

Ned W. Paschke, PE, Fellow ASCE

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OVERVIEW

Detailed knowledge in the engineering and management of water and wastewater systems and facilities. Board-Certified Environmental Engineer. Professional Engineer (Wisconsin). 40+ years' experience as director of engineering for a large municipal sewerage utility, consultant for national and international engineering firms, and leader of nationally known university continuing education courses in water and wastewater.

FIELDS OF EXPERTISE

- Pumping Systems, Lift Stations, Force mains, Gravity Sewers, Water Distribution Systems
- Water and Wastewater Conveyance and Treatment Facilities
- Asset Management, Value Engineering, Hydraulic Analysis
- Costs, Failures, and Repairs for Water and Wastewater Infrastructure

PROFESSIONAL EXPERIENCE HIGHLIGHTS

University of Wisconsin-Madison College of Engineering (2005-2022) - Program Director, Teaching Faculty, Faculty Emeritus

- Leader of nationally known engineering courses for water and wastewater professionals.
- More than 4,000 professionals, from firms & agencies in all 50 states, have attended.
- Recipient of Teaching Excellence Award from the UW-Madison EPD Department.
- J. William Fulbright Specialist, U.S. State Dept., water lecture series in Kiev, Ukraine.
- Professor of Practice, UW-Madison Dept. of Civil and Environmental Engineering.

Paschke Water Analytics, LLC (2011-present) - Founder

- Analysis and consulting related to water and wastewater facilities and systems.

Madison Metropolitan Sewerage District (1986-2004) - Director of Engineering

- Leader and manager of all engineering and capital programs for the MMSD. Service area population 330,000. Average flow rate 42 million gallons day. Peak flow 120 MGD.
- Planning, permitting, budgeting, design, construction, and startup of more than 100 individual wastewater projects, ranging in size from \$10,000 to \$20 million.
- Led multiple large expansions and process upgrades at the Nine Springs wastewater treatment plant. Led numerous pumping station and conveyance projects, from 400 to 50,000 gpm.
- Led the creation of detailed long-range asset management plan for the MMSD collection system, including \$84 million in key improvements to pumping stations, gravity sewers, and force mains.
- Worked respectfully and successfully with employees, consultants, contractors, regulators, municipal boards, and the general public. Actively coached, managed, and helped them succeed.

Harza Engineering Company, Chicago (later MWH Global) (1982-86) - Hydraulic Engineer

- Hydraulic and environmental analysis & design work for large water projects including
 - Spillway hydraulics for 10,000-MW Guri Hydro Project (Venezuela)
 - State-of-the-art river ice modeling on Susitna River (Alaska)
 - Penstock hydraulic analysis for Bath County Pumped Storage Project (Virginia)
 - Hydraulic studies for Chicago's Deep Tunnel and Reservoir Plan, many others.
- Each of these projects, at that time, was the largest of its type in the world.
- L.F. Harza Prize - twice was awarded this company-wide recognition for best technical papers.

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EDUCATION

Master of Science in Civil & Environmental Engineering, University of Wisconsin-Madison, 1982

- Overall GPA 4.00/4.00. Studies included hydraulics, wastewater treatment, costs.
- Published groundwater research in national peer-reviewed journal, Water Resources Research.

Bachelor of Science in Civil & Environmental Engineering, University of Wisconsin-Madison, 1978

- Named to dean's honor list in every semester.

SELECTED AWARDS, HONORS, ACTIVITIES

- Fellow of the American Society of Civil Engineers (ASCE)
- Board-certified Environmental Engineer (DEE, BCEE), American Academy of Environmental Engineers.
- J. William Fulbright Specialist, U.S Dept. of State, water & wastewater workshops in Kiev, Ukraine (2011).
- Teaching Excellence Award, Univ. of Wisconsin-Madison Dept. of Engineering Prof. Development.
- L.F. Harza Awards (1985,1987) for best companywide technical papers at Harza Engineering Co.
- President, American Society of Civil Engineers, Wisconsin Section (2004-05).
- Technical presenter at Water Environment Federation conferences (2008, 2009, 2011, 2014).
- Member of WEF professional delegation to China and the Three Gorges Dam (2000).
- Wisconsin Dept. of Natural Resources technical advisory committees, sanitary sewer overflow regulations.
- President, Kiwanis Club of Downtown Madison (2014-15)
- President, Foundation Board for a 500-student regional high school, a 501c(3) organization.
- American Waterworks Association – member and conference presenter.
- Licensed Professional Engineer, State of Wisconsin. Other interests: travel, history, violin.

SELECTED PUBLICATIONS AND PRESENTATIONS

1. Water Environment Federation, **Manual of Practice 32: Energy in Water Resource Recovery Facilities**, (lead author for Chapter 5: Wastewater Pumping Systems), 2021.
2. Paschke, Ned W., **“Analysis of Trends in Municipal Per Capita Water Use”**, Singapore International Water Conference, July 2018.
3. Paschke, Ned W., **“Understanding Public Water Supply in the U.S.”**, white paper, UW-Madison Dept. of Engineering Professional Development, March 2016.
4. Paschke, Ned W., **“Water Supply and Wastewater Treatment in the United States”**, presented at China Agricultural University, Beijing, China, October 2014
5. Paschke, Ned W., **“Performance Under Pressure: Practical Perspectives on Pumping and Energy”**, Water Environment & Technology, the national publication of the Water Environment Federation, July, 2012.
6. Paschke, Ned W., **“Water and Wastewater Engineering and Management”**, Fulbright-sponsored lecture series, National Technical University of Ukraine, Kyiv, Ukraine, November 2011.
7. Paschke, Ned W., **“Pumping System Energy Analysis”**, pre-conference workshop, technical paper, and poster session at WEFTEC international conference, Los Angeles, October 2011.
8. Paschke, Ned W., **“Essentials of Hydraulics for Civil Engineers and Designers”**, professional workshop series presented at University of Wisconsin-Madison (2008 through 2019).
9. Paschke, Ned W., **“Wastewater Pumping Systems and Lift Stations”**, professional workshop series presented at University of Wisconsin-Madison (1995 through present).
10. Paschke, Ned W. and Michael E. Simon, **“Managing Wastewater Conveyance in Wisconsin's Capital City”**, WEFTEC conference, Water Environment Federation, Chicago, October 2008. And feature article published in WATER magazine, Central States Water Environment Association, January 2008.
11. Paschke, Ned. W, **“A Visit to the Yangtze River and the Three Gorges Dam”**, ASCE Journal of Leadership & Management in Engineering, January 2003. Also presented to numerous civic groups.
12. Paschke, Ned W., **An Overview of Wastewater Collection and Treatment in the United States –** seminar presented at Tsinghua University, Beijing, China, November 2000.
13. Sanks, Robert L., **“Pumping Station Design”**, 2nd edition, Butterworths Publishers, 1998. Contributor and consultant for Chapter 12, Pumps: Intake Design, Selection, and Installation.
14. Paschke, Ned W. and Carl Schoch, **“Simulation of River Ice Processes on Alaska's Susitna River”**, Waterpower '85 International Conference on Hydropower, Las Vegas, NV, Sept. 1985, pp. 2211-2220.
15. Paschke, Ned W., and J.A. Hoopes, **“Buoyant Contaminant Plumes in Groundwater”**, Water Resources Research, American Geophysical Union, September 1984, pp. 1183-1192.