

WATER SCIENCE AND TECHNOLOGY BOARD

Environmental Engineering to Support Economic Prosperity, Enhance Resilience, and Create a Secure Water Future

July 7, 2026



Keck Center, 500 Fifth St NW, Washington DC
Room 101

MEETING OBJECTIVE

Environmental engineering research can help secure the nation's water future while driving economic growth and resilience. This meeting will highlight transformative advances in water technology, from wastewater disease surveillance and next-generation treatment systems to artificial intelligence applications in water quality monitoring and precision agriculture. Leading researchers and technologists will discuss opportunities to accelerate innovation and address the nation's most pressing water challenges.

TUESDAY, JULY 7, 2026

1:00 pm ET Welcome

1:10 pm Session 1: Environmental Engineering and the Nation's Water Challenges

Focus: An overview on how NSF fundamental research in environmental engineering addresses pressing water challenges and supports the nation's multi-billion-dollar water technology sector.

- *Role of science and technology in addressing the nation's water challenges*
David Sedlak, UC Berkeley, WSTB Chair
- *Overview of NSF's mission and its relationship to water security*
Sunny Jiang, NSF
- *Case study #1 on High-ROI Environmental Engineering Breakthroughs: Wastewater Infectious Disease Surveillance*
Ali Boehm, Stanford University (virtual)
- *Case study #2 on High-ROI Environmental Engineering Breakthroughs: Nanoscience and Technology Innovations that Shaped Water Treatment*
Pedro Alvarez, Rice University, WSTB Member
- *Q&A/Discussion (20 min)*
Moderator: Amy Pruden, Virginia Tech, WSTB Member

2:15 pm Session 2: Innovative Environmental Engineering Research and Technology to Create Next-generation Water Systems

Focus: Six flash talks highlighting efforts to apply the latest technology advances to create a resilient and secure water future

- *Trusted Tap: Innovative Drinking Water Household Monitoring*
Kimberly Parker, Washington University
- *From Comammox to Anammox: Advancing Low-Energy Wastewater Treatment*
Ameet Pinto, Georgia Tech
- *Waste Not: Using Electrochemistry to Recover Valuable Resources*
Will Tarpeh, Stanford
- *Using AI to Track Toxic Substances in Surface Water*
Zhenyu Tian, Northeastern University
- *AI-Enabled Transformation of Phased-Out Urban Infrastructure for Resource Recovery and Precision Agriculture*
Yongsheng Chen, Georgia Tech
- *Innovative Technological Approaches to Address Harmful Algal Blooms*
Linda Weavers, OSU

3:15 pm Break

3:30 pm Panel Discussion with Flash Talk Speakers (30 min)
Moderator: Pedro Alvarez, Rice University, WSTB Member

4:00 pm Session 3: Panel Discussion on Opportunities to Advance Innovation and Address the Nation's Water Challenges
Moderator: David Sedlak, UC Berkeley, WSTB Chair

Jason Ren, Princeton University
Peter Fiske, LBNL/DOE
Jeffrey King, ERDC/USACE, Engineering With Nature
Jonathan Pressman, EPA Drinking Water Science and Engineering Division
Lucy Mar Camacho, NSF Engineering Directorate

4:50 pm Wrap up

5:00 pm Adjourn