

## Regionalized Channel Geomorphologic Characteristics for New York Streams are being developed by the U.S. Geological Survey and other interested agencies

### Problem:

Geomorphologic techniques for stream channel and bank restoration are fast becoming the technique of choice among Federal, State, County, and local agencies to reduce suspended sediment loads, reduce flood-related damages, improve aquatic habitat, and generally stabilize stream channels. One reason for this upswing in use is that appropriate use of these methods have been shown to reduce the need for repetitive visits to a reach to remove sediments or repair stream banks, thus, reducing long-term channel maintenance expenses.



Geomorphologic restoration projects require data that define what a stable stream channel should look like in a given region. A critical set of information in designing these geomorphologic restoration projects are data defining, regionally, what a stable stream channel should look like. Regional hydrologic curves and regional channel-geomorphologic characteristics are used to develop this information. These regional data have not been compiled or analyzed for New York.

### Objective:

Develop regional hydrologic curves and regional channel-geomorphologic characteristics at bankfull discharge for streams of New York State by physiographic region and by Rosgen stream type to help define stable reach characteristics for stream-channel restoration projects.

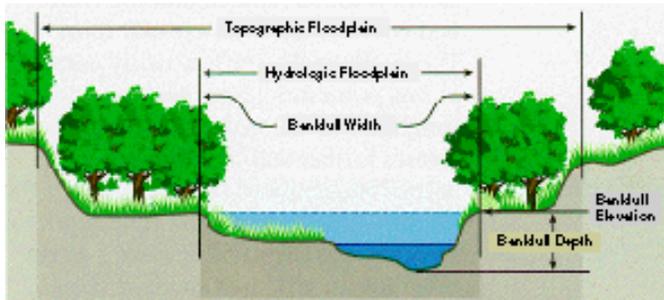


### Who Is Involved:

The project will be a collaboration between the United States Geological Survey (USGS), New York State Department of Environmental Conservation (NYSDEC), New York City Department of Environmental Protection (NYCDEP), and other interested agencies. An advisory committee has been formed to review planned work and to determine strategies to best implement collaborative efforts. The advisory committee includes the USGS, NYSDEC, NYCDEP, United States Fish and Wildlife Service (USFWS), Natural Resources Conservation Service (NRCS), and Greene County Soil and Water Conservation District (SWCD). Regular progress reports will be made to the New York State Non-Point Source Coordinating Committee.

## Approach:

During the first year of the project, a work plan will be developed (and tested) which integrates USGS and Rosgen channel-characterization and survey methods. Candidate USGS gaging stations statewide and historical data for one region will be identified, and a sampling team will be trained. The sampling team will conduct preliminary reconnaissance surveys within the region, and begin to assess the data.



Training will focus on introductory and mid-level Rosgen classes, USGS step-backwater-profile survey methods, and side-by-side work on active stream-geomorphology characterization efforts in one region with the NYCDEP staff. During the second year of the project, stream-channel surveys, data analyses, and preparation of a draft report for the first region will be done.

During the next 7 to 8 years, this effort will compile historical USGS information, conduct reconnaissance assessments, stream-channel surveys, and develop and refine models for stream-channel geomorphology characteristics for one region each year. Geomorphologic assessments will be prioritized by region depending upon the interest of the NYSDEC and other potential collaborators.

## Products:

Summaries of channel geometry and hydrology data for analyzed stations, and regional channel-geomorphologic characteristics will be published as annual or semi-annual reports and will also be available on the USGS, New York District web site. The first regional report will require 12 to 16 months for review, revisions, layout, and printing. Additional reports for each region will follow on a similar schedule, about 1 each year.



## For More Information:

Contact: Barry Baldigo  
U.S. Geological Survey  
425 Jordan Road  
Troy, NY 12180

Email: [bbaldigo@usgs.gov](mailto:bbaldigo@usgs.gov)  
Phone: (518) 285-5605  
Fax: (518) 285-5601

## Current Support:

Initial support for year 1 (2001) of this study is being supplied by the NYSDEC and the USGS with in-kind support from the NYCDEP and other agencies.

## Web Page:

<http://ny.usgs.gov>