United States 2019 Stockholm Junior Water Prize
State Winners

The following state winners have advanced to the U.S. Stockholm Junior Water Prize national competition, June 13-16, 2019 to be held at The Ohio State University

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Alabama
Noel Lange
Development of an Innovative Strategy to Protect
the Aquatic Environment from Household Plastic Microfibers: Electrostatic Filtration
Auburn High School
Teacher – Mark T. Jones
Sponsored by the Alabama Water Environment Association

Alaska
No Qualifying Entries
Sponsored by the Alaska Water Wastewater Management Association

Arizona
Aris Zhu & Shreya Tripathi
Biochar Filtrate: A Novel Solution to Lead Contamination through Adsorption
Hamilton High School
Science Teacher – Debbie Nipar
Sponsored by the AZ Water

Arkansas
Anusha Bhattacharyya
Novel Nanostructured Metal Powder by Simple Hot Water Treatment: An Economic and
Sustainable Oil-Water Separation
Little Rock Central High School
Science Teacher – Patrick Foley
Sponsored by the Arkansas Water Environment Association

California
Shloka Janapaty
A Novel, Fast, Low-Cost Approach to Achieve Near 100% LDPE Degradation and Leachate
Remediation: Phanerochaete chrysosporium Landfill Bioremediation
Presentation High School
Science Teacher – Tracy Hughes
Sponsored by the California Water Environment Association

Colorado
Connor Petit
Creation and characterization of Layered Double Hydroxides (LDH) for
absorbing nitrate from aqueous solutions
Regis Jesuit High School
Science Teacher – Mary Bartholomew
Sponsored by the Rocky Mountain Water Environment Association

Connecticut
Brooks Ferguson & Colin Mulshine
Development of an Algae-based Buffer System to Mitigate Excess Nitrogen and Acidification in
Marine Environments
Brunswick School
Science Teacher – Dana Montanez
Sponsored by the New England Water Environment Association

Delaware
Elliott Ruebush & Ankit Gupta
AquaSight: A Novel Platform for Accessible Water Quality Analysis
Utilizing Computer Vision and Deep Learning
The Charter School of Wilmington
Science Teacher – Christopher Kramer
Sponsored by the Chesapeake Water Environment Association

District of Columbia
No Qualifying Entries
Sponsored by the Chesapeake Water Environment Association

Florida
Helena Jiang
Bioinspired Colorimetric Sensors for Detecting Organic Pollutants in Water
Buchholz High School
Science Teacher – Marc Moody
Sponsored by the Florida Water Environment Association

Georgia
Sweta Munagapati
Natural Edible Compounds to Reduce Lead Concentrations in Water
South Forsyth High School
Science Teacher – Melissa Smith
Sponsored by the Georgia Association of Water Professionals

Hawaii
Min-Hua Tsou
Designing an Algae-Immobilized Membrane Bioreactor for
Wastewater Bioremediation and High-Density Algae Production
Mililani High School
Science Teacher – Nel Venzon
Sponsored by the Hawaii Water Environment Association

Idaho
Jimin Ryu
Building a Water Sampling Quadcopter
Treasure Valley Mathematics and Science Center

Science Teacher – Shanda Palsulich
Sponsored by the Pacific Northwest Clean Water Association

Illinois
Priyanka Patel
Designing a Water Purification Device by Nanocurcumin and Dissolvable Paper
Niles West High School
Science Teacher – Parin Patel
Sponsored by the Illinois Water Environment Association

Indiana
Ankush Dhawan
An improved Method for Trace Level Quantification of Arsenic in Water
Signature School
Science Teacher – Shane Thread
Sponsored by the Indiana Water Environment Association

Iowa
Mya Batten
The Bioremediation of Polluted Environments with the Application of Azolla
Van Buren Community Schools
Sponsor Teacher – Amanda Schiller
Sponsored by the Iowa Water Environment Association

Kansas
Laura Flucke
The Effect of Microalgae on Wastewater Quality
Olathe North High School
Science Teacher – Marsha Skoczek
Sponsored by the Kansas Water Environment Association

Kentucky
Jane Hu & Eleanor Hummel
Designing a Novel Water Filter for the Removal of Pharmaceuticals from Water
Using various Carbon Based Nanomaterials
duPont Manual High School
Science Teacher – Kathy Fries
Sponsored by the Kentucky-Tennessee Water Environment Association

Louisiana
Haley Marcotte
Salinity Effects on Juvenile Penaeus axtecus Determined by Total Length and Wet Weight
St. Joseph's Academy
Science Teacher – Jacqueline Savoia
Sponsored by the Louisiana Water Environment Association

Maine
Marina Mohawass
Use of Vanadium Organic Complex to Remove Ethanol from Water
Bangor High School
Science Teacher - Cary James
Sponsored by the New England Water Environment Association

Maryland

Marvin Li
Machine Learning Classifiers to Predict Outbreaks of
Toxic Karenia Brevis Blooms on the West Florida Shelf
James M. Bennett High School
Science Teacher – Philip Bock
Sponsored by the Chesapeake Water Environment Association

Massachusetts
Benjamin Dwyer
Business is Blooming: Optimizing Phosphorus and Carbon Content to Maximize Growth and
Lipid Production in an Algal Photo-bioreactor
Wachusett Regional High School
Science Teacher – Nicholas Guerin
Sponsored by the New England Water Environment Association

Michigan
Akash Rathod
Repurposing Raw Bamboo Waste to Sustainably Purity Contaminated Water
Okemos High School
Science Teacher – Dave Chapman
Sponsored by the Michigan Water Environment Association

Minnesota
Haley Jostes
Combating Undernutrition in Developing Countries with a
Compact Aeroponics System Utilizing Contaminated Water
Stillwater Area High School
Science Teacher – Andrew Weaver
Sponsored by the Central States Water Environment Association

Mississippi
Kaitlyn Moss
Is It Safe?
Lafayette High School
Science Teacher – Deborah Jones
Sponsored by the Mississippi Water Environment Association

Missouri
Je'anne Wegner
The Development of an Integrative Biosensor for the Detection of Escherichia coli in
Recreational Waterays
Camdenton High School
Science Teacher – Christopher Reeves
Sponsored by the Missouri Water Environment Association

Montana
Lillianna Hanson
Desalination of Saline Water via Reverse Osmosis using
Vacuum Filtration through Graphene Coated Diatomaceous Earth
Baker High School
Science Teacher – Linda Rost
Sponsored by the Montana Water Environment Association

Nebraska

Tyler Slechta & Tristan Weston
The Effects of Mussels on Nitrates in Hastings, Nebraska
Adams Central Jr Sr High School
Science Teacher – Jay Cercle
Sponsored by the Nebraska Water Environment Association

Nevada
No Qualifying Entries
Sponsored by the Nevada Water Environment Association

New Hampshire
Kavya Phadke
Is Your Water Safe?
Nashua High School South
Teacher – Divya Nagri
Sponsored by the New England Water Environment Association

New Jersey
Sonja Michaluk
A Novel Method of Monitoring the Health of our Global Fresh Water Supply using
DNA Barcoding of Chironomidae (Diptera)
Hopewell Valley Central High School
Science Teacher – Karen Lucci
Sponsored by the New Jersey Water Environment Association

New Mexico
Samantha Shaver
Aquaponics vs Conventional Agriculture
Rio Rancho High School
Science Teacher – Melissa Marks
Sponsored by the Rocky Mountain Water Environment Association

New York
Serena Zhao & Samantha Chen
Optimizing the Removal of Methylene Blue from Aqueous Solution
Using Curbita Pepo and an Analysis of Desorption Efficiency and Material Reusability
Manhasset High School
Science Teacher – Alison Huenger
Sponsored by the New York Water Environment Association

North Carolina
Aneesha Manocha
A Novel Approach to Modeling Heterogeneous Particle Aggregation and
Adsorption to Predict the Fate of Nanoparticles in the Environment
North Carolina School of Science and Mathematics
Science Teacher – Robert Gotwals
Sponsored by the North Carolina Water Environment Association

North Dakota
Alyssa Kemp
Saving Our Seas – A Solid Solution to Reducing Carbon Dioxide and Ocean Acidification
Cavalier Public School
Science Teacher – LuAnn Kemp
Sponsored by the North Dakota Water Environment Association

Ohio
Raghav Samavedam, Ryan Ziegler & Jayanth Gunda
An Affordable, Autonomous, Solar-powered, Modular, Robotic Water Monitoring and Bio-remediation System
Dublin Jerome High School
Science Teacher – Anne Fuller
Sponsored by the Ohio Water Environment Association

Oklahoma
Maha Achour
Big Problem, Tiny Solution; Is Nanotechnology the New Oil Spill Clean Up Solution?
Bartlesville High School
Science Teacher – Gary Layman
Sponsored by the Oklahoma Water Environment Association

Oregon
Rohan Wagh
Designing a Novel In-Situ Microbial Fuel Cell Based Soild Conductivity Sensor System for Soil Moisture Representation to Combat Overwatering in Large Crop Fields
Sunset High School
Science Teacher – Korin Riske
Sponsored by the Pacific Northwest Clean Water Association

Pennsylvania
Lillian Miller
The Effect of Micronized Plastics on Daphnia
Perkiomen Valley High School
Science Teacher – Julie Mest
Sponsored by the Pennsylvania Water Environment Association

Puerto Rico
Camila Rodriguez
A bioremediation simulation of Dehalococcoides sp. Strain FL2 for Vinyl Chloride on groundwater located in Guayanilla Bay, Puerto Rico
Escuela Especiaizada en Matematicas, Ciencia y Tecnologia de San Juan
Science Teacher – David Vazquez
Sponsored by the Puerto Rico Water & Environment Association

Rhode Island
Brooke Newbury
Using Aloe Vera to Purify Water
St. Mary Academy – Bay View
Science Teacher – Janell Johnson
Sponsored by the New England Water Environment Association

South Carolina
Ishraq Haque
A Novel Arsenic Filtration System for Low-Income Families in Rural Bangladesh
Academic Magnet High School
Science Teacher – Katharine Metzner-Roop
Sponsored by the Water Environment Association of South Carolina

South Dakota
Emily Foiles
Effects of Gray Water on Plants
Doland High School
Science Teacher – Melissa Knox
Sponsored by the South Dakota Water Environment Association

Tennessee
No Qualifying Entries.
Sponsored by the Kentucky-Tennessee Water Environment Association

Texas
Mehaa Amirthalingam
A Novel Toilet Flushing System Using Grey Water and Fresh Water
Travis High School
Science Teacher – Matthew Hindmarch
Sponsored by the Water Environment Association of Texas

Utah
Aarushi Verma
Functionality of the Oligodynamic Effect in Copper to
Purify Water
Skyline High School
Science Teacher – Cheryl Forster
Sponsored by the Water Environment Association of Utah

Vermont
Esther Koo
Can Dialysis Be Used to Treat Lead Poisoning?
South Burlington High School
Science Teacher – Nathaniel Moore
Sponsored by the New England Water Environment Association

Virgin Islands
No Qualifying Entries
Sponsored by the Seven Seas Water Corporation

Virginia
Janine Icalla
Using Waste Biomass-Based Electrodes by Electrocoagulation for the
Simultaneous Removal of Lead and Phosphate from Water
Mills E. Godwin High School
Science Teacher – Dana Delano
Sponsored by the Virginia Water Environment Association

Washington
Audrey Gruian
UVPDetect: A Computer-Vision Powered System to Detect Microplastics
Using Ultra Violet Light
Eastlake High School
Science Teacher – Casey Green
Sponsored by the Pacific Northwest Clean Water Association

West Virginia
No Qualifying Entries
Sponsored by the West Virginia Water Environment Association

Wisconsin
Beatrice Youd
Eutrophication Prevention Analysis of Driveway Materials
F. J. Turner High School
Science Teacher – Kelsey Uttke
Sponsored by the Central States Water Environment Association

Wyoming
No Qualifying Entries.
Sponsored by the Rocky Mountain Water Environment Association