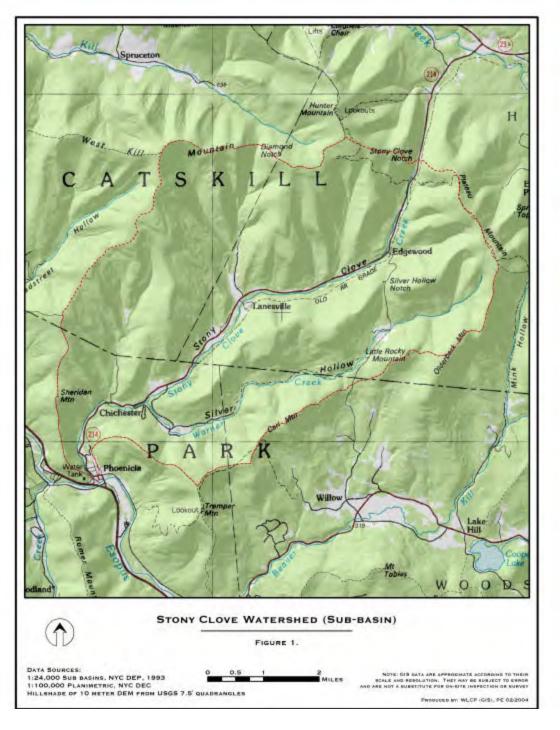
# The Stony Clove Creek Stream Management Plan

Volume I
Introduction & Goals
Natural & Institutional Resources
Watershed Inventory & Assessment

March 2005



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





# Stony Clove Creek Stream Management Plan March 2005



# Stony Clove Creek Management Plan Table of Contents

#### Volume I

- i. Table of Contents
- ii. Forward and Acknowledgements

#### 1. Introduction & Goals

- 1.1 Introduction: Why a Stream Management Plan?
- 1.2 Purpose: Why a Stream Management Plan for the Stony Clove Creek?
- 1.3 Goals and Objectives
- 1.4 Guide to the Organization of this Plan

#### 2. Stony Clove Creek Natural and Institutional Resources

- 2.1 Regional Setting
- 2.2 Physiography
- 2.3 Hydrology and Flood History
- 2.4 Geology
- 2.5 Wetlands & Floodplains
- 2.6 Riparian Vegetation
- 2.7 Landuse/Landcover
- 2.8 Stakeholders
- 2.9 Recreational Opportunities
- 2.10 Agency Contacts and Program Resources
- 2.11 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

#### References

#### Volume II

#### 4. Management Unit Summary & Recommendations

- 4.0 Introduction to Management Unit Descriptions and 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
- 4.19 Management Unit #19
- 4.20 Management Unit #20
- 4.21 Management Unit #21

## 5. Lanesville Bank Stabilization Project

#### **6.** General Recommendations

#### 6.1 Flood Protection

- 6.1.1 Floodplain Mapping and Review of Community Floodplain Regulations
- 6.1.2 Education and Outreach
- 6.1.3 Flood Damage Prevention Library
- 6.1.4 Community Rating System
- 6.1.5 Flood Prevention Library
- 6.1.6 Special Flood Hazard Zone Notification
- 6.1.7 Flood Hazard Education Session
- 6.1.8 Flood Damage Data Base
- 6.1.9 Hazard Mitigation Plans

#### 6.2 Public Recreation

- 6.2.1 Public Fishing Access
- 6.2.2 Streamside Recreational Trails
- 6.2.3 Fisheries Tourism

#### 6.3 Water Quality

- 6.3.1 Community Stormwater Management Plans
- 6.3.2 Watershed Agricultural Program
- 6.3.3 Critical Area Seeding Program
- 6.3.4 On-Site Waste Water
- 6.3.5 Road Abrasive Program
- 6.3.6 Watershed Forestry Program
- 6.3.7 Stormwater Retrofits

#### 6.4 Education & Outreach

6.4.1 Education & Outreach Strategy

- 6.4.2 Web Based Outreach
- 6.4.3 News Media Outreach
- 6.4.4 Stream Management Publications
- 6.4.5 Watershed Health Reports

#### 6.5 Programmatic Resources

- 6.5.1 Watershed Association
- 6.5.2 Technical Advisory Committee
- 6.5.3 Stream Permitting Activities
- 6.5.4 Flood Response Technical Resources
- 6.5.5 Local Landuse Regulations

#### 6.6 Fisheries Habitat

- 6.6.1 Restoration Project Fisheries Monitoring
- 6.6.2 Habitat Improvement Projects

#### 6.7 Riparian Zone Management

- 6.7.1 Technical Resources (publications)
- 6.7.2 Agricultural Buffers
- 6.7.3 Riparian Technical Assistance
- 6.7.4 Land Use Ordinances
- 6.7.5 Watershed Forestry Program
- 6.7.6 Riparian Conservation Easements
- 6.7.7 Landowner Incentives
- 6.7.8 Watershed Buffer Cost-Share Program
- 6.7.9 In Lieu Compensatory Mitigation
- 6.7.10 Knotweed Management Resources

#### 6.8 General Stream Management Activities

- 6.8.1 Stream Management Guidelines
- 6.8.2 Technical Assistance
- 6.8.3 Highway Activities
- 6.8.4 Public Lands
- 6.8.5 Community Stormwater Plans
- 6.8.6 Practical Training
- 6.8.7 Future Stream Stability Restoration

## 7. Plan Implementation

#### References

# Volume III

# 8. Appendices

Appendix A – Riparian Vegetation Analysis for the Streamside Planting Program

Appendix B – Fish Habitat Assessment on Stony Clove Creek, NY using MesoHABSIM

Appendix C – Native Trees, Shrubs, and Ground Covers for Riparian Buffers

Appendix D – Watershed Data and Analyses

# Glossary

### ii Forward and Acknowledgements

We are pleased to release Volumes I and II of the Stony Clove Creek Stream Management Plan. Volume I provides Stony Clove Creek background information, watershed resources and institutional information. Volume II provides individual Management Unit Descriptions and General Recommendations, specifically tailored to the ongoing stewardship of the Stony Clove Creek sub-basin, as well as a description of the demonstration restoration project in Lanesville, and suggestions for plan implementation. This plan is not complete; to stay alive it needs to grow and change through the comments, input, concerns, suggestions and needs of the watershed community. Section 7, Plan Implementation, provides suggestions on how to ensure the Plan continues to evolve.

First and foremost, the Stony Clove Project team acknowledges the patience of the many streamside landowners who permitted the project's field assessment teams access to the stream in their backyards. We developed many new friends along the way, and we hope our intrusion on their privacy is justified in the end, through a better understanding of stream conditions and trends, a clearer vision of the particular stewardship needs along the stream corridor and, finally, a healthier Stony Clove Creek.

This plan represents the efforts of many people, some working as part of their day-to-day jobs, some as volunteers, over the past three years. We especially appreciate the efforts of Amy DeGaetano, project coordinator and Joel Dubois, field coordinator, both with Greene County Soil and Water Conservation District, who have overseen the field effort and the project coordination, and drafted many sections of this management plan. Special thanks go to Amanda LaValle, Jennie Church, Ashley Brown and Abbe Martin, all AmeriCorps members who played key roles in fieldwork and data analysis, as did Darren Dekoskie, Matt Maraglio, Derrick Burchins, and Courtney McCormack. The historical information given in the Management Unit Descriptions in Section 4 owes much to the generosity of Lonnie Gale and Millard Ruoff. We wish to thank the Stony Clove Creek Project Advisory Committee, a team of 30, including the officials from the Towns of Shandaken and Hunter, and the Stony Clove Creek Watershed Association, to whom the baton now passes for directing the future of this plan. The Watershed Association, and the committed individuals who have brought it into being, will now be the conduit for information and resources regarding this plan, and stream stewardship in general, to the broader Stony Clove Community. Health and prosperity to you! We particularly thank the unwaivering support of Jerry Fraine, of NYSDEC Region 4. Jerry and Jack Isaacs of Region 3 both provided gracious access to their stream disturbance permit records, and helped prepare sections of the plan. Gary Capella, of Ulster County SWCD, also played a key role in the continuity of the project, and we extend our thanks to him and to the UCSWCD staff.

We recognize the entire staffs of the Greene County SWCD and the DEP Stream Management Program, who were called on to support their colleagues in so many ways. This project was made possible through funding from the NYC DEP Stream Management Program, the US Army Corps of Engineers under the Watershed Environmental Assistance Program, and NYS Department of Environmental Conservation.

Rene' VanSchaack Executive Director Greene County Soil and Water Conservation District Cairo, New York Mark A. Vian Stony Clove Creek Project Manager Stream Management Program, NYCDEP Kingston, New York