

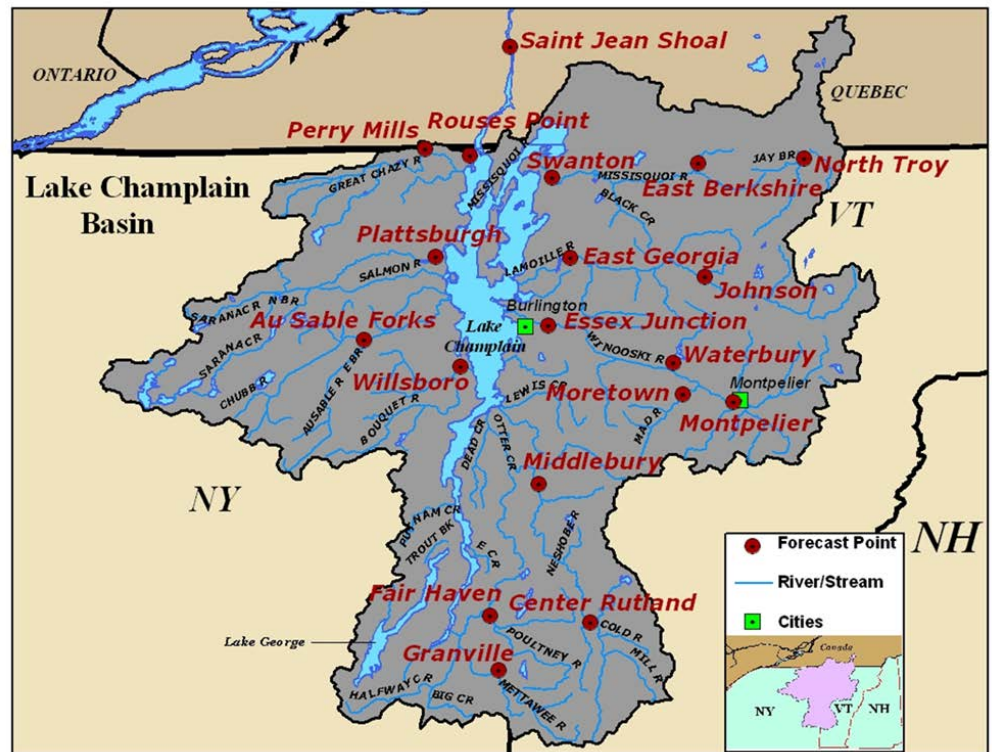
# International Joint Commission's Lake Champlain-Richelieu River Study

## NOAA Contributors:

- Great Lakes Environmental Research Laboratory
- Office of Coast Survey
- Center for Operational Oceanographic Products and Services
- NWS Eastern Region
- NWS National Centers for Environmental Prediction

# Lake Champlain-Richelieu River Study

- April, 2011: record spring precipitation and snowmelt
- Overflow of the Richelieu River in Canada and Lake Champlain in the United States.
- Waters exceeded flood stage on April 13, 2011 and remained there until June 19, 2011, a total of 67 days.
- 4,000 homes damaged, tens of millions of dollars in damage





- International Lake Champlain-Richelieu River Plan of Study Workgroup - March 2012 to July 2013
- US and Canada issued a Reference in September 2016 to the IJC to more fully explore the causes, impacts, risks, and solutions to flooding in the Lake Champlain-Richelieu River basin.
- NOAA is developing a plan for a real-time flood forecasting and flood inundation mapping capability within the context of NOAA's operational hydrodynamic modeling systems which exist for the Great Lakes. The final deliverable to the IJC is a flood modeling and mapping system.
- The NOAA plan involves a commitment conditioned upon 1) inclusion in the Study work plan, 2) IJC funding, and 3) IJC acceptance of an experimental product.
- A detailed work plan for Years 1 and 2 is under development.



# Study Board Membership

- US:
  - US Geological Survey
  - NOAA
  - Vermont Department of Environmental Conservation
  - University of Vermont
  - Clinton County, NY
- Canada:
  - National Hydrological Service
  - Centre for Meteorological and Environmental Prediction
  - Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques, Quebec



# NOAA Participants

- NOAA Great Lakes Environmental Research Laboratory (GLERL): Serves as FMC, Project Manager, Study Board Member, developer of the Lake Champlain circulation and ice models, and host of the pre-demonstration flood forecasting system.
- NWS/National Centers for Environmental Prediction – Provides wave forecasting technical expertise.
- NWS/NERFC and Burlington WFO – Serves as regional technical proponents and provides hydrologic, hydraulic and community engagement expertise. Will be final customer of new flood guidance system.
- NOAA Coast Survey – Provides transition expertise for lake modeling.
- CO-OPS: Future potential operator of lake and ice models.