

Professor Howard M. Neukrug, P.E., BCEE, Hon. D.WRE

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Profile

Mr. Neukrug began his career in 1978 as a Staff Engineer for Philadelphia Water and retired in 2016 as its Commissioner and CEO. During his career, he worked to reposition the utility as a 'One-Water Utility' serving 2.3 million persons in the Philadelphia region with drinking water, wastewater, and stormwater services.

He is a leader in innovative and progressive water utility management, asset management, treatment and operations, water policy and regulations, SDWA and CWA compliance, and utility finance and strategic planning. He is widely recognized for his work as the creator of Philadelphia's Green City Clean Waters program and its Office of Watersheds, where he oversaw the development and implementation of the City's integrated CSO, MS4 and Source Water Protection programs as well as their impact on water quality in the Delaware River Basin.

In 2016, he was named the University of Pennsylvania's Professor of Global Water Practices where he teaches courses on "The Global Water Industry in the 21st Century" and "Urban Water Policies and Practices for a Changing Climate."

He is also the founder and executive director of the Water Center at Penn (WCP), an applied water research and policy center that engages community-based, national, and global decision-makers with university faculty and students. The Water Center aims to integrate innovative urban water system solutions that support local sustainability, resilience, and climate goals, from issues like affordability, equity, and justice to public water utility guidance on effective utility management.

Mr. Neukrug is co-founder and chair of the Delaware River Basin's Advisory Committee on Climate Change, as well as the chair of the Leading Utilities of the World (LOUW) Network, an international organization of 70 of the world's leading water and wastewater utility CEOs. Its members represent the gold standard of utility innovation and performance throughout the developed world's water and wastewater sector.

Key Experience (2016 to present)**Professor of the Global Water Practice, The University of Pennsylvania**

Mentor, advise and teach the next generation of water professionals. Courses include: "Urban Water Policies and Practices for a Changing Climate," "The Global Water Industry in the 21st Century," and "The Role of Water in Optimizing Sustainable and Resilient Urban Systems and Community."

Founding Executive Director of The Water Research and Policy Center at the University of Pennsylvania

An applied water research and policy center that engages community-based, national, and global decision-makers with University faculty and students to integrate innovative urban water system solutions that support local sustainability, resilience, and climate goals, from issues like affordability, equity, and justice to public water utility guidance on effective utility management.

Principal, CASE Environmental

Consult on water system operations and management, optimization trends and innovations in the global water industry, civil engineering, urban planning, sustainability, organizational development, public-private partnerships, and strategic planning.

Founding Chair of the Leading Utilities of the World (LOUW) and Senior Advisor to the Global Water Leaders Group

The LOUW is a network of the world's most forward-thinking water and wastewater utility chief executives, as defined by the network's 14 distinct innovation areas. Its members represent the gold standard of utility innovation and performance throughout the developed world's water sector.

Key Experience (prior to 2016)

Commissioner and CEO, Philadelphia Water (2011 to 2016)

Responsible for all aspects of utility operations, compliance, engineering, finance, capital and strategic planning, customer service, human resources and legal and policy decisions for a \$1 Billion water/wastewater/stormwater utility serving 2.3 million people.

Deputy Commissioner of Planning and Environment, Philadelphia Water (2009-2010)

Manager of laboratories, planning and watersheds.

Co-Founder and Vice-Chair, US Water Alliance (2009 to 2016)

Developed the organizational structure and early concepts, such as "One Water," "The Value of Water," and "The Water Prize."

Founder and Director, Philadelphia Water's Office of Watersheds (1999 to 2011)

Created and directed the \$2.5 Billion "Green City, Clean Waters" CSO program, revolutionizing how America's cities approach to land and water management for sustainability and resilience.

Chair, American Water Works Association's Water Utility Council (WUC) (2001 to 2004)

Culminating over 20 years of volunteerism within the US water industry professional organizations, I chaired the WUC and its 24 utility CEO members on federal drinking water regulation and legislation issues, utility best management practices, and water quality and health.

Director, Philadelphia Water's Office of Planning and Tech Services (1984 to 1999)

Director of strategic planning and engineering services for water resources, asset management, public:private partnerships, renewable energy, legislative and regulatory affairs, drinking water quality research, regionalism, marketing, and system optimization.

Water Treatment Research Engineer and Assistant Laboratory Director (1978 to 1984)

Led a USEPA-funded multi-year study of organics in Philadelphia, Cincinnati and New Orleans drinking water and the effectiveness of ozone and activated carbon technologies in reducing THMs, VOCs, and taste and odor-producing compounds.

Education

University of Pennsylvania, B.S., Civil and Urban Engineering, 1978

Harvard School of Public Health, Risk Analysis in Environmental Health

Drexel University, Coursework in Environmental Engineering

Rutgers University, Operation and Maintenance of Water Treatment Plants

The Management Exchange, Privatization of Water and Wastewater Projects

Licenses / Certifications

Professional Engineer, Commonwealth of Pennsylvania, National Society of Professional Engineers

Board Certified Environmental Engineer, American Academy of Environmental Engineers

Honorary Diplomate, Water Resources Engineer, American Academy of Water Resources Engineer

Honorary Member, American Water Works Association

Selected Leadership / Board Roles

US EPA Effective Utility Management Task Force, Chair

US EPA National Drinking Water Advisory Council

US EPA National Advisory Council on Environmental Policy and Technology

US EPA Federal Advisory Committee on Wet Weather Flow

AWWA (American Water Works Association), Board of Directors

AWWA Water Utility Council, Chair

AWWA Technical Advisory Group, Chair

AWWA Lead, Copper and Arsenic Regulatory Task Force, Chair

NACWA (National Association of Clean Water Agencies), Board Director

WRF (Water Research Foundation), Board of Trustees

WRF, Research Advisory Council

WEF (Water Environment Federation), Energy Conservation and Climate Change, Chair
 USWA (US Water Alliance) Founder and Vice-Chair
 DRBC (Delaware River Basin Commission) Water Management Advisory Committee
 DRBC Advisory Committee on Climate Change, Chair
 PDE (Partnership of the Delaware Estuary), Executive Committee
 Pennsylvania State Water Plan, Water Resources Advisory Committee
 Schuylkill Action Network, Founder and Executive Committee
 Tacony-Frankford Watershed Partnership, Founder and Executive Committee
 US Forest Service National Advisory Committee
 Philadelphia Parks and Recreation Commissioner
 Value of Water Coalition, Steering Committee
 Delaware Valley Green Building Council, Board Director

Selected Honors / Awards

US EPA Source Water Protection Award
 AWWA Lifetime Honors Award; Fuller Award; Exemplary Source Water Protection Award
 NACWA National Environmental Achievement Distinguished Service Award
 WEF Public Official Award; Emerson Distinguished Service Award
 USWA Founders Award
 Schuylkill Action Network Founders Award
 Water Resources Association of the Delaware Valley, Samuel Baxter Leadership Award
 APA (American Planning Association) National Planning Award
 ACE (Architecture-Construction-Engineering) Mentor Program, Community Leader of the Year
 AAEE (American Academy of Environmental Engineers), Environmental Communications Award
 American Rivers, River Champion
 Delaware Valley Green Building Council, Leadership in Sustainability
 Pennsylvania Heritage Conservancy, Commitment to Watershed Protection Award
 Pennsylvania Resources Council, Leader in Sustainable Design and Development
 White House Cooperative Conservation, Recognition for Outstanding Leadership

Selected Areas of Technical Expertise

Asset Management and Capital Planning
 Climate Change Adaptation and Mitigation
 Community Partnerships, Equity, Justice, and Poverty
 Drinking Water and Wastewater Quality and Treatment
 Emerging and Legacy Contaminants
 Environmental Law, Regulations and Policy
 Flood and Drought Management
 Blue, Green, and Grey Infrastructure
 Lead in Drinking Water
 Management and Facility Audits
 Media and Public Affairs
 Net Positive Energy and Net Zero GHG Emissions
 One Water Integrated Systems Planning
 Public: Private Partnerships and Regionalism
 Resource Recovery
 River and Stream Restoration and Management
 Stormwater Utilities and Fees
 Strategic Planning
 Sustainable and Resilient Cities
 Transformational leadership
 Urban Planning and Sustainability
 US and Global Water Industry Trends and Forecasting
 Water and Sewer System Optimization
 Water and Wastewater Research
 Water Tariffs, Cost of Service, Budgeting and Financing
 Water Utility Management and Operations
 Wet Weather Management