

PRESENTATION SUMMARIES & SPEAKER BIOGRAPHIES



Minnesota Ground Water Association
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Heritage Center of Brooklyn Center

50 Years of the Safe Drinking Water Act

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50 Years of the Safe Drinking Water Act (SDWA)

Presentation

Congress passed the Safe Drinking Water Act in 1974, providing the fledgling Environmental Protection Agency the authority to create rules and programs to work with states, tribes, and public drinking water supply systems. The goal was and is to provide safe drinking water to the public across the entire US. Both rules and programs have evolved over the past 50 years to continue to help identify and address threats to public drinking water.

Education

B.C.E (Civil Engineering), University of Minnesota, 1983
B.A. (Biology), St. Olaf College, 1974

Experience

Randy is a licensed professional civil engineer, retired but engaged in a number of source water interests as well as managing the swirl of jobs that come with a hobby farm. As Manager of the Section of Drinking Water Protection at the Minnesota Department of Health, he served as Administrator for the Safe Drinking Water Act for MN (2008 to 2018). Other experience includes serving as Manager of the Minnesota Plumbing Code program (2000 - 2008), Principal Engineer in the Feedlot program at the Minnesota Pollution Control Agency (1988 - 2000), and Assistant Scientist in forage quality research at ARS USDA and the University of Minnesota (1976 - 1988).



Bruce Olsen

Retired (Minnesota Department of Health, Minnesota Geological Survey)
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Steve Robertson

Minnesota Department of Health
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Bob Tipping

Minnesota Department of Health
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Mapping the Gradational Boundary between Wellhead Protection and Source Water Protection**Presentation**

Wellhead Protection and Source Water Protection exhibit many similar characteristics, including the goal of providing long term, sustainable protection of drinking water sources. However, the regulatory, water resource management, and public health imperatives have evolved over time – thus a definable facies change is observed when examining program operations over time. Characteristics of Wellhead Protection include an emphasis on groundwater sources, a structured approach towards delineation and vulnerability assessments, and recognition of the importance of fractured geologic settings, as well as those that may involve exchange with surface water. These same features are exhibited in Source Water Protection, with the exception that emphasis on groundwater sources is less prominent. However, the changing water resource management environment of post-legacy Minnesota, increasing awareness about CECs in drinking water, and growing need to protect surface waters used as sources of drinking have expressed new program characteristics in Source Water Protection. These, and likely features of future Source Water Protection, will be detailed in the presentation.

Education and Experience

All of the presenters have graduate degrees in Geology (two from Minnesota, one from Texas), all have worked at MDH, two (Bruce and Bob) have also worked at MGS, and one (Steve) has worked in consulting.



Lanya Ross, PG

Metropolitan Council Environmental Services

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Evolving Technical and Policy Challenges for Sustainable Water Supply in the Twin Cities Metro

Presentation

Over three million people, more than half of the state's population, live in 186 communities spread across the 3,000 square-mile Twin Cities metropolitan area. As the regional planning agency, policy-making body, and provider of essential services for the Twin Cities region, Metropolitan Council is charged with developing and periodically updating a regional development guide for the orderly and economical development of the region, addressing the physical, social, or economic needs of the region and those future developments which will have an impact on it. A lot has changed, including groundwater and water supply conditions, since the first regional development guide was created in the 1970's. Looking ahead, more changes are on the horizon. This presentation will focus on how some groundwater and water supply technical and policy issues have evolved for Council over the past few decades and what the Council – with input from stakeholders across the region - sees as the major issues to focus on for the future.

Education

M.S., Geology, Northern Arizona University, 2005

B.A., Geology, Macalester College, 1997

Experience

2006-Present, Metropolitan Council, Environmental Services, Water Planning and Policy

2000-2001 & 2004-2006, Shakopee Mdewakanton Sioux Community, Land and Natural Resources Department



Tony Runkel

Minnesota Geological Survey
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Paul F. Putzier

Retired Hydrogeologist
pputzier@comcast.net

The County Atlas Program: Evolution of Geologic and Groundwater Atlases as Tools for Water Resource Management

Presentation

- Historical background of the Groundwater Atlas
- Evolution of the Groundwater Atlas over 30 Years
- Applications and Uses of Groundwater Atlas
- What's Next? The future of the Groundwater Atlas Program

The County Atlas Program is unique to Minnesota. Starting in the 1980's the Minnesota Geological Survey (MGS) began the process to complete detailed geologic mapping of every county in the state. By the early 1990's, Minnesota's legislature gave the Department of Natural Resources the mandate to work with the MGS and complete detailed mapping of groundwater systems (Groundwater Atlases), also at the county scale. The Atlas Program provides invaluable 'information infrastructure' for resource managers, researchers, regulators and private interests. The presentation will discuss the evolution of the atlas program and look at what the future holds for the program.

Tony

Education

B.A. University of Minnesota Twin Cities
M.S. University of Montana
PhD University of Texas Austin

Experience

1989-Present, Minnesota Geological Survey (Geologist, Lead Geologist, Interim Director)



Paul

Education

M.S. Hydrogeology/Geophysics, University of South Florida, 1987

B.S. Geology/Geophysics, University of Wisconsin – Madison, 1982

Experience

2016 – 2023 Hydrogeologist Supervisor, Minnesota Department of Natural Resources

2011 – 2016 Lead Hydrogeologist, Minnesota Department of Natural Resources

1986 – 2011 Senior Hydrogeologist, Operations Manager, private environmental consulting

1985 – 1986 Hydrogeologist, Florida Department Environmental Regulation

1978 – 1982 Lead Driller, Wisconsin Geological and Natural History Survey

Affiliations

American Institute of Professional Geologists (AIPG)

Minnesota Ground Water Association (MGWA)

Bio

Paul recently retired as the Hydrogeologist Supervisor for the DNR's County Groundwater Atlas team. The team is responsible for completing detailed mapping of aquifers at the county scale. Prior to taking the supervisor position, Paul was a Lead Hydrogeologist at DNR developing the agency's new Groundwater Management Area program and as the Project Manager for the North & East Metro Groundwater Management Area and had extensive involvement determining why water levels got so low in White Bear Lake. Before joining DNR, Paul held positions as Operations Manager, Project Manager and Senior Hydrogeologist over the last 25 years for several national private consulting firms. He earned a Bachelor of Science in Geology/Geophysics from University of Wisconsin, Madison (Go Bucky!) and a Master of Science in Geology from the University of South Florida, Tampa (Go Bulls!).



Mindy Erickson, PE, PhD

US Geological Survey

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Private Domestic Wells: Challenges to Equity in Drinking Water Quality

Presentation

- Common drinking water contaminants: where and why; perception and reality
- Publicly-supplied drinking water quality compared to private domestic drinking water
- Socio-economic-demographic characteristic relations to drinking water quality
- Minnesota's challenges and opportunities

Education

PhD (Water Resources Science), U of MN, 2005

MS (Civil Engineering), U of MN, 1992

BS (Geo-engineering), U of MN, 1990

Experience

2009 – present: Research hydrologist, U.S. Geological Survey

2007 – present: Adjunct faculty member, University of Minnesota

2006 – 2009: Environmental Research Scientist, Minnesota Pollution Control Agency

1998 – 2000: Hydrologist, Minnesota Department of Health

1993 – 1997: Project engineer and project manager, RETEC (environmental consulting)



Hannah Albertus-Benham

WSP

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East Metro PFAS Ground Water Contamination: Technical and Policy Challenges in Addressing PFAS in Drinking Water Supplies

Presentation

- Overview and history of contamination in the East Metro and the subsequent settlement
- Changes to how private and public water supplies were addressed over time given changing science and financial resources.
- Challenges of developing and implementing the Conceptual Drinking Water Supply Plan for 14 communities

Education

M.S. Civil Engineering with Environmental Emphasis, South Dakota School of Mines and Technology – Rapid City, SD 2009

B.S. Civil Engineering with Environmental Emphasis, South Dakota School of Mines and Technology – Rapid City, SD 2007

Experience

2013-present: WSP (and predecessor companies), Environment and Infrastructure, Water Resources and Environmental Engineer

2010-2013: South Dakota Department of Environment and Natural Resources, Groundwater, Hydrologist



Anita Anderson

Minnesota Department of Health

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Noncommunity Public Water Supply Wells: On the Public-Private Boundary

Presentation

- Overview of Noncommunity Public Water Systems (NPWS) and well characteristics
- Providing safe drinking water at NPWS – common issues
- MDH approach to supporting small systems

Education

M.S. Environmental Engineering, University of Minnesota, Twin Cities

B.A. Mathematics, Gustavus Adolphus College

Experience

1996 – present, Minnesota Department of Health, Public Health Engineer



Jim Walsh

Retired (Minnesota Department of Health)

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Microbes in the Mist: Minnesota's Pathogen Project – Unexpected Encounters in Groundwater

Presentation

The MDH has been involved in studies looking at the occurrence of microbial genetic material in public supply wells since directed to do so by the Minnesota legislature in 2013. Initial reconnaissance-scale sampling was conducted in 2014-2016. The surprising findings from that work resulted in several follow-up efforts, including statistical analysis of variables possibly related to microbial occurrence, detailed sampling at four of the earlier project sites focused around groundwater recharge events, and corresponding groundwater tracer studies to evaluate transport pathways. This talk will summarize these latest findings and suggest possible avenues for incorporating them in our efforts at protecting drinking water.

Education

M.S. Geology, University of Michigan, 1985

B.A. Geology, Miami University, 1982

Experience

1989-2023 Minnesota Department of Health (hydrogeologist/hydrologist supervisor)

1985-1989 Golden Reward Mining Company (mineral exploration and mining geologist)



Jane de Lambert

Minnesota Department of Health, Drinking Water Protection
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Incorporating Unregulated Contaminant Monitoring into Minnesota's Public Water Supply Program

Presentation

Overview of investigative monitoring projects at MDH and introduction to a new program initiative that will provide a permanent capacity for monitoring of emerging contaminants and other chemicals in drinking water.

- Unregulated Contaminants Monitoring Project (UCMP)
- Statewide PFAS Testing Project
- Cyanazine Testing
- Drinking Water Ambient Monitoring Program (DWAMP)

Education

Master of Public Health (MPH), Environmental Health Science, University of Minnesota, 2015
B.S. Geology, University of St. Thomas, 2014

Experience

2020-current, Environmental Research Scientist, Minnesota Department of Health, Drinking Water Protection

2016-2020, Hydrologist, Minnesota Department of Health, Drinking Water Protection

2014-2016, Student worker, Minnesota Pollution Control Agency

