Riparian Corridor Management Plan
Schoharie Creek
Silver Property – Elka Park, NY

Prepared by:

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November 19, 2009

Introduction

Maintaining healthy and intact riparian areas is a high priority of the Catskill Streams Buffer Initiative, as is improving the condition of degraded riparian buffers. Through the protection and enhancement of the riparian corridor we are protecting water quality, protecting and increasing habitat diversity and offering some level of stabilization for streambanks through natural biological means. Well vegetated riparian buffers filter upland pollutants, provide rooting mass for bank stability, and lower stream water temperatures. Numerous streams in the Catskills have been walked with detailed mapping of the vegetation conducted within the riparian corridors, documenting various stream conditions, need for supplemental vegetation, presence of invasive species, and other conditions impacting the health of the riparian area. While 75% of the West of Hudson Watershed is forested, it is apparent that some riparian areas lack this protective cover.

The overall goal of the Catskill Streams Buffer Initiative is to inform and assist landowners in better stewardship of their riparian (streamside) area through protection, enhancement, management, or restoration. The New York City Department of Environmental Protection and its partners (County Soil & Water Conservation Districts and Cornell Cooperative Extension) will assist private, riparian landowners throughout the West of Hudson Watershed by providing:

1) Riparian Corridor Management Plans to create awareness about riparian management issues specific to individual properties
2) Best management practice design and/or prescriptive measures and installation to encourage positive riparian stewardship and
3) Educational materials and activities as needed by landowners to understand the critical role of their buffer and how to maintain it in optimal functioning condition.

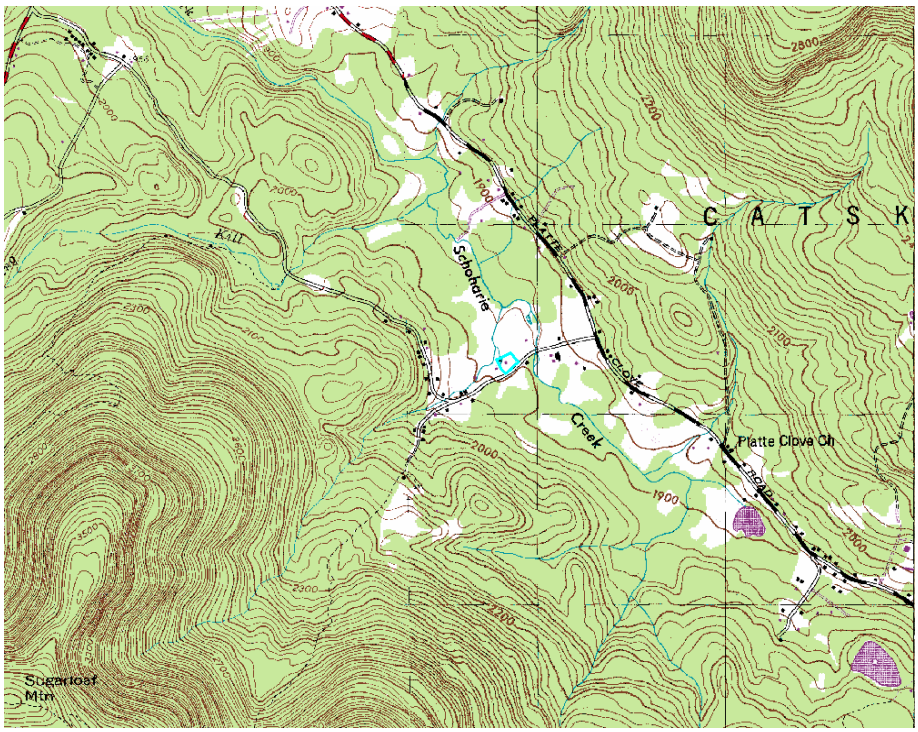
Any watershed landowner with property within the mapped buffer area can receive technical assistance and a Riparian Corridor Management Plan.

Aerial view of Silver property on Dale Lane

Site Visit Description / Existing Conditions

Roy Silver owns a 1.9 acre parcel on Dale Lane in the hamlet of Elka Park, within the Town of Hunter. A small C(TS) stream, a tributary of the Schoharie Creek, runs through the property's northwest corner.[1] This unnamed tributary that local residents call Sugarloaf stream drains runoff from Sugarloaf Mountain and has a drainage area of 1.19 mi^2. The parcel's boundary to the north and east is NYS DEC regulated freshwater wetland #K-9. Land-use / land-cover in the reach is a mix of forest, shrubland, palustrine wetland, and limited residential development. In the area where erosion is occurring on Silver's propery, very little deep rooted woody vegetation was visible next to the stream during a site visit in the fall of 2009.

The soil type within the project area is identified as Tunkhannock gravelly loam 0-8% slopes (TuA and TuB) derived mainly from reddish sandstone, siltstone and shale and is classified as prime farmland.[2] Native trees found in this soil type are maple, black cherry, beech, ash, oak, hemlock, and white pine.



USGS Topo map – Silver property outlined in blue

History / Past Findings

Greene County Soil and Water Conservation District (GCSWCD) completed the Schoharie Creek Management Plan in 2007. Based on the 2006 stream feature inventory, the riparian vegetation recommendations for Management Unit 1 which include areas up

[1] All waters of New York State are provided a class and standard designation based on existing or expected best usage of each water or waterway segment. Classification C is for waters supporting fisheries and is suitable for non - contact activities. Classification TS designates trout spawning waters.

[2] National Cooperative Soil Survey
Official Series Description – Tunkhannock Series, 1999

and downstream of Dale Lane are to plant the herbaceous areas, especially within the first 50 to 100 feet of the stream.

Mr. Silver has been living in the house on the property since 2004. In 1996 when the entire area was flooded, the flooding reached the front steps of the house. There has been flooding on Dale Lane as recently as 2005 but Silver's property has not been affected. Some water enters the basement during rain events but the sump pump is effective in removing the water. GCSWCD has surveyed the stream in the spring of 2009 and is in the process of developing a HEC-RAS model to calculate water surface profiles for the stream to anticipate future flooding.

The owner does not participate in any other watershed programs at this time.

Landowner Issues / Concerns

Mr. Silver has expressed concerns about localized erosion on the right streambank where a fence is now hanging over the stream. The eroding streambank is 55 inches high. The owner has stopped mowing the lawn to the edge of the stream letting a small buffer area "go wild" to establish more roots. Goldenrod and Rubus species are now growing among the grass.

Owner states that the stream is changing its course and there is new siltation. Mr. Silver suspects these changes are due to a new paved road that has been built upstream on Wase Road and due to boulders that have been rearranged near the Roaring Kill bridge ¼ mile upstream where Dale Lane and Wase Road intersect. The Town of Hunter Highway Department confirmed they did rebuild the bridge's headwall in the 1990s but no major repairs have been made in recent years.

The landowner is concerned that the 70 ft. high dying tree behind the house could fall in the stream. This beech tree is 50 ft. from the streambank and is more likely a threat to the house. The owner would like to have the tree removed. It was also noted during the site visit that the propane tank by the house is in the floodplain.

September 22, 2009 – Site Visit
Landowner Goals

1) Stop stream from encroaching on property
2) Increase riparian buffer
3) Include a variety of habitats for birds and wildlife

Recommendations – Best Management Practices (BMPs)

1) Apply to CSBI for funding support to install one or more of the practices below.

2) As deep rooted woody vegetation is critical to maintaining slope stability, this site could benefit from enhanced buffer width and establishment of more woody vegetation. Planting and maintaining a healthy buffer of native trees and shrubs along the streambanks and floodplains is one of the most cost effective and self-sustaining methods for landowners to protect streamside property**.**

3) Use vegetative treatments such as willow stakes to address minor localized erosion. Bioengineering, the use of live vegetation, either alone or in combination with harder materials such as rock or (dead) wood, to stabilize soils associated with streambanks can be used at this location. Dormant materials such as willows quickly establish vegetation on the banks. Willow stakes are cut from living willow shrubs when the shrub is dormant (usually during the fall). The stakes, ranging from one to several feet long, are hammered or pushed into the stream bank where they will grow quickly and provide necessary bank stabilization where it is needed most. A willow stake detail drawing is attached.

4) Use live fascines. Live fascines are a standard bio-engineering technique which involves the bundling and planting of dormant plant cuttings. The plant bundles sprout and develop a root mass that will hold the soil in place and protect the streambank from erosion. A willow fascine detail drawing is attached.

5) Increase native riparian vegetation and habitat. Plantings can include a variety of flowering shrubs, trees and sedges native to the Catskills. Native species are adapted to our regional climate and soil conditions and typically require less maintenance than exotic species following planting and establishment.

6) Maintain root systems that hold soil in place by not mowing right to the stream edge. Degrading buffer zones can be improved by not mowing in the buffer zone. Keeping a buffer zone of trees and shrubs, especially in the first 50 to 100 feet, along streambanks helps to minimize erosion and protect property, filter pollutants, and increase habitat value.

7) Remove fencing that is close to dynamic stream. Obstructions in the floodplain interrupt the flow of flood water on the floodplain, and can accumulate debris. Obstructions promote accelerated flow velocities and result in increased erosive power of flood flows.

8) Continue to monitor reach stability through normal observations. Take photographs from the same location each year to photo document erosion.

9) **Consider using dying tree as bank protection.** Woody debris in streams serves a structural role in maintaining stream stability. Large woody debris occurs naturally and is often used in stream management projects to minimize both lateral and vertical channel erosion. Woody debris also serves an important role in habitat diversity. Localized scour and complex velocity patterns that form near the debris help to create and maintain critical aquatic habitat features.

10) Seek advice from your fuel supplier on proper anchoring of propane tank located in the floodplain to prevent flotation or lateral movement during a flood.

Resources and References

Schoharie Creek Management Plan
http://www.catskillstreams.org/Schoharie_Creek_Management_Plan.html

Catskill Streams Buffer Initiative
http://www.catskillstreams.org/pdfs/CSBI_application.pdf

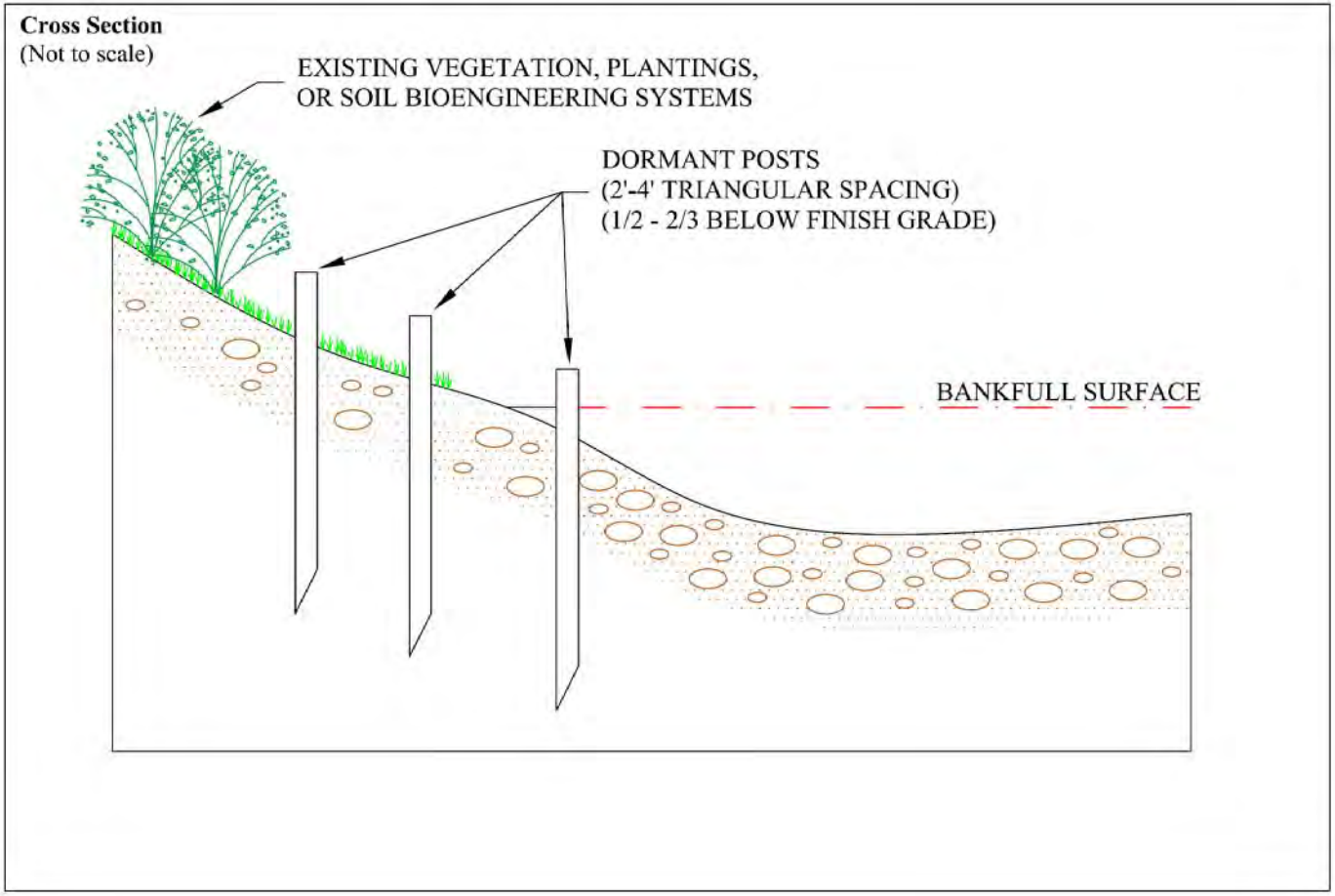
Fascines
Ohio Stream Management Guide
http://www.dnr.state.oh.us/Portals/7/pubs/fs_st/stfs14.pdf

Japanese Knotweed Information
http://www.catskillstreams.org/pdfs/Knotweed%20webpage%20text%20&%20links.pdf

Riparian Buffers
http://www.catskillstreams.org/stewardship_streamside_rb.html

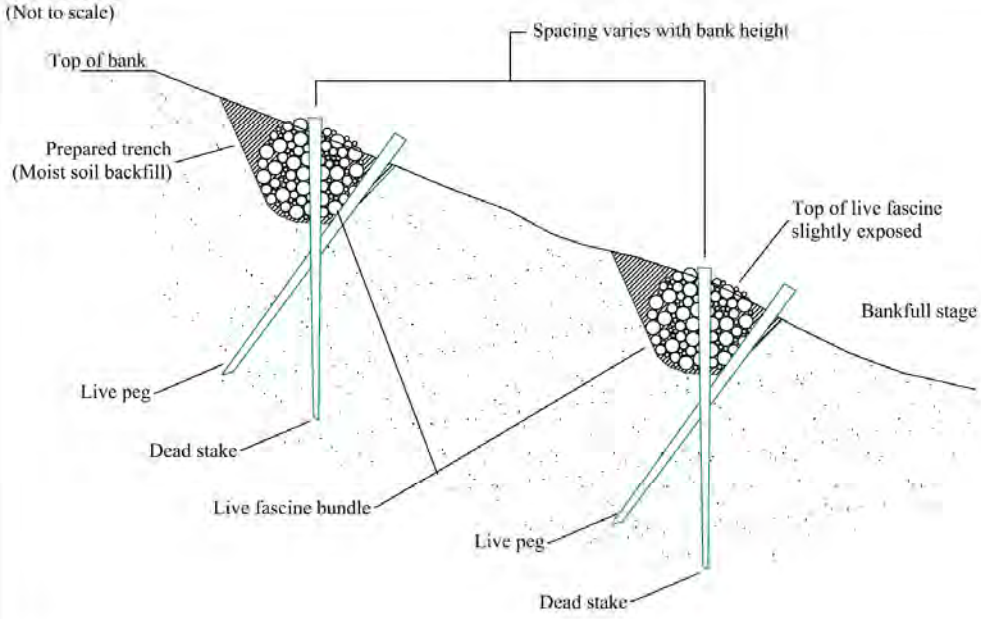
Soils
National Cooperative Soil Survey
Official Series Description Series, 1999
http://soils.usda.gov/technical/classification/osd/index.html

DORMANT POST DETAIL (VS-03a)

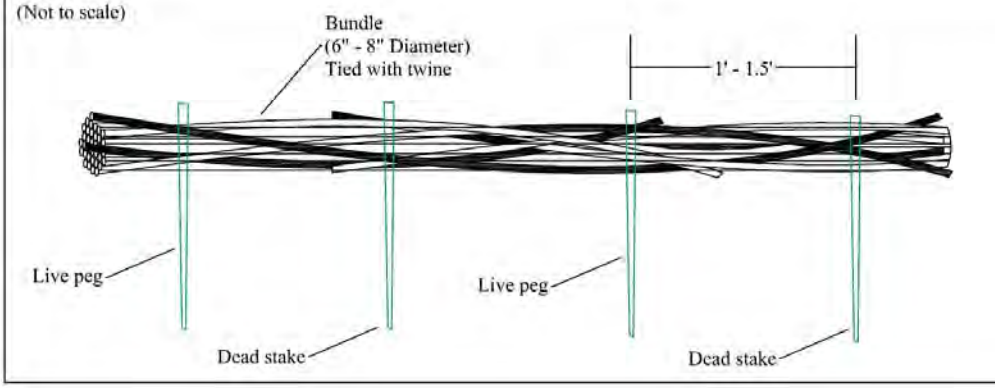


LIVE FASCINE DETAIL (VS-01)

Cross Section
(Not to scale)



Profile
(Not to scale)



Landowner Self-Evaluation Form

CATSKILL STREAMS BUFFER INITIATIVE

DATE 12/20/09

OWNER ROY SILVER

ADDRESS or SITE NAME 118 Dale Lane Elka Park, NY 12427

STREAM NAME "SUGARLOAF STREAM" TRIBUTARY TO SCHOHARIE CREEK Watershed CATSKILL Tax Parcel 209.00-2-18

Have you participated in the Catskill Streams Buffer Initiative in the past? (if Yes, explain) NO
History of working with GCSWCD, NYCDEP, USACE, Other agency? (who, when) N/A
Do you participate in any other NYC Watershed Programs? (how, when) NO

- Catskill Watershed Corporation (CWC)?
- Conservation Reserve Enhancement Program (CREP)?
- Watershed Agricultural Council's (WAC) Forestry or Whole Farm Programs?

Land-use History? Dale Lane lands formerly part of the Dale FARM. Developed in early 1960's with a few residences
Flooding History? "100 year" flood occurred January 16, 1996 along Dale Lane properties.
Goals for the Property? Protection from stream erosion. Stabilizing of Stream bank
Do you anticipate any major changes on your property within the next 5 years? (explain) No

Please return form to Laura Weyeneth, Catskill Streams Buffer Initiative Coordinator at laura@gcswcd.com or GCSWCD, 907 County Office Building, Cairo, NY 12413

Landowner Self-Evaluation Form

Goals for the Project?

Same as goals for my property

Preferred Buffer Width: 5-10 ft (10-25ft) 50-100 ft. 100-300ft. Other:

Will like to consider 50-100 ft as deemed preferential.

Landowner Participation and Commitment to the Project? (explain)

- ☐ Cost share (% of total) [RETIRED]
- ☒ Project installation assistance
- ☒ Project maintenance/monitoring
- ☒ Easement/License agreement (10yr/5yr)
- ☒ Attend training on related topics
- ☐ Other:

Landowner concerns: (Site access, invasive sp, wildlife, etc.)

Streambank erosion.
Potential of flooding on my property.

Issues with site access for project installation and staging: (explain)

Must remove fencing in the immediate remedial area.

Is site visible from road?

NO

Would you agree to use this as a demonstration project for other landowners interested in the CSBI program?

Yes

Are neighbors interested in streamside assistance? (Identify)

I have discussed the program with my neighbors Ray Ethier P.O. Box 370, Tannersville, NY 12485 and Umberto Guido, P.O Box 98 County Route 16, Elka Park NY 12427. They are my contiguous streamside neighbors and are interested in streamside remediation

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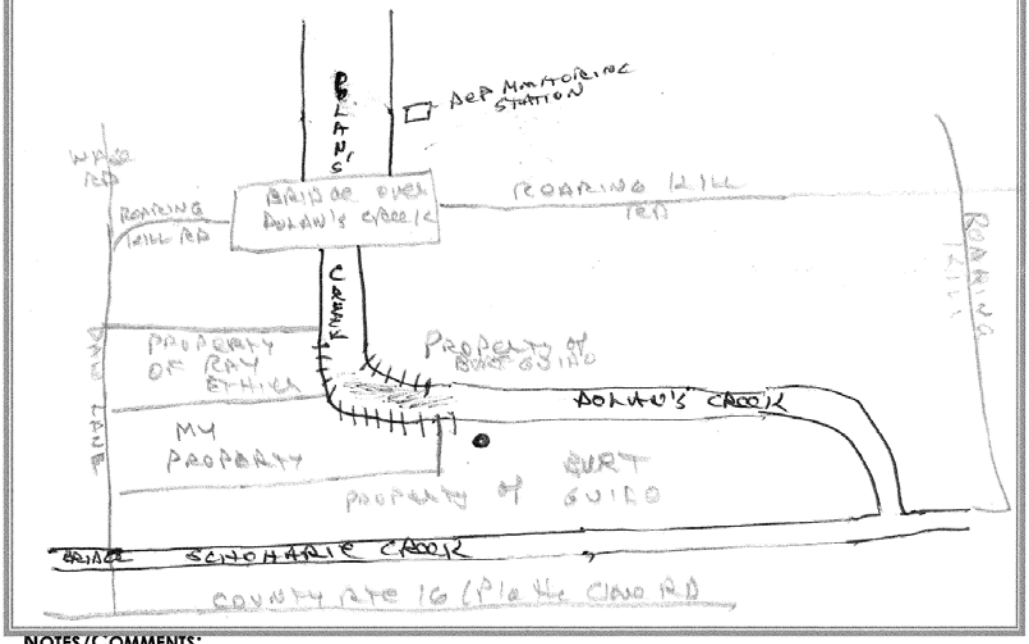
Landowner Self-Evaluation Form

Site Sketch



NOTES/COMMENTS:

IIII - LOSS OF STREAMBANK [EROSION]

- STREAM SITUATION

- 40 FT TREE (MATURE) endangering Possibly Future stream FLOWS IF DIVERTED BY FLOODWATER

DOLAN'S CREEK -(AKA) SUGARLOAF STREAM

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