

# VERMONT EPSCoR Center for Workforce Development and Diversity

Mike Winslow

Coordinator

VT EPSCoR All Hands Meeting June 6, 2017

St. Michael's College

# What is the CWDD?

**The VT EPSCoR Center for Workforce Development and Diversity** works to cultivate and prepare students in science, technology, engineering and math (STEM) fields. Through integrating students and teachers into active research we inspire students to pursue STEM careers.

# Who is the CWDD?



# CWDD Goals

## Thrust 5 – Workforce Development

- Goal 5.1 - Increase the size of the Vermont STEM workforce by integrating undergraduate students, high school students and teachers into research and inspiring them to enter STEM fields.

## Thrust 7 – Diversity

- Goal 7.1 - Increase the Diversity of the STEM Workforce participants among faculty, undergraduates and high school teams to bring the benefits of inclusion and talent without regard to geography to the national research enterprise; by providing research opportunities broadly to students and postdocs and by increasing the number of girls in STEM

# CWDD Programs

- Undergraduate
- Scholarships
- High School
- Symposium
- Middle School





# Undergraduates

- 10 week summer program
- Integrate students into BREE research
- Provide training, experience, a networking opportunity and relevant jobs skills for future scientists
- Provide a student/staff oversight role for post docs and graduate students.
- Provide weekly professional development workshops



# Undergraduate

- 30 interns chosen from 191 applicants
- 7 students from UVM, 7 from other Vermont schools, 7 from Puerto Rico, and 9 from schools in other states
- Placed at six institutions around Vermont





# Undergraduate

## Ecology Team (17 interns)

- Watershed and Lake Biogeochemistry
- Watershed and Soil Biogeochemistry and Linkages to Water Quality
- Lake Hydrodynamic and Bottom Bathymetric Analysis
- Water Quality Lab
- Photochemistry of Dissolved Organic Carbon





# Undergraduate

## Integrated Assessment Team (8 interns)

- Integrated Assessment Modeling
- Climate Modelling and Analysis
- Microclimate Evaluation
- Stormwater Modeling GIS Support



# Undergraduate

## Social Sciences Team (5 interns)

- Policy and Administration for Land Use Development and Planning
- Institutional Network Analysis
- General Equilibrium Model





# Scholarships

- \$5,000 scholarships to **Native American** (including Abenaki) and **First Generation** college students who enter STEM majors at a Vermont college or university.
- 33 applicants
- 11 awards (9 first generation and 2 Native American)
- Award ceremony early August at the Statehouse





# Scholarships

- 7 females and 4 males
- 4 Chittenden, 3 Franklin, 1 each from Caledonia, Rutland, Windham, and Windsor
- 4 refugee students – 2 Nepal and 2 Somalia



# High School

- Participants develop skills in scientific methods and experience being a scientist
- Training Week June 19-23
- 21 HS teams from 17 schools
- Schools: 8 Vermont, 7 Puerto Rico, 1 Boston, 1 South Carolina





# High School – Water Quality Lab


- 16 Macroinvertebrate community assessments
- Water Quality Samples Run



	TSS	TP/TN
HS Teams	402	553
ISCO/other	103	180





# High School



Vermont EPSCoR  
**CWDD**  
Center for Workforce Development & Diversity  
AT SAINT MICHAEL'S COLLEGE

### Reports

Stream/Site Code *	Available Reports	Date Range
<ul style="list-style-type: none"><li>Brewster River Imp</li><li>BRX_FxMdBrk_155</li><li>BRX_Trbrk_99</li><li>Cold Brook</li><li>CTD_BldBrk_498</li><li>CTD_DthnBrk_498</li><li>CTJW_HllsBrk_713</li><li>CTJW_SBrnchWR_797</li><li>CTWW_CprsBrk_1187</li><li>CTWW_EOBrnch_1567</li><li>CTWW_OmpRvTribA_973</li><li>CTWW_OmpRvTribB_970</li><li>CTWW_OmpRvTribB_975</li><li>CTWW_WtsRv_1730</li><li>CTWW_WtsRv_804</li></ul>	<ul style="list-style-type: none"><li><input type="radio"/> Site Assessments</li><li><input type="radio"/> Habitat Assessments</li><li><input type="radio"/> Macroinvertebrate</li><li><input type="radio"/> Macroinvertebrate ID</li><li><input type="radio"/> Macroinvertebrate ID 2</li><li><input type="radio"/> Water Quality</li><li><input type="radio"/> E. coli</li><li><input type="radio"/> Total Suspended Solids</li><li><input type="radio"/> Phosphorus &amp; Nitrogen</li><li><input type="radio"/> Lab Data (Ecoli, Phosphorus &amp; Nitrogen, TSS)</li><li><input type="radio"/> GIS Assessment Data</li><li><input type="radio"/> Site Information Data</li><li><input type="radio"/> Thalweg</li></ul>	<p><b>Start Date:</b> Jun ▼ 1 ▼ 2008 </p> <p><b>End Date:</b> May ▼ 16 ▼ 2017 </p> <p><b>Report Help</b></p> <ul style="list-style-type: none"><li>• <a href="#">Data Variable Definitions</a></li><li>• <a href="#">Bedrock Subcategories</a></li></ul> <p><i>For additional reports, please send us a request via our <b>"Contact US"</b> Page.</i></p>

\* Multiple selections allowed

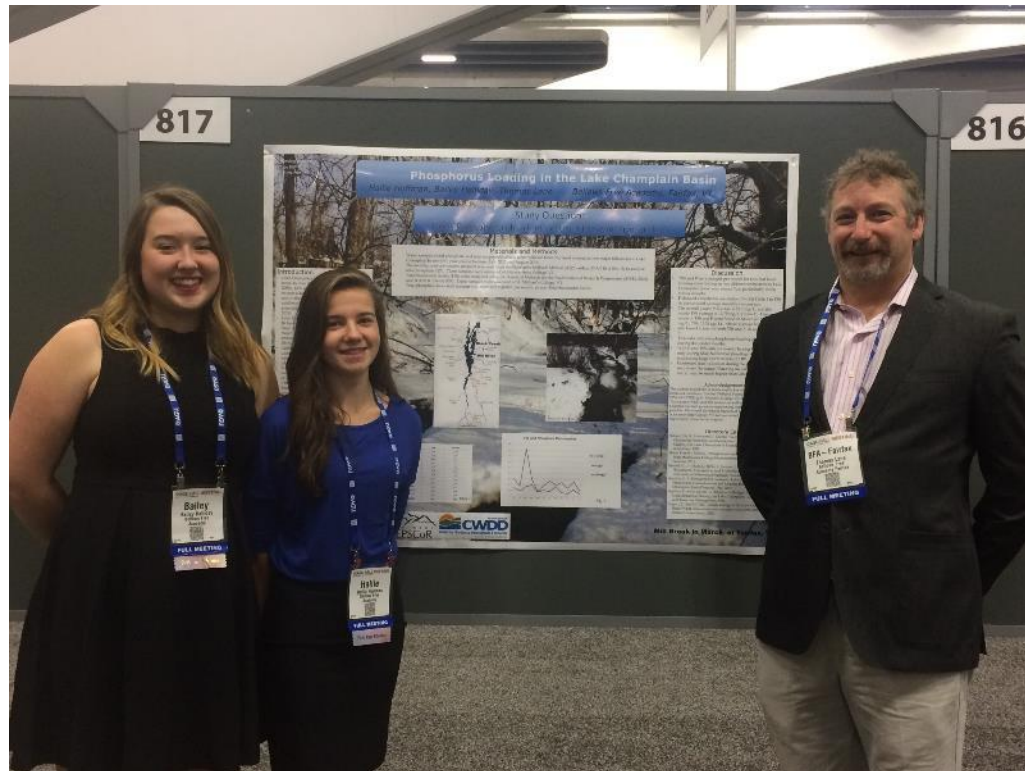
# Macroinvertebrate Workshop – December 2016





# High School

- American Geophysical Union Fall Meeting in San Francisco





# High School



## Radio Yaucana TV

Saturday at 8:18 AM • 🌐



# Symposium

- Offers student researchers an opportunity to practice science communication skills in a professional environment.
- Provides a capstone to the year-long high school research projects and summer undergraduate internships



# Middle School – Rosie's Girls

f t v i e q

**DONATE**

WHY WOMEN AND GIRLS? **OUR PROGRAMS** VERMONT WORKS FOR WOMEN ABOUT US SUPPORT US CONTACT

**ROSIE'S GIRLS**

**REGISTER NOW**

**STEM & TRADES EXPLORATION FOR MIDDLE SCHOOL GIRLS!**

Rosie's Girls® is a one-week summer day camp that helps girls develop grit, connection and expanded possibilities as they explore hands-on STEM- and trades-related activities. Girls entering 6, 7 and 8th grades practice the skills of carpenters and engineers as they invent, design and build cooperative projects. It's a safe, supportive, girl-centered environment and emphasizes friendship, teamwork and healthy body image – with tons of fun woven in! A place where girls can get their hands dirty, take positive risks and try something new.

Since 2000, the Rosie's Girls® model has been licensed to sites in Vermont and more than 20 locations nationwide. [Learn more >](#)

[ROSIE'S GIRLS](#)  
[CAMP INFO](#)  
[NATIONAL SITES](#)  
[2017 REGISTRATION](#)

[VIEW ALL PROGRAMS](#)

- Four one-week summer sessions
- 67 Middle School girls and 5 junior instructors
- 42 participants received full or partial scholarships



# Middle School – Class Visits





# Middle School –Visits

- Field days with 240 students from three middle schools
- Reviewed poster presentations at Hunt MS
- Life of a Scientist at Flynn Elementary School
- Flynn Elementary Maker Fair
- Women Can Do Expo

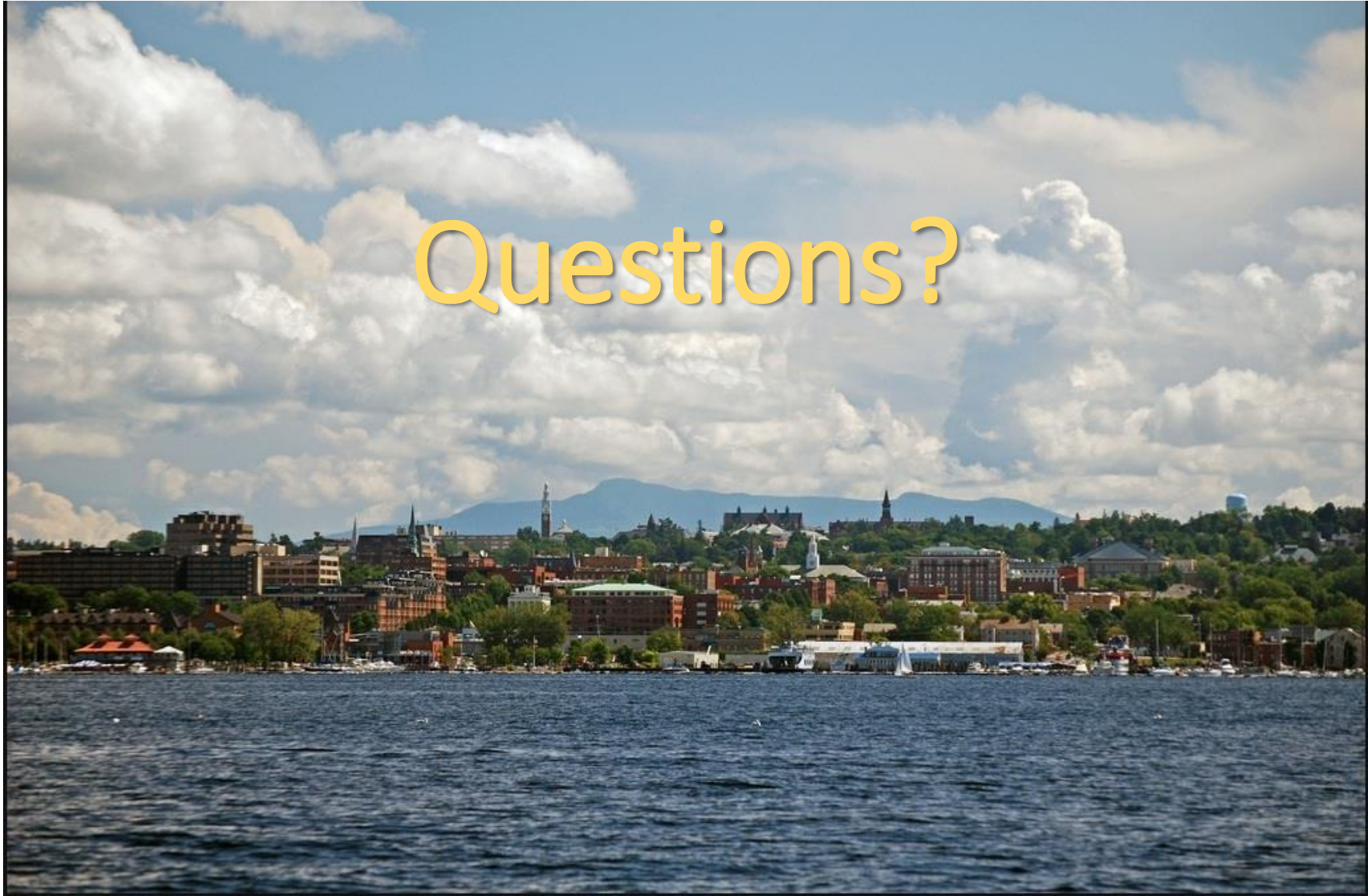


# CWDD Programs

- Undergraduate
- Scholarships
- High School
- Symposium
- Middle School







# Questions?

# Why Diversity? DELETE



Levine, S.S. et al. (2014). Ethnic diversity deflates price bubbles. PNAS 111(52) pp. 18524-18529