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## Northeastern Section - 48th Annual Meeting (18–20 March 2013)

Paper No. 13

Presentation Time: 11:40 AM

### THE *LANDSCAPE CHANGE PROGRAM*—A DIGITAL ARCHIVE OF HISTORIC VERMONT PHOTOGRAPHS

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The *Landscape Change Program* is a web-based archive of Vermont imagery that contains over 60,000 images of the state's landscape. Over the past 13 years, the National Science Foundation and the National Endowment for the Humanities have supported dozens of students as they collected, described, and uploaded images for public viewing.

The *Landscape Change Program* archive contains images collected from or contributed by a variety of sources, all available free-of-charge, on-line at <http://uvm.edu/landscape>. Many of these images show both geologically- and landscape management-relevant subjects including floods, landslides, deforestation, reforestation, development, road building, and erosion. There are numerous lesson plans available for download on the website; they lessons focus on the use of historic images as teaching and learning tools.

Rephotography of archive images shows dramatic changes. For example, rephotography of more than 60 oblique aerial photographs taken along river corridors just days after the flood of record for most of Vermont (1927), documents dramatic revegetation as well as floodplain and near-river development patterns over the past 75 years – many of these sites were similarly impacted by flooding related to Hurricane Irene. Numerous images of gully erosion and shallow landsliding support the conclusion that clearcutting of New England slopes led to widespread increases in sediment yield.

Paired images of road building, dating from as early as 1908, show clearly the disturbance and hydrologic changes occasioned by roads. Early pairs (1908-1915) show improvements that smoothed and strengthened earthen roads during the transition from animal- to motor-powered transport. Later pairs (c. 1930) show the first road paving, straightening, and water diversion. The most recent pairs, from construction of the interstate highways (1958-1978), show landscape disturbance on an unprecedented scale (see abstract by Vang et al.).

The *Landscape Change Program* provides a public, visual means for people to explore the complex inter-relationships between geology, geomorphology, human activity, and landscape change over time. The archive serves as a model for investigators in other states to compile similar databases.

Session No. 31

[S2. History of Geology in the Northeast: A Symposium to Mark the 125th Anniversary of The Geological Society of America](#)  
Tuesday, 19 March 2013: 8:00 AM-12:00 PM

Monroe Room (Omni Mount Washington Resort)

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