United States 2017 Stockholm Junior Water Prize
State Winners

Alabama
Noel Lange
Factors Effecting the Discharge of Micro-Plastic Fibers from Household Laundry
Auburn High School
Teacher – Mark Jones
Sponsored by the Alabama Water Environment Association

Alaska
Jedediah Dean
A longitudinal study of fluctuating radiation levels in prince William sound, Alaska; a conclusion to a four-year study
Colony High School
Science Teacher – Theodore Dean
Sponsored by the Alaska Water Wastewater Management Association

Arizona
Joseph Galasso
A Novel, Cost-Effective Water Filtration and Desalination Technique Based on Biodegradable Superabsorbent Polymers
Galasso Home School
Science Teacher – Sandra Galasso
Sponsored by the AZ Water

Arkansas
Grace Xiang
Water Filtration: The Effects of Coconut Fiber and Burnt Rice Hull on the herbicide Atrazine
Little Rock Central High School
Science Teacher – Patrick Foley
Sponsored by the Arkansas Water Environment Association

California
Visala Tallavarjula
Statistically Designed Experimental Optimization of Root Zone Water Delivery Using a Low-Cost Surface Drip Micro-irrigation Method for Regions Suffering from Drought
Wilcox High School
Science Teacher – Deanna Dutton
Sponsored by the California Water Environment Association

Colorado
McKinley Dirks; Alexandrea Rivera
Methods to Reduce Micropollutants in Treated Waters
Skyview Academy
Science Teacher – Timothy Smith
Sponsored by the Rocky Mountain Water Environment Association
Connecticut
Luca Barcelo
Crowd Sourced Detection and Mapping of Nitrate Water Pollutants
via a Mobile Web-Based Image Analysis System
Greenwich High School
Science Teacher – Andrew Bramante
Sponsored by the New England Water Environment Association

Delaware
No Qualifying Entries
Sponsored by the Chesapeake Water Environment Association

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

Florida
Talar Terzian
Spin Cycle: An Off–the-Grid Hydrodynamic Water Filtering Washing Machine
Oak Hall School
Science Teacher – Sandra Swindler
Sponsored by the Florida Water Environment Association

Georgia
Sophia Woodrow; Ethan Asher
Exploring the Aquaponic Theory as a Sustainable Water Solution
Centennial High School
Science Teacher – Robert Kuhn
Sponsored by the Georgia Association of Water Professionals

Hawaii
Felix Peng
Optimal pairings of locally isolated bacteria for
maximum hydrocarbon bioremediation efficiency
Waiakea High School
Science Teacher – Whitney Aragaki
Sponsored by the Hawaii Water Environment Association

Idaho
Ari Carter
SiNK
Moscow High School
Science Teacher – Pat Blount
Sponsored by the Pacific Northwest Clean Water Association

Illinois
Ashritha Karuturi
How the Chemical Speciation of Sn and Zn Control
Their Biouptake by Organisms through Adsorption of Zinc on Abrasives
Illinois Science and Math Academy
Science Teacher - TBA
Sponsored by the Illinois Water Environment Association
Indiana

Julia Hunkler
Determining the Optimal Vegetation to Decrease Fertilizer Runoff
Marian High Schools
Science Teacher – Ken Andrzejewski
Sponsored by the Indiana Water Environment Association

Iowa

Maggie Walker
Sodium Polyacrylate Used for Nitrate Runoff Prevention Phase: 2
Holy Trinity High School
Sponsor Teacher – Gail Kunch
Sponsored by the Iowa Water Environment Association

Kansas

Ellie Green
Detection of Lead in Drinking Water Using Internally Referenced
Competitive Assays Allowing Low Cost Source Sample Testing
at 1 ug/L Reading Positive/Negative at Action Level
Shawnee Mission East High School
Science Teacher – Jerrod Bardwell
Sponsored by the Kansas Water Environment Association

Kentucky

Adithya Iyengar; Louis Yang
The Effect of Different Materials and Solar Disinfection on
Filtering out Excessive Nutrients in Urban Streams
duPont Manual High School
Science Teacher – Erin Moss
Sponsored by the Kentucky-Tennessee Water Environment Association

Louisiana

Anna Koonce
The Effect of Sodium Chloride on Hybrid Taxodium Species
St. Joseph's Academy
Science Teacher – Linda Messina
Sponsored by the Louisiana Water Environment Association

Maine

Mei Tian
Testing the Effectiveness of Mycorrhizae in the Remediation
of Phosphorus from Stormwater
Bangor High School
Science Teacher - Cary James
Sponsored by the New England Water Environment Association

Maryland

Claire Wayner
Interactions between a Stormwater Pathogen Indicator, Escherichia coli,
and Various Bacteria Present in an Engineered Infiltration System
Baltimore Polytechnic Institute
Science Teacher – Lisa Fridman
Sponsored by the Chesapeake Water Environment Association
Massachusetts
Sangwon Cha; Ji Yeon Kwon; Jin Young Shin
Utilization of Food Dyes as Photosensitizers for Enhanced Solar Disinfection of Water
Lorous Academy
Science Teacher – Eric Ahn
Sponsored by the New England Water Environment Association

Michigan
Anjini Chandra
Extraction of Bacteria from Untreated Wastewater Using Magnetic Nanoparticles
Okemos High School
Science Teacher – Evangelyn Alocilja
Sponsored by the Michigan Water Environment Association

Minnesota
Maxwell Vogel
Can a Golf Course Riparian Buffer Zone Reduce Fertilizer, Pesticide and Sediment Runoff into the Brown’s Creek Watershed?: Year One - Phase I
Oak-Land Junior High School
Science Teacher – Katy Pupungatoa
Sponsored by the Central States Water Environment Association

Mississippi
Ian Espy
Effects of Perfluorooctanoic Acid on Daphnia Magna
St. Andrew's Episcopal High School
Science Teacher Claudia Bhagat
Sponsored by the Mississippi Water Environment Association

Missouri
Kelli Alford
Photo- and Chemotactic Response of Orconectes virilis: Determining the Efficacy of a Positive and Negative Taxis System for Nuisance Crayfish
Camdenton High School
Science Teacher – Christopher Reeves
Sponsored by the Missouri Water Environment Association

Montana
Ella DeGrandpre
Ion Exclusion in Partially Frozen Water and the Effects of the Newly Concentrated Water on Daphnia Magna Mortality
Hellgate High School
Science Teacher – Rob Jensen
Sponsored by the Montana Water Environment Association
Nebraska
Marcella Jurotich
Signal Flow Graph Theory is Effective in Modeling Inter-Functional Relationships in an Aquatic Ecosystem
Wayne Junior Senior High School
Science Teacher – Lee Brogie
Sponsored by the Nebraska Water Environment Association

Nevada
No Qualifying Entries
Sponsored by the Nevada Water Environment Association

New Hampshire
Meghana Avvaru
A Novel and Economical Approach for Testing Lead in Water at Home by using a Combination of Infrared Spectroscopy and Colorimetry
Nashua High School South
Teacher – Stephen Minnigh
Sponsored by the New England Water Environment Association

New Jersey
Shravya Jasti
Evaluating the Effectiveness of Copper and Silver Ions in Removing Contaminants from Wastewater
Holmdel High School
Science Teacher – Josephine Blaha
Sponsored by the New Jersey Water Environment Association

New Mexico
Matuke Fomukong
Helios Aqua System Phase 3: Comparing the Methods of Thermal and Electrical Energy Storage for 24-Hour Water Purification
Rio Rancho High School
Science Teacher – Melissa Marks
Sponsored by the Rocky Mountain Water Environment Association

New York
Rachel Chang; Ryan Thorpe
A Novel Approach to Rapidly and Sensitively Detect and Purify Water Contaminated with Shigella, E. coli, Salmonella, and Cholera
Manhasset Secondary School
Science Teacher – Alison Huenger
Sponsored by the New York Water Environment Association

North Carolina
Kenny Hoang
Photocatalytically Degrading Organic Pollutants from Aqueous Environments using Solar-Powered Palladium-end-capped Gold Nanorods
North Carolina School of Science and Mathematics
Science Teacher – Myra Halpin
Sponsored by the North Carolina Water Environment Association
North Dakota
Lauren Knoll
There is No Planet B: Aquaponics, Farming of the Future
Park Christian School
Science Teacher – Krista Rankin
Sponsored by the North Dakota Water Environment Association

Ohio
Katelyn Niehaus
Smart Soil Tester and App Reduce Fertilizer Runoff and Increase Water Quality
Eaton High School
Science Teacher – Amy Kochensparger
Sponsored by the Ohio Water Environment Association

Oklahoma
Liza Williams
Oh, Well: A Study of the Effects of
Common Oil Well Practices on Induced Seismicity
Bartlesville High School
Science Teacher – Gary Layman
Sponsored by the Oklahoma Water Environment Association

Oregon
Bryan To
Reactions of Salvinia sp. to Copper
Contamination; Death or Absorption?
Oregon Episcopal School
Science Teacher – Peter Langley
Sponsored by the Pacific Northwest Clean Water Association

Pennsylvania
Anna Dewey
Utilizing Used Coffee Grounds and Bioeleastomeric
Composite Foam to Remove Metals from Water
Academy of Notre Dame de Namur
Science Teacher – Emily Giannantonio
Sponsored by the Pennsylvania Water Environment Association

Puerto Rico
Vincent Hwang
Phosphorus Recovery from Storm Water Runoff with Seawater-Mixed
Pervious Concrete for Reutilization as a Mineral Fertilizer
Southwestern Educational Society (SESO)
Science Teacher – Evelyn Montalvo
Sponsored by the Puerto Rico Water & Environment Association

Rhode Island
Nicolas Berg
Impacts of 1,2-Propanediol Effluent Discharge on Reproductive Rates and
Dispersion Patterns of Anabaena inaequalis and Chlamydomonas reinhardtii
Bishop Hendricken High School
Science Teacher – Jeremy Graney
Sponsored by the New England Water Environment Association
South Carolina  
Sarayu Das  
A novel technique to purify water using the coagulant Properties of Moringa oleifera to filter pharmaceuticals, heavy metals, and herbicides from contaminated water sources  
Spring Valley High School  
Science Teacher – Michelle Spigner  
Sponsored by the Water Environment Association of South Carolina

South Dakota  
Jeanne Rasmussen  
Model for a Sustainably Powered Ultraviolet Irradiation Water Purification System  
Aberdeen Central High School  
Science Teacher – Charles Hermansen  
Sponsored by the South Dakota Water Environment Association

Tennessee  
Lindsey Phillips; Emilee Guinn  
The Effect of Differing Aquatic Plants on Chlorella Variabilis Control  
Heritage High School  
Science Teacher – Cheri Reznicek  
Sponsored by the Kentucky-Tennessee Water Environment Association

Texas  
Hudson Nash  
Microbial Fuel Cells for Environmental Monitoring II  
The Academy of Science and Technology  
Science Teacher – Larry Walker  
Sponsored by the Water Environment Association of Texas

Utah  
Divyam Goel  
Resource Recovery from Liquid Waste: A Strategy for Ensuring Food Security  
West High School  
Science Teacher – Melissa Anderson  
Sponsored by the Water Environment Association of Utah

Vermont  
Aida Arms  
The Effect of Different Nitrogen to Phosphorus Ratios on the Growth of Cyanobacteria  
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
Ana Humphrey
ColiFind: A Digital Image Analysis Application to Identify E. coli Colonies in Coliscan Easygel Water Quality Tests
T.C. Williams High School
Science Teacher – Shawn Lowe
Sponsored by the Virginia Water Environment Association

Washington
Apoorv Khandelwal
Molecular Dynamics Simulation and Experimental Fabrication of Nanoporous Graphene Membranes for Optimal Water Permeability in Reverse Osmosis Desalination
Tesla STEM High School
Science Teacher – Kate Allender
Sponsored by the Pacific Northwest Clean Water Association

West Virginia
Dylan Collis; Matthew Betts; Dylan Doyle
Water you wasting your money for?
Musselman High School
Science Teacher – Cindy Raines
Sponsored by the West Virginia Water Environment Association

Wisconsin
Laurel Chen; Reilly Olinger
Removal of Cyanobacterial Contaminants with Solar-Power via Electrocoagulation-Sand Filtration and Optimization of pH
Brookfield Central High School
Science Teacher – Michael Mohammad
Sponsored by the Central States Water Environment Association

Wyoming
Shelby Stith
Toxic Tides
Newcastle High School
Science Teacher – Zach Beam
Sponsored by the Rocky Mountain Water Environment Association