

Geol 151 Geomorphology  
Dr. Paul Bierman  
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Kathy Donna  
Sarah King

## **Project Proposal**

### *Hydrologic Study of Thundering Brook Drainage Basin in Mendon, VT*

#### **Introduction:**

The drainage basin of Thundering Brook and the Ottauquechee River is the area for a proposed relocation of the Appalachian Trail. Land and easement rights have been purchased in order to relocate the trail through a marsh with a boardwalk. The hydrologic study will determine the maximum stage for the 100 year flood, which will be used in the design of the boardwalk. In determining the maximum stage, we propose to use field work and historical data.

The hydrologic study will consist of:

- Installing two stream gages along Thundering Brook in a marsh along River Road.  
The gages will be 2" PVC perforated pipe with 1" PVC pipe as dip sticks, using graded cork as indicators of water level. The gages will be monitored during and after large storm events.
- Historical flow data will be obtained from USGS for the area.
- The drainage basin will be sized using the Pico Peak USGS topographical map.
- A rating curve will be developed using the stream gage data and the historical flow data, to determine the stage of the 100 year flood.