



Welcome to the 11th Annual Vermont EPSCoR Student Research Symposium



Thank you for a successful year of BREE
Your passion and dedication make this event
possible!

April 2nd, 2019

3:00 - 8:00 pm

Dion Student Center, Saint Michael's College
Colchester, Vermont





11th Annual VT EPSCoR Student Research Symposium

Agenda

2:30 **Registration**

3:00 **Welcome and Introduction to BREE**

Dr. Arne Bomblies, State Director, VT EPSCoR

Dr. Veronica Sosa Gonzalez, Coordinator, VT EPSCoR
Center for Workforce Development and Diversity

3:30 **Vermont PBS “Saving Our Waters”**

4:00 **Oral Presentations** - See titles on page 2

5:15 **Poster Session** - See titles on pages 3-5

7:00 **Dinner**



Thank you for a great year of research!



2018 BREE Undergraduate Interns



2018 BREE High School Teams



Poster Presentations

5:15-6:45pm

1. Langston Quail, Hope Soucy, Scott Worland, Long Trail School – **The Influence of Current Velocity and Substrate Positionality on Macroinvertebrate Communities in a Riffle Stream Habitat**
2. Samantha Christopher, University of Vermont – **Municipal Behavior Towards Water Quality in Relation to Presence of Impaired Waters**
3. Nicole Dávila Torres, Universidad Ana G. Méndez – **Evaluating the Visual Classification of Suspended Sediment – Discharge Hysteresis via Crowd-sourcing and In-stream Monitoring**
4. Elizabeth Lugo-Berríos, Griselle Pérez-Díaz, Diana González-Green, Pablo Colón Berdecia High School – **Water Quality Analysis of Quebrada Helechal and Piñonas River in Barranquitas, Puerto Rico Using Physicochemical Parameters and Aquatic Macroinvertebrates**
5. Sarah Eustis, Saint Michael's College – **A Comparison of Habitat Assessments and Total Suspended Solids Between Agricultural, Urban, and Forested Streams**
6. Heally Gonzalez Lopez, Lesly Portillo, Kristen Cacciatore, East Boston High School – **Comparing Horn Pond and Mystic River Nitrogen and Phosphorus Levels**
7. Alexandra Cole, Northern Arizona University – **The Determining Factors Behind Clean Water Grants by Vermont State Agencies**
8. Noelle Lyon, Adrienne Noyes, Bryan Hirschman, Essex High School – **Changes in pH Levels Over Time**

9. Mikayla Haeefe, Middlebury College – **Forest Land Use Activities and Fragmentation as a Threat to Northeastern Forest Cover and Water Quality**
10. Stephanie Herbert, Hunter College – **An Analysis of Land Composition and Stormwater Runoff in Stevens Brook, St. Albans City**
11. Melanie Ard, Sabrina Marte, Coral Tapia, Shannon Morey, Abbott Lawrence Academy – **Comparison of Urban Streams in Massachusetts and Vermont**
12. Pamela García Irizarry, University of Puerto Rico, Mayagüez Campus – **Effects of Precipitation Events on Soil Properties in an Agricultural Site**
13. Olivia Rooney, Lisa Uwiduhaye, Sharon Boardman, Rice Memorial High School – **A Comparison of Stream Discharge Data in Four Chittenden County Streams**
14. Elias Davis, Bridget Hamel, Tom Lane, Bellows Free Academy Fairfax – **A Relationship Between Macro-benthic Invertebrate Communities and Total Suspended Solids in 2nd Level Tributaries to Lake Champlain**
15. Lishka Pagan Delgado, Universidad Ana G. Mendez Recinto de Gurabo – **Comparing Total Suspended Solids During Baseline and Storm Events in an Urban Watershed**
16. Yaniris Figueroa, Ariana Landrau, Yiria E. Muñiz-Costas, Academia María Reina – **Changes in the Water Quality and Macroinvertebrate Population Before and After Hurricane María**
17. Colin Myrick, Saint Michael's College – **Effects of Action Replay Buffer Size on BMP Adoption Following Extreme Rainfall Events**



18. Cooper Pinaud, Nicole Wright, Katy Abbott, Mount Mansfield Union High School – **The Impact of Land Use on Phosphorus and Nitrogen Levels**
19. Frances De Jesus Iglesias, Universidad Ana G. Méndez – **The Efficacy of Green Stormwater Infrastructure on the Removal of Total Suspended Solids in Stevens Brook, St. Albans Bay Basin, VT**
20. Jean Espinal, Carlos Reyes, Simonai Santiago, Kaitlin Dinot, Abbott Lawrence Academy – **Quality of Stream Health Assessments**
21. Nichole Ortiz Jiménez, University of Puerto Rico, Río Piedras Campus – **A Comparison of Soil Moisture between ERA5 and an In-situ Soil Moisture Sensor in Vermont**
22. Ashley Rodriguez Torres, Marivelisse Velazquez Pena, Glenda Almodovar Morales, Specialty School Of Fine Arts Ernesto Ramos Antonini – **A Comparison of Macroinvertebrates in Yauco River, Puerto Rico (2016 vs 2018)**
23. Stephanie Martinez, Smarlyn Rodriguez, Oluwanifemi Mabayoje, East Boston High School – **How do Water Quality Parameters Differ between the Urban Areas of Massachusetts and Vermont?**
24. Peter Hyams, Alyssa Provost, Michelle Pinaud, Champlain Valley Union High School – **How Changes in Land Use Affect Total Suspended Solids and Flow**
25. Kelsey Coates, Duquesne University – **Groundwater Nutrient Export in a Forested Riparian Area**
26. Mariana Delpín Sosa, Universidad Ana G. Méndez, Fredrick Sherenco, Norwich University – **Understanding the Timing and Intensity of Cyanobacteria Blooms in St. Albans Bay and Missisquoi Bay**



Oral Presentations

4:00-5:00pm

- 4:00 Jessica Gagne, Teddi Simons, Nicole Gorman, Champlain Valley Union High School
The Effect of Substrate on Biodiversity of Macroinvertebrates
- 4:10 Christopher Cuevas, University of Florida
Comparative Analysis of Regional Scale Water Quality and Hazard Mitigation Governance in Vermont
- 4:20 Grace Brouillette, Nathan Wu, Erin Bessy, Essex High School
Are Certain Types of Soil Better at Reducing the Leaching of Road Salt into Waterways?
- 4:30 Amanda Jackson Mojica, University of Puerto Rico
Effects of Winter Events on Nutrient Mobilization and Loading Across Different Land Uses
- 4:40 Dariany Ayala Santiago, Kiana Vega Pelegrin, Elliot López Machado, Juan Ponce De León High School
Those Who Beat the Hurricane: Recovery of Benthic Macroarthropods After an Extreme Event
- 4:50 Eric Romero, University of Vermont
Evaluating the Visual Classification of Suspended Sediment – Discharge Hysteresis via Crowd-sourcing and In-stream Monitoring

