan
2018	Shemin Ge	1985	John A. Cherry
2017	Donald O. Rosenberry	1984	Franklin W. Schwartz
2016	Andrew T. Fisher		J. Leslie Smith
2015	Brian Berkowitz	1983	Edward P. Weeks
2014	Charles F. Harvey	1982	Gordon D. Bennett
2013	Chunmiao Zheng	1981	Richard L. Cooley
2012	David L. Parkhurst	1980	John M. Sharp, Jr.
2011	Graham E. Fogg		P.A. Domenico
2010	Mary Jo Baecker	1979	William R. Nelson
2009	W. Mike Edmunds	1978	Jacob Rubin
2008	Donald C. Thorstenson		Ronald James
2007	Shaun K. Frape	1977	Shlomo P. Neuman
2006	Karsten Pruess		Paul A. Witherspoon
2005	Donald I. Siegel	1976	John D. Bredehoeft
2004	Ghislain de Marsily		George F. Pinder
2003	Steven E. Ingebritsen	1975	R. Allan Freeze
2002	Thomas C. Winter	1974	William Back
2001	Fred M. Philips		Bruce B. Hanshaw
2000	Francis H. Chapelle	1973	Joseph F. Poland
1999	Edward A. Sudicky		George H. Davis
1998	Mary P. Anderson	1972	George B. Maxey
1997	Leonard F. Konikow	1971	Victor T. Stringfield
1996	John L. Wilson	1970	Hilton H. Cooper, Jr.
1995	Grant Garven	1969	Madhi S. Hantush
1994	Steven M. Gorelick	1968	Robert W. Stallman
1993	Niel L. Plummer	1967	C.L. McGuinness
1992	Craig M. Bethke	1965	József Tóth

O.E. MEINZER AWARD

Presented to

Dr. Michelle Walvoord

San Antonio, Texas, USA

October 2025



Hydrogeology Division
The Geological Society of America

Dr. Michelle Walvoord



Dr. Michelle Walvoord is a research hydrologist in the Water Resources Mission Area's Earth System Processes Division of the U.S. Geological Survey (USGS). She earned her B.A. in Geology from Hamilton College, followed by an M.S. in Hydrology and a Ph.D. in Earth and Environmental Science from New Mexico Tech. She continued the research theme of her dissertation work in deep vadose zone flow and transport as a National Research Council postdoctoral fellow before

beginning her federal career with the USGS's National Research Program. For her early work in desert paleohydrology and nitrogen dynamics, Michelle received the Geological Society of America's Doris M. Curtis Outstanding Woman in Science Award in 2005.

Throughout her professional journey, Michelle has collaborated extensively with colleagues and students in the U.S. and internationally, resulting in more than 80 peer-reviewed publications on diverse hydrological topics in settings that range from the deserts of the southwestern U.S. to the boreal forests of the Arctic. Her research broadly focuses on advancing change detection, quantifying impacts, and deepening the understanding of hydrologic responses to climate variability and landscape disturbances. Specifically, her work in high latitudes addresses critical questions to quantify the rate of permafrost thaw and constrain the consequences of thaw on groundwater and surface water resources. In 2022, Michelle was honored by the Canadian Geophysical Union's Hydrology Section to present the Woo Distinguished Lecture, an acknowledgement of her influential contributions to permafrost hydrology.

In addition to her research, Dr. Walvoord is actively engaged in serving the hydrogeologic and broader geoscience communities through various roles, including on the USGS Powell Center Science Advisory Board, the U.S. Permafrost Association Board, and the National Science Foundation's Study of Environmental Arctic Change Project. She has also contributed as an Associate Editor for *Hydrogeology Journal* and *Water Resources Research*. As an affiliated faculty member, Michelle serves on graduate student committees at the Colorado School of Mines, the University of Colorado Boulder, and Laval University.

O.E. MEINZER AWARD

It is an honor to present Dr. Michelle Walvoord's O.E. Meinzer Award citation in recognition of her transformative contributions to cold regions hydrogeology.

Michelle Walvoord has profoundly influenced research directions and practice in the hydrogeology community through ingenuity, technical mastery, and teamwork. Dr. Walvoord's publications have defined how climatic shifts in cold regions are increasingly driving substantial changes in water resources and transforming ecosystems. Her research leverages field data and statistical and process-based modeling approaches at multiple spatial and temporal scales to address coupled hydrologic and biogeochemical responses to climate perturbations.

Highlights from Michelle Walvoord's contributions include (1) the first large-scale effort to quantify decadal-scale baseflow patterns in Alaska, which showed definitively that groundwater contributions to streamflow were increasing with regional warming (Walvoord and Striegl, 2007), (2) provocatively proposing that perennially thawed subsurface zones were a sentinel for tipping points in accelerating permafrost thaw demonstrated through coupled cryohydrogeologic modeling (Walvoord et al., 2019; Walvoord et al., 2012), (3) a foundational review paper that established the state of cryosphere hydrology and charted a course to navigate theoretical and observational gaps (Walvoord and Kurylyk, 2016), and (4) unprecedented regional-scale imaging of permafrost, highlighting how permafrost thaw can leave millennial-timescale legacies for groundwater flow and yielding new conceptual understanding and hypotheses for groundwater- cryosphere linkages (Minsley et al., 2012).

Mentoring the next generation of hydrogeologists is perhaps the greatest contribution that we, as scientists and engineers, make to our field. Michelle Walvoord is a generous mentor and advocate for numerous graduate students, post-doctoral fellows, and early-career colleagues.

Congratulations Michelle!

— *Brian A. Ebel and Kamini Singha*

Cited publications

Walvoord and Striegl (2007): <https://doi.org/10.1029/2007GL030216>

Walvoord et al. (2012): <https://doi.org/10.1029/2011WR011595>

Minsley et al. (2012): <https://doi.org/10.1029/2011GL050079>

Walvoord and Kurylyk (2016): <https://doi.org/10.2136/vzj2016.01.0010>

Walvoord et al. (2019): <https://doi.org/10.1088/1748-9326/aaf0cc>