



# The Schoharie Creek Management Plan

April 2007

PREPARED BY THE  
GREENE COUNTY SOIL AND WATER CONSERVATION DISTRICT  
NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION

# Schoharie Creek Management Plan

April 2007

*Developed By*

## **Greene County Soil & Water Conservation District**

907 County Office Building, Cairo NY 12514

Phone (518) 622-3620 Fax (518) 622-0344

[www.gcswcd.com/stream/schoharie-eastkill](http://www.gcswcd.com/stream/schoharie-eastkill)



### *Project Team*

Amy DeGaetano, Schoharie Creek SMP Project Manager

Abbe Martin, Conservation Planner

Carrie Miles, AmeriCorps Member

Rene' VanSchaack, Executive Director

## **NYCDEP Stream Management Program**

71 Smith Ave, Kingston NY 124021

Phone (845) 340-7519 Fax (845) 340-7514



### *Project Team*

David Burns, Project Manager

Elizabeth Reichheld, Stream Program Manager

# Schoharie Creek Management Plan

## Table of Contents



- i. Table of Contents**
- ii. Preface and Acknowledgements**
- 1. Introduction**
  - 1.1 Purpose of the Schoharie Creek Management Plan
  - 1.2 Schoharie Creek and its Watershed
  - 1.3 How are we all connected to the Schoharie Creek and Why should I care?
  - 1.4 What are the primary concerns in the Schoharie Creek Watershed?
  - 1.5 Past, Current, and Future Activities
  - 1.6 Goals and Objectives for this Management Plan
- 2. Schoharie Creek Natural and Institutional Resources**
  - 2.1 Regional Setting
  - 2.2 Watershed History
  - 2.3 Physical Geography (including Climate Change)
  - 2.4 Hydrology and Flood History
  - 2.5 Geology
  - 2.6 Wetlands & Floodplains
  - 2.7 Riparian Vegetation
  - 2.8 Landuse/Landcover
  - 2.9 Fisheries & Wildlife (Wildlife Biodiversity)
  - 2.10 Recreational Opportunities
  - 2.11 Stakeholders
  - 2.12 Agency Contacts and Program Resources
  - 2.13 Stream-related Activities and Permit Requirements
- 3. Watershed Inventory & Assessment**
  - 3.1 Water Quality Assessment
  - 3.2 Introduction to Stream Processes
  - 3.3 Watershed Inventory & Assessment
- 4. Management Unit Summary & Recommendations**
  - 4.1 Management Unit #1
  - 4.2 Management Unit #2
  - 4.3 Management Unit #3
  - 4.4 Management Unit #4
  - 4.5 Management Unit #5
  - 4.6 Management Unit #6
  - 4.7 Management Unit #7
  - 4.8 Management Unit #8

- 4.9 Management Unit #9
- 4.10 Management Unit #10
- 4.11 Management Unit #11
- 4.12 Management Unit #12
- 4.13 Management Unit #13
- 4.14 Management Unit #14
- 4.15 Management Unit #15
- 4.16 Management Unit #16
- 4.17 Management Unit #17
- 4.18 Management Unit #18

## **5. Potential 2007 Restoration Projects**

## **6. General Recommendations**

- 6.1 Flood Protection
- 6.2 Public Recreation
- 6.3 Water Quality
- 6.4 Education & Outreach
- 6.5 Programmatic Approaches
- 6.6 Fishery Habitat
- 6.7 Riparian Zone Management
- 6.8 General Stream Management Activities

## **Appendices**

- Appendix A Native Vegetation
- Appendix B Vegetation Mapping Protocol & Maps
  - Figure 2.7.5 (Riparian Vegetation Map for Management Units 1 - 3)
  - Figure 2.7.6 (Riparian Vegetation Map for Management Units 4 - 6)
  - Figure 2.7.7 (Riparian Vegetation Map for Management Units 7 - 9)
  - Figure 2.7.8 (Riparian Vegetation Map for Management Units 10 - 15)
  - Figure 2.7.9 (Riparian Vegetation Map for Management Units 16 - 18)
- Appendix C Complete Biodiversity Table
- Appendix D Shandaken SPDES Permit
- Appendix E Stream Management Data Dictionary Guide

## **Glossary**



## **Preface**

Many generations have managed the streams of the Schoharie Basin. In the Mountaintop communities, creeks have been armored and intentionally redirected in some areas, to allow for streamside land uses. Due to the steepness of the Schoharie Valley, many roads have been built on the gentler slopes adjacent to the stream. Floodplains and streamside wetlands have been filled, diversions created to sluice water into floodplain ponds, and pastures and lawns cleared along Schoharie and tributary streambanks and adjacent terraces. Each of these activities has an impact on the Creek that reverberates throughout the system. The combined impact of these reverberations becomes most obvious during flood events that cause the loss of property and infrastructure, but can also be seen during low flow periods when the stream is over-wide and shallow, unable to support a vibrant coldwater fishery in affected segments.

The Schoharie Creek and its tributaries are a dynamic system and what one person does on their own stream bank can create significant effects –good or bad– upstream or downstream. While we maintain individual rights to use our own land as we think best, we also have an individual responsibility to act as good stewards for the health of the stream, while protecting the welfare of our neighbors. The Schoharie is in many ways a community resource, and cannot be effectively managed without a coordinated effort. It is because we recognize the many benefits streams contribute to our community’s quality of life, and also the many risks they pose, that we need to coordinate decision-making around the goals we identify collectively for the stream. This plan presents the background information, stream feature inventory and framework necessary to drive this coordinated effort.

In order to meet both surface and groundwater planning needs, both quality and quantity, a comprehensive watershed approach is required to identify the unique resources the streams provide to Schoharie Basin communities, document the magnitude of potential impairments, and involve watershed stakeholders in recommending strategies for remediation and management. To this end, the Greene County Soil and Water Conservation District (GCSWCD) and New York City Department of Environmental Protection (DEP) initiated the Schoharie watershed planning project in 2006. This is a culmination of planning processes that started in 1996 with the initiation of the Batavia Kill Stream Management Project. The Batavia Kill (GCSWCD, 2003) and West Kill (GCSWCD, 2005) management plans were

designed to guide local residents and municipalities towards addressing stream management activities on a system-wide basis through the employment of natural channel design principles. With the completion of the Schoharie and East Kill Plans, the majority of the Schoharie Basin is now covered under a stream management plan.

To a large degree, the success of the watershed project depends upon the amount of local participation and support. On Saturday, June 3, 2006 a public meeting with approximately one-hundred attendees marked the start of the stakeholder involvement portion of the Schoharie Creek/East Kill Management Planning Project. Following this workshop, the Schoharie project team, and a professional consultant from the Consensus Building Institute, completed a survey and workshop with potential Project Advisory Committee (PAC) members to start gathering input for the management planning process (full results and recommendations in Section 2.11). Most interviewees described the stream as picturesque and aesthetically pleasing, historic and of great potential value. At the same time, it was also described as “out of control”, in need of attention, and unstable.

Following the workshop, a PAC was initiated that met several times prior to completion of this stream management plan. It should be noted that “completion” is a relative term. The stream management plan is designed to be updated with new assessments, knowledge or recommendations. Additionally, the PAC will develop an annual action plan to prioritize recommendations. Therefore, the management planning process is not a stagnant process that concludes with the completion of the stream management plan, but rather begins.

In coming years, through a basin-wide Project Advisory Committee and annual work plans, Stream Management Plan recommendations will be implemented. The NYCDEP has committed two million dollars towards the implementation of SMP recommendations as a stipulation within the Shandaken Tunnel SPDES permit that was issued in 2006. This funding will be eligible for Plan implementation within municipalities that have formally adopted the plans. These funds can also be leveraged to attract additional funding that will lead the successful implementation of the management plan recommendations.

To get involved in this effort please contact Amy DeGaetano at [amy@gcswcd.com](mailto:amy@gcswcd.com) or (518)-622-3620, or visit: [http://www.catskillstreams.org/majorstreams\\_sc](http://www.catskillstreams.org/majorstreams_sc). and/or <http://www.gcswcd.com/stream/schoharie-eastkill/>.

## **Acknowledgments**

The Schoharie Creek Project team is pleased to release the Schoharie Creek Management Plan. This plan is a guide for local residents, municipalities, interested organizations and agencies to protect and improve the Schoharie Creek Watershed. We look forward to the improvements in the Schoharie Creek's health that will come about from implementing the management options outlined in this plan.

The Schoharie Creek Project team would like to especially thank the streamside residents that assisted the project by providing valuable information and/or allowing stream access for data collection. The project team met many landowners along the way who were willing to share their experiences of living streamside over the years. Through our stream feature inventory we have developed a better understanding of stream conditions and trends, and look forward to implementing management recommendations that will lead to a healthier Schoharie Creek.

Special thanks to the primary authors of this plan: Amy DeGaetano (GCSWCD), Abbe Martin (GCSWCD), and David Burns (DEP). As well as the entire staff of Greene County Soil & Water Conservation District and the NYC Department of Environmental Protection's, Stream Management Program. In particular, GCSWCD's Brandi Molitor, Matt Maragallo, Joel Dubois and AmeriCorps service members Carrie Miles and Sean Antonelli, along with DEP's Dan Davis, Mark Vian, and Jenn Grieser, who played key roles in data collection, drafting, and editing sections of this management plan.

Great appreciation is given to the Schoharie Creek Project Advisory Committee, a voluntary group of local stakeholders, for their support and guidance in development of this plan. Your input helped produce what we believe will be a successful plan for managing the Schoharie Creek.

### Project Advisory Committee Members:

- Francine Barbet (Streamside landowner)
- Judith Brown (Hunter Chamber and Planning Board)
- David Burns (DEP, Stream Management Program)
- Lynn Byrne (Lexington Town Board)
- Amy DeGaetano (GCSWCD, Schoharie Project Coordinator)

- Christine Delorier (US Army Corps of Engineers)
- Paul Dibbell (Town of Hunter Councilman)
- John Farrell (Town of Hunter Highway Superintendent)
- Mike Flaherty (Town of Jewett Supervisor)
- Jerry Fraine (NYS DEC Region 4)
- Keith Griffin (Town of Hunter Code Enforcement)
- Guido Giuliani (Hunter resident)
- Mark Hyer (Town of Hunter Planning Board Chair)
- Jim Hitchcock (GC Legislator, GCSWCD Board of Directors)
- Charlene Holdridge (Hunter Foundation)
- John Jacobson (Catskill Watershed Corporation)
- Barbara Joyce (Streamside landowner)
- Catherine Legg (Streamside landowner)
- Dennis Lucas (Town of Hunter Supervisor)
- William Maley (Village of Hunter, Mayor)
- Michael McCrary (Hunter Chamber of Commerce)
- Candy McKee (Catskill Mt. Foundation)
- Keith Mellot (Town of Lexington Councilman)
- Richard Morse (Town of Prattsville Supervisor)
- Elizabeth Reichheld (DEP, Stream Management Program)
- Jeanette and Mike Siatkowski (Streamside landowners)
- David Slutzky (Streamside landowner)
- Gary Slutzky (Co-Chair Hunter Foundation)
- Paul Slutzky (Village of Hunter Planning Board)
- Rene VanSchaack (GSWCD, Executive Director)
- Marilyn Wyman (Cornell Cooperative Extension of Greene County)
- Michelle Yost (GCSWCD; Watershed Assistance Program coordinator)

This project was made possible by funding from the NYC Department of Environmental Protection, Stream Management Program.



Rene VanSchaack  
 Executive Director, Greene County Soil & Water Conservation District  
 Cairo, New York