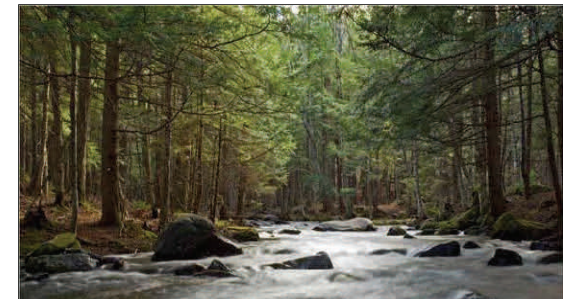


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Universidad Metropolitana
Rubenstein Ecosystem Science Lab, UVM



Welcome to the 4th Annual Vermont EPSCoR Watershed Project Spring Symposium



April 2nd, 2012

Hampton Inn

Burlington, Vermont



Funded by NSF EPS Grants #1101317 & #0918284



Welcome and thank you for attending the 4th Annual Watershed Project Symposium!

The Watershed Project is excited to showcase the hard work of participating high schools and colleges in studying the streams of Vermont, New York, Puerto Rico, Delaware, and Rhode Island. Participants have worked to collect and analyze data on water quality and watershed land use. This symposium provides an opportunity for students, faculty, and other interested state and local groups to share their findings and network with others working on watershed issues. Researching the connections between land use and water quality is important work, and the Watershed Project is proud to have worked with so many wonderful young scientists in this effort.

Thank you for a fun and successful year of the Watershed Project. Your passion and dedication makes this possible!

We would like to thank the following individuals for their assistance with this event: Lindsay Wieland, Miranda Lescaze, Catherine Duck, Lexie Haselton, Lydia Pitkin, Steve Exler, Nora Joyal, Lillian Gamache, Kelvin Chu and Judy Van Houten, VT EPSCoR; and Declan McCabe, Saint Michael's College.



Quiñones, Mariana - University of Puerto Rico

Comparison of TSS and Sources of Fecal Coliforms in Streams Surrounded by Forested and Agricultural Land Uses

Rios, Karoline - Universidad Metropolitana

The Effects of Urban and Forested Land Use on *Escherichia coli* and Total Suspend Solids in Potash Brook and Snipe Island Brook in Vermont

Rivera, Juan Pablo - Universidad Metropolitana

Understanding the Effect on the Population of *E. Coli* with the Impact of the Acid Mine Drainage (AMD) in Ely Brook

Rivera, Mariana - University of Puerto Rico

Hydraulic Geometry of Various Sites in Thatcher Brook, Vermont, and the Relationship with Riparian Vegetation, 2011

Rosario, Gabriela, Jean Carlos Torres, and Frank Torres - University Gardens High School

Two-years Comparative Study of Water Quality Levels of Two Streams in San Juan, Puerto Rico

Salazar, Laura - Universidad Metropolitana

The Effect of Multi Parameter Nutritional Regime on *Escherichia coli* strains

Strella, Steve - University of Vermont

Effects of Hurricane Disturbance on Leaf Breakdown and Metabolic Processes in Neotropical Headwater Systems

Sullivan, Ian - Saint Michael's College

Using Stepwise Multiple Regressions to Analyze the Relative Impacts of Land Feature Variables on Benthic Macroinvertebrate Community Metrics

Welsh, Molly - University of Rhode Island

Beaver Ponds and Transient Headwater Streams: Hidden Hotspots of Bio-geochemical Cycling



Huntley, Elise, Jonathan Caplan and Christine Colella - Home School/Mt. Snow Academy

Are Macroinvertebrates Vermont Strong? Monitoring One Stream's Recovery and Water Quality after Tropical Storm Irene; Investigating the Conventional Belief that Flooding and Stream Dredging have an Inverse Impact on the Overall Health of a Stream

Lebron, Dayanara - Universidad Metropolitana

Community Productivity with Sand Exposure in Urban and Forested Streams and the Effects of Fine Sediments in Grazers and Scrapers

Levine, Bridget - Saint Michael's College

The Effects of Shoreline Development on Macroinvertebrate Communities in Lake Champlain

Maurice, Ashley, Kassandra Morse and David Schilling - Cabot School

Tropical Storm Irene: Effects on Stream Ecosystem

Menken, Jacob - University of Vermont

Effects of Extreme pHs on the Growth and Survival of Leptophlebiidae May-fly Nymphs

Mitchell, Chelsea - University of Vermont

Total phosphorus and *Escherichia coli* levels in small streams of the Centennial Brook Watershed

Murphy, Abigail – Johnson State College

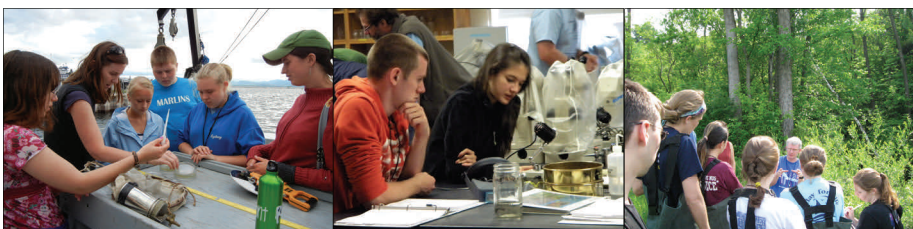
Sources of *E. coli* compared to habitat assessments of streams in the Lamoille Valley, Vermont

Ortiz, Greisha - Universidad Metropolitana

Comparing the Overall Width and Water Quality of the Riparian Habitat Between Sites

Perez, Gabriel - Universidad Metropolitana

Identifying Source of Fecal Pollution in 19 Stream Sites of the Lamoille River Basin with MST Method and Enlarge the Ribotyping Library to Identify *E. coli*



Agenda

2:00-3:00 Registration in Lobby

Welcome & Presentation Session – Champlain Ballroom

3:00 Welcome **Dr. Kelvin Chu, Associate Director, VT EPSCoR**

Introductions: **Miranda Lescaze, Director, VT EPSCoR Center for Workforce Development and Diversity**

3:10 **Dr. Declan McCabe, Saint Michael's College**

New Resources for Vermont EPSCoR's Partner Schools

3:25 **Beguin, Samouel - Middlebury College**

Land Use and Experimental Sedimentation: Mixed Impact on Macroinvertebrate Assemblages in Low-order Streams

3:35 **Orengo, Ismael - Universidad Metropolitana**

Effect of Channelization on Macroinvertebrate Species

3:45 **Davis, Erika, Noah Lowenthal and David Spero - Long Trail School**

A Comparison of Chemical and Biological Indicators of Water Quality Between Forested and Agricultural Sites Along the Mettawee River

3:55 **Roberge, Janel - Saint Michael's College**

The Effects of Land Use on Phosphorus and Benthic Macroinvertebrates in the Lake Champlain Basin

4:05 **Martinez, Michael , Shona Paladugu and Kathy Rossman - Rock Point School**

A Look at the Relationships Between *E. coli*, Total Phosphorous and the Macroinvertebrate Populations in Englesby Brook and Snipe Ireland Brook

4:15 **Strella, Steve - University of Vermont**

Relationships Between Streamflow and Water Quality in Vermont Streams

4:25 **Hamlin, Lily, Taylor Small and Kara Lenorovitz - Colchester High School**

Isn't It *Irene-ic*: A Comparison of Stream Characteristics Before and After Tropical Storm Irene

Presentation Session Continued—*Champlain Ballroom*

4:35 Rodriguez, Elaine, Isardo Braverman, and Yiria Muniz - Jose E. Aponte de la Torre High School
Two-years Comparative Study of Water Quality Levels of Two Streams in San Juan, Puerto Rico

4:45 Birk, Helen - University of Vermont
Annual Variation of the Sources of *Escherichia coli* in the Lamoille River Basin, Vermont

4:55 Program Surveys

5:00 Break

5:15-6:15 Poster Session — *Champlain Ballroom*

See poster titles on pages 3-6

6:15-7:15 Dinner — *Champlain Ballroom*

Posters

Addonizio, Erica, Kayla Iuliano, Yanni Kaliakin, and Seth Olson - University of Delaware
Shad Restoration on the White Clay Creek Wild and Scenic River

Boardman, Evelyn - University of Vermont
Evaluating the Hilsenhoff Biotic Index as a Biological Monitoring Indicator in Stream Ecosystems

Borsari, Jacob, Sydney Whipple, and Ellen Swenson - United Christian Academy
The Relationship Between Land Use and Phosphorus Loading: A Sampling of Forested and Agricultural Land Use

Brooks, Ben, Zoe D'Olimpio, Haillie Mesics, Nick Ruede, Heather LaPointe and David Williams - Lyndon Institute
Comparison of Stream Water Characteristics within Agricultural and Forested Watersheds

Burnham, Anne - Saint Michael's College
Trophic Cascades in Artificial Ponds

Burridge, Sarah, Rachel Emerson and Carl Hildebrandt - Oxbow Union High School
What Bugs Bugs?

Chambers, Kelly, Conner Meehan and Don McDowell - Stowe High School
The Use of Ephemeroptera, Plecoptera and Chironomidae as Indicators of Total Phosphorus Water Quality in the Winooski and Lamoille River Basins

Cifferi, Alix, Julia Rigothi and Bryan Woods - Poughkeepsie High School
What Types of Correlations are There Between Precipitation, *E. coli*, Phosphorus, and Total Suspended Solids in the 2011 Sampling Period

Costa, Amanda - Saint Michael's College
A Water Quality Analysis of *E. coli*, Suspended Solids, and Total Phosphorus Levels of Streams Draining to Shelburne Bay

Elman, Dan, Jaclyn Ryan and Rick Marshall - Massena High School
Testing for Tetracycline Resistance Genes in Macroinvertebrate and Sediment Samples

Elmstrom, Elizabeth - University of Vermont
Beaver Ponds as Potential Sources of Greenhouse Gas Emissions

Hauke, Alayna, Basha Zvarova and Sharon Boardman - Rice Memorial High School
Weather and Water Quality - A Correlation of Precipitation and Water Quality Metrics

