



Experimental Program to Stimulate Competitive Research

Annual Meeting August 5, 2014



Research on Adaptation to Climate Change in the Lake Champlain Basin: New Insights through Complex Systems Modeling



RACC

Research on Adaptation to Climate Change



CWDD

Center for Workforce Development & Diversity

AT SAINT MICHAEL'S COLLEGE

Vermont EPSCoR



Vermont EPSCoR



CONNECTING VERMONT'S EDUCATIONAL INSTITUTIONS TO THE WORLD



V e r m o n t

EPSCoR

Experimental Program to Stimulate Competitive Research

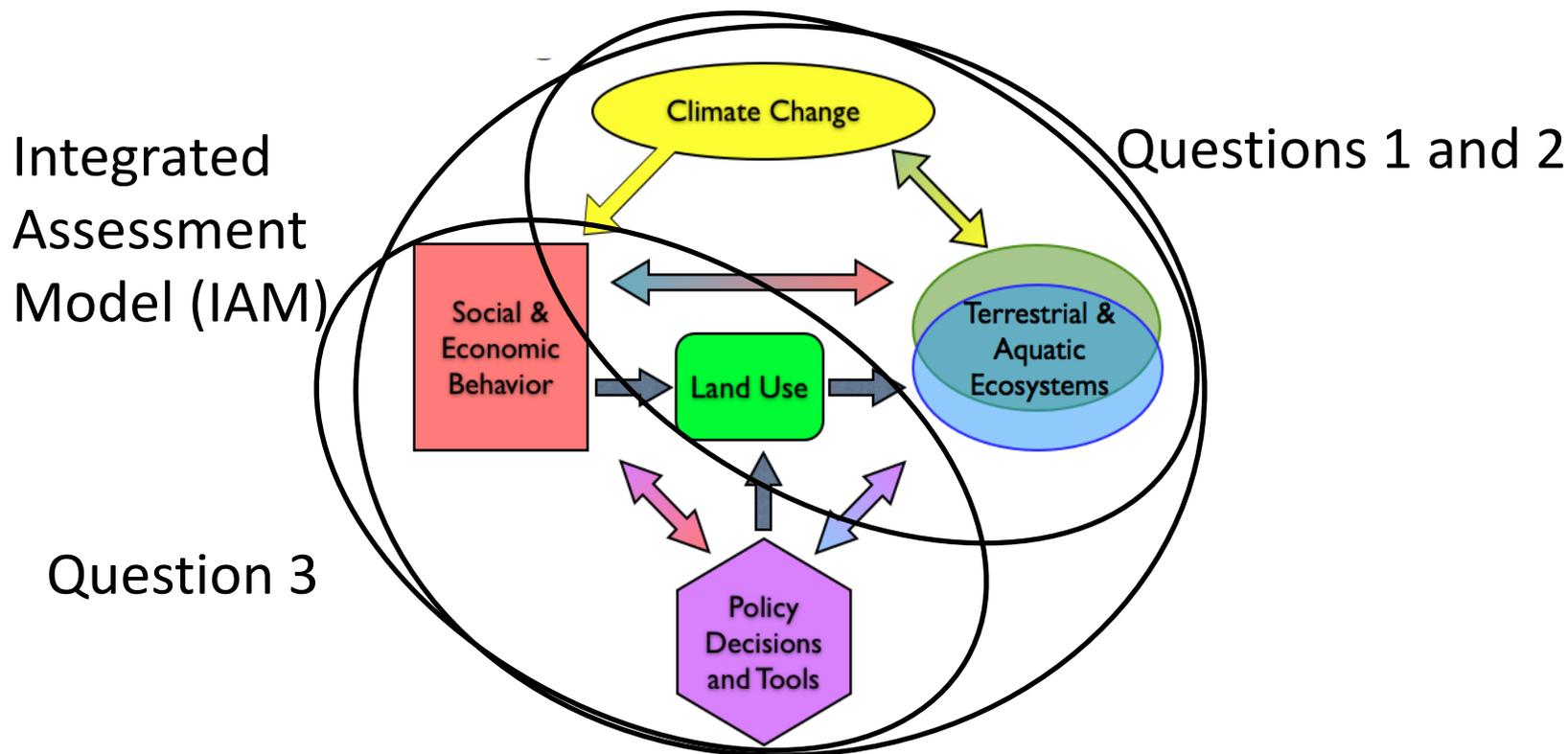
Research on Adaptation to
Climate Change
(RACC)

The Lake Champlain Basin



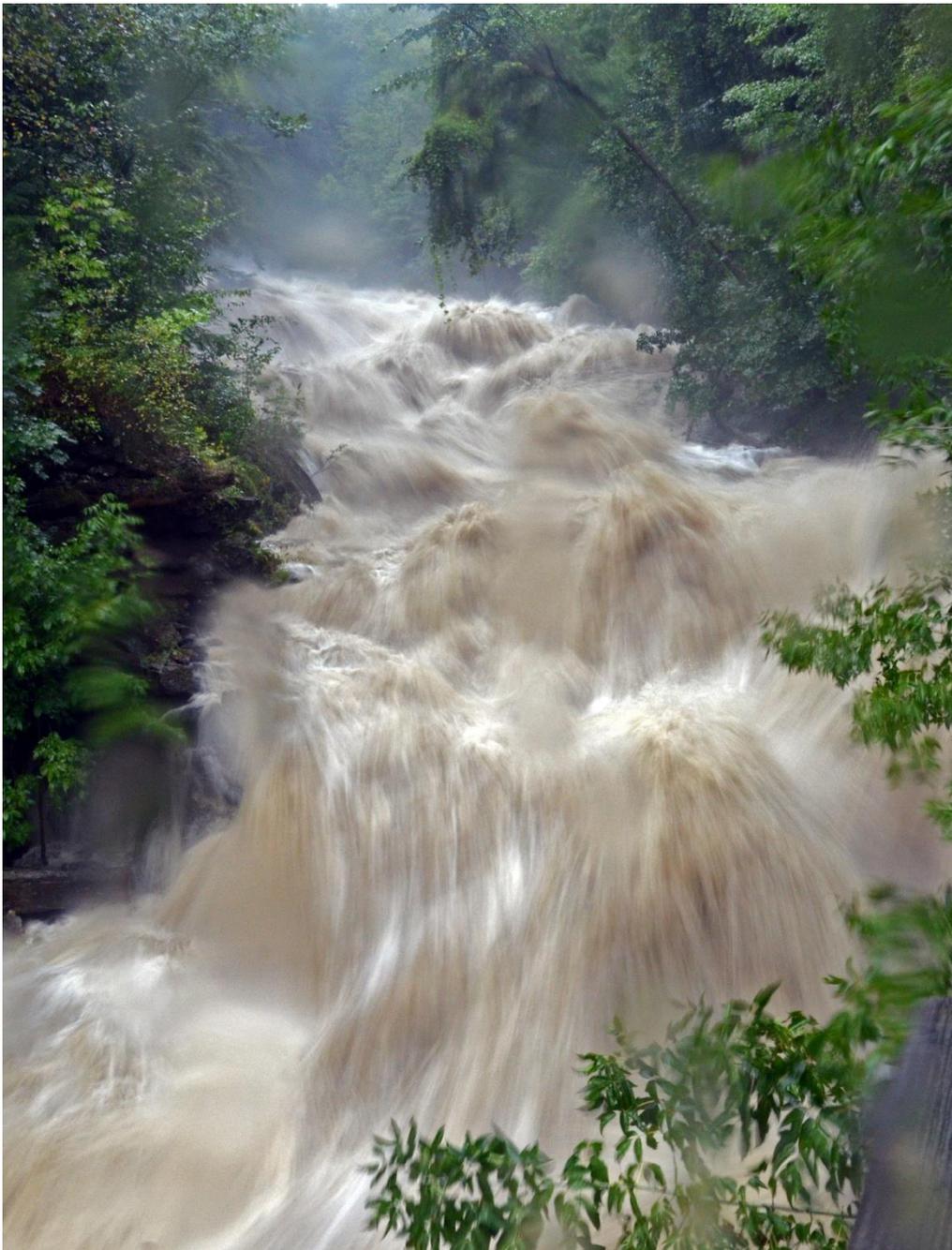
The Overarching RACC Question

How will the interactions of climate change and land use alter hydrological processes and nutrient transport from the landscape, internal processing and eutrophic state within the lake, and what are the implications for adaptive management strategies?



Big Data in RACC

- “Big Data” are not simply defined by volume, but also by complexity
- The Four V’s of Big Data
 - **Volume** - How many bytes of data?
 - **Variety** – How many different types of data?
 - **Velocity** – How quickly / how often are new data created?
 - **Veracity** – How trusted are the data in decision making?
- The various components of the RACC project each deal with one or more of these V’s of Big Data



Tropical Storm Irene,
Aug. 27, 2011
(Gordon Miller)

***Partners and
Stakeholders:***

Agency of Natural Resources
Governor's Climate Cabinet
Lake Champlain Basin
Program
Nature Conservancy of New
York and Vermont
Lamoille River Project
Lake Champlain International



Experimental Program to Stimulate Competitive Research

Workforce Development and Diversity Plans

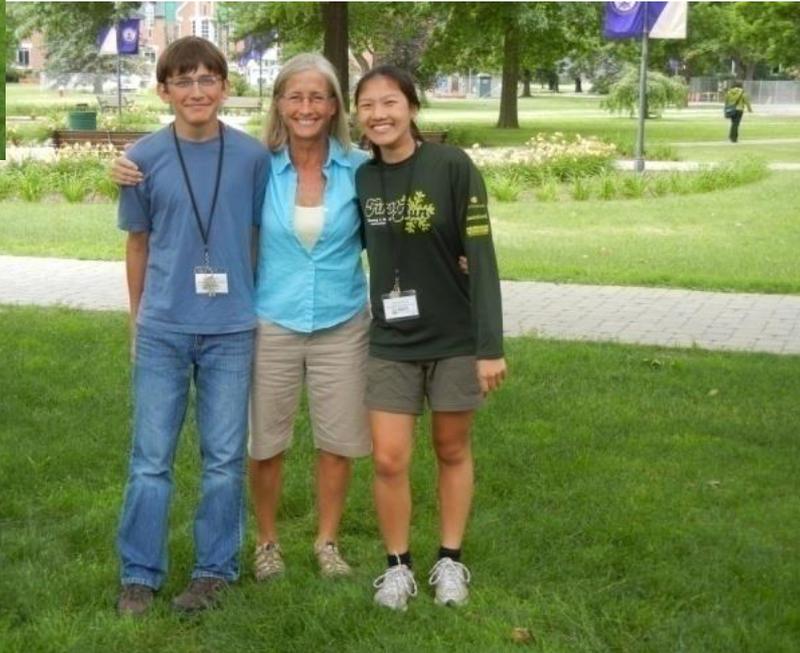


Undergraduate Interns Participate in All Aspects of RACC Research



Undergraduate and graduate students have been directly involved in installation, maintenance, sampling, analysis, data management, surveys of stakeholders, and more!

High School Teams Integrate into RACC



Above University Gardens HS & Jose E. Aponte de la Torre HS, PR; Right Rice HS VT

Scholarships for First Generation and Native American Vermont STEM Undergraduates



Alexander Ferno, Katie Bedard, Judith Van Houten, Tazey Ryea, Miranda Lescaze



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EPSCoR

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**Pilot and Private Sector
Highlighted in our Poster Session
and Private Sector Panel**

Campus Connectivity



CONNECT

- Founded the VT Unified Community Anchor Network (UCAN), providing Internet2 access to over 100 locations statewide
- Provided 1Gbs Interent2 connectivity to St. Michael's College and Norwich University, and 10Gbs to the Vermont State College System

INTEGRATE

- Invested in significant cloud-ready cyberinfrastructure at UVM which will provide EPSCoR researchers with advanced computing resources
- Reached out to educators statewide to introduce them to the national Internet2 community and available resources

EMPOWER

- Fostered a large community, drawing from private sector, education, government and non profit organizations, which continues to work together to utilize and grow VT's cyberinfrastructure



V e r m o n t

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Vermont Internet2 SEGP



CONNECT. 

INTEGRATE. 

EMPOWER. 

