

Division of Water

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Department of
Environmental
Conservation

May 26, 2015

Mr. Paul Weberg, PE
FEMA Region II
26 Federal Plaza, Room 1337
New York, NY 10278-0002

Re: Seneca Watershed Recommended Scope of Work

Dear Mr. Weberg,

Please accept the State's priorities for new or revised floodplain mapping within the Seneca Watershed as developed by the Seneca Discovery project. Pre-Discovery community engagement meetings were held through webinar the week of March 3rd, 2014 to discuss the Discovery process and collect information on community mapping needs, as well as determine if any existing data that might exist could be incorporated into a possible RiskMAP project. There were eight webinar meetings held for the counties, communities, and other interested stakeholders within the watershed. Participation on the webinars was mixed with some counties and communities very interested in providing feedback and other communities more reticent to provide information. Following the Pre-Discovery Engagement meetings the project team held eight Discovery meetings for the communities within the watershed during the weeks of May 6th and May 12th, 2014. During these meetings the project team followed up on the information collected during the Pre-Discovery meetings and provided an additional opportunity for the communities and other stakeholders to give further information on mapping needs. NYSDEC used the information collected throughout the Discovery Process to develop this proposed scope. Table 3 included at the end of this document summarizes the detailed study requests from this recommended scope of work in order from highest priority to lowest. Certainly more stream requests were provided than can be studied as part of this project. All additional study requests will be entered into CNMS to be considered for future floodplain mapping projects.

NYSDEC's highest priority is the development of updated lake studies with base flood elevations for Seneca, Cayuga, Canandaigua, and Keuka Lakes. The lakes were the most frequently requested study priority by the counties and communities that border them. The county and community officials feel that there may be some inaccuracies with the effective lake studies due to the age of the study and improvements that have been made in the ability to collect more accurate topographic data. The lake fronts are densely developed and continue to see development as summer homes are converted into year round residences in many communities. Some of the communities along the lakes have detailed base flood elevations while neighboring communities have only approximate studies with no base flood elevation provided. The County officials and NYSDEC feel

that it would be beneficial for all communities along the lake to have base flood elevations due to the population density and continued development along the lakeshores.

The greatest need for a countywide DFIRM is in Tompkins County. Tompkins County has experienced a growth in population of approximately 8% from 1990 to 2010 and a growth of 25% in housing units in the same time period. Table 1 and 2 provided at the end of this memorandum provide an overview of population and housing statistics by county for the Seneca Watershed. The effective FIRMs in Tompkins County range in date from 1979-1988. The age of the current maps in combination with the population of the County and known changes that have been made to streams within the County are the most significant contributing factors for the County's need for updated Flood Insurance Rate Maps. Tompkins County officials have expressed a strong interest and desire for updated floodplain mapping for their communities. The City of Ithaca is forming a task force to look at flooding issues within the City to potentially develop updated floodplain and inundation maps for flooding sources within the community. These updated studies could be incorporated into the floodplain maps for the City of Ithaca. The City has expressed an interest in cooperating with FEMA to ensure their efforts meet FEMA standards. Tompkins County collected LiDAR for the entire county in 2008 for the intent of updating the FEMA Flood Insurance Rate Maps. The LiDAR collected was used to create a 2 Meter Digital Elevation Model (DEM) for Tompkins County. Sixmile Creek and the Tributaries to Salmon Creek have existing hydrologic and hydraulic studies that may be useful for updating the current floodplain maps. Any specific stream studies that were mentioned during the discovery meeting are noted in the study priorities below. NYSDEC has proposed approximately 45.87 miles of new detailed study and one detailed lake study as part of the Tompkins County portion of the Seneca Watershed remapping effort.

Ontario County would also benefit tremendously from the development of countywide modernized FIRMs. As seen in the Tables 1 and 2 provided at the end of this document, Ontario County has experienced the most growth in population and housing of all the counties within the Seneca Watershed due to suburban growth from the Rochester metropolitan area. The population has increased from 1990 to 2010 by about 13.5% and the number of housing units has increased by almost 30% over the same time period. The effective floodplain maps in Ontario County are also from the early 1980s. These maps are out of date and the lack of detail makes them extremely difficult for the communities to use for enforcing NFIP regulations and other floodplain management purposes. Ontario County officials have expressed a strong interest and desire for having updated floodplain mapping for their communities. Ontario County collected LiDAR in 2006 with the intent that the LiDAR would be used to help with updating the FEMA Flood Insurance Rate Maps for the county. Fall Brook has a hydrologic and hydraulic study conducted by Larson Engineering and the LA Group as part of the design of a detention facility for the Finger Lakes Community College. This information should be used for a new detailed study of Fall Brook if possible. The NYSDEC has proposed approximately 85 miles of new detailed study and one detailed lake study.

If FEMA has additional funds available after the highest priority needs are met, NYSDEC proposes an additional 4 miles of detailed stream study for the Village of Penn Yan in Yates County. The Village experienced extensive flood damages from heavy rainstorms in May 2014 shortly after meeting with the Discovery Team. The Village of Penn Yan's maps are from the 1981, and there will be significant changes made to the channels within the Village as recovery efforts are made in response to this event. Some of the damaged areas in Penn Yan are not currently shown as Special Flood Hazard Areas.

The Seneca River runs through many populated areas in Seneca and Onondaga County and has not been updated since 1981 for Seneca County communities and 1982 for Onondaga County communities. If additional funds are available after including new detailed studies for the Village of Penn Yan, the Seneca River should be studied by detailed methods in the more populated towns and villages in Seneca and Onondaga Counties. It was noted by Onondaga County officials that there has been recent development near the Seneca River along the Route 31 corridor in the Town of Lysander. NYSDEC recommends 37.5 miles of detailed study along the Seneca River.

The Town of Walworth in Wayne County has experienced heavy development since the effective maps were released in 1982. The Town would greatly benefit from having updated studies and digital mapping products to help with enforcement and guidance for new development. Due to the amount of development, flood risks may have also changed significantly over the last 33 years. The NYSDEC recommends 8.2 miles of new detailed study in the Town of Walworth.

Schuyler, Yates, Seneca, and Wayne Counties would all greatly benefit from countywide modernized FIRMs. Schuyler County maps are outdated flat maps from the 1970s that have little detail and a scale that makes them difficult for community officials to use for enforcing NFIP regulations. The same is true for Yates, Seneca and Wayne Counties. These counties are mostly rural and have many approximate studies, although western Wayne County is experiencing some suburban development from the Rochester area. Due to the improvements in methodology and available topographic information for approximate studies, updated studies would greatly assist local officials in enforcing floodplain management and NFIP regulations.

At this time, NYSDEC is not proposing any updated modeling in the portions of Onondaga, and Cayuga County that fall within the Seneca Watershed, with the exception of Cayuga Lake and a portion of the Seneca River. Cayuga County has modernized maps from 2007 and Onondaga County has preliminary modernized maps that should become effective shortly. Any new study requests from Onondaga and Cayuga Counties were collected entered into CNMS for future mapping projects.

Although Steuben and Chemung Counties would benefit equally from having modernized maps due to the age and usability of the effective maps, the majority of the flooding concerns for these two counties are outside of the Seneca Watershed. The portion of Steuben County that falls within the Seneca Watershed accounts for only 3 percent of the watershed area and only 6 percent of the total land area of Steuben County. Chemung

County accounts for 1 percent of the Seneca Watershed area and only 9 percent of the county's land area. Both counties have requested that if any portion of the county is updated as part of the Seneca Watershed RiskMAP project, the entire county should receive modernized maps. All requests for new studies that were presented as part of the Seneca Discovery process have been entered in to CNMS for future mapping projects.

Tioga, Cortland, Livingston and Monroe Counties did not have any requests within the Seneca Watershed. Each of these counties contribute to less than 1 percent of the land area that makes up the Seneca Watershed. Any requests received by these counties during the Seneca Discovery process will be added to CNMS for consideration for future mapping projects.

Seneca Watershed Proposed Scope of Work:

The following study requests are for water bodies that span multiple counties and communities within the Seneca Watershed. The study requests for the watershed in order of priority are:

1. Seneca Lake should be studied as a detailed lake study with an updated lake base flood elevation provided for all communities. The lake shoreline is the area of highest development for many of the communities that border the lake, and many community officials feel that the current studies are outdated and may be inaccurate. The Seneca County representatives feel that the current effective Base Flood Elevation may be understated or that there may be an issue with the topography used to create the 1 percent-annual-chance boundary. Detailed base flood elevations are provided for the lake in some communities, while neighboring communities have approximate studies with no base flood elevation. The lake restudy was requested by Seneca County, the Town of Hector, Town of Fayette, Town of Starkey, and Village of Dresden.
2. Cayuga Lake should be studied as a detailed lake study with an updated lake base flood elevation provided for all communities. Representatives from Cayuga and Seneca Counties feel that the current Base Flood Elevation for Cayuga Lake is too low. Cayuga County Officials expressed concern with the major structural and water level management changes at the Montezuma National Wildlife Refuge that have cut off thousands of acres of the Seneca River floodplain and increased flood levels along Cayuga Lake. Since the changes have been made, Cayuga Lake has exceeded the elevation of 384.0 feet (NGVD29) five or six times. In some communities detailed base flood elevations are provided for the lake, while in neighboring communities approximate studies were completed with no base flood elevation. The lake was requested for restudy by Cayuga, Tompkins and Seneca Counties as well as the Town of Fayette and Town of Ithaca.
3. Canandaigua Lake should be studied as a detailed lake study with an updated base flood elevation developed for all communities. The communities around Canandaigua Lake would like the lake to be restudied due to the high density development along the lake shore and the age of the current effective study. The

Town of Middlesex indicated that there may be an issue with the 1 percent-annual-chance boundary due to the fact that there are properties that are approximately 40 feet above the lake shore elevation that are included in the floodplain. The Town of Canandaigua and the Town of Middlesex have requested that the lake be restudied. There are also a large number of LOMAs for properties along the lake shore, which may indicate that a new study or more accurate topography is needed for Canandaigua Lake.

4. Keuka Lake should be studied as a detailed lake study with an updated lake base flood elevation provided to all communities. The communities along Keuka Lake would like to see a revised base flood elevation for the lake shore. There was a USGS gage at the south end of the lake that was discontinued in the 90's. The lake level is managed in Penn Yan through the Keuka Lake Outlet Compact, based on a gage at the north end of the lake. Environmental Emergency Services also operates a gage at the south end of the lake with real time data included in the Automated Flood Warning System (AFWS) of the National Weather Service. There are also a number of LOMAs around the lake shore that may indicate the need for an updated study. In some communities detailed base flood elevations are provided for the lake, while in neighboring communities approximate studies were completed with no base flood elevation. Steuben County, Yates County, and the Village of Penn Yan have requested that the lake be restudied.

Tompkins County Detailed Study Priorities:

It is NYSDEC's understanding that in counties within the watershed receiving new detailed modeling all existing approximate studies will be updated with new approximate modeling where topography was collected. These existing approximate studies will not be listed separately at this time. Detailed study requests for Tompkins County in order of priority are:

1. The Cayuga Inlet should be studied by detailed methods in the City of Ithaca from the Confluence with Cayuga Lake to the City of Ithaca corporate limits for a distance of 3.13 miles. There have been changes to the channel since it was last studied and there is development pressure in this area in the City. The stream reach was requested by the City of Ithaca and Tompkins County.
2. Sixmile Creek should be studied by detailed methods from the confluence with the Old Inlet to the City of Ithaca corporate limits for a distance of 1.7 miles and through the Town of Caroline for a distance of 7.2 miles. There are flooding issues along Sixmile Creek in the City of Ithaca and the Town of Caroline. There is hydrologic and hydraulic study information for the restoration project for Sixmile Creek in the Town of Caroline available from the Tompkins County Soil & Water Conservation District. There is also study information available from Milone & MacBroom as part of Sixmile Creek Flood Mitigation Needs Assessment. The stream reach has been requested by Tompkins County, Town of Caroline, and the City of Ithaca.
3. Virgil Creek should be studied by detailed methods from the confluence with Fall Creek to the eastern corporate limits of the Town of Dryden for a distance of 7.6

miles. The effective study was not updated to reflect the NRCS flood control dam constructed in 1998. The effective study of Virgil Creek within the Village of Dryden was completed in December 1977 according to the FIS for the village. The stream reach was requested by Tompkins County and the Village of Dryden.

4. Fall Creek should be studied by detailed methods in the Town of Groton for a distance of 5.9 miles and in the City of Ithaca for a distance of 2.2 miles. The approximate studies for Fall Creek should also be updated. The stream reach was requested by Tompkins County and the Town of Groton.
5. Enfield Creek should be studied in the Town of Enfield for a distance of 7.9 miles. The Town of Enfield currently does not have any Flood Insurance Rate Maps and is not an NFIP participating community. The stream reach was requested by Tompkins County.
6. Owasco Inlet should be studied by detailed methods from the northern corporate limits of the Village of Groton to the southern corporate limits of the Village of Groton for a distance of 1.85 miles. The Village has experienced flooding from the Owasco Inlet and the current study is outdated. The stream reach was requested by Tompkins County.
7. Egypt Creek should be studied by detailed methods from the western corporate limits of the Village of Dryden to the northern corporate limits of the Village of Dryden for a distance of 1.29 miles. There is a new housing development near the creek and the developer's engineer will be completing a hydrologic and hydraulic study for a portion of the creek. This stream reach was requested by the Village of Dryden.
8. Unnamed Tributary to Sixmile Creek that crosses Valley Road and follows Central Chapel Road should be studied by approximate methods for a distance of 3.93 miles. This tributary is currently not studied and there are flooding issues along this stream. This stream reach was requested by the Town of Caroline.
9. The Dryden Lake Outlet should be studied by detailed methods from the confluence with Virgil Creek to the Village of Dryden corporate limits for a distance of 0.77 miles. The current study is outdated and inaccurate. The stream reach was requested by the Village of Dryden.
10. Lateral A should be studied by detailed methods from the confluence with Egypt Creek in the Village of Dryden for a distance of 0.9 miles. This stream experiences frequent flooding during heavy rain storms. This stream reach was requested by the Village of Dryden.
11. Lateral B Reach 1 should be studied by detailed methods in the Village of Dryden from the confluence with Lateral A for a distance of 0.4 miles. This stream experiences frequent flooding during heavy rain storms. This stream reach was requested by the Village of Dryden.
12. There are detailed stormwater studies available for the Tributaries to Salmon Creek in the Town of Lansing that should be incorporated into any detailed studies for these tributaries. One of the Tributaries to Salmon Creek crosses Ludlow Road and is about 0.5 miles in length, and the other Tributary is about 0.6 miles in length and is just north of the first Tributary. This study was completed by Barton &

Loguidice and more information is available on the Tompkins County Community Planning website.

Ontario County Detailed Study Priorities:

It is NYSDEC's understanding that in counties within the watershed receiving new detailed modeling all existing approximate studies will be updated with new approximate modeling where topography was collected. These existing approximate studies will not be listed separately at this time. Detailed study requests for Ontario County in order of priority are:

1. Canandaigua Lake Outlet should be studied by detailed methods from the confluence with Canandaigua Lake to County Road 6 in the Town of Phelps for a distance of 21.6 miles. There are number of structures located in the floodplain especially in the Villages of Manchester, Shortsville, Clifton Springs, and Phelps that would benefit from having an updated study with a base flood elevation. This stream reach was requested by Ontario County and the Town of Hopewell.
2. Fish Creek should be studied by detailed methods in the Town of Victor from the confluence with Mud Creek to the southern corporate limit of the Town of Victor for a distance of 3.6 miles. This area has experienced a growth in development and there are a number of residential structures in the floodplain. This stream reach was requested by Ontario County and the Town of Victor.
3. Great Brook should be studied by detailed methods from the confluence with Ganargua Creek to the southern corporate limit of the Town of Victor for a distance of 5.65 miles. There has been rapid growth in the Town of Victor as well as flooding issues in the Town and Village of Victor caused by Great Brook. The stream reach was requested by Ontario County, the Town of Victor, and the Village of Victor.
4. Flint Creek should be studied by detailed methods in the Town of Gorham from the southern corporate limit to the eastern corporate limit for a distance of 7.2 miles. Flint Creek has been channelized and excavated as part of the Potter Swap project since the creek was last studied. The stream reach was requested by Ontario County.
5. Mud Creek should be studied by detailed methods in the Town of Bristol and the Town of South Bristol for a distance of 11 miles and in the Town of Victor for a distance of 0.65 miles. The stream should be studied due to the number of structures in the floodplain and the current effective study is an approximate study for the Towns of South Bristol and Bristol. The detailed study for the Town of Victor is outdated and the Town experiences frequent flooding from Mud Creek. The stream reach was requested by Ontario County and the Town of Victor.
6. Grimes Creek should be studied by detailed methods in the Town and Village of Naples for a distance of 5.8 miles. There are a number of structures located in the approximate study in the Town of Naples and there have been many changes to the creek since the detailed study was completed in the Village of Naples. The stream reach was requested by Ontario County and the Village of Naples.

7. Fall Brook should be studied by detailed methods for 7.37 miles from the confluence with Canandaigua Lake to the headwaters in the Town of Gorham. There are hydraulic models available for Fall Brook in the Towns of Gorham, Hopewell and Canandaigua from Larson Engineering and the LA Group. The LA Group also designed a detention facility that was constructed for the Finger Lakes Community College along Fall Brook. If the model meets FEMA standards, it should be incorporated as detailed study for the Towns of Hopewell, Gorham, and Canandaigua. Although there is engineering data available for this stream, it is not the highest priority for the county or municipalities because there is little residential development near this stream. This stream reach was requested by Ontario County.
8. Castle Creek should be studied by detailed methods in the City of Geneva from the confluence with Seneca Lake to the Town of Geneva corporate limit for a distance of 2.4 miles. The current study in the City of Geneva is outdated and is in a highly populated area of the City. There is potential development near the creek in the Town of Geneva and the current approximate study is outdated. There is a hydraulic and hydrologic study available for Castle Creek in the Town of Geneva. The stream reach was requested by the City and Town of Geneva.
9. Sucker Brook should be studied by detailed methods in the Town and City of Canandaigua for a distance of 5.7 miles. There have been changes to the channel since the last study in both the town and the city. The City of Canandaigua has experienced flooding of Gibson Street, West Avenue, and Ellis Place from Sucker Brook. This stream reach was requested by the Town and City of Canandaigua.
10. Ganargua Creek should be studied by detailed methods in the Town of Victor for a distance of 5.3 miles and by approximate methods through the Town of Farmington. There has been development in the floodplain in both towns. The stream reach was requested by the Town of Victor and the Town of Farmington. This stream continues into Wayne County and was also requested to be studied by detailed methods in the Town and Village of Macedon.
11. Marsh Creek should be studied by detailed methods in the Town and City of Geneva for a distance of 7.1 miles. There are development pressures along Marsh Creek in the Town of Geneva. The wastewater treatment plant is located near the creek in the City of Geneva. The stream reach was requested by the Town and City of Geneva.
12. Naples Creek in the Town and Village of Naples should be studied by detailed methods from the confluence with Grimes Creek to the Town of Naples' northern corporate limit for a distance of 3.9 miles. The Town of Naples has experienced flooding issues along the creek and the current approximate study is outdated. The detailed study for the Village of Naples is also outdated. The stream reach was requested by the Town and Village of Naples.
13. Tannery Creek should be studied by detailed methods in the Village of Naples from the confluence with Eelpot Creek to the Village corporate limits for a distance of 0.26 miles.
14. Glenwood Cemetery Creek should be studied by detailed methods from the confluence with Canandaigua Lake for a distance of 2.26 miles in the City of Geneva. The culverts along this creek may be undersized and cause backwater

along the creek during heavy rain storms. There is development pressure along the creek and the creek receives a high volume of stormwater. The stream reach was requested by the City of Geneva.

15. Cemetery Creek should be studied by detailed methods for a distance of 0.5 miles in the City of Geneva. The creek is piped underground through a 36" brick sewer. The condition of the sewer is unknown by the City Officials. The streams was requested by the City of Geneva.

Village of Penn Yan Detailed Study Priorities:

The requested studies for the Village of Penn Yan are prioritized as follows:

1. Sucker Brook should be studied by detailed methods in the Village of Penn Yan from the confluence with Keuka Lake Outlet to the Village of Penn Yan corporate limit for a distance of 1.3 miles. There are possible elevation discrepancies with the current study and the stream is located in a heavily developed residential area within the Village. The stream reach was requested by the Village of Penn Yan.
2. Keuka Lake Outlet should be studied by detailed methods from the confluence with Keuka Lake to the Town of Milo corporate limits for a distance of 1.3 miles. The effective study for the Town of Milo is an outdated approximate study and the Village of Penn Yan would like to have an updated detailed study. The stream reach was requested by the Town of Milo and the Village of Penn Yan.
3. Jacobs Brook should be studied by detailed methods from the confluence with the Keuka Lake Outlet to the Village of Penn Yan corporate limits for a distance of 0.9 miles. Residents are trying to dispute the existing floodplain in this part of the Village. The stream reach was requested by the Village of Penn Yan.
4. Kimbell Gulley should be studied by detailed methods from the confluence with Keuka Lake Outlet to the Village of Penn Yan corporate limits for distance of 0.47 miles. This area of the Village is likely to experience future development. The stream reach was requested by the Village of Penn Yan.

Seneca River Detailed Study Priority

1. The Seneca River should be studied by detailed methods within the more populated reaches of the river from the confluence with Seneca Lake the eastern corporate limit of the Town of Seneca Falls in Seneca County for a distance of 13 miles, and from the confluence with Cross Lake to the northern corporate limits of the Town of Lysander for a distance of 24.5 miles. The current Seneca River study is outdated and runs through populated areas of Seneca and Onondaga Counties. The stream reach was requested by Seneca and Onondaga Counties.

Town of Walworth Detailed Study Priorities:

1. Black Creek should be studied by detailed methods in the Town of Walworth from the Ontario County corporate limit to the Monroe County corporate limit for a distance of 6.8 miles. The current Black Creek study is out dated and the Town of

Walworth has experienced heavy development since it was studied in 1982. The stream reach was requested by Wayne County and The Town of Walworth.

2. Tributary No. 2 also known as Red Creek should be studied by detailed methods in the Town of Walworth from the confluence with Black Creek to just above Walworth Penfield Road for a distance of 1.4 miles. The current Red Creek study is out dated and the Town of Walworth has experienced heavy development since it was studied in 1982. The stream reach was requested by Wayne County and The Town of Walworth.

Thank you for providing NYSDEC with the opportunity to recommend a scope of work for areas within the Seneca Watershed. This recommended scope of work is certainly not inclusive of every request received during the Seneca Watershed Discovery process. If funds are still available in the mapping budget after all of the recommended priorities have been studied, there are additional stream miles that can be found in the Watershed Priority Memo that should be considered for updated mapping. We look forward to working with you to refine and finalize this scope as we move forward. Please feel free to contact NYSDEC if you have any questions or would like additional information provided.

Sincerely,

A handwritten signature in cursive script that reads "Jennifer Horton".

Jennifer Horton
Environmental Engineer
Floodplain Management Section

Cc: Scott Duell

Table 1: Seneca Watershed Census Data by County				
County	1990 Population Census	2000 Population Census	2010 Population Census	Population, % change, April 1, 1990 to April 1, 2010
Cayuga	82,313	81,963	80,026	-2.8%
Chemung	95,195	91,070	88,830	-6.7%
Cortland	48,963	48,599	49,336	0.8%
Livingston ¹	2,407	2,322	2,439	1.3%
Monroe ²	73,234	80,735	82,704	12.9%
Onondaga	468,973	458,336	467,026	-0.4%
Ontario	95,101	100,224	107,931	13.5%
Schuyler	18,662	19,224	18,343	-1.7%
Seneca	33,683	33,342	35,251	4.7%
Steuben	99,088	98,726	98,990	-0.1%
Tioga ³	2,979	2,881	3,153	5.8%
Tompkins	94,097	96,501	101,564	7.9%
Wayne	89,123	93,765	93,772	5.2%
Yates	22,810	24,621	25,348	11.1%
TOTALS	1,226,628	1,232,309	1,254,713	2.3%

¹Includes only information for the town of Springwater.

²Includes only information for the towns of Penfield and Perinton.

³Includes only information for the town of Spencer

County	1990 Total Housing Units	2000 Total Housing Units	2010 Total Housing Units	Estimate of Total housing units - Built 1990 to 1999	Estimate of Total housing units - Built 2000 to 2009	Estimate of Total housing units - Built 2010 or later	Percent Change in Housing Units - 1990 to 2010
Cayuga	32,041	35,477	36,489	3,447	2,202	120	13.9%
Chemung	35,587	37,745	38,369	2,110	1,529	110	7.8%
Cortland	18,127	20,116	20,577	1,622	961	71	13.5%
Livingston ¹	20,953	24,023	27,123	2,774	2,307	104	29.4%
Monroe ¹	278,105	304,388	320,593	26,293	21,690	848	15.3%
Onondaga	181,224	196,633	202,357	14,725	13,261	862	11.7%
Ontario	37,120	42,647	48,193	5,462	5,952	527	29.8%
Schuyler	8,036	9,181	9,455	1,162	667	10	17.7%
Seneca	13,436	14,794	16,043	1,313	1,042	60	19.4%
Steuben	40,768	46,132	48,875	4,769	3,245	139	19.9%
Tioga ¹	19,020	21,410	22,203	1,818	1,810	73	16.7%
Tompkins	33,412	38,625	41,674	5,404	3,245	168	24.7%
Wayne	33,657	38,767	41,057	5,146	2,705	105	22.0%
Yates	10,542	12,064	13,491	1,696	1,189	47	28.0%
TOTALS	762,028	842,002	886,499	77,741	61,805	3,244	16.3%

¹ includes entire county data

Priority #	Flooding Source	Current Study Type	Miles to be Restudied	Study Type Requested	Community/Communities	County/ Counties
1	Seneca Lake	Mixed A and D	N/A	Detailed		Seneca, Ontario, Yates, and Schuyler
2	Cayuga Lake	Mixed A and D	N/A	Detailed		Cayuga, Seneca, and Tompkins
3	Canandaigua Lake	Mixed A and D	N/A	Detailed		Ontario
4	Keuka Lake	Mixed A and D	N/A	Detailed		Yates and Steuben
5	Cayuga Lake Inlet	Detailed	3.13	Detailed	City of Ithaca	Tompkins

Priority #	Flooding Source	Current Study Type	Miles to be Restudied	Study Type Requested	Community/Communities	County/ Counties
6	Sixmile Creek ¹	Mixed A and D	8.9	Detailed	Ithaca (C) and Caroline (T)	Tompkins
7	Virgil Creek	Mixed A and D	7.6	Detailed	Dryden (T&V)	Tompkins
8	Fall Creek	Mixed A and D	8.1	Detailed	Groton (T) Ithaca (C)	Tompkins
9	Enfield Creek	Not studied	7.9	Detailed	Enfield (T)	Tompkins
10	Owasco Inlet	Detailed	1.9	Detailed	Groton (V)	Tompkins
11	Egypt Creek	Detailed	1.29	Detailed	Dryden (V)	Tompkins
12	Unnamed Trib. to Sixmile Creek	Not studied	3.9	Detailed	Caroline (T)	Tompkins
13	Dryden Lake Outlet	Detailed	0.77	Detailed	Dryden (V)	Tompkins
14	Lateral A	Detailed	0.9	Detailed	Dryden (V)	Tompkins
15	Lateral B	Detailed	0.4	Detailed	Dryden (V)	Tompkins
16	Tributary 1 to Salmon Creek ²	Not studied	0.5	Detailed	Lansing (T)	Tompkins
17	Tributary 2 to Salmon Creek ²	Not studied	0.6	Detailed	Lansing (T)	Tompkins
18	Canandaigua Lake Outlet	Mixed A and D	21.6	Detailed	Manchester (V), Shortsville (T), Clifton Springs (T), Phelps (T), Hopewell (T), Canandaigua (T&C)	Ontario
19	Fish Creek	Backwater/ Not studied	3.6	Detailed	Victor (T)	Ontario
20	Great Brook	Detailed	5.7	Detailed	Victor (T&V)	Ontario
21	Flint Creek	Detailed	7.2	Detailed	Gorham (T)	Ontario
22	Mud Creek	Mixed A and D	11.65	Detailed	Bristol (T), South Bristol (T), Victor (T)	Ontario
23	Grimes Creek	Mixed A and D	5.8	Detailed	Naples (T&V)	Ontario
24	Fall Brook ³	Not studied	7.35	Detailed	Hopewell (T), Gorham (T), Canandaigua (T)	Ontario
25	Castle Creek	Mixed A and D	2.4	Detailed	Geneva (T&C)	Ontario
26	Sucker Brook	Mixed A and D	5.7	Detailed	Canandaigua (T&C)	Ontario
27	Ganargua Creek	Detailed	5.3	Detailed	Victor (T)	Ontario
28	Marsh Creek	Mixed A and D	7.1	Detailed	Geneva (T&C)	Ontario

Priority #	Flooding Source	Current Study Type	Miles to be Restudied	Study Type Requested	Community/Communities	County/ Counties
29	Naples Creek	Mixed A and D	3.9	Detailed	Naples (T&V)	Ontario
30	Tannery Creek	Detailed	0.26	Detailed	Naples (V)	Ontario
31	Glenwood Cemetary Creek	Approximate	2.26	Detailed	Geneva (C)	Ontario
32	Cemetary Creek	Not studied	0.5	Detailed	Geneva (C)	Ontario
33	Sucker Brook	Detailed	1.3	Detailed	Penn Yan (V)	Yates
34	Keuka Lake Outlet	Detailed	1.3	Detailed	Penn Yan (V) and Milo (T)	Yates
35	Jacobs Brook	Detailed	0.9	Detailed	Penn Yan (V)	Yates
36	Kimbell Gulley	Detailed	0.47	Detailed	Penn Yan (V)	Yates
37	Seneca River	Mixed A and D	37.5	Detailed	Wateloo (T&V), Seneca Falls (T&V), Feyette (T), Lysander (T), Van Buren (T), Baldwinsville (V), Geddes (T), Salina (T), Clay (T)	Seneca and Onondaga
38	Black Creek	Detailed	6.8	Detailed	Walworth (T)	Wayne
39	Tributary No. 2 (Red Creek)	Detailed	1.4	Detailed	Walworth (T)	Wayne

¹ There is existing hydrologic and hydraulic studies completed by Tompkins County Soil & Water Conservation District and Milone and MacBroom.

² There is existing hydrologic and hydraulic study information available from Barton & Loguidice.

³ There is hydrologic and hydraulic study information available from Larson Engineering and the LA Group.