Stakeholder Council 2017 Membership

The Ashokan Stakeholder Council is comprised of:

The Executive Council:

2 representatives from each of the active AWSMP working groups.

Both representatives of a working group should not come from the same organization or agency.

Representatives should be chosen annually by the working group.

No person can represent more than one working group on the Stakeholder Council.

Staff: (CCE Ulster County, UC SWCD, DEP SMP Contract Manager for Ashokan Watershed)

Regular Members: Membership in the Stakeholder Council is open to any interested and knowledgeable stakeholder.

Ashokan Watershed
Stream Management Program

ASHOKAN WATERSHED STREAM MANAGEMENT PROGRAM STAKEHOLDER COUNCIL MEETING MINUTES

AWSMP Program Office, Shokan, NY 12481

May 23, 2017 1:30pm-4:30pm

In Attendance: Aaron Bennett, Brent Gotsch, Leslie Zucker, Chris Tran, David Burns, Adam Doan, Andrew Emrich, Kirk Peters, Jason Siemion, Kathy Nolan, Sylvia Rozzelle, Brian Burns, Tim Cox, John Mathiesen; Executive Council members present: Amanda LaValle, Burt Samuelson, Mike Flaherty, Barry Baldigo, Marc Hollander

Next scheduled meeting: November 28, 2017

Introductions and Stakeholders Announcements:

Attendees introduced themselves and Leslie Z. summarized the agenda.

Community Updates:

Kathy N. reported that non-profit organizations have organized a campaign to amend the NYS constitution "to protect public health and the environment by ensuring clear air and water" with some success. A bill (A06279/S.5287) passed the state Assembly.

Amanda L. reported that the Environmental Impact Statement for the CATALUM SPDES Permit covering Ashokan Reservoir releases to the lower Esopus Creek was recently finalized after a two-year process (EIS, March 2017). The County is the administrator of stream management planning funds for the lower Esopus Creek and will use EIS findings to scope planning. Initial steps will be to take a closer look at stream studies and flood conditions for communities along the Lower Esopus using improved floodplain data and maps. Discussions are to address community requests for more void in the Ashokan Reservoir to provide flood protection and other potential flood mitigation actions. Local Flood Analysis methods may be used as a guide for evaluating different options and their relative benefits.

AWSMP Updates:

AWSMP announced two new staff members: Annette Ferchau, Administrative Assistant, and Samantha Kahl, Temporary Watershed Educator; both are employees of Cornell Cooperative Extension of Ulster County (CCEUC).

Leslie Z. of CCEUC gave a quick update on recent and planned AWSMP outreach activities. The Ashokan Watershed Conference was held April 29 at The Ashokan Center. Conference attendees rated the presentations and conference highly on the conference evaluation. A "Stream Explorers" youth conference was successfully piloted at the same time/location. However, attendance was down this year and the conference planning committee met on May 16 to discuss strategies for boosting participation at future programs.

Leslie Z. updated the Council on the 2017-2019 Action Plan. AWSMP staff added brief progress reports on existing recommendations to update reviewers on progress. Recent actions of the Stream Access & Recreation Working Group (e.g., to pilot assessment of large wood deposits) were incorporated as new recommendations into the plan. A hard copy of the 2017-2019 Action Plan was distributed to the Stakeholder Council at the meeting and via email afterward.

Leslie Z. covered the schedule for next year's Action Plan update. The revised schedule will be to review and discuss plan recommendations this fall's Stakeholder Council meeting. This allows staff more time to incorporate Council input before the plan is due to NYC Department of Environmental Protection (DEP) in early May of each year.

Adam D. of the Ulster County Soil & Water Conservation District (SWCD) reported on completion of the Moran Streambank Bioengineering Demonstration Project on the Bushkill in fall 2016. The project was completed by the Catskill Streams Buffer Initiative (CSBI) program implemented by SWCD. A short video of CSBI Coordinator Bobby Taylor describing the project was viewed at: https://www.youtube.com/watch?v=GceEsuwfPNs.

SWCD is observing excellent sprouting and growth of native tree-species stakes installed at the site, including stake bundles installed vertically (versus horizontal fascines). SWCD is developing a standardized approach to monitoring streambank bioengineering outcomes.

A question was asked about the applicability of streambank bioengineering methods to other bank erosion sites in the watershed. Adam responded that landowners can successfully carry out smaller streambank bioengineering projects, but this project went beyond what landowners can typically do on their own. How are stream restoration projects differentiated from CSBI projects? Bioengineering projects carried out through CSBI do not involve rock work in the channel, but they do go beyond a simple stream buffer planting. Filling this "niche" in project need will be a growing focus within Ashokan's CSBI program. SWCD is reviewing sites for future bioengineering projects.

Adam D. previewed two, large stream restoration projects planned for construction summer 2017 in the Mink Hollow portion of the Beaver Kill watershed in the Town of Woodstock. The projects are adjoining and will treat 1,600 linear feet of stream channel and address two failing hillslopes contributing large amounts of fine sediment to the stream. The projects will be constructed simultaneously. The floodplain will be excavated to prevent a flood elevation rise. A series of headcuts moving up the stream channel will be treated.

SWCD is also advancing a second stream restoration project on Woodland Creek located just above the state campground. Over time, the stream has adjusted course between adjoining floodplain terraces in this section. Flow is now splitting and eroding into fine bank sediments. The project is between 60-90% design completion. Plans will be shared at future meetings when more is known.

The AWSMP funded the US Geological Survey (USGS) to begin monitoring of suspended sediment concentrations and turbidity above and below the future stream restoration site in 2016. The site will be monitored after project completion to evaluate its impact on water quality.

This summer, the AWSMP will be conducting a Stream Feature Inventory of the Little Beaver Kill to gather data for a stream management plan. The assessment will be led by Allison Lent of the SWCD. Adam D. shared a stream profile of the Little Beaver Kill and a map showing stream buffer widths in the watershed. The analysis shows an intact riparian buffer. The location of roads along the valley walls (instead of in valley bottoms) could help to explain the intact buffer. SWCD will contrast the results of this inventory with previous assessments to compare conditions between tributary watersheds. The Little Beaver Kill is largely a stable stream compared to other tribs.

Slides accompanying Ulster County SWCD's report of implementation activities, reported above, are attached to these notes.

Dave B. of NYC Department of Environmental Protection (DEP) gave a brief update on development of the 2017 Filtration Avoidance Determination (FAD). Negotiations are near final. The NYS Department of Health will release the final draft FAD for a 45-day public comment period. The stream program is expected to continue with few changes. The exact number of stream projects that will be required may change. A new deliverable for Stream Feature Inventories to drive water quality priorities is also expected. An on-going turbidity monitoring program will also help to develop priorities. The NYC-funded flood hazard mitigation project is expected to continue. The focus will shift from flood mitigation planning to implementation of recommendations identified during the town-led Local Flood Analysis process.

Presentation by USGS on Latest Turbidity Monitoring Results:

Jason S. of the USGS New York Water Science Center presented the latest monitoring results for the "Upper Esopus Creek Sediment and Turbidity Study" funded by NYC DEP. Specific objectives of the study are to: 1) Monitor suspended sediment concentration (SSC) and turbidity levels through a range of streamflows; 2) Calculate suspended sediment loads and yields; 3) Examine the relation between SSC and differences in geomorphology and geology; and 4) Monitor the effects of sediment and turbidity reduction projects.

A map of the upper Esopus Creek monitoring sites is attached to these notes.

Jason reviewed methods for taking water quality samples, and plotted results comparing tributaries. The results compared how different tributary watersheds performed in terms of turbidity values observed, both at the highest streamflows and across all streamflows. Turbidity at the highest streamflows are plotted separately because historically, the highest sediment load is generated at the highest volume flows.

Graphs of the two sets of box plots are attached to these notes. Note the change in scale on the Y-axis between graphs.

Over the past six months, a significant deviation from past monitoring results was observed. Previous studies conducted between 2010-2013 showed the Stony Clove Creek to be the highest contributor of SSC and turbidity over other tributaries by a substantial margin. Suspended-sediment loads in Stony Clove Creek generally were greater than those in Beaver Kill by a factor of 6 to 10 during this period.

But after completion of stream restoration projects in the Stony Clove Creek watershed, the difference in loads between the Beaver Kill and Stony Clove Creek was reduced to less than a factor of 2 during water year 2014. Now, monitoring results for the past six months show Broadstreet Hollow to be the highest contributor of SSC and turbidity across all streamflows. Broadstreet Hollow and the Beaver Kill are the largest contributors at higher streamflows.

A more detailed monitoring study of SSC and turbidity in the Stony Clove Creek conducted before and after completion of the stream restoration projects, suggests the projects are responsible for the change in the Stony Clove's status as a SSC/turbidity contributor relative to other tributaries.

Jason also previewed two studies that are to begin later this year with NYC DEP funding: 1) Upper Esopus Creek Tributary Bedload Pilot Study; and 2) Upper Esopus Creek Tributary Sediment Fingerprinting Pilot Study.

Stream Management Implementation Program (SMIP) Update:

Leslie Z. and grant review committee co-lead Sam B. updated the Council on outcomes of the spring 2017 Request for Applications.

A total six applications requesting $377,630 were received. The Grant Review Committee scored the applications and met on May 11, 2017 to discuss the projects and develop funding recommendations.

The Committee recommended the following four applications for funding:

- Ulster County Department of Public Works, $250,000 to construct a stream restoration and hillslope stabilization project to address an eroding bank threatening closure of Watson Hollow Road in the Town of Olive.
- Catskill Center, $12,000 to pilot methods for preventing the spread of knotweed into upper portions of the Esopus Creek watershed, working with area landowners.
- Cornell Cooperative Extension of Ulster County 4-H Youth Program, $10,630 for a team of 4-H youth to develop presentations and educate recreational users of Catskills public trails about water quality and beneficial stream management practices.
- Fractured Atlas, $22,000 to conduct "Catskill Waters" a community arts and outreach project to share stories and learn about stream conservation in the Little Beaver Kill watershed in the Town of Woodstock.

Although a minimum quorum of the AWSMP Executive Council (EC) voting body were present in-person and by phone, the committee leads decided to obtain the vote by proxy to involve all EC members.

Leslie Z. announced the next SMIP funding round will be announced mid-September with an application deadline of mid-October. The AWSMP Executive Council will consider funding recommendations at the November 28, 2017 Stakeholder Council meeting.

The AWSMP hopes to announce a second request for research, assessment & monitoring proposals in 2017 following the successful request in 2016. Timing is dependent on the ability of the AWSMP Stream Ecosystem Working Group to meet and review science needs and funding priorities this summer. The group will also work to finalize the Research & Monitoring Strategy for the Ashokan Watershed.

Addition to notes: Burt S. organized a proxy vote by email subsequent to the May 23 Stakeholder Council meeting. Burt S. moved to adopt the Grant Review Committee's recommendations for SMIP grant funding. This was a motion to vote on all of the projects at the same time. Barry B. seconded the motion. The motion carried by a majority vote (6/10), unanimous for those responding.

Working Group Reports:

Flood Hazard Mitigation Working Group: The Town of Shandaken is advancing Local Flood Analysis (LFA) for the hamlets of Shandaken and Allaben; preliminary mitigation actions and benefit-cost analysis results will be reviewed at a June flood committee meeting. The Town hopes to wrap the project by end of 2017.

The Town of Olive will receive a final Local Flood Analysis report for Boiceville and West Shokan this week. A special meeting of the Town Board to review final LFA results is scheduled for June 28, 7pm at the Town Meeting Hall. The Town thanked Aaron B. and Phil Eskeli for their persistence in helping the Town move the project to completion.

Aaron B. reported on the progress of FEMA buyouts in Ulster County. Of the 16 buyouts in the watershed, 11 have closed and 5 of these have completed demolition. The remaining six are expected to close in the next month.

The Town of Olive has selected Aaron B. and Adam D. to serve as NYC Flood Buyout program outreach lead and technical assessment leads. Assessments requiring geotechnical evaluation will be referred to the Catskill Watershed Corporation's hired consulting firm for the purpose. The Town has received two formal inquiries within hamlets; both are on hold until the Town Board accepts the LFA.

Brent G. gave a status report on flood hazard mitigation training opportunities. Since January, Brent has trained a class of Greene County SWCD staff for the Certified Floodplain Manager's exam administered at the NYS Floodplain & Stormwater Manager's conference, June 11-14 in Binghamton. The AWSMP is supporting municipal officials from watershed towns to attend the conference and obtain continuing education. Attendance is funded through a SMIP-funded training scholarship program.

The FHM Working Group last met on March 17. Bill Nechamen, Section Chief for Floodplain Management at NYS Department of Environmental Conservation (DEC) presented on the state Community Risk and Resiliency Act (CRRA). Bill is retiring in July; a huge loss to the watershed, but we look forward to continuing work with DEC Floodplain Management.

Brent G. and Aaron B. will be offering a floodplain management course for real estate professionals in Kingston on May 31. The course is offered for continuing education credit through the Ulster County Board of Realtors. Registration is maxed out at 30 attendees. Goal is to help agents better assist clients with properties located in the floodplain.

This summer and fall Brent will be preparing floodplain management modules (curricula) for area educators to use.

Stream Ecosystem Working Group: Barry B. of USGS summarized ongoing fish studies and plans for the summer. Two studies are underway:

1) A long-term fish monitoring study in the upper Esopus Creek, ongoing since 2009 (pre- and post-Irene) will continue into 2017 and 2018 to obtain 10 years of record. The study assesses the long-term variability in fish communities throughout the basin to evaluate impacts of flooding and droughts, changes in climate conditions, spills, etc. A decline in Rainbow Trout populations also spurred the study on. This June-August, Barry's team will survey six Esopus Creek sites with SMIP funding; and
2) A Rainbow Trout growth study by Scott George (also USGS), is a bit behind schedule for good reason – to evaluate additional data on larger fish obtained with assistance from DEC. The study analyzes the effects of invasive fish introduced in the early 1980s, on trout populations in the reservoir. A drafted paper and will be updated to include results from larger fish. Researchers are also looking at the effects of an enzyme called thiaminaze on fish survival and reproduction. Final paper due this fall.

Stream Access & Recreation Working Group: Marc H. reported on themes being addressed by the working group, including:

1) Conserving coldwater in the Schoharie Reservoir as Gilboa Dam renovations are planned, including a lower-level outlet. Good work to date with input from stakeholders and DEP responded with changes to the outlet design. The changes are to help protect coldwater releases and may also benefit recreational releases. The working group is asking if siphons can be kept on the dam to meet multiple objectives. One consideration is the velocity at which the dam can be emptied and still maintain structural integrity of reservoir banks. Another thought regards the articulated arm and planned new high-level outlet – why not have the articulated arm installed now?
2) Trout Unlimited recently met with NYSDEC and NYC DEP about implementing a coldwater plan one month earlier in the season – typically it's implemented in June, looking to move up to May. Mike F. (DEC) reported that DEP has shared a Schoharie Reservoir temperature profile with DEC in May. The thermocline has not set up yet, which typically delays calculation of coldwater volume. A good thing is this spring's abundant coldwater input to reservoirs; it's the best-case scenario going into June this year. DEC will complete a coldwater plan officially in mid-June.

KCCNY requested four recreational releases this year. A release June 3-4 was approved. See the requested schedule at: http://www.dec.ny.gov/lands/80682.html

Also, the working group is discussing revision of Part 670 to modernize it, after review and collection of input and lessons learned. The group would like to see input solicited in a free and open online space.

Highway Managers Working Group: No report this meeting.

The meeting was adjourned.

USGS
science for a changing world

Turbidity and Suspended Sediment Monitoring in the Upper Esopus Creek Watershed, Ulster County, NY
and
An Evaluation of Turbidity and Suspended Sediment in the Stony Clove Creek Watershed, Ulster County, NY

Jason Siemion and Michael R. McHale

USGS, New York Water Science Center

Danyelle Davis

NYCDEP, Stream Management Program

In Cooperation with the New York City Department of Environmental Protection

U.S. Department of the Interior
U.S. Geological Survey

Upper Esopus Sites

Primary Sites

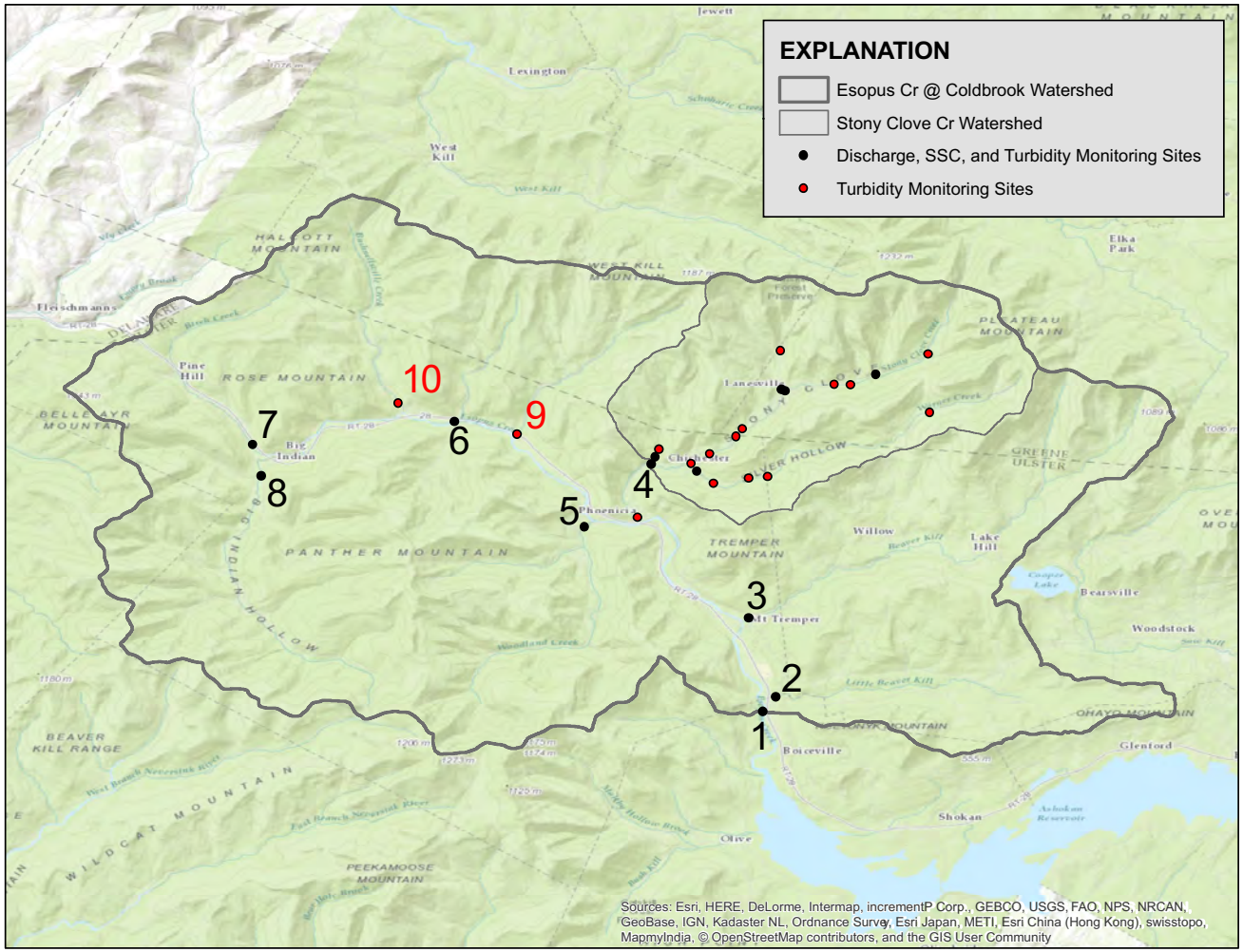
(streamflow, SSC, SSL, turbidity)

1. Esopus Creek @ Coldbrook
2. Little Beaver Kill
3. Beaver Kill
4. Stony Clove Creek
5. Woodland Valley Creek
6. Esopus Creek @ Allaben
7. Birch Creek
8. Esopus Creek @ Lost Clove

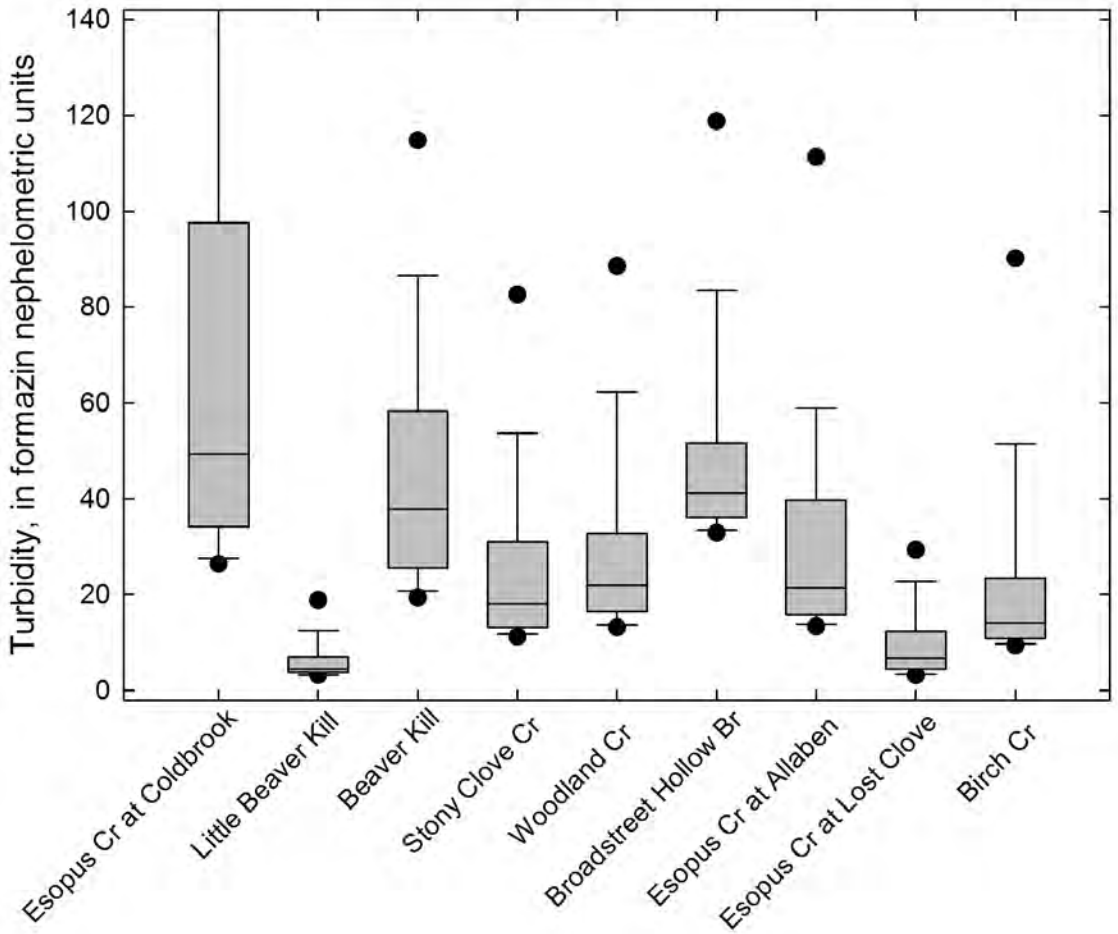
Secondary Sites

(turbidity only)

9. Broadstreet Hollow Brook
10. Bushnellsville Creek

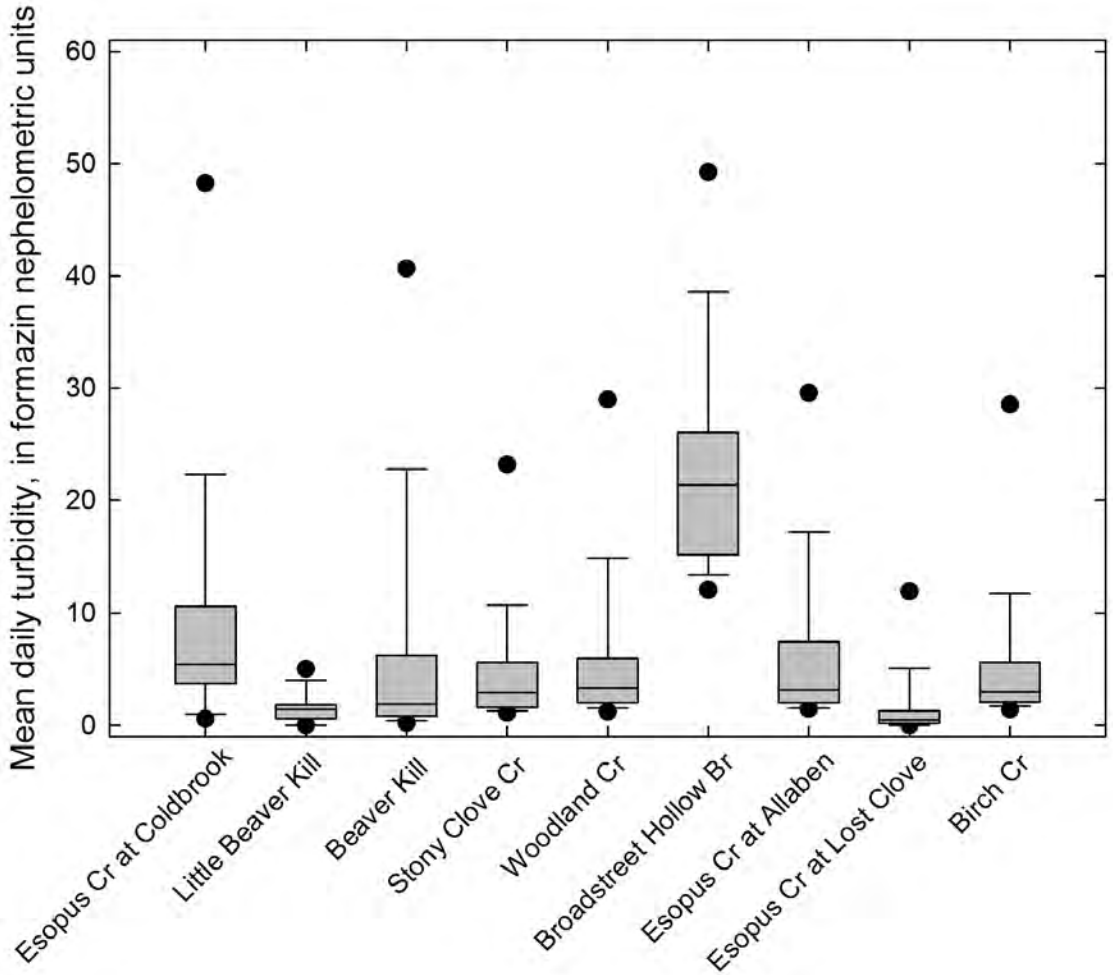


Which tributaries have the greatest turbidity values during high streamflows in the Esopus Creek watershed (1st six months of study)?



USGS

Which tributaries are contributing the greatest turbidity to the upper Esopus Creek across all streamflows (1st six months of study)?



USGS

Cornell University
Cooperative Extension
Ulster County

NYC Environmental Protection

ULSTER COUNTY Soil and Water Conservation District
PO Box 667, 3130 Rt. 28, Shokan, NY 12481
5 Park Lane, Highland, NY 12528

AWSMP Stakeholder Council

UCSWCD Planning for 2017

Adam Doan – Project Manager: Ulster County Soil and Water Conservation District

adam.doan@ashokanstreams.org

Ashokan Watershed
Stream Management Program

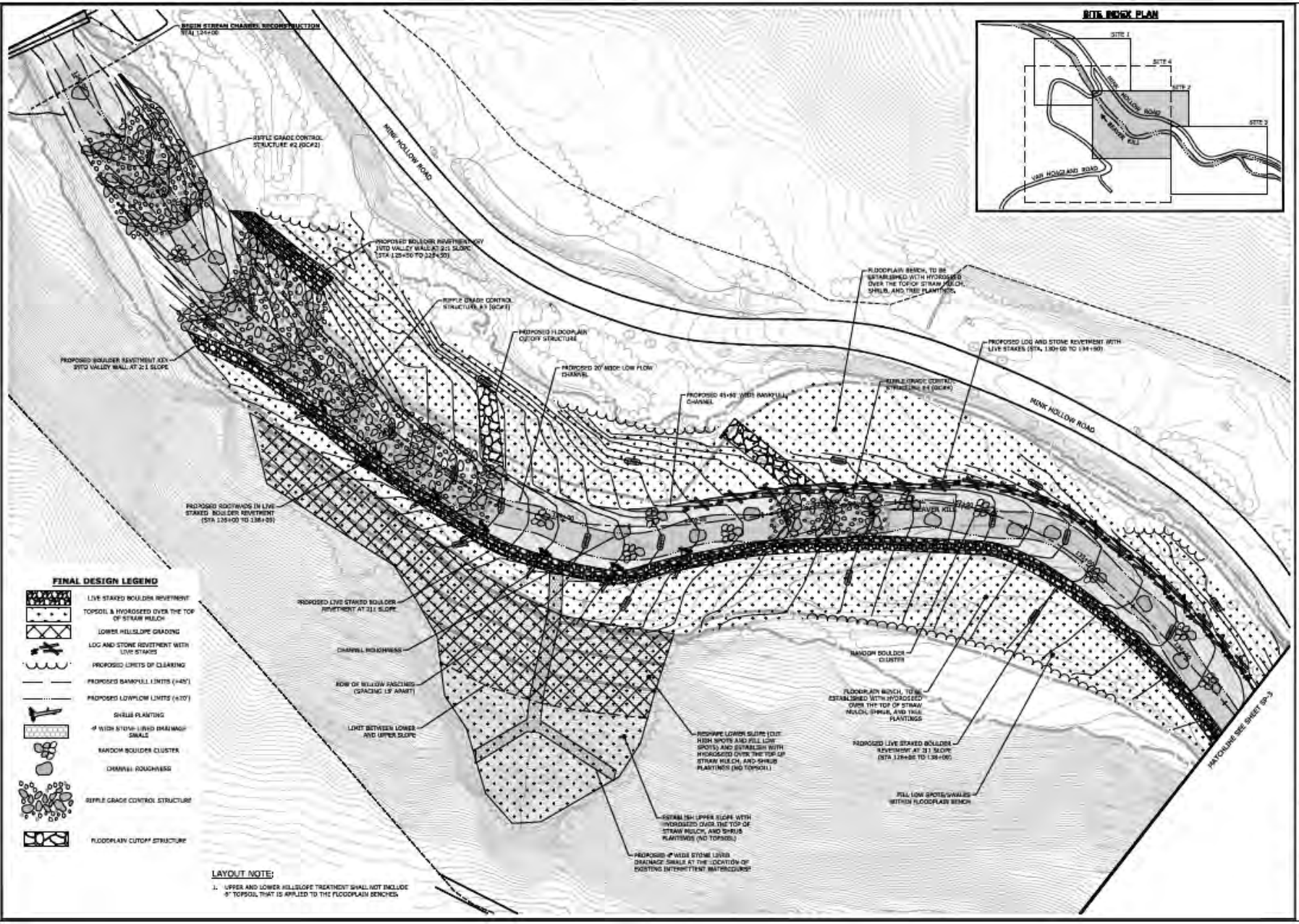

Hilltop D
by Hollow Brook
Bell Ln
Moon Haw Rd
Bell Ln
Every Rd
Every Rd
42
Brookside Dr
42
Watson Hollow Rd
Bush Kill
Watson
Hollow
Watson Hollow Rd

Bushkill Bioengineering US

Bushkill Bioengineering DS

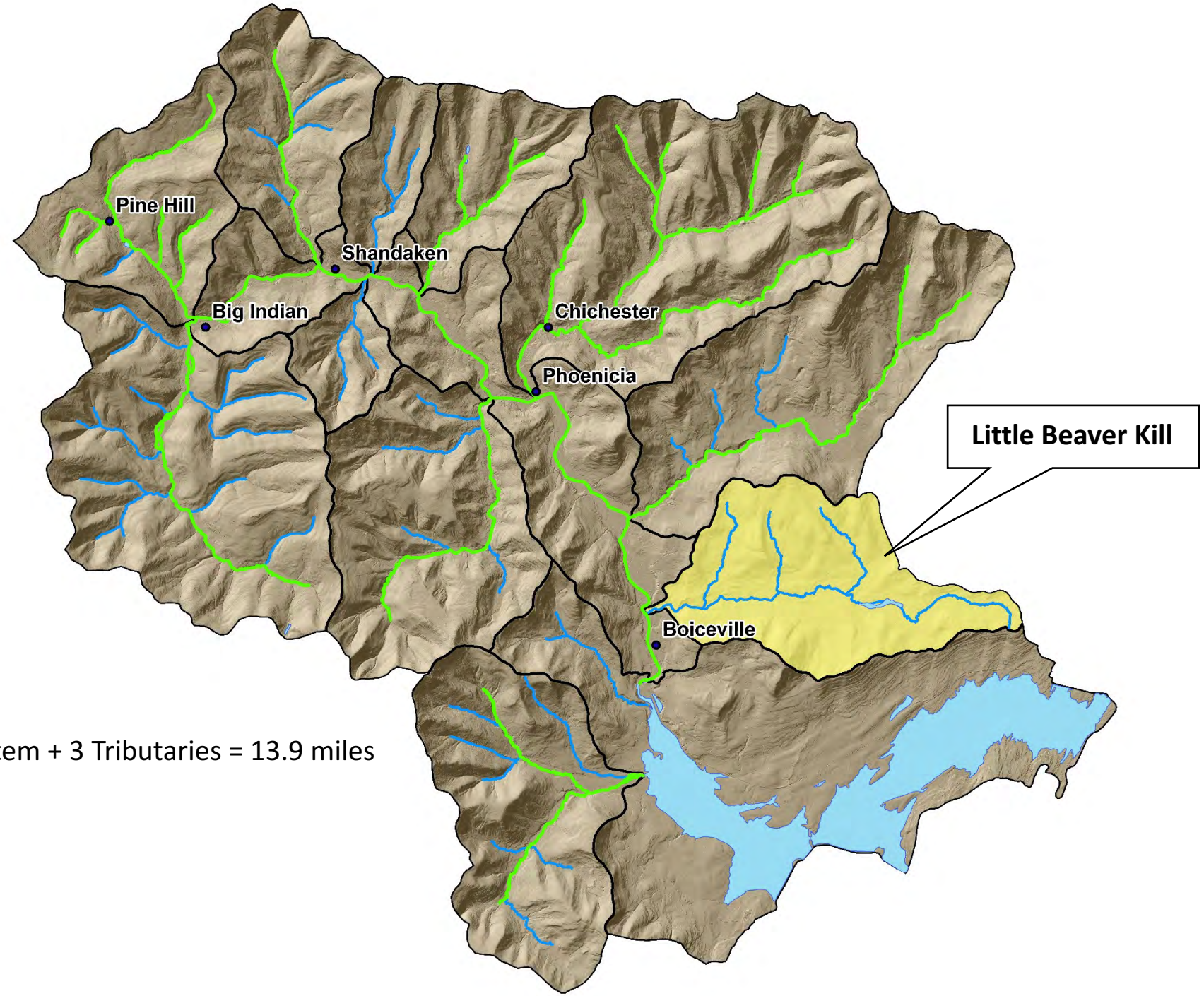
BVK @ Van Hoagland US

BVK @ Van Hoagland DS

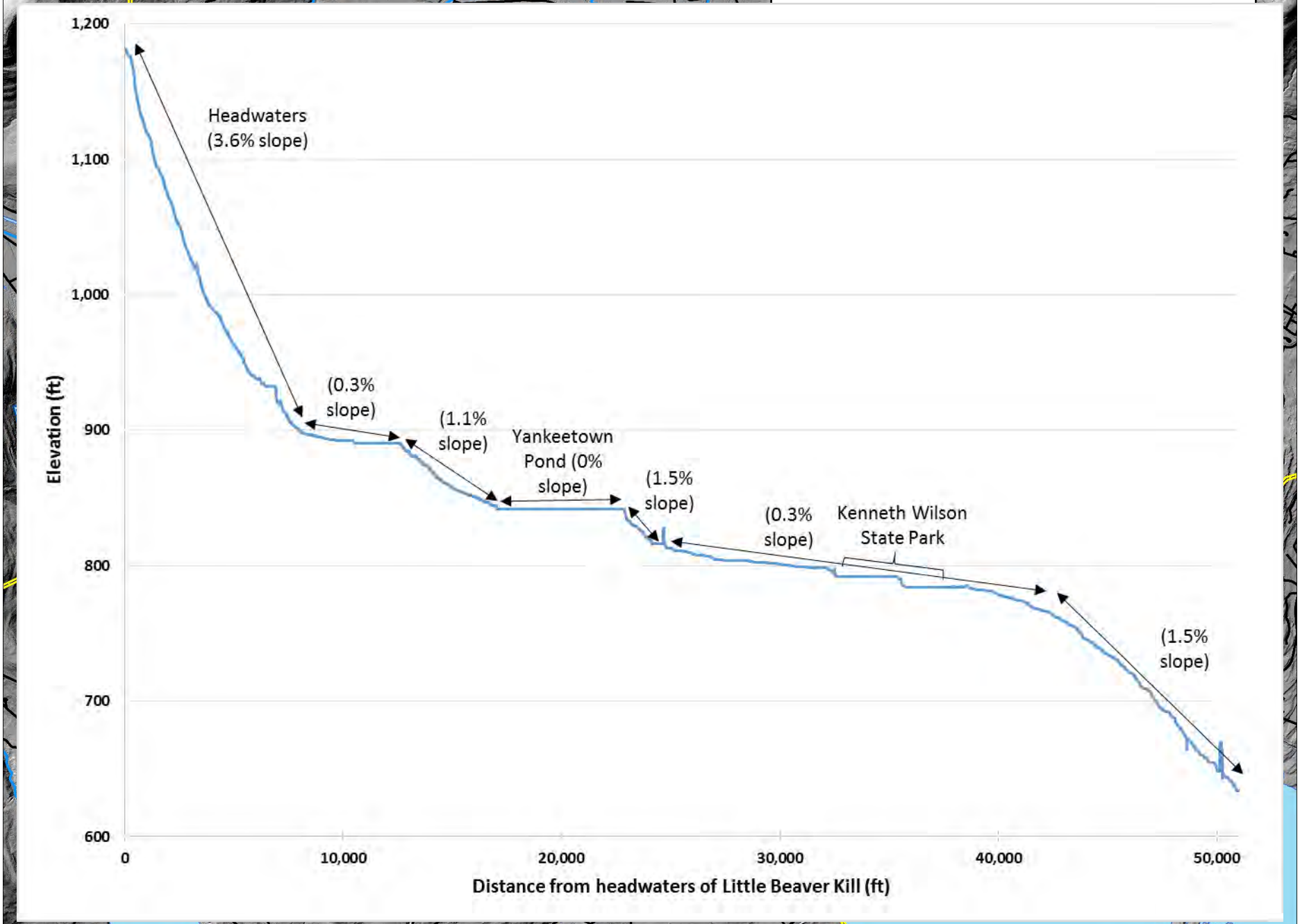

SITE INDEX PLAN
SITE 1
SITE 4
SITE 2
SITE 3
MINK HOLLOW ROAD
VAN HOAGLAND ROAD
BEAVER KILL
BEGIN STREAM CHANNEL RECONSTRUCTION STA 124+00
RIFFLE GRADE CONTROL STRUCTURE #2 (GCS#2)
PROPOSED BOULDER REVETMENT KEY INTO VALLEY WALL AT 2:1 SLOPE (STA 125+50 TO 128+50)
RIFFLE GRADE CONTROL STRUCTURE #3 (GCS#3)
PROPOSED FLOODPLAIN CUTOFF STRUCTURE
PROPOSED 20' MDOF LOW FLOW CHANNEL
PROPOSED 45+92' (MDF) BANKFULL CHANNEL
RIFFLE GRADE CONTROL STRUCTURE #4 (GCS#4)
FLOODPLAIN BENCH, TO BE ESTABLISHED WITH HYDROSEED OVER THE TOP OF STRAW MULCH, SHRUB, AND TREE PLANTINGS
PROPOSED LOG AND STONE REVETMENT WITH LIVE STAKES (STA. 130+00 TO 134+00)
PROPOSED BOULDER REVETMENT KEY INTO VALLEY WALL AT 2:1 SLOPE
PROPOSED ROOTWADS IN LIVE STAKED BOULDER REVETMENT (STA 125+00 TO 136+00)
PROPOSED LIVE STAKED BOULDER REVETMENT AT 2:1 SLOPE
CHANNEL ROUGHNESS
ROW OF WILLOW FASCINES (SPACING 15' APART)
LIMIT BETWEEN LOWER AND UPPER SLOPE
RANDOM BOULDER CLUSTER
RESHAPE LOWER SLOPE (CUT HIGH SPOTS) AND FILL LOW SPOTS) AND ESTABLISH WITH HYDROSEED OVER THE TOP OF STRAW MULCH, AND SHRUB PLANTINGS (NO TOPSOIL)
FLOODPLAIN BENCH, TO BE ESTABLISHED WITH HYDROSEED OVER THE TOP OF STRAW MULCH, SHRUB, AND TREE PLANTINGS
PROPOSED LIVE STAKED BOULDER REVETMENT AT 2:1 SLOPE (STA 128+00 TO 136+00)
FILL LOW SPOTS/SWALES WITHIN FLOODPLAIN BENCH
ESTABLISH UPPER SLOPE WITH HYDROSEED OVER THE TOP OF STRAW MULCH, AND SHRUB PLANTINGS (NO TOPSOIL)
PROPOSED 4' WIDE STONE LINED DRAINAGE SWALE AT THE LOCATION OF EXISTING INTERMITTENT WATERCOURSE
MATCHLINE SEE SHEET SP-3
FINAL DESIGN LEGEND
LIVE STAKED BOULDER REVETMENT
TOPSOIL & HYDROSEED OVER THE TOP OF STRAW MULCH
LOWER HILLSLOPE GRADING
LOG AND STONE REVETMENT WITH LIVE STAKES
PROPOSED LIMITS OF CLEARING
PROPOSED BANKFULL LIMITS (+40')
PROPOSED LOWFLOW LIMITS (+10')
SHRUB PLANTING
4' WIDE STONE LINED DRAINAGE SWALE
RANDOM BOULDER CLUSTER
CHANNEL ROUGHNESS
RIFFLE GRADE CONTROL STRUCTURE
FLOODPLAIN CUTOFF STRUCTURE
LAYOUT NOTE:
1. UPPER AND LOWER HILLSLOPE TREATMENT SHALL NOT INCLUDE 6" TOPSOIL THAT IS APPLIED TO THE FLOODPLAIN BENCHES.
MILONE & MACBROOM
SITE PLAN - SITE 2 HILLSLOPE RESTORATION
BEAVER KILL AT VAN HOAGLAND ROAD
STREAM RESTORATION
VAN HOAGLAND ROAD
TOWN OF WOODSTOCK, ULSTER COUNTY, NEW YORK
FINAL DESIGN
DRM
DRM
WMD
1"=50'
MAY 2017
4284-09
08 OF 20
SP-2

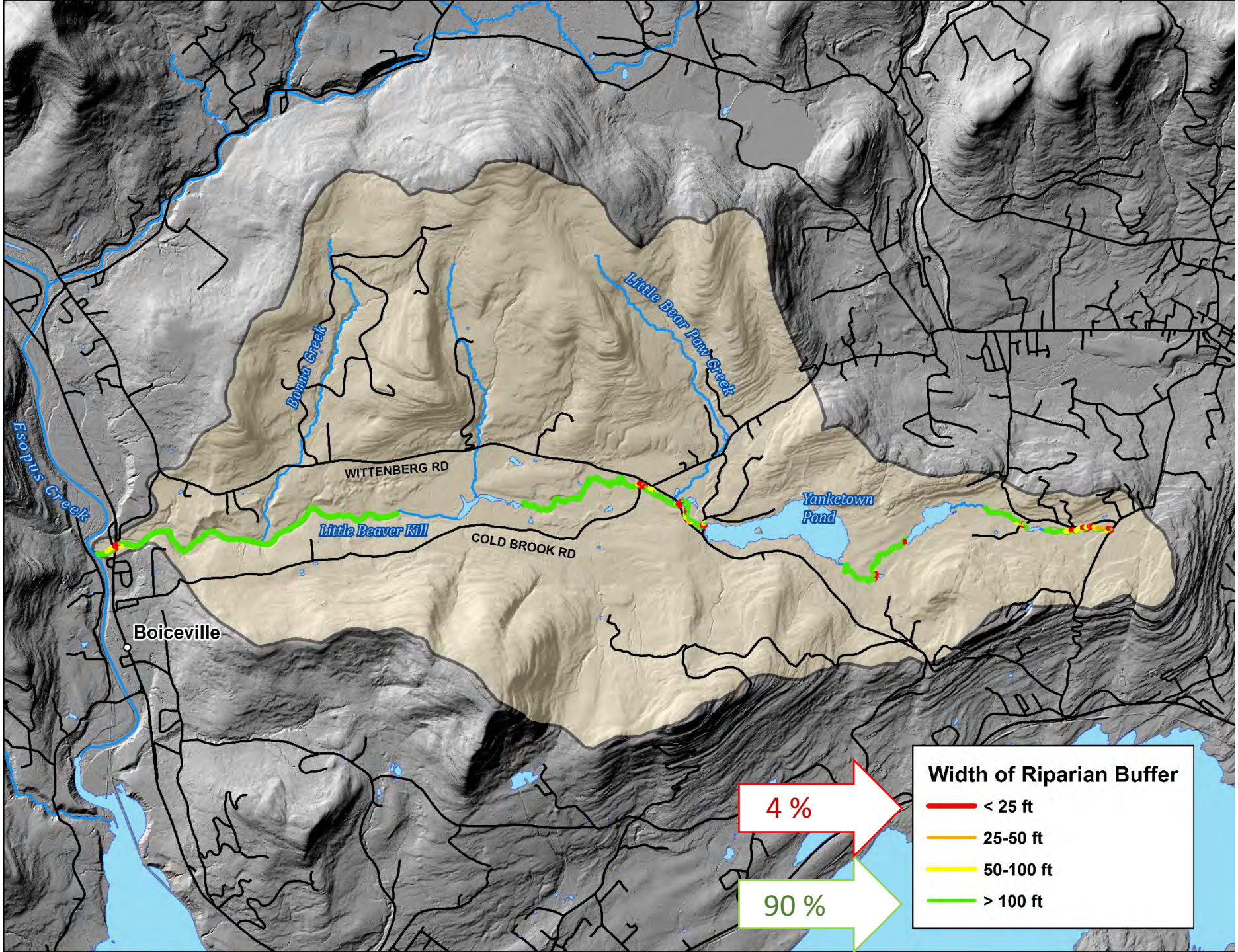
Woodland Creek @ WVLA


Pine Hill
Shandaken
Big Indian
Chichester
Phoenicia
Boiceville



Mainstem + 3 Tributaries = 13.9 miles


1,200
1,100
1,000
900
800
700
600
Elevation (ft)
Headwaters
(3.6% slope)
(0.3%
slope)
(1.1%
slope)
Yankeetown
Pond (0%
slope)
(1.5%
slope)
(0.3%
slope)
Kenneth Wilson
State Park
(1.5%
slope)
0
10,000
20,000
30,000
40,000
50,000
Distance from headwaters of Little Beaver Kill (ft)


Esopus Creek
Bonnie Creek
Little Bear Paw Creek
WITTENBERG RD
Little Beaver Kill
COLD BROOK RD
Yanketown Pond
Boiceville
4 %
90 %
Width of Riparian Buffer
< 25 ft
25-50 ft
50-100 ft
> 100 ft

- Crew of 4 to 5 people
- Field work from mid June through July