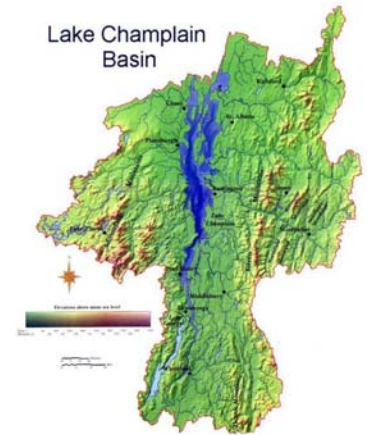


# EPSCoR Funding in Vermont



## NSF VT EPSCoR Science and Engineering

- VT EPSCoR funded research is studying the use of **complex systems for environmental problem solving** in the Lake Champlain Basin.
- VT EPSCoR researchers are developing **new tools** to help study the disparate data sets on Lake Champlain to help make predictions.
- VT EPSCoR funded research has created **new knowledge** related to toxin-producing cyanobacteria in Lake Champlain as a function of nutrient levels, lake temperature and various other data that have been collected.
- The **NorthEast Cyberinfrastructure Consortium (NECC)**, a five state consortium with VT EPSCoR as the lead, has laid the first ever high bandwidth intra and inter-state fiber network to allow for cyber-enabled research – lighting the “black-hole” of the north east.



## NSF VT Workforce Development

- Since 2003, VT EPSCoR has provided funding to 39 **M.S.** graduate students, 26 **Ph.D.** students and 4 **Post doctoral students**. Seven of these Graduate Students have been located in the **Vermont Center for Emerging Technologies (VCET)** as MBA students working with start-up companies. EPSCoR is increasing the number of highly trained M.S. and Ph.D. graduates in Math, Science, and Engineering.
- The newly created VT EPSCoR Center for **Workforce Development and Diversity (CWDD)** is partnering with the Vermont Technology Council to help match Undergraduate interns with local businesses in Vermont. In its Pilot Year (2010) 7 students were matched with local technology companies in Vermont.



## NASA EPSCoR

- NASA researchers are developing **micropropulsion and control technologies** for the on-orbit positioning of nano satellites. Potential applications for this small satellite format include protecting larger satellites from collisions with space debris. The graphic on the right is provided by Dr. Darren Hitt, UVM Dept. Mechanical Engineering, and illustrates a miniaturized propulsion unit
- NASA EPSCoR researchers have developed a **30kW Inductively Coupled Plasma (ICP) facility** at the University of Vermont and are using this new facility to study aerothermodynamic gas/surface interactions on materials used for the heat shields of spacecraft under atmospheric re-entry conditions.

