SIWI

Stockholm *Junior* Water Prize

United States 2025 Stockholm Junior Water Prize State Winners

Water Environment Federation
the water quality people®

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Let's Solve Water

The following state winners have advanced to the U.S. Stockholm Junior Water Prize national competition, to be awarded June 21, 2025, at Washington University of St. Louis.

Alabama
No Qualifying Entires.

Alaska

Andy Zhang

How Rusting Arctic Streams Threaten Ecosystem Health: Aquatic Food Webs, Subsistence Fish, and Biodiversity

Dimond High School

Science Teacher: Brett Roth

Sponsored by the Alaska Water Wastewater Management Association

Arizona

Abigail Qiu

Atmospheric Water Harvesting with Desiccant-Coared Clay TMPS Structures

BASIS Chandler High School

Science Teacher: Alex Harmatuck

Sponsored by the Arizona Water Association

Arkansas

Kira Burnett

Urbanization's Impacts on Aquatic Ecosystems: Assessing Phosphorus Transport, Biological Health, and for Endocrine Disruptors

Arkansas School for Mathematics, Sciences, and the Arts

Science Teacher: Dr. Allyn Dodd

Sponsored by the Arkansas Water Environment Association

California

Aditya Shivakumar and Trisha Shivakumar

HgMAP: Mapping Global Aqueous Mercury Contamination with Ultra-Low-Cost Localized Surface Plasmon Resonance Sensors and Physics-Informed Deep Learning

The Harker School

Science Teacher: Casey Brown

Sponsored by the California Water Environment Association

Colorado

Addison Mondragon
Sink or Swim: Effects of Varied Conservation Methods on Fishery Success
Monte Vista High School
Science Teacher: Loree Harvey
Sponsored by the Rocky Mountain Water Environment Association

Connecticut
Dongeun Rhee
Biomimetic Filtration: Applying the Voronoi Pattern of Sea Urchin Shells to Remove Lead from Connecticut's Water Supply and Combat Marine Desertification
The Taft School
Science Teacher: Amanda Getty
Sponsored by the New England Water Environment Association

Delaware
Lale Ergen
The Impact of Income Level on Polycyclic Aromatic Hydrocarbon Presence in Drinking Water in Neighborhoods in or Around Newark, Delaware
Science Teacher: Matthew Lohman
Newark Charter School
Sponsored by the Chesapeake Water Environment Association

Florida
Aditi Swain
Evaluating the Efficacy of a Novel BIOPAC BioAdsorbent for the Removal of Aqueous Per- and Polyfluoroalkyl Substances (PFAS)
Orlando Science High School
Science Teacher: Judith Bright
Sponsored by the Florida Water Environment Association

Georgia
Steven (Seowon) Park
Measuring the Impact of Conyers BioLab Explosion Using Daphnia Magna
Johns Creek High School
Science Teacher: Joy Smith
Sponsored by the Georgia Association of Water Professionals

Hawaii

Vera Wang

Innovative Sustainable Ocean Remediation: A Novel Design of Multi-Pollutant Removal Utilizing Polynesian Weaving Traditions of Natural, Biodegradable Plant-Based Materials

Henry J. Kaiser High School

Science Teacher: Darin Kohora

Sponsored by the Hawaii Water Environment Association

Idaho

No Qualifying Entries

Illinois

William Grzesik and Aver Edwards

Efficacy of Biochar as an iron Filter to increase Water Potability

Wheeling High School

Science Teacher: Kimberly Milligan

Sponsored by the Illinois Water Environment Association

Indiana

Aditi Ethiraj

The Metal Muncher: Investigating the Bioremediation Potential of Bacillus Subtilis in Reducing Copper and Iron Contamination in Water

Carroll High School

Science Teacher: Jim Walker

Sponsored by the Indiana Water Environment Association

Iowa

Addison Hohl

The Effects of Biodegradable Materials on Water Quality Using Bioreactors Phase IV

Central Lee High School

Science Teacher: Alicia Schiller

Sponsored by the Iowa Water Environment Association

Kansas

Riley Gaikowski

An Investigation of the Effects of Fertilizer on Photosynthesis Rates

Shawnee Misson East High School

Sponsored by the Kansas Water Environment Association

Kentucky

Sriram Achaththekoot

Development of a Novel, Low Cost, Environmentally Friendly, Reusable Sponge for Purification of Heavy Metals, Microplastics, and Oil Spills

DuPont Manual

Science Teacher: Valerie Conti

Sponsored by the Clean Water Professionals of Kentucky & Tennessee

Louisiana

Tanmayee Iskapalli

Investigating the Effectiveness of Ozone in Removing Contaminants from Water

Caddo Parish Magnet High School

Science Teacher: Cameron Hall

Sponsored by the Louisiana Water Environment Association

Maine

Dhana Park and Sungbeen Lee

Synthesis and application of iron oxide nanoparticles-loaded chitosan composites for phosphate removal to prevent algae blooms

Fryeburg Academy

Science Teacher: Dylan Harry

Sponsored by the New England Water Environment Association

Maryland

Sumeir Soni and Christian Yoon

GALATEA: A Novel Solution Utilizing Buoy Arrays and Graph Neural Networks to Autonomously and Accurately Predict Biochemical Oxygen Demand at 4% of Commercial Costs
Poolesville High School
Science Teacher: Zachary Kingman
Sponsored by the Chesapeake Water Environment Association

Massachusetts
Yuxuan Zhang
Heavy Metal Analysis of Lichen at a Massachusetts Superfund River Reveals Previously Overlooked Contamination
Boston Latin School
Science Teacher: Susan Will-Wolf
Sponsored by the New England Water Environment Association

Michigan
Miriam Haddad
Optimizing Aquatic Oil Spill Clean Up:
Oil Viscosity and Ferrofluid Composition
Saginaw Arts and Sciences Academy
Science Teacher: Clara Wagner
Sponsored by the Michigan Water Environment Association

Minnesota
John Liu
Developing a Solar-Enhanced Biomass-based Filtration System for Removing Microplastics and Heavy Metals from Water
Mounds View High School
Science Teacher: Jing Tang
Sponsored by the Central States Water Environment Association

Mississippi
Lucas Wang and Mihi Tekal
Revolutionizing Water Resource Management: Leveraging Deep Learning for Improved Short-Term Snow Water Equivalent Predictions

Madison Central High School
Science Teacher: Kristy Ezell Ainsworth
Sponsored by the Mississippi Water Environment Association

Missouri
Vihaan Sawardekar
Bayesian Augmented Neuro-Computational Software for the Predictive Modeling of Harmful Algal Bloom Emergence
Marquette High School
Science Teacher: Cathy Farrar
Sponsored by the Missouri Water Environment Association

Montana
Bree Straub
Comparison of Fecal Contamination in Two Southeastern Montana Lakes Connected by Chlorinated Lagoon Wastewater Discharge or Irrigation Wastewater Runoff
Baker High School
Science Teacher: Linda Rost
Sponsored by the Montana Water Environment Association

Nebraska
Alexia McDonald
Correlating Diatom Populations and Water Quality Indicators as Signs of Lake Health: Holmes Lake and Pawnee Lake, Southeast Nebraska
Science Teacher: Emily Rose-Seifferlein
Sponsored by the Nebraska Water Environment Association

Nevada
No qualifying entries.

New Hampshire
Aadi Kulkarni

Economical and Novel Microplastic Detection Using a Custom-Built Arduino-Based Turbidity Sensor: A Comprehensive Investigation
Nashua High School
Science Teacher: Dimple Master
Sponsored by the New England Water Environment Association

New Jersey
Aarthi Gunasekaran
A Natural Cost-Effective Solution to Pharmaceutical Contamination in Drinking Water
High Technology High School
Science Teacher: Dina Ellsworth
Sponsored by the New Jersey Water Environment Association

New Mexico
Sebastian Stoker
Analysis of Microplastic Pollution in Albuquerque Water Sources Utilizing FTIR Spectroscopy
Albuquerque Institute for Math and Science
Science Teacher: Philip Watje
Sponsored by the Rocky Mountain Water Environment Association

New York
Catherine Chen
Integrated In Vitro and In Silico Approaches for Hydrogel-Based Dye Adsorption: Synthesis, Characterization, and Implementation of a Novel 3DPrinted Wastewater Filtration System
Manhasset Secondary School
Science Teacher: Alison Huenger
Sponsored by the New York Water Environment Association

North Carolina
Kate Muiruri

The Removal of Heavy Metal Ions from Synthetic Wastewater Using Functionalized Multi-walled Carbon Nanotubes Decorated with Cobalt Ferrite Nanoparticles
North Carolina School of Science and Mathematics
Science Teacher: Michael Bruno
Sponsored by NC One Water

North Dakota
Malory Kemp
Management of Nitrogen and Phosphorus Biogeochemical Cycles Through Harvest of Chlorella Vulgaris and Elodea Canadensis
Cavalier Public High School
Science Teacher: Deanna Grandalen
Sponsored by the North Dakota Water Environment Association

Ohio
Gavin Sifuentes
Comparison of Phosphate and Nitrate Levels in Wetlands Pond and Surface Runoff Pond
Pettisville High School
Science Teacher: Donna Meller
Sponsored by the Ohio Water Environment Association

Oklahoma
Sarah Guzman
What do students at Central Technology Center know about biosolids as a fertilizer in crop production?
Stroud High School
Science Teacher: Amber Day
Oklahoma Water Environment Association

Oregon
Hannah Oh and Jacob Park
Closing the Loop: Destroying PFAS in Residential Water Filters by Utilizing Flash Joule Heating

Sunset High School
Science Teacher: Christopher Downie
Sponsored by the Pacific Northwest Clean Water Association

Pennsylvania
Sophia Burke
Optimizing Greywater Use in Commercial & Agricultural Sectors for Countries Struggling with Water Scarcity
Conestoga High School
Science Teacher: Janet Wolfe
Sponsored by the Pennsylvania Water Environment Association

Puerto Rico
Nomar A. Negrón and Jadiel Rolón
Investigation On the Purification of Water with a Homemade Filtration Tablet to Be Used in Case of Emergencies or Disasters
Vigotsky Bilingual Academy
Science Teacher: Juan R. Torres
Sponsored by the Puerto Rico Water Environment Association

Rhode Island
Donghyun Kang
Environmental Factors of AMR in Rhode Island Waters
Portsmouth Abbey School
Science Teacher: Stephen Zins
Sponsored by the New England Water Environment Association

South Carolina
Avraham Lieberman and Vedant Parmar
Hybrid Powered Water Filtration System with UV and Mineral Purification Techniques
Academic Magnet High School
Science Teacher: Katherine Metzer-Roop
Sponsored by the Water Environment Association of South Carolina

South Dakota
Olivia Knox
Effective Deterrents to Reduce Runoff Part II
Doland High School
Science Teacher Name: Melissa Knox
Sponsored by the South Dakota Water Environment Association

Tennessee
Ruhaan Singh
Advancing Streamflow Prediction in the United States with a Temporal Sequence Transformer Model
Farragut High School
Science Teacher: Matthew Milligan
Sponsored by the Clean Water Professionals of Kentucky & Tennessee

Texas
Rishabh Yadav and Karishma Parghi
Uncharted Waters: Biochemical Trapping via Green Synthesized Metallic Nanoparticles in Water Purification.
The Academy of Science and Technology at The Woodlands College Park High School
Science Teacher: Larissa Coffee
Sponsored by the Water Environment Association of Texas

Utah
Aiden Karnam
We are the Gateway of PFAS Compounds in the Environment
The Waterford School
Science Teacher: James Harris
Sponsored by the Water Environment Association of Utah

Vermont
Kyle Ni
Will Zebra Mussels Consume if no other food sources are available?

South Burlington High School
Science Teacher: Nathaniel Moore
Sponsored by the New England Water Environment Association

Virginia
Naomi Dalmet
A Novel Method for Mitigating Eutrophication and Harmful Algal Blooms in Lakes
Madison High School
Science Teacher: Jyothsna Vallampati
Sponsored by the Virginia Water Environment Association

Washington
Sanjay Srinivasan
DeepScope: A Novel Approach for Testing Water Safety Using Deep Learning Inference of Microscopic Images of Unincubated Water Samples
Eastlake High School
Science Teacher: Shelby Ruge
Sponsored by the Pacific Northwest Clean Water Association

West Virginia
Ethan White
Stream pH Exploring Acidity
Preston High School
Science Teacher: Ryan Cool
Sponsored by the West Virginia Water Environment Association

Wisconsin
No Qualifying Entries

Wyoming
Caden Thacker
Determining the Potential for Detrimental Effects and Bioaccumulation in Dahnia Populations Exposed to Coal Fly Ash Leachate

Greybull High School
Science Teacher: Joel Kuper
Sponsored by the Rocky Mountain Water Environment Association