

**United States 2009 State  
Stockholm Junior Water Prize Winners**

**Alabama**

Rebecca Daniels  
"Phase II: Phytoremediation of Heavy Metals  
in Coal Ash Leachate"  
Brooks High School  
Science Teacher - Jeanene Daniels  
Sponsored by the Alabama Water Environment Association

**Alaska**

Madison Nolan and Hannah Wilson  
"The Effects of Estrogen on the Mass, Length, and Gender  
of Sand Shrimp (*Crangon alaskensis* and *franciscorum*)"  
Juneau Douglas High School  
Science Teacher - Jonathan Smith  
Sponsored by the Alaska Water Wastewater Management Association

**Arizona**

Scott Boisvert  
"Growth of the Amphibian Pathogen *Batrachochytrium dendrobatidis*  
in Response to the Chemical Properties of Aquatic Environments"  
Basha High School  
Science Teacher - Christina Jahr  
Sponsored by the Arizona Water and Pollution Control Association

**Arkansas**

Alison Thoma and Stephen Thoma  
"Spatial Patterns of Antibiotic Resistance  
Near Wastewater Treatment Plant Outfalls"  
Fayetteville High School  
Science Teacher - William Rosser  
Sponsored by the Arkansas Water Environment Association

**California**

Monica Chen  
"Elucidation of Bactericidal Effects Incurred by  
*Moringa oleifera* and Chitosan"  
Palos Verdes Peninsula High  
Science Teacher – Peter Starodub  
Sponsored by the California Water Environment Association

**Colorado**

Erik Schnaderbeck  
"The Effect of Reservoirs on the Biodiversity of Aquatic Invertebrates  
in Cold Water Fisheries"  
Sargent High School  
Science Teacher – Ronna Cochran  
Sponsored by the Rocky Mountain Water Environment Association

**Connecticut**

Morgan Bartz  
"The Role of Natural Flocculants in the Purification  
and Clarification of Contaminated Water"  
Bethel High School  
Science Teacher - Sharon Bly  
Sponsored by the New England Water Environment Association

**Delaware**

No Nominations

Sponsored by the Chesapeake Water Environment Association

**Florida**

Collin McAliley

“Florida Harmful Algal Bloom Mitigation Year 5:  
Neutralizing Brevetoxin Using the Amino Acid Derivative, Cysteine Methyl Ester”

Cocoa Beach Jr./Sr. High School

Science Teacher - Scott McCord

Sponsored by the Florida Water Environment Association

**Georgia**

Elizabeth Kornegay

“Georgia's Footprint on the Ochlocknee River: A Water Quality and Benthic Analysis of the  
Ochlocknee River As It Flows from Its Origin to the State Line, Phase II”

Thomasville High Scholars Academy

Science Teacher – Laura Kornegay

Sponsored by the Georgia Association of Water Professionals

**Hawaii**

Tyler Yamada and Jared Shimada

“Water Desalination: Got Fresh Water?”

Seabury Hall

Science Teacher - Daryl Yamada

Sponsored by the Hawaii Water Environment Association

**Idaho**

No Nominations

Sponsored by the Pacific Northwest Clean Water Association

**Illinois**

Allison Ramsey

“Bioremediation: The Effectiveness of Pseudomonas putida  
when Varying Levels of Carbon”

Southeastern Senior High School

Science Teacher - Carolyn Phillips

Sponsored by the Illinois Water Environment Association

**Indiana**

Marijke Wijnen

“Improving the Efficiency of the Bioremediation Process  
in Xylene Contaminated Groundwater”

John Adams High School

Science Teacher - Nevin Longenecker

Sponsored by the Indiana Water Environment Association

**Iowa**

Olivia Rairden

“How Dangerous Are Our Waters?”

Central Lee High School

Science Teacher - Alicia Schiller

Sponsored by the Iowa Water Pollution Control Association

**Kansas**

Lauren Severance and Baylee Birkmeyer

“The Effects of Precipitation on the Water Quality of Little Mill Creek”

Shawnee Mission Northwest

Science Teacher - Debra Brewer

Sponsored by the Kansas Water Environment Association

**Kentucky**

Shuang Xu

“The Effects of Chemicals Pyrethrin and Carbaryl  
on Crayfish *Procambarus clarkii*”  
Paul Laurence Dunbar High School  
Science Teacher - Heidi Anderson

Sponsored by the Kentucky-Tennessee Water Environment Association

**Louisiana**

Alaina Leggette

“The Effects of Hurricanes Lili, Katrina, and Gustav on the Salinity  
and Turbidity of Lake Pontchartrain”  
St. Joseph's Academy  
Science Teacher - Linda Messina

Sponsored by the Louisiana Water Environment Association

**Maine**

Anne Marie Lausier

“Detection of Pharmaceutical and Personal Care Products (PPCPs)  
in 3 Maine Lakes by Synchronous-Scan Fluorescence Spectroscopy (SFS)”  
Bangor High School  
Science Teacher - Cary James

Sponsored by the New England Water Environment Association

**Maryland**

Mikhail Slutskiy

“Filtration of Oils: Rubber vs. Sand”  
Franklin High School  
Science Teacher - Kaitlin Spivak

Sponsored by the Chesapeake Water Environment Association

**Massachusetts**

Nadya Shlykova

“Clean Energy: Osmosis at Work”  
Westfield High School

Science Teacher - Raneé Sweeney

Sponsored by the New England Water Environment Association

**Michigan**

No Winner Sponsored

Sponsored by the Michigan Water Environment Association

**Minnesota**

Megan Miller

“The Influence of Fish Communities on the Diurnal Horizontal Migration  
of *Daphnia* Species in Deep Prairie Wetlands”  
Lincoln High School

Science Teacher – Cheryl Winkler-Miller

Sponsored by the Central States Water Environment Association

**Mississippi**

Courtney Ramsey

“Microbial Conversion of Glucose into Lipids  
Using Activated Sludge Microflora”

Mississippi School for Mathematics and Science

Science Teacher – Mary Davidson

Sponsored by the Mississippi Water Environment Association

**Missouri**

Jessica Baber

“A Pilot Study of the Effects of the Type of Water Filtration Material  
(Activated Carbon, Vermiculite, and Corn Cob)  
on the Amount of Progesterone and Testosterone Removed from the Water”

West Platte R-II

Science Teacher - Brad Lynch

Sponsored by the Missouri Water Environment Association

**Montana**

Allison Stringer

“Effect of Constructed Wetlands on Water Temperature in  
Lower Burnt Fork Creek: Implications for Native Trout Populations  
and Possible Stream Restoration”

Sentinel High School

Science Teacher - Jonell Prather

Sponsored by the Montana Water Environment Association

**Nebraska**

Nicholas Kinzer

“A Prototype Sewage Treatment Plant”

Lakeview High School

Science Teacher - Edward Kinzer

Sponsored by the Nebraska Water Environment Association

**Nevada**

Kirsten Perry

“pH and Salt Content of Soils and Irrigation Water  
of the Lower Humboldt River”

Elko High School

Science Teacher - Paul Hughes

Sponsored by the Nevada Water Environment Association

**New Hampshire**

No Nominations

Sponsored by the New England Water Environment Association

**New Jersey**

Elaine Gomez

“Metal Concentrations of Plants in an Engineered Wetland;  
Establishing Protocols and Base-line Conditions”

Union City High School Campus North

Science Teacher - Nadia Makar

Sponsored by the New Jersey Water Environment Association

**New Mexico**

Terryl Bell

“An Analysis of Microbial Diversity and Water Chemistry in Karst Springs:  
Eddy County, New Mexico and Culberson County, Texas”

Carlsbad High School

Science Teacher - Dara Bell

Sponsored by the Rocky Mountain Water Environment Association

**New York**

Benjamin Valentino

“Magnetic Gradient Anomalies on Onondaga Lake, New York:  
Are They Geologic or Anthropogenic?”

Home School

Science Teacher - Karen Valentino

Sponsored by the New York Water Environment Association

**North Carolina**

Eileen Jang

“Natural Organics Control Aggregation of  
Mercury Sulfide Nanoparticles in Freshwater Systems”  
North Carolina School of Science and Mathematics  
Science Teacher – Myra Halpin

Sponsored by the North Carolina Water Environment Association

**North Dakota**

Benjamin Sun

“Sink or Source: The Role of Street Solids  
in Heavy Metal Pollution of River Water”  
Red River High School  
Science Teacher - Jenny Sun

Sponsored by the North Dakota Water Environment Association

**Ohio**

Grace Miner

“Utilization of Organic Phosphorus by Cyanobacteria”  
Bowling Green High School  
Science Teacher - Hans Glandorff

Sponsored by the Ohio Water Environment Association

**Oklahoma**

Jenna Huling

“Global Warming Effects on Ground Water/Surface Water Interactions”  
Ada Junior High School  
Science Teacher - Kelly Reynolds

Sponsored by the Oklahoma Water Environment Association

**Oregon**

Ashutosh Patra and Siheng You

“Novel Water Lens for Cost Effective Electricity Generation  
and Water Cleansing”  
Sunset High School  
Science Teacher - John Sheu

Sponsored by the Pacific Northwest Clean Water Association

**Pennsylvania**

Vincent Zampelli

“A Novel Synthesis of MFCs on the Reduction of Chemical Oxygen Demand  
in Wastewater Treatment Plants”  
Conrad Weiser High School  
Science Teacher - Adam Serfass

Sponsored by the Pennsylvania Water Environment Association

**Puerto Rico**

Patricia A. Gonzalez

“Municipal Landfill Leachate on Surface Waters of Juncos, Puerto Rico”  
Escuela Jose A. Lopez Castro  
Science Teacher - Tere De L. Hernandez

Sponsored by the Puerto Rico Water & Environment Association

**Rhode Island**

Emily Papazian

“How Does Temperature Affect Total and Fecal Coliform  
Presence in Rhode Island Ponds?”  
LaSalle Academy  
Science Teacher - Leslie Martinelli

Sponsored by the New England Water Environment Association

### **South Carolina**

Emily Bakaj

“The Effect of Ferrous Ammonium Sulfate Concentration  
on Marine *Synechococcus sp.*'s CO<sub>2</sub> Absorption and O<sub>2</sub> Production”

Spring Valley High School

Science Teacher - Robin Henderson

Sponsored by the Water Environment Association of South Carolina

### **South Dakota**

Jennifer Ratzlaff and Victoria Rezac

Is Salt Accumulating in the Right of Way of Highways?

Avon High School

Science Teacher - Paul Kuhlman

Sponsored by the Water Environment Association

### **Tennessee**

Gregory Markov

“Using Algae and Nitrate-Polluted Water in a Photobioreactor  
for Hydrogen Production”

Franklin High School

Science Teacher - Sergei Markov

Sponsored by the Kentucky-Tennessee Water Environment Association

### **Texas**

Li Boynton

“Using Bioluminescent Bacteria to Detect Water Contaminants”

Bellaire High School

Science Teacher - Anna Loonam

Sponsored by the Water Environment Association of Texas

### **Utah**

Christie Hewlett

“A Comparative Study of the Mercury Content in the Bear, Jordan, and Weber Rivers  
and its Effects on the Wildlife and the Great Salt Lake”

Weber High School

Science Teacher – Lareen Radle

Sponsored by the Water Environment Association of Utah

### **Vermont**

Stephanie Chang

“Reducing Phosphorus in Dairy Effluent  
via Constructed Wetland-Steel Slag Filter System”

South Burlington High School

Science Teacher - Curtis Belton

Sponsored by the New England Water Environment Association

### **Virginia**

Amanda Schanz

“The Effect of Estrogen Level in Water on the Average Root Length  
and Average Number of Roots of the *Epipremnum Tricolor*”

Mathematics and Science High School at Clover Hill

Science Teacher - Erin Peebles

Sponsored by the Virginia Water Environment Association

### **Washington**

AshiyahCays-Vesterby

“Nitrate Removal from Water Using Conifer Tissues”

Sequim High School

Science Teacher - Mary Omberg

Sponsored by the Pacific Northwest Clean Water Association

**West Virginia**

Briana Breault

“Hydroelectric Power Potential in the Ohio River Valley”

Bishop Donahue Memorial High School

Science Teacher - Robert Ball

Sponsored by the West Virginia Water Environment Association

**Wisconsin**

Jamie Molloy

“The Effect of Nano Metal Oxides on Sentinel Organisms  
in the Aquatic Environment”

Divine Savior Holy Angels High School

Science Teacher - Betty Jo Azpell

Sponsored by the Central States Water Environment Association

**Wyoming**

Talysa Stockert

“Variation in Containment Methodologies for the Remediation  
for CBM Effluents”

Greybull High School

Science Teacher - Joel Kuper

Sponsored by the Rocky Mountain Water Environment Association