



NEW YORK STATE ENVIRONMENTAL EXCELLENCE AWARD CASE STUDY

Delaware County Soil and Water Conservation District - *Honored for producing critically needed, innovative and sustainable flood-response protocol and pre-flood training program*

SUMMARY

Delaware County Soil and Water Conservation District's (SWCD) Post-Flood Emergency Stream Intervention Program is a critically needed, innovative, and sustainable flood-response protocol and pre-flood training program. This “stream triage” sets standards and practices for the period immediately following a flood. Moreover, these same principles and methods can be applied to other municipal work in and around streams, such as bridge and culvert work.

BENEFITS

Municipalities using this new protocol learn how to work with a stream's natural tendencies, and post-flood responders obtain knowledge and guidance that serves as a basis for an environmentally and economically sound post-flood response. The Post-Flood Emergency Stream Intervention Protocol has gained broad acceptance by both municipalities and regulatory agencies. Using the protocol and training program, local stream responders can scientifically assess the need for intervention and use their knowledge to perform work that protects aquatic resources consistent with a stream's natural tendencies. Trained staff from Delaware County municipalities, the New York State Department of Environmental Conservation (NYSDEC), the NYS Office of Emergency Management, FEMA and the Army Corp of Engineers dovetailed together for the first time in recent flood-response history. Using this training and protocol, municipalities and contractors responded responsibly, NYSDEC and the Army Corps of Engineers issued permits efficiently, and FEMA provided reimbursement.



KEY METRICS

- 132 sites were mitigated with this protocol
- 127 Delaware County equipment operators received three days of mitigation training
- 836 NYS employees in different departments were given four hours of training in public and agency support

ABOUT DELAWARE COUNTY

- Population 48,000
- 1,468 square miles, of which 22 square miles are water
- Headwaters of the Delaware River start at the north and flow to the south of the county
- Very mountainous terrain, with the highest peak at 3,520 feet

NYS Environmental Excellence Award: Annual recognition of outstanding innovative and sustainable projects or programs and unique partnerships that are improving and protecting New York State's environmental resources and contributing to a stronger economy

HIGHLIGHTS

The Delaware County SWCD has evolved the protocol to its present form, realizing that this post-flood “triage” isn’t about manipulating a stream, but rather helping it return to the “laws and tendencies” that streams obey, facilitating the stream in healing itself.

Training was provided both in the classroom and in the field to municipal equipment operators and contractors. Delaware County SWCD evaluated, surveyed and constructed the site using the new protocol, while at the same time using the before, during and after construction phases of the project as training.

Municipalities now realize that the responsibilities of flood response can be completed while protecting aquatic resources and habitat. The “where not to work” component of the new program has also saved municipalities considerable financial resources, making the area sustainable for years to come.

The same principles and methods used after a flood could be applied to other municipal work in and around streams, such as bridge and culvert work. Town and village highway superintendents have taken ownership of this new protocol, resulting in new partnerships with the Delaware County SWCD, as well as improving relationships with NYSDEC. For example, over 43 NYSDEC Article 15 permits were issued on one day to municipalities in the wake of Hurricane Irene and Tropical Storm Lee.

FUNDING

The total cost for development of this program was \$363,400, with \$161,700 provided by a Round IX NYS Water Quality Improvement Program grant, an amount matched by the New York City Department of Environmental Protection. Funding was used to develop the protocol, develop and conduct the training, and pay for project implementation. Although the original funding was limited to the New York City watershed portion of Delaware County, the program was subsequently expanded to include all of Delaware County, using \$115,500 in county funds. Discussion pertaining to the economic benefits of the program can be found in previous sections of this submission.

A MODEL OF EXCELLENCE

- Developed an environmentally friendly flood response protocol used by municipalities and contractors
- Developed training for the protocol, which was administered to local municipalities and state agencies
- Funded and delivered heavy earth-moving equipment to municipalities for flood response
- Post-flood approach to help a stream return to the “laws and tendencies” that streams obey, facilitating the stream in healing itself
- Protocol was delivered to municipalities for bridge and culvert work, which smoothed the path for permitting
- Local government saved money by training protocol which protected aquatic resources and habitat. The “where not to work” component saved money and made the area sustainable
- Transferability to other agencies and endorsed by the Nature Conservancy, Trout Unlimited and Cornell Cooperative Extension
- Organizations have taken the program and use it to train legislators, municipal officials and the public