



July 24, 2014

Emily Lloyd
Commissioner

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Bureau of Public Water Supply Protection
Empire State Plaza – Corning Tower 11th Floor
Albany, NY 12237

Phil Sweeney
United States Environmental Protection Agency - Region II
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New York, NY 10007-1866

Dear Dr. Young and Mr. Sweeney:

Enclosed is the DEP Response to the NYSDOH/USEPA Comments on 2007 FAD Deliverables submitted through May 2014. The following documents are attached:

- NYC Land Acquisition Program Solicitation Methodology for the Riparian Buffer Acquisition Program, New York City Flood Buyout Program, and WAC Farm / Forest Conservation Easement Program 2012-2017, Revised July 2014.
- Delaware County Stream Corridor Management Program, Two-Year Action Plan for the West Branch Delaware River, Cannonsville Reservoir Basin, May 2014 – April 2016
- EBDR and WBDR Action Plans 2014 Recommendation-Prioritization of Identified Stream Intervention Projects

As always, if you have any questions about these comments or other aspects of the City's watershed protection efforts, please do not hesitate to contact me.

Sincerely,

David S. Warne
Assistant Commissioner

**DEP Response to NYSDOH/USEPA Comments on the FAD Deliverable Reports
Submitted May 31, 2014
Response Date July 24, 2014**

4.2 Land Acquisition Program

The Land Acquisition Solicitation methodology was submitted as required by the Revised 2007 FAD. NYSDOH/USEPA understand that the farm easement solicitation process involves a few steps, including discussions, eligibility evaluation, and an application. If all the steps are successfully completed, the acreage will be counted as solicited "for the applicable year." NYSDOH /EPA support this process, but want ensure that the frequency of resolicitation is consistent with the base LAP. Please provide confirmation that this will be the case. Include language that prevents acreage for which the solicitation process may span more than one calendar year from being credited for solicitation in successive years, and resubmit the farm easement methodology.

DEP Response:

WAC meets annually with the owners of virtually all farms with Whole Farm Plans, so even those who do not express interest in a CE one year are reached out to again the following year. However, "resolicitation" as defined for eligibility purposes here will only include farms that express interest and would be eligible for a CE. An interested and eligible farm that is counted as solicited in one year will thus not likely be considered solicited the next, because it will be included in active CE effort with respect to negotiations, site design, appraisal, purchase offer, contract, etc. See revised document, attached.

Please clarify how the Riparian Buffer Acquisition Program is crediting acreage. The methodology indicates that DEP plans to credit the solicitation of the acreage of whole parcels at rate of twice the actual acreage if it is vacant. However, since only a portion of most parcels can be considered riparian, this crediting rate should be reevaluated.

DEP Response:

See proposed revision, attached, in which we propose to conservatively assign acreage values to properties based on their size and development status (i.e. vacant vs. residential).

Also, please describe the mechanisms in place, if any, to prevent a landowner from keeping portions of lot if he decide to divide the property after the initial solicitation to make a counter offer.

DEP Response:

There is nothing to prevent landowners from subdividing their properties prior to entering purchase contracts. However like all LAP acquisitions, RBAP will operate on a willing buyer / willing seller basis, and therefore counter-offers will be considered by the City and its partner based on the merits of each proposal on a case-by-case basis.

It is also not entirely clear how Forest CEs will be credited – as whole parcels, just the forested portions, or some combination of the two? Some landowners may want to keep part of a forested tract out of a CE. The document references Attachment Z of the MOA, the MOA, the FAD, and the WSP (final bullet on page three) describing how credits will be determined. NYSDOH/USEPA suggest that at least a summary of the property requirements from these references be provided in the current document.

DEP Response:

Solicitation of land for WAC Forest CEs will be performed in a way that is virtually identical to DEP’s solicitation of large properties: the entirety of the property is considered as solicited even if a building envelope or excluded area is subsequently implemented. Building envelopes are integral to the design of a CE, even though development is permitted within them, so it is appropriate to count them as a component of the Program. Excluded areas are often used in cases where (1) a landowner demands to retain land and this is acceptable in regard to project design, or (2) including the area in the CE would either be counter to the CE (i.e., landfills, debris fields, hazardous waste, etc.) or cause difficulties for the grantee (lengthy / expensive surveys with few acres, etc.). Excluded areas are not usually known at the time of solicitation, but are usually quite small.

4.6 Stream Management Program

The Revised 2007 FAD requires that, each year, a rolling two-year Action Plan be submitted for each of the West of Hudson Basins that outlines upcoming projects in the program areas (Stream Projects, CSBI, SMIP, Education/Outreach/Training, and LFHMP). Two-year action plans were submitted for the following basins: Ashokan, Pepacton, Rondout/Neversink, and Schoharie. No action plan was received for the Cannonsville basin.

DEP Response:

The Delaware County Soil and Water Conservation District (DCSWCD) has been operating on an Action Plan schedule of delivery outlined in its contract with DEP under the 2007 FAD, and that deliverable was not due for Cannonsville until next Spring, 2015.

In response to this request, the DCSWCD has updated the Action Plan for the Cannonsville Basin, attached as the file “West Branch Delaware SCMP Action Plan 2014-2016.” The updated Action Plan has not been reviewed and approved by the DCSWCD Project Advisory Council (PAC) as is their process before submission of the Action Plans to DEP, but will be presented and reviewed for approval at the Fall 2014 meeting of the PAC.

NYSDOH/USEPA appreciate the detailed Ashokan Plan, but ask for a short update that clarifies the current plan for 2014 projects. Please confirm that the Stony Clove/Warner Creek confluence project will proceed in 2014.

DEP Response:

The plan for stream projects for 2014 is to complete construction of the Stony Clove/Warner Creek confluence project and to construct two additional EWP

projects – Stony Clove at Stony Clove Lane (Shandaken) and Stony Clove near Wright Road (Hunter).

The confluence project was started in late 2013 and resumed site activities in late June 2014. Elevated flows have limited the current progress but we anticipate no problem with completion.

The two other Stony Clove projects are in the final stage of the design/permitting process. The intent is to begin construction on these in August 2014. There are two landowner issues that may preclude that implementation schedule:

Stony Clove Lane Project: One of the most important properties within this project is enrolled in the FEMA flood buy-out program initiated after Tropical Storm Irene. FEMA rules restrict investment of other federal funds to improve the property, but FEMA can waive this requirement. UCSWCD is managing this project and has requested FEMA waive this to allow this important water quality improvement project to proceed. UCSWCD has secured the tacit support of the landowner to allow this project to proceed as long as FEMA agrees that “improvements” to the property are not going to jeopardize the buy-out deal. At this time, we are waiting for a decision from FEMA. DEC Article 15 stream disturbance permit applications cannot be considered complete until all landowners have provided written agreement in support of the project. UCSWCD has submitted this stream disturbance permit application without this one agreement nonetheless.

Wright Road Project: One of the properties on the Wright Road project has no identified owner. A title search revealed that the last known deed was in the late 1960s and that it was owned by a defunct Greene County agency. Subsequent title search investigations have not been able to identify a current landowner. This property is an integral part of the stream restoration project design. UCSWCD is working with the Town of Hunter to identify how to resolve this issue so a permit application can be submitted to DEC.

The previous action plan listed three possible projects that are no longer included: Beacher Smith Property, Rt. 212 below s-curve, and Full Moon Resort. Briefly describe why these projects were removed. Describe which other Stony Clove projects (Wright Road, Stony Clove Lane) or Esopus Creek projects will be constructed this year.

DEP Response:

The Beacher Smith, Rt. 212 and Full Moon Resort projects were identified as possible EWP cost-shared projects and were in consideration for 2014 treatment, among other sites, including Wright Road, Stony Clove Lane and two projects at the Van Hoagland Road area in Woodstock.

DEP registered change orders in both the CCEUC and UCSWCD agreements to support continued implementation of EWP projects in 2014 – the final year the funds are available. Per the revised FAD, \$500,000 was added to the CCEUC agreement for application to EWP projects, and an additional \$1,041,000 was added to the stream restoration budget within the UCSWCD agreement to apply to the Wright Road, Stony Clove Lane, and up to two of the other pre-qualified EWP projects listed above.

UCSWCD, DEP and NRCS worked together to identify the additional two projects. The team prioritized the three Woodstock projects (Rt. 212, Van Hoagland sites) over the Full Moon Resort site and the Beacher Smith site. The Esopus Creek at Full Moon Resort and Beacher Smith projects were removed from the EWP eligibility list by the NRCS when they were not prioritized for 2014 construction by the team. Recall that the NRCS EWP Program requires the municipality to serve as the project's Sponsor. The team was very disappointed, despite its best efforts, to have the Town of Woodstock decline (in January 2014) to serve as Project Sponsor for the remaining projects. This effectively left only the Stony Clove Lane and Wright Road projects as viable for 2014 construction.

In the Ashokan Plan (page 14), please clarify the purpose of the grants to the Town of Olive (AWSMP-2013-69) and the Town of Shandaken Highway Department (AWSMP-2013-78), as the listed purposes are the same.

DEP Response:

There is an error in the table for the Town of Olive project. The purpose of the grant should be the following: "Engineering to determine appropriate sizing and design of a culvert replacement for the Hillside Drive crossing."

The Ashokan Plan indicates a stream assessment was completed for Bushnellsville Creek in 2013 (page 22). However, this plan is not listed on the Program's website (<http://ashokanstreams.org/exploring-the-watershed/bushnellsville-creek/>), which states: "Bushnellsville Creek has not yet been assessed. A full report on Bushnellsville Creek conditions and management recommendations will be available on this website when it becomes available." Please clarify this discrepancy.

DEP Response:

The website currently has the following statement: "Bushnellsville Creek was assessed in 2013. A full report on Bushnellsville Creek conditions and management recommendations is under development and will be available on this website when completed". UCSWCD is currently approximately 80% complete with the Bushnellsville Creek report.

For the East Branch Delaware Plan, please provide expanded descriptions of all the projects and programs listed in Recommendation 13 and include target milestone dates for each.

DEP Response:

The attached file, titled "Stream Project Milestones_2014 EBDR and WBDR Action Plans," provides the schedules proposed by DCSWCD for all stream intervention projects planned in the coming two year period. Enhanced descriptions of the projects are viewable at <http://catskillstreams.org/stream-management-program/grants/>.

For the Rondout/Neversink Plan, it is not clear that there will be any demonstration or restoration projects conducted in 2014, including CSBI. If there are projects planned, please provide the locations and target completion dates for each.

DEP Response:

The focus of summer 2014 work in this basin is stream feature inventories and assessments, and CSBI projects. Two CSBI projects were completed spring 2014, and four additional projects are in process and will be constructed when the weather cools in the fall.

Completed in Spring 2014

Neversink Fairground: 145' of willow bioengineering (fascines), 0.27 acres of planting

Biscuit Brook Phase 2 (Frost Valley YMCA): 560' of willow bioengineering (fascines), 0.47 acres of planting

Planned Fall 2014

DEP Grahamsville Facility Planting: Red Brook and Chestnut Creek -- 2.30 acres of planting

EB Neversink River/Flat Brook Planting: 850 feet including 200 feet of willow bioengineering

WB Neversink River at Frost Valley Road Planting: 250 feet

WB Neversink River at Frost Valley YMCA (location #2) Planting: 1,060 linear feet

NYSDOH/USEPA request that DEP and its partners merge the annual rolling two-year action plans for the Cannonsville and Pepacton basins. Most of the listed tasks clearly overlap (such as education/outreach, gravel and debris management, flood hazard mitigation, and streamline work permitting). Merging the action plans would also allow for reporting on stream project and CSBI workplans on a more frequent basis.

DEP Response:

Delaware County Soil and Water Conservation District will merge the Pepacton and Cannonsville Action Plans, beginning with the submission in spring 2015.

In general, the submitted action plans contain useful information, are well organized, and reflect tremendous efforts of the dedicated and talented SMP teams. NYSDOH/USEPA recommend that, to the extent possible, efforts should be made to develop a common design and format for these action plans. Great variability in formatting makes it difficult for the reader to efficiently process provided information and make comparisons/assessments.

DEP Response:

DEP, and our partners, appreciates the acknowledgment of the effort that goes into the Action Plans and we will consider a common design and format. If you have feedback for us on which format you found most easily accessible, that would be valuable to us.

*NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER SUPPLY*

**NYC Land Acquisition Program Solicitation Methodology for
The Riparian Buffer Acquisition Program,
New York City Flood Buyout Program,
And WAC Farm / Forest Conservation Easement Programs
2012-2017**

May 2014
Revised July 2014

*Prepared in accordance with Section 4.2 of the
March 2014 Revised Draft 2007 Filtration Avoidance Determination*



Prepared by: DEP, Bureau of Water Supply

Section 4.2 of the 2014 FAD requires the City to provide methodology for crediting acres solicited within the following programs: the Riparian Buffer Acquisition Program (“RBAP”), the NYC Flood Buyout Program (“NYC FBO”), and the Farm & Forest Easement Program managed by the Watershed Agricultural Council (“WAC CEs”). The FAD directs the City to take credit for acreage solicited through these programs as follows:

Program	Maximum Credit Allowed
RBAP	Double the number of acres solicited annually
NYC FBO	Double the number of acres solicited annually
WAC CEs	Up to 10,000 acres annually

Methodology

Each program has or will have distinct solicitation methodologies, although most are not completely determined because many program details (with the exception of WAC Farm Easements) have yet to be finalized. Nonetheless we can describe methodologies that will be used to count the acreage solicited in each program, as follows:

RBAP

Properties will be considered as ‘solicited’ using the following approach, which seeks to strike a balance between efficient methodology and accurate bookkeeping by crediting acreage very conservatively. The solicitation process for RBAP is consistent with the process as outlined in the 1997 Memorandum of Agreement, although it will not strictly count all acres that could be eligible. Solicited acreage will be tallied as follows (all figures are prior to the doubling credit allowed pursuant to the FAD):

Acreage to be Counted as Solicited Under RBAP

Property Size	If Vacant, solicited acres to Equal:	If Developed, solicited acres to Equal:
<10 Acres	Size of property	
>10 Acres	10 acres (capped)	
<15 Acres		Zero acres. ¹
>15 Acres		10 acres (capped)

Exception to the 10-acre cap: more than ten acres may be counted towards RBAP solicitation if the area eventually appraised is substantially larger than the original solicitation figure assigned. In such cases the City may add the acreage appraised to the solicitation total for the calendar year in which it was appraised.

NYC FBO

This is a case where the exact methodology can’t be determined until the Program Plan has been completely fleshed out, which is unlikely until late 2014 or early 2015. We do know that solicitation will only apply in towns that ‘opt in’ to the Program, and that a property will be considered solicited if outreach to the owner has followed a process established by the City (or by the City and its partner). It is expected that any property receiving outreach would be considered solicited in its entirety, whether vacant or improved.

WAC CEs

Farms:

- WAC conducts Annual Status Reviews (ASR) on each farm that is covered by a Whole Farm Plan (WFP). During the ASR, WAC informs the landowner about the Agricultural Conservation

¹ DEP will take zero acreage credit for soliciting developed parcels under 15 acres because it is assumed that non-trivial acreage (in the range of 30% or more of the property) surrounding the dwelling would often be retained by seller, and it is not worthwhile to calculate the remaining acreage for purposes of solicitation credit.

Easement Program, distributes an application and CE brochure, and asks if the landowner has an interest in selling a CE.

- Interested landowners are marked as such in WAC's database. WAC staff periodically prints reports listing farms and acreage. Farms that have expressed interest and that may be considered eligible for the CE program receive an application that must be filled out and returned to WAC by the landowner in order to proceed.
- Farms that reach the point where WAC has initiated follow-up contact, the owner has expressed interest in the CE Program, and the property has been deemed eligible (including but not limited to being outside a designated hamlet, in compliance with WFPs, in accordance with CE size and quality standards, etc.), will be tallied as solicited for the applicable calendar year. Acreage is not expected to be counted twice in successive years because an eligible farm that expressed interest one year would likely have been pursued by WAC in the year reported, and thus would not be pursued the following year.

Forests:

- Forest CE solicitations are expected to be determined in ways much closer to DEP's process than to those in the Farm CE Program, and if the properties meet all requirements of the MOA, FAD and WSP, such acreage would credit toward LAP solicitations.

EBDR and WBDR Action Plans 2014
Recommendation -- Prioritization of Identified Stream Intervention
Projects

West Branch Action Plan Projects

1. Beers Brook Stream Bank Stabilizations (site 8a and site 8d), Town of Walton
 1. Milestone:
 - a. Project Design Completed – May 2014
 - b. Project Permitted – July 2014
 - c. Estimated Project Completion – October 2014
2. Chambers Hollow streambank stabilization project, Town of Hamden (EWP project)
 1. Milestone:
 - a. Project Design Completed – May 2014
 - b. Project Permitted – July 2014
 - c. Estimated Project Completion – October 2014
3. Town of Walton River Access, Catskill Developments Foundation, Inc.
 1. Milestone:
 - a. Project Design Completed – July 2014
 - b. Project Permitted – July 2014
 - c. Estimated Project Completion – October 2014
4. Hamden Boat Launch, Town of Hamden
 1. Milestone:
 - a. Project Design Completed – July 2014
 - b. Project Permitted – July 2014
 - c. Estimated Project Completion – October 2014
5. Boat Launch, Signage of Hoyt's Park, Village of Delhi
 1. Milestone:
 - a. Estimated Plan Completion – December 2014
6. Boat Launch, Signage at Fitch's Cover Bridge, Town of Delhi
 1. Milestone:
 - a. Estimated Completion – October 2015
7. Medium Hydraulic Structure Study, Delaware County Dept. of Public Works
 1. Milestone:
 - a. Plan Draft – December 2014
8. Little Delaware Streambank Stabilization/restoration project, Town of Bovina
 1. Milestone:
 - a. Estimated Project Design – December 2014
 - b. Estimated Project Completion – October 2015

EBDR and WBDR Action Plans 2014

Recommendation -- Prioritization of Identified Stream Intervention Projects

9. Lake Brook Stabilization / Odell Lake Road Ext. Culvert Replacement, Town of Harpersfield

- a. Estimated Project Design – December 2014
- b. Estimated Project Completion – October 2015

West Branch Action Plan Programs:

10. Walton School Gravel Study, Walton Central School

1. Milestone:

- a. Purchase Equipment - January 2013
- b. Training for students – May 2013
- c. Preliminary Data – June 2013
- d. Draft Report - July 2014
- e. Estimated Project Completion – December 2014

11. Village and Town of Walton LFA

1. Milestone:

- a. Preliminary Data - April 2014
- b. Public Meeting – May 2014
- c. Walton Flood Commission Meeting – July 2014
- d. Estimated Draft Report - September 2014
- e. Estimate Public Review Meeting – October 2014
- f. Estimated Project Completion – December 2014

12. Village of Delhi River Walk, Village of Delhi

1. Milestone:

- a. Steering Committee Meeting – February & April 2014
- b. Preliminary Design - April 2014
- c. Public Village Planning Board Meeting – May 2014
- d. Estimated Draft Report - September 2014
- e. Estimate Public Review Meeting – October 2014
- f. Estimated Project Completion – December 2014

13. Cummings Road Drainage & Stream clean-up, Town of Masonville

1. Milestone:

- a. Draft Request for Proposal – April 2013
- b. Request for Proposal and hire consultant – December 2014
- c. Design complete December 2015.

EBDR and WBDR Action Plans 2014

Recommendation -- Prioritization of Identified Stream Intervention Projects

East Branch Action Plan Projects

14. Little Dingle Hill Stream Stabilization
 1. Milestone:
 - a. Project Survey – June 2014
 - b. Estimated Project Design – December 2014
 - c. Estimated Project Completion – October 2015
15. Holiday Brook Stream Stabilization
 1. Milestone:
 - a. Project Survey – June 2014
 - b. Estimated Project Design – July 2014
 - c. Estimated Project Completion – October 2014
16. Gulf Road Stream Stabilization
 1. Milestone:
 - a. Project Survey – June 2014
 - b. Estimated Project Design – July 2014
 - c. Estimated Project Completion – October 2014
17. Briggs Road Stream Stabilization
 1. Milestone:
 - a. Project Survey – August 2014
 - b. Estimated Project Design – December 2014
 - c. Estimated Project Completion – October 2015

East Branch Action Plan Programs:

18. Ballentine Park Master Plan
 1. Milestone:
 - a. Steering Committee Meeting – 2013
 - b. Preliminary Design - February 2014
19. Fleischmanns Local Flood Analysis
 1. Milestone:
 - a. Preliminary Data - April 2014
 - b. Public Meeting – May 2014
 - c. Estimated Draft Report - September 2014
 - d. Estimate Public Review Meeting – October 2014
 - e. Estimated Project Completion – December 2014

**DELAWARE COUNTY STREAM CORRIDOR MANAGEMENT PROGRAM
TWO-YEAR ACTION PLAN FOR THE WEST BRANCH DELAWARE RIVER
CANNONVILLE RESERVOIR BASIN
May 2014 - April 2016**



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Develop a Process for Updating the West Branch Delaware River Stream Corridor Management Plan

Introduction:

A comprehensive Stream Corridor Management Plan (SCMP) for the West Branch Delaware River was completed in 2005 by the Delaware County Soil & Water Conservation District (DCSWCD) Stream Corridor Management Program, New York City Department of Environmental Protection (NYCDEP), and Delaware County Planning Department (DCPD). The DCSWCD in partnership with DCPD and NYCDEP, are implementing the plan's 17 recommendations. This Two-Year Action Plan for the West Branch Delaware River outlines action items that are related to the implementation of the SCMP recommendations and the overall program development.

During the development of the West Branch Delaware River SCMP, a Project Advisory Committee (PAC) was formed to represent the interests of local officials, residents, businesses, and agencies living and working in the Cannonsville Reservoir watershed. The PAC assisted in the preparation of the SCMP recommendations and is now working collaboratively to guide the Stream Corridor Management Program (SCMP) in the implementation of the recommendations. Since completion of this plan, the program has also completed a SCMP for the East Branch of the Delaware River (2007) and was assisted by a separate PAC. Since the completion of the East Branch Delaware SCMP the two PAC's have merged. This joint PAC provides review and comment on program development and projects in both West and East Branch basins to the SCMP. The PAC is assisted by four sub-committees with the following focus: Fisheries and Recreation, Education and Outreach, Highway Infrastructure, and Floodplain Management. These sub-committee contribute their expertise to furthering the fulfillment of the relevant recommendations of the SCMP.

The implementation of the recommendations are accomplished through the following program elements:

Delaware Watershed Stream Management Grant Program (SMIG)

The Delaware Watershed Stream Management Grant Program (SMIG), established in 2010, funds eligible stream and floodplain water quality protection construction projects and programs that advance the recommendations for municipalities that have adopted the Stream Corridor Management Plan and signed a Memorandum of Agreement with the Delaware County Soil and Water Conservation District.

Local Flood Hazard Mitigation Program

In response to major flood events in 2006 and 2011, the Delaware Stream Corridor Management Program partners have advanced the proposal for a watershed wide flood hazard mitigation effort that will identify the most beneficial projects for reducing flood related losses and water quality impacts and provide funds to implement those projects. In coordination with the CWC and at the request and direction of municipal government, the program will assist with the analysis, planning, funding, design and construction of hazard mitigation projects beginning during this Action Plan period. This effort will require the cooperation of all relative

government entities, utilize the support of consultants and rely on the local knowledge of community leaders and residents. Funds will be made available for projects through the SMIP.

Catskill Streams Buffer Initiative (CSBI) funding

Catskill Stream Buffer Initiative (CSBI), established in 2009, works with local streamside landowners to provide assistance to enhance and maintain riparian buffers. Technical assistance includes; landowner consultation, landowner riparian corridor management plans that include operation and maintenance plans, and native vegetative plantings to establish or enhance riparian buffers.

Demonstration project funding

Demonstration projects utilize new and innovative stream management techniques with educational value. These projects make use of fluvial geomorphic principles and the scale of the project may vary from localized activities such as stream bank stabilization to more extensive stream restoration projects.

Conservation Reserve Enhancement Program (CREP) Assistance

Provide assistance for the implementation of Conservation Reserve Enhancement Program (CREP) in agricultural areas where streambank stability issues make those lands ineligible for buffer enhancement under the CREP's guidelines.

Stream Corridor Management Program technical assistance and general support

Stream Corridor Management Program staff from each of the partnering agencies (the Delaware County Soil and Water Conservation District, New York City Department of Environmental Protection and Delaware County Planning Department) provide technical, planning and educational support for a range of stakeholders on water quality related issues such as floodplain management, flood response and recovery, debris and infrastructure management, property protection, aquatic habitat and recreation concerns. Support can include assessments, plans, designs, training workshops and general advice to stakeholders.

The following recommendations from the West Branch Delaware SCMP are related to one or more of these elements and draw upon the respective program staff and financial resources. The separate Two Year Action Plan for the East Branch Delaware River SCMP also directs the activities of the program and commitment of funds for projects and programs in the Pepacton basin. The Action Plans for these two basins will be combined in 2015.

Recommendation 1: Integration of the Stream Corridor Management Program and the Watershed Agricultural Program

The New York City Department of Environmental Protection (NYCDEP), Stream Corridor Management Program (SCMP) and Watershed Agricultural Council (WAC) should develop and implement mechanisms to comprehensively integrate stream corridor management and stewardship into the Whole Farm Planning and implementation process.

Action Items:

1. Provide Stream assessment training to Watershed Agricultural Program planning and technical staff to identify and classify impaired stream segments during the development or revision of individual Whole Farm Plans.
 - May 2014 – April 2016, SCMP Staff
2. Continue to implement the MOU between DCSWCD and the WAC and its protocols for providing technical assistance to the Watershed Agricultural Program. Renew the MOU with the WAP in 2014.
 - May 2014 - April 2016 DC SWCD SCMP Coordinator, DCSWCD Executive Director, and DCSWCD Technical Coordinator, NYCDEP Project Manager.
3. Provide assistance to the WAP Planning Staff in techniques for proper placement and planning of stream related agricultural Best Management Practices.
 - May 2014 – April 2016 DCSWCD SCMP Staff
4. Provide engineering approval, technical support, and individual project design assistance to Watershed Agricultural Program engineers and technicians as per the Protocol Identified in action item #2 above.
 - May 2014 – April 2016, DCSWCD SCMP Coordinator, SCMP Professional Engineer, and DCSWCD SCMP Staff

Recommendation 2: Provide Technical Support to the USDA Conservation Reserve Enhancement Program (CREP)

The Stream Corridor Management Program (SCMP) and the NYCDEP should continue to fund and provide technical and design assistance for stream bank stabilization projects at potential CREP sites. The goal of this assistance is to stabilize stream banks so they are eligible for CREP participation.

Action Items:

1. Continue to develop the prioritization process for providing technical and financial assistance to the WAP on CREP projects.
 - May 2014 – April 2016 SCMP Coordinator, NYC DEP Project Manager, WAP Program Managers
2. Provide stream evaluation and assessment assistance to the Watershed Agricultural Program planners to determine if stream instability issues will preclude CREP enrollment. Training and ongoing assistance.
 - May 2014 – April 2016 SCMP Coordinator, SCMP PE, SCMP technicians, and NYC DEP as needed
3. Provide design assistance and engineering approval to the Watershed Agricultural Program engineers and technicians in the preparation of approved stream stabilization designs and projects that facilitate CREP enrollment.
 - May 2014 – April 2016 SCMP Coordinator, SCMP PE, SCMP technicians, and NYC DEP as needed
4. Provide funding to the Watershed Agricultural Program for stream stabilization projects that facilitate CREP enrollment
 - May 2014 – April 2016 SCMP Staff
 - i. Willard J. Frisbee, Town of Delhi DEC-SF-043
5. In cooperation with the Watershed Agricultural Program, evaluate stream instability issues for remediation on existing CREP sites.
 - May 2014 - April 2016 SCMP Coordinator, SCMP PE, and SCMP Technicians
 - i. Dominick Siniscalchi, Town of Tompkins, DEC-184
6. Provide funding to the Watershed Agricultural Program for stream projects that stabilize existing CREP sites.
 - May 2014 – April 2016 SCMP Staff
7. Continue to monitor and evaluate the success of the bank stabilization projects
 - May 2014 – April 2016 SCMP Staff

Recommendation 3: Enhance the Implementation of CREP on New York City Watershed Cropland and Explore Long – Term CREP Contracts

The Stream Corridor Management Program (SCMPr) should work with the New York City Department of Environmental Protection, United States Department of Agriculture, US Environmental Protection Agency, Watershed Agricultural Council and other pertinent federal, state and local agencies and organizations to enhance CREP implementation on cropland and explore long-term CREP contracts.

Action Items:

1. Develop an interagency working group to prepare a white paper requesting USDA / FSA to enhance rental payments for CREP riparian buffers on cropland.
 - May 2014 – April 2016 WAP Staff, DEP Staff, SCMPr Staff
2. Explore options to maintain riparian buffers after CREP contract expiration and submit written recommendations. Development of an interagency advisory committee with Delaware County
 - May 2014 – April 2016 WAP Staff, SCMPr Staff, DEP Staff, DC Staff

Recommendation 4: Implement a Variable Width Riparian Buffer Pilot Program

The Delaware County Soil and Water Conservation District (DCSWCD) Stream Corridor Management Program (SCMP_r) should work with the New York City Department of Environmental Protection (NYCDEP), New York State Department of Environmental Conservation, Watershed Agricultural Council, Catskill Watershed Corporation, Cornell Cooperative Extension and other pertinent federal, state and local agencies and organizations to develop and implement a pilot program to establish variable width riparian buffers along unstable stream reaches and monitor their effectiveness.

Action Items:

1. CSBI will initiate a process defining eligible sites and for implementing variable width buffers
 - May 2014 - April 2016 DCSWCD CSBI Coordinator and NYC DEP CSBI Coordinator with NYC DEP and DCSWCD staff input
2. Identify potential sites for demonstration of a variable width riparian buffer pilot project. Implement one demonstration project
 - May 2014 – April 2016 SCMP_r Staff, DEP Staff, WAP Staff

Recommendation 5: Participation with the Catskill Watershed Corporation

The Stream Corridor Management Program (SCMP) should cooperate with the Catskill Watershed Corporation (CWC) to explore the enhancement of existing CWC programs and explore the development of new CWC funding programs that address stream related stormwater issues, stream stewardship, public education and outreach, and stream stability issues.

Action Items:

1. Provide technical assistance as requested for stream related CWC funded projects.
 - May 2014 – April 2016 SCMP Staff, NYC DEP Staff, CWC Staff
2. Explore ways to coordinate stream related education and outreach efforts (such as Catskill Streams and Watershed Education Program) with CWC.
 - May 2014 – April 2016 SCMP Staff, CWC Staff
3. Coordinate with CWC on Local Flood Hazard Mitigation Program including the analysis of flood problems, identification and funding of potential mitigation projects.
 - May 2014 – April 2016, Executive Directors and staff of DCSWCD, NYC DEP, DC Planning, and CWC

Recommendation 6: Stream Corridor Management Plans for Non-Agricultural Riparian Landowner Stewardship

The Stream Corridor Management Program (SCMP) should seek funds to develop a program to provide non-agricultural riparian landowners with their own site specific Stream Corridor Management Plans.

Action Items:

1. Continue the implementation of the Catskill Streams Buffer Initiative (CSBI) through the DCSWCD Stream Corridor Management Program Contract funded by NYC DEP.
 - May 2014– April 2016 SCMP Staff, NYC DEP CSBI Coordinator
2. Periodically update the protocol for prioritizing the implementation of the Catskill Streams Buffer Initiative and strategies for soliciting participation in the program.
 - May 2014 – April 2016 SCMP Coordinator, DCSWCD CSBI Coordinator, NYC DEP CSBI Coordinator
3. Development of a minimum of 10 Riparian Corridor Management Plans (RCMP) per year.
 - May 2014 – April 2016 DCSWCD CSBI Coordinator, DCSWCD SCMP Staff
 - I. Little Delaware Outside Education Center – SUNY Delhi
 - II. West Branch Delaware River – Cohen
 - III. East Brook – County Route 22 Phase II project
 - IV. Peakes Brook – Delhi
 - V. Terry Clove – Hamden
 - VI. Little Delaware River Tributary Knotweed – Delhi
 - VII. Thompson Hollow Knotweed – New Kingston
4. Implement a minimum of 5 Riparian Corridor Management Plans per year. Implement 1 demonstration or educational riparian Corridor Management Plan per year.
 - May 2014 – April 2016 DCSWCD CSBI Coordinator
5. Education and outreach for CSBI shall be accomplished by facilitating at least one riparian workshop for landowners per year. Education and outreach shall also be accomplished by active participation at relevant local events, direct mailings, web site usage, and local media.
 - May 2014 – April 2016 DCSWCD CSBI Coordinator

6. **Secure landowner license and maintenance agreements for long-term access by DCSWCD and NYCDEP to facilitate ongoing maintenance and monitoring.**
 - **May 2014 – April 2016 DCSWCD CSBI Coordinator**
7. **Develop planting plans as requested for applicable Stream Program projects in coordination with Stream Program staff.**
 - **May 2014 – April 2016 DCSWCD SCMPR Staff and DCSWCD CSBI Coordinator**
8. **Develop and implement a monitoring program for riparian buffer projects to identify project success and effectiveness.**
 - **May 2014 – April 2016 DCSWCD CSBI Coordinator, NYC DEP CSBI Coordinator**
9. **Develop local resources to maintain availability of native vegetation planting stock as needed.**
 - **May 2014 – April 2016 DCSWCD CSBI Coordinator**

Recommendation 7: Stream Gravel Deposition Issues

The Delaware County Soil and Water Conservation District (DCSWCD) Stream Corridor Management Program, New York City Department of Environmental Protection and Delaware County Department of Watershed Affairs will identify opportunities to work with the New York State Department of Environmental Conservation and U.S. Army Corps of Engineers for the purpose of identifying options pertaining to the management of deleterious gravel deposits within the West Branch of the Delaware River system.

Action Items:

1. Develop and implement an educational and outreach program to teach municipal leaders and community members about the specific stream processes involved in the mobilization and transport of gravel and debris. Continue to promote training in Post-Flood Stream Intervention practices.
 - May 2014 – April 2016 SCMP Staff
2. Encourage one or two municipalities to apply for grant funding through the SCMP to scientifically study stream reaches with identified gravel deposition issues for potential case studies to be used in Item 1. This could be accomplished through the Local Flood Hazard Mitigation Analysis process.
 - May 2014 – April 2016 SCMP Staff
 1. Village of Walton
3. Design and implement two demonstration projects that utilize the existing gravel management protocol developed by the SCMP.
 - May 2014 – April 2016 SCMP Staff
4. Develop a Delaware County protocol for municipalities to manage woody debris in stream systems.
 - May 2014 – April 2016 DCSWCD SCMP Coordinator, NYC DEP Project Manager and Stream Engineering Coordinator, DCDPW, Highway Subcommittee
6. Undertake a periodic review of the gravel maintenance protocol developed by the SCMP.
 - May 2014 – April 2016 SCMP Staff, NYC DEP Staff

Recommendation 8: Streamline Stream Work Permitting

The Stream Corridor Management Program (SCMP) proposes that the permitting process for stream work be simplified and streamlined. It is proposed that an interagency working group composed of representatives from the New York State Department of Environmental Conservation, U.S. Army Corps of Engineers, Delaware County Soil & Water Conservation District (DCSWCD), New York City Department of Environmental Protection, neighboring Soil & Water Conservation Districts, Delaware County Department of Public Works (DCDPW) and local community leaders identify ways to delegate, simplify and streamline the permitting process for the benefit of all agencies and stakeholders.

Action Items:

1. Work in cooperation with NYSDEC, US Army Corps of Engineers, NYC DEP, and DCDPW to enhance the authority thresholds of the DCSWCD General Permit as delegated by the NYSDEC for approved stream management practices within the County.
 - May 2014 – April 2016 SCMP Staff, NYCDEP RRE and SMP staff, US Corps of Engineers, DCDPW, Highway Subcommittee

Recommendation 9: Assist Municipalities with Culvert Sizing and Design

The Stream Corridor Management Program (SCMP_r), in cooperation with the Catskill Watershed Corporation, Delaware County Department of Public Works and NYCDEP should develop a program to provide technical assistance to Town Highway Superintendents for culvert design, sizing and placement.

Action Items:

1. Continue to provide technical assistance and educational support to municipalities for sizing and the design of routine culvert replacements.
 - May 2014 – April 2016 SCMP_r Staff, DCDDPW
2. Continue to enable municipalities to apply for funding through the grants program for high priority culverts that are improperly sized or aligned and causing stream instability and/or water quality issues.
 - May 2014 – April 2016 SCMP_r Staff, DCDDPW

Recommendation 10: Participation with the Delaware County Action Plan (DCAP)

The Stream Corridor Management Program will continue to work closely with all DCAP participants to integrate the West Branch Delaware River Stream Corridor Management Plan and its recommendations into all relevant components of the Delaware County Action Plan.

Action Items:

1. Attend regular meetings of DCAP and advocate for inclusion of Stream Corridor Management Plan and its recommendations into all relevant components of the Delaware County Action Plan.
 - May 2014 – April 2016 DCPD Director, DCSWCD Executive Director, SCMP_r Coordinator

Recommendation 1.1: Expand Public Education and Outreach Efforts

The Stream Corridor Management Program (SCMP) should expand public education and outreach efforts to better inform and educate all stakeholders, including municipalities, regarding stream stewardship, the importance of floodplain function, stream processes and the importance of riparian vegetation. These efforts should be developed and implemented in cooperation with the Project Advisory Committee with funding from the Catskill Watershed Corporation.

Action Items:

1. Continue to fund and implement education and outreach activities identified and prioritized by the Project Advisory Committee Education and Outreach sub-committee.
 - May 2014 – April 2016 PAC, SCMP Staff, DCPD staff, NYCDEP staff.
2. Continue to educate municipalities and communities on the importance of floodplain function and the benefits of preserving floodplains, and opportunities for improving flood protection and reducing flood damages through the refinement and use of digital flood insurance rate maps (DFIRMs), the participation in the LFHMP, and other State/Federal programs such as the Community Rating System.
 - May 2014 – April 2016 DCPD Staff, SCMP Staff, NYSDEC.
3. Develop and Implement an education and outreach effort to support the LFHMP for a range of involved and affected stakeholders including community officials, involved outside government agencies, landowners, residents and not for profit groups.
 - May 2014 – April 2016, DCSWCD staff, DC Planning Department staff, Department of Watershed Affairs, NYCDEP, CWC

Recommendation 12: Geomorphic Assessments at Bridges and Culverts

The Stream Corridor Management Program (SCMP_r) and NYCDEP should develop a protocol and program to perform a full geomorphic assessment at prioritized bridges and large culverts. This program should be developed in cooperation with the New York City Department of Environmental Protection, Delaware County Department of Public Works, Delaware County Planning Department, Town and Village Highway Superintendents and New York State Department of Transportation.

Action Items:

1. Support the completion of DC DPW's evaluation of Medium Hydraulic Structures (culverts) funded through the Delaware Watershed Stream Management Grants Program.
 - May 2014 – April 2016 SCMP_r Program Coordinator, DCSWCD Engineering staff, DEP Project Manager and DEP Stream Engineering Coordinator and DCDPW
2. Continue to advise and/or fund municipalities through the grants program for the replacement of publicly owned stream crossing structures that are causing stream instability and/or water quality issues.
 - May 2014 – April 2016 SCMP_r Staff

Recommendation 13: Flood Hazard Mitigation and Flood Recovery

Work with Delaware County Planning Department and Emergency Services to develop a county-wide Hazard Mitigation Plan. Continue to work with the Delaware County Board of Supervisors, New York City Department of Environmental Protection (NYCDEP), New York State Department of Environmental Conservation (NYSDEC) and the State Emergency Management Office (SEMO) to revise the Federal Emergency Management Agency (FEMA) flood study and floodplain maps.

Action Items:

1. Provide documentation of completed flood hazard mitigation projects to the Hazard Mitigation Coordinator. Enhance through the development of LFHMP and implementation of the All Hazards Mitigation Plan.
 - May 2014 – April 2016 SCMPr Staff
2. Provide assistance as requested by the Director of Emergency Services to the Emergency Operations Center during flood related events.
 - May 2014 – April 2016 SCMPr Staff
3. Develop a list of historic problem areas where streams impact infrastructure during flood events and correlate to stream gage stage heights.
 - May 2014 – April 2016 SCMPr Staff
4. Work with communities to understand, utilize and revise FEMA floodplain maps.
 - May 2014 – April 2016 DCPD, NYC DEP Project Manager, NYSDEC, SCMPr Staff
5. Work with communities to update local ordinances, laws and comprehensive land use plans to incorporate elements of the Stream Corridor Management Plan its recommendations and stream stewardship principles.
 - May 2014 – April 2016 DCPD, SCMPr Staff
6. Provide technical assistance to municipalities with emergency stream intervention measures during flood recovery.
 - May 2014 – April 2016 SCMPr Staff
7. Implement the proposed Local Flood Hazard Mitigation Program including the development of program rules, guidelines, procurement documents as well as providing guidance and outreach to participating communities, support of the consultants, and input on the identification and prioritization of projects. Provide assistance with the acquisition of grant funds and technical support for project design and construction (implementation)
 - May 2014 – April 2016 DC SWCD staff, DC Planning staff, NYC DEP

Recommendation 14: Continuation of Geomorphic Research / Assessments

The Stream Corridor Management Program (SCMP) and New York City Department of Environmental Protection, in consultation with the Project Advisory Committee, should continue Rosgen Level II assessments and perform Rosgen Level III and Level IV assessments at prioritized locations throughout the West Branch Delaware River watershed.

Action Items:

1. Perform Rosgen Level II assessment of Steele Brook In Dalhi
 - June 2014 – October 2016 SCMP Staff
2. Complete the development of the Village of Walton Third Brook Management Plan under development by Millone and MacBroom Engineering consultant, funded by the NYS DOS and NYC DEP at the request of the Walton Flood Commission.
 - December 2013 SCMP Staff – COMPLETED
3. Work with the PAC to identify and prioritize stream reaches that require further assessments through the LFHMA process.
 - May 2014 – April 2016 SCMP Staff

Recommendation 15: Seek Funds Necessary for Construction of Walton Streambank Stabilization Projects - COMPLETED

The Stream Corridor Management Program (SCMP) will continue to seek all funds necessary to implement two streambank stabilization projects located at Terrace Avenue and South Street in the Village of Walton.

Action Items:

- 1. Terrace Avenue Project completed.**
- 2. South Street Project completed.**
- 3. Monitor and evaluate the effectiveness of select projects.**
 - May 2011 – April 2013 SCMP Staff - COMPLETED**

Recommendation 16: Prioritization of Identified Stream Intervention Projects

The Stream Corridor Management Program, working with the Project Advisory Committee and New York City Department of Environmental Protection, will prioritize potential restoration reaches relative to the type and level of intervention needed.

Action Items:

1. Develop a formal protocol for the prioritization of Stream Intervention projects
 - October 2011 SCMP Staff, NYC DEP, PAC - **COMPLETED**
2. Implement the Village of Walton Floodplain Reclamation project at West Brook in collaboration with the Open Space Institute and the Village of Walton. This project is a FAD deliverable due May 2012.
 - May 2011 – October 2011 SCMP Staff - **COMPLETED**
3. Implement the Third Brook Corridor Mass Slope Failure Mitigation (WRDA grant) project at Third Brook as per the NYSDOS watershed management plan recommendations.
 - May 2014 – December 2014 SCMP Staff
4. Implement the East Brook Slope Failure Project (County Route 22 Phase II project a FAD deliverable due May 2012) – EWP Implementation project.
 - May 2015 SCMP Staff

5. Design and implement approved Delaware Watershed Stream Management Implementation Grant Program projects within the West Branch of the Delaware River watershed.

- May 2016 SCMPR Staff

List of on-going projects approved to date under the grant program:

- Projects:
 - i. Beers Brook Stream Bank Stabilizations (site 8a and site 8d), Town of Walton
 - ii. Chambers Hollow streambank stabilization project, Town of Hamden (EWP project)
 - iii. Town of Walton River Access, Catskill Developments Foundation, Inc.
 - iv. Boat Launch, Signage of Hoyt's Park, Village of Delhi
 - v. Boat Launch, Signage at Fitch's Cover Bridge, Town of Delhi
 - vi. Medium Hydraulic Structure Study, Delaware County Dept. of Public Works
 - vii. Little Delaware Streambank Stabilization/restoration project, Town of Bovina
 - viii. Lake Brook Stabilization / Odell Lake Road Ext. Culvert Replacement, Town of Harpersfield
- Programs:
 - i. Walton School Gravel Study, Walton Central School
 - ii. Walton Route 206 Study, Floodplain, Culvert Construction, Town of Walton
 - iii. Cummings Road Drainage & Stream clean-up, Town of Masonville
 - iv. Village of Delhi River Walk, Village of Delhi

6. Complete NRCS Emergency Watershed Protection (EWP) projects from Tropical Storms Irene and Lee.

- May 2014 SCMPR Staff

List of all projects EWP in the West Branch Delaware River watershed to be completed:

- i. Chambers Hollow, Town of Hamden, DSR-D-TH-04
- ii. Moose More, Town of Hamden. DSR-D-TH-05

Recommendation 17: Develop a Process for Updating the West Branch Delaware River Stream Corridor Management Plan

In cooperation with the Project Advisory Committee and New York City Department of Environmental Protection, the Stream Corridor Management Program shall develop a process for updating the West Branch Delaware River Stream Corridor Management Plan.

Action Items:

1. Work with the Project Advisory Committee and its Sub-Committees to initiate a comprehensive review of The West Branch Delaware River Stream Corridor Management Plan and initiate a process to update the plan as required.
 - May 2014 – April 2016 PAC, DCPD, SCMPR Staff, DEP staff